INFLUENCE OF SOCIAL CHANGES ON THE EVOLUTION OF THE DESIGN OF SHOPPING CENTERS [IN EGYPT]

A Thesis Submitted in Fulfilment
Of
Ph.D. Degree

BY

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ARCHITECTURAL DEPARTMENT
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I dedicate my thesis in memory of my late father **Dr. El Sayed Mohamed Khairy,** *Ex-Dean of Faculty of Arts, Ain Shams University, whose wishes and hopes were my incentive to complete the work done.*

It is also dedicated to my husband **Dr. Baher Ibrahim Fouad** *and my children* **Mohamed and Maha** *for their support and patience during my work.*

ACKNOWLEDGEMENT

In this thesis which is an aim to explore new fields in Architecture, great efforts have been put.

I should like to acknowledge my great debt to **Dr. Yehia Mohamed Eid,** *professor of Architecture Ain Shams University for his sincere guidance and encouragement.*

Acknowledgement also is due to **Dr. Abd El Aziz Fath-Allah,** *professor of Planning Architectural Dept. for his honest, valuable criticism which enabled me to rise with the thesis up to this level.*

I owe my great gratitude to **Dr. Sandra C. Howell,** *professor of Architecture in Dept. of Architecture, School of Architecture and Planning, Massachusetts Institute of Technology. for her sincere help and advice.*

I also owe my thanks and gratitude to **Dr. Donna Derk,** *Assistant Lecturer in M.I.T. University, for her guidance support during my presence in America.*

Finally I would like to recognize my immense gratitude to all staff members of Arch. Dept. Ain Shams University for their support and assistance with special recognition to: **Dr. Imam Shalaby,** *Professor of Arch. in Architectural Dep. for his honest support,* **Dr. Sohair Hathout,** *Lecturer in Arch. Dept., for her constructive discussions and positive work and* **Dr. Shafak El Awad El Wakil,** *Lecturer in Arch. Dept. for her encouragement and effective efforts.*

INFLUENCE OF SOCIAL CHANGES ON THE EVOLUTION OF THE DESIGN OF SHOPPING CENTERS [IN EGYPT]

FOREWORD:

The marketing activity from the market to the small shop to the very contemporary and elaborate shopping centers, there is, the underlying and basic desire in all these settings to create a plearant environment-not only for the purpose of buying and selling but also, to satisfy all social and economical needs.

The human being seeks communication with others and the social aspect is the most important part of the person's experience.

Through the discussions and analysis of factors to reflect the social form and aspects through different civilizations in different parts of the world, shopping settings have been influenced by the changing pattern of life.

The first chapter reviews the social changes in history and their affect on the shopping habits; beginning by the pre-historic period starting from the Ancient Civilization, Egyptian, Greek and Roman Civilizations with their own different concepts.

The analysis of the Middle Ages and its action both in Europe and the Middle East, follows.

The radical change in the design of marketing facilities began from the industrial revolution in the early years of the eighteenth century and rapidly stimulated other phases of development up till the twentieth century which brought about a new trend in shopping center development as a part of the urban scene.

This new retailing trend was a natural product in America where starting with the neighbourhood center it ended with the evolution of the Regional Shopping Center.

The second chapter includes the discussion of the contemporary strategy of shopping centers i.e. the development of the center as a part of the Urban Pattern. It also explains the different concepts in zoning of the shopping center and its relation to the surrounding traffic routes. Planning Motivations of shopping facilities and the standard definitions for the different types of centers with an analysis of designing concepts.

The third chapter explains planning for shopping activity, it analysis and evaluates potentialities in shopping outlets in the community, the effect of the socio-economic factors of a center from the aspect of present retail expenditures, the social classes, education and the population. These items must be predetermined to decide on the market and economic analysis the size and location of the center.

Circulation is a main asset in the success-criterion of a shopping center. either of vehicle, pedestrian or service movement and many methods have been planned to solve it. The latter item lead forth to the tackling of a contemporary problem, which is, congestion of vehicles in shopping streets. Techniques designed from different parts of the world for solving this problem are presented and statistics made, show a sure success of these techniques.

In the forth chapter the psychological aspects in designing shopping spaces are discussed. The first point being "Environmental Perception" and this part reflects on human behavior and activity in shopping spaces combined with the design of the landscape to suit their behavior. The second point deals with "Visual Perception" manifested by the instalments in the center e.g. signage, shop fronts stating the objectives and problems that constrain the designer. The psychology of perception and human reaction is the third point mentioned in this chapter. It involves the different types of advertisement and their affect on the consumer with statistics concerning advertisement.

The fifth and last chapter points out the physical setting of the center, the interior-design flexibility concerning size, width, depth and the possibility of its' including a mult-storey-parking.

Lighting is another physical factor considered as one of the most important assets in interior design; many different solutions and considerations have been discussed in this chapter followed by a survey dealing with the circulation and attractiveness of the center.

This chapter is concluded by contemporary shopping outlets and their potentialities in U.S.A., Europe and Egypt, succeeded by a thorough comparative analysis of statistics, tables and diagrams to indicate the difference.

INFLUENCE OF SOCIAL CHANGES IN THE EVOLUTION OF THE DESIGN OF SHOPPING CENTERS

CONTENT

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ILLUSTRATION OF FIGURES

CHAPTER (I):

CHAPTER (I)

HISTORICAL REVIEW OF SHOPPING PLACES AND ACTIVITIES

1.1. Introduction:

Society is the resultant of a conflict of different factors. In the strife to maintain economic security, mend social maladjustments, get rid of mass self-deception and resist commanders bent on personal glory and self distinction; many degrees of pressure on human kind have been created and in the process, cities developed parrallel to the culture of people.(1)

The physical form of a city coupled with its natural characteristics and climate have reflected on the kind of cities people built for themselves. The justice or injustice present in a city, that is, its political, social and economic structure has shaped its physical form.

Civilisation has mostly been measured by the monumental buildings existing but to understand the characteristics of any civilisation this is a very narrow view.

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(1) *The Urban Pattern, Fourth Edition, Gallion Eisner D. Van Nostrand Company.*

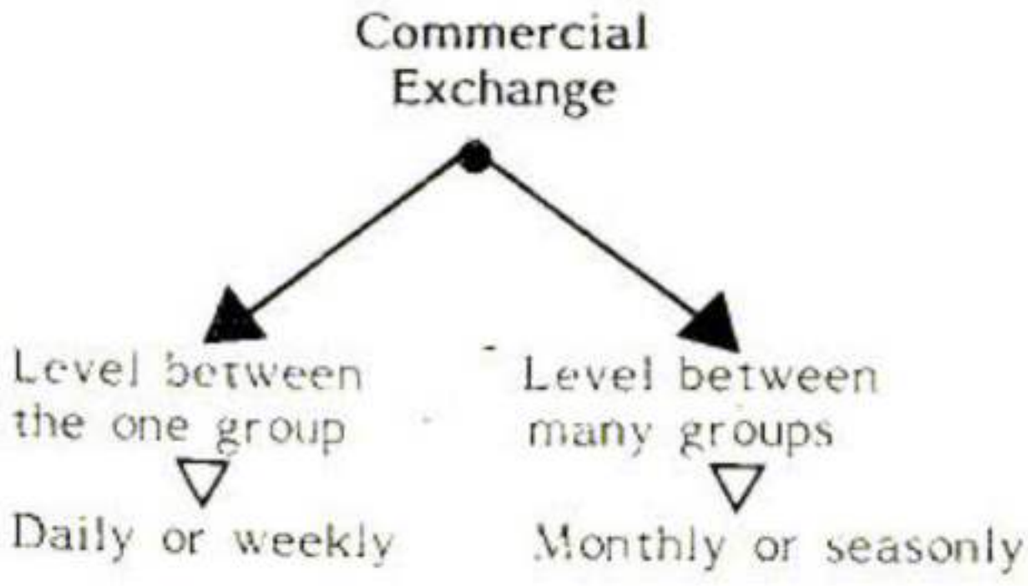
The city means, the people who live, their culture, traditions customes and believes, their dwellings and places for work, streets they path, and intertainment places. The power that rule, economy and system of trade.

1.2. Prehistoric Review:

When paleolithic man moved from his cave into the shelters he constructed boughs and leaves, he was making the first step towards urbanisation. Then Neolithic man cultivated plants, domesticated animals, and introduced agriculture. He created possessions in the form of crops, animals and tools, and possessions bred rivalry, which in turn brought the need for protection.

Families collected into friendly groups and formed villages in which they were associated to the land and enjoyed the advantages of mutual protection, and help. The villages were located on sites offering the natural protection of elevated terrain, islands, peninsulas, or they were surrounded with barricades and moats.(1)

Man was inclined to live in groups. In early ages he sought the companionship of his fellowmen and devised group entertainment and sports. The strong hold of the village became an appropriate sanctuary for the alter of his deity. It provided a place for worship; a meeting place for assembly, and a center for trade.(2) As a multi-purpose place for trade, purchases and comercial exchanges.



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(1) Gallion Eisner, "The Urban Pattern. Third Edition.
(2) Breasted, James, Henry. Ancient Times, a history of the Early World, Ginn. and Co. Boston, 1964.

The market and the shop belong to all dates and climates for they respond to those pressing necessities of commercial exchange and the feeding of the public which are inevitably inherent in every culture and in every civilization, even the most primitive.

It would appear that with the assyrians, the Babylonions and the Hebrews the market functioned at the gates of the city without any sort of permanent structure as protection. It was a type of fair made up of innumerable pushcarts or barrows. On the other hand, banking activities of all types apparently were carried on in the temples, and there is fragmentary information which permits us to believe that there were also places of artisans grouped together according to production or materials bought and sold.(1)

1.3 Markets and Shopping Facilities in Ancient Civilizations:

1.3.1 Markets and Shopping Facilities Ancient Egyptian Civilization:

Early civilizations spread along the fertile valleys of the Nile. Tigris-Euphrates, and Rivers where food, water, and transportation were at hand. A series of great and small Empires rose, waged wars, and fell and gave birth to the first kingdoms in ancient Egypt.

Supremacy shifted from one kingdom to another in Egypt, each adding its contribution to the evolution of the civilized world, but one characteristic feature was shared in common in all these civilizations.

Moved by a mystic superstition, the people were ruled by a ruling class, and they bowed before the reigning king as if before a deity. All possessions of the kingdom, the land, and its benefits were subjects to the will of the ruling monarch and his appointed emissaries.

In ancient Egypt during the pharaonic period the lives of the people were dedicated to the Pharaoh, the towns they built in the third millinium B.C. were errected upon his order. The ruling class engaged the people and

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(1) *Bouri, Maurier and others, Golden Ages of the Great Cities.*

artisans in building the great pyramids - (the royal tombs of Kings and Nobles).(1)

Home industries in Egypt were much developed. A well to do class of artists, artisans, handworkers flourished forming an intermediate class between the class of the kings and the poverty of the people.

Their new hand-made articles were exchanged and brought to the markets where the system was still the barter system. Fig. (1).

From the beginning of the 1st Dynasty 3360 B.C. a short and simple business and trade writing was developed seen in the picturesque hieroglyphic called "Hieratic and for the first time in history metallic money was used. for example, copper and gold rings of certain weights. It was used in book-keeping, account, commercial orders, reciepts, etc. The Nile was a natural water-way helping the commercial relations of Egypt with Sudan and Punt (now-a-days Somaliland) to flourish. In the 12th Dynasty Sesostris connected the Nile with the Red Sea by a canal in order to have a direct and easy commercial route to the Egyptian Capital. There were also trade routes to Palestine and Babylon Fig. (2). The Egyptian commercial ships traded even with south Europe in the Aegean Greek Period (Aegean Greek vessels were found in Allahun in tombs of the middle empire Period.(2)

1.3.2 Greek Civilization:

Between old Egypt and Historical Greece there was in important link. The importance of Medeterainian Sea. The Greek City was the outward expression of a collective life rich in activities. In the eighth century B.C. on the mainland of Greece a class of wealthy land owners rose in power and replaced the kings in their influence on the people. The palaces' power disappeared and temples dedicated to the gods of their religion replaced them upon the acropolis. The nobles dominated the city forcing the people to

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(1) *Fletcher, Banister (Sir): A History of Architecture in the Comparative Method. Edition Batsford, 1954.*

(2) *Farag, Fouad, El Kahira, vol. 1.2.3. Cairo, 1946, p. 173.*

seek new lands for colonies and trade hence a middle class of merchants emerged.(1)

Due to the continuous feuds between the new Economic group and the city - dwelling nobles, the selection of a common leader was necessary and as the common people were the majority, the common came into power and Democracy was maintained.

Under their successive leadership, the principles of law evolved as a basis of social conduct determined by the people. The Democracy established in the fifth Century and its intimate relation with the spiritual values was reflected in the Temples that were built upon the acropolis.

During the early years in the fifth Century when Democracy was at its highest the only public buildings present were the temples and those were few and simple. The common assembly place, the pnyx was an open-air podium where citizens met to consider affairs of state. The Agora or market place and center of activity was irregular in form at that time and consisted of a row of shops.

However later in the fifth Century during the flourish of philosophy and art a system of goemetrical forms and order was originated for the city plan "the clear atmosphere was conductive to the development of the love of precise and exact forms which are special attributes of Greek Architecture".(2) The Agora, being their only place of activity was usually situated in the center of the town plan.

The residential units of the Greeks were planned uniformly throughout the town plan and there was little distinction between the dwellings in the town, yet they preserved their privacy.(3)

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(1) *Lawrence, A.W. Greek Architecture. Pelican History of Art., Great Britain, 1955.*

(2) *Fletcher, Banister (Sir). History of Architecture on the Comparative method, Edition Batsford, 1954.*

(3) *Anderson, W.J.; Spiers, R.P. and Dinshoor, W.B., The Architecture of Ancient Greece, Batsford, 1927.*

They conducted all their social contacts and business affairs in or adjacent to the agora. On the whole it could be said that in that period the Greek citizen enjoyed a democratic way of life and equality of men cultivating an environment of culture and philosophy which produced Socrates, Plato and Aristotle.(1)

Thus the form of the society which was reflected on the city Planning and the central position of the Agora, where Free Speech and Assembly took place, defines its importance in the life of the people. e.g. Agora of Priene, Fig. (3).

The expanding affairs of the government required appropriate facilities. The Agora, or market place, was the center of business and political life, and about it were lined the shops and market booths. Accessible from the Agora square, but not facing it, were the assembly hall (ecclesiasteron), council hall (bouleuterion) and council chamber (prytaneum).

The Agora was usually located in the approximate center of the town plan with the major east-west and north-south streets leading to it. It was designed to accomodate all the citizens who would have business in the market place or attend public functions in the adjacent public buildings. The open space enclosed by the Agora occupied about five percent of the city area.(2)

The Agora which was the center of city life, was not exclusively a market however. Certain Areas were reserved for particular marchants or atrisans; from literary sources(3) we know that there were specjal zones for these selling pots and pans, fresh cheeses etc., and at the point of most intense traffic the bankers were installed, surrounded by businessman, brokers, Besides those modest tradesmen organized in rather a provisory fashion, there was the commercial society - the barbers, the doctors and the perfumers- which had veritable shops in the surrounding buildings. It appears that during the morning as many as twenty thousands of people entered the Agora of Athens.

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(1) *Lewis Mumford, Culture of Cities.*
(2) *R.D. Martienssen, M. Arch., D. Litt. (RAND) A.R.I.B.A. The Idea of Space in Greek Architecture.*
(3) *Mercati E. Negozi, Roberto Aloi Heopli.*

The plan of the Agora was goemetrical in order. Square or rectangular open spaces were surrounded by colonnaded porticoes sheltering the buildings about the square. The plan was arranged to avoid interference between the movement of people across the open space and those who assembled for trade and business in the market. Streets generally terminated at the Agora rather than crossing it, the open space being reserved primarily for pedestrian traffic and circulation. This form of rows of shops with a colonnaded gallery in front of them could be considered as one of the oldest known organized shop groups known later as the origin of stoas in the Greek Hellenic period. Deep colonnaded portices (stoas) usually closed the Agora on three sides except for narrow pathways. They offered shelter from rain and sun to the shops and market booths beneath.(1) Fig. (3.4.5)

At first the stoas did not have any partitions, but later on, wooden partitions projecting half way from the back wall towards the colonnade were used to divide the interior into stalls. When the stoas became deeper an internal colonnade was introduced to support the roof. Fig. (6) and afterwards the partitions were made of stone.(2) [6th Century].

Characteristics of Stoas:

1. The largest stoa was in Corinth, a row of 33 shops about 160 m long, each shop with a door at the back giving access to the store rooms behind.

2. Deep wells inside the shop supplied with water from a near cistern or a spring in the Agora were used by shop-keepers for cold storage.

3. A variety of speciality shops were provided (paint, clay, pottery shops etc.).

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(1) *Fletcher, Banister (Sir) A history of Architecture on the Comparative Method. Edition Batsford, 1964.*

(2) *Anderson, W.J., Spiers, R.P. and Dinsmoor, W.B. The Architecture of Ancient Greece.*

Fig. 3. PRIENE

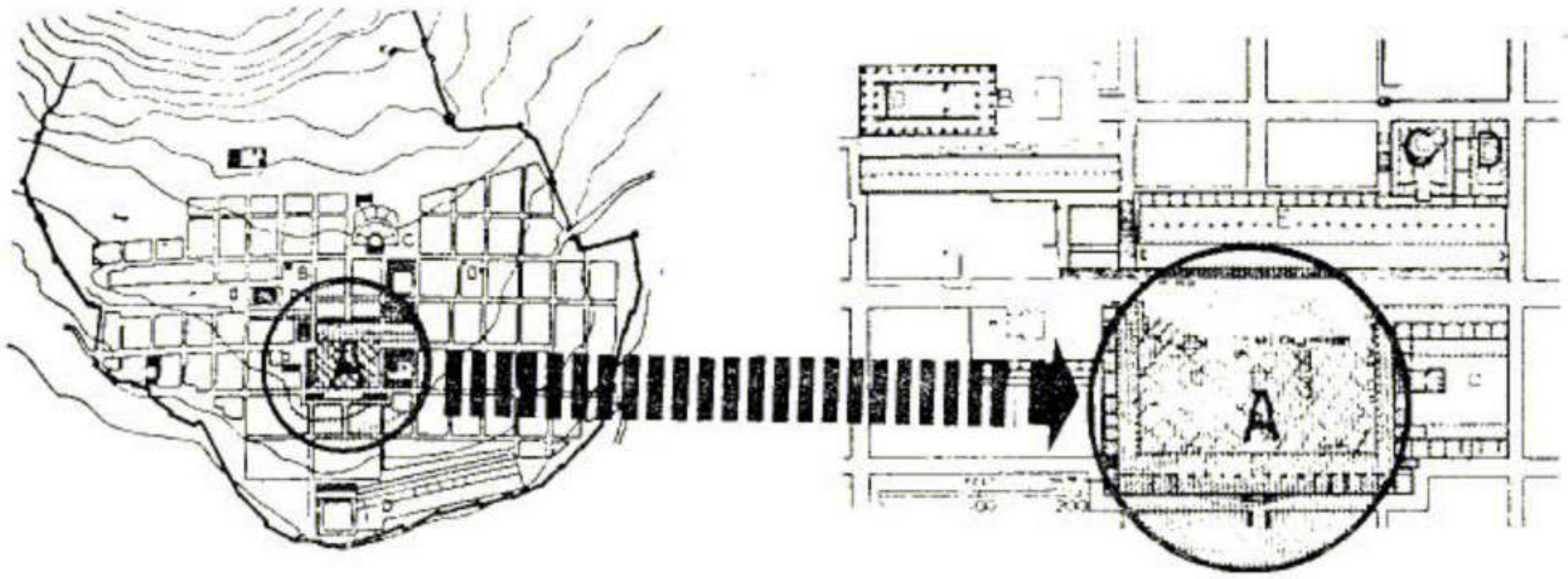
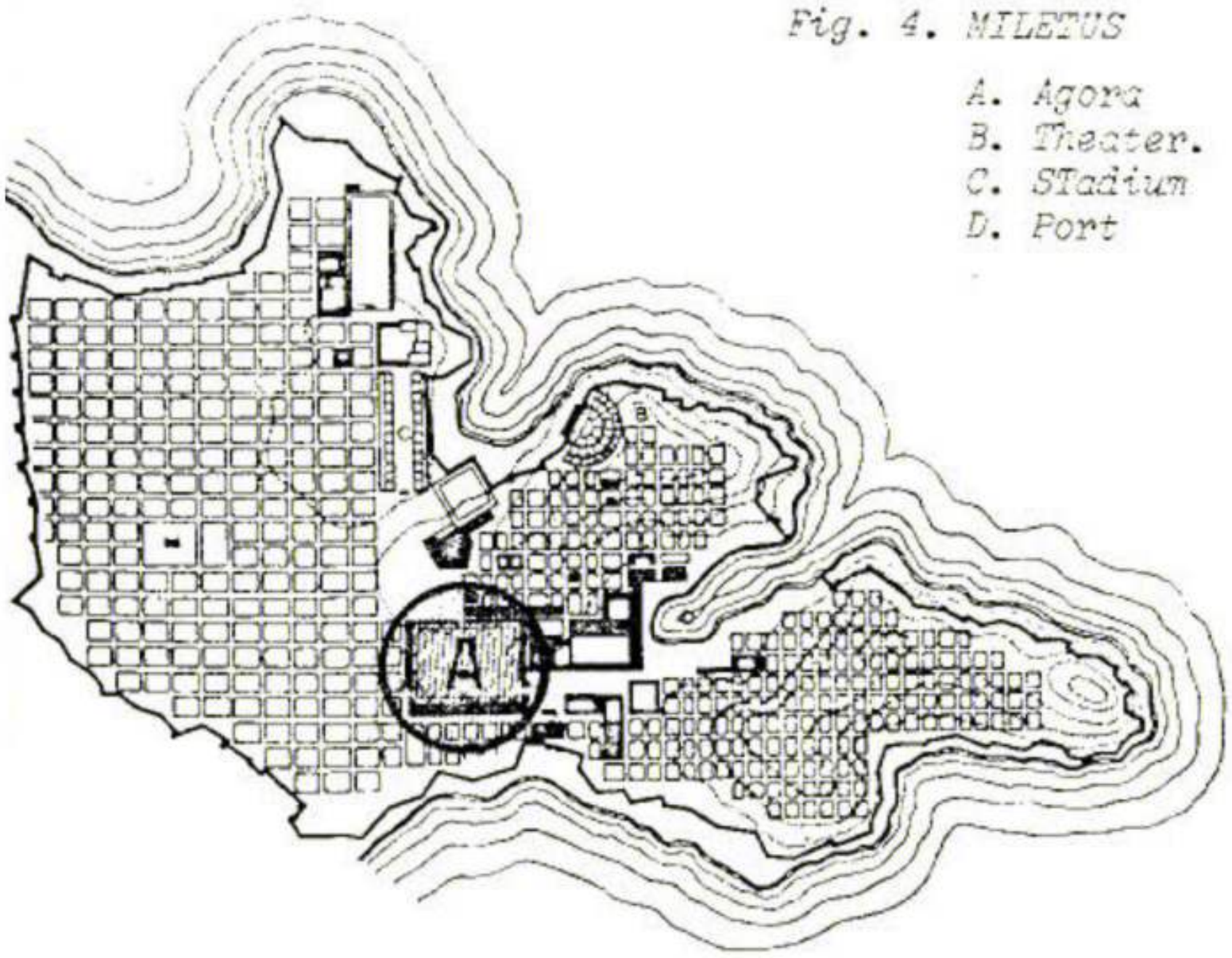


Fig. 3. A. Agora
B. Temple
C. Theater
D. Stadium

A. Agora of Priene.
B. Temple of Athene Polias.
C. Theater.
D. Stadium.

Fig. 4. MILETUS

A. Agora
B. Theater.
C. STadium
D. Port

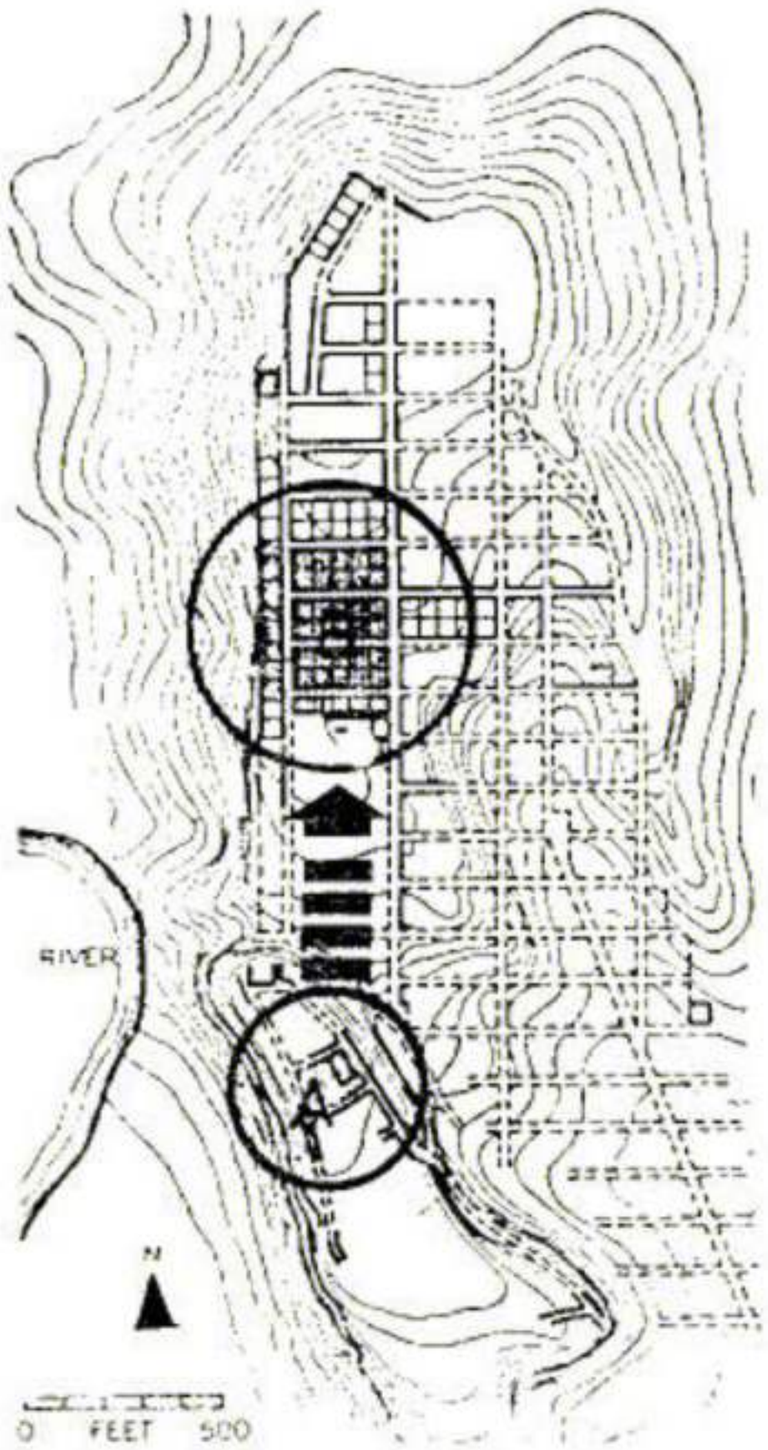


The Agora in these cities occupies the approximate geometrical center of the town. The contours of the site indicate that some of the streets were very steep, steps frequently required, but the main streets connecting the gates and the Agora were generally placed so that beasts of burden and carts could traverse them readily.

Reff : Anderson, W.J. Spiers, R.P. and Dinsmoor W.B.
" The architecture at Ancient Greece "

Fig. 5. OLYNTHUS.

A. Old Agora.
B. New Agora.

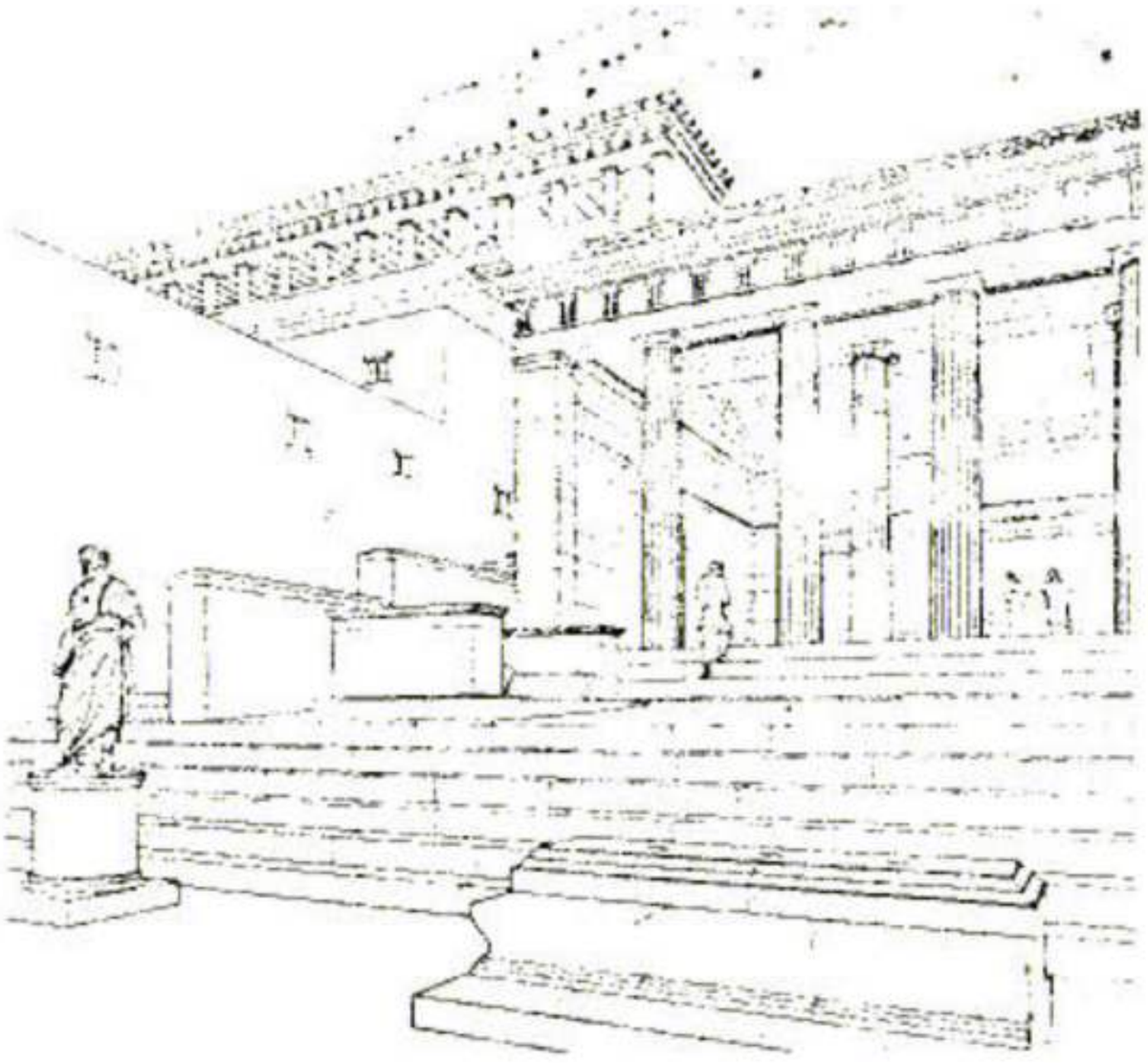


Reff : Anderson, W.J. Spiers, R.P. and Dinsmoor W.B. "The Architecture of Ancient Greece" Batsford (1927)

Fig. 6. North-West corner of the Agora at Priene, showing portion of the principal stoa with the internal columnade

Reff : Fletcher, Banister (sir) A History of Architecture in the Comparative Method.

Edition Batsford 1954.



4. The stoas at Assos were doubled at the back by a bazaar which included a basement in addition to two floors. Also in the same method was designed the Stoa at Priene but of one floor. Fig. (6). The study has revealed the nature of the elements that made up the characteristic arrangement of the Greek activities.(1) The limitation of structural method and available material, the influence of social conditions and economic trends, the demands of human habit and human scale. All these factors played a defining part in the search for architectural standards in the Greek shopping activities.

During the fourth Century there was a growing indifference towards the government due to the people being accustomed to liberty and democracy began to fade away forming distinction between the people. The middle class was disappearing and a wide gap was growing between those with money and those without it. The power of money was spreading and corrupting morality. Every thing could be bought, everything had its price and wealth was the measure of social values. The city became the scene of luxury, magnificent public buildings - the odein, the treasury the library, the prison were added to the Agora. [By the third and second centuries B.C. the hellenistic city faded with the degradation of the social structure].(2)

1.3.3. Roman Civilization:

the Social life of the Romans could clearly be seen in their buildings. Unlike the Greeks the Religion of ancient Rome was part of the constitution of the state and Religious feelings had not so strong a hold on the Romans as on the Greeks and did not enter in the same degree into the life of the people.(3) Temples were the predominating buildings of the Greeks and were of one storey but the complex civilization and varied needs of the Romans introduced other types and of several storeys which were frequently ornamented e.g. Coloseum, Thermae, Temples, ampitheaters, aqueducts, bridges, tombs and basilicas and the most important the Forums, (the equivalent of the Agora).

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(1) *Lawrence, A.W.: Greek Architecture, Pelican History of Art, Great Britain.*
(2) *Robertson: Handbook of Greek and Roman Architecture.*
(3) *Haskell: The New Deal in Old Rome.*

The Romans were skilled engineers and reduced the Greeks graceful art forms into mechanical formulas that could be arranged in parts on graph paper. They were not artistic but they excelled in administration and devised rules which are in use up till now. They were genius with technical problems that were created by the presence of great numbers of people in cities.

Here the citizens observed distinction in class but this fact caused no problem in their lives for the common people indulged themselves in the various forms of entertainment (carnal displays - bloody gladiatorial combats). During the Republic until 390 B.C. the Forum was made of shops and had a human scale.

World conquest was the ambition of Rome and wealth won in combats poured into the capital. Emperors succeeded one another and each one building a forum exceeding in size the one that preceded it. The scale of all these structures, the spaces they enclosed, and the architectural adornments intimidated the Roman Citizen.(1)

But with the rise of Roman Power 78 B.C. and the gradual transformation of the Forum into the political center of the city and the empire, the monumental buildings eliminated the small shops, the latter were regrouped and concentrated in various other parts of the city and although still named Forum they became specialized markets, or centers of certain trade or artican there was the "Forum Vinarium" for wine, others dedicated to the sale of fish, fruit and vegetables, and even one where the rarest delicacies could be found Fig. (7).

The idea of a market as an architectural structure, rather than as a goegraphic place of sale, began Roman and was first realized at 179 B.C. with the construction on the site of a former fish market what was known to be the "macellum", a general market despite the fact that today this word refers particularly to a "slaughter house". Other Macella followed both in

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(1) *Robertson: Handbook of Greek and Roman Architecture.*

Rome and in the outermost provinces and were generally of a standard type: a four sided rectangular arcade under which were arranged the various booths or stalls and in the center, open to the sky there was either an alter or fountain. The walls were usually of stone as can be seen in the covered marcatus of Traiani of the first century A.D.

The Maractus Traiani was a precedent of the department stores of the nineteenth century. Their similarity lies in their vertical organisation and the great variety of their mechandise.(1)

Maractus was a three storeyed market and the stairways were near the ends of the curve which overlooked the Forum Traiani the largest interior space was the cross-vaulated market hall on the third level. Fig. (8).

However together with the development of the covered market, the shop also underwent a process of enormous expansions. They began to extend into all of the side streets and occupy the ground floor of the houses with vast assortments of varied merchandise. The most typical arrangement was a small room on ground level with a wide entrance on the street and an interior and an exterior balcony arrived at by means of a ladder. The outside balcony arrived at by means of a ladder. The outside balcony served as a shade to protect the entrance from the rain.

The entrance consisted essentially of an "L" shaped counter, with its small arm, turned towards the street, made up of various tiers for the display of merchandise the longer arm extending towards the interior of the shop was used for the actual sale.

Yet the monuments to the glory and greatness of leaders were the main characteristics of that period. The height of these buildings reached six, seven and eight floors hence, the prosperity of the city was only limited on the nobles while the city dweller lived in slums.

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(1) *Giedion, Sigfried. Architecture and the Phenomena of Transition.*

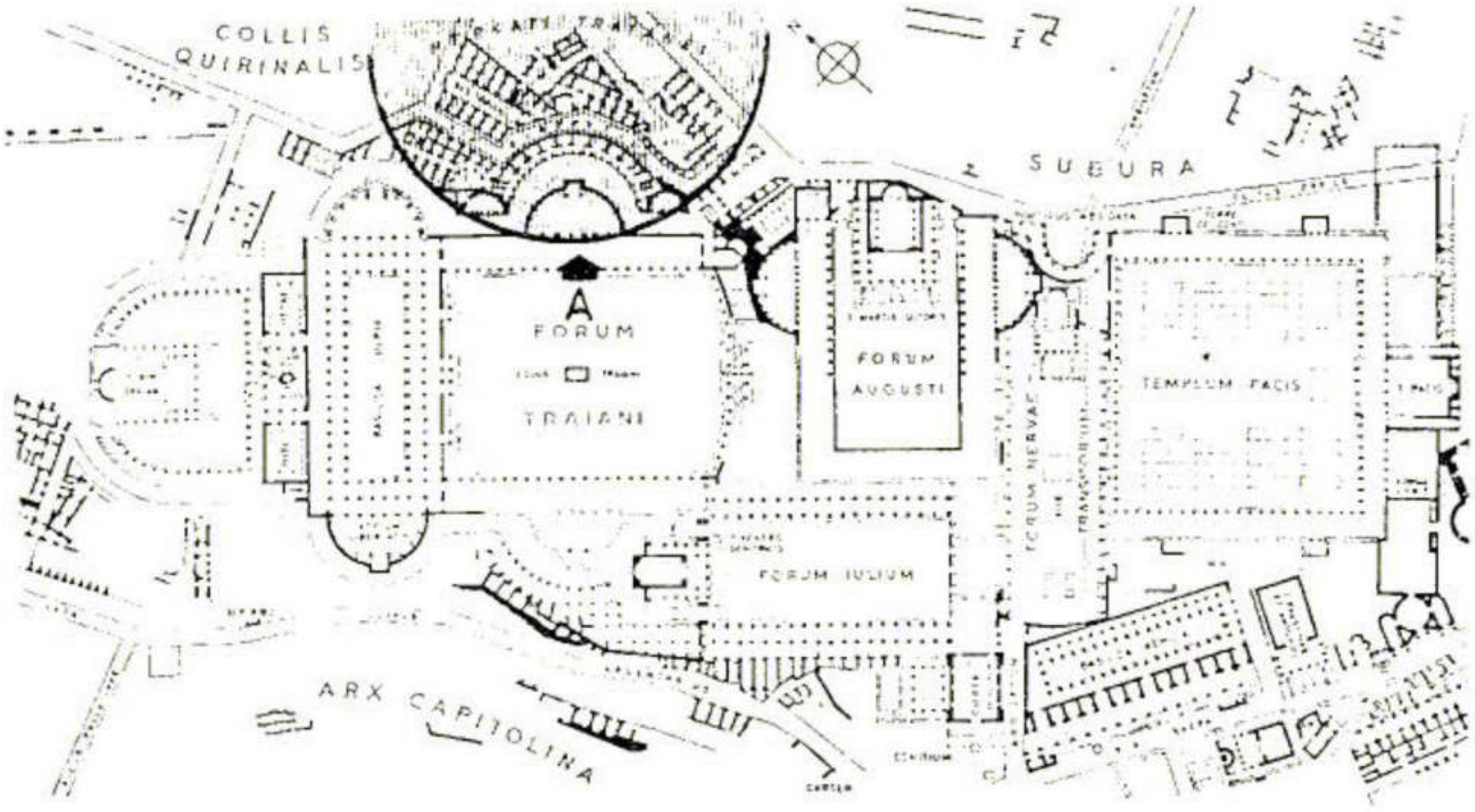


Fig. 7 : Plan of the Imperial Fora, Rome Each individual forum was laid out on axial principles.

Fig. 8. Mercatus Traiani, Rome. view from "A" six-storeyshopping center, the first two stories formed a large semicirele adjacent to the forum of Tragan.

Reff : Architecture and the Phenomena of Transition.

SIGFRIED GIEDION

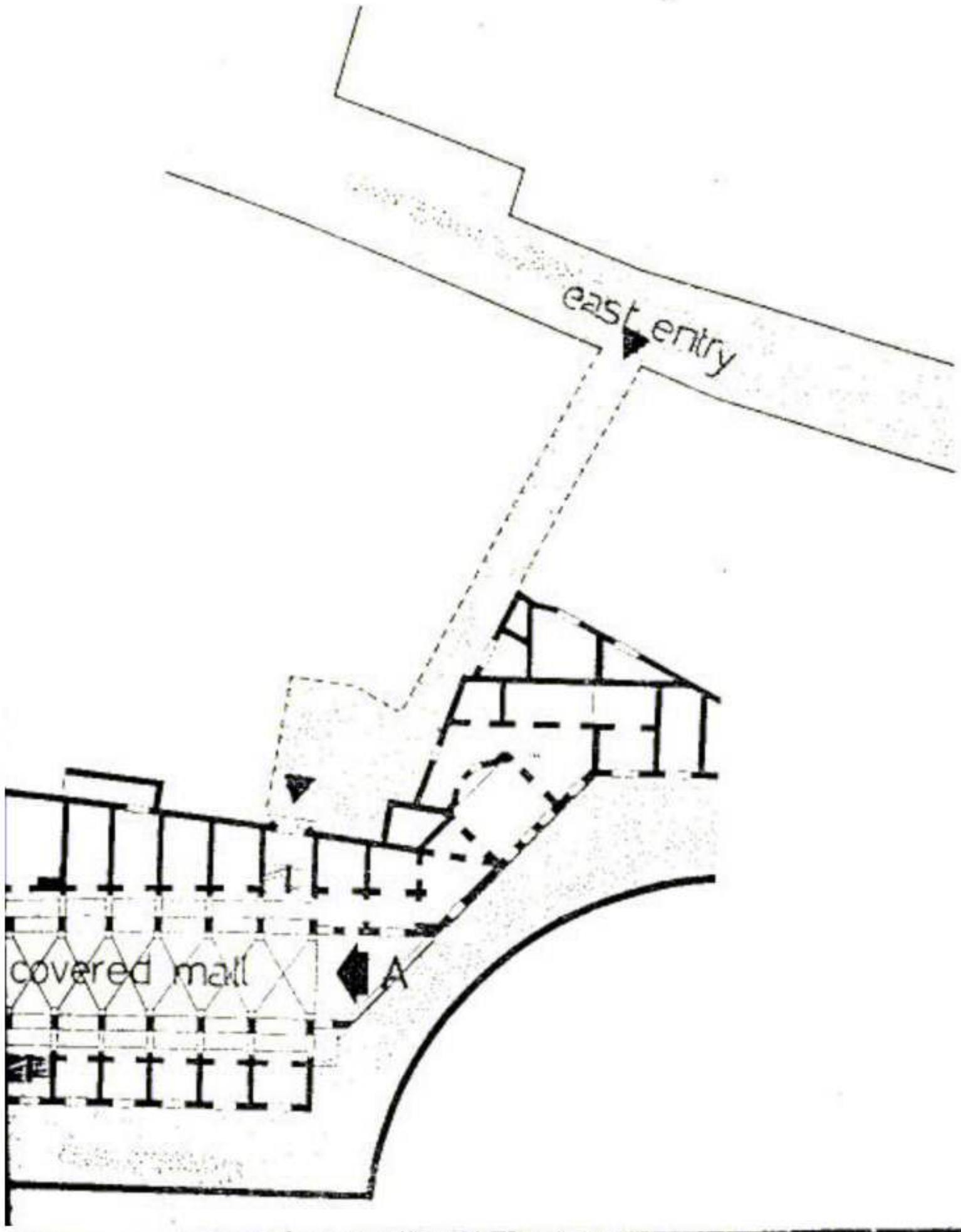


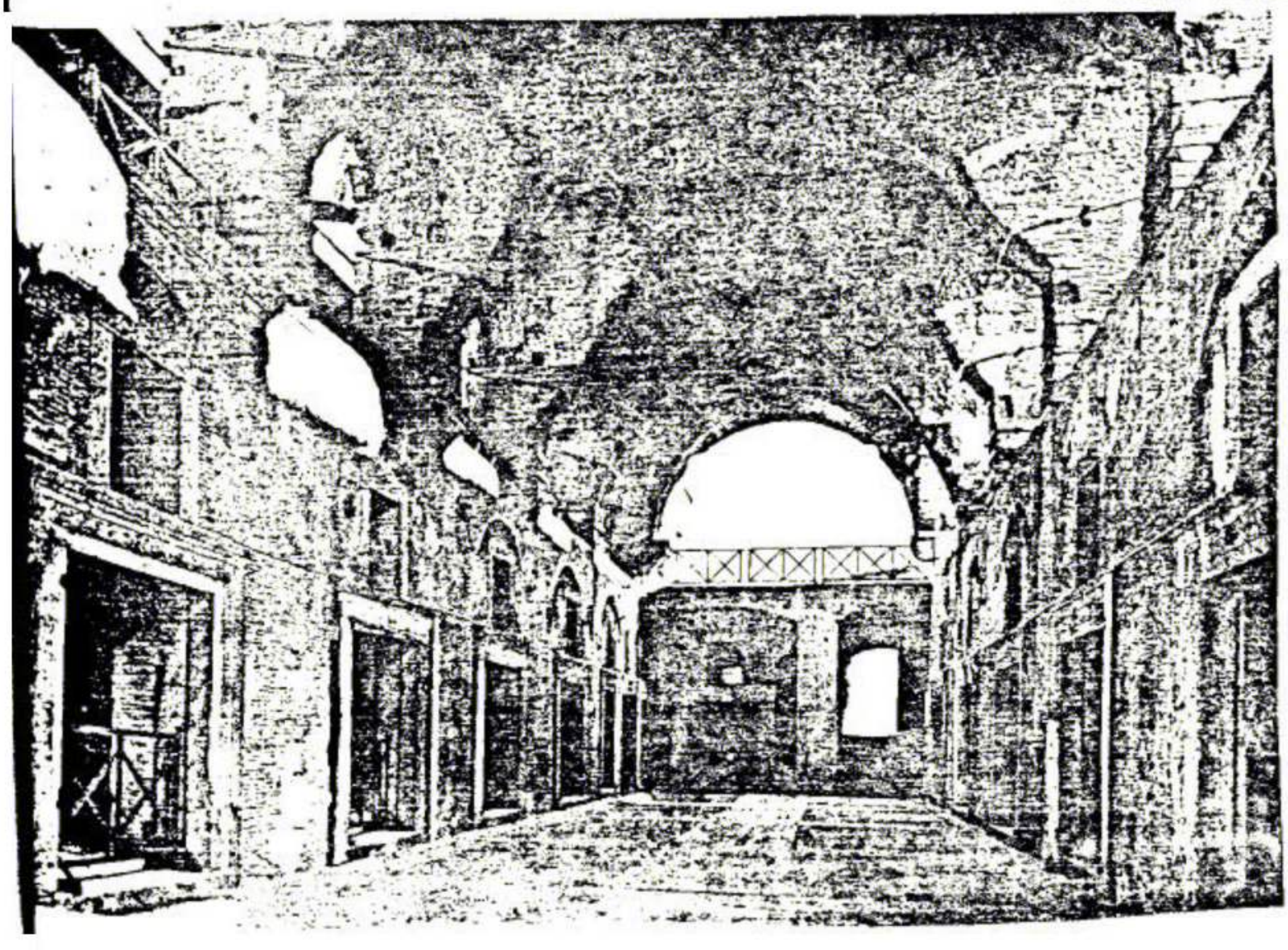
Fig. 8 : Mercatus Traiani Plan of the third level of the shopping center, showing the connection of the east entry with the traffic network of the city.

Reff : Architecture and the Phenomena of Transition.

SIGFRIED GIEDION.

Fig 8 : Marcatus Traiani a view from "A" showing a two-story, crossvaulted market hall, on the third level.

The complex was linked with the entire city by providing direct access on three levels.



Depression and misery pervaded the population and some perished in want.

Here rose Christainity and rapidly invaded the Eastern Mediteranian causing unsettled social conditions. The steady progress of Christianity was parrallel to a series of Emperors. This monarch continued during the fourth and fifth century up till the begining of the six century (526 A.D.) when Theodoric The Goth reigned in Italy offering a period of peace and prosperity.(1)

As the Empire sank under wealth and riches it also settled in vice and idleness causing social and economic confusion which in turn was an opportunity for uncivilized rulers to take hold of the city - states. As the agriculture was the reason for economy of that time, the rulers divided the land among lords who encouraged their presence and the populace served the land under the lords, but the country side was not safe stronger fortifications had to be built to protect the people, so many of them moved into the town.(2)

1.4 The Middle Ages:

1.4.1. The mediterranian:

By the expansion of Islam in the Seventh Century and the conquest of the Eastern, shores of the Mediterranian. On these coasts, which had once maintained an intercourse based on community of manners, needs and ideas, two Civilizations were against each other, the crescent in the East and the cross in the West, the difference in faith kept them in continuous war. The insecurity was so great along the coast that the merchants dared not venture any more and there was a rapid decline in Commercial Activities.(3)

In the eighth Century the interruption of commerce brought about the disappearance of the merchants and by the end of the eighth century Western Europe depended mainly on agriculture. Although, the Roman Empire depended

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(1) *Town Planning in theRoman World. Town Planning Conference, Transactions, R.I.B.A. London, 1910.*

(2) *Hamlin, Talbot. Architecture through the Ages, G.P. Putnam's Sons, 1940.*

(3) *Pirenne , Henri. Medieval Cities. Trans. Frank Halsey. Princeton U. Press, 1925.*

also partly on the land yet in theMedieaval period the estate functioned differently, commerce having disappeared between towns.

The Lords owning these estates made arrangments to produce in their domain, the tools and garments which they and their servants needed. Hence the extablishment of those workshops (Gynaecas) characteristic of the Early Middle Ages were necessary in the absence of Commerce and Industry in supplying each estate with its own needs.

The Byzantine Empire and Especially Venice had not been influenced very much by the continuous wars and being a landless city supplied towns having artisans and professional merchants with trade, and heedless of difference in faith they renewed their business with Africa and Syria.

From the Ninth Century the commercial activities of the Middle ages was remarkable in view of the difficulties confronting the movement of people. The condition of the roads were terrible and a number of Tolls were created (Toloneum or market toll) but they were not used for public purpose. Mean of transport had to be adapted, light two-wheeled wagons were generally used due to the bad state of roads. But with the revival of trade and the coasts becoming less dangerous they turned to navigation again.

One of the most striking features of the economic organization of the Middle Ages was the important role played by the "fair" down to the thirteenth Century and though they were subsequent to the small local markets (which were appearing in ever-increasing numbers over the whole of Europe by the beginning of the Ninth Century) they were not connected to them. The fairs were periodical meeting places for professional merchants but the small local market, supplied by the peasants round about, provided for the daily needs of the numerous clergy of the cathedral and of the churches or monasteries grouped around it. The small markets were in the center of the cities resided by the bishops and this Center was mainly important from the religious point of view. At the big annual festivals the population and pilgrims flocked into the city reviving commercial activities, Fig. (9)[1]

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(1) *Renard, Georges François, Guilds in the Middle Ages. London, 1919.*

The concept of the covered market, an architectural structure, was practically unknown in Italy during the Middle Ages. The use of arcades or the use of the churches for the display of the merchandise was temporary and had the character of the fair.

The medieaval market was a return to the pattern of the Agora with a public square generally reserved for the stalls and barrows of the merchants. The other European Countries followed the Italian Example. The oldest market of Paris, "The Marche Palu" perhaps built before the elevnth Century extended along the seine from the Petit Pont to Pont St. Michel. There are numerous open air markets of medieval origin in Germany. But the covered market was known in Northern Europe at that time e.g. "Halles" in Paris and the famous market of Bruges, built of stone in 1239. Fig. (10)(1)

However the medieaval shop, was not really different from its Roman counter part, and does not change throughout Europe till the 16th Century It was generally small, sometimes with a back room or an interior balcony. The opening onto the street was partly closed by a counter with the result that the customer generally stayed in the street frequently protected by a protruding roof.

It is only late in the Renaissance that the conception of a market as a building was revived in Italy.

The old walls during the early years were sufficient for their protection but later when security was a main importance when they were threatened in the South by Saracens and in the North and West by Normons and at the beginning of the tenth Century by the Hungarians. Fortified Castles were errected by princes to serve as shelter for their men and surrounded by walls other than those surrounding the city.

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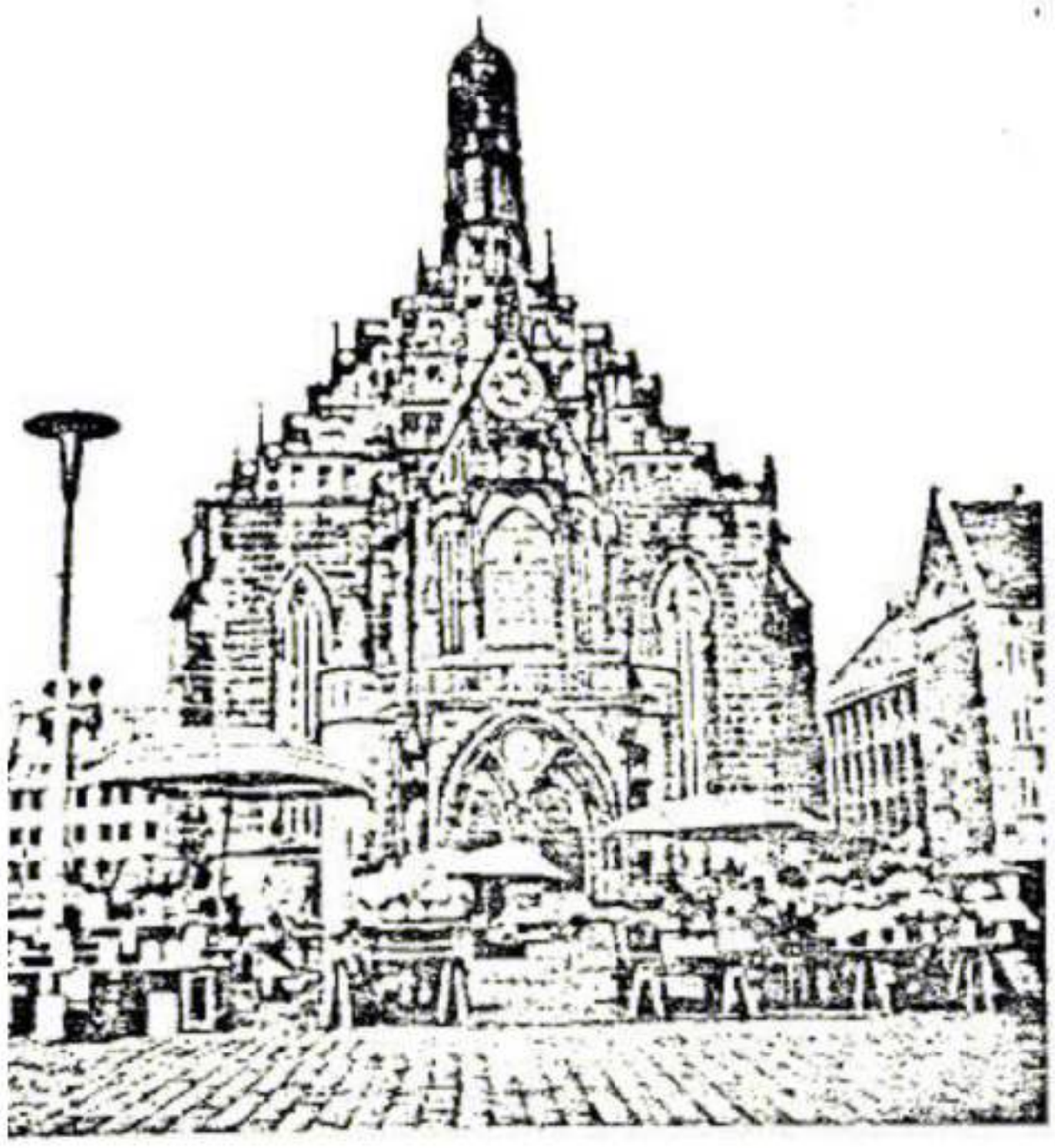
(1) *Hammarstrand, Nils "Cities Old and New" Journal of the American Institute of Architects. New York, 1926.*



g. 9. Market Place beside the church Norimberga. (1352 - 1361)

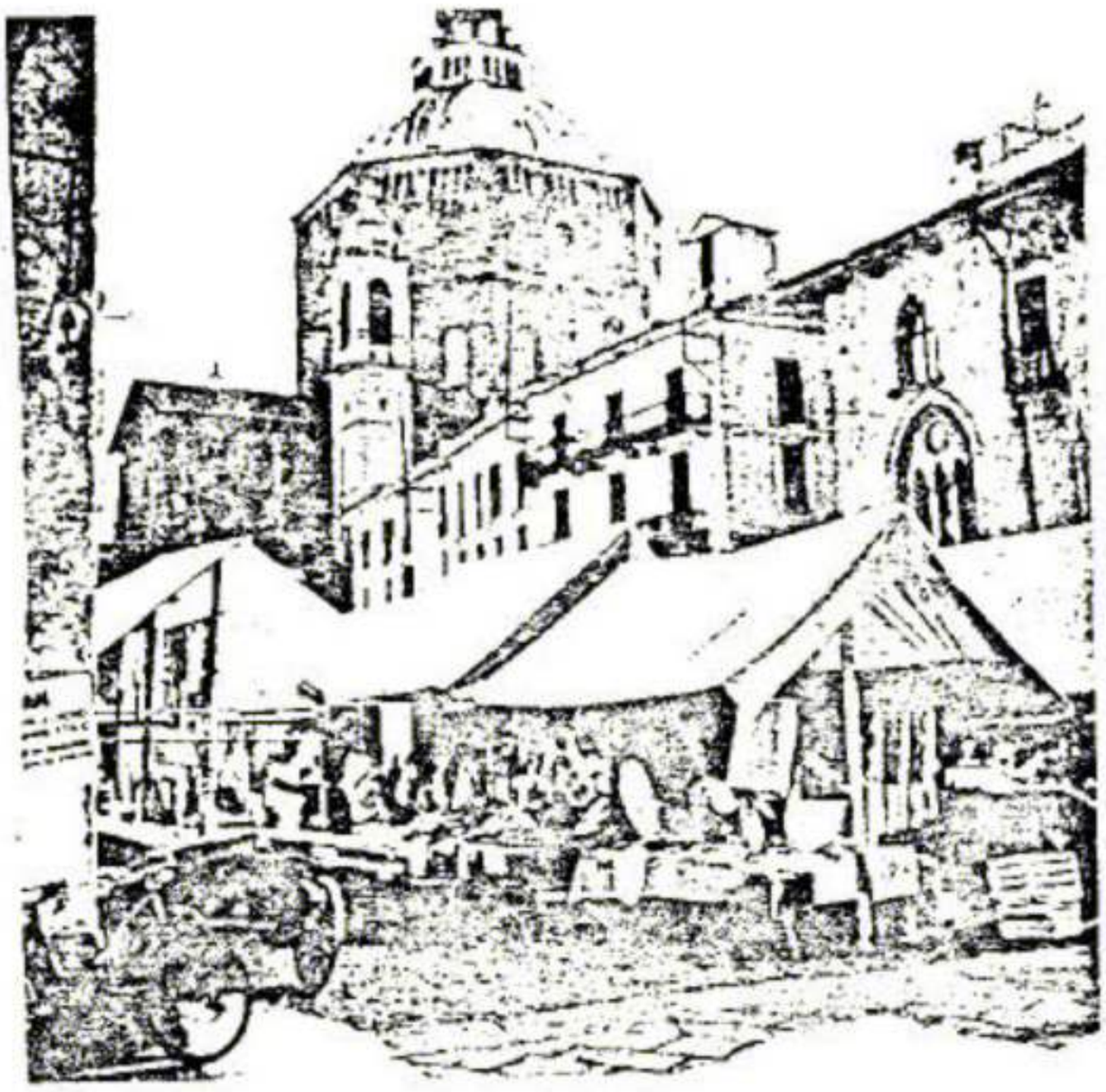
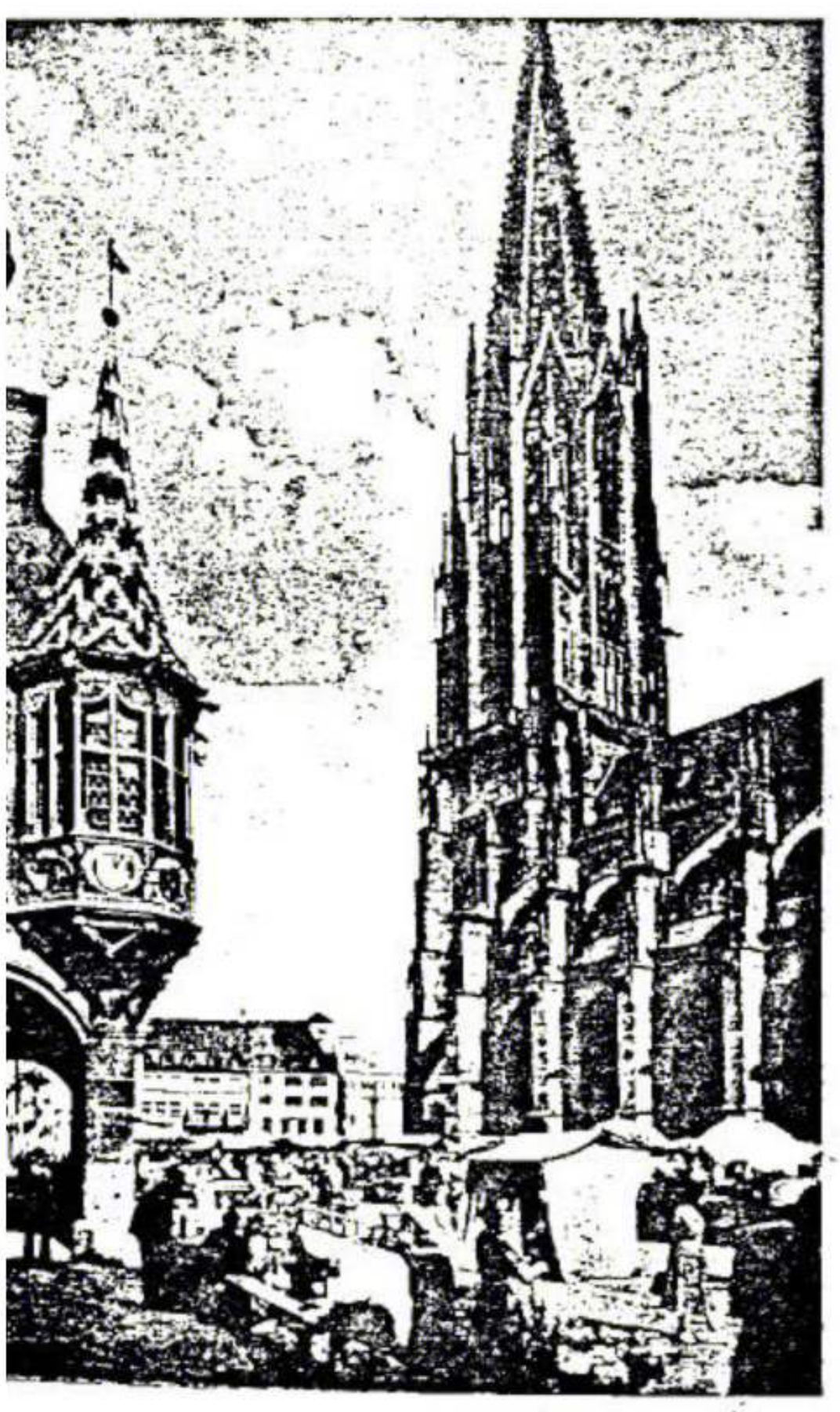


Fig. 9. Market Place, Pavia.



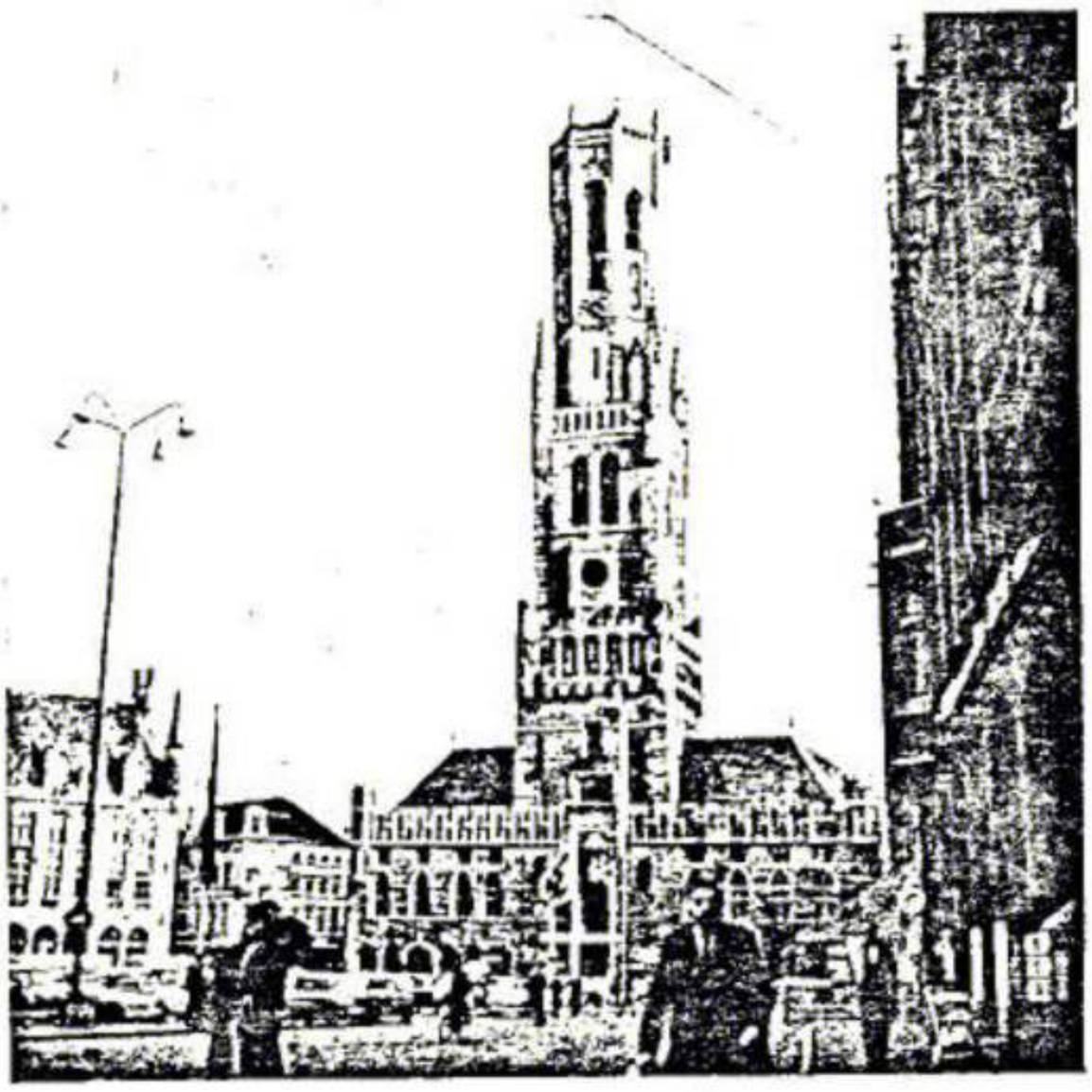


Fig. 10. Les Halles,Bruges (1239)

Reff : Mercati E Negozi, Robcrto Alol Heopli.

Fig. 9. Market Place of Duomo, Freiburg

With the revival of trade. 12th Century, a middle class arose. the wealthy Merchants, to challenge the power of lords or princes.

The merchants and craftsmen formed guilds to strengthen their social and economic position betweent he class of nobles and the class of the religious men, for the Early Medeaval town was dominated by the church and the church plaza became the market place.

The town sites on the whole were usually on irregular terrains, occupying hilltops or islands. The concept adapted in this period was that the towns design was fitted to the topographic features according to degrees of distinction; from cathedral to the moat and walls. Roads radiated generally from the church plaza and market square to the gates e.g. Carcassone, Noerdilingers, Montpazier. Fig. (II).

Life in Medieval Cities had characteristics which were enfluenced by the church. The church gave people inspiration, encouraged better deeds, added strength to the existence of people by offering music and meditation and helped in pervading a sense of human scale in the informal environment of the city.(1)

This could be seen in the policy that each town reserved for its own citizens the advantages which it and its craftsmen could offer them and any foreign manufacture was prohibited to enter the town except during the fair and any craftsman who wanted to enter into their franchise (Trade Organization) had to pay large fees and a multiplication of qualifications such as legitimate birth, cirtificates of origin or of good character and so on.

Nevertheless this internal manufacture gradually declined as a result of the constant rise in wages, the growing claims of workers and numbers of workers began to migrate to Italy and by the fourteenth Century large scale commerce spread over the whole of Europe. One of the most striking

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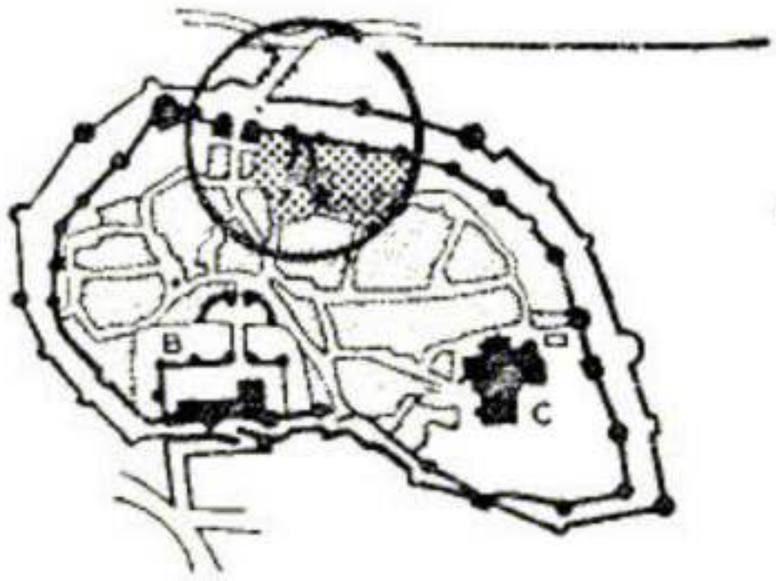
(1) *Life in a Medieval City. London, 1920.*



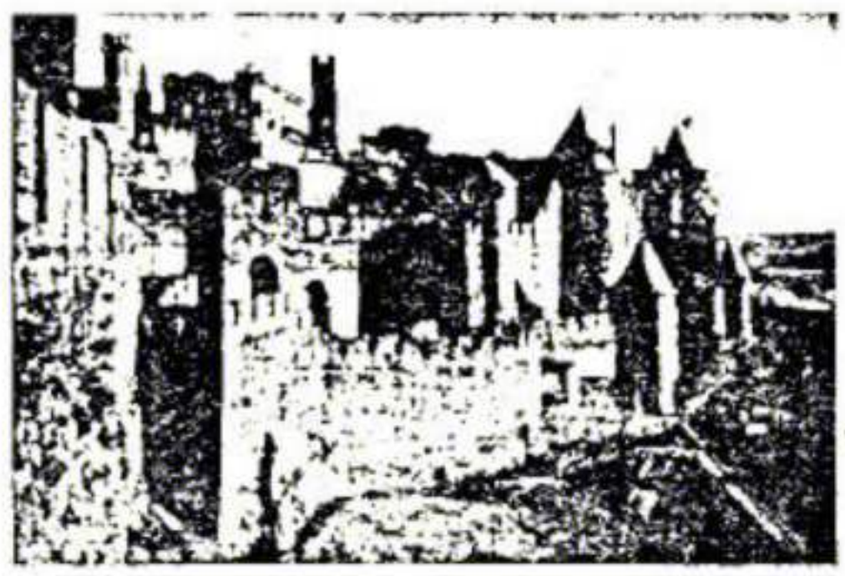
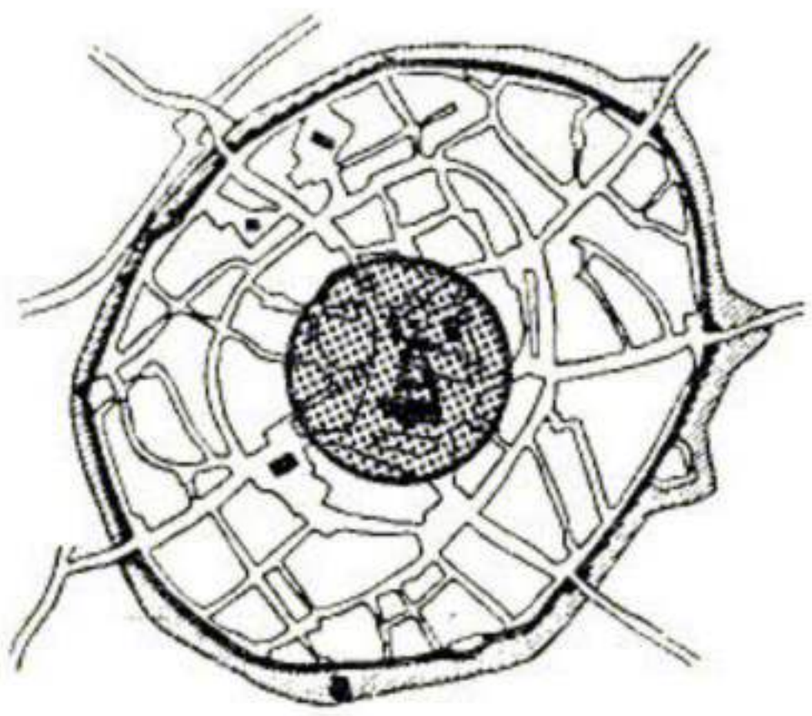


Fig. 11. Carcassonne .

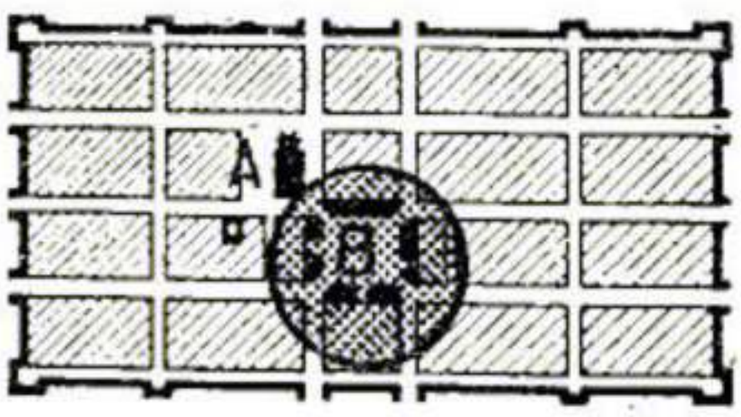
A. Market square B. Castle
C. Church of Sr. Nazaire.



Noer Dlinger.

A. Cathedral Plazza.

B. Moat.



Montpazier :

A. Cathedral square

C. Market square.

Reff : The Urban Pattern. Fourth Edition
Gallion Eisner.

Phenomena of the fourteenth and Fifteenth centures is the rapid growth of Commercial companies in different parts of the Continent. For the Italian capitals taught men the management of capital, book-keeping and the various forms of credit and ended by dominating the trade in money. Although they found themselves faced with a growing number of rivals who had followed their steps they still held the first place. Modern banks began to appear beginning by "Case di S. Georgio" in 1407 at Genoa followed by banks in Venice, Florence, etc. On the whole it was the beginning of a process which on the long run was destined to throw aside the medeaval character of trade.(1)

1.4.2. Islamic World:

As has been mentioned previously, Islam appeared in the East in the Seventh Century and through different periods governed by different leaders, the Abbassyeens, the age of governers, the Toulons The Akhshideens and the Fatimides and the Ayoubyeens till the Mamluk period where significant Commercial buildings could be mentioned.

The mamluks were slaves brought to the east from different countries like the Kokaz and Small Asia, Turkistan and other countries even some were bought from European countries. They were taught and trained to fight the different leader's wars. Due to the continuous conflict between those leaders the country was in a continuous state of depression till the end of the Ayoubyeen that by the death of "Salah El Din El Eyoubi" the Mamluks were so powerful and so great in number that they took over the country. 1250 - 1380.(2) They were organised and their period was a period of flourishment to the country. The trade route having changed its route away from the country and also the country being economically blockaded by Europe, the Mamluks had to turn inward for wealth and to encourage internal trade and agriculture and manufacture.

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(1) *Harcourt, Brace, New York, 1961. The City in History: Its Origins, its Transformations, and its Prospects. Har.*

(2) *Al Kalkashandi: The help of the town p. 72-73.*

The social structure of the people was divided economically into seven categories (1) the sultans or rulers (2) the merchants who lived in luxury (3) the sellers (4) the workers and middle class (5) the people who worked in agriculture (6) the people who lived in the farms; (7) the poor people were the cultured and the soldiers.

Before speaking about the commercial buildings built in that period it is important to know the different regions around the nile famous for commerce, industry and agriculture to give a clear view for the internal trade activities. Between these regions and where great open-air markets were held in the heart of the Moslims city Fig. (12).

1. Sharnout : Famous for Pipes and Nitron metal(1)
2. Rashid : Market for cereals, fish and fruits(2)
3. Shubra El Kheima : Its market was on Tuesday and it sold pottery, ovens and oil products(3) Fig. (12)
4. Mena of the Princes : A big town with markets and Hamams and its market was on Sunday famous for cattle and sheep, cereals and it is one of the famous markets of that time.(4)

Those and other markets for Poultry and clothes and food etc... were present all over the country but we must understand that the people did not benefit from these very specialized markets but the market for luxury products was limited on the sultans and their friends. Their money system was mostly like the barter system. The whole sale merchants left their boxes of silver and gold in a "Mumluk" building named "Funduk Belal" where they did their banking business and instead of their gold and silver they recieved documents stating their fortunes.(5) Fig. (13).

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(1) *El Makrisi: Gani El Ashar 27 Writings.*
(2) *El Makrisi: Gani El Ashar 27 Writings.*
(3) *Ibn Dokian: Al Intisar Lewasta Akd El Amsr 5/47*
(4) *El Makrisi: The Writing 3/211.*
(5) *El Makrisi: Writing 3/149 - 150.*

Fig. 12. In NOrth Africa. Food stuffs are sold in the open air.

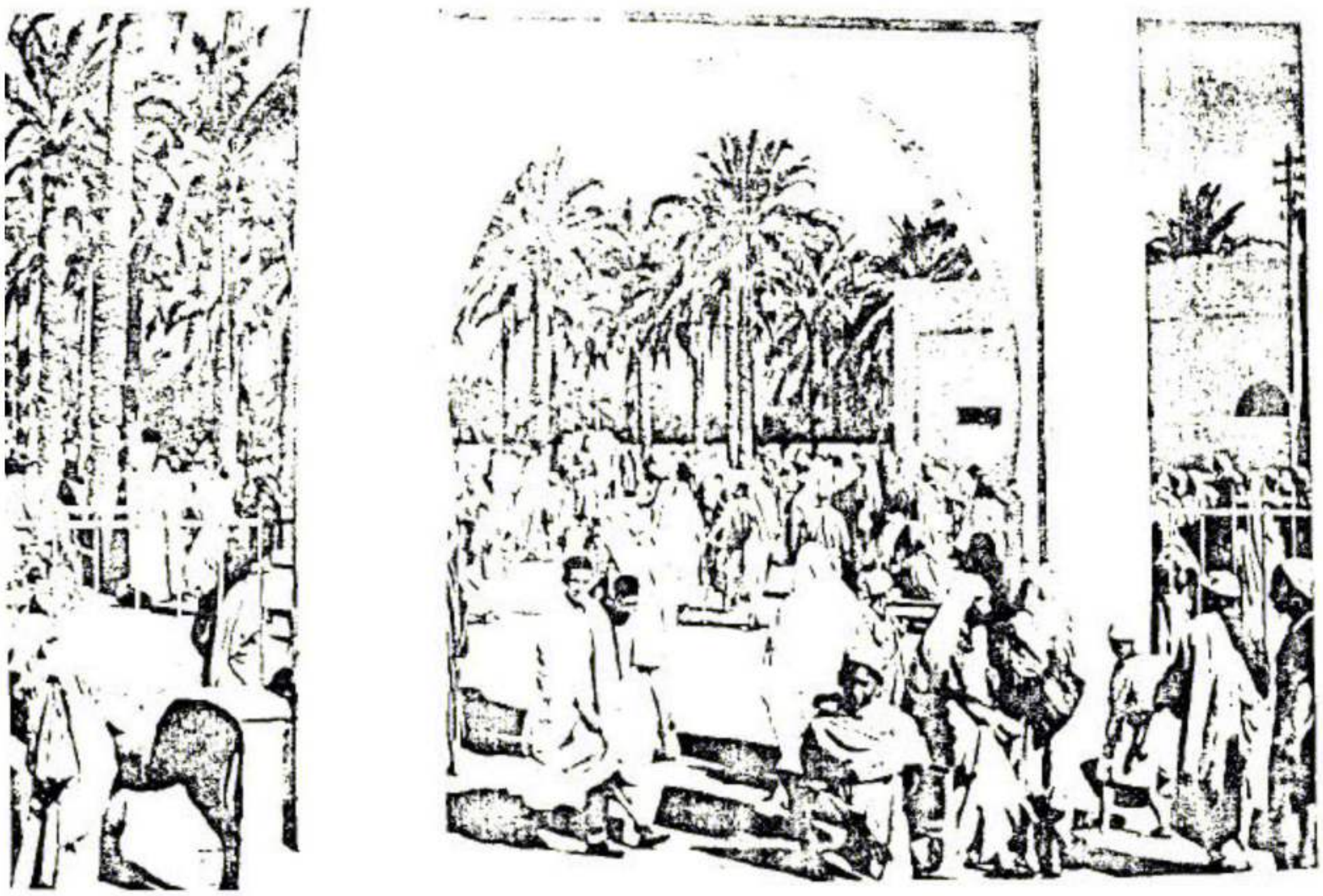

Fig. 12. Market day in a North Africa Suq

Reff : (Trade and Travel, Markets and Cavauanserais)
Eleanor Simms.

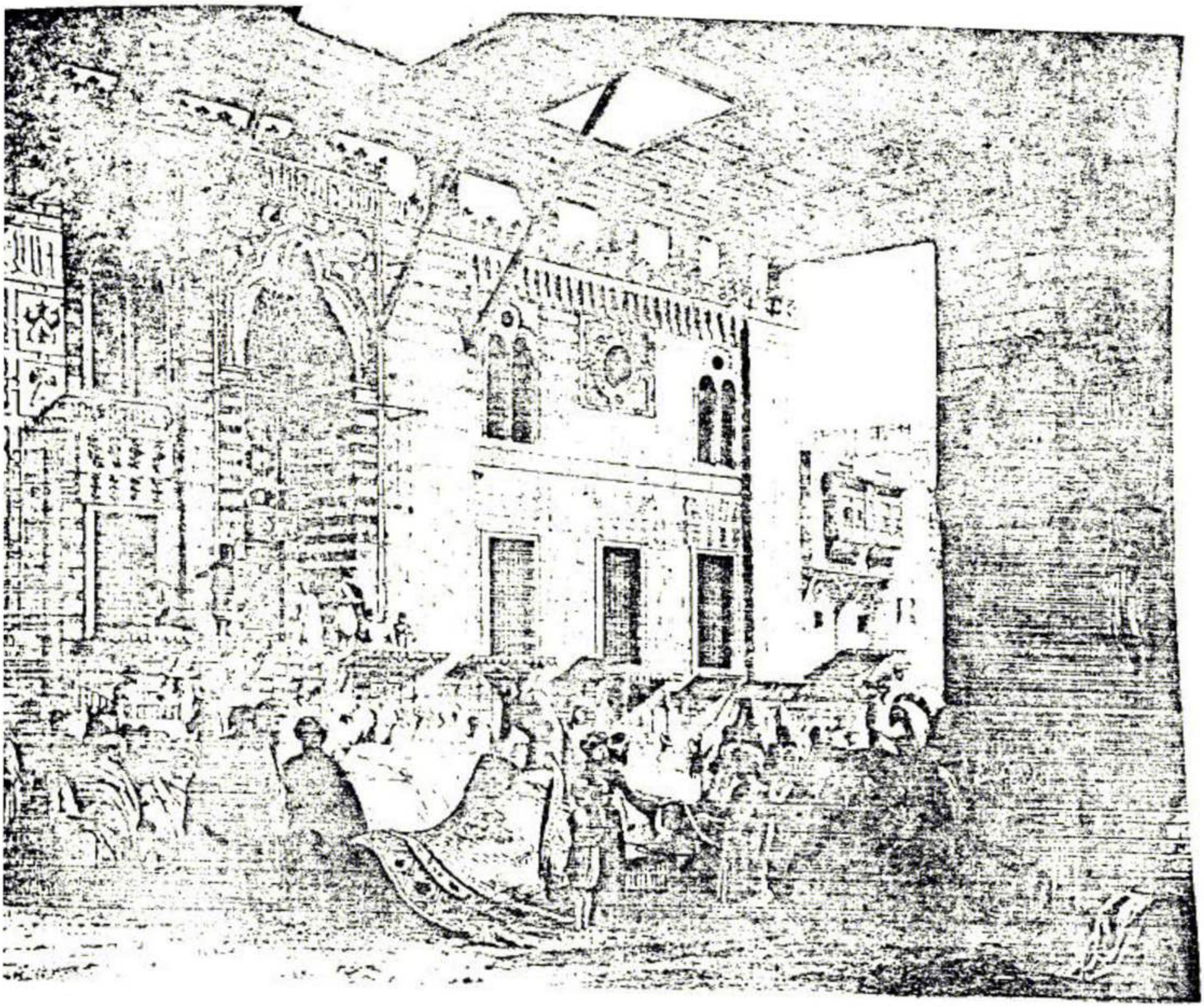

Fig. 12. Cloth and Carpet Market in front of El Ghoury Mosque, Cairo.
Engraved plate by Haye.

Due to the importance of trade in this society the sultans encouraged the building of commercial buildings "Wikalas and Khans, bazaar, 1299. A.D.

Three specific kinds of structures contribute to the typical Islamic market, a network of covered streets Fig. (14), a securely gated and covered edifice in its midst, and Khans or Wikalat. Any muslim settlement with a market also had a number of Hammams, since Islamic law demanded complete immersion on certain occasions.

The segregation of goods and trades, so characteristic of Islamic markets was also the trend present in the Khans or Wikalas. Ibn Battouta remarks that each wikala had gates that were closed at night. This is a feature of a specific Islamic market structure usually called Kaysariya known by a variety of names, of which Khan or Wikala is the most common.(1) By the word Kaysariya or Funduq or Wikala or Khan is meant a large court or gallery surrounded by almost 50 shops and had a gate closed by night. The shops were 1.5mX1.5m the trader collected around him all his merchandise and at the front of the shop a seat (Mastaba) where the people bargained and friends come to sit and chat, Fig. 15. Next to its function as a commercial devise it also afforded a place for sleep and resort with stores for seasonal merchants and their merchandise by having over the shops a (Ribaa) residential units rented to the populace during the season, Fig. (16). These Khans or Wikalas were owned by the Sultans and the rich people. e.g. Kaysuriyya Al Anbar built by Kallowun 1281 after being a prison he made it a market, Kaysuriyya Al Osfor built by Prince Alam El Deen Singer El Masrouri; and usually these owners bequested the Wikala to their successors.

But it is important to note that these commercial activities were all situated on the main spine of the city or near the gates of Cairo either inside or outside so that they would be near the entrance of the products into the city and it is interesting to notice that those wikalas were specialized in the products that entered from that gate in the direction of that gate, while,

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(2) *Ibn Battouta: Tohfa El Nozar Fi Gharib El Amsar. (Agaib El Asfar. Paris, 1880).*

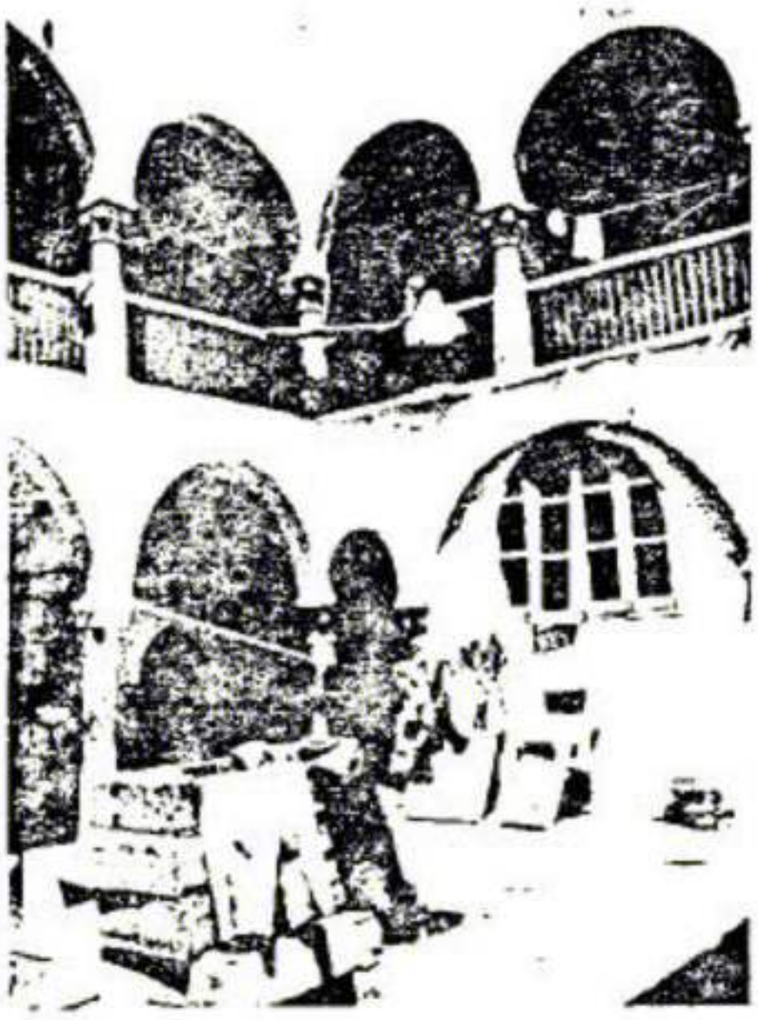


Fig. 13. Funduq "Tripoli" for the banking business of the merchants.

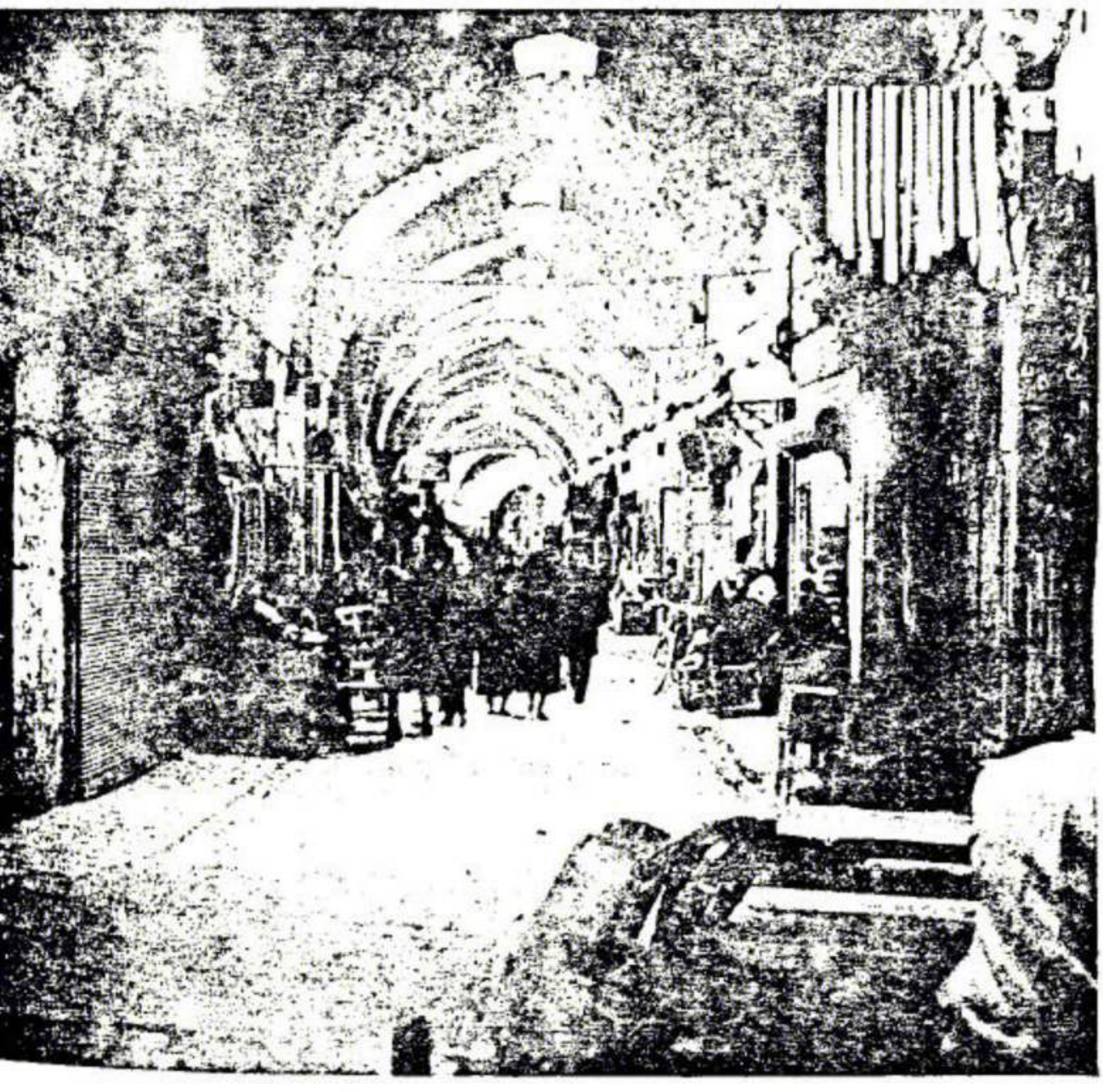


Fig. 14.

A vaulted covered shopping street. A cool and well ventilated space ideal for hot climates. Damascus.

In courtesy of (Trade and Travel Markets and caravanserais) Eleanor Simms.

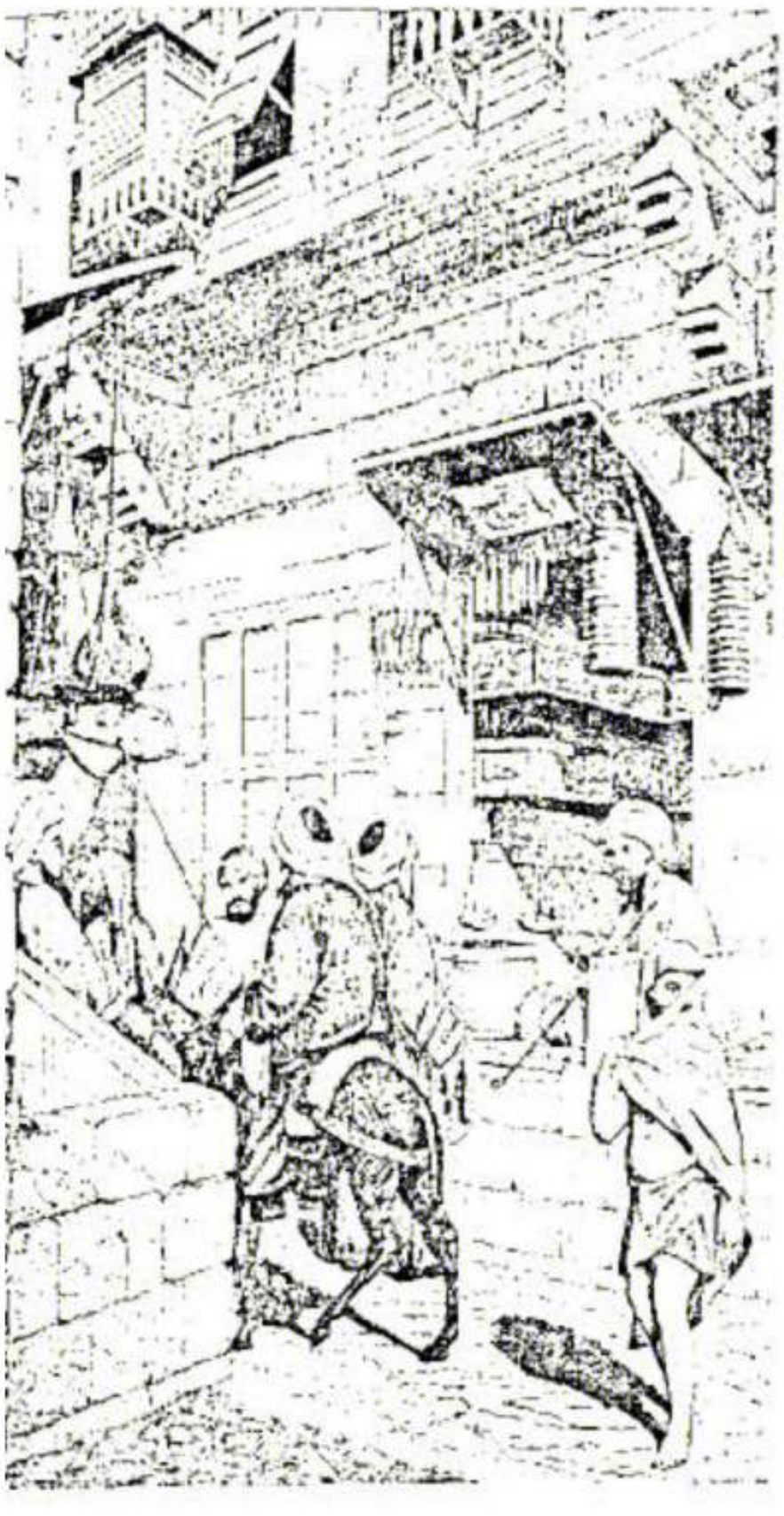
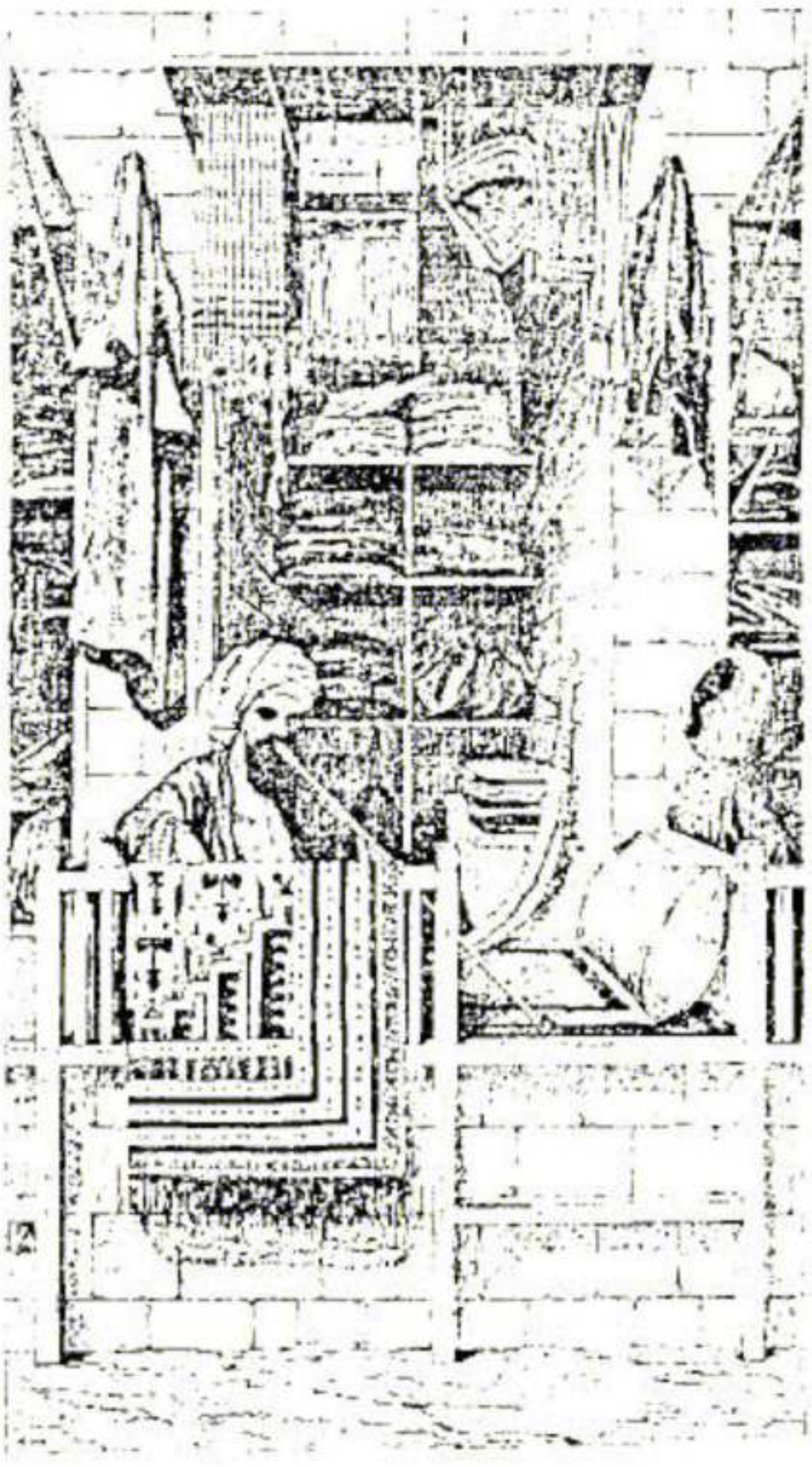


Fig. 15. Shops in a street of Cairo. The principal object in this view is the shop of an "attar" who sells drugs, perfumes, wax candles, etc..

* *Shop of a Turkish in the cook called Khan El Khaleelee in Cairo.*

Reff : Customs of the Modern Egyptians, London, 1860. Cf. Edward Lane.



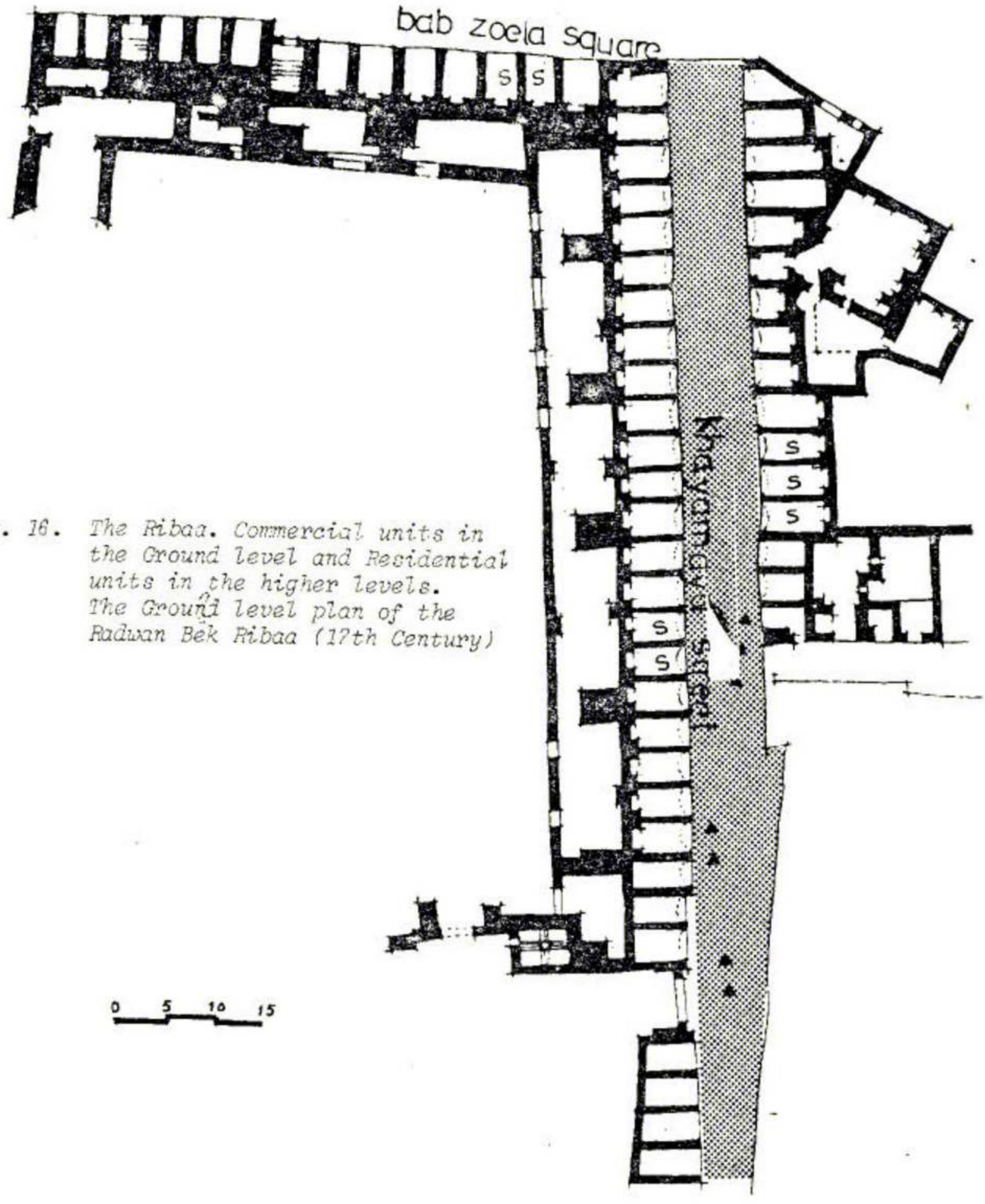


Fig. 16. *The Ribaa. Commercial units in the Ground level and Residential units in the higher levels. The Ground level plan of the Radwan Bek Ribaa (17th Century)*

Reff : (Arab Antiquities Conservation Commitee) p. 43.

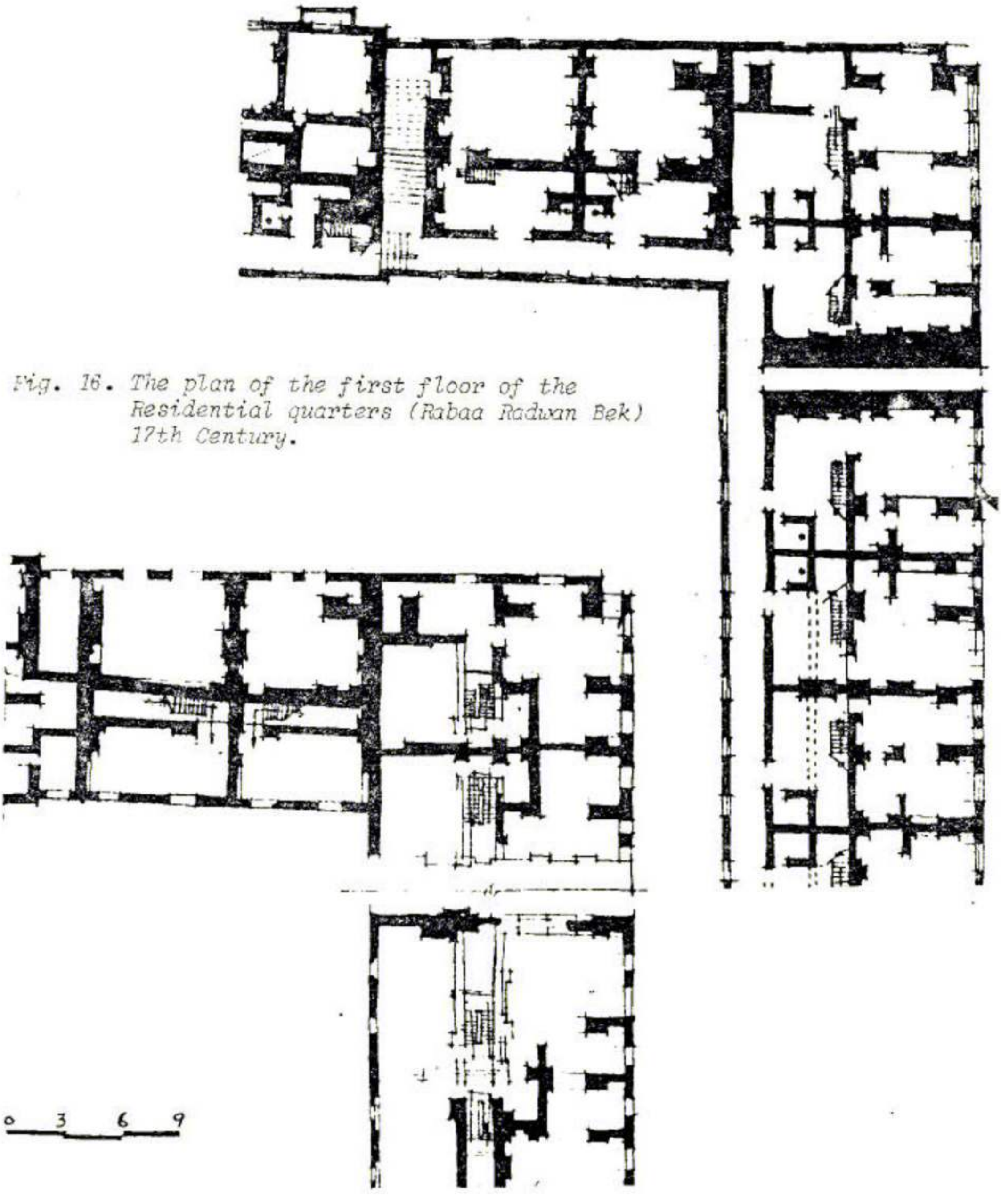


Fig. 16. The plan of the first floor of the Residential quarters (Rabaa Raduan Bek) 17th Century.

* *Plan of Second floor. Duplex system.*

Reff :- (Arab Antiquities Conservation Commitec) p. 44

the seasonal markets were usually situated in irregular spaces surrounding the local mosques: which shows the close relationship between the citizen and his religion and his daily activities.

WIKALAT AL ASHRAF QANSUH AL GHOURY:

(AL-Nakhla) constructed 1504/909 - 1505/910: The only restored Wikalat in Cairo. this is a distinguished example of its type. The edifice, located behind the mausoleum of Al-Ashraf Qansuh Al Ghuri, as in use as a cultural center housing a school for traditional handicraft is the former storage rooms below (bad lighting condition). The courtyard gives space for public porfornances in a unique setting.

Ware-houses were generally two or three stories high and rectangular or square in plan, with a single portal(1) Fig. (17). On the upper floors, galleries gave access to small rooms of approximately the same size, with windows, and chimneys if the climate required. The chambers for merchants, where their merchandise could also be deposited, were usually on the upper floors, and the ground floor was usually used for stables and shops, together with large-scale storage and with time, the stables were removed elswhere.

In the 16th and 17th century Cairo contained about 200 caravanserais or wikalas - all of them situated in the original Fatimid City Al Kahira. Today only about two of these buildings can be seen. One of them has been recently restored. Wikala of Al-Ashraf Qansuh Al-Ghoury (built in the early 16th century); it is now used as a museum and school for traditional handicrafts.

WIKALAT BAZARAA: Fig. (18)

Also the present condition of the Wikalat Bazaraa perhaps the best preserved example of a Wikala in Cairo, makes possible a general idea of the original function and appearance of the building, and this is the reason

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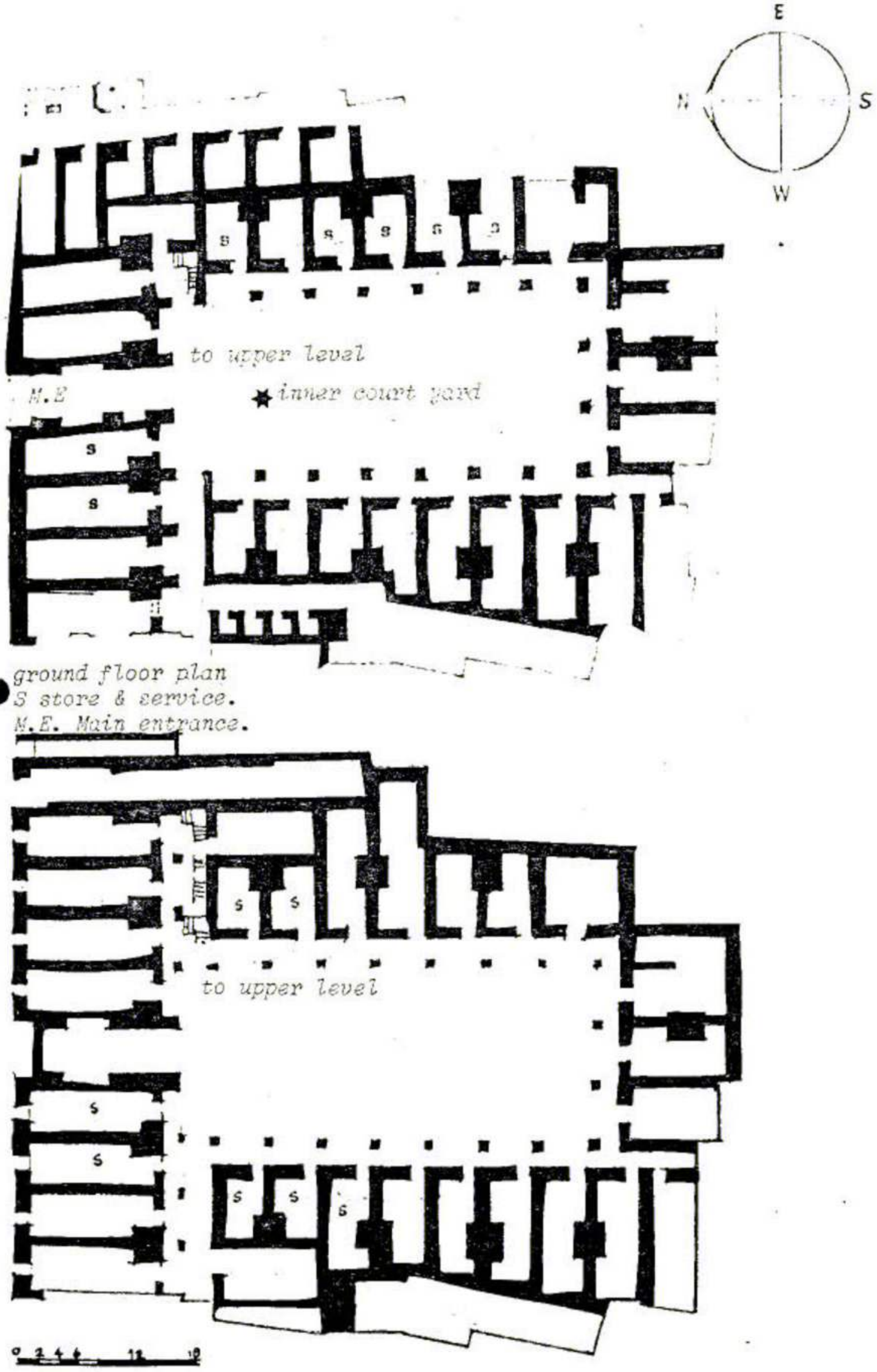
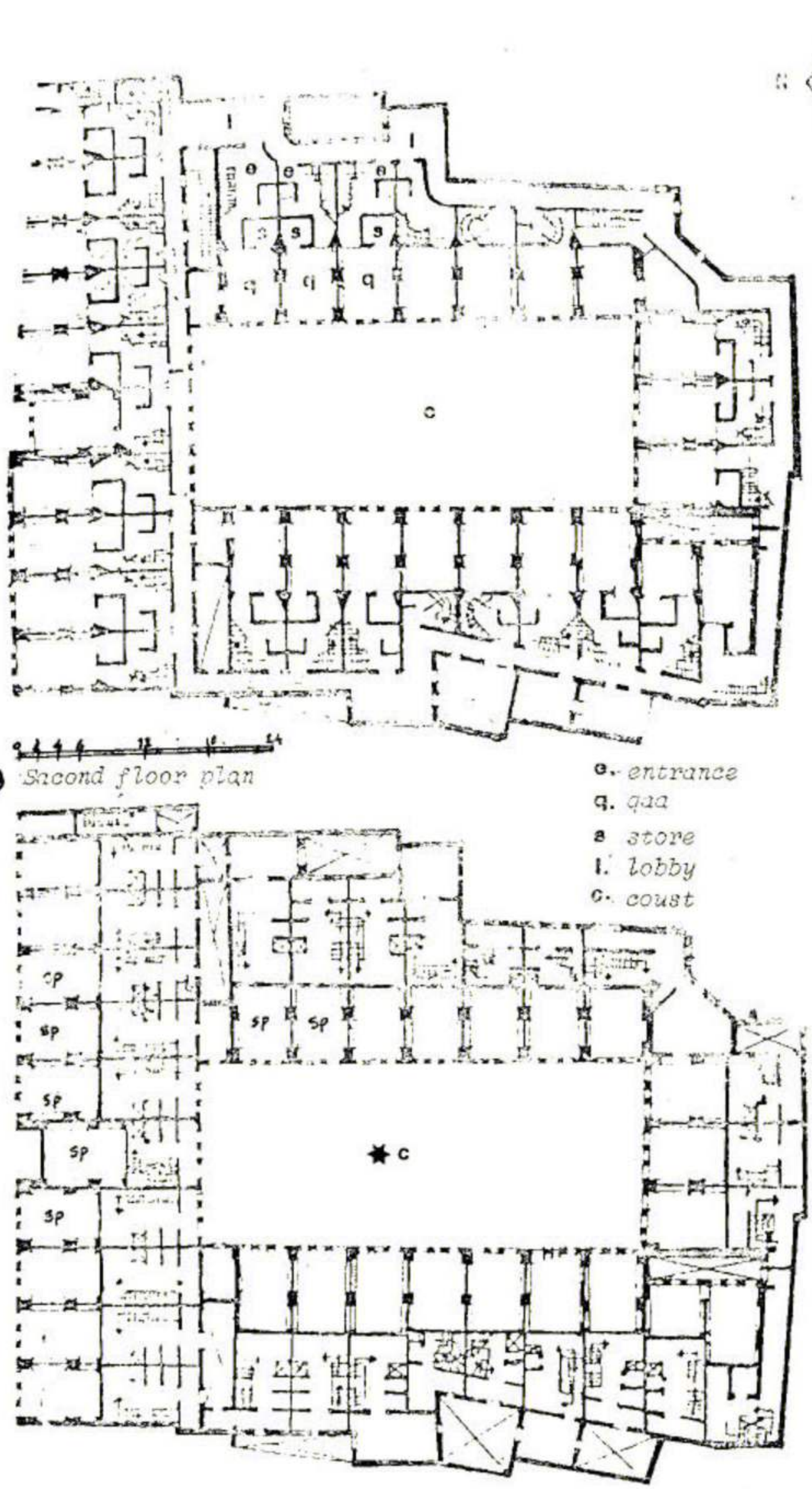
(1) *Architecture of the Islamic World. History and Social Meaning Research Associate. Eleanor Simms.*



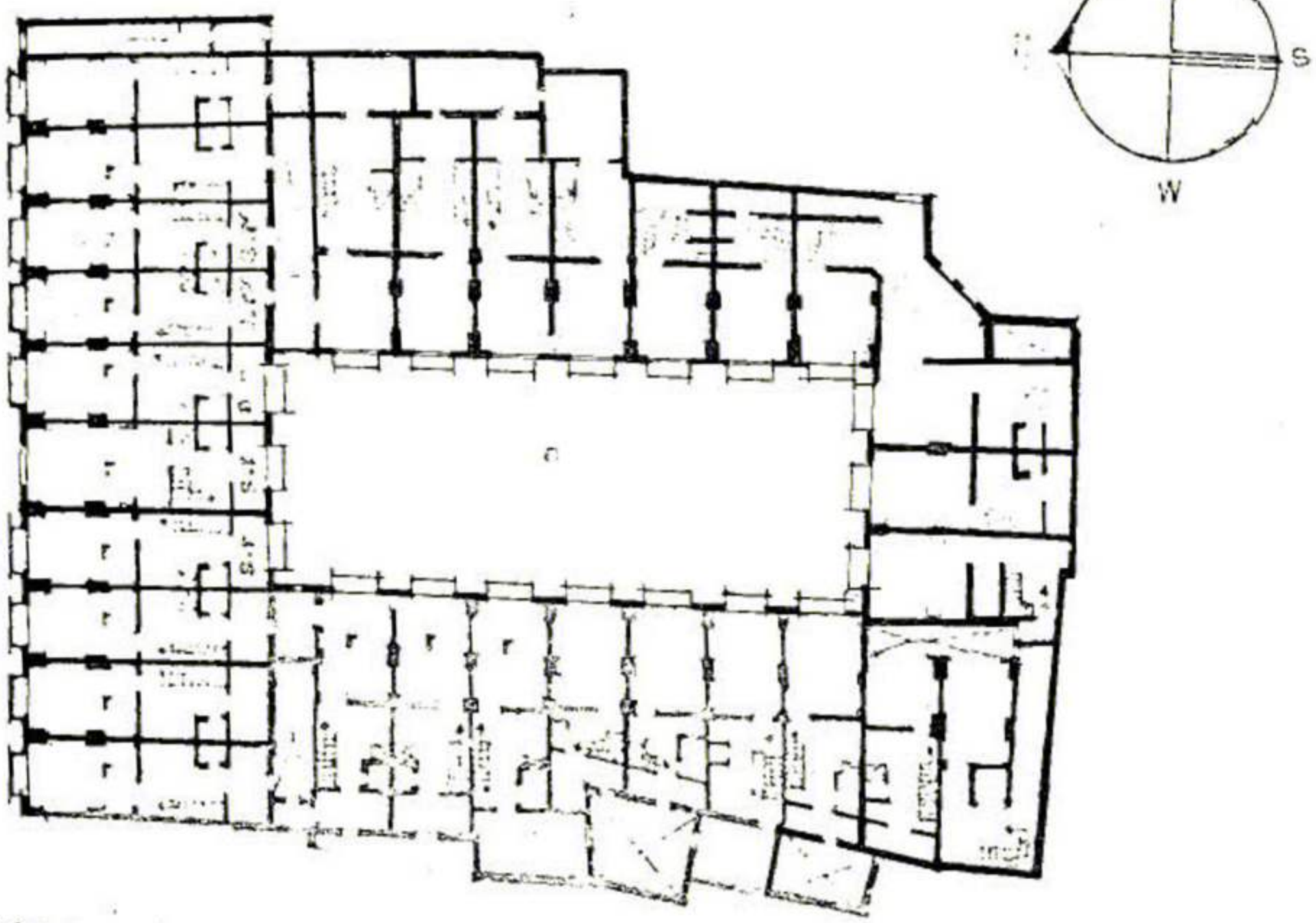
Courtesy of (M.Sc. Thesis by Arch, Ibrahim Abou Eish Ein Shams University .

Fig. 17 Wikalat Al - Ghoury . First G.L. Plan.



Courtesy of (M.Sc. Thesis by Arch
Ibrahim Abou Eish. Ein Shams Univereity

Fig. 17 Wikalat Al-Ghoury Second & Third floor plan.



fourth floor plan

r. room
s.r secondary room
c. court

Courtesy of (M.Sc. Thesis by Arch. Ibrahim abou Eish - Ein Shams University

Fig. 17 WIkalat Al-Ghoury Fourth floor plan.

Courtesy of (Michael. Meinecke Islamic Cairo.

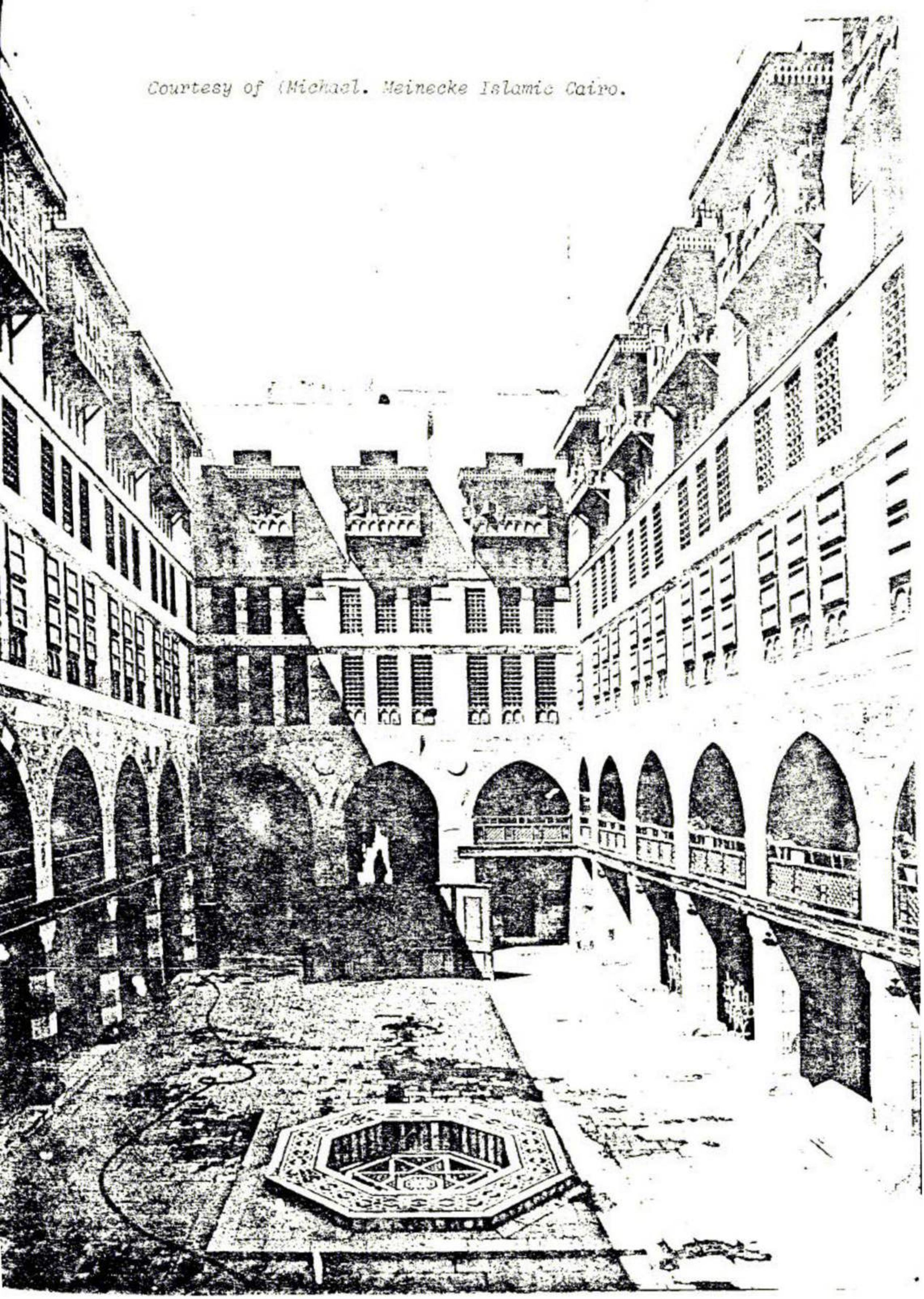
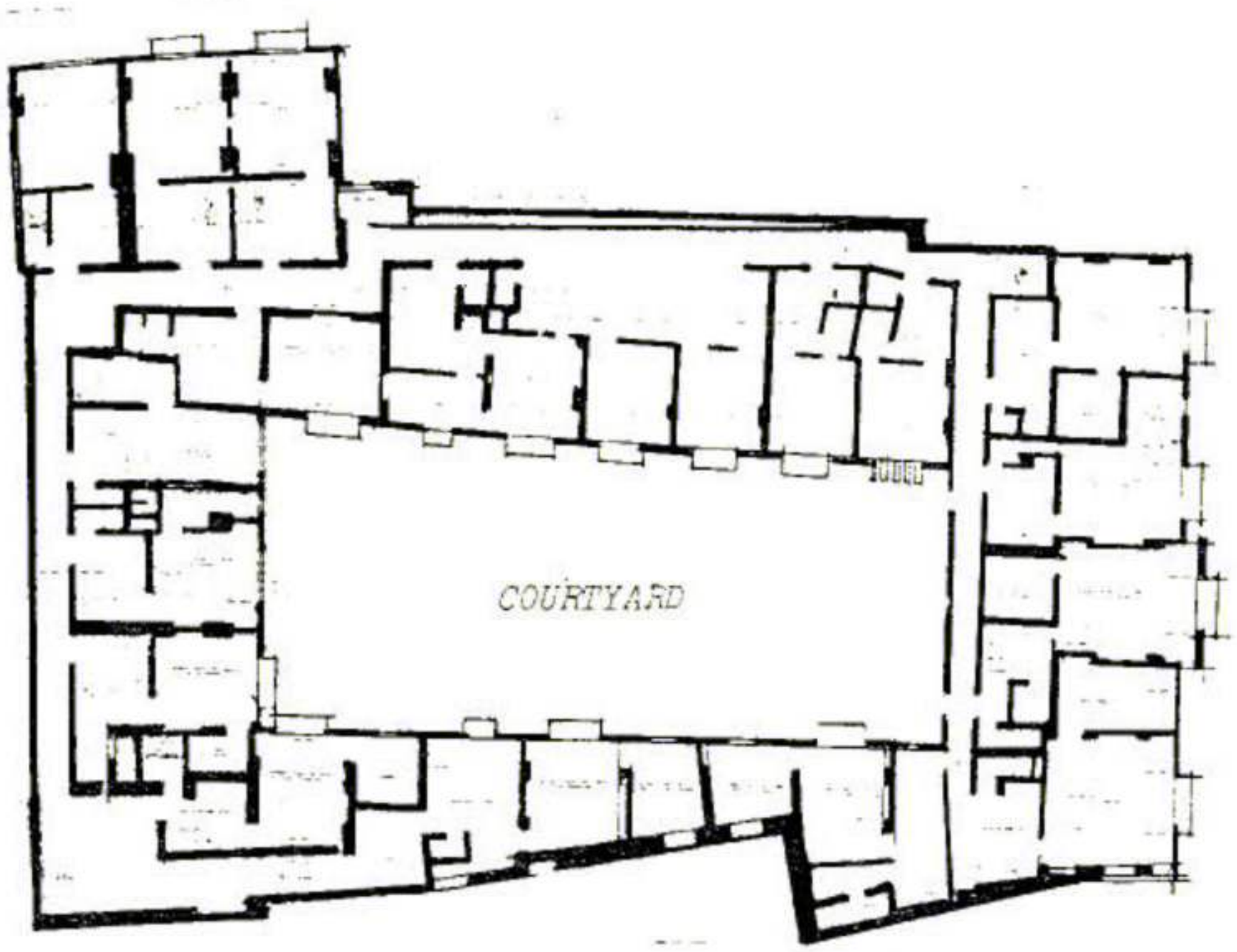


Fig. 17 Al. GHOURY [View Looking North]



Wakalat Bazarca: Second floor showing present condition.

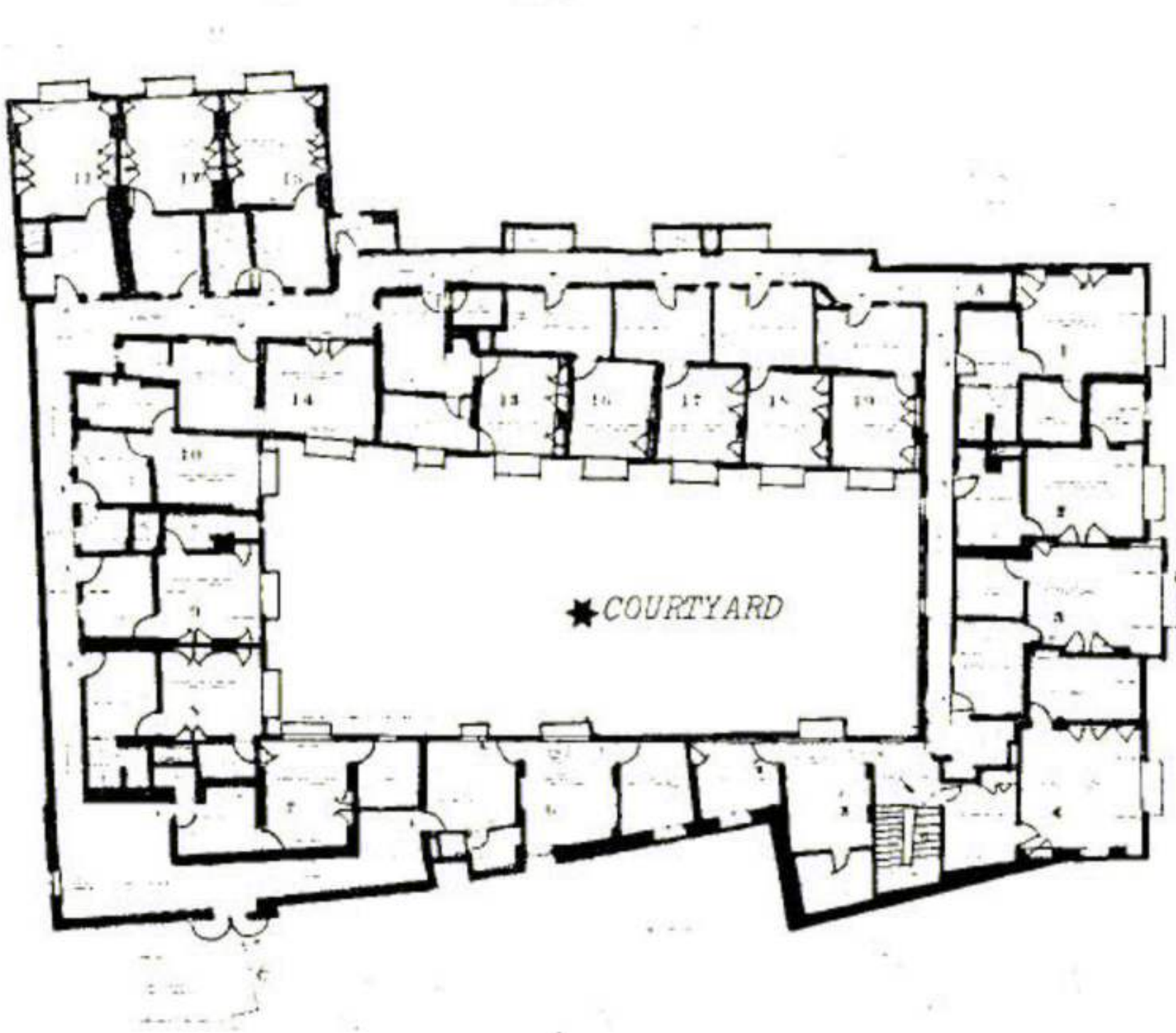
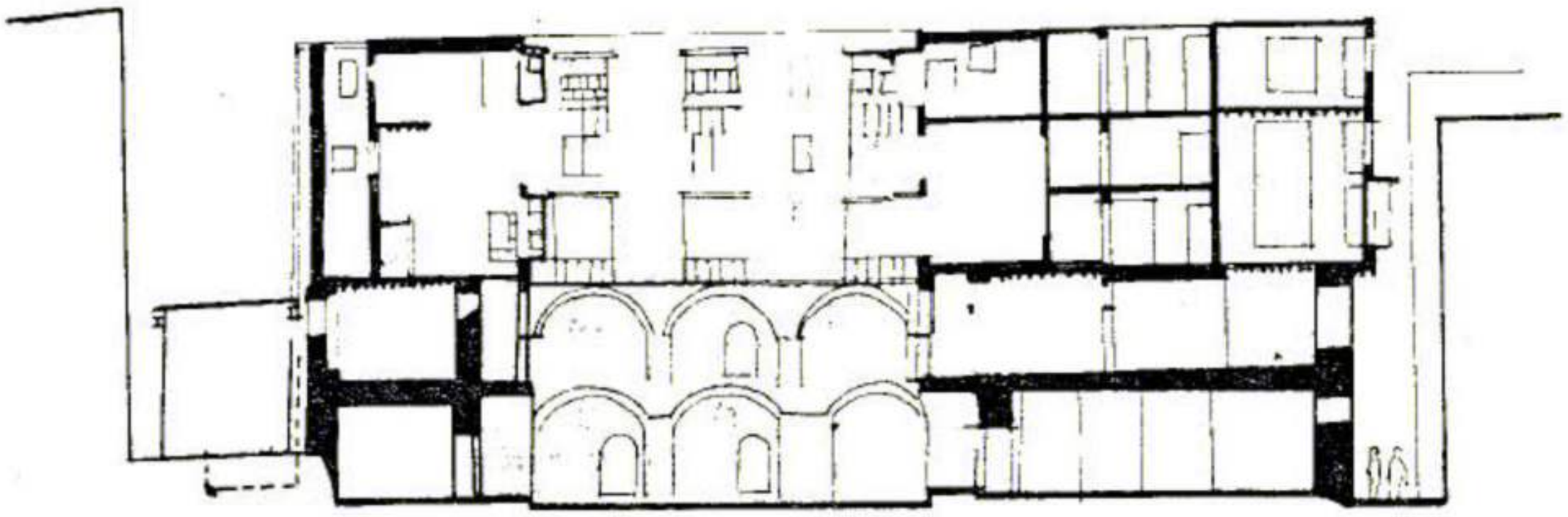
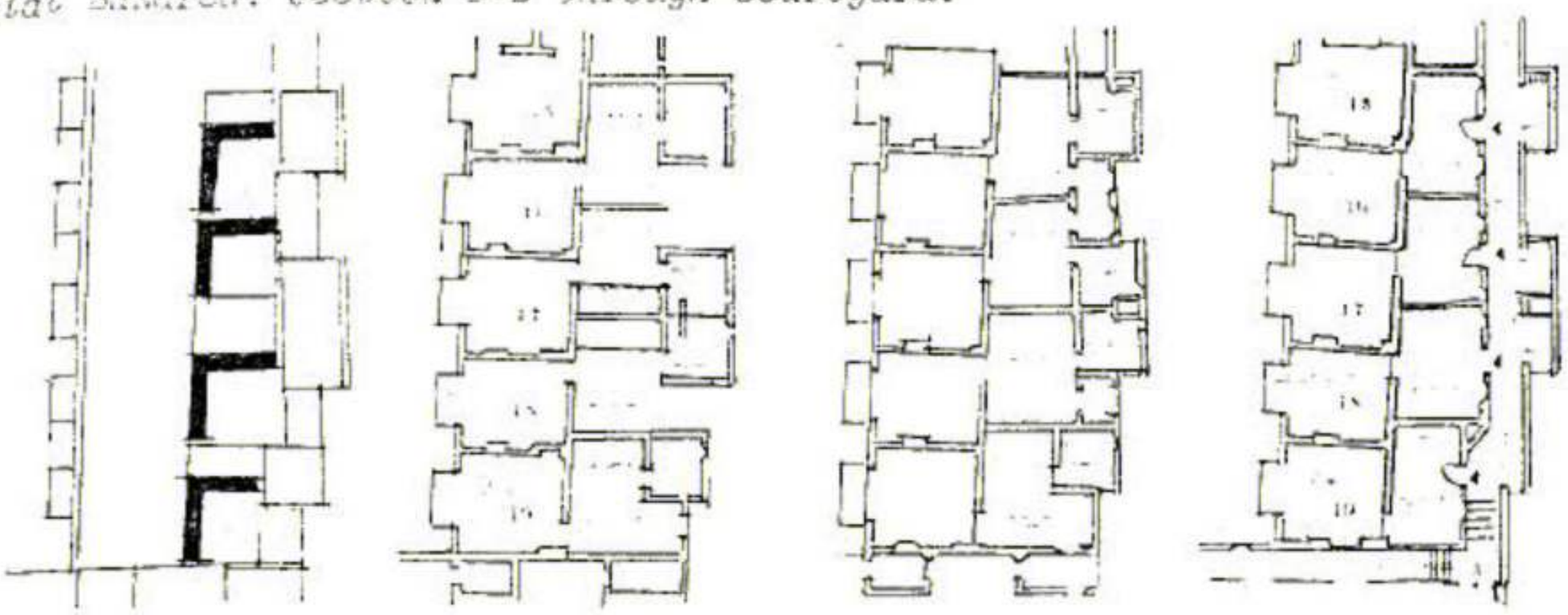


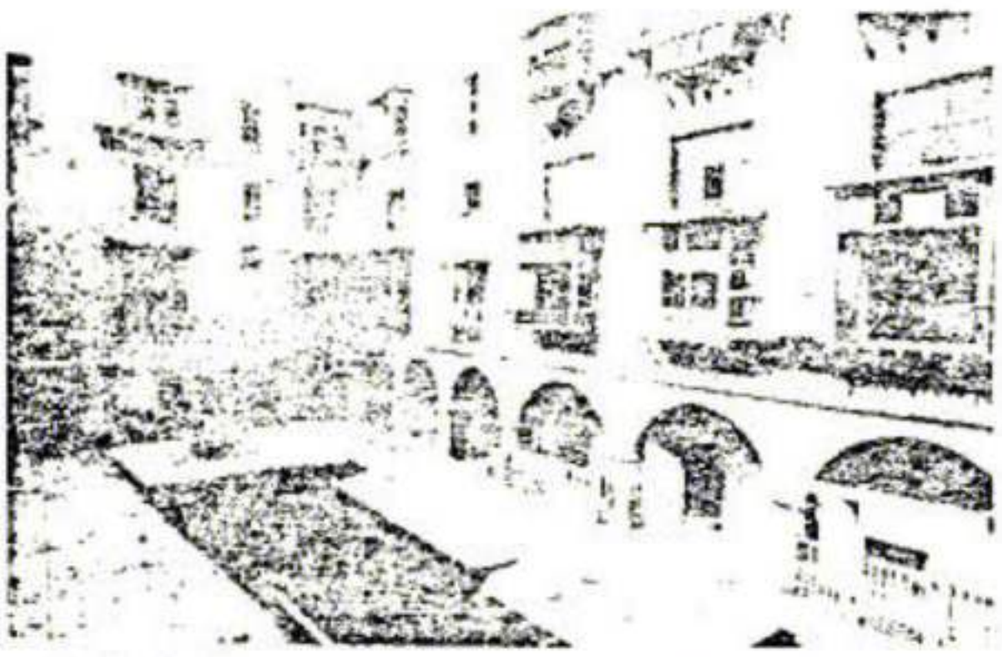
Fig. 18 Wakalat Bazarca: second floor showing proposed restoration



Wakalat Bazarca: section B-B through courtyard.



Wakalat Bazarca: proposed reconstruction of living units



✱ Wakalat Bazarca: courtyard.

Fig. 18.

Reff : (Michael Meinecke, Islamic Cairo)

for working out a proposal for its restoration. The building is situated in the heart of Al-Jamaliyya. The building faces a rectangular courtyard with two lower storeys in stone and three upper storeys in plastered brick, each floor being about 1000 sq.m. The irregular plan is due to later rebuilding and undetached houses, as in the case in the medieval town quarter with a high floor space ratio.

Numerous rebuilding make it difficult to date the time of construction but very likely it can be traced to the end of the 17th century.(1)

There are no written sources giving specific information about the building history, but different historical accounts and the medieval topography of Al-Maqrizi indicating different names, gives an impression of the changeable fate of the wikala. It was originally built to serve the trading needs of Damascus marchant dealing with woven materials; later it was rebuilt as a leather bazar providing funds for a madrasa the building faces north towards Shari-al Tumbakshiyya together with wikala of "Abbas Agha", the Madrasa of "Gamal-ad Din Yusef al Ustador" and wikalat "Dhu-i-Figar" composes a fine ensemble of the regional Islamic building tradition. The corbelled upper storeys together with the narrow streets protect the building against the relentless sun during the hot summer. The windows are filled with wooden lattice screens in tuned wood-work, at the same time allowing free air ventilation and softening the glare without dazzling the eyes.(2)

The staircase continues to an open terrace at the top of the unit from where there is an access to another living room with a mashrabiyya.

Damascus has been famous since its early development for its markets and souks. Owing to its central location in relation to the neighbouring countries of the Middle East and its position at the cross roads of communication

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(1) Artisans at commercants au Caire au xville siécle I-II (Publication of the Institute Francais de Damas), 1973/1974, pp. 257 (Note 1) 260 (Note, 3), 332, 333 (Note 1).

(2) Many comparable features are found in the architecture of le corbusier such as double height, mezanine floors and roof terraces.

and trade in this part of the world.[1] This ancient city became a flourishing center of commerce. Reference to Habib El Zayat in The Oriental Coffre. He esimates the number of souks and markets to be 150. Ibn Batouta writes that the principal souks were grouped around the Omayad mosque. Nu'man Kassthy, whose book showed life in Damascus in 1860 A.D. says that there were thirty principal souks grouped together. He describes the typical souk in the old cities as follows: It is of regular shape and wide dimensions, well planned, does not permit the sun or the rain to enter inside because of the protection given by its covered roof. The roads inside the souks were paved with stones; thus no dust was raised by the passage of shoppers and that is why the merchandise remained clean. All the shops of the souk were built in the form of arcades and vaults made of stone to resist fire. The architectural style of the buildings is the Arab style with lofty ceilings.

In whole the souks were popular for:

A. They were the main shopping center serving the town as a whole.
B. They were in general combined with communal buildings such as mosques, public baths, courts etc....
C. Being the focus of the city's central area.
D. Publicaly circulation easy and seperated from movement.
E. Each souk specifically for a certain merchandise.
F. Unity in the design of the souk as a whole.
G. Weather insulated.
H. In a number of souks we find small workshops engaged in service industry and also we may find accomodations for living quarters for the craftsman or merchants usually in the second floor.

Factors that hindered the internal trade:

A. The nile: As trade in that period depended mainly on agriculture, the nile and the state of the flood, was a main factor determining the economical flourishment of the country.

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(1) *Halim H. Aref: Town markets old and New Lessons of the old souks of Damascus. An International Seminar Sponsered by the Congress for Cultured Freedom and the Egyptian Society of Engineers, Cairo, 17-22 December, 1960.*

B. Measures and Weight: Being different in every region.

C. El Makous: Taxes paid by the merchants on entering every region.

But the main difficulty that faced the merchants, and was the main reason for the decline of the trade in that period was the Aggression and Injustice the merchants endured by the government at that time especially in the period of El-Nasser Mohamed Ibn Kalawoon. When the sultans needed money for Wars they depended on the money from tradesmen either by force or by borrowing. However the flourishment in trade was very significant in the beginning of the Mamulk Period and began to decline by the fourteenth Century.

Next to the wikalat other commercial institutions were constructed with other aims. Both the Arabs and the various non-Arab conquerors from central Asia were originally nomadic (wanderers) inherited a tradition of travel. Large armies were constantly on the move. Students and Scholars undertook long journeys to sit at the feet of famous Teachers. The wealth of cities depended upon the transport of goods over vast distance. The faith of Islam commanded the faithful and the able to travel, to perform the "HAJ" or pilgrimage. In the harsh conditions and inhospitable country-side of most Islamic countries, these two last classes of traveller-merchants and pilgrims - needed more frequent places of rest and shelter than the widely spaced cities and towns could provide.

This led to the construction of caravanserais along the main routes places where men and their animals would be safe for the night and where they could be sure of food and water.(1) Fig. (19).

After having analysed in detail the Wikalat, souks and markets in Cairo we can therefore point out the resemblance in the architecture and design of markets, wikalas and souks through out the Islamic World and how they

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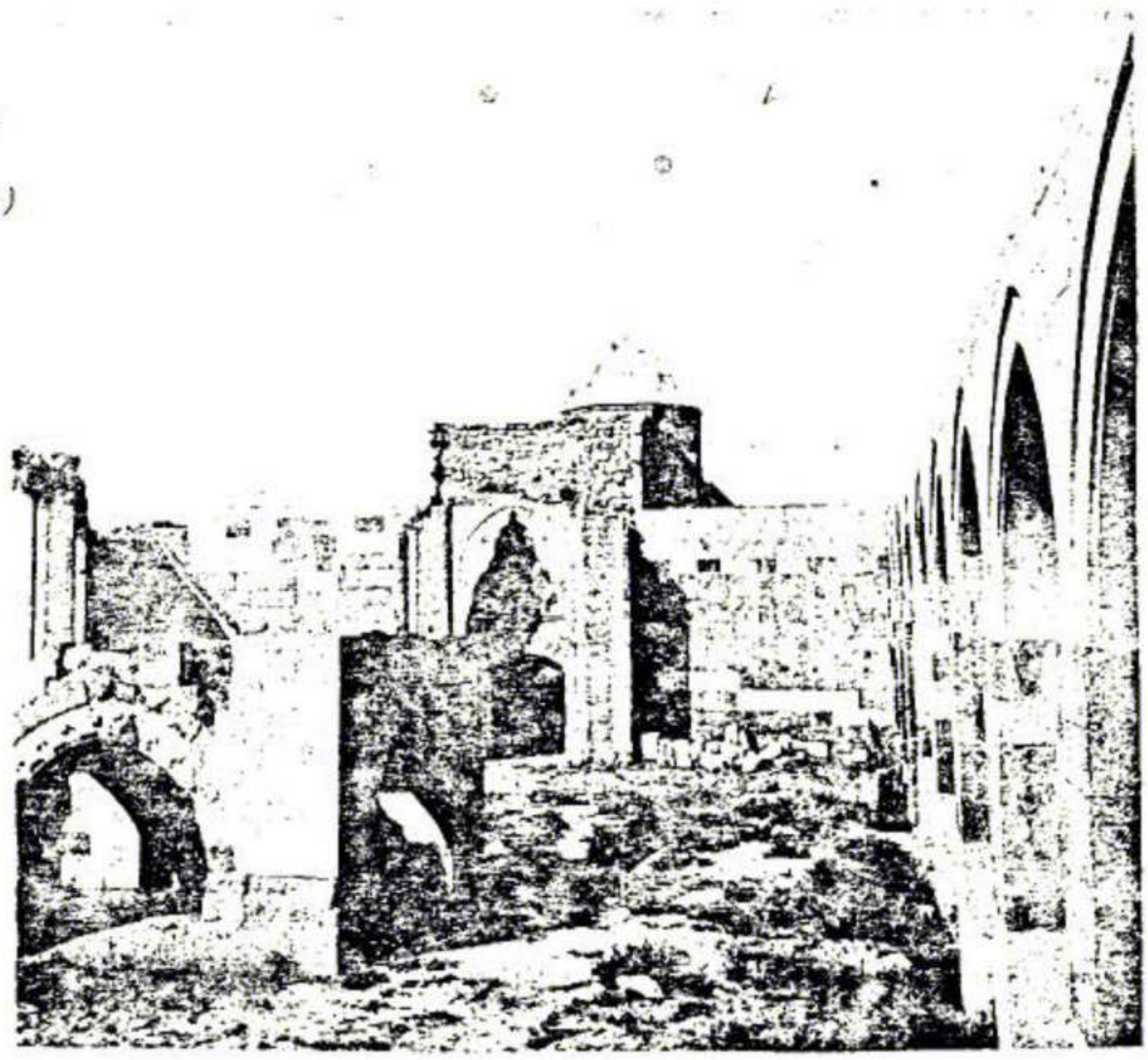
(1) *Architecture of the Islamic World. Its History and Social meaning Research Associate, Istito Italiano pu il Medio l'Estremo Oriente. Rome Thames and Hudson (Trade and Travel Markets and caravanserais Eleanor Sims).*

Fig. 19. mud walls of a caravanserai (Afghanistan)

* *Right : Gates of a caravanserai (Al-ad-Din Kayqubad's built 1232 - 1236. Anatolia)*



: [Trade and Travel. Market and Caravanserais]

Eleanor Simms.

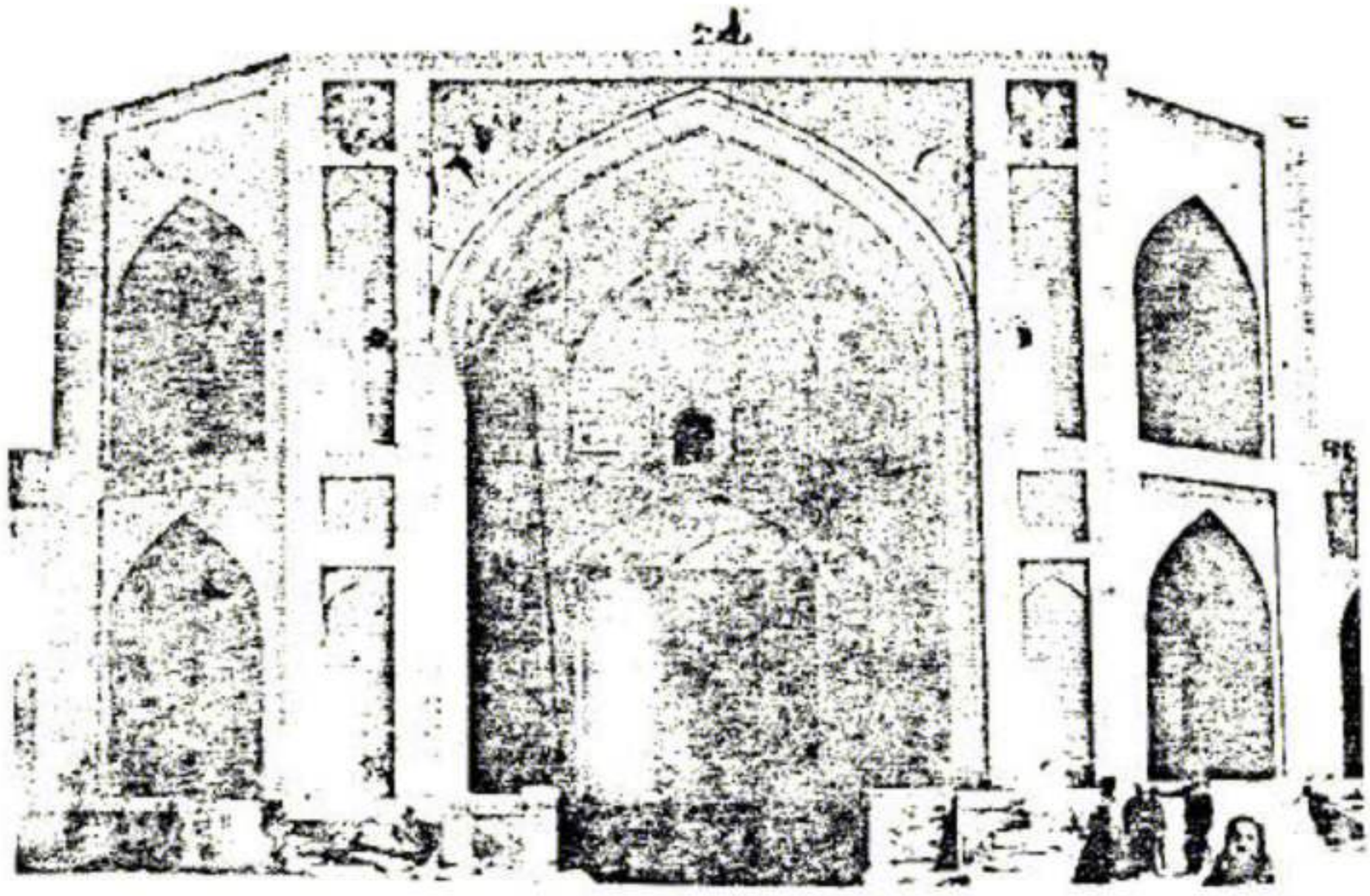


Fig. 19. Above : Courtyard of a magnificent caravanserai (madrasa of the Madsr-ishah, Asfahan).

* *Right : Entrance Portal of the caravanserai*

Reff : (Trade and Travel, Markets and Caravanserais)
Eleonor Simms

had been successfully designed to suit the shopping habbits and climatical conditions of that time.

From the 15th Century, in Egypt the people began to migrate from around the old center forming a modern new one forming two social levels. The old center having around it the poor and middle class who did not have the means for moving into a better environment. The new center and its users socially and economically and residentially higher in standard followed the Western New Intellectual movement [Art, literature crafts, architecture] which was in progress at that time.

Although the new city was advanced in social standards but geographically the older was higher in level but in space the development of the new city was great while the old one kept within its limited boundaries around the Azhar and Hussein Mosque and it could be even said that it shrank.

The new city. to give a meaning for its presence, had to have a new core for its administrative and social activities mainly the shopping activities and the main core that was the most developed in Egypt was the core of the city of Cairo and it could be taken as an example for the trend at that time. The core of Cairo at the beginning was Egg-shaped and reflected the shape of the city between the Mokatam and the River Nile. It could be defined by the heads of a triangle. 1- The Cairo Train Station. 2- The Green Attaba 3- The Tahrir Square. This triangle is surrounded by a network of traffic beginning from the station square and Lemon Bridge in the North and the Green Ataba and Asbakia in the East and Bab-El-Louk station and Tahrir Square in the South.

As the core has been divided into 3 zones horizontally it also was divided into three layers vertically. The ground floor shops and stores, the First floor offices and clinics and the third floor away from the noise of the streets are residential quarters with the exception of the presence of department stories that were a Western import situated on the main spine.

Most of the Egyptian cities extended towards the North but with the Exception of Cairo it extended West toward the wealthier residential zones. Attaba --- Opera Square --- Emad El Deen --- 26th July Street --- solinian Street --- Tahrir Square, Zamalek and Garden City and later the new Western extension towards Agouza and Dokki and Giza.

The main Spine of each of the previous zones is a shopping street surrounded by the residential quarters.

1.4.3. Markets of Shopping Centres in Europe from 15-17 "Rennaisance and Baroque":

On the opposite side of the Mediteranian, in Europe, the center was occupied by the busy, middle class community of craftsmen and merchants. The political affairs of the city was decided elsewhere, and the city politics concerned only administrative forms for commercial business. Because the city lacked wide political activities its only military form was the fortified walls. The city appeared as closely grouped houses and craftsmen's shops situated around an open space where the cathedral and municipal palace were to be found, and close by open spaces where markets and fairs were held.(1)

But by the end of the fifteenth Century the city had totally changed and the order governing the city planning was mainly political. There was an increase in the grandeur and number of public buildings and it was obvious that a political authority stood above the authority of communal administration. The transformation of the city from a social and economic organism into a political one depended on various factors. The old urban middle class made up of craftsmen and merchants broke up and a new pattern was formed which controlled the cultural and political life of the city.

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(1) *Planning and Cities. The Renaissance City. Giulio C. Argan.*

This pattern was generally ruled by a single family or person who had great power and who was responsible for the peace and war in the cities.

Often many cities were under one power and this principal was later the basis for the system of a capital with regional centers.

The distinction between the liberal (philosophy and history) arts and the mechanical arts (manual arts) led to a difference between those two classes for the craftsman was considered a workman while the class of artisans formed a new class of architects and were closer to the center of political power. The founding of new cities was rare and mostly by the will of the princes and the carefully studied plans of the architects, structural rennovation were made to transform the medieval cities into a number of colonies in Africa, Asia and America. These colonies were a cheap source for raw materials and food products and at the same time a big market for the distribution of the European manufactured products and the evolution of the traffic network in the 16th and 17 Century contributed greatly to localization and the appearance of big. countries. e.g. A. Venice and Vicenza B. Leghorn C. Antwerp D. Paris.(1)

But the rulers took over the city and after the extreme power of wealthy merchants over the city, the noble families and rulers displayed their influence and power by ordering the practitioners and architects to build monumental public buildings, draped with classic motifs, around enormous Plazas.

In the eighteenth Century the Barqoue city expanded and dominance of the rulers intensified and plazas of the seventeenth Century which had been closed and isolated were now opened.

Yet in both periods the Renaissance and the Baroque the changes in Society and custom brought about wider, more complex and free social relationships which by the eighteenth century, with the Industrial Revolution and

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(1) Williams, Henry Smith. The Historian's History of the World. The outlook Co. 1904.

the sudden increase in production by the introduction of the factory system 1785. stimulated the gradual transformation of the shop into the modern store. The need for a changing more spacious commercial institution. the stimulation of an increased sense of competition, a wider diffusion of wealth with the resulting increase in demand, all these factors bought about change and expansion.

The development of the new techniques of the metal frames structure 1783 and, later, reinforced concrete helped the means for building vast-covered areas without intermediary supports. But as the services of the covered market become more complex the organization began to be broken down into sub-sections. There were central markets and district markets; there were markets specialized in the sale of particular foods or wares, meat, flowers etc... and there were whole sale markets.

There were the Retailer shops, open markets and covered market halls, fairs and during this Century (18) show windows appeared and interior decorations became important and reflected the aristocratic society of the time.(1)

In the Baroque period the shopping streets became shopping parades for fun and recreation. The most outstanding example of the covered market in the ninteenth Century is the "Hall of the Madelaine 1824 Paris and the "Hungerford Fish Market", London 1835, and "Les Grandes halles" Paris 1855(2) Fig. (20).

1.4.4. The Industrial Revolution and Shopping Faccilities Shopping Facility in Europe from 1765 - 1953:

There had always been those who worked with inventions the Renaissance had been such a period; gun powder, the printing press, and the processing of various materials were important developments of that time. Ways were

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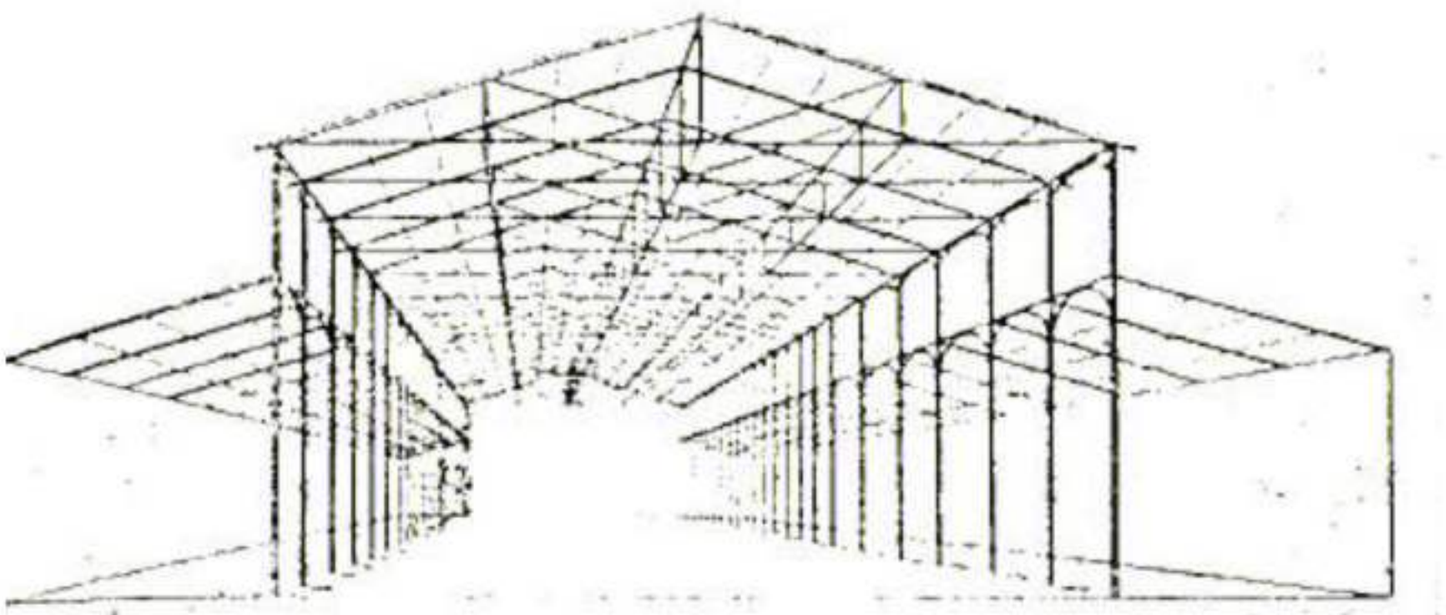
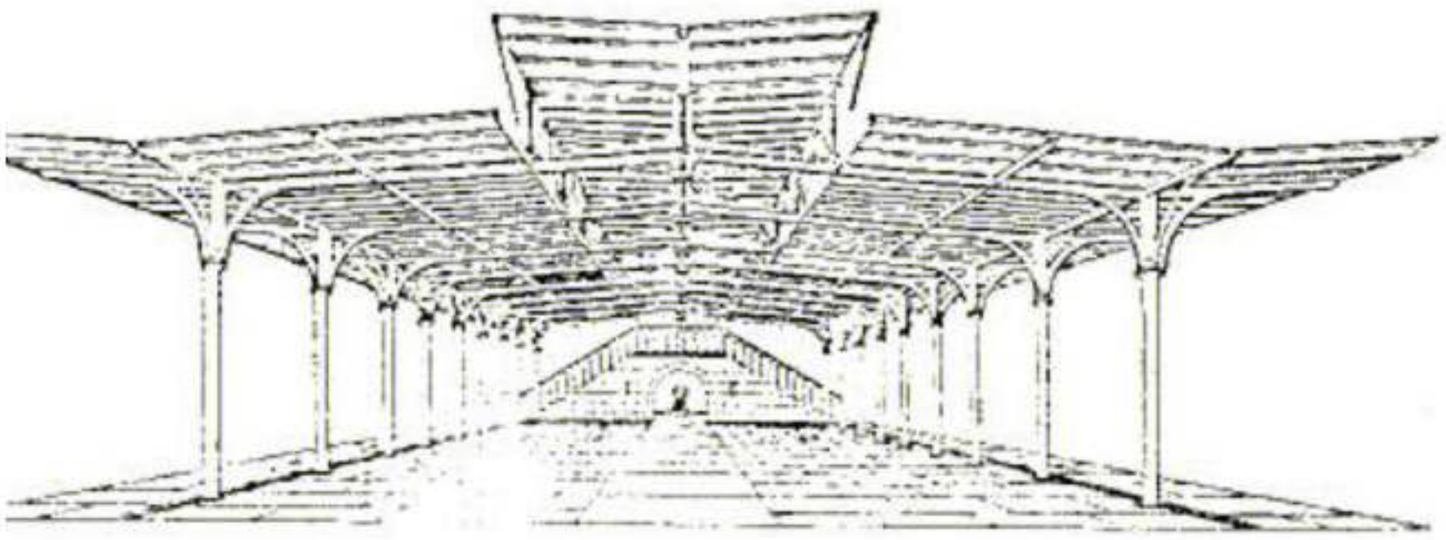
(1) *The City in History. Louis Memford.*
(2) *Space, Time and Architecture. S. Giedion.*



Market Hall of the Madeleine, Paris, 1824. One of the earliest examples of the attempts of nineteenth-century engineers to combine elegance with economy of materials.



Hungerford Fish Market, London. Metal roof, 1835. Particularly noteworthy for its wide roof span (thirty-two feet) with its straight line.

Victor Balard. Halles Centrales, Paris. Interior. Interior. Begun 1853. Baltard had to be forced use in iron in his second attempt (the first - in stone - was a disastrous failure). "Du fer Du fer Rien que du fer " Haussmann insisted.

Fig. 20. Reff : Space, Time and Architecture S. Giedion.

erived to improve the simple hand machine, but in 1765 Watt invented the steam machine and by 1809 the first steamboat was built and in 1825 the first steam railroad was operated for public and trade transportation.

Before the invention of the steam engine the transportation of raw material to the factory and finished products to the consumers were hauled in wagons and towed on river barges.

Mass production:

Industrialisation become independant of hand operation and production increased and domestic and foreign trade expanded. The industrial Revolution swept across Europe. With production increase, work shops moved from the home into seperate quarters - the factory - and the distinction between employee and employer widened. The number of employees in proportion to the owners increased rapidly, and trade unions were formed among workers and in contrast to the medieval, guilds of proprietors were formed.

With each new devise production per worker jumped, mass production made it possible for more people to have more things. The size of factories grew and the number of workers employed by each factory owner also increased. The factory was like a magnet, drawing about it an ever increasing belt or worker's dwellings, schools, and shops.(1)

The factory system bought more and more people to the urban centers.(2) Fig. (21).

Georges-Eugene Hausmann, a bureaucrat in the city administration was selected in 1853 to plan Paris. The result was an amazing administration and organization. Hausmann was aware of the need to design for the traffic of a new industrial age. He laid out the new streets in long sweeps cutting

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(1) *Gallion-Eisner: The Urban pattern. City planning and Design third Edition 1975.*

(2) *Ledislos-Segoe, Local Planning Administration, International City Managers Association Chicago 1941, First Edition.*

through the maze of winding medieval lanes. With these avenues he connected old plazas and erected new plazas. Fig. (22).

By the beginning of the twentieth century the industrial system was no longer a technical problem. It was now a commercial process. Financing and distribution were the new emphasis. Selling the rapidly produced merchandise and financing the expanding facilities to produce more were transforming the system into a financial empire. Factory management turned its attention from production of goods to commercial organization, banking, national and world-wide trade associations. Statistics, business cycles, book-keeping, financing, and the stock market were the stock in trade of those who strove for success. Trade in commodities rather than the commodities themselves was what counted now.

The industrial revolution changed the city into a metropolis. The city population became the multitude and the supply of basic human wants of this multitude required highly organized services.(1)

It will be observed that the enterprise engaged in public services assumes a dual obligation. The first is to supply the needs of the public implied by the nature of the service, and the second is to provide the services at a cost reflecting reasonable profit. Public Utilities became an integral part of city planning and the evolution of internal transportation, by the appearance of trams and subways, helped the expansion in the suburbs and concentration in the "catchment area" the commercial core. 1850 - 1860.

The invention of elevators and the use of electricity was an important devise in forming new types of commercial buildings with many storeys and that was evident especially after the appearance of the Chicago School 1890 and the spread of their ideas which were summarized into:

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(1) *Ledislos Segoe, local planning Administration International City Managers Association, Chicago, 1941, First Edition.*

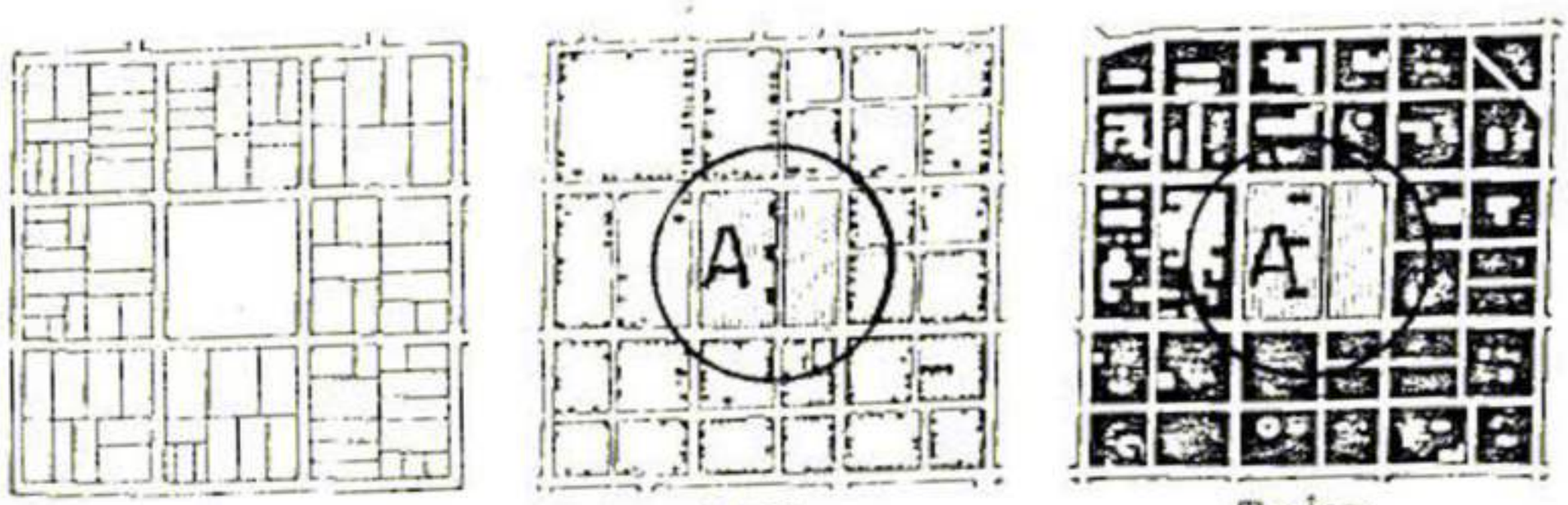
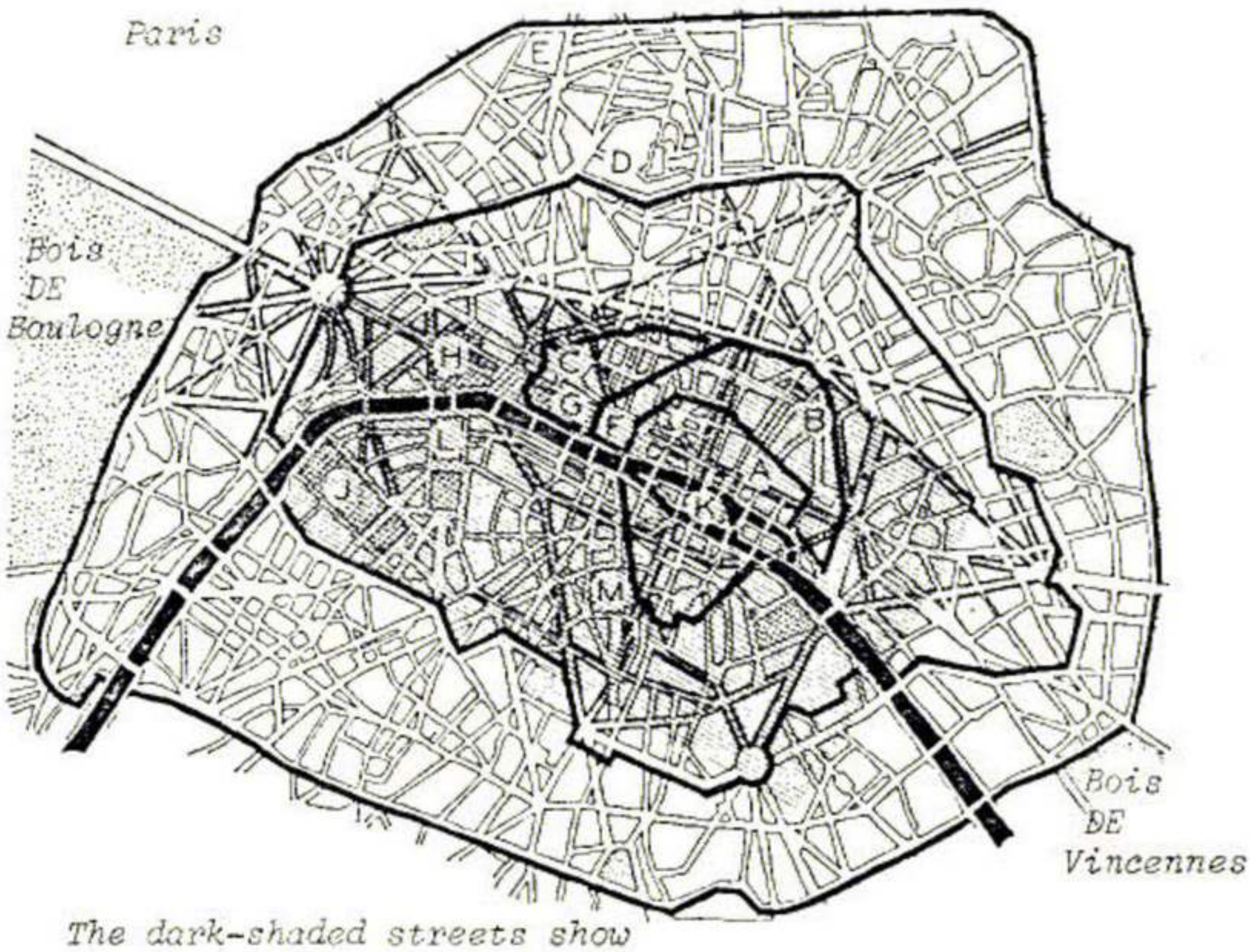


Fig. 21. New Haven. England. Factory system bought more and more people to the urban centers. A. *Factory*

■ *People*



g. 22. Haussman program commercial and civic centers around the main arteries.

f: [Ledislos-Segoe, Local planning Adminstration, International City chicage 1941]

The dark-shaded streets show the Haussmann Program

Wall A Built by Philip Augustus, twelfth century
Wall B Built by Charles V, Fourteenth century
Wall C Built by Louis XIII, Seventeenth century
Wall D Built by Louis XV, Eighteenth century
Wall E Built by Napoleon III, Nineteenth century
F The Louvre
G The Tuilleries
H The Champs Elysees
J The Champs de Mars
K The Ile de la Cite
L The Invalides
M The Luxembourg

a) The errection of skyscrapers with the ground floor and mezanaine. shops and department stores and the higher levels offices. Fig. (23).

b) The network of the skeleton is the basis of the expression of the elevations of these buildings.

c) The development and situation of the department store in the centralized business center. Fig. (24).

However, Recognizable types of commercial forms could be pointed out during the nineteenth Century.

1. The unit shop.
2. Department store and the Branch Department store. Fig. (23,24).
3. Chain stores.
4. Mail order Houses.
5. Co-operative Consumer's shops.
6. Limited price shops (5-10) cents up-to-one dollar stores.
7. Open markets(25).
8. Market Halls.
9. Bazzars.
10. Shopping group Fig. (26).
11. Shopping streets in the center of the city, Fig. (27).

By the beginning of the twentieth century beside the previous commercial units there appeared a new form of commercial unit the small neighbourhood center. The modern counterpart of the "corner grocery store". The neighbourhood - center provides the day-by-day commodities for the direct convenience of a limited population Fig. (28). The Downtown Center that is the financial and administrative center of its region and, in some cities, it has become the center of business for the nation. New York has its "Wall Street, Chicago its "La Salle Street", Paris its "Bourse" and London its "Exchange District".(1)

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(1) *Alevizos, F.P. and Beckwith. A.E. Downtown and Suburbs Shopping Habits.*

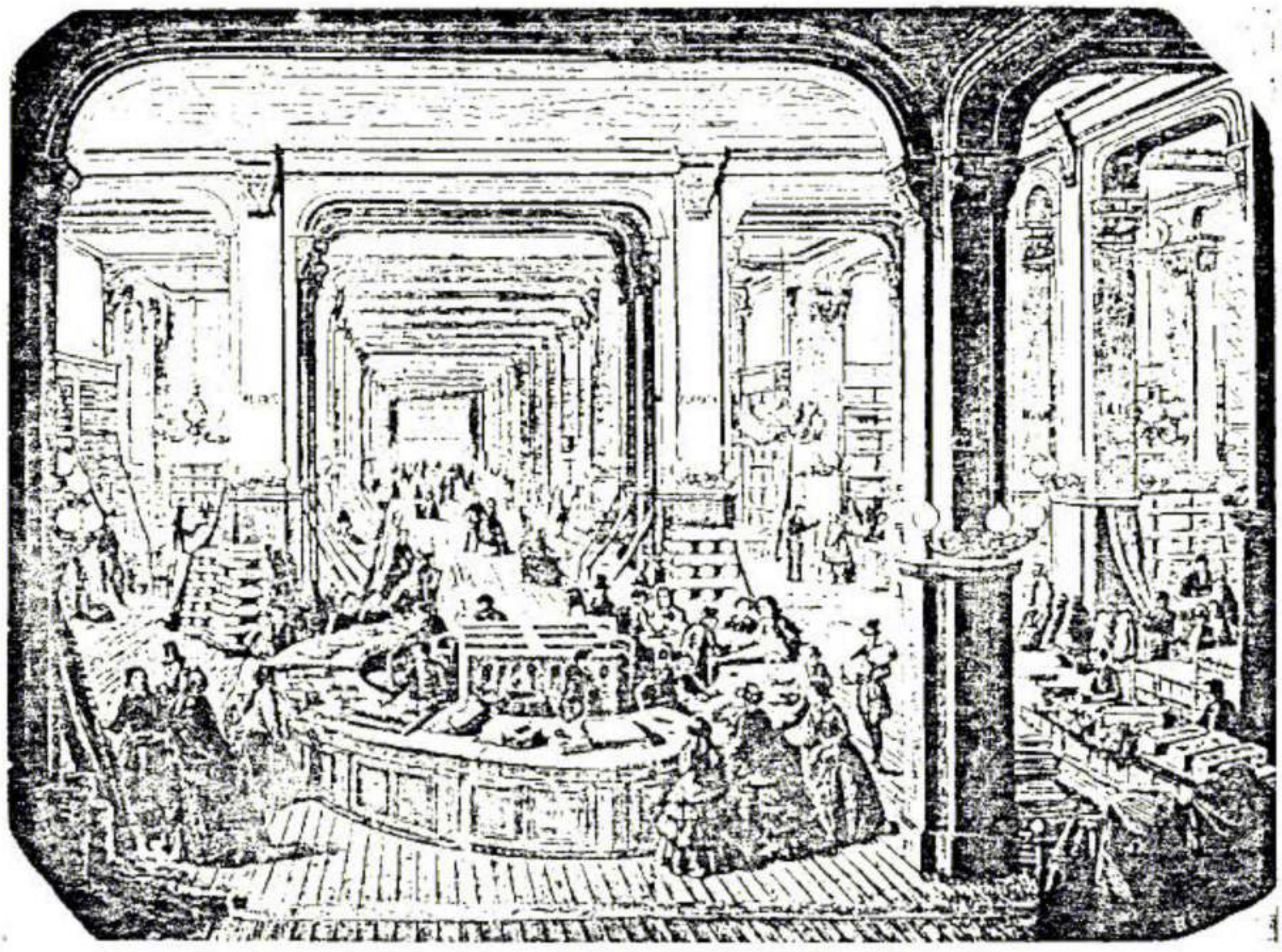


Fig. 23. Parigi "Magasins des Villes de France" 1854 Ground level Department stores.

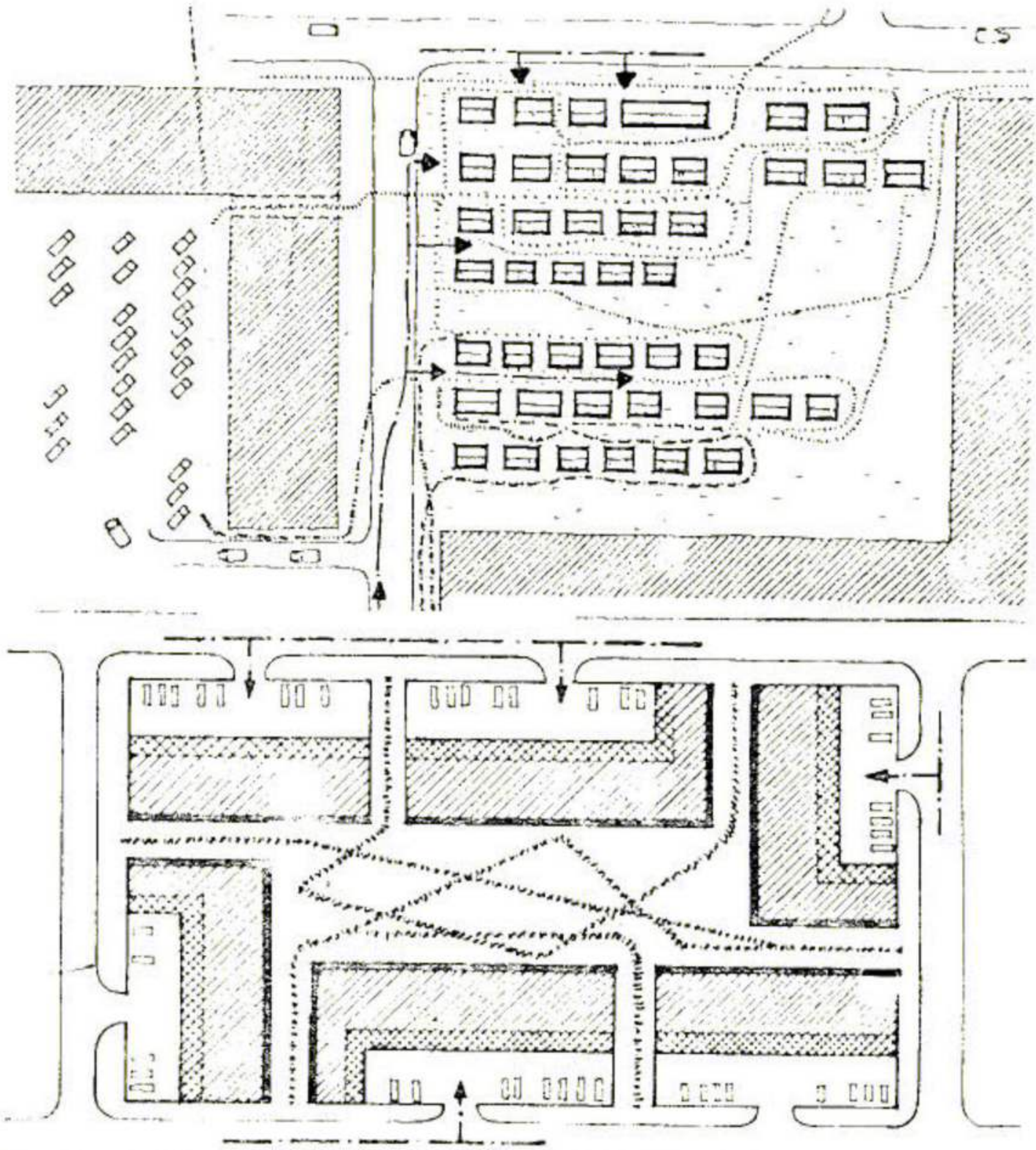
Fig. 24. Parigi : Grand Department store.
"An Bon Marche" Laplanche, 1872.

Reff : Mercati E Negozi, Roberto Aloi Heopli

. 25

The market

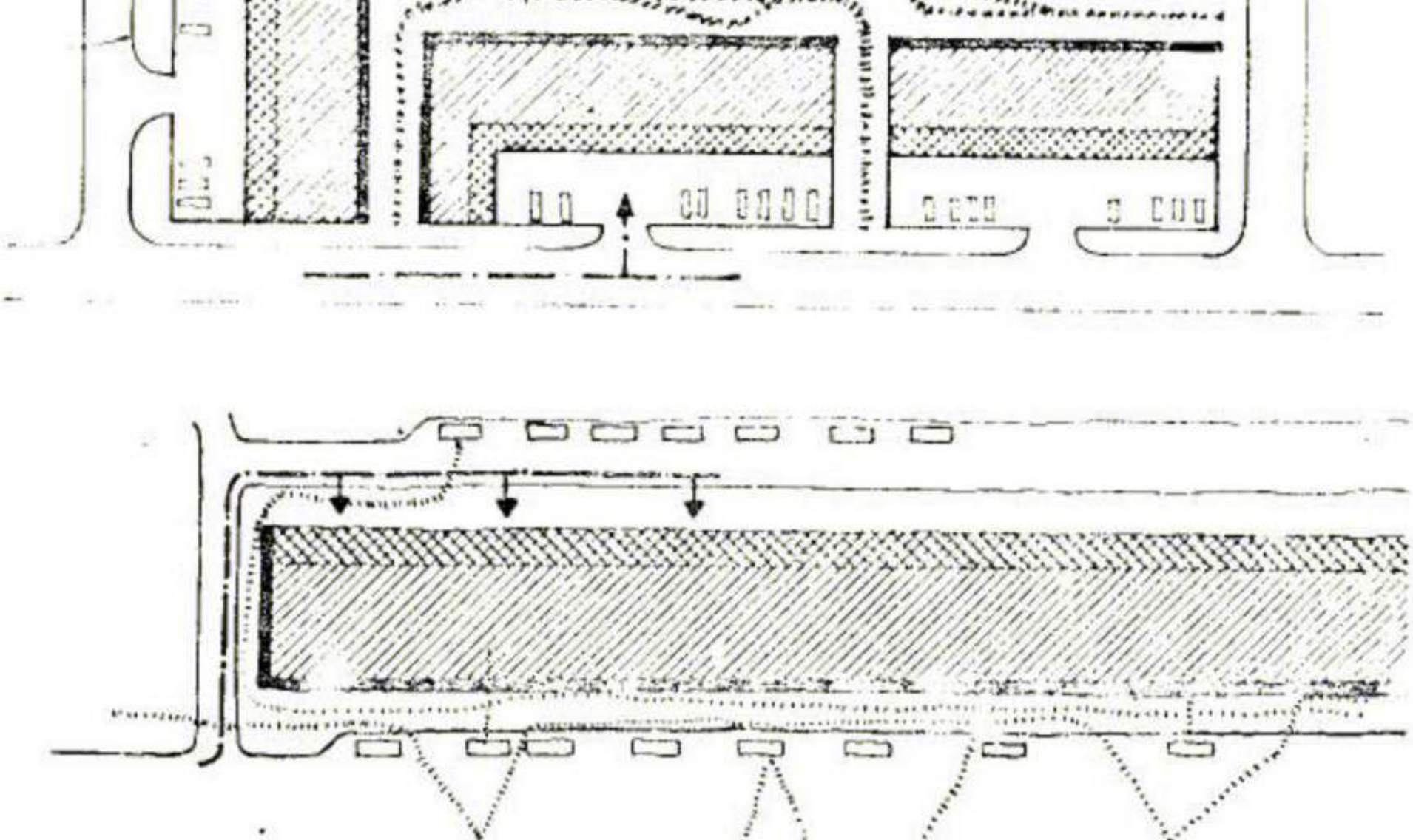
Shops.



. 26

Shopping Group

Shops



g. 27

Shopping Street.

Shops

Service areas

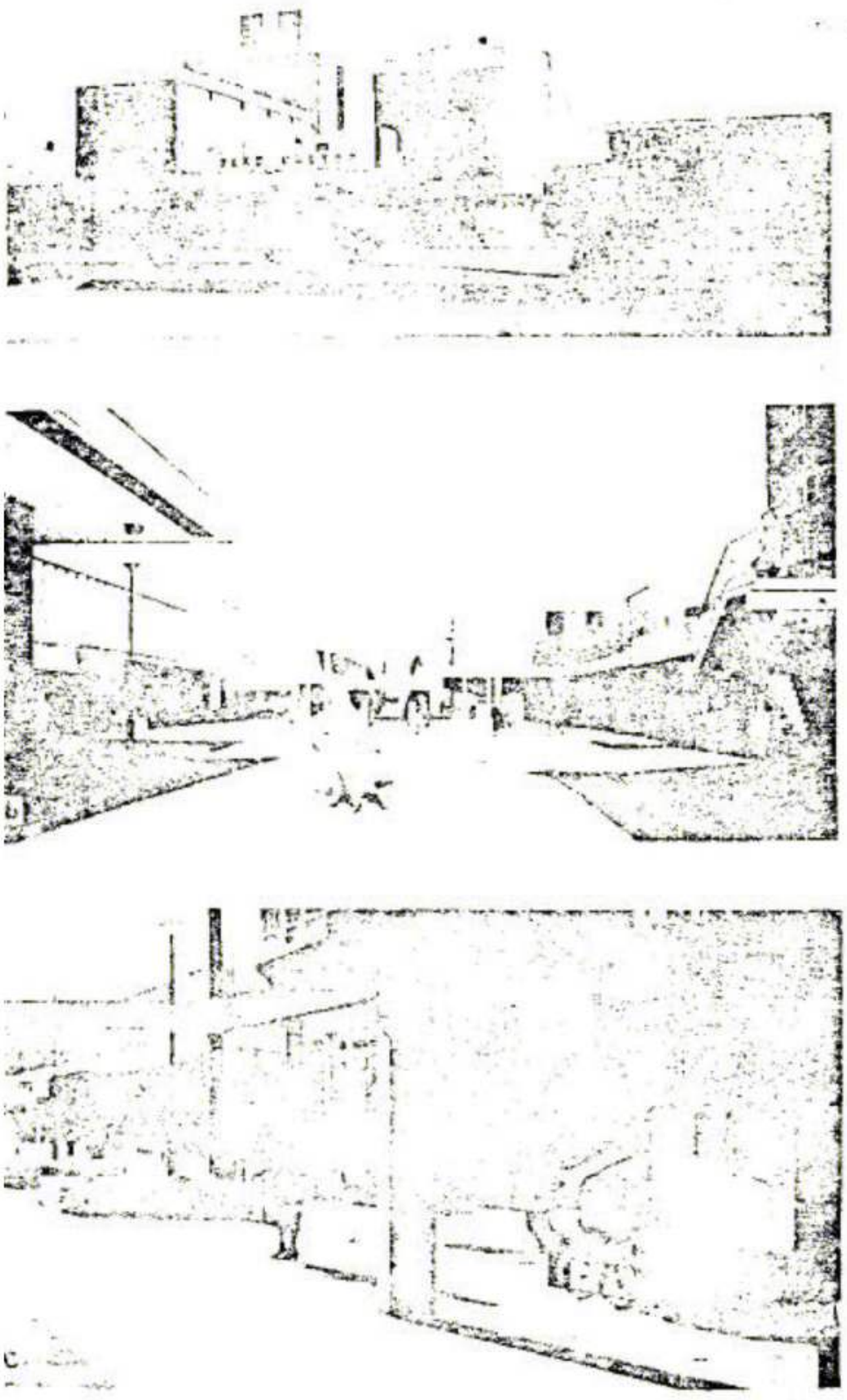
Cars

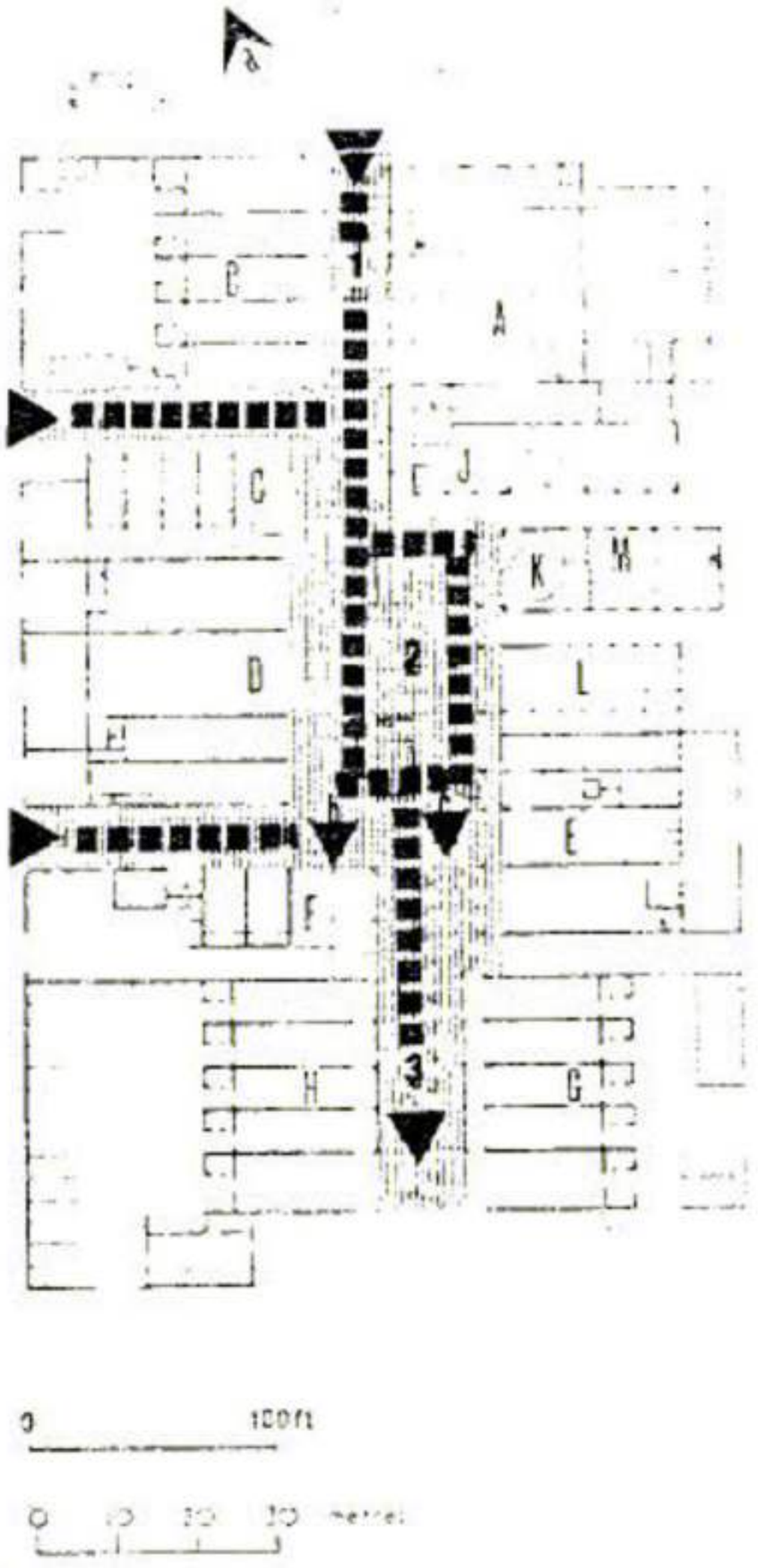
Display frontage

Service vans

Pedestrian circulation

Reff : [Collins. S. Jones Regional Shopping Centers]





KEY:

A. Co-operative store with service shops above.
B. C. Shops with maisonettes above
D. Shops, including Woolworths, with storage and staff rooms above.
E. Shops with flats above
F. G, H. Snops with maisonettes above
J. Public house *K. Coffee bar*
L. Public Library *M. Clubrooms with hall above*

Fig. 28. Neighbourhood Center. Park Neighbourhood, Swindon Frederick Gibberd.

Reff : " Downtown and Suburbs Shopping Habits" Alevizos, F.P and Beck with A.E.

In 1885 Daimeer invented the internal combustion engine and by the year 1900 there were 8,000 cars, and in 1972 there were 97,000,000 cars.(1)

With the increasing number of car-owners a new type of commercial institutions appeared by the mid-twenties in America and some European Countries; that is the Modern "Shopping Center". it consists of a group of stores selling all kinds of goods, located at the intersection of a regional motor system.(2)

It has developed as a result of the congestion and the high cost of land in central areas, coupled with the use of the private cars by large numbers of the population. The first genuine move out-of-town location came in 1954 when Finnegan's, the Manchester department store, decided to move to Wilmslow, 12 miles south of the city. This actual development completed in 1956. Since then the growth of out-of'town centers has largely increased.(3)

Social changes that encouraged the success of shopping centers:

a) Population growth with a considerable expansion in suburban residential areas.

b) The continuing increase in income enabled a large possibility of private cars.

c) Absolute and antiquated premises, combined with increasing traffic congestion has effected the economic success of town centers. A recent survey indicates that 20 percent of motorists avoid their town center because of parking difficulty.(4) Fig. (29).

1.5.1. Shopping Places in United States:

Beginning from the early 1600^{s} and spanning three centuries great numbers of imigrants went to North America from Europe.

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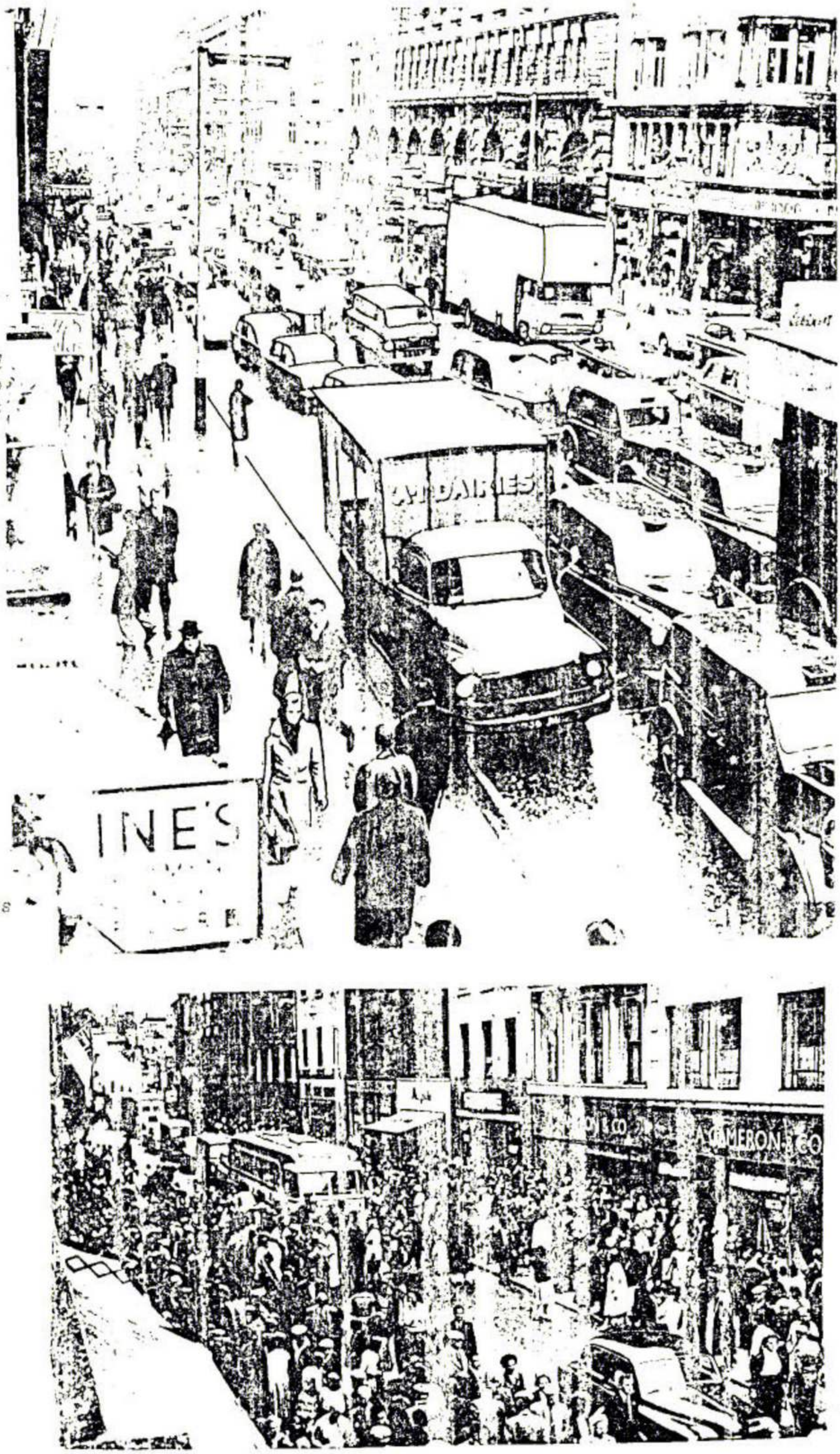
(1) *Urban Pattern. Fourth Edition. Gallion Eisner 1980.*
(2) *Britton J.N.H. Regional Analysis. Economic Geography.*
(3) *Collins S. Jones Regional Shopping Centers.*
(4) *Britton J.N.H. Regional Analysis and Economic Geography.*

Fig. 29

Picadilly, London Traffic Conjestion Parking restrictions create danger to pedestrians and intrustion into the environment



* *High Street Inverness England At peak Shopping hours*

Reff :

Collins S. Jones REgional Shopping Centers.

These immigrants settled in self sufficient colonies compactly along the coast with their own outlets to the sea. In whole they were thirteen colonies; New Hampshire, Massachusetts, Rhode Island, Counecticut, New York, New Jersey, Pennsyluania, Delaware, Maryland, Virginia, North Carolina, South Carolina and Georgia. Supportive Industries developed as the colonies grew and shipyards were opened to build fishing fleets and the merchant English marine.

The federal constitution established that the entire nation was a common market and that the federal government should a) Regulate commerce with other nations and among the states b) establish uniform bankruptcy laws. c) print money and regulate its value. d) Fix standards of weights and measures. e) Establish post offices and post roads. f) Fix the rules governing patents and copy rights.

By 1860 when Abraham Lincoln was elected President 16 percent of the population lived in Urban Areas and a Third of the Nation's income came from manufacturing. The second half of the nineteenth century was the birth of a number of business who formed vast financial empires, they were fierce competitors in their strive for success and power e.g. Jay Gould J.P. Morgan, Andrew Carnegie, John D. Rockfeller and Henry Ford. These leaders up till to day are often involved in many areas of public life e.g. directors in corporations, boards in their community and University Trustees. 1920 - 1929 was a period of prosperity and the Government had to be involved and undertook massive public work large scale industry banks, stock markets, insurance campanies and credit unions.

These changes were the tools that formed America's Economic Development. Natural Resources, Labor supply technology and managerial Talents being in abundance, yet the productive movement was not the responsibility of the Government for Capitalism was and still is the system operating (Free Enterprise system).

Giant corporations owned by the public occupying dominant places in American business and as wealthy as many nations.

Retail business is performed in three ways:

1) Managed by single owners.
2) Partnership.
3) Stockholders as owners.

The rise of chain stores is a significant factor against small business. They have invaded the system of single proprietor or the partnership. In food retailing, for example, chain grocery stores have become dominant, driving out many small business.These Chain stores use mass methods, buy in large quantities, maintain a high volume of sales, and stress self-service and encourage and offer credit cards. The Americans buy almost everything on credit and they have almost an infinite choice of ways to spend; and the bank plays an important role in their life; most of the people put their money in a checking account at the bank and a saving account and they go about paying for their purchases by credit cards and checks. Sometimes retail stores offer credit cards of their own to their regular customers and repayment is made in monthly instalments.

CHAPTER (II)

CONTEMPORARY STRATEGY OF SHOPPING ACTIVITIES

2.1. Introduction:

The early cities were built to possess visual physical evidence of individual origin, growth and progress. But in the image of the City of progress, a residential area is concieved as being an "island of quiet " in the total space where man strolls around with pictorial space and where travelling machines are made subservient to the existing new way of life. Within these islands of quiet, much change, however, has taken places, situated within newly developed sectors of the city. What is obvious is that the residential areas will be seen as a counterform of place to the newly understood order in natural housing in clusters and reached by a net work of pathways linked by a net of service roads, the latter linked at points to the next scale of road, new services have been established to serve these groups of people where they live in an urban pattern. New meaning at shopping activity has been established to form a more convenient organization with suitable services concentration.

The term shopping center reffers to a group of architecturally unified commercial establishments built on a site which is planned, developed, owned and managed as an oparating unit related in its location, size, and type of shops to the trade area that the unit serves. The unit provides on-site parking in definite relationships to the types and total size of the center.(1)

5.1. Zoning:

The Ground Plan sets the basic policies for development of the city, the general relation between the various land uses residential, commercial and industrial forming framework of the urban structure that is the general framework is translated into precise areas which specify the zoning of the land use, streets and highways, mass transits, recreation and conservation, subdivision expansion utilities, railways and airports, civic centers, schools and urban re-development.(2)

2.2. Zoningof Shopping Facilities in the Urban Form:

Is the legal regulation which developed to protect the public health, safety or welfare of the people.

One of the first recorded steps of Zoning was in 1810 in certain Napoleonic laws and the prussian codes in 1845 which contained land-use regulations.

Yet Most early laws concerning land-use regulations were concerned only with the uses that were a menace to life (storage place for gunpowder, slaughter house, hogstorage and hide).

Legal action on Zoning affairs passed through two phases: The first a group of court cases: San Fransisco (1867), Los Angeles (1985)....(3) Resulting from the numerous court cases held concerning zoning laws, regulations

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(1) *Applebaum, William. Shopping Center Strategy: International Council of Shopping Centers, 1970.*
(2) *Mc Keever, J. Ross. Shopping Center Zoning, Technical Bulletin 69. Washington. Urban Land Institute 1973.*
(3) *Rams, Edwin M., ed. Analysis and Valuation of Retail Location. Reston, Virgina Reston Publishing Company 1976.*

were made. One of the earlist court decisions was in 1813 Los Angeles and the most important was in 1920 defining the benefits of zoning.(1) Later zoning laws contined to develop and recently zoning has become a means for both conservation and planning.

The land use considerations could be classified in five steps. The first step is the identifications of objectives and principles characteristic to residential, commercial, reecreational, educational and industrial uses of land and lays down existing standards for such uses.

The second step concentrates on the pattern of expected development within existing city boundaries.

The third step looks in detail at the undeveloped surrounding land and its characteristies for future development.

The fourth step brings together the analysis and results of the previous steps and suggests a coardinated comprehensive land use plan for the city and its surrounding land including all items present in the first step.

This step locates the neighbourhood units with their facilities (schools, parks, playgrounds and shopping) the plan will represent the relation between city and region.

The fifth step in the land use consideration is to investigate the tools that are needed to accomplish such a plan. e.g. the Azuza General Plan. Fig. (30).

Most of the big cities of the west during the first phase of our industrial age have been and still are characterised by:

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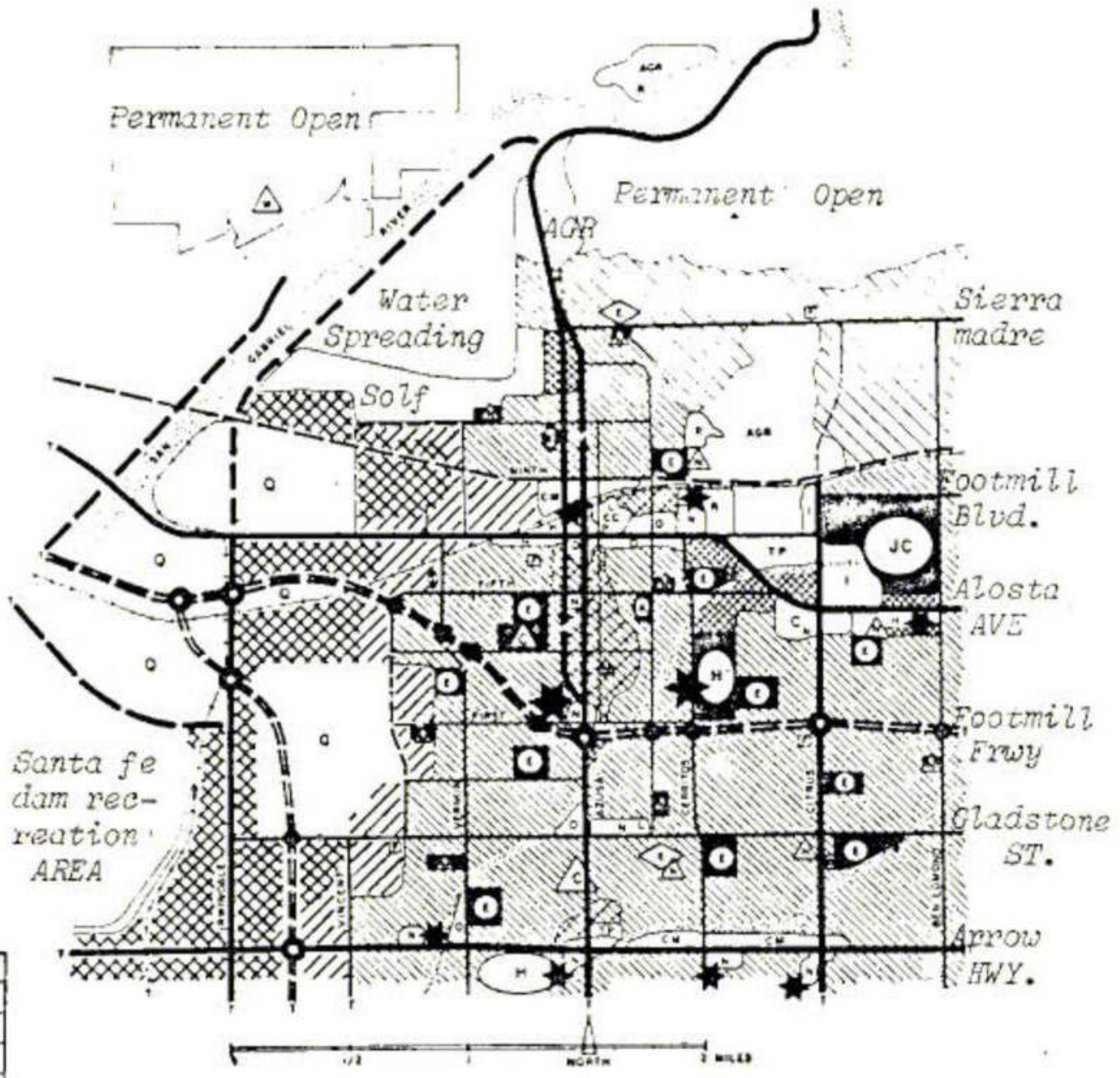
(1) Windsor V. Whitney, 95 Connecticut 357, 363.



CONSERVATION		RECREATION	
	FLOOD CONTROL	N	NEIGHBORHOOD PARK
	SETTLING BASIN	C	COMMUNITY PARK
	PERMANENT OPEN	W	WILDERNESS PARK
	WATER SPREADING GROUNDS		
AGR	AGRICULTURE		
RESIDENTIAL		**PUBLIC FACILITIES**	
	LOW DENSITY 0-3 FAM/NET AC	CC	CIVIC CENTER
	LOW DENSITY 0-6 FAM/NET AC	F	FIRE STATION
	MEDIUM DENSITY 7-15 FAM/NET AC.	L	LIBRARY
	HIGH DENSITY 16-33 FAM/NET AC	P	POLICE
TP	TRAILER PARK 10-13 FAM/NET AC	E	ELEMENTARY SCHOOL
		H	HIGH SCHOOL
COMMERCIAL		JC	JUNIOR COLLEGE
D	CENTRAL BUSINESS DIST	A	SCHOOL ADMIN. OFFICE
C	COMMUNITY CENTER		
N	NEIGHBORHOOD CTR.	**STREETS & HWYS.**	
O	OFFICE-INSTITUTIONAL		FOOTHILL FREEWAY
H	HIGHWAY COMMERCIAL		MAJOR HIGHWAY
R	COMM. RECREATION		SECONDARY HWY.
C-M	COMMERCIAL-MFG.		TRAFFIC COLLECTOR
INDUSTRIAL			INTERCHANGE
	LIGHT INDUSTRIAL		GRADE SEPARATION
	GENERAL INDUSTRIAL	T	TRUCK ROUTE
Q	ROCK QUARRY		ONE-WAY STREET
QUASI PUBLIC		**TRANSPORTATION**	
I	INSTITUTIONAL		HELIPORT
			RAILROAD R-O-W

★ *Shopping Facilities*

Fig. 30. A coardinated comprehensive Land use plan.

Courtesy of "R.I.B.A. Journal September and October 1960.

The Azusa General Plan (Azusa, Calif).

2.2.1. Concentration:

This was the outcome of unplanned random growth which evolved as follows:

At first the wealthy merchants and craftsmen settled close to the commercial center of the town with easy walking distances from their places of work. The poor workers had to come daily from the fringes of the town where they lived in poverty.(1) After the use of railroads in the 19th century, the wealthier members of the commercial communities moved to the open countryside at the outskirts of the city as the center had become ugly to look at and unsanitary to live in. Commerce and light industry filled the evacuated space, creating more and more congestion. Again as these outside territories became in their return more congested and less suitable for residential purposes, the wealthier people moved further outwards, being replaced by the commercial and industrial establishments. Fig. (31).(2)

With the automobiles increase as a means of private transportation the same process continued: haphazard centralization congested growth in cities and unplanned flood towards the suburbs. Such haphazard concentric growth gives the following parodox in the commercial business cores of our cities; where the traffic congestion is the greatest we have the narrowest streets; where we need big parking lots for public buildings we have the smallest parking facilities. One good solution has been given by Constantines Doxiades "Dynamic City"(3) Fig. (32), emphasizing that the growth of the city should be in one direction by building up sectors and allowing the center to expand without being overlapped. The result will be that we will have a graduate transfer of the center of gravity along one axis, forming new areas with new centers.

2.2.2. Decentralisation:

With the use of motor vehicles and high ways, heavy industries which had at first needed central locations to be served by rail and water transportation began to decentralize and be located out of town. Fig. (33). Especially

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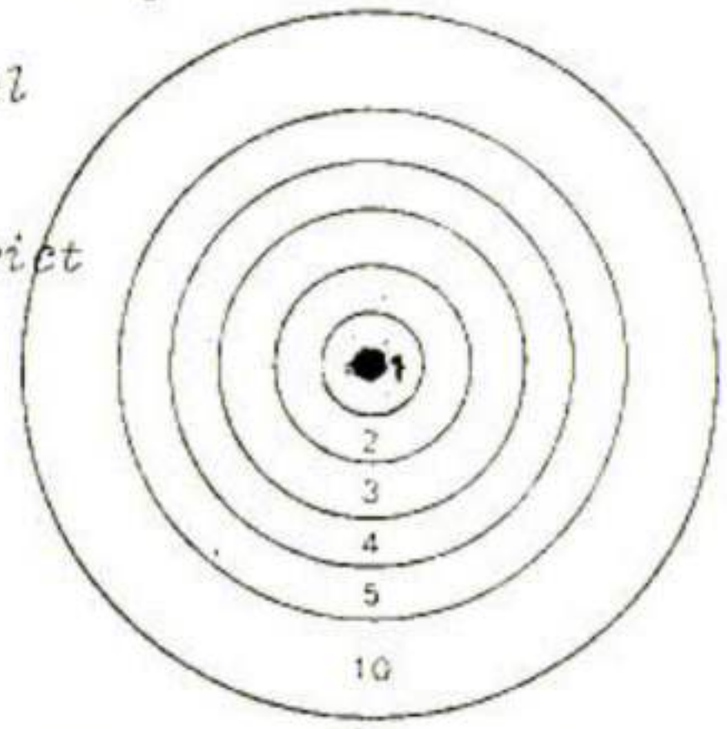
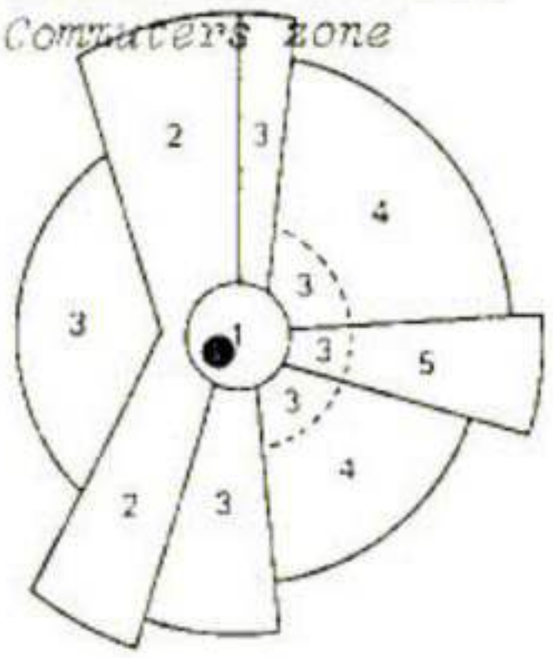
(1) *Abd-El-Fattah, Kamal, Ph.D. Thesis.*
(2) *Gruen, Victor and Larry Smith. Centers for the Urban Environment; Survival of the Cities. New york: Van Nostrand Reinhold, 1973.*
(3) *R.I.B.A. Journal. September and October 1960.*

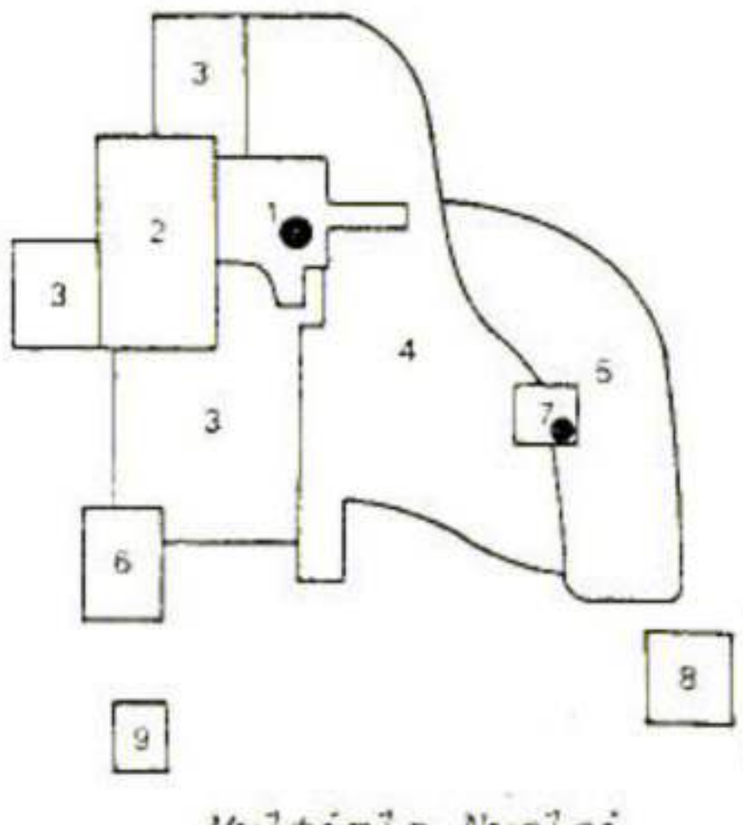
1. Central business district
2. Wholesale light manufacturing
3. Low-class residential
4. Medium-class residential
5. High-class residential
6. Heavy manufacturing
7. Outlying business district
8. Residential suburbs
9. Industrial suburbs
10. Commuters zone



Concentric Zone theory



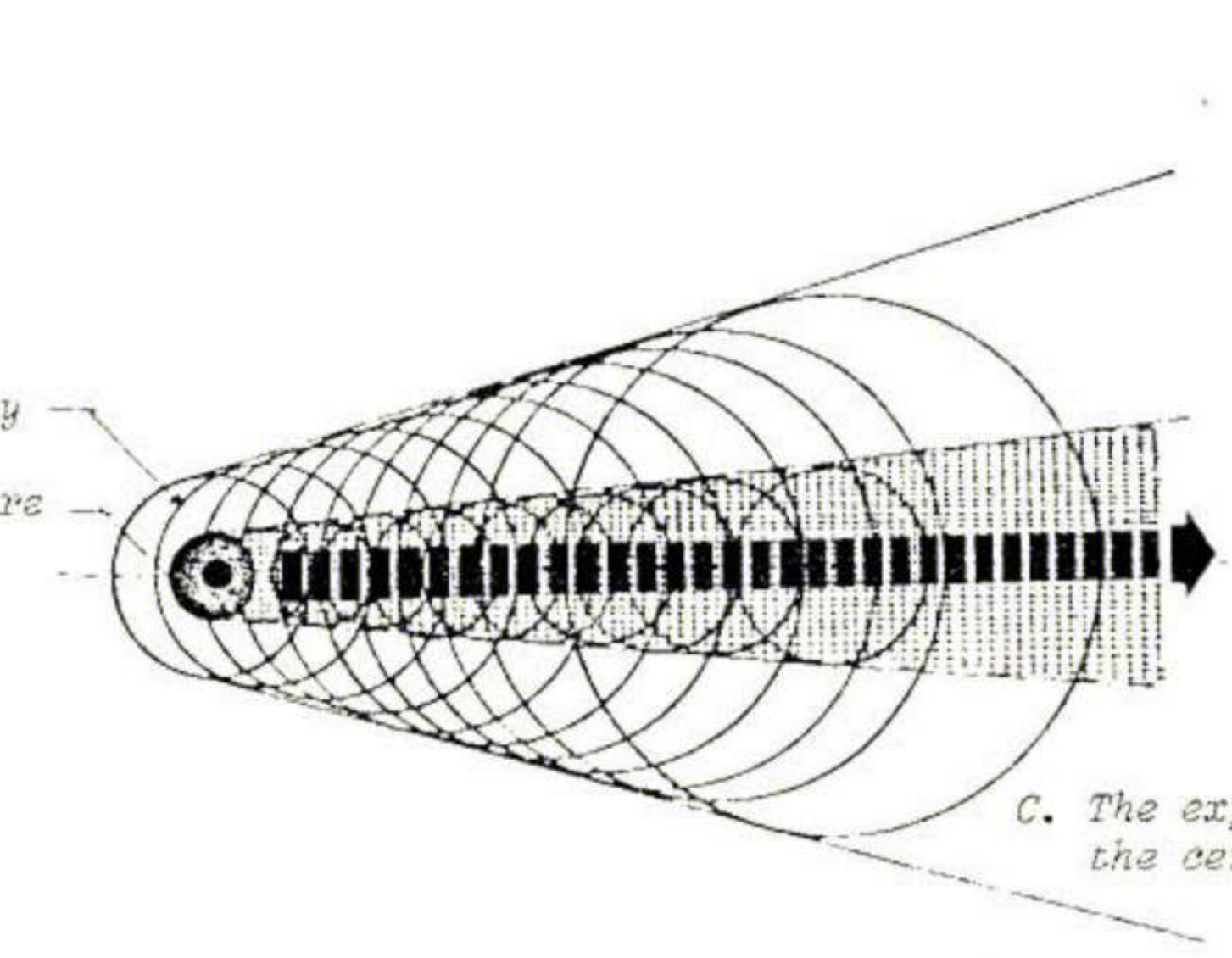
Sector theory



Multiple Nuclei

Courtesy of "R.I.B.A. Journal
September and October 1960.

Fig. . Concentration.



C. The expansion in one direction, allows the centre to expand without difficulty

Fig. 32. The "DYNAMIC CITY" Dr. Constantinos Doxiades.

with the increased conditions of unhealthy and difficult conditions in the congested central area which led to a considerable decrease of residential population downtown and a rapid increase of population in the suburbs. Department stores and commercial establishments consequently followed the residential population to the suburbs where there is more space, less cost, lower taxes and parking areas available near the customers.(1)

Fig. (33) shows a diagramatic aspects of decentralization where the center is the central core for administration and central institutions such as speciality retail stores requiring special customers from a very wide area. The other units are outer town communities each having its own business and commercial center.

2.3. Transportation Pattern and The Orban Form:

There are four basic designs for movement networks: the radial, the ring, the grid, and the linear. Like a spider-s web, the radial has a strong center, with lines moving outwards, where the flow of movement has a common origin, destination, or intersection and volumes arriving at the center can be controlled, the radial network gives the most practical line of travel. It works well in gathering and distributing traffic to and from the peripheries. To by-pass the center of the radial system, a ring road may be introduced. As compelling as they are dramatic, these highways have set the regional design skeleton for decades to come. Radial designs are most useful at the microscobe when laying out circulation systems for campus plans, hospital complexes and superblocks.

Rectangular grids are probably the most common network.(2) They can be fitted into the topography and adjusted in size and frequency to accomodate varying traffic demands without losing their strong and easily grasped goemetrical designs. The application of modern topological theory, however suggests a design quite different from the gridiron, namely a mosaic of hexagons, subdivided into triangles, which Le Ricolais calls a trihex Fig. (34)

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(1) Levin, Michael S. Measuring the Fiscal Impact of a Shopping Center on its Community. New York: International Council of Shopping Centers, 1975.

(2) Environmental Design Richard P. Do Ber, Aip.

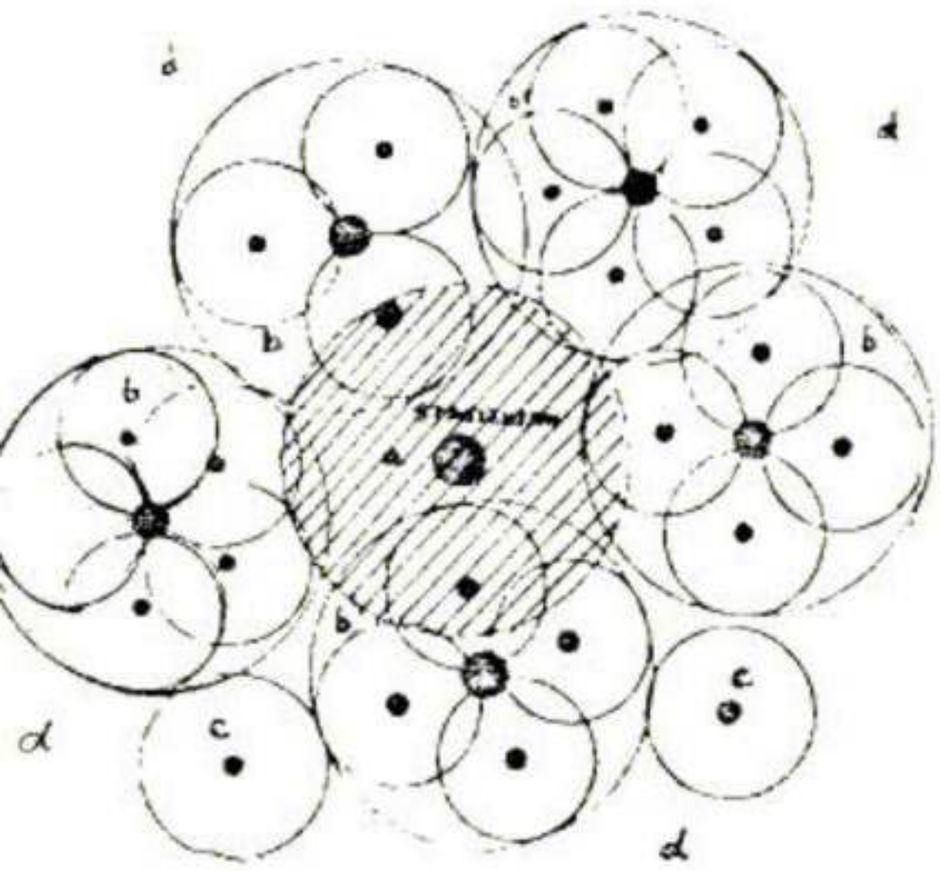
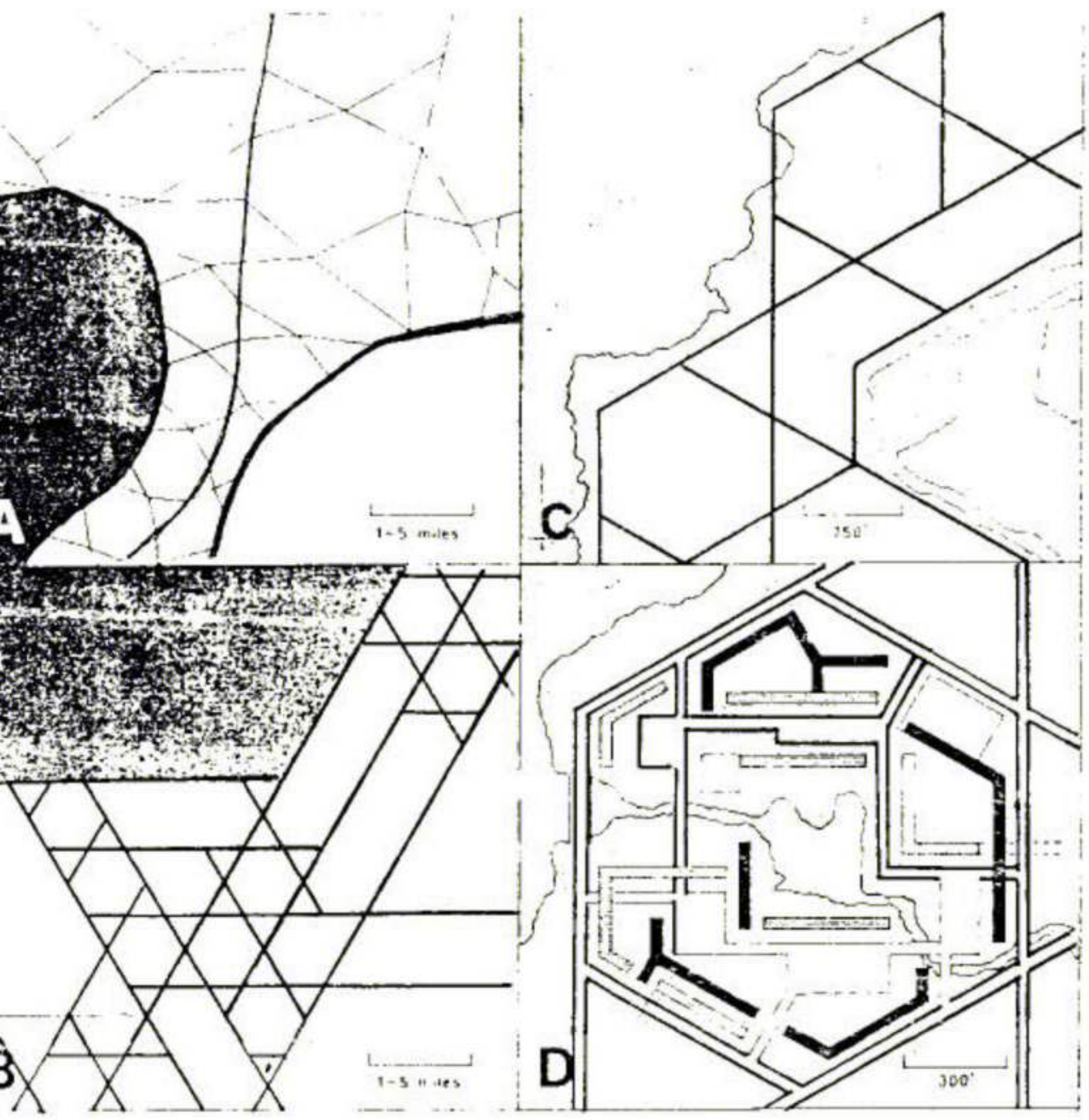


FIG. 33 Decentralisation
a. Central core
b. Town districts
c. Self-contained suburbs
d. Heavy industry and recreation



Courtesy of "Environmental Design" Richard P. Dober. AIP.

Fig. 31. Trihex grid in development areas.

Diagram A : Trihex grid follows the design of elements.

Diagram B : Trihex grid can be developed in steps

Diagram C and D : Case of Trihex grid with parrallel street 0.25 miles apart.

Diagram D Suggests a high-density area.

The qualitative analysis indicates that a trihex vehicular grid at one level, coupled with trigrid for pedestrians at another, produces the most ordered and efficient system of differentiated movement. However on the whole we can define other kinds and explain them.

a. The Linear City or Ribbon City: Fig. (35)

This is one solution for the decentralized city and escape from congestion. Here the city is spread along the rail road and highway as a continuous narrow band always close to the countryside. The local shopping center for each residential unit is in direct contact with it and within walking distance from the farthest dwelling (Stalingrad.[1]

By le corbusier: It is aimed at solving the problems created by uncontrolled industrialization in our modern cities accompanied by uncontrolled increase of their population. Their solution was to move to the country and place the new industries with their related industrial cities along the main transportation routes connecting great existing cities. The existing cities remain concentric acting as the main commercial, administrative and cultural downtown centers for the industrial cities. Fig. (36).[2]

b. The City as a Grouping of Townships: Fig. (37)

A further development of the ribbon city. The industrial zone here is still a continuous band extended along the main artery of transportation. Perpendicular to it and separated by a green belt is the residential zone, broken up here into a number of residential cells. The space between the cells is used as a park and recreational areas, schools, vegetable gardens and commercial buildings each cells has its own independant business and commercial core.

Here the city has no central dominating administrative and commercial core. Instead it is composed of a number of cells or small cities connected to each other by highways and railroads. The commercial business core is

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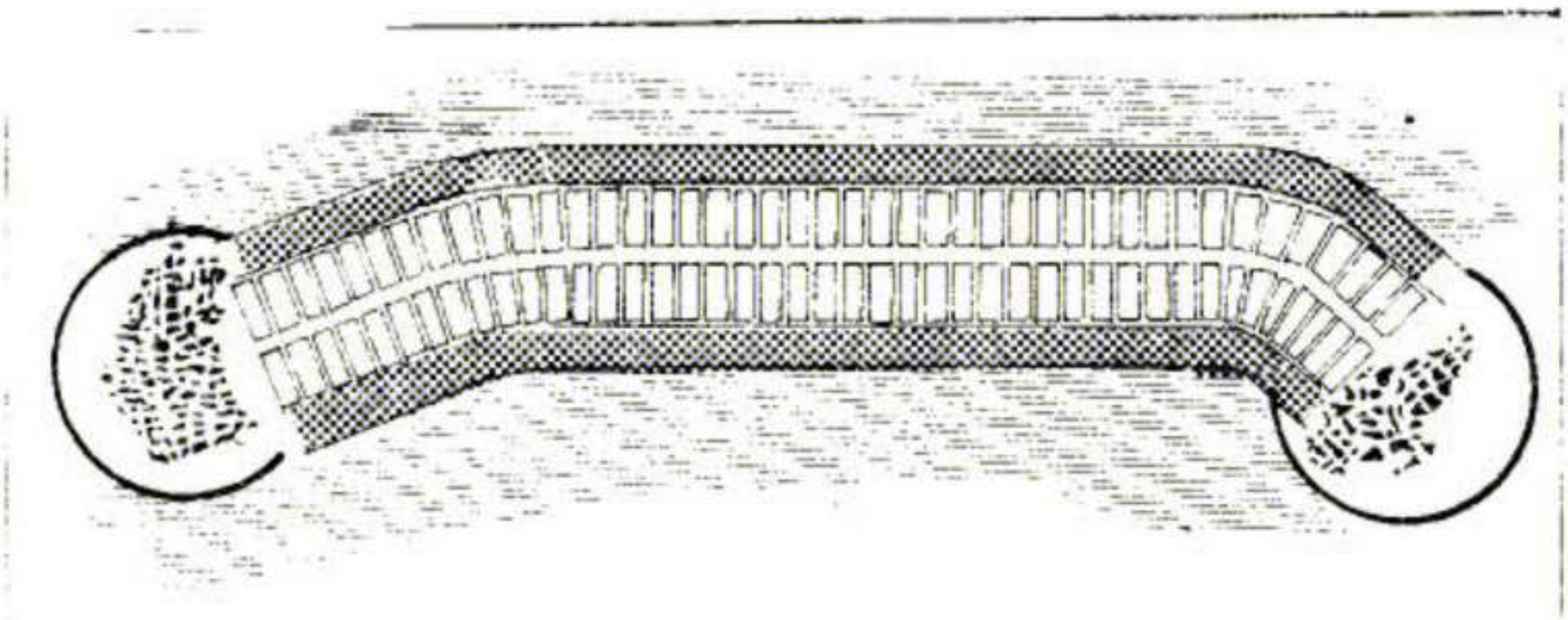
(1) *Runcorn. Town Plan. 1966.*

(2) *Eisner, Gallion. The Urban Pattern, Fourth Edition.*



An example of two congestioned cities linked through a Lineal City with an agricultural belt 100 metres wide on each side, joining two old agglomerated cities.

Soria Y Matta The basic concepts of Soria Y Matta's proposals can be gleaned from these two diagrams. Source : Harvard Graduate School of Design Library.

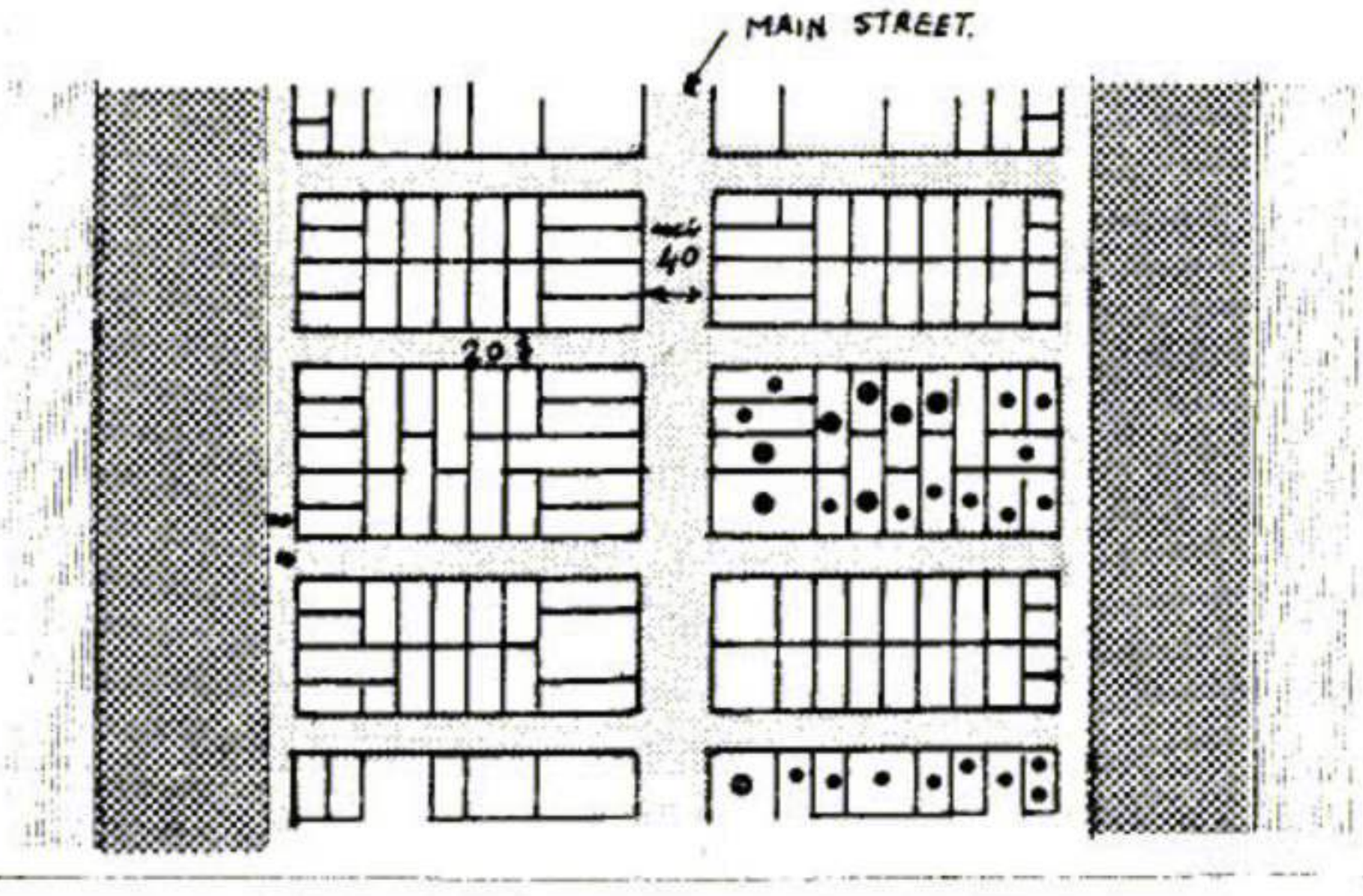


Fig. 35. The Lineal City or Ribbon City.

Plan of a Lineal City fragment with the main street 40 metres wide, the transverses 20 and the posteriors 10 meters in width, all with trees and shrubberies. The division the blocks of houses into plots at different sizes is arranged in order that all dwelling-houses should be surrounded with archards and gardens. The Lineal City is bound on botli sides with agricultural zone and woods.

Ref. Runcorn New Town, Town Center, Source (Runcorn Town Plan 1966)

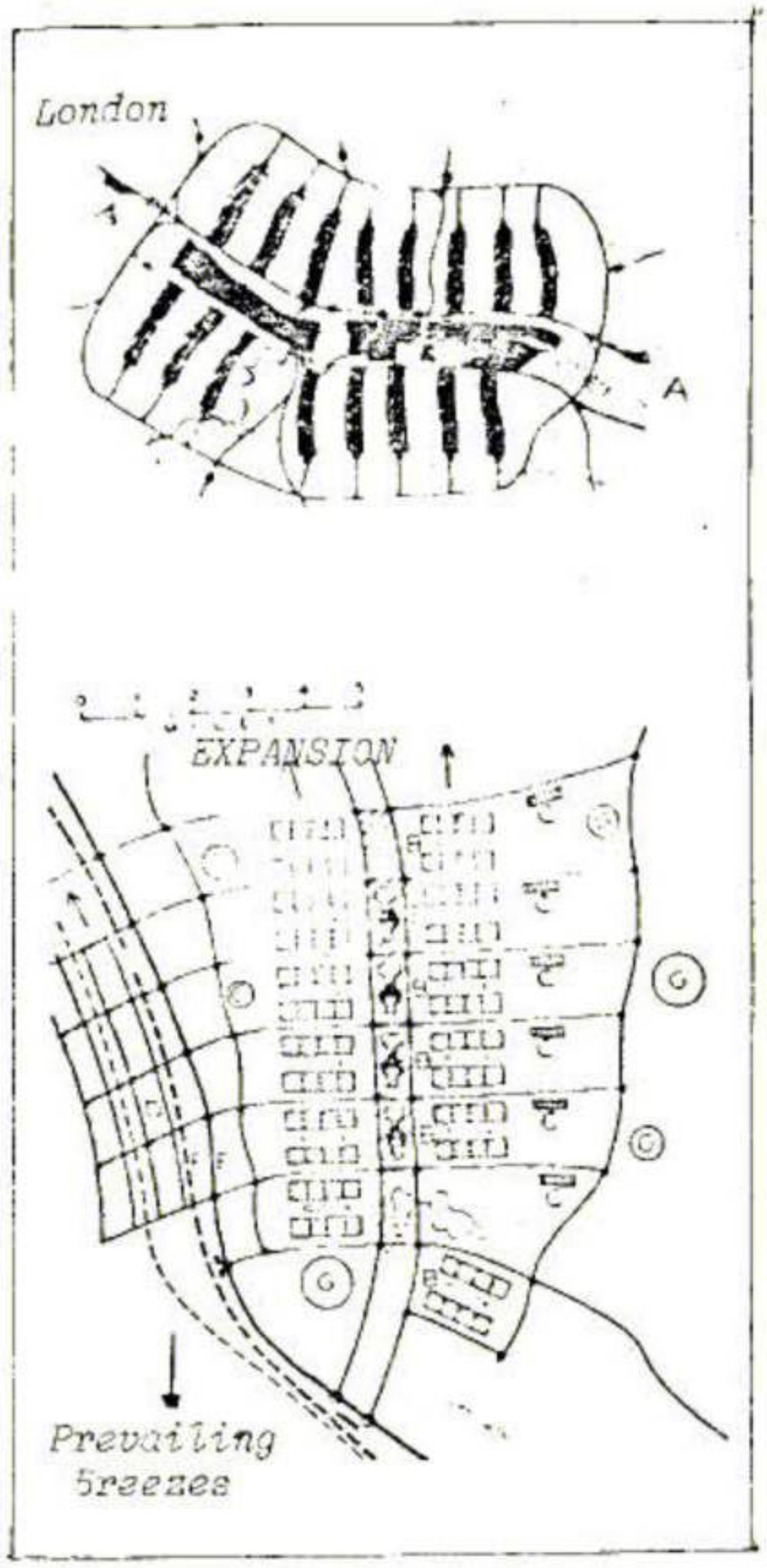


Fig. 37. Proposed plan for London by M.A.R.S. group

A-A, central commercial, adminstrative and cultural band along the Thames forming the core.

Fig. 37 The city as a group of town ships (total population = 1 million) by Jos'e Sert.

A: Civic and commercial center
B: Township community and shopping center
C: Light industry
D: Heavy industry
E: Main highway
F: Main railway
G: Air fields

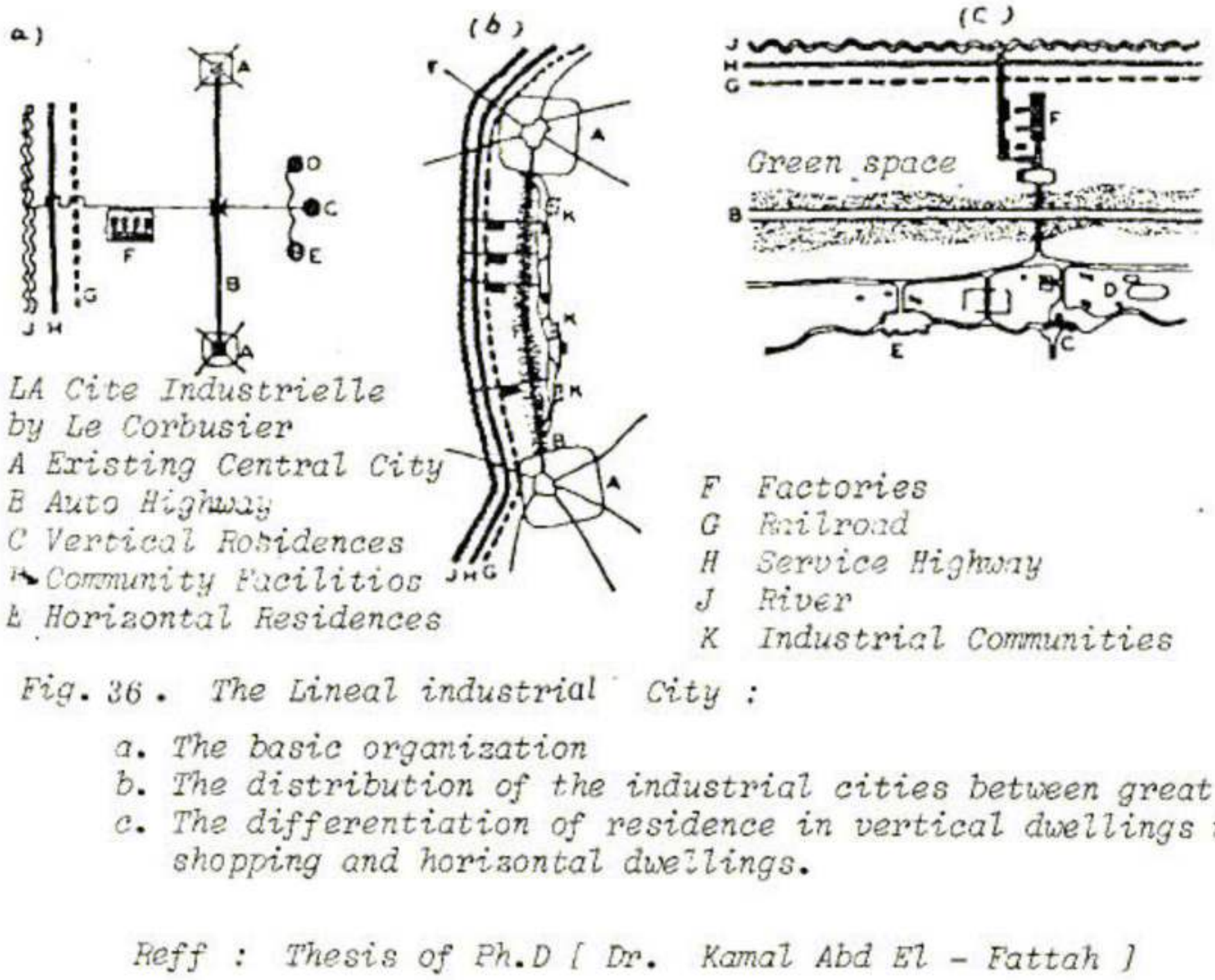


Fig. 36. The Lineal industrial City :

a. The basic organization
b. The distribution of the industrial cities between great citeis
c. The differentiation of residence in vertical dwellings with shopping and horizontal dwellings.

Reff : Thesis of Ph.D [Dr. Kamal Abd El - Fattah]

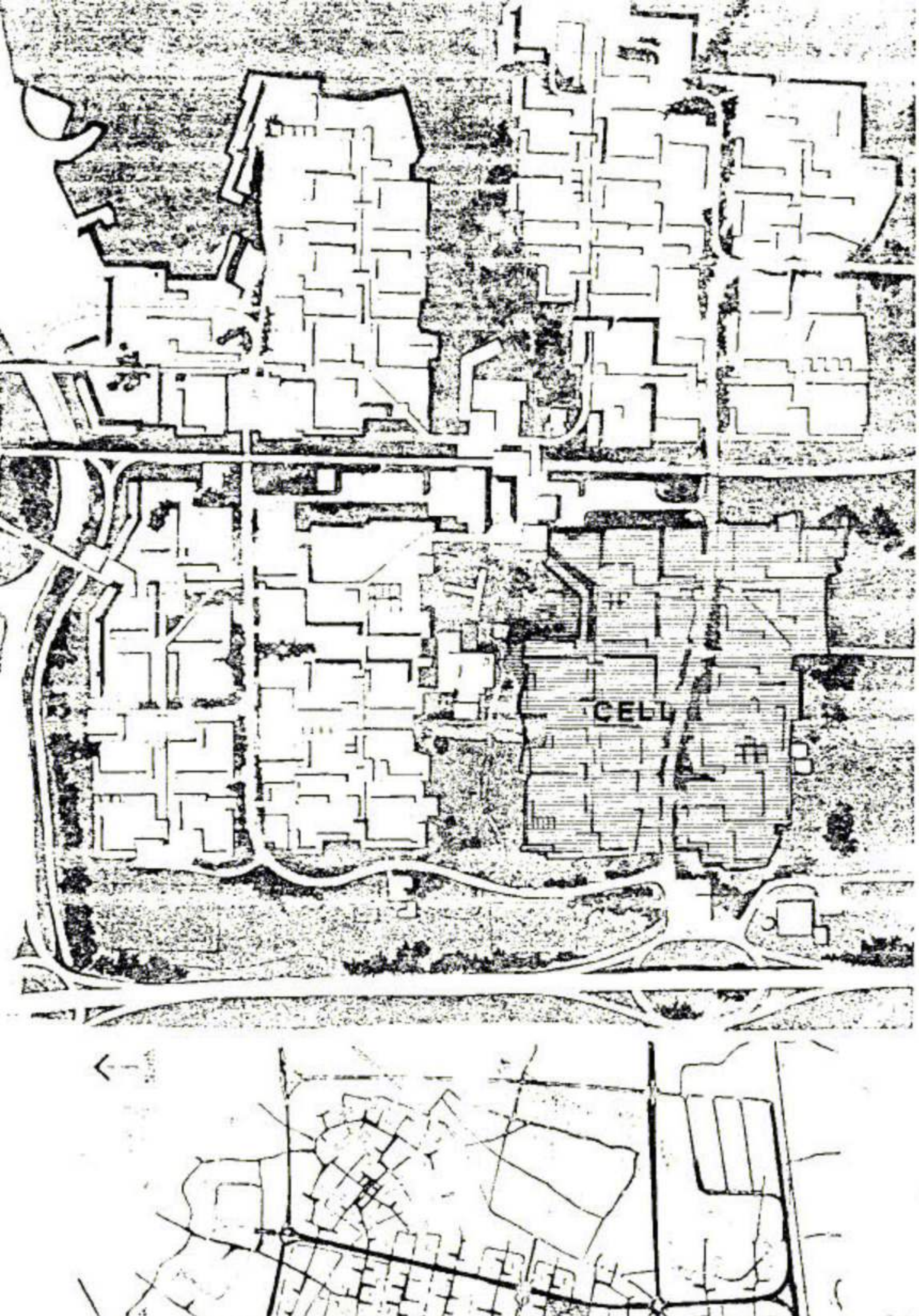


Fig. 37 Cellular City used in Cumbernauld New Town, University of Essex and University of Bath. Source Greater London Council

* Cellular City :

Runcorn New Town, Town Center. Source (Runcorn Town Plan, 1966)

isolated from the residential areas by the industrial zone. At the same time it lacks the social institutions which are usually placed in the green zone between the cities near to the inhabitants Fig. 37. The best solution is to get the commercial core out of its congested and isolated location in the center and place it between the cities. Such centers are "Regional Shopping Centers".

2.4. Shopping Utilities in Modern Urbanisation:

The market place has always been the focal point of the city and due to the development of industry and transportation a variety of commercial functions have been introduced.

Surveys have been done to define the exact commercial needs of the society but still there are some who do not fit in with the average shopper.

Sometimes people prefer to have a choice for special durables and be ready to use public transport to visit the city center. Perhaps, also, a family will want to make an adventure out of a shopping trip - to a historic town that specializes in antique furniture or silver or paintings for example. But still any society is not uniform in its aspirations, age or habits. The housewife, with young children may not have the use of the family car and may need a local shop.

The elderly, too, may actually prefer the local nearby shop where he could socialize and exchange ideas rather than the impersonal shopping center.

Planner's must therefore understand more about the real needs of people - social, physical as well as economic.

Within the commercial land uses which are called shopping facilities, there are several major identifiable types - neighbourhood, community, Down-town and Regional Shopping Centers and later the role of the Viewphone

[a combined Television -Telephone] which developed in line with the development of larger supermarkets and shopping centers that have been and still are being built today.(1)

There are certain terms needed for the definition of the major kinds of centers: These include the terms GLA [gross leasable area], parking index and trade area and the names for the classes of goods at store or center.

2.5. Planning Motivation of Shopping Facilities:

2.5.1. The Neighbourhood Center:

The smallest type of shopping center which provides the day-by-day commodities for the direct convenience of a limited population where the house wife may have an easy walk to a shopping center [that is walking distance from home does not exceed one half mile] Fig. (38).

A supermarket or drugstore is the principal tenant in the neighbourhood unit.

The convenience of a suitable distance for the customer is his first choice and a wide selection of merchandise comes here as a second consideration.

The Neighbourhood Center lies on a typical gross site area of about 3 to 10 acres and serves a trade area population of about 2,500 to 40,000 people within a 6-minute drive.

2.5.2. The Community Center:

Is built around a junior department store or variety store is the major tenant, in addition to the super market. Such a center does not have a complete department store, although it may have a strong specialty or discount store as an anchor tenant.

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(1) *Redstone,Louis, G. New Dimensions, in Shopping Centers and Stores. New York: McGraw-Hill, 1973.*

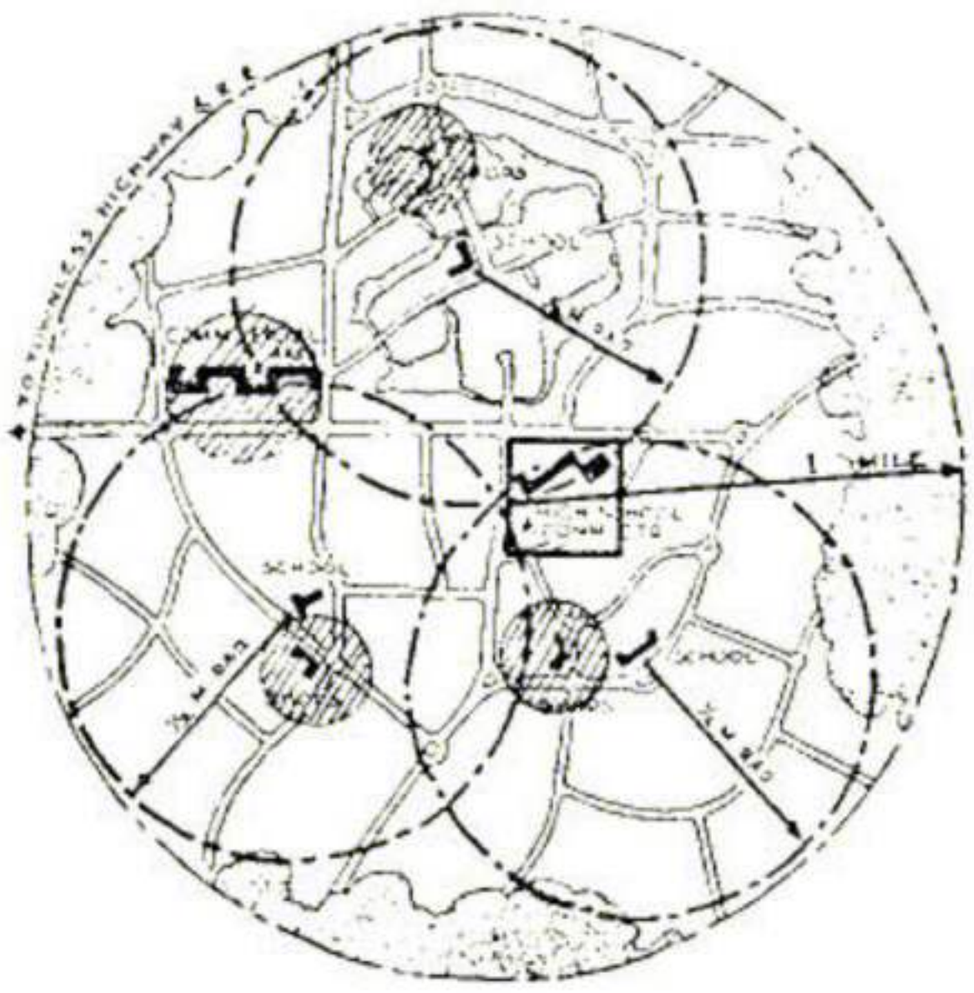
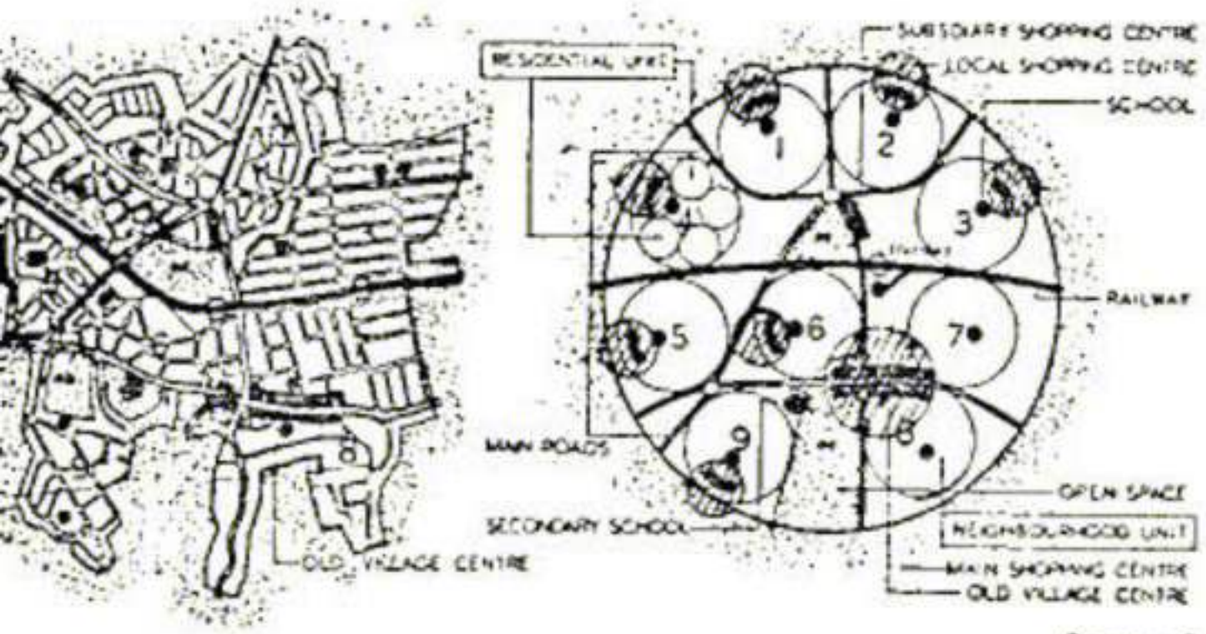


Fig.38. Clarence Stein's conception. In the upper diagram the N. shopping center is the center of the Unit next to the school within a one-half mile radius of all residents in the neighbourhood. Left: The grouping of three neighbourhood units each being almost one mile with a S.C. in its Center. The whole grouping is served by one or two commercial centers walking distance being one mile.

Neighbourhood Shopping Center

Community Center



Courtesy Carter and Goldfinger, London

Clarence, A. Perry's Plan. Shopping Area are stuated at intersecting Streets on the outside corners rather than at the center.

Neighbourhood Shopping Center

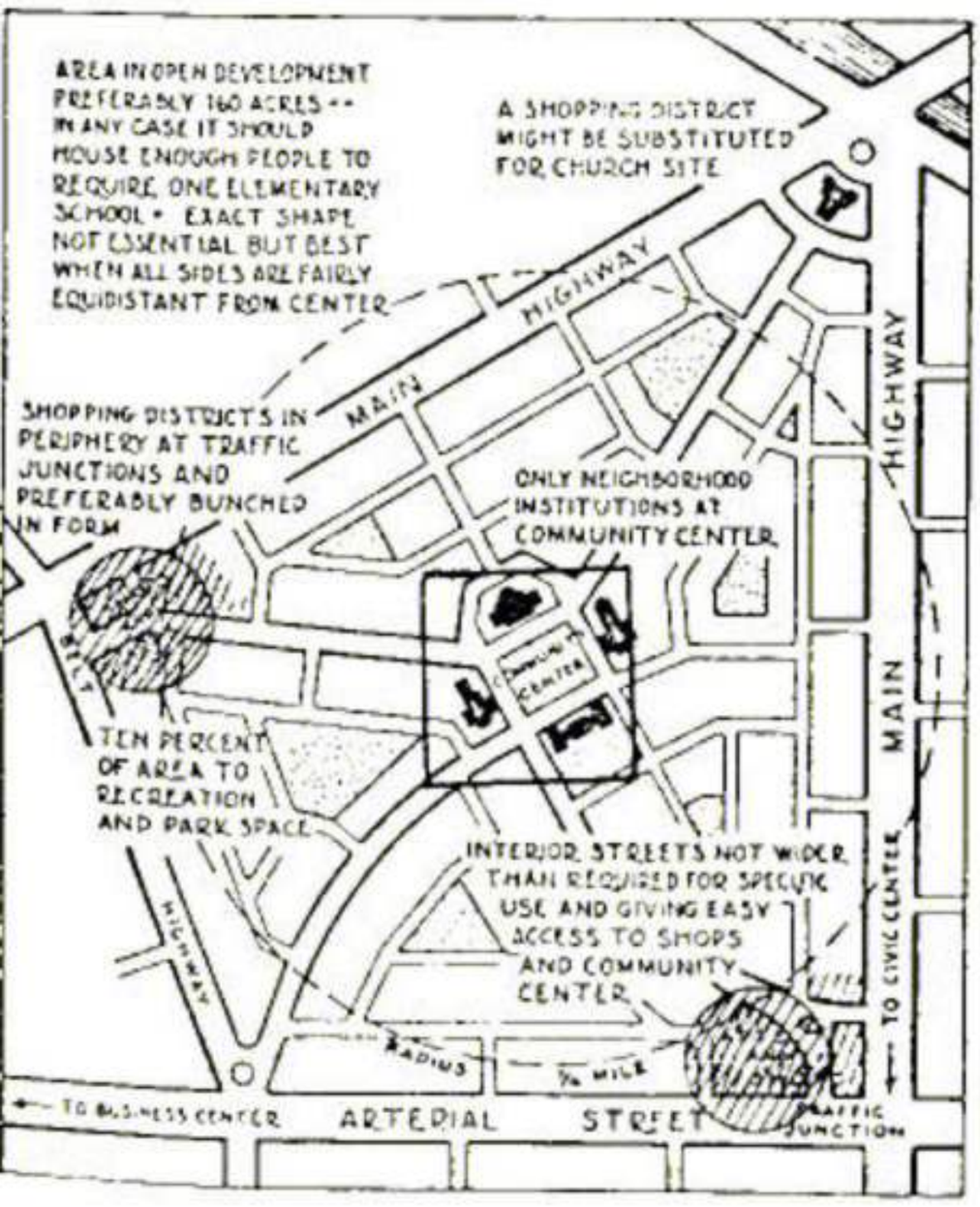


Fig. 39. The Country of London Plan. A neighbourhood unit was the planning unit in the development of this city. Shopping Centers at outer edges.

Community Center

Shopping Center. [Neighbourhood] Ref. Countesy of robert. S. Witterspoon, Jan. P. Abbett. "New Ways of Land Use".

The Community Center has a typical gross site area from 10 to 30 area. It normally serves a trade area population of 40.000 to 150,000 people. When a Community Center is successful it usually is increased in status to that of a small Shopping Center by the introduction of a full-line department store and additional shops.offices and services. A Community Shopping Center is the type whose size and pulling power are most difficult to estimate. Because some shopping goods are made available, shoppers are less predictable in their shopping habits for clothes and appliances but will customarily go to their favorite supermarket for their household daily needs.

The Community Center is the in-between or intermediate type of Shopping Center. Fig. (39)(1)

2.5.3. Main Shopping Centers (Downtown and Regional Centers)

2.5.3.a) Downtown Shopping Centers:

The concept of planning shopping centers has in the last twenty years undergone a dynamic progress not only in the United States where it began but over all continents and developing countries, completely independant of political and economic systems, in Europe, Italy, Sweden, Belgium and Romania, Saudi Arabia in Australia and Africa and other parts of the world.

The shopping centers in different parts of the world reflect a very loose determination of the constitution of the "Shopping Center" and some of them have been termed so on any grouping of stores, even if such groupings should only consist of one supermarket. Yet each continent has followed standards derived from their social forms and economical and political system.(2)

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(1) *Shopping Towns USA. New York: Reinhold 1960 Hornbeck James S ed. Stores and Shopping Centers. New York Mc Graw-Hill, 1962.*

(2) *S.O. Kaylin. Case Studies in Shopping Center Development and Operation New York: International Council of Shopping Centers, 1974.*

When the term shopping center in America is used accurately it reffers to[1] a group of architecturally unified commercial establishments built on a site which is planned, developed, owned, and managed as an operating unit related units location, size, and type of shops to the trade area that the unit serves. The unit provides on-site parking in definite relationships to the types and total size of the centers.

Shopping Centers because of their preplanned layout and unified operation differ from shopping streets even though both are commercial-use-areas for retail selling and the operation of other businesses.

The following elements characterize the shopping center:

(a) Unified architectural treatment for the buildings that provide space for commercial establishments which are selected then managed as a unit for the benefit of all tenants.

(b) Unified site, suited to the type of center called for by the market. The site may permit building and parking expansion if trade area and other growth factors demand. In addition, the site is located for easy access from the trade area and is arranged to distribute customer-pedestrain-traffic so as to maximize retail merchandising.

(c) On-site parking, arranged to provide adequate entrance and exit and acceptable walking distances from the parked car to the stores.

(d) Service facility for good delivery, separated from customer awareness.

(e) Tenant grouping that provides merchandising interplay among stores and the widest possible range and depth of merchandise appropriate for the trade area.

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(1) *Urban Land Institute, Washington D.C., Shopping Centers Re-Studred, Part one Emerging Patterns February, 1957.*

(f) Agreable surroundings for shopping in comfort (including weather protection) convenience, safety, and quality of design - including signs and their placement.

(g) Provides shopping goods, general merchandise, apparel, furniture, and home furnishings in full depth and variety. It is built around the full-line department store, with a minimum G.L.A. square feet, as the major drawing power. For even greater comparative shopping, two department stores-even three or more are being included among the tenantry. The normal design uses the pedestrian mall. Either open or enclosed, as a connector between the major anchor stores. The malls also establish a basic pattern for directing customer flow past supplementary tenant stores which are placed between the purposaly separated majors.

However the shopping center being a sort of reproduction of the oriental bazaar, where all types ofmerchandise are available implies the construction of large buildings of several floors, all equally accessible to the public. Examples are numerous and countless.

2.5.3.b) Regional Shopping Centers:

Between 1940 and 1950 the suburbs surrounding cities increased 35 percent and the rate of growth between 1950 to 1960 jumped to 50 percent.

This remarkable expansion was the result of the increase of the total population and also from the movement of people from the center of the city to the suburbs and also an important factor was the increase of car-owners to 330 cars per 1000 person.

Retail facilities emerged along with this expansion to serve the suburbs in the form of a new distinguished feature "The Regional Shopping Center".

The Regional Shopping Center as termed and defined in America where it first appeared could be described as a Unified Shopping group similar to the Downtown Shopping Center consisting of two or three Major Department Stores and including a full range of retail facilities. It serves a population ranging from 150,000 to 400,000. An average size is about 100,000 sq.ft. of total store area up till 400,000. A minimum site area of 20 acres and reaches up to 100 acres. This type of center is distinctive for cheap land price and convenient parking facilities.

2.6. Aspects in Designing the Shopping Center:

Shape of Site:

Merchandising planning begins after the economic analysis of the site has determined the size of the project and the architectural and engineering analysis of the site has determined the basic planning concept. The step here consists of determining the size, location and type of each store to be placed in the shopping center.

Another significant phase of the planning test is the determination of the character of the shopping center as influenced by the choice of the major tenant, the department store.

The primary objective of the merchandising planner is to select stores and to arrange them in such a manner that the greatest possible number of customers are attracted to the shopping center and funnelled through it, thereby creating the maximum amount of pedestrian traffic and inter-store shopping opportunities.(1) The basic principal controlling this process is the enhancement of the customer's satisfaction in terms of a suitable selection of merchandise offered with greatest convenience to the customer.

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(1) *Victor Gruen and Larry Smith: Shopping Towns U.S.A. The Planning of Shopping Centers.Reinhold Publishing Corporation, New York Progressive Arch. Library.*

Mainly there are two concepts after which any location from any department, either primary or secondary, depends:

a) The introvert.

b) The extrovert.

The introvert center provides for show windows and entrances to the individual stores exclusively from the public pedestrian areas (mall, courts, arcades). In the introverted center the shopper is guided from the entrance on a certain circulation given the chance to communicate with all the stores through a series of malls and public areas.

Here there is an opportunity for an attractive treatment for the exterior of the center without individual signage for advertisment. The extroverted center on the other hand provides for show windows and entrances which are directed towards the parking facilities, and for additional ones which are directed towards the public pedestrian areas. This type could be critisized that shopper's traffic here is split. Some of the shoppers who enter from the parking area might never enter the public pedestrian areas and thus enter the other stores. Also from the economical side the provision of two store fronts, two entrance doors, two sets of show windows is wasteful.(1)

2.6.1. Either Entrovert or Extrovert the Shape of the Center is Governed by Other Factors:

Customers are attracted by the over-all presentation of merchandise in the center but especially by primary customer attractors. By placing primary and secondary customer attractors in locations where they function as magnetes, customers are pulled through the center from one magnet to the other, past the doors of the tenants who fall into the catogory of traffic users. Fig. (40) These latter cannot in themselves attract a sufficient number of customers to survive, and therefore are dependant on the fact traffic generated by the primary and secondary traffic attractors.

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(1) *Dollars and Cents of Shopping Centers (Trienn 6th edition 1975) Urban Land Institute 1200 18th Street, N.W. Washington D.C. 20036.*

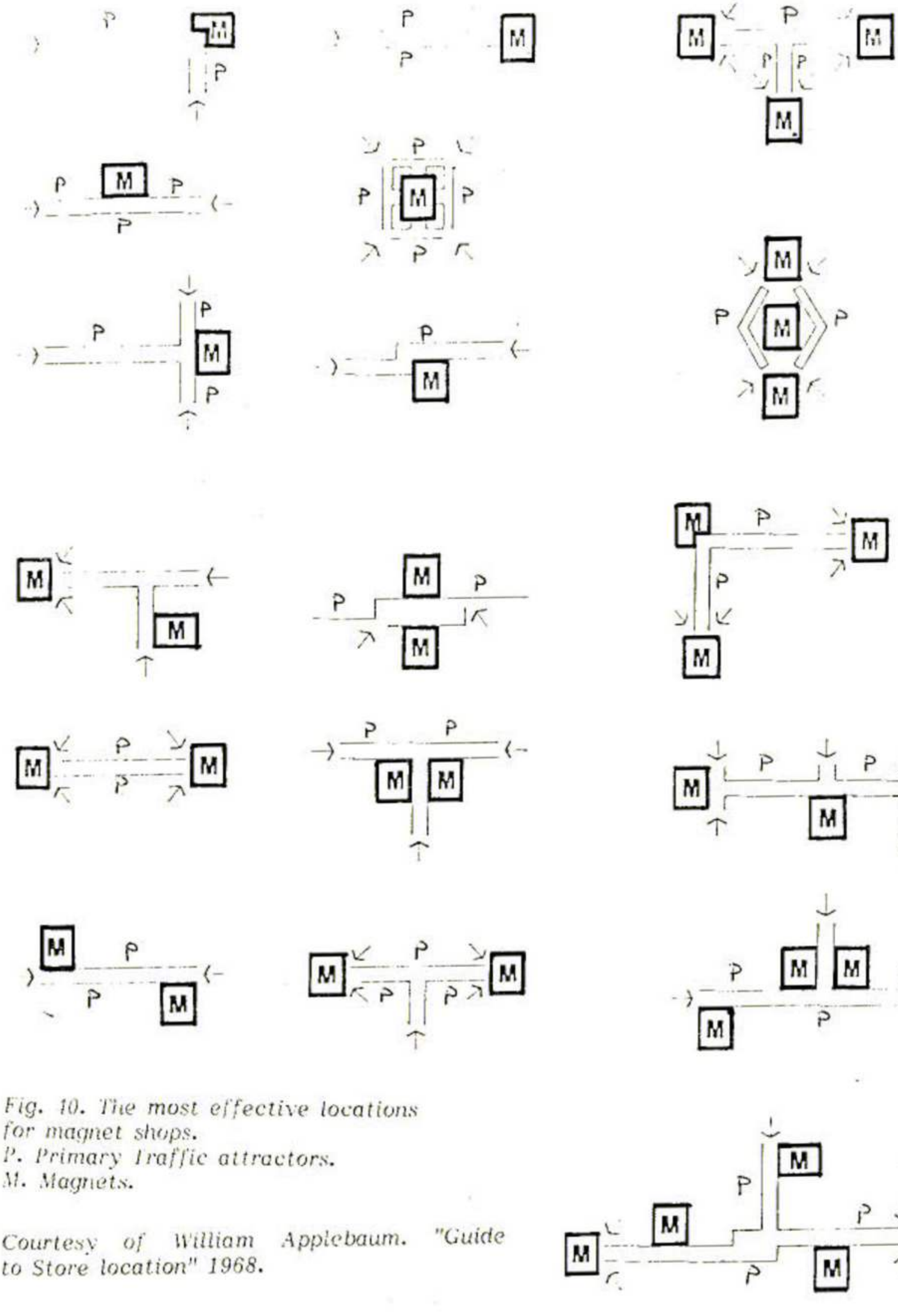

Fig. 10. The most effective locations for magnet shops.
P. Primary Traffic attractors.
M. Magnets.

Courtesy of William Applebaum. "Guide to Store location" 1968.

The most important primary traffic attractor that is a tenant capable of attracting customers to the center is in a regional center, obviously the department store. The junior department store,the specialty and large fashion store, the supermarket and the large quality restaurant also serve as primary traffic attractors. Fig. (41).

The function of the secondary traffic attractor that of pulling customer traffic through the center - is performed by the tenants in the primary attractor category as well as by banks, post offices, clusters of apparel stores, groups of selling services stores, such as barbar, beautician, shoe repairman, dry cleaner and other related activities. The remainder of the tenants fall into the category of traffic users and, as such, require prime space with maximum pedestrian traffic. This category is largely made up of the so-called small tenants who, while they are not traffic generators, serve a highly useful function since they contribute to the completeness of one-stop shopping characteristic of the regional center. They add color and enhance the atmosphere and character of the center..(1)

The primary traffic generator can function best for the shopping center when located in accordance with the "pull" principal. The single-pull plan is used when one anchor tenant is contemplated. Fig. (42). The double-plan is desirable when two anchor tenants are anticipated and function well where the mall type of building arrangement is used. Fig. (43). The triple-pull plan can be used for a variety of more complex building arrangements when three anchor tenants are located in the project. Fig. (44). The use of this type of plan could be particularly useful in the case when the project is to be constructed in two or more stages. After the primary and secondary traffic attractors have been located the location of other stores is determined.

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(1) *Stokols, D. Origins and Directions of Environment-Behavioral Research. Theory, Research and Applications. New York. Plenum Press, 1977.*

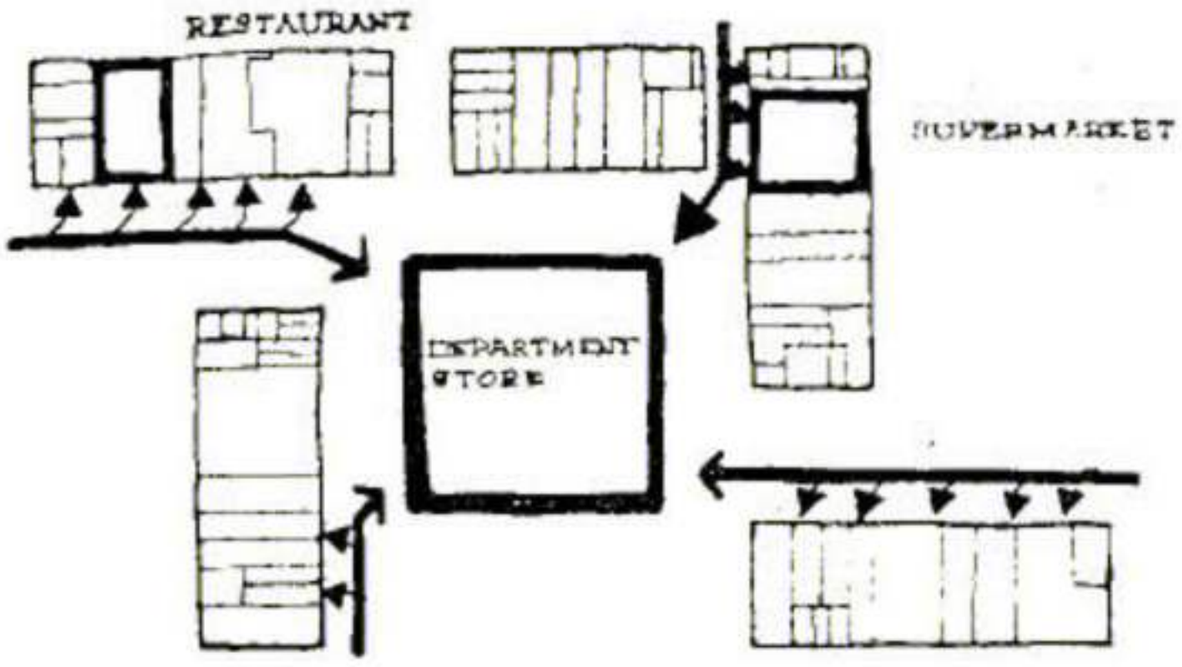
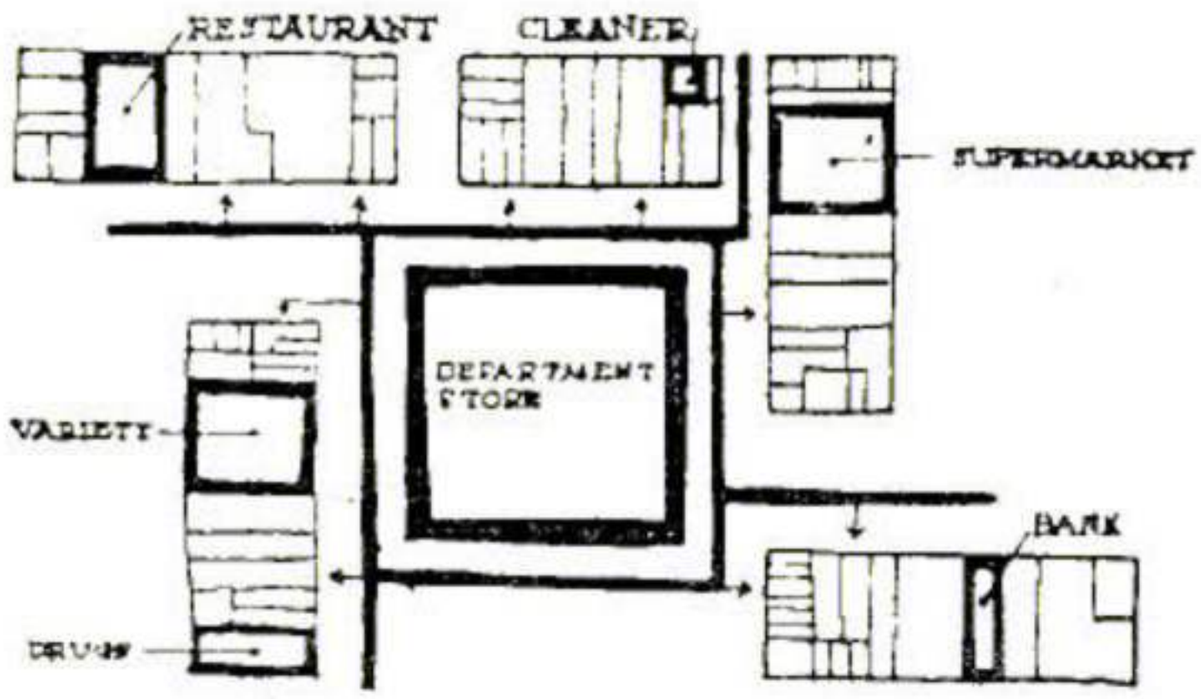


Fig. 11. Shoppers are attracted to the Scene by primary customer attractors

Fig. 41. (Right)
Secondary traffic attractors.



Courtesy of Victor Gruen and Associates. Shopping Towns, U.S.A.

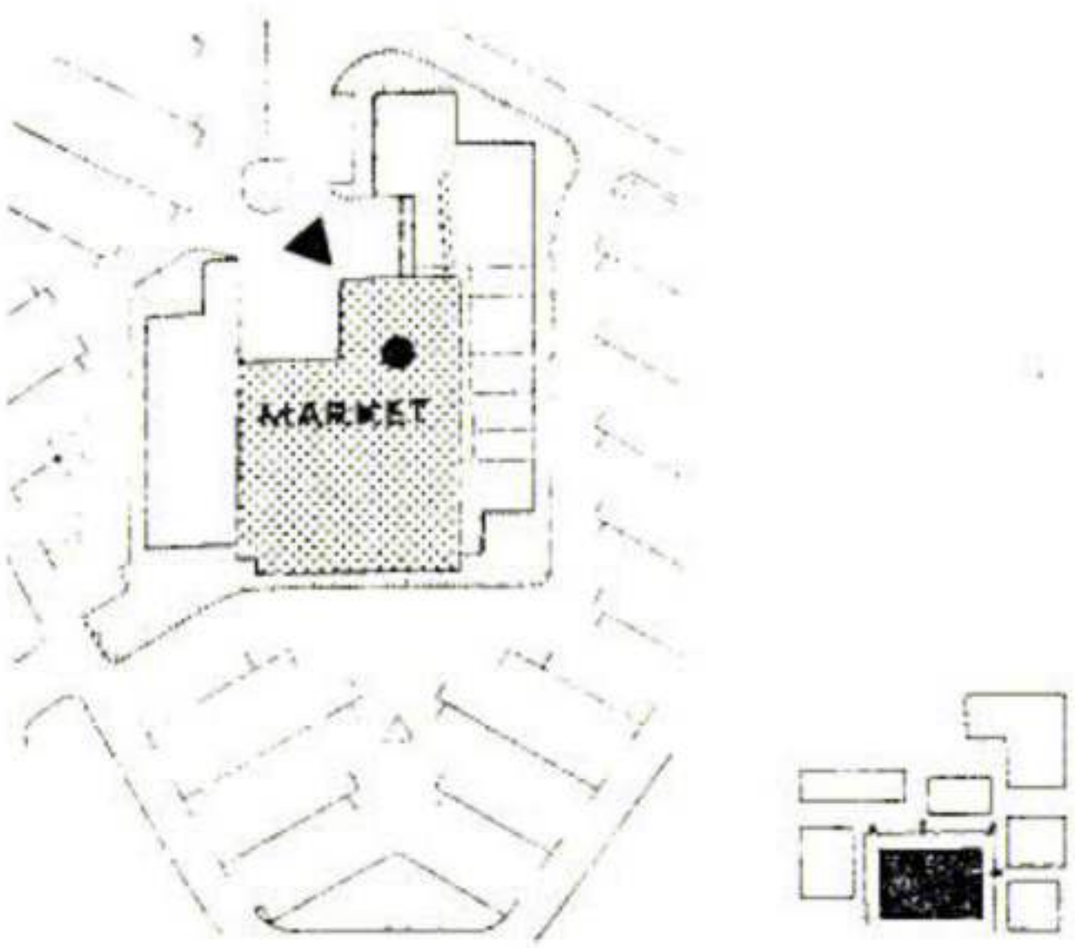


Fig. 42. The single-pull plan. The supermarket dominates N. Center. Black Horse Pike, Audubon New Jersey.
Architects. Victor Gruen Associates.

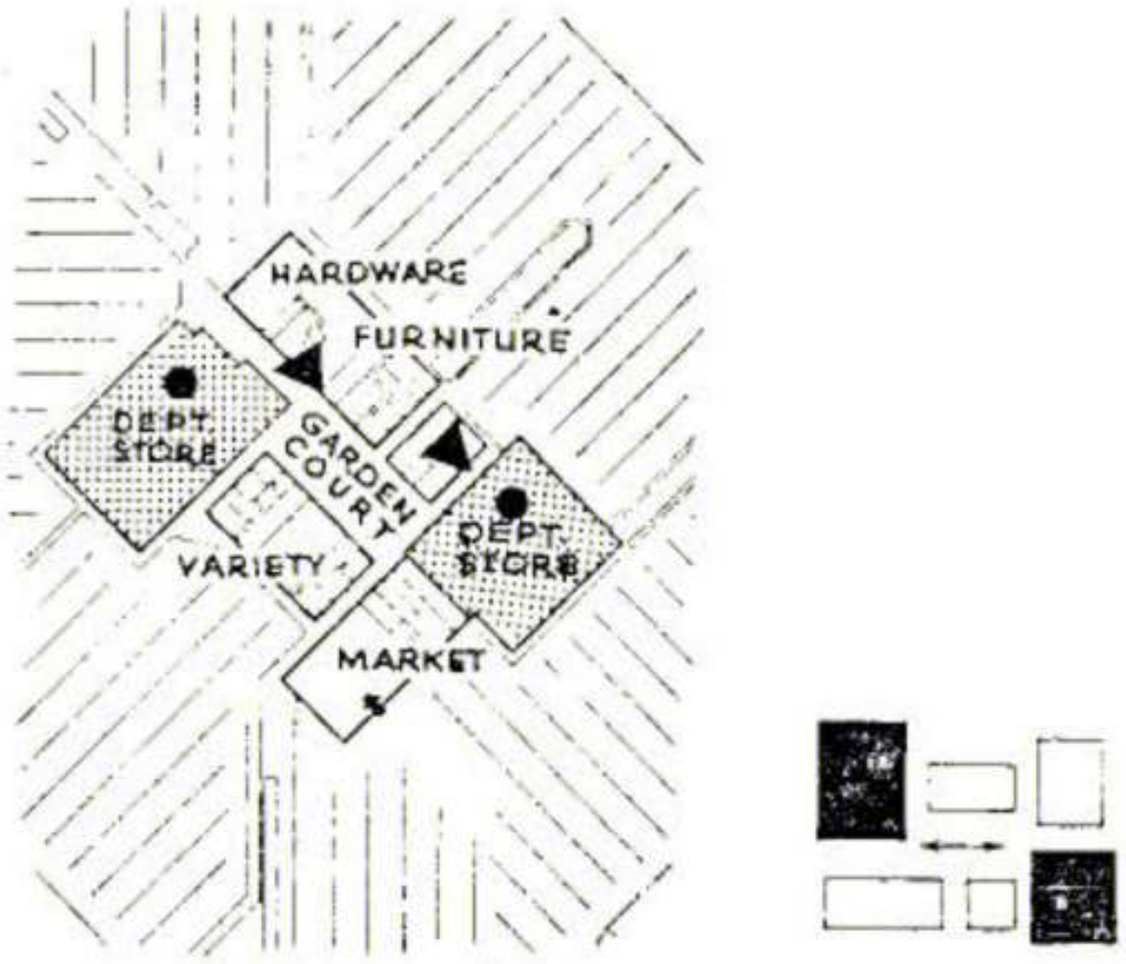
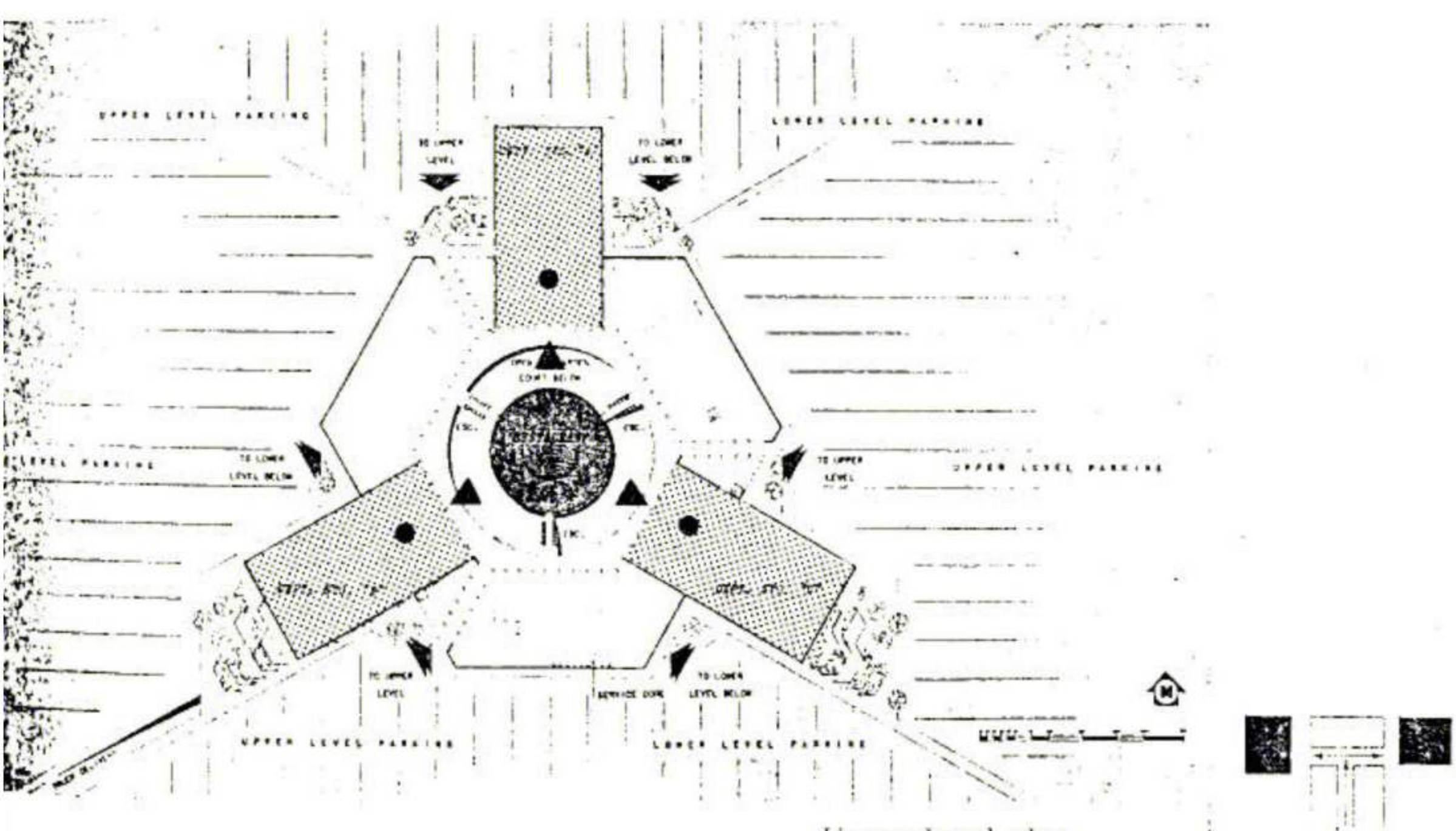


Fig. 43. The double-pull plan. Two department stores are the anchor tenents at Southdale Shopping Center near Minneapolis.
Architects. Victor Gruen Associates Architects for Donaldson Store: John Graha m and Co.,



Upper level plan

Fig. 44. The Triple-pull plan. Three department stores are the anchor tenants at Mt. Prospect Center, (Randhurst Center), Mt. Prospect, Illinois, [in the planning stage]
Ref. Victor Gruen Associates Shopping Towns U.S.A.

Here the principal of compartmentalization should not, (although it might be successful in some cases) be followed, exclusively, as introduction of non-related store types in any grouping may add to customer interest and capitalize on the value of developed pedestrian traffic. When the plan is merchandised to the extent of locating the primary and secondary traffic attractors and the related store groups, locations are indicated for each specific tenant on the basis of his need for exposure to pedestrian traffic and his ability to pay the indicated value of particular location within the project.(1)

In this stage of merchandising planning it is important to create the maximum number of opportunities for impulse buying by the sprinkling of small attractive shops such as candy stores, pastry shops, gift shops, tobacco stores, and card shops.

The location of service stores is not as critical with respect to customer traffic as some of the other tenant types. Once they have developed a client, they generally have enough traffic generating ability, for this reason they usually occupy space that is difficult to merchanidse productively with most other tenants.

After analysing the components of a center and the importance of their individual location the shape of the center as a whole could be described as follows:

a) **The Strip Pattern:** That is the most usual form used for a narrow and extended site. The length of the strip should be limited to reduce walking distances (400 - 600 feet) and should be parrallel to the main access road. A café, pub and restaurants can be placed at the entrances to encourage movement from end to end. Fig. (45).

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(1) *Sommer, Robert, Personal Space. The behavioral basis of Design. 1969. (Englewood Cliffs, N.J. Prentice Hall, Inc.).*

b) The L and U Shaped Pattern: The L and U shaped centers are variations of the strip type and are used to reduce the overall frontage length or to meet special site conditions. It is also well suited to sites located at two important intersecting roads, and gives interesting focal points in its corners where the main branch department stores could be located.

c) The Pedestrian Mall Pattern: In mall layouts two strips are planned opposite to each other, with a pedestrian mall in between.

Normally two key departments stores are located at opposite ends of the mall to generate customer movement.

These malls create an animated attractive atmosphere, shielded from noise, smells and the danger of motor traffic; they also provide adequate space for festivals and other communal activities.(1)

d) The Cluster Pattern: The cluster center is designed to place one major tenant in the prime location, being surrounded by other units from which it is seperated by pedestrian walks. This introverted type will reduce the overall length of the building area as found in strip mall centers. The advantage of this pattern is that the key tenant is exposed to the pedestrian of traffic from the four sides. Fig. (46). Customers are obliged to enter the pedestrian areas through controlled entrances, screened service courts are provided at the rear of units.(2) Difficulty may arise in servicing the key tenant and the use of basement warehousing is preffered in major centers.

Thus we can conclude, by the previous analysis, the importance of the placement of themajor tenant through the different patterns and that the decision and choice of any pattern may affect the shopping center's success as a retail project.

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(1) V. Gruen and L. Smith, Shopping Towns U.S.A. p. 132-133.
(2) R.Nelson, Op. Cit., p. 239.

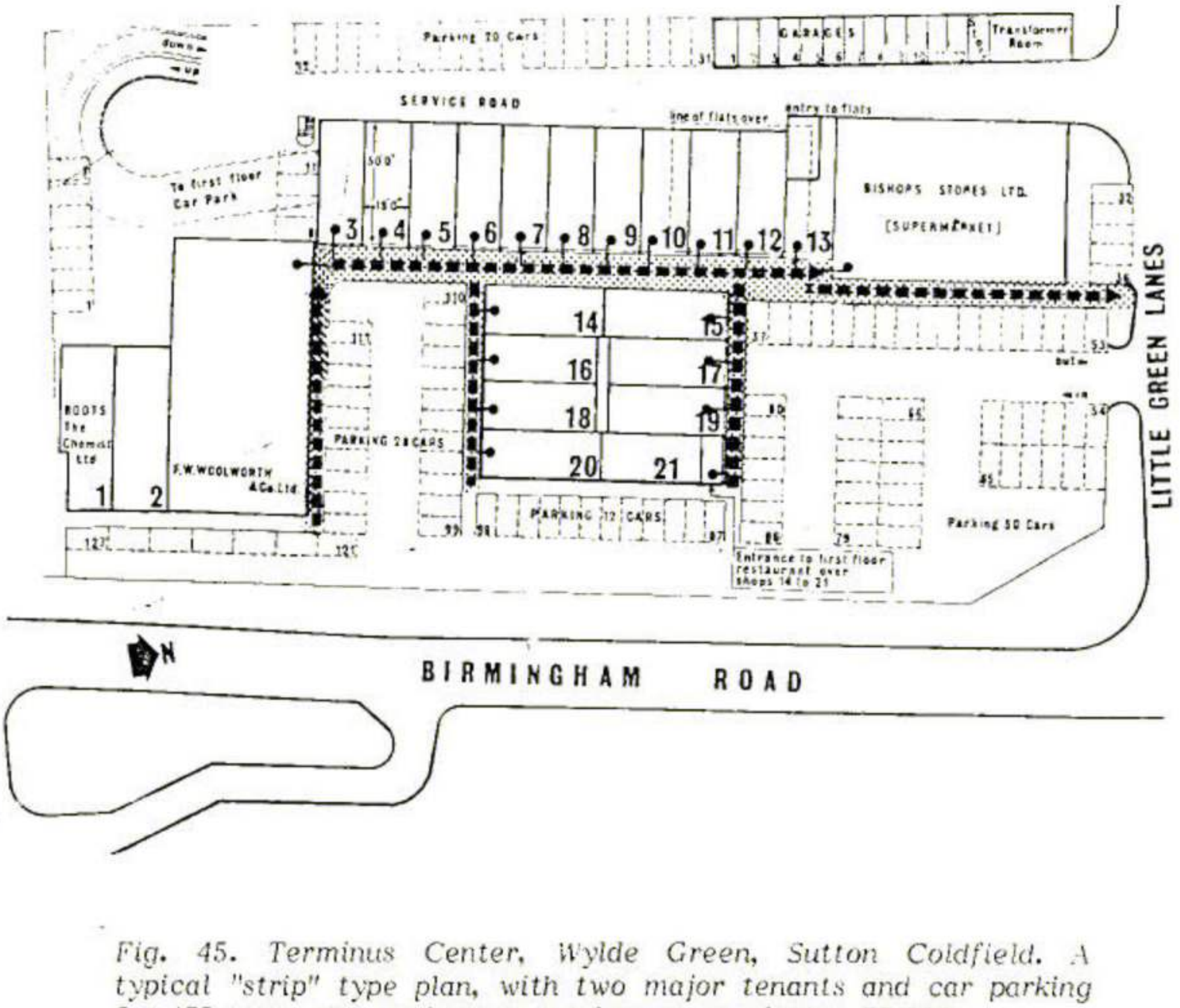

Fig. 45. Terminus Center, Wylde Green, Sutton Coldfield. A typical "strip" type plan, with two major tenants and car parking for 175 cars: The estimated catchment population 75.000
Courtesy of: Gruen, Victor and Larry smith.Shopping Towns U.S.A.

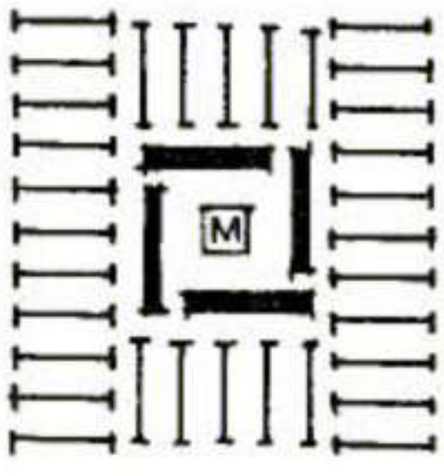

Fig. 46. The Cluster type arrangement

Courtesy of R. Nelson, Op. Cit., p. 239.

CHAPTER (III)

PLANNING FOR SHOPPING ACTIVITY

3.1. Introduction:

Development preliminaries:

The shopping center from the economic point of view is a retail merchandising complex that generates supplementary land uses and influences community, values. In each of its several standard forms and variations, the shopping center is built on the concept of planned arrangement and development and unified management control. The whole undertaking goes through certain essential stages before the project opens for business, from site selection to an involving intricate studies in feasibility. Market Analysis, Environmental impact evaluation, site planning, traffic handling, lease negotiations financial processing, structural designing, interior designing concerned with human behavior and public relations all of these areas require input from a team of experts under the guidance of an astute developer.

In puting together any shopping center project there are a number of essential preliminaries. The precise order of evaluation may vary but they are part of the feasibility study.(1)

3.2. The Analysis and Evaluation ofPotentialities Shopping Outlets in the Community:

The existing retailing structure should be thoroughly investigated and all aspects having any direct or indirect effect on all participation, these studies include:

(a) The total sales volume for all outlets the total sales floor area - the development of these over (at least) the five preceding years - the relationships between the total sales floor area and the residential area or the number of population for each year.(2)

(b) Location of outlets and how they expand or shift by time.

(c) The pattern of the distribution of the different kinds of shopping facilities in the urban pattern.

(d) Types of shops, the total sales volume and the respective total sales floor area per each type or line of trade.

3.2.1 Market and Economic Analysis:

3.2.1.a Before enbarking on any shopping center project, a developer must indentify and evaluate the community, then calculate its potential patronage of commercial outlets, as shown in the table. this step should bc taken before prospecting for suitable sites following a logical sequence:

3.2.1.b) The potential net sales volume for a new center is related to the sales volume in existing and potential location and volume of trade in the trading area. Thus requires informed judgement of the proportion of existing trade which may be attracted to thenew location.

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(1) *Maxwell C. Huntoon? Jr. PUD: A Better Way for the Suburbs (Washington, D.C.: ULI-The Urban Land Institute 1971).*

(2) *Geography, Marketing and Urban Growth. Kent State University.*

3.2.1.c) The trading area involves an investigation of the population income levels, places and direction of its growth, the existing and potential location and volume of trade in relation to the site of the new center.(1)

The gross potential sales for the center is derived from estimated expenditures in the trading area. Family income data will dislose the portion devoted to living expenses for various goods and services food, furniture, clothing, appliances, drugs, automative equipments, restaurants, entertainment, miscellaneous merchandise.(2)

The physical space that can be supported by the net sales from the trading area may be estimated from the average sales per square foot of floor space in the several retail facilities.

Anticipated income from the center may be determined by application of the probable rental rates of retail space, less operating and management cost, taxes, insurance and interest.

The type of center and its site character, drawing power, and ultimate success hinge strongly on this investigation. The developer will predict what is feasible. But he must be equipped with hard data to interest prospective tenants, to identify the site, to sketch the proposed plan, to satisfy the community, to obtain zoning approval and to secure financing.(3)

The developer's principal aim is to match the location, size and composition of the center to the needs of the trade area. To attain that goal he usually attempts to obtain an accurate economic analysis of the trade area based on a market survey from which he can derive a tentative plan for a shopping center.(4)

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(1) S.O. Kaglin. "Selecting the Best Site for a "Shopping Center" Shopping Center World vol. 2, No. 5 (June,1973).

(2) Darwin G. Stuart and Robert B.Teska "Who pays for what" A cost Revenue Analysis of Suburban Land-Use Alternatives, Urban land, vol.30,March,1971.

(3) Regional Survey of New York and its Environment, 1931.

(4) The 212 Standard Metropolitan Statistical Areas of the U.S. Bureau of the Ansus, 1960 having 50,000 or more Urban Population.

The economic market analysis is a job for a specialist in the field Fig. (47). The analysis does not take the place of the developer's sound judgement, but its measurements show in paper whether or not the new center is justified. With strong competition in the retail field, plus competition of high land development and building construction costs and heightened financing and operating charges;a developer faces a risk that leaves little room for miscalculations, including tenor of community attitudes towards growth and development activity at the site or in its surroundings. The analysis tells the investor - developer whether there is a demand for shopping facilities. Study will show whether new facilities will answer a need growing out of increased populations and purchasing power. and whether new outlets are needed to replace worn-out facilities.(1)

It is very important to understand that a shopping center cannot generate new business or create new buying power, the income level and percentage of buying power is constant it can only attract customers from existing businesses which may be obsolute; or capture the increase in purchasing power that occurs with population growth. It can cause a redistribution of business outlets and consumer patronage, but it cannot create new consumers.

3.2.2. Determination of The Size of The Trade Area:

Divisions of the trade area: The term trade area can also be considered to mean the geographic area from which is obtained the major portion of the continuing patronage necessary for steady support of the shopping center. It is necessary to determine first the extent of the area from which the center can be expected to draw customers. The trade area naturally varies as do the types and qualities of merchandise to be offered.

Boundaries of a trade area are estimated by carfully accounting for shopper's habits, location of competition drawing power of the tenants and access by highway and public transportation.

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(1) *Community Builders Handbook Executive Edition (Urban Land Institute,*

Within a shopping center's trading area, the strongest influence will be exerted close to the site, with influence diminishing gradually as the distance increases. Any trade area (for a regional shopping center, for example) is usually directed into three categories or zones of influence.(1) e.g. Mountain View Hall's market area Fig.(48).

Here the size of trade area could be analysed as follows:

(a) The Primary Trade Area is composed of the nearby walking area plus the area which has no daily convenience store, closer than the site under investigation. For convenience items, such as food and personal services, it is likely that 60 to 70 percent of the ultimate sales volume will represent the population within 5 minutes driving time. For a regional center, the primary trade area will extend, at the least, to an area within 10 minutes driving time of the center.(2)

(b) The Secondary Trade Area is the area which may have local convenience stores but with no important soft line (apparel) hard line (hard ware, appliances, etc) or shopping goods (furniture, high level clothing) stores. It may have some of these stores, but they would be less conveniently accessible than the prospective site. Driving limits can be set at 15 to 20 percent of all sales.

(c) The Tertiary or Fringe Trade Area: is the broadest area from which customers may be drawn because of essier access, greater parking convenience, and better merchandise, even though other shopping goods stores or general merchandise stores may be available within the territory. Driving time from this area to the site can be set at roughly 25 to 30 minutes.(3)

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(1) *Alan M. Voorhees, Gordon B. Sharpe and J.T. Stagmeers. "Shopping Habits and Travel Patterns" U.L.T. Technical Bulletin 24 (Washington, D.C. U.L.L. The Urban Land Institute, 1955).*

(2) *Building for Commerce and Industry. Mc Graw hill Book Company. Edited by Charles King Hoyt AIA.*

(3) *"Marketing Technical Information to Non-Technical Andiences" M.Sc. in MIT June, 1977.*

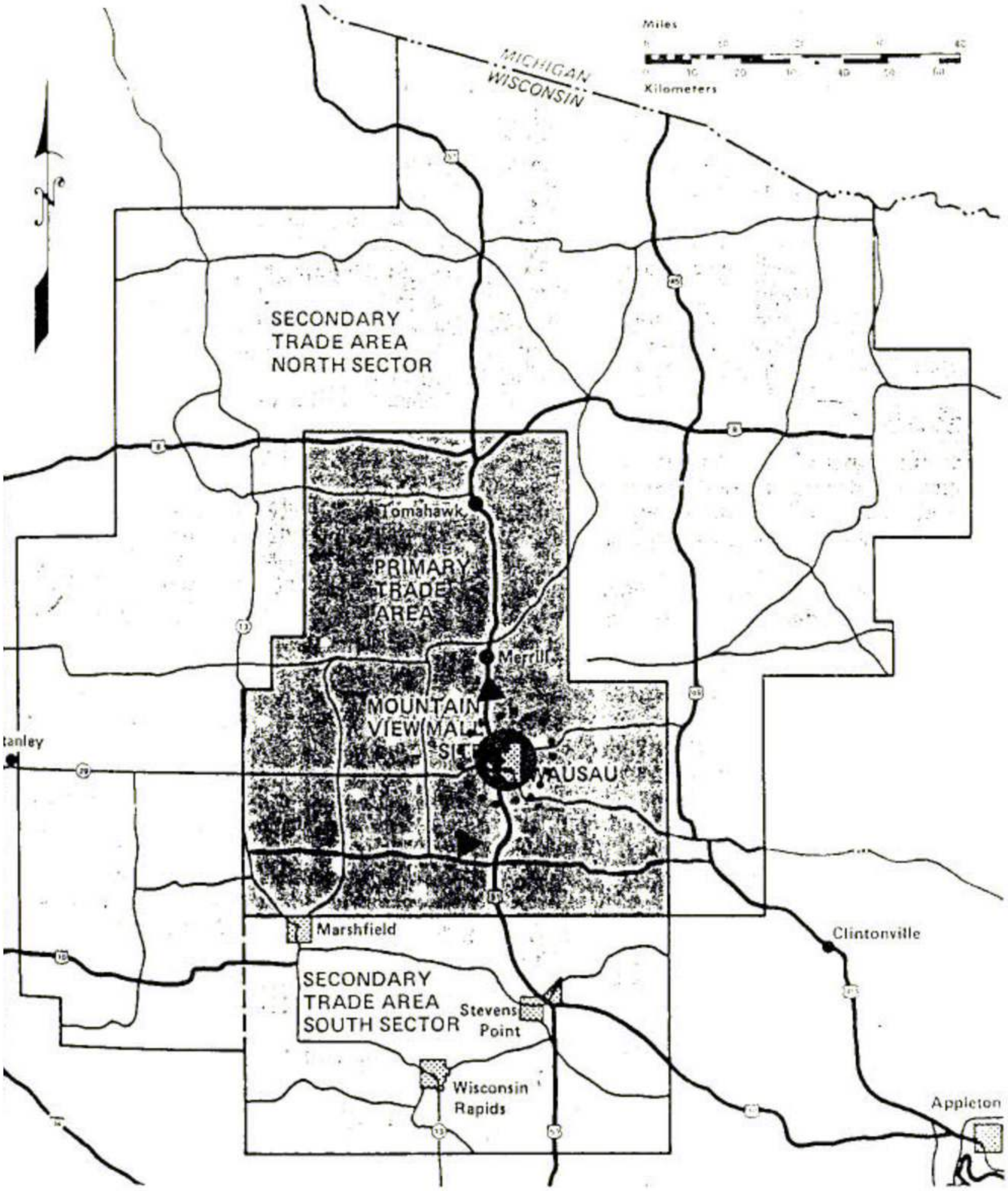

Fig. 48. Projected trade Area for Mountain View Mall, Wausau. Wisconsin. To Define the trade area considered four major factors considered: a) Location of major competitive shopping centers. b) natural or physical barriars. c) Driving time from the site. d) Socio-economic character of the various surrounding population sectors. P. Trade Area captured 90 to 95% retail sales. S. Trade Area Shared Sales with other centers that is overlapped with other major retail centers.
Courtesy of: Gladstone Associates.

3.2.3. Location Compination Methods for Determining the Location of the Trade Area and its Boundaries:

Neighbourhood center - draws from a radius of 1 1/2 miles 2 miles depending on character of residential use.

Community center - draws from a radius of 3 to 5 miles. Regional center - draws from a radius of 8 miles up to 30.

Driving time would ordinarily be 20 minutes, but this may be 20 or 30 miles governed by the areas from which customers will drive to the site and related to the ease of access by streets and highways Fig. (49).

Driving times, traffic lights, roadside hazards and barriers such as steep slopes, stream valleys, parks, and rail roads are all factors in the measurements of access. Allowance must be made for any purposed changes in existing routes. Access by mass transit will also affect the size of the trade area.(1)

The type of streets and through forces which serve a prospective site also affect accessibility. For example, a car driven on an express way for a driven time will travel perhaps three times the distance covered by a car on a congested, signal-impeded street. A trade area is shaped by the various zones of accessibility, population, buying power and competition. Because of these factors, the trade area will not assume a regular size of form.

In a large shopping center it is wiser to examine all possible avenues in order to provide for a mixed pattern of accessibility. It has been proven that over the years, the percentage of those who take advantage of public and semipublic transportation grows steadily. In the centers located within

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(1) *Downs, R.M., and Stea, D., Maps in Minds: Reflections on Cognitive Mapping. New York: Harper and Row, 1977.*

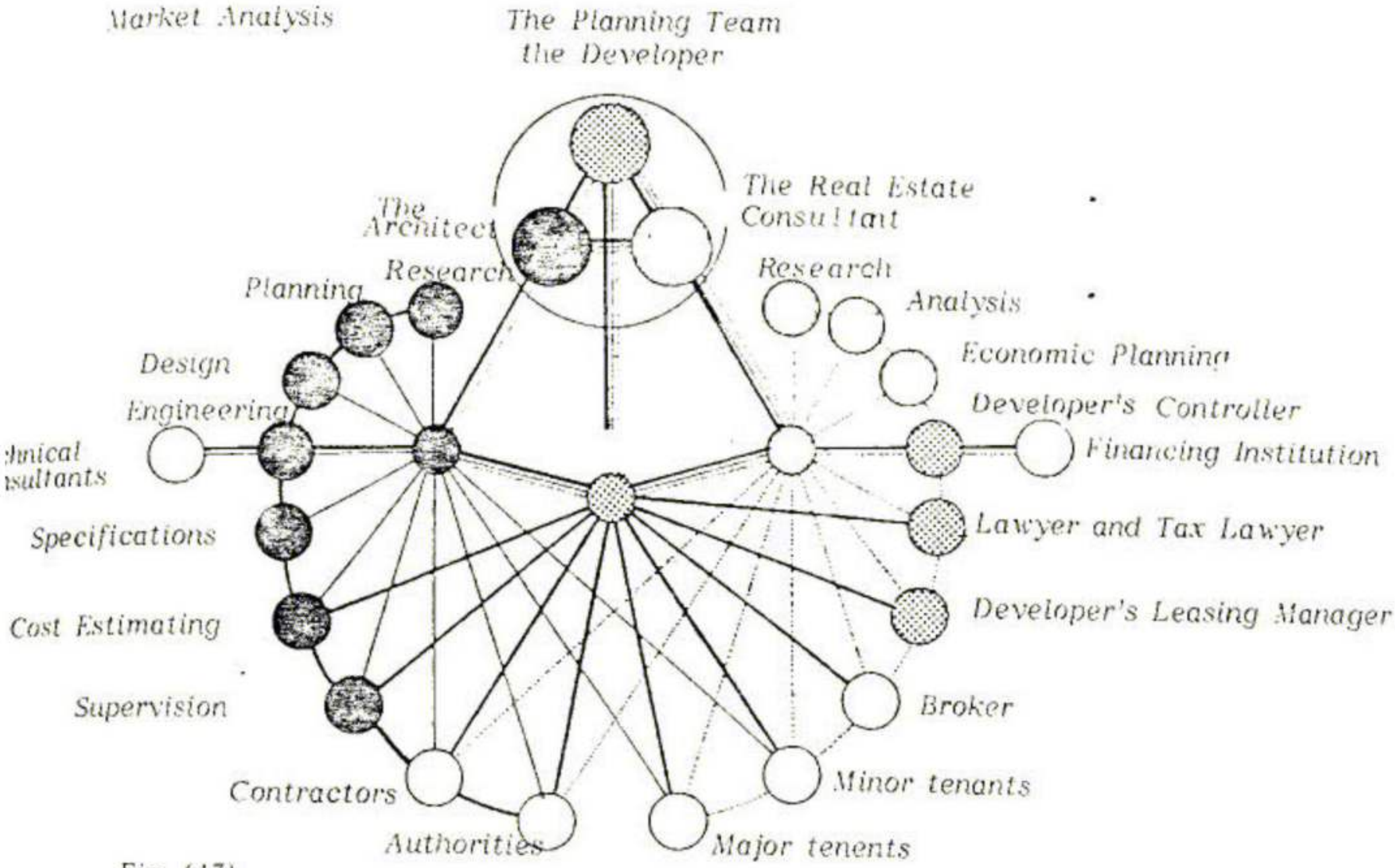

Fig. (47)

Developers organization

Architect's organization

Real Estate Consultant's Organization

Developer's contact lines

Architect's contact lines

Real Estate Consultant's Contact lines

Outside organization

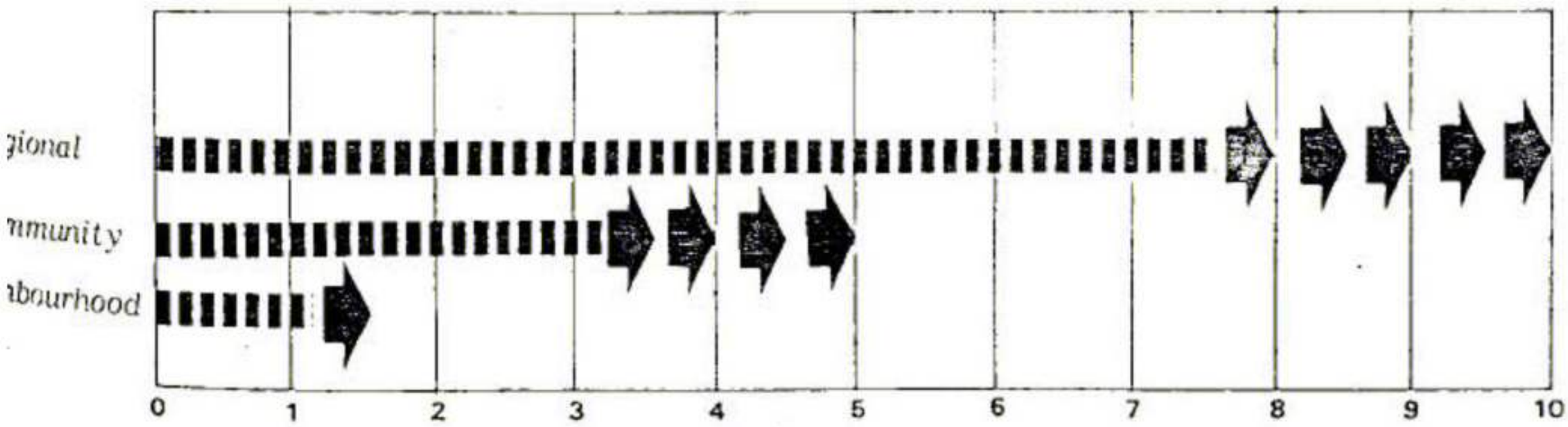

Fig. 49. Shopping Center Trade Area - Theoretical Travel Distances

Ref. Stores. Journal October, 1980 p.30 Lewis, A. Splading.

densely populated areas, public transportation plays a larger role than individual transportation.(1)

The project Tête Defence in Paris anticipates that 60 per cent of the customers will use public transportation. The center midtown plaza in Rochester, New York, depends on pedestrians and public transportation to a higher degree than on visitors who arive by private cars.

An example of this was made in Revitalization Plan for Fort Worth, Texas, recommended steps were made: Fig. (50).

1. Improvement in accessibility especially by means of public transport.
2. Exclusion of the private automobile and radical reduction of all other surface traffic within the core, with the remaining traffic operated either electrically or by some other environmental friendly method.
3. Creation of a loop-road around the core area by rerouting the already projected freeway.
4. Provision of garages and bus terminals directly accessible from the new loop road.
5. Encouragement of multifunctionality.
6. Creation of new urban features and landscaping in the urban space liberated from automative traffic.
7. Establishment of an underground goods-moving system beneath the existing service allys.(2)

Thus with these points, safety of consumers arriving by public transport could be ensured.

In different-level-site the parking of cars could enter the site on the lower level and the parking area could spread there. The public transport consumer could be carried to the higher level adjacent to the shopping area on another level than auto-circulation.

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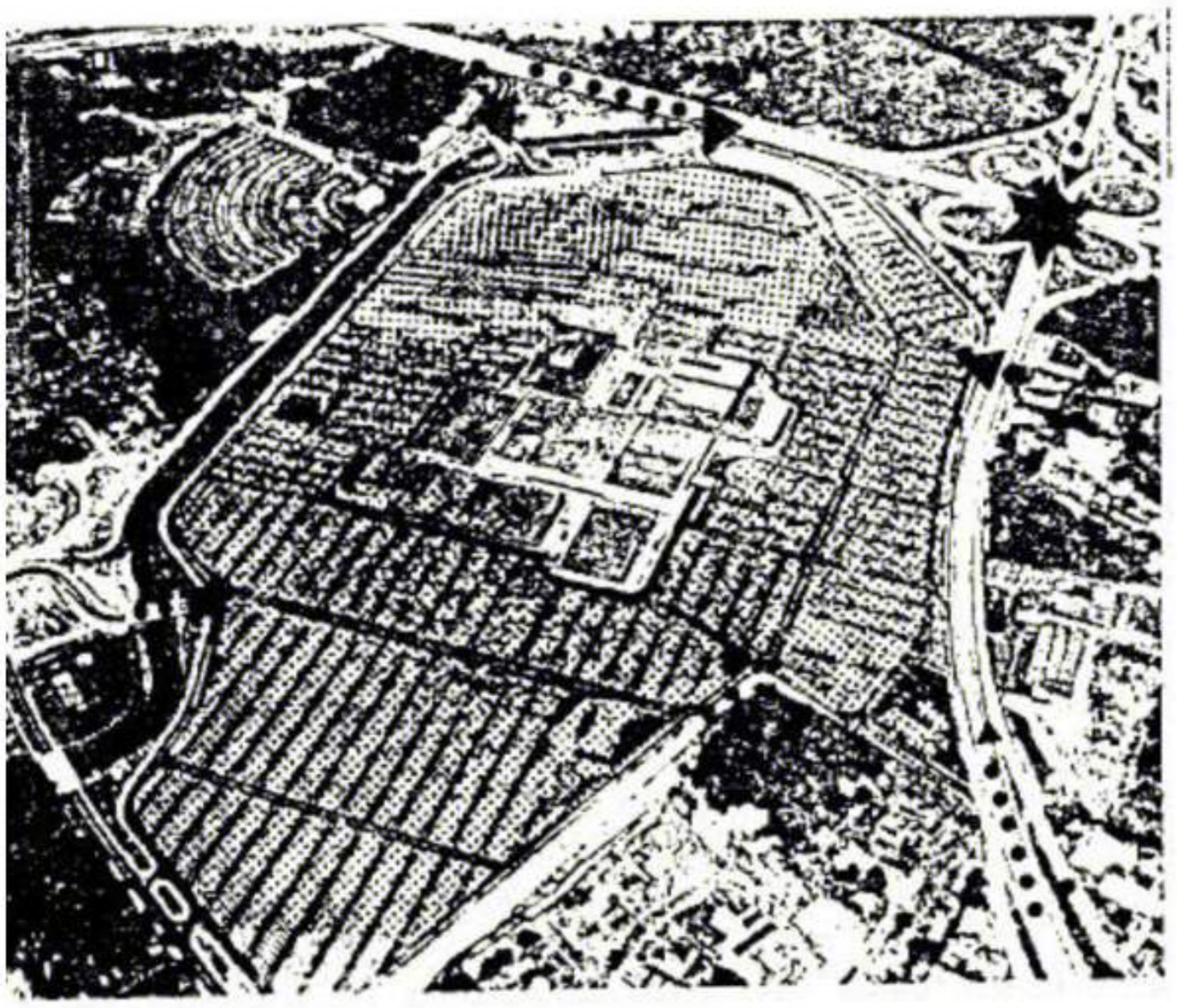
(1) *Gruen. Centers for the Urban Environment.*
(2) *Guidlines for Planning and Designing Access Systems for Shopping Centers, prepared by Technical Council Committee 5-DD, Institute of Traffic Engineers (Arlington, Va, 1976).*

Fig. 50. Tabulation of existing shopping traffic at critical traffic periods as well as existing road capacities.

▒ Shopping Center.

• 400 cars



A The intersection taken as an example.
The following maps and charts are from the Traffic Analysis Report by Victor Gruen Associates for Garden State Ploza Shopping Center. Paramus, New Jersey.

Road pattern and Traffic Area now existing at Garden State Plaza.

Courtesy of: Alan M. Voorhees Gordon B. Sharpe and J.T. Stagmaer
"Shopping Habits, and Travel Patterns"

Some of the shopping center provided their own public transport (kept in garages) in peak days or hours affording ease in transportation to certain spots for the user.

Another solution was to plan the mall over the stop of an underground subway so that the consumer entered directly the shopping center without entering the landscape and parking area.

After looking at geographic factors, a map of the trade area can be plotted. This map or a series of diagrams is needed to visualize present and proposed access routes, population, density of developed areas, commercial locations and competitive facilities, and topography and land use features.

Accessibility: The success of a particular center is dependant on minimum distribution costs for the trader and on its central location in relation to the most productive area within its trading area. Consequently the relative accessibility of Shopping Centers is reflected in their spatial disposition, and on the road usage by private cars and public transport vehicles. Accessibility itself is dependant on journey times, road capacities and usage, car ownership and public transport services, the importance of each being relative to the type of center envisaged.(1)

Journey Times and Distances: A major suburban regional center with a department store will obtain most of its business from residents within a distance of 5 to 20 miles, whereas a neighbourhood center, will draw its business from within a distance of 2 miles. It has been found that the majority of customers is prepared to travel up to 30 miles to reach major centers, though 6 minutes was the maximum time travelled to neighbourhood centers. Driving time depends predominantly on the existing road network.(2) Fig. (51)

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(1) W.L. Garrison et al., Studies on Highway Development and Geographic change p. 57.

(2) L. Smith Op. Cit. p. 324-325. Urban Land Institute Shopping Centers Re-Studied. vol. 1, p. 19.

Major regional centers are large traffic generators, which could give use to acute difficulties of heavy concentrations on roads of inadequate capacities or at unsuitable points. In assessing the road patterns within the trade area, the following must be considered:

(a) Points of origin of shopping center traffic, here the analysis will provide information about the trading area of the shopping center and the number of persons who will approach it from various directions. The example taken to show this procedure is Garden State, Plaza, New Jersey.

(b) The routes which customers from the various points of origin are most likely to follow when approaching the site. Fig. (50).

(c) Information concerning existing traffic loads on such approach roads and specially the existing hourly traffic loads which coincide with the peak traffic hours of the shopping center itself. Fig. (51) Intersection (A) Taken as an example.

(d) Expected critical traffic conditions for peak traffic hours, based on listings of combined peak load for incoming and out going traffic for shopping days, with and without night openings, as well as existing traffic at the same hours.(1) Fig. (52).

If it can be proven that existing approach roads will be able to carry the critical peak leads in addition to existing traffic loads, then a decisive factor contributing toward the feasibility of a shopping center project will have been established. Fig. (53).

The quantity of traffic which can be carried by the roads surrounding the shopping center site is only one of the criteria by which accessibility has to be measured. A second criteria is the quality of that traffic.

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(1) *Harvard Business Review "Dynamic Planning for Retail Areas", Victor Gruen. November-December, 1954.*

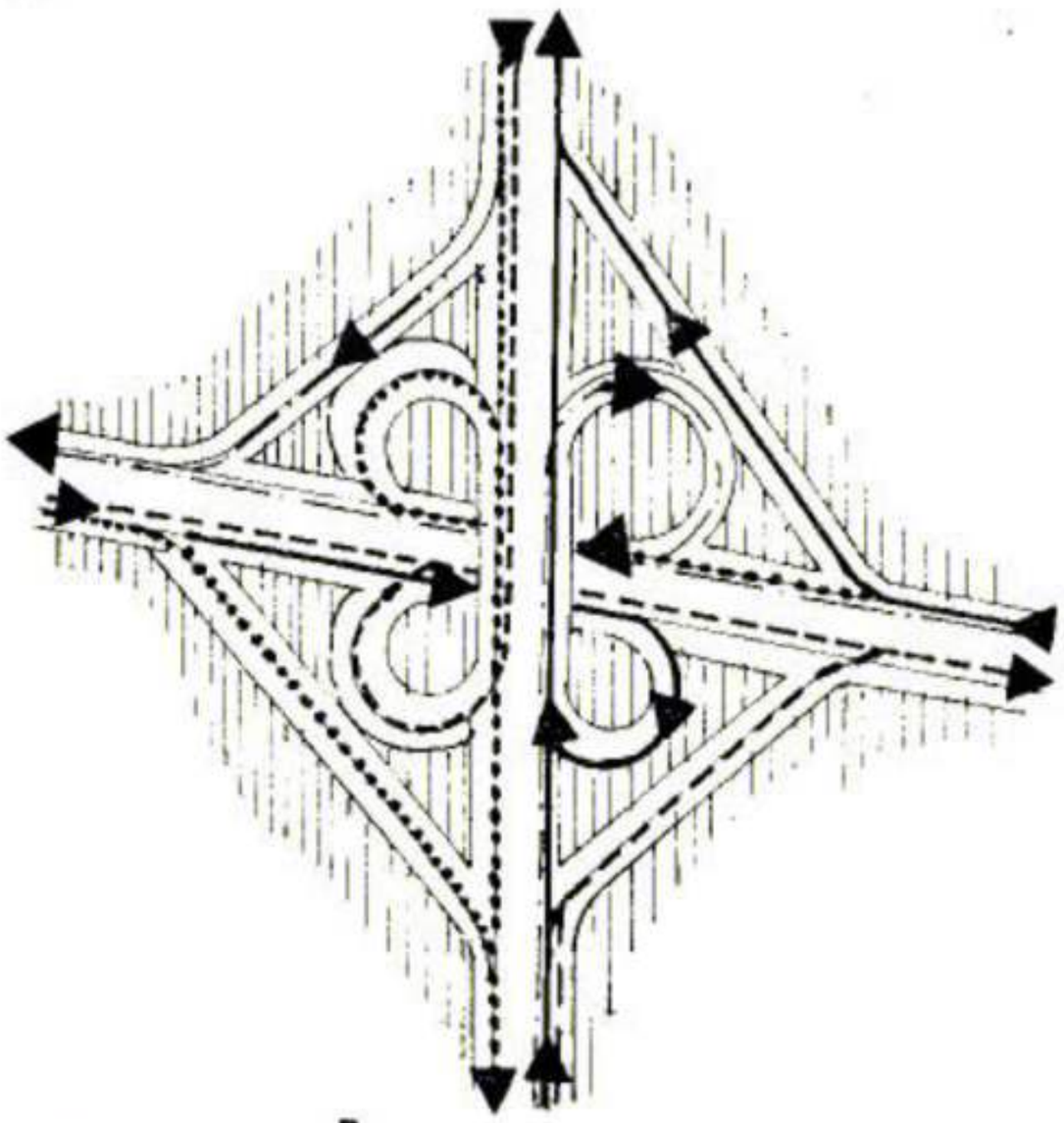


Fig. 51. Example

High way **4** *and High way* **17**

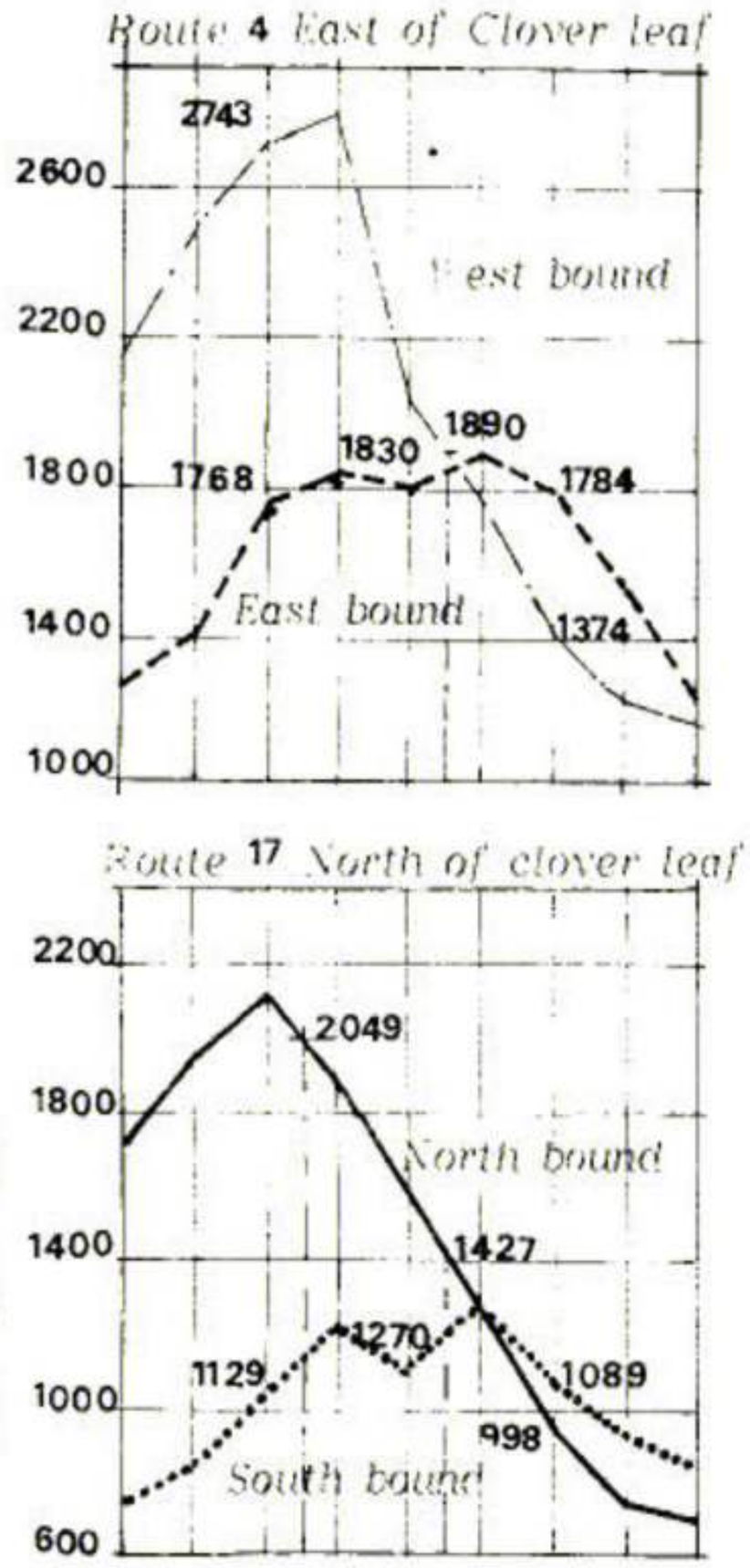
..... *South bound*

—·— *East bound*

– – – – *West bound*

——— *North bound*

Detailed maps of traffic conditions at critical intersections, to be expected when shopping center is completed.



Existing traffic loads on approach roads.

Fig.52. Projected traffic fluctuations for normal shopping days and for shopping days with night openings.

Ref. Harvard Business Review "Dynamic Planning for Retail Areas", Victor Gruen. November-December, 1954.

Location of proposed shopping center and Means of Access.

Existing road pattern around site.

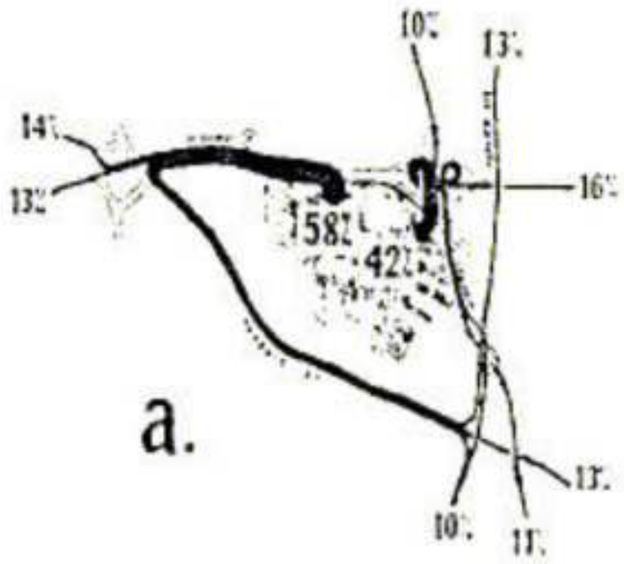
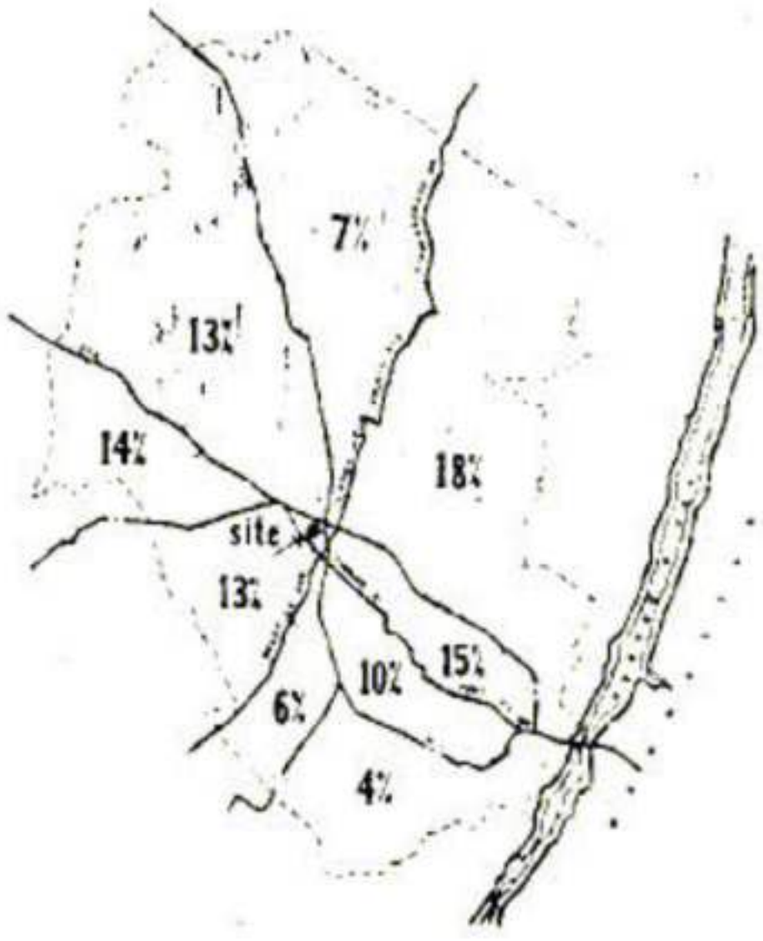
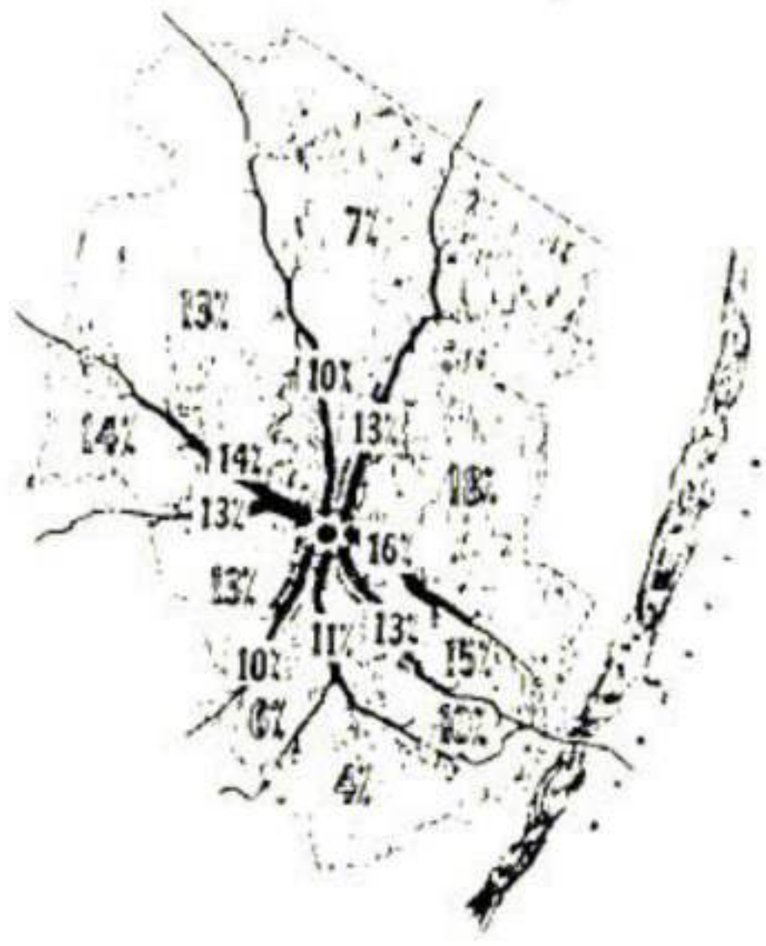


Fig. 53. Terminal conditions at shopping center site.



Pattern of Traffic transfer between boundary roads and site



Recommended Highway improvements necessary to correct conditions where existing road capacity is lower than combined expected traffic load.

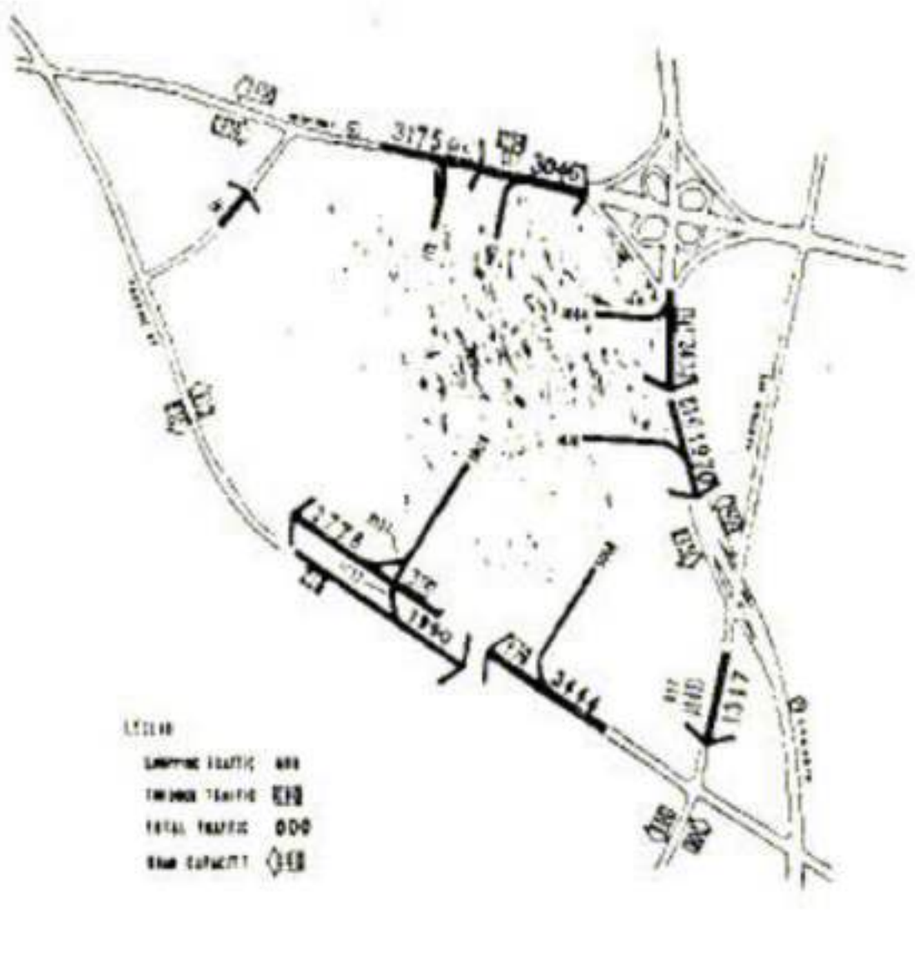
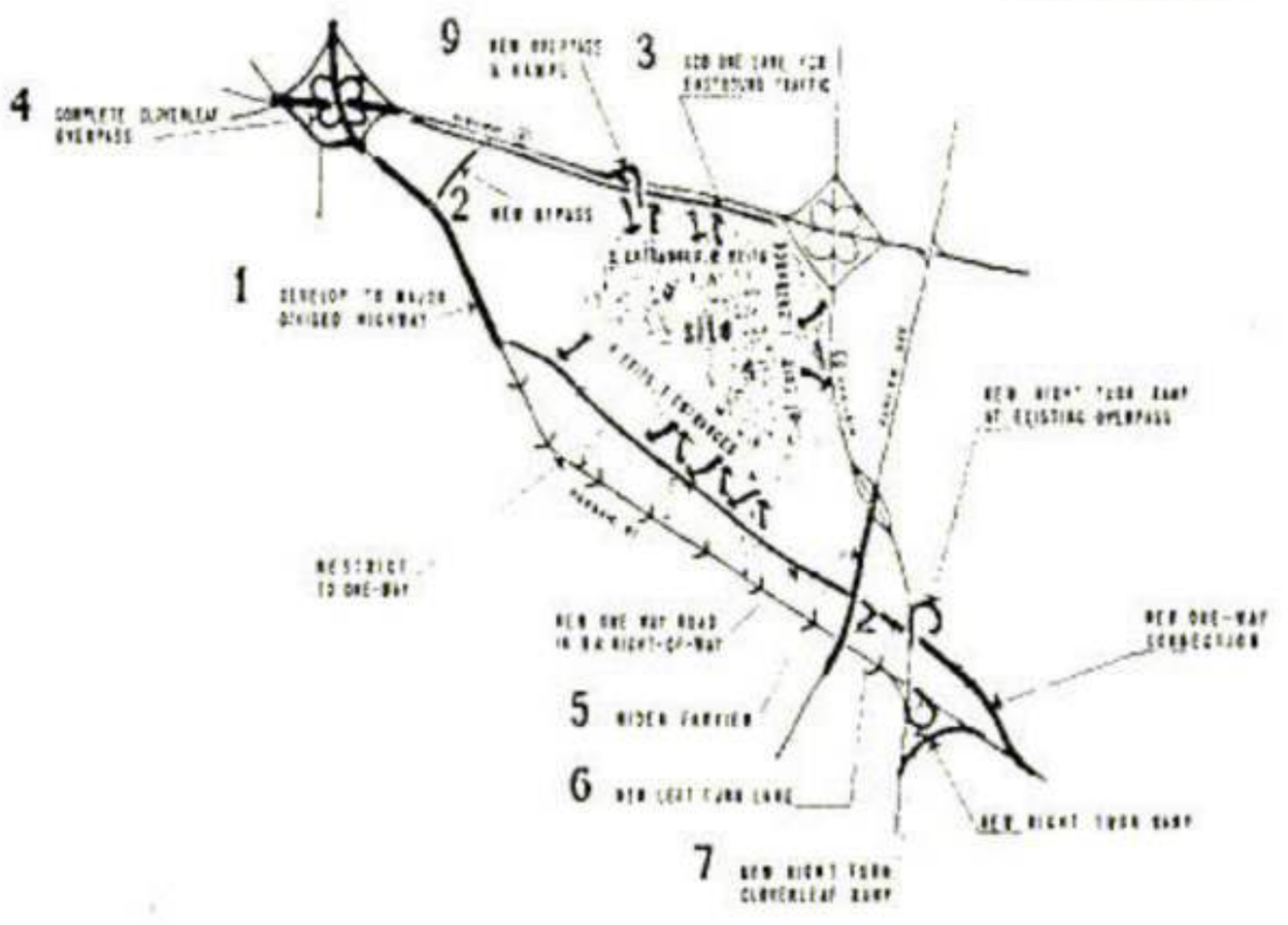


Fig. 53. Trade area indicating areas of origin of shoppers.



Trade routes on which shoppers from areas of origin can be expected to travel.

In 1965 in U.S.A. the ratio of car ownership per 1,000 is 330. In Egypt the number of cars per 1000 inhabitants was 30 in 1965 and is expected to be 50 by 2000.(1) Although Egyptian Centers will be partly dependant upon pedestrian traffic, it is essential to provide adequate parking areas for consumers arriving by their private cars. Also additional areas for future parking demands are essential, as the number of cars is expected to increase rapidly owing to industrialization. the consequent higher standard of living, and the new motor-car industry which has already been established in Egypt.

3.3. Socio-Economic Factors:

3.3.1. Population Data:

Within the limits of the trade area as delineated through the above process, characteristics of the population must be studied. These include present population and future growth posibilities and composition by age, income level and family and household unit sizes. The census of population and housing (taken each decade) and the latest census of retail trade (conducted every 5 years as part of the economic censuses) offer basic statistics.

3.3.2. Social Classes and the Community Structure:

Social classes, indicated by the occupation of the head of the household, is responsible for considerable variation in income and expenditure. The Haydock Report divided households into two groups: A family whose head is a wealthy person (professional person) and a family whose head is a relatively poor person.

The viability of a major regional center is dependant almost entirely on sales of durable goods, apart from a small suscipient sales by convenience outlets. such as supermarkets. Consequently, greater reliance is placed on purchases of durable goods by the higher income groups, which have a greater percentage of car owners and more flexibility in shopping habits.(2)

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(1) *Arab Republic of Egypt. Ministry of Housing and Recoonstruction. Advisory Committee for Reconstruction. September, 1977.*

(2) *G. Baker and B. Funaro, Shopping Centers Design and Operation, p. 196.*

The special importance of these factors to out-of-town shopping centers where potential trade from very low income groups is often disregarded in the economic analysis, even if this amounts to over 50 per cent of the trade area.

3.3.3. Buying Power and the Local Structure:

The income level within the trade area is important, not only in terms of total dollars available but also in relation to expendable income by retail categories the proportion of total family income spent for food increases rapidly as income decreases. As a result, in a trade area with a lower average family as compared with the average for the city as a whole, the proportion of total expenditives available for non-food stores is much less than that in an area of medium income or high-income families. Buying power and the number of families needed to support any shopping center are variables, particularly in a new development area.

3.3.4. Present Retail Expenditure:

The total Retail expenditure, together with other calculations should be analysed:

1. Total retail expenditure per annum on all goods (retail and service trades) for the trade area, and for each subdivision. this is calculated by multiplying the number of persons of similar status and income groups by the average retail expenditures of persons in that group.(1)

2. Total retail expenditure per annum on each good,and for each good in each subdivision in the trade area. This can be calculated by multiplying the number of persons of similar status and income groups by the average of retail expenditure of persons in that groups on each seperate good.

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(1) *W.L. Waide, "Changing Shopping Habits and their impact on town planning" T.P.I. Journal, Sept./Oct. 1963.*

3. Sales per head of population, in terms of total expenditure per year, and for each good in each subdivision, including the service trades. These can be calculated by dividing the results of 1 and 2 by the estimated trade area population.(1)

3.4. Circulation:

Traffic Types in the Shopping Site:

a. Customer vehicles.

b. Employee parking.

c. Truck and service.

d. Circulation.

a. Customer Vehicles:

Parking design requirements:

The amount of parking required in any center depends on a number of variable factors which Nelson lists as follows:(2)

1. The amount of business from car-born shoppers, as opposed to customers on foot, those arriving by public transport, or "let-outs" being those dropped and collected at the center inprivate cars.
2. The number of shoppers per car.
3. The rate of turnover in parking spaces, being the number of cars in each space per day.
4. The type of stores provided.
5. The occurrences and abundance of peaks.

Yet it is important to remember that parking demands at a shopping center compared with that of a free standing store is lightened by the fact that a customer visits several stores during a single shopping trip. Two terms are used to describe the relationship of parking provision to the shopping center structure.

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(1) H. Bliss "Local Changes in Shopping Potential" T.P.I. Journal. Sept., Oct., 1965, p. 337.

(2) R. Nelson. Selection of Retail Locations p. 249.

Parking area:

The ratio of the site area assigned to parking use in relation to the building area will vary accordingly to the size of each car.(1)

Quoting American Experience, the urban land Institute stated in 1957 that a 2:1 ratio parking to building area should be considered as an absolute minimum, but recent research indicated that 5.5 spaces per thousand feet of shopping area has proved adequate to meet all demands.(2) But these ratio are only adoptable in America with American Cars. Smaller sized-cars and less car owners in Egypt sould give a bigger ratio.

The number of car spaces depends also on other elements such as angle of car stalls, width of moving aisles and access drives and other arrangements of parking. Similarly the area of ratil selling space depends on tenant type, display of goods, method of selling, the number, size and variety of items and other variables.(3) This method however is needed to be done in preliminary site planning.

However the used index is that of 5.5 spaces of car per 1000 sq.ft of GLA (as has been said before and to measure GLA three variables must be first ascertained:

1. Parking turnover: This varies according to the type of store. That is may be one per day for branch department store to 10 per day for supermarkets. Yet that does not mean less parking spaces as still the space will be occupied but it will mean more entrance and exit near the supermarket and that is why that type of parking should be located as near as possible to the highway and away from the parking of other branch department stores.(4)

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(1) *Urban Land Institute "Shopping Centers" Re-Studied. vol. p. 45-46 Parking Requirements for Shopping Centers p. 5 at Seq.*
(2) *In Traffic Impact of the Automative Shopping Center, "Larry Smith Proceedings of September 1954 meeting.*
(3) *What Parking Means to Business "Published by Automative Safety Foundation, November 1, 1955.*
(4) *Urban Land Institute Shopping Centers Re-Studied vol. 1, p. 49.*

2. Peak loads: It has been usual in American Centers to provide sufficient parking spaces for the estimated average weekly peak loads but it should be noted that excessive spaces may make the center look infrequently visited and encourage customers to shop elsewhere.(1)

3. Walking distances: The distance from the farthest parking bay to the nearest store should not be far away especially in a very cold or hot climate and covered walkways should be provided.

Patterns of parking:

Location of parking with respect to the center-front parking:

This method provides for a separation between both the pedestrian and parking at the front,from the service and delivery traffic at the back. Also the parking lot being in front of the store gives an impression of the center's prosperity which is very important for the success of the center. Also if the depth of the parking lot is conveniently designed as being varied according to the needs of the stores adjacent to it the consumer can park his car as near as possible to his goal Fig. (54)(2)

Rear parking: Used in strip L and U and mall patterns. The main disadvantages are that many customers enter the store from the delivery back entrances causing great confusion.

Split parking: Fig. (55). This means having both front and rear parking usually the front parking area is smaller and of quick turnover, intended for quick in and out shopping.

Parking In a Different level from the sales level:

1. Roof parking:

The roofs of the stores are utilized as parking areas, made accessible by ascending and descending ramps. Mortorist consumers are transfered to

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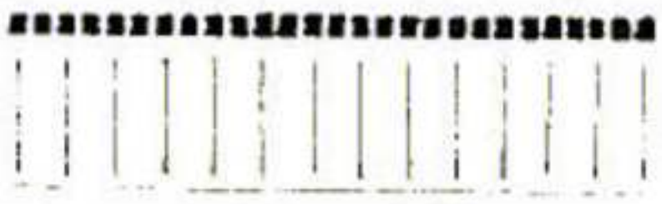
(1) *Atkins. C.R. People and the Motor Car. University Burmingham, 1964.*

(2) *George A. Devlin, "New Directions in Parking Design", Urban land, vol. 34 No. 5 (May 1975) and George E. Kanean and Daird K. Witheford, "Parking not Design Standards", Traffic Quarterly, vol. 27, No. 3 (July 1973).*

Fig. 54. Stores moved back from the highway permit parking in front.

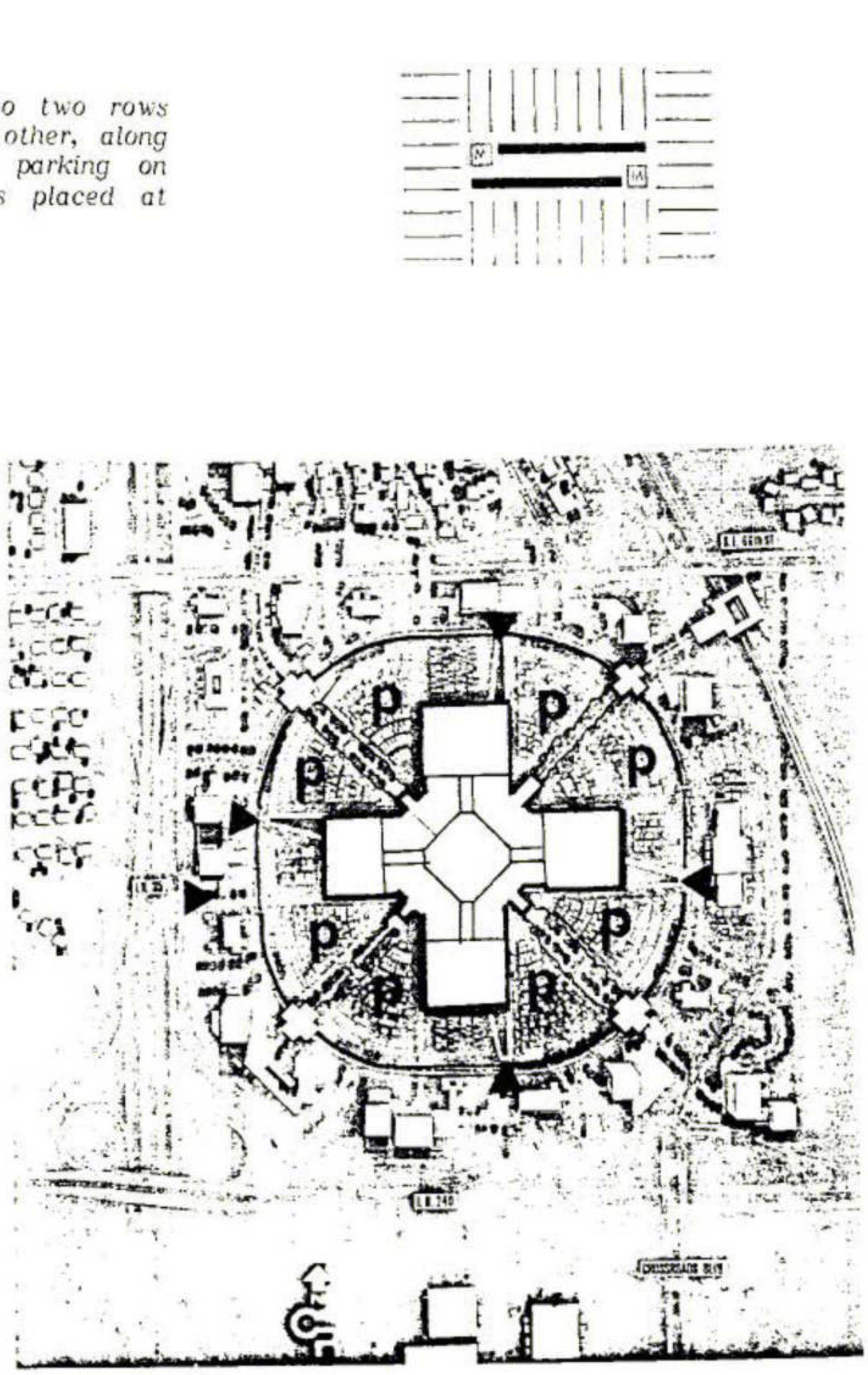


Strip Center . with off-street Parking.

The strip in divided into two rows of stores, opposite each other, along a pedestrian mall with parking on each side. A magnet is placed at each end.

Fig. 55. Split Parking Crossroads Center, Oklahoma City Split Parking offers short distances to all four department stores.

[Architects: Omniplan Architects. Harrell and Hamilton]



the sales area by means of escalators, lifts and stairs. Such a pattern is suitable for one storey centers, located on high-priced sites where as much land as possible has to be devoted to the sales area. e.g. White plains Mall. Fig.(56). Also it gives a good separation between motorist and pedestrian traffic. The only disadvantage is that the ramps are somewhat expensive.

2. Parking under the stores:

Either in basements or by raising the merchandising floor on columns, leaving the ground floor to be utilized as parking area. There the users reach the shopping Malls by means of escalators and stairs. e.g.

a) Main Place, Buffalo New York Fig. 57.
b) Lausanne Fig. (58).

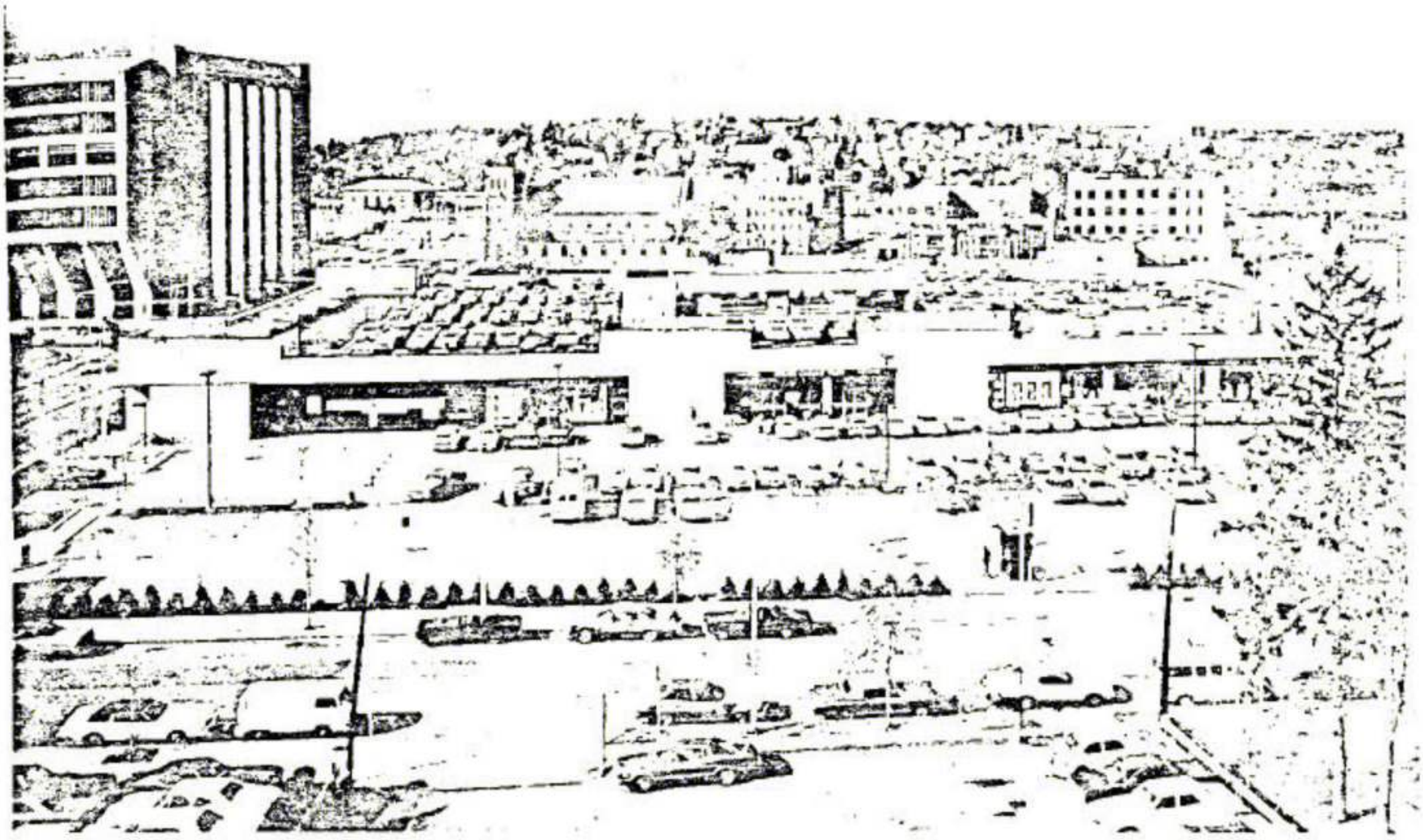
Parking can be either under the store over the ground level or under the G.L.

3. Multi-storey parking: This types can be used in high rise centers. Usually this pattern can be either, one separated building for parking e.g.:

a) Forum Steglitz, Germany Fig. (59).
b) Worcester Center. Worcester Fig. (60).
c) Parking could be included in the center building with pathway between parking area and sales area or some of the parking under the sales area and some over "Sandwich Parking Pattern". Fig. (61). The parking can also be arranged for pedestrian traffic on both sales levels, the parking level are arranged in a way that they slope half a level upwards to the upper level or half a level downwards the lower level Fig. (62).

3.4.b. Employee Parking:

Parking space for employees should be separated from public areas or confined to the outermost spaces. In no case should employees be permitted



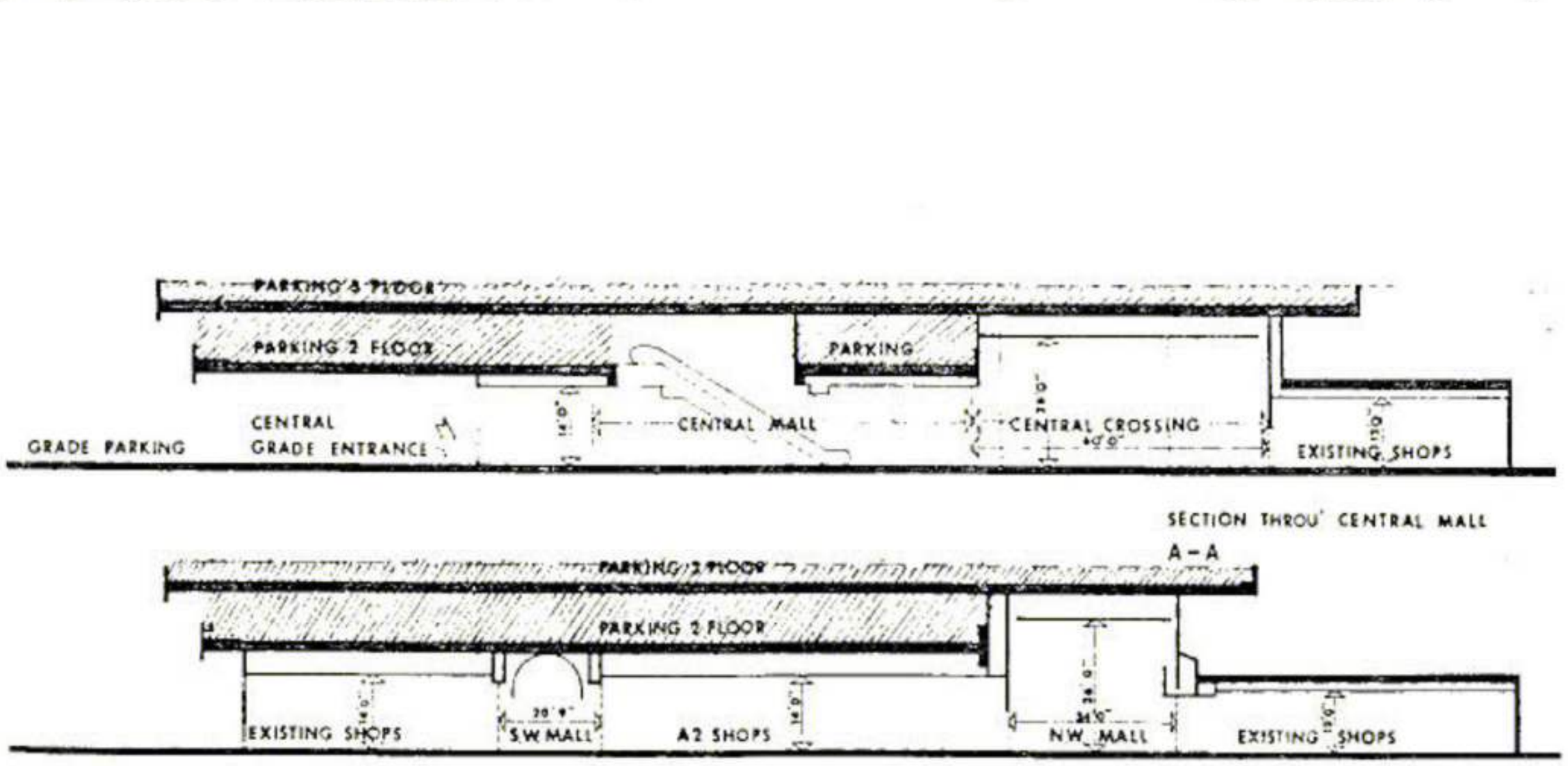
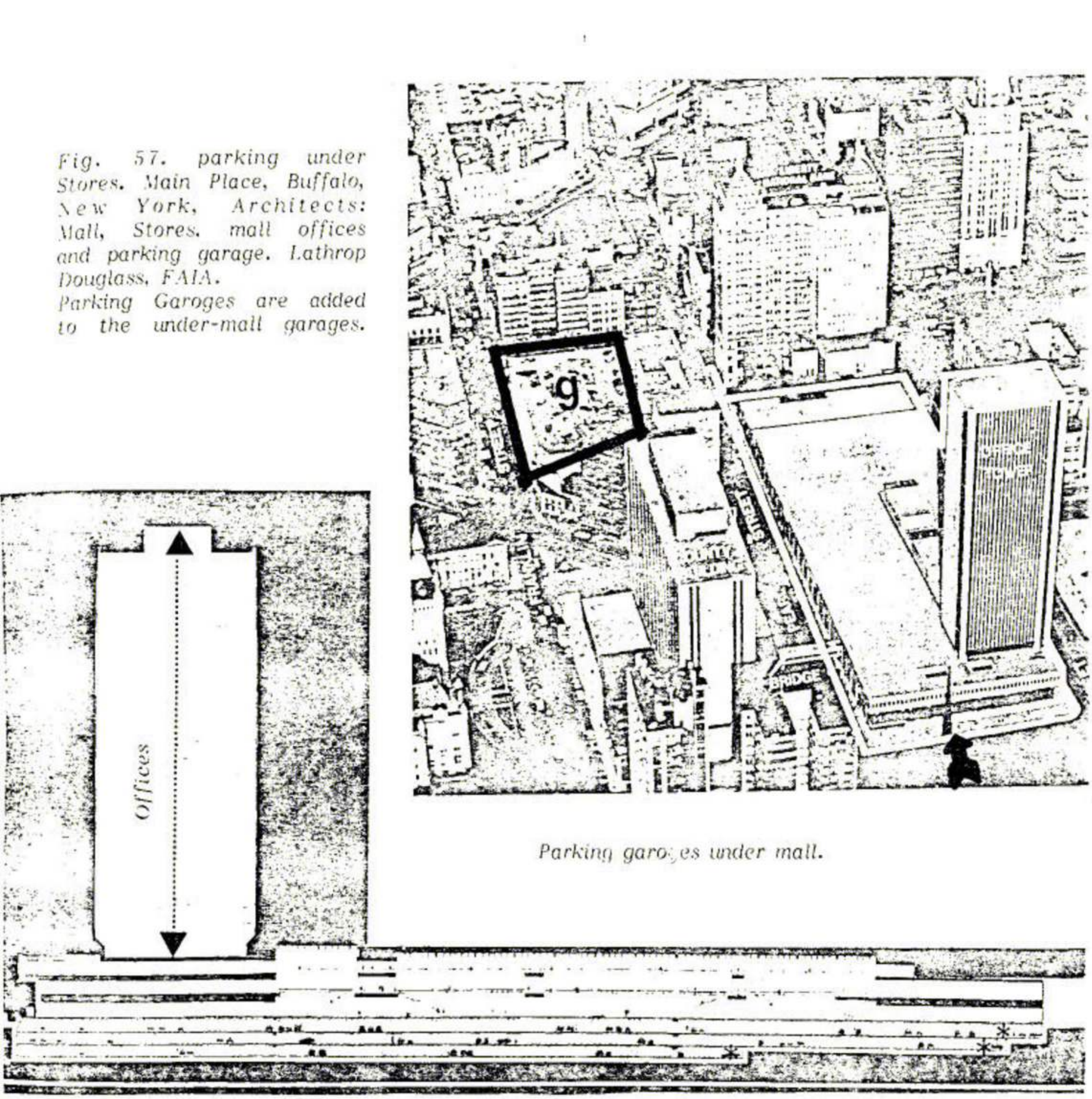


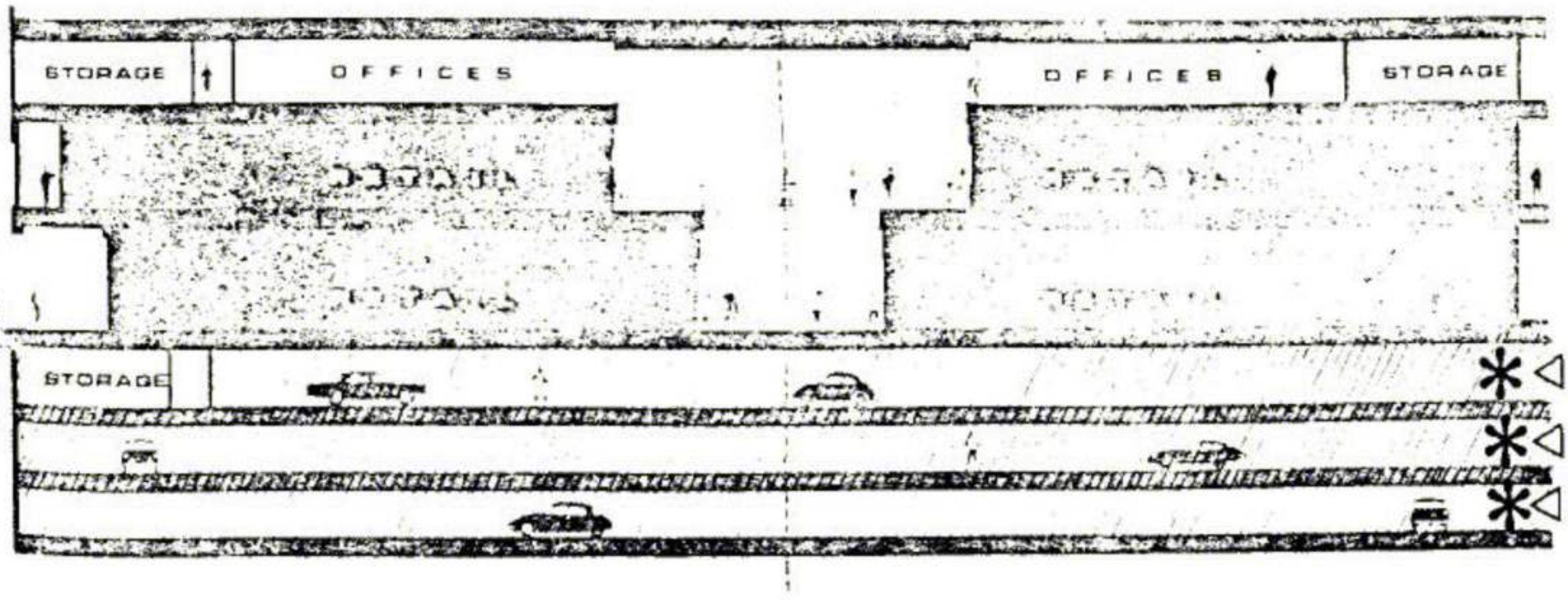
Fig. 56. White Plains Mall. Roof Parking. New York.
Architects: "Welton Becket and Associates.

Ref. Courtesy of: R.I.B.A. Journal "Shopping and the town Center. July, 1963.

Fig. 57. parking under Stores. Main Place, Buffalo, New York, Architects: Mall, Stores. mall offices and parking garage. Lathrop Douglass, FAIA.
Parking Garoges are added to the under-mall garages.



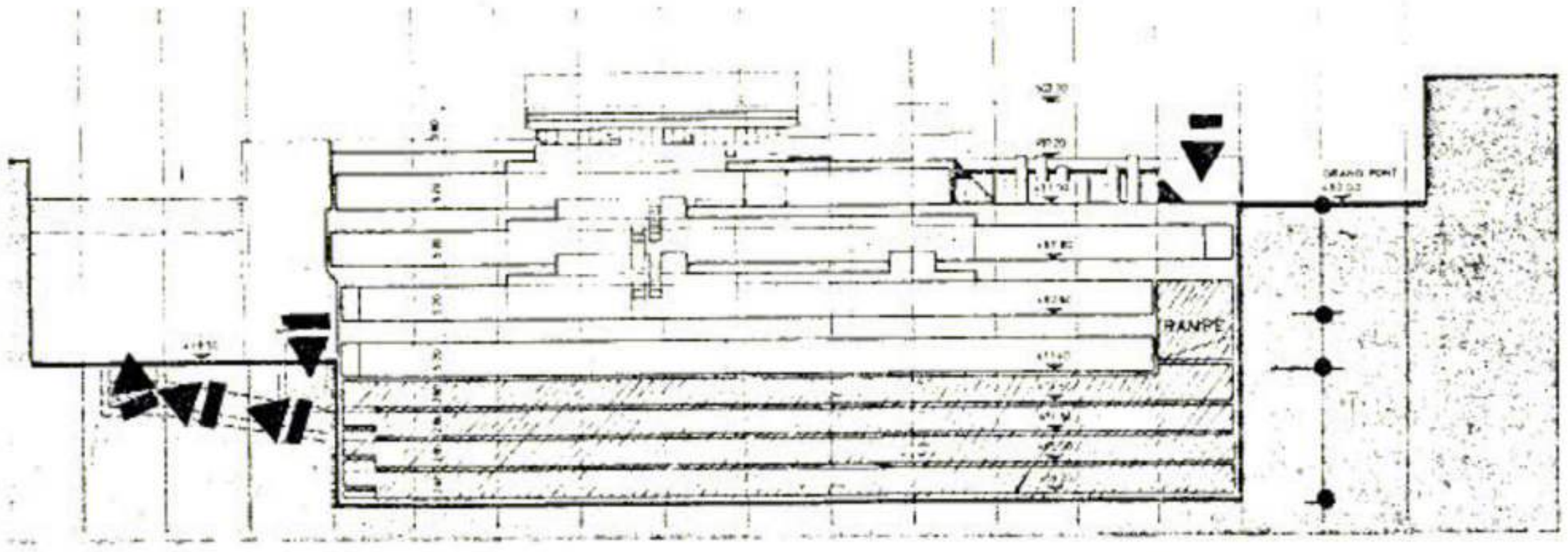
Parking garoges under mall.



Ref. Courtesy of R.I.B.A. Journal "Shopping and the Town Center" July, 1963.

Fig. 58. Under Mall. Parking Garages.

Laussanne: Perspective view of the projected center showing car entrances and exits of the project on its different levels.



S.M. Shopping mall
A.L. Activity level
U.G. Under ground garage

Section revealing that the street level on the right side is identical to the terrace and on the left to the lower activity level.

Ref.Courtesy of Victor Gruen and Larry Smith, Op. Cit.

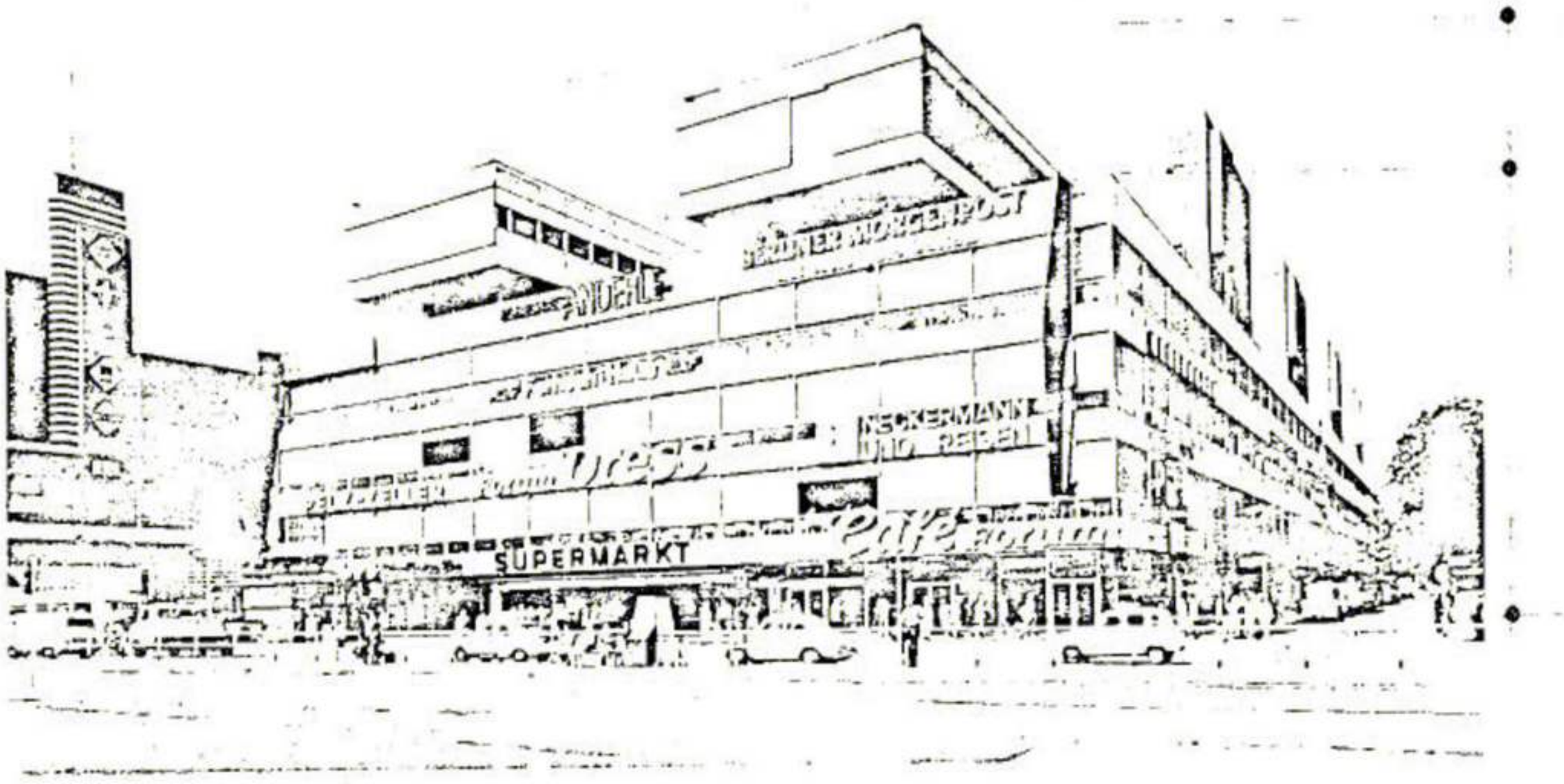
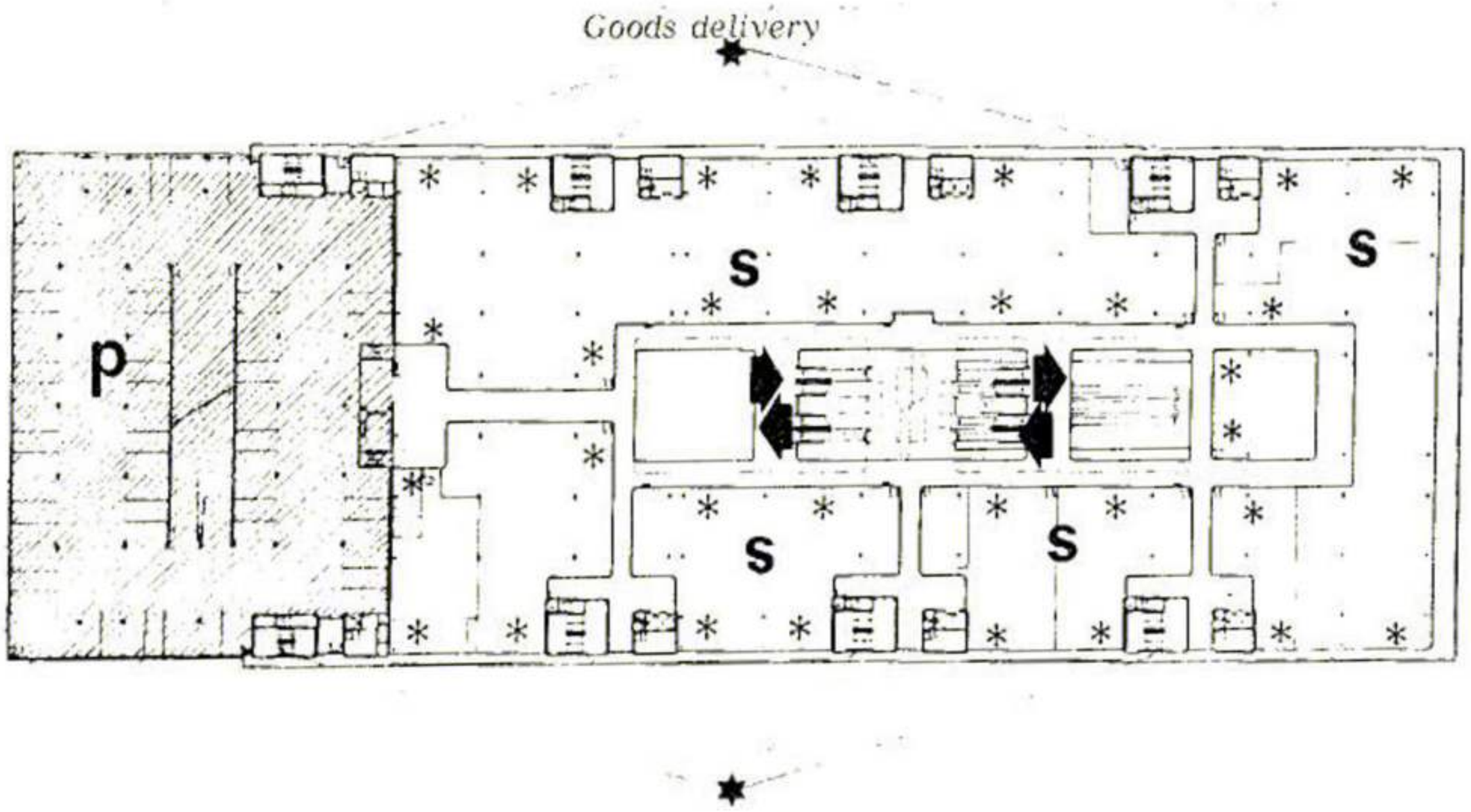


Fig. 59. Forum steglitz: Exterior view.
One typical activity level with parking related to it in a horizontal sense.



S *Sales area*

P *Parking area*

Ref. J. Ross Mckeever. Shopping Center Zoning, U.L.I. Technical Bulletin 69 (Washington, D.C.)

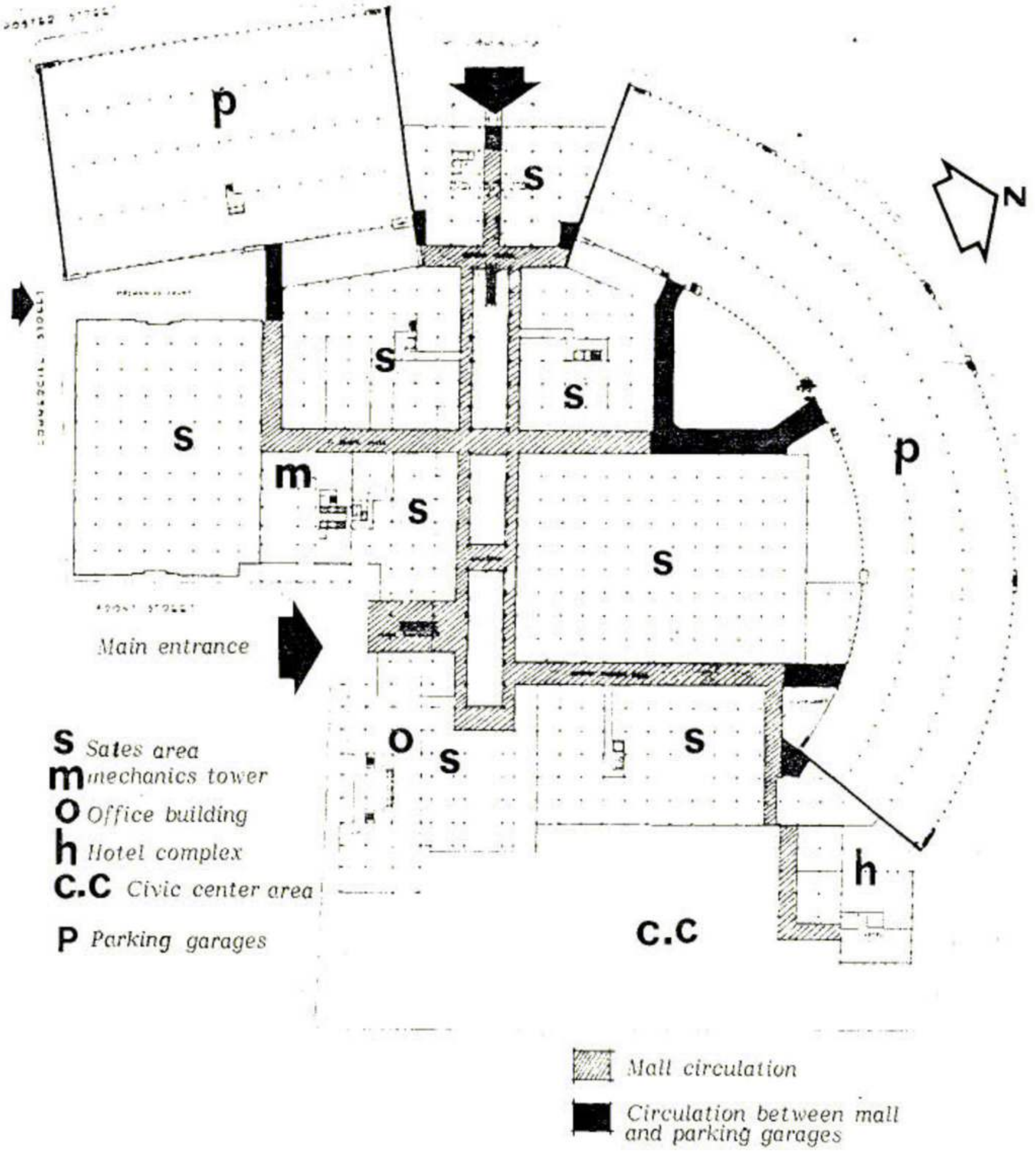
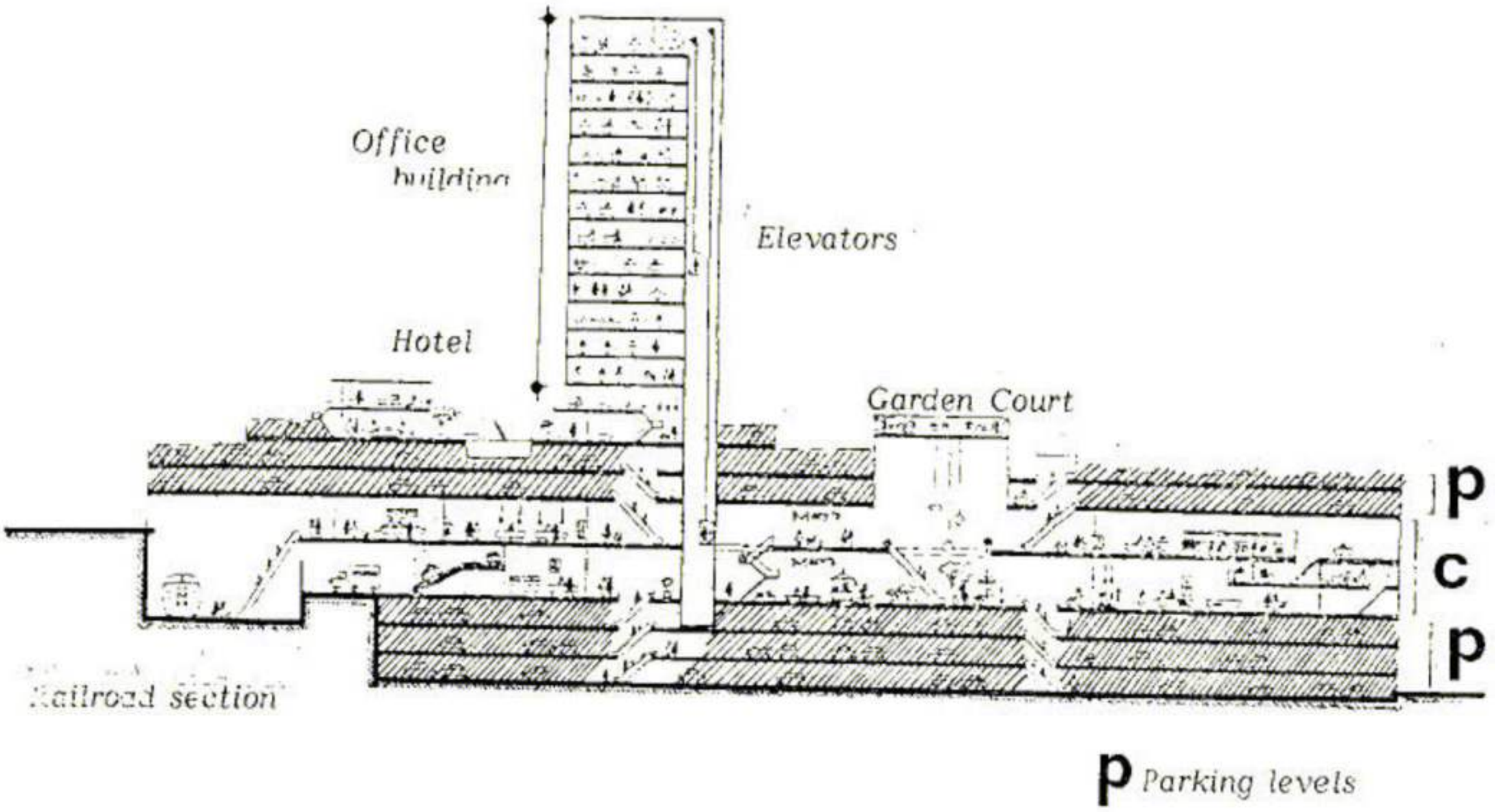


Fig. (60)

Ref. Victor, Gruen. and Larry Smith "Shopping Towns U.S.A.



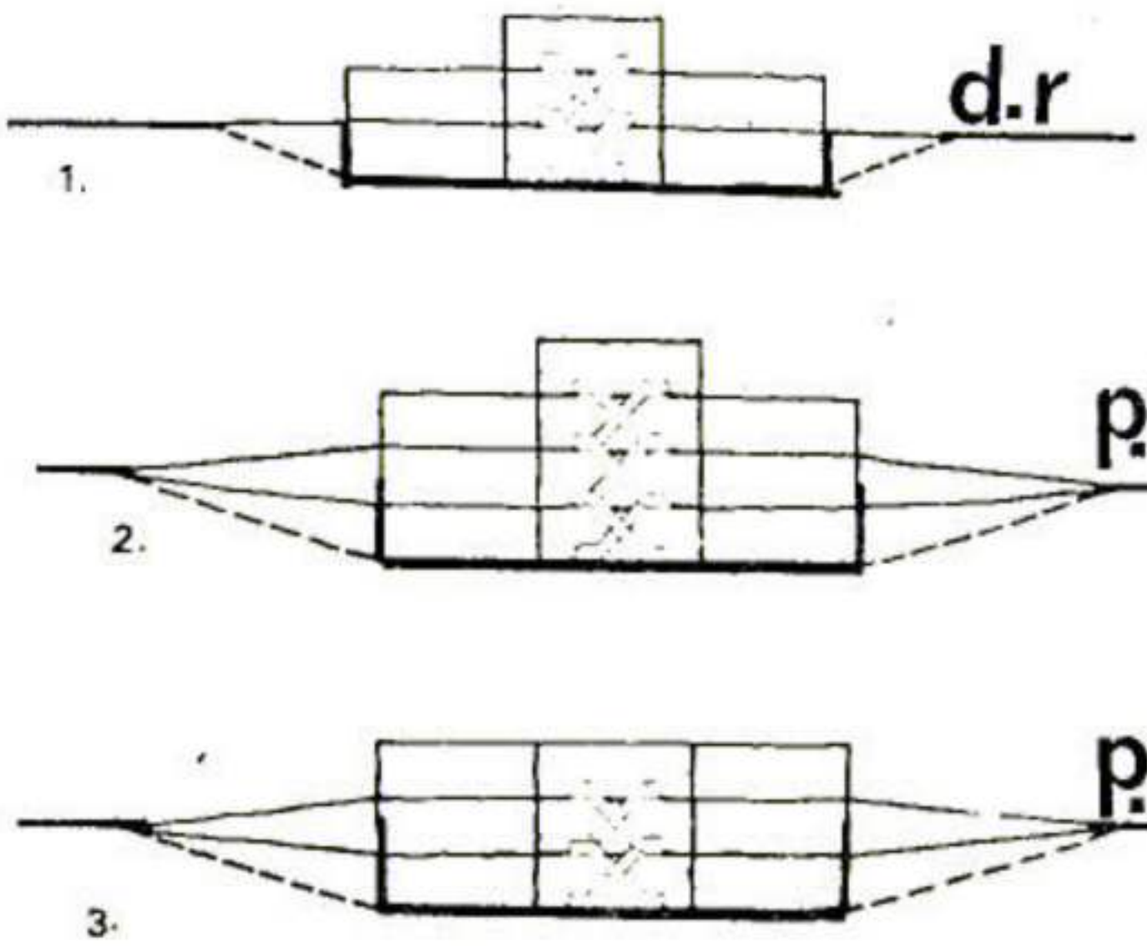
P *Parking levels*

C *Comercial levels*

Fig. 61. Westchester Terminal Plaza Project, New Rochelle, New York

The section shows how two shopping centers are sandwiched between lower and upper parking levels.

Ref. Courtesy of "Victor Gruen and Larry Smith. "Shopping Centers U.S.A.



d.r *Delivery road.*
Section Through a center Tenant stores, one story high Department store. Two stories high, dotted lines are ramps to delivery road.

p.l *Parking level.*

Section 2 and section 3.

Section with basement and two selling levels. In order to achieve an equal amount of pedestrian traffic on both sales level, the parking level slope half a level upwards.

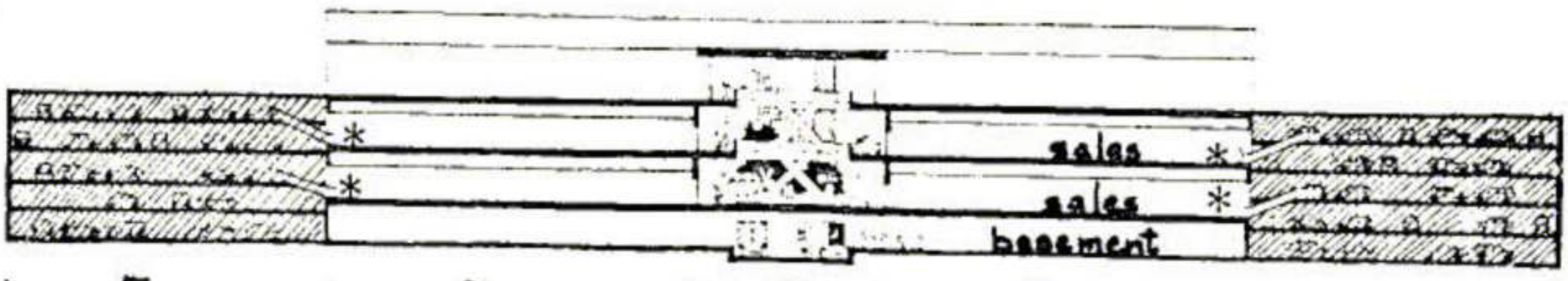


Fig. 62. Application of the method of relating parking levels to shopping levels. The lowest parking level would be used for center employees.

Ref. Courtesy of R. Zion. The Landscape architect and the Shopping Center, 1961.

to use spaces near the building core where valuable customers may need to use.(1) The actual number of spaces required will depend on the number of staff and the extent of public transport, but where special areas are provided, individual spaces may be smaller than those for public space. Employees are all-day parkers and may be allowed stall widths of 8 feet. In a strip convenience center, employee parking is best placed at the near of the stores with the service parking area.(2) In some sites employee parking spaces have been placed outside the sites internal ring road. As Exton Square Wall . However an alternative formula has been suggested with respect to the different shopping facilities Fig. (63).

3.4.1. Pedestrian Movement:

The safety of the pedestrian users should be ensured during entrance and exist from the shopping area and that could be achieved by totally seperating their circulation from the circulation of the motorist consumers.

A clever site designs, for example pedestrian over-passes and under passes leading directly to the center will ensure the safety of the pedestrian shopper. Once the pedestrian shopper enters the mall he will find himself unconsciously drawn through the different shopping facilities.

That will be more predictable if the concept of the mall is introvert but if the mall is extrovert than the pedestrian movement is unpredictable. The pedestrian mall must not be too long but shortened by wide court at intervals or close the consumer whould not continue it and also the human scale will not be maintained. At appropriate intervals there should be a recreational plaza where any refreshments should be available. Rest and Relaxation for old people and play areas for young children should be provided. Sculpture, greenery and fountain with artificial ponds should be everywhere during the pedestrain movement creating an air of gaiety and freshness,

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(1) *J.Ross McKeever, Shopping Center Zoning. ULI Technical Bulletion 69 (Washington, D.C.: ULI - The Urban Land Institute 1973).*

(2) *"Layout and Design of Parking Lots: Aesthetic Consideration" Traffic Quarterly January, 1952.*

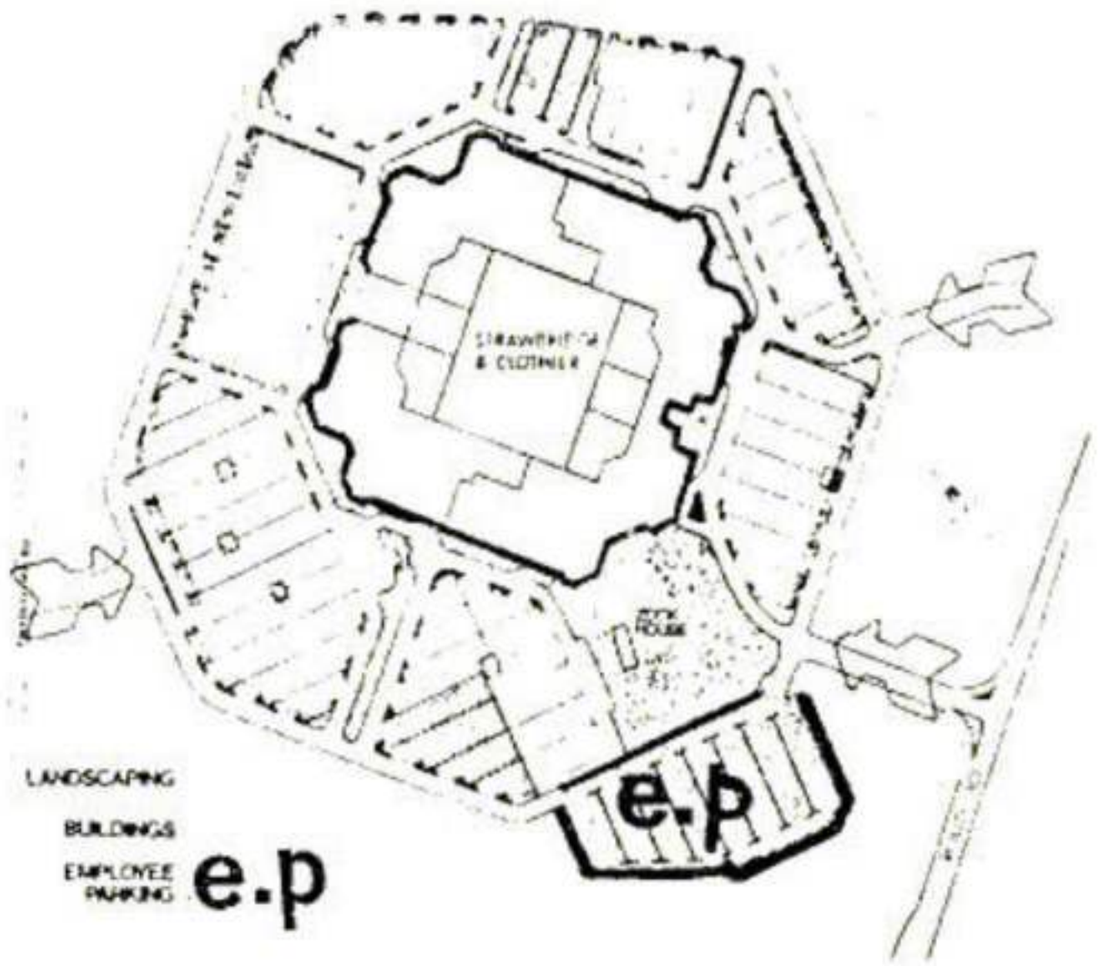


Fig. 63. At Exton Square Mall in Exton, Pennsylvania employee parking spaces have been placed outside the site's internal ring road.

EMPLOYEES' PARKING ALLOCATIONS[1]

	Gross floor area (GFA)	Number of spaces	Alternative formula
Neighbourhood centre	30- 60,000	50	
	60- 100,000	85	One space per 900 square feet GFA
Community centre	Less than 75,000	86	
	75- 150,000	178	
	150- 200,000	252	One space per 800 square feet GFA
Regional centre	Less than 250,000	312	
	250- 400,000	435	
	Over 400	500	One space per 800 square feet GFA

Courtesy of: Ross McKeever, Shopping Center Zoning. U.L.I. Technical Bulletin 69 (Washington, D.C. U.L.I. The Urban Land Institute 1973).

leisure and excitement a loop or circulatory mall offers a confinuous flow of circulation and impluse merchandise should be stationed within reach during the flow. Public lavatories and drinking fountains should be obvious, and available.

Public Transport Pedestrian Circulation:

It is preffered to design the shopping center combined to a subway or a main bus station and for the safety of the users there should be direct access to the store seperated from the other types of shopping traffic. Sheds and canopies should be used to shelter the consumer till they reach the shopping area through a safe and short circulation.

Some centers have solved this problem and built the mall on top of the subway station, the station being in the level of the basement.

3.4.2. Truck and Service Parking:

At one time truck tunnels were commonly used at Regional mall Centers to separate shoppers and freight delivery. Fig. (64). Another method used in sloping sites where a basement could not be built, the road delivery would be above the sales area; goods are transferred from above by chutes.(1) and can be delived to the customer at pickup station Fig. (65). The economics of the truck tunnel however, are now prohibitive. Instead the enclosed mall center either schedules most deliveries for non-shopping hours or provides a screened or walled truck delivery court from which a group of stores can be served.(2)

Yet there are two kinds of Goods Traffic:(3)

a- Goods comming from major stores to be sold in this Department branch.

b- Goods leaving the shopping site to be distributed to the customer's residence.

---

(1) *Urban Land Institute. Shopping Centers Re-studied vol. 2, p. 13.*
(2) *E. Beazley, Super Markets, Architectural Review, Nov. 1966, p. 333.*
(3) *Guidelines for Planning and Designing Access Systems for Shopping Centers, Prepared by Technical Council Committee, 5-D, Institute of Traffic Engineers (Arlington, VA, 1976).*

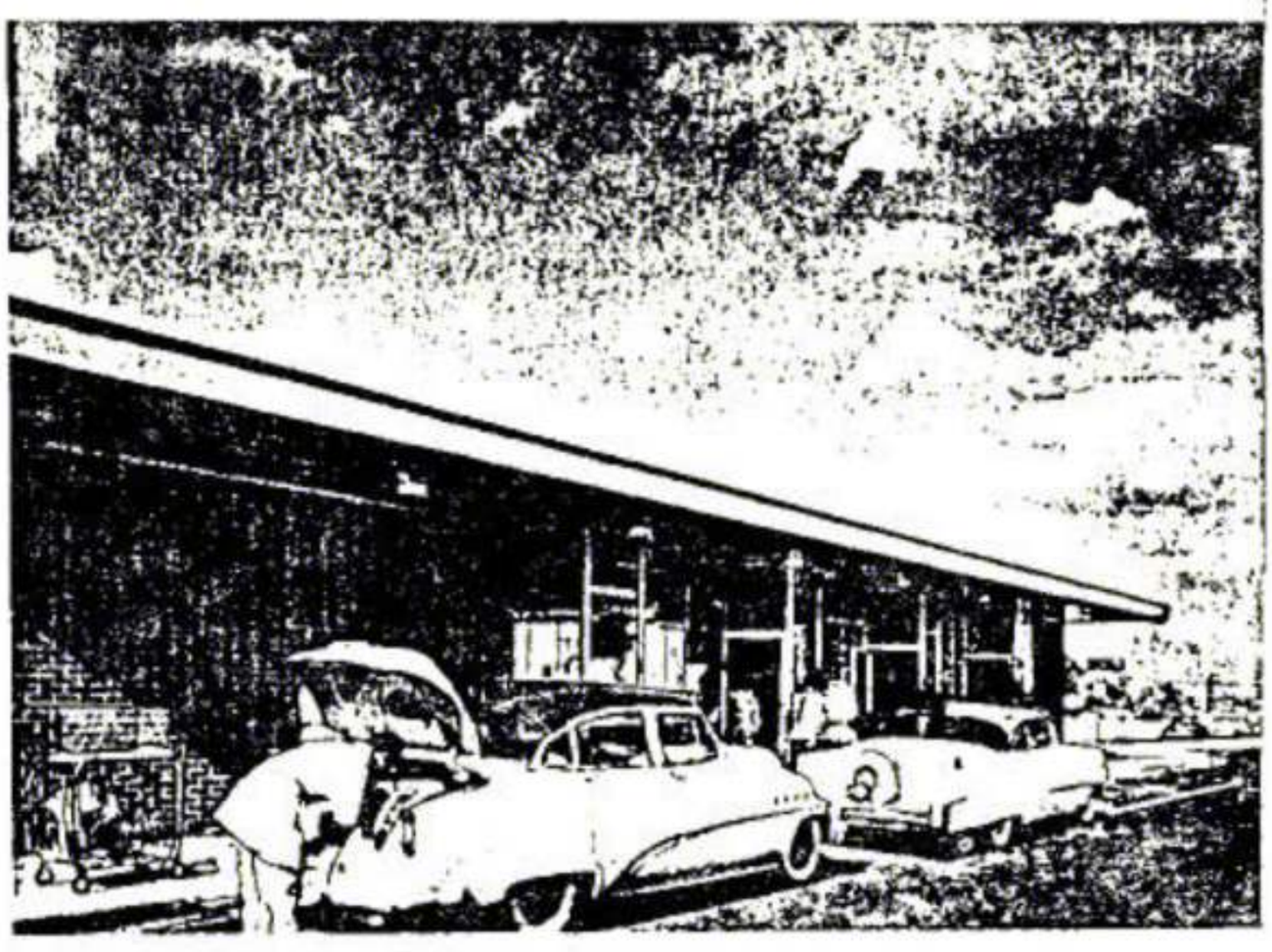
T.T

T.T *Truck Tunnel.*

Fig. 64. Southdale Center in Edrina. The Center includes Truck tunnel which serves individual stores.

Courtesy of: Urban Land Institute Shopping Centers Re-studied. vol.2.

Fig. 65. Pick up station for supermarket at Northland Center, Detroit Sold Merchandise is moved by underground conveyors to pickup station.



Courtesy of: Supermarkets and Architectural Review 1966, November.

(a) Goods comming from major stores to be sold in the dep. branches:(1)

First methods and statistics' should be made to define approximately number of trucks to be expected per day and truck traffic during the days of the week Fig. (66).

(A) Number of Trucks to be Expected Per Day:

Regardless of geographical location, shopping centers without food markets could have approximately 75% of the maximum daily volume of conters with food markets. "P" factor - trucks per 1,000 sq.ft. of rental area, is an average of 0.23 for centers without markets. (For centers with markets, 0.29).

(B) Number of Trucks to be Accomodated of One Time:

An accumulation of 7% and 15% of the daily volume can be considered as the minimum and maximum requirements, with a figure of 12% desirable for economical and efficient operation.

(C) Physical Requirements of Truck Delivery Spaces:

Generally speaking, the ideal layout of truck delivery spaces should be characterized by the following consideration:

1. Ease of access for delivery trucks from public roadways; minimum interference with customer automobile and pedestrian traffic.
2. Delivery spaces located out of sight of normal customer areas.
3. Delivery space planned so that trucks can maneuver into docks, or berths, with a minimum of lost motion, in the shortest possible time and with the greatest degree of safety both for other vehicles and fixed building elements, such as columns, platforms, wall, etc.
4. Docks designed to provide the greatest ease in the transfer of goods from truck to receiving platform.
5. Delivery docks located where they can provide the most direct access to serve and stock areas of stores being served.

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(1) These statistics were taken from "The Landscape Architect and the Shopping Center, 1961.

Comparison of Average Daily "P" Factor.

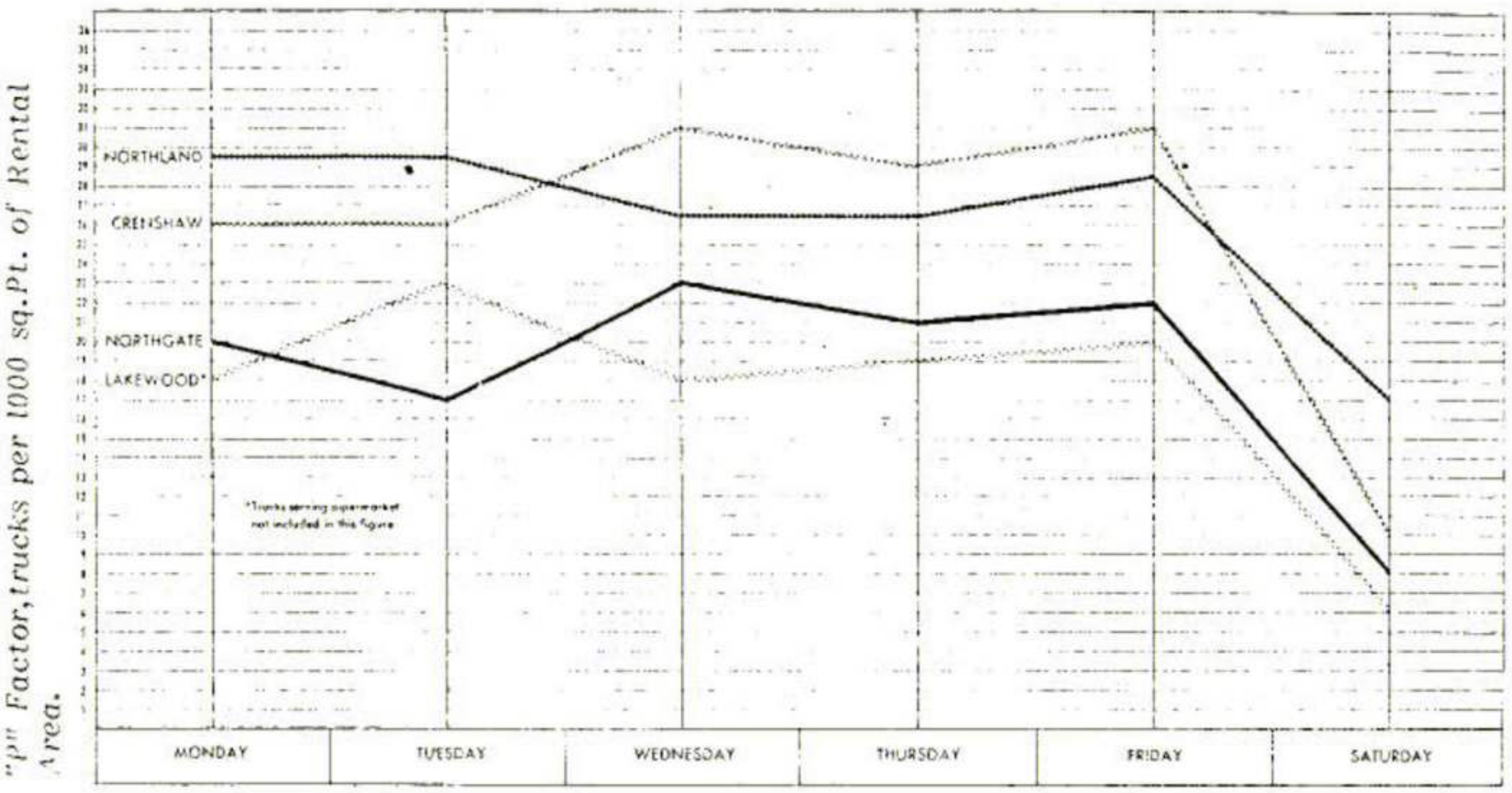
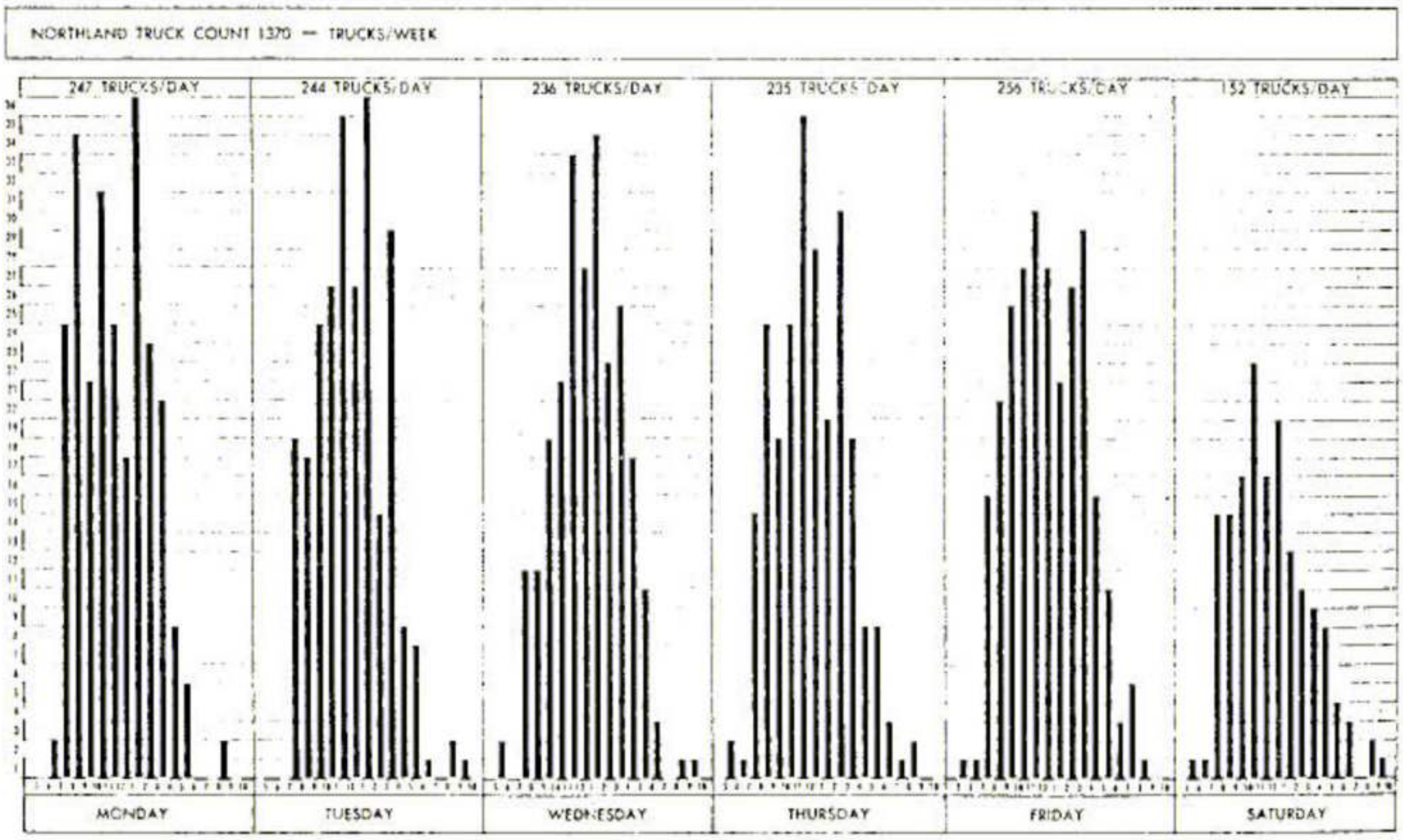


Fig. 66. Comparison of Truck Traffic based on actual observation for four shopping centers.



Tabulation of Traffic count during one week at Northland Center, Detroit.

Ref. R. Zion: The Landscape Architect and the Shopping Center 1961.

For maximum efficiency of circulation of truck delivery convenience accessibility from surrounding public roads should be necessary. Its circulation must be separated from pedestrian and motorist traffic and sereened from the consumer's eyes by the methods discussed before.

Different methods of delivery could be adopted according to size and site of store:

1) A service court in the rear of the center are designed separated from the parking area especially in large stores needing a big service court.

2) Truck Tunnel in Basement: This is usually located under the pedestrian mall with unloading docks on both sides adjacent to freight elevators and stairways to convey the goods to shopping area. The truck tunnel continues underground till its entrance is away for pedestrian and motor consumer traffic Fig. (67).

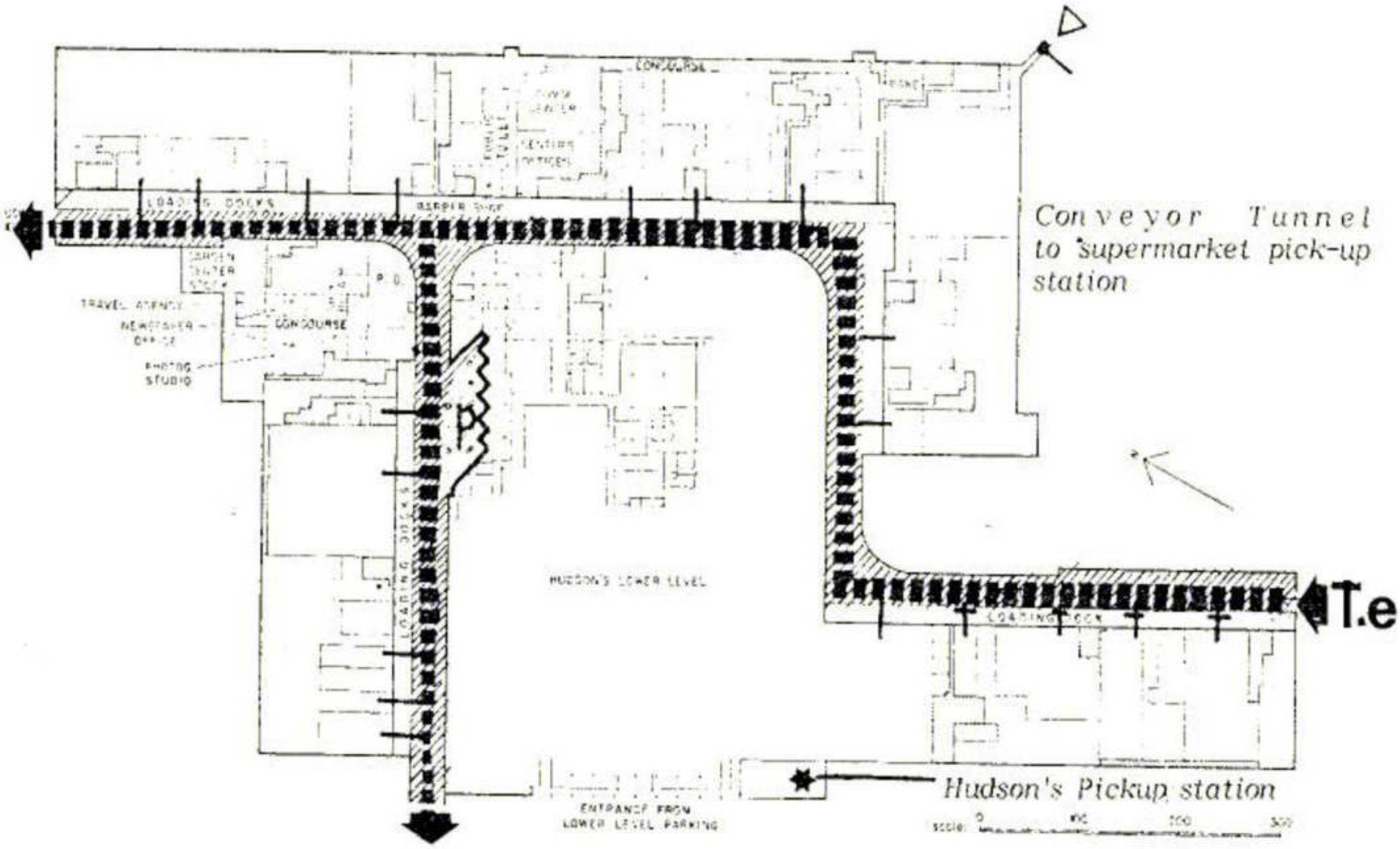
3) If the site is sloping then the truck service road could be located in the high level and the storage service area above the sales area.

(b) **Goods leaving the shopping site to be dispatched to the consumer's residence:**

1) Some merchandise have to be dispatched to the consumer's residence in case of bulky goods such as furniture.

2) Some customers would preffer to hand their pruchases to a package pick-up station while they continue to shop.

The purchases are delivered by means of underground convey or belts to one pick-up station on the parking lot where the consumer can pick-up her purchases by car. Fig. (65).



layout of Truck road and loading docks at Northland Center, Detroit.

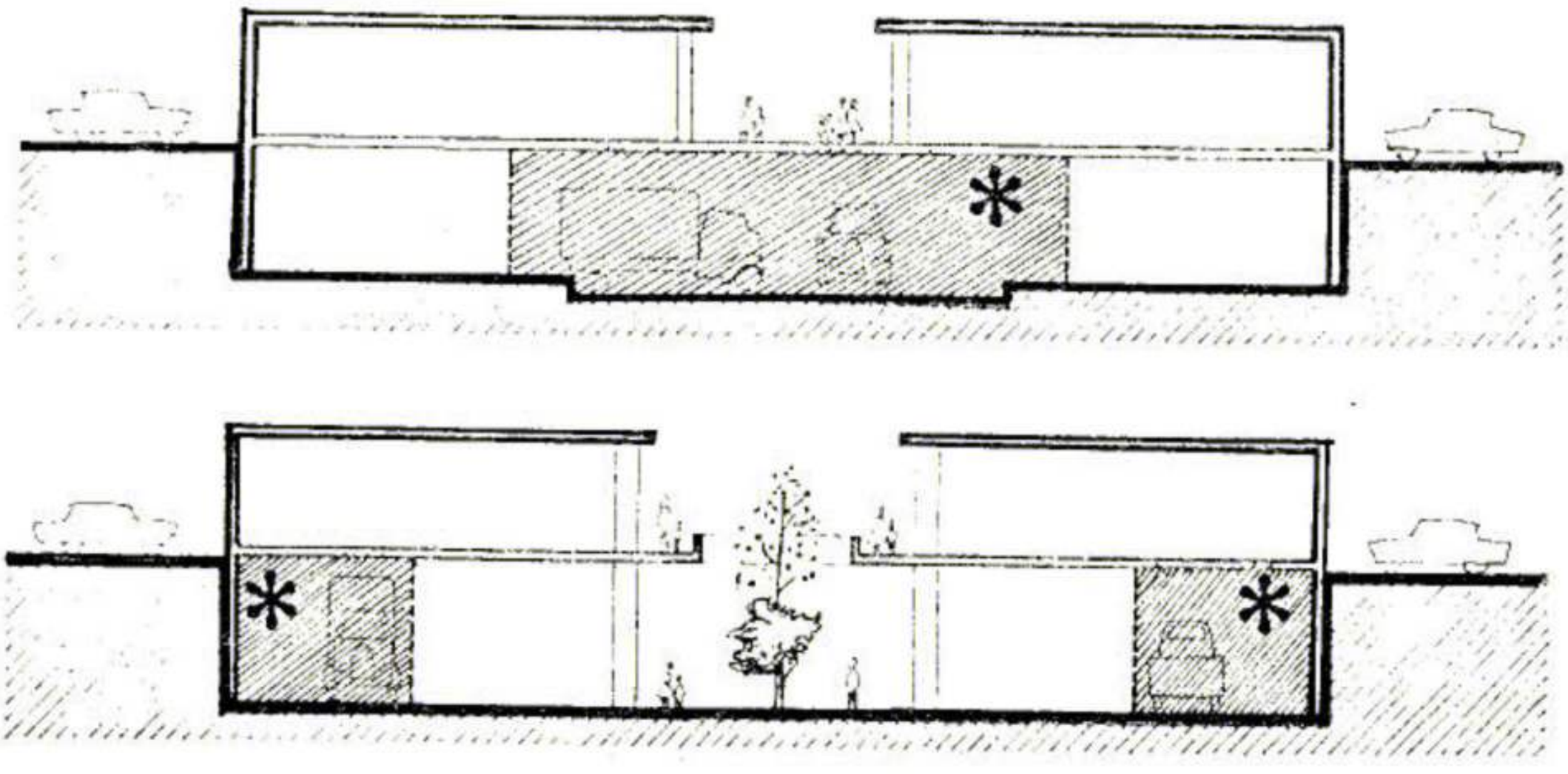


Fig. (67)

Ref. Victor Gruen and Lary Smith Op. Cit.

3.4.3. Approaches and Techniques Used to Solve Over-Congested Traffic in Already Existing Shopping Streets:

Concern for maintaining and improving the quality of the environment, has prompted a number of cities to experiment with ways to limit the number of cars crowding into central areas. Many means to limit traffic are being evolved involving indirect means such as parking restrictions.

One of the most effective direct approaches - through admittedly practical only on a limited scale - is to exclude traffic entirely from certain areas. The evidence from these projects demonstrates that vehicle - free zones, are feasible technically, commercially. e.g. Tokyo's Ginza Fig. 68 and could be two levels e.g.) Schulstrasse, stutgart Fig. (69).

The problem in such a method is the service of goods by technical innovations are more likely to find a way. For example, at Toulouse the regional center "Geant-Epargne" has a centrally located "Consigne" where purchases can be deposited and which are delivered by means of conveyors within a tunnal to a depot adjoining the car park outside.(1)

There are three ways which would improve pedestrian movement in relation to the movement of traffic. The first is to design, traffic-free areas, areas that are now surrounded by primary roads within the city. These roads will probably require to widen to take through traffice previously crossing the area or extra traffic generated by the attractiveness of the new area.

A second way is to construct segregated networks for pedestrians above or below ground. While possible within new development areas, this solution is extremely difficult within ancient areas. From the point of view of traffic it enables existing traffic levels to be maintained.

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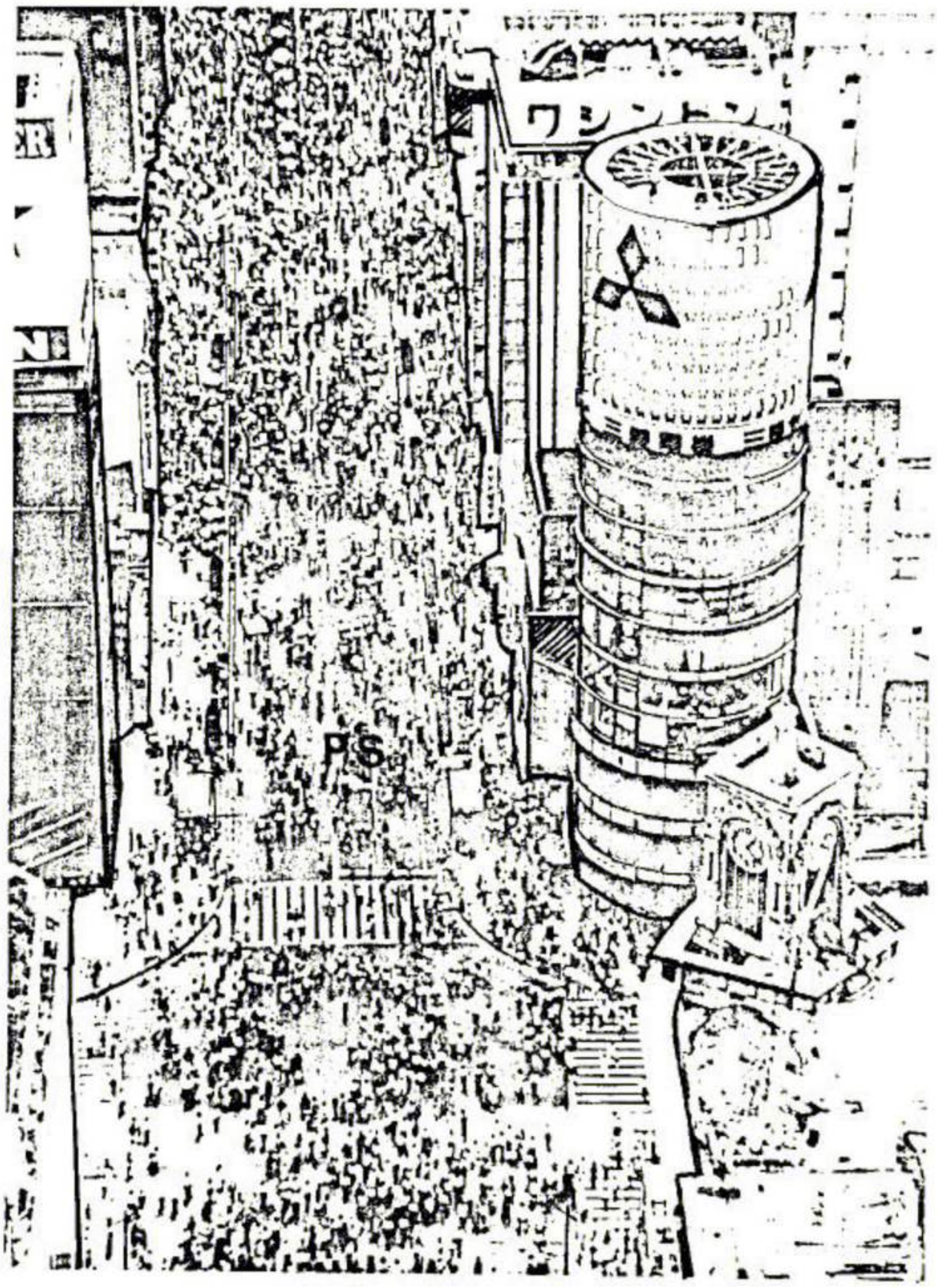
(1) *Rubenstein, Harvey M., A Guide to Site and Environmental Planning, New York, John Wiley and Sons, 1969).*



P.S *Pedestrian street.*

Fig. 68. Crowds in Tokyo's Ginza, where pollution has been greatly reduced since the exclusion of motor vehicles.

Courtesy of: "The Landscope Architect and the shopping center" I.L.A. Journal, May, 1961, p. 7-9.

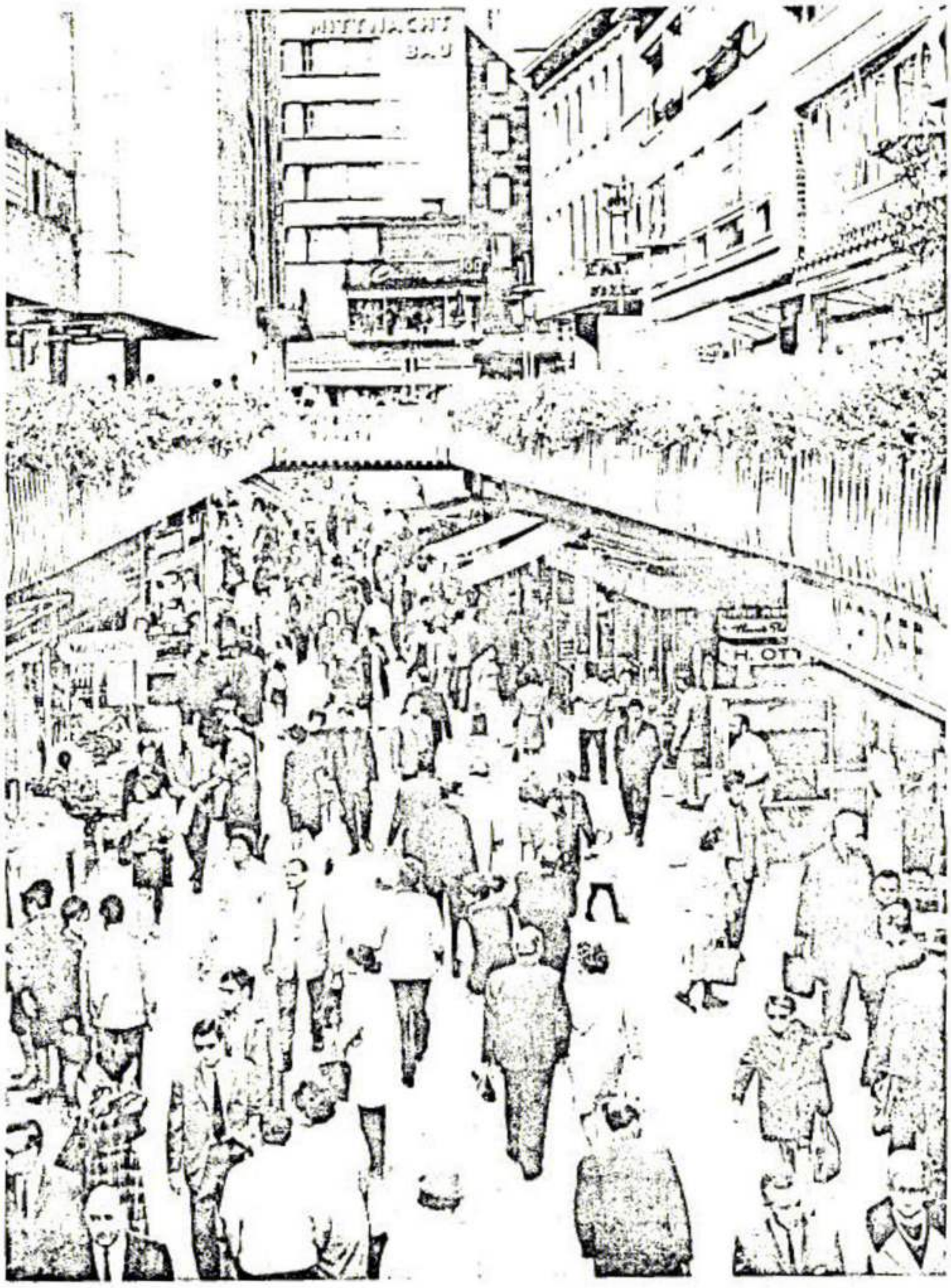


Fig. 69. View of Schulstrasse, Stuttgart, illustrating the effective use ofmassed flower planting in two level pedestrian shopping street.

A third way is to plan better environment for pedestrian in existing streets at ground level e.g.:

a) Above Bar Street, Southampton Fig. (70).

b) Union street, and center of Burmingham.

This may require the imposition of greater Fig. (71), restraints on use of vecicles than at present in order to male ground space available. In congested area, the time of deliveries may have to be limited, leading to the introduction of more efficient systems.

In relation to pedestrian shopping streets close location of stations or bus stops with pedestrian areas is important.

All kinds of emergency vehicles require access to pedestrians streets and paved areas may have to be designed to take the weight of fire engines and to allow them to move around easily.

When streets are closed temporarily to traffic in order to assess their potential as pedestrian streets, it is important to introduce simple landscaping in the form of shrubs and seats laid out in such a way as reduce the empty appearance of the streets, particularly in wide street.(1)

Ideally all design aspects of the street have to be considered together, including lighting, refreshment areas, seating and show cases; space can be allowed for extensions of restaurants and cafés onto the paved streets. ex. the piazza Navona rome and the Graben in Vienna. Fig. (72). The Neuer market, Vienna there seems little doubt that improvements in the quality Fig. (73) of the pedestrian environment, at least in shopping streets, do lead to increases in the number of people actually using the streets.

For example during a week on New York's Madison Avenue the number of people walking between mid-way and 14.00 hours rose from 9.00 before

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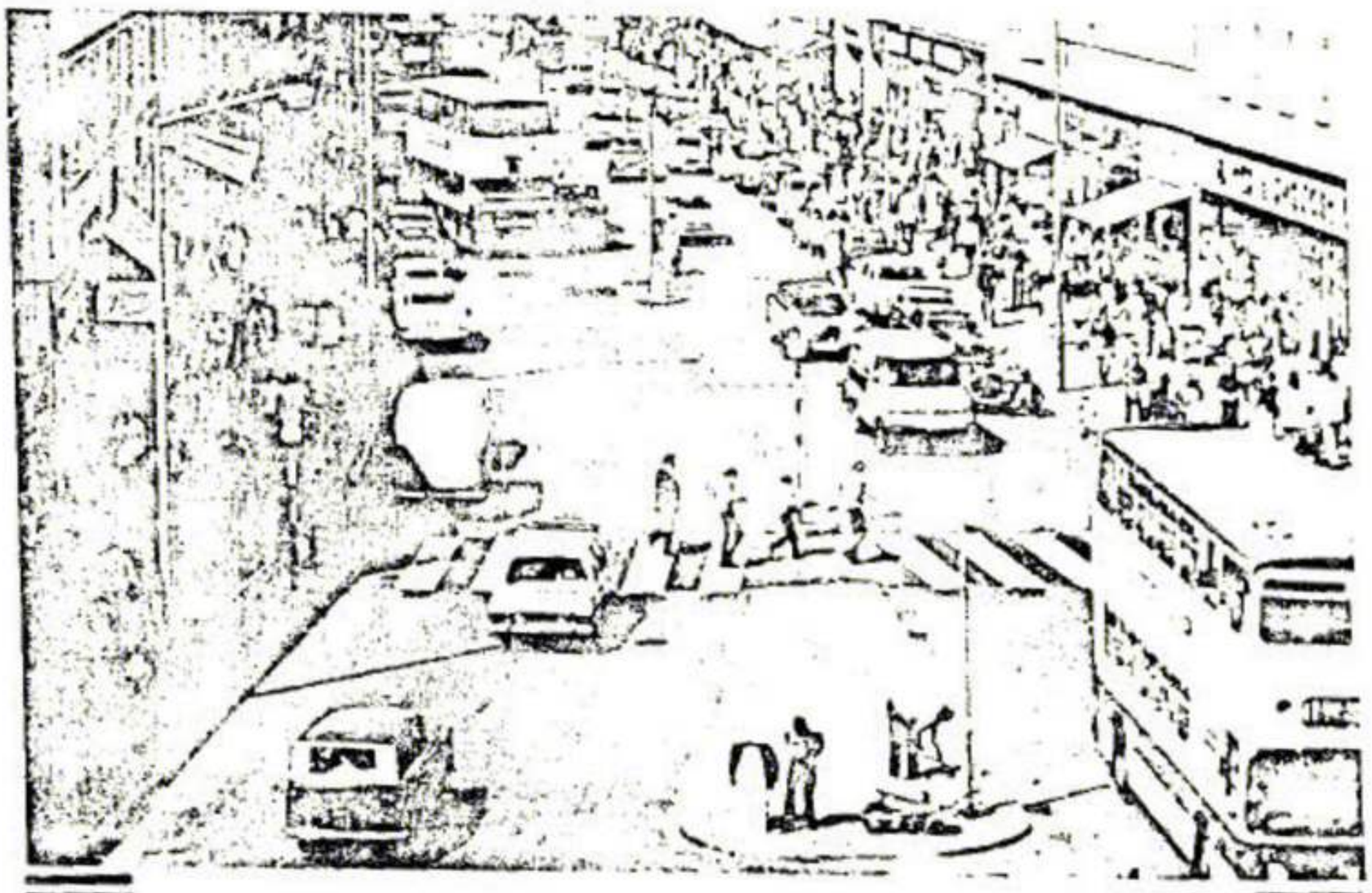
(1) *Fruin, John J., Pedestrian Planning and Design, New York, Metropolitan Association of Urban Designers and Environmental Planners, Inc., 1977.*



Bar Street, Southampton, the Scene before the street was closed to traffic.

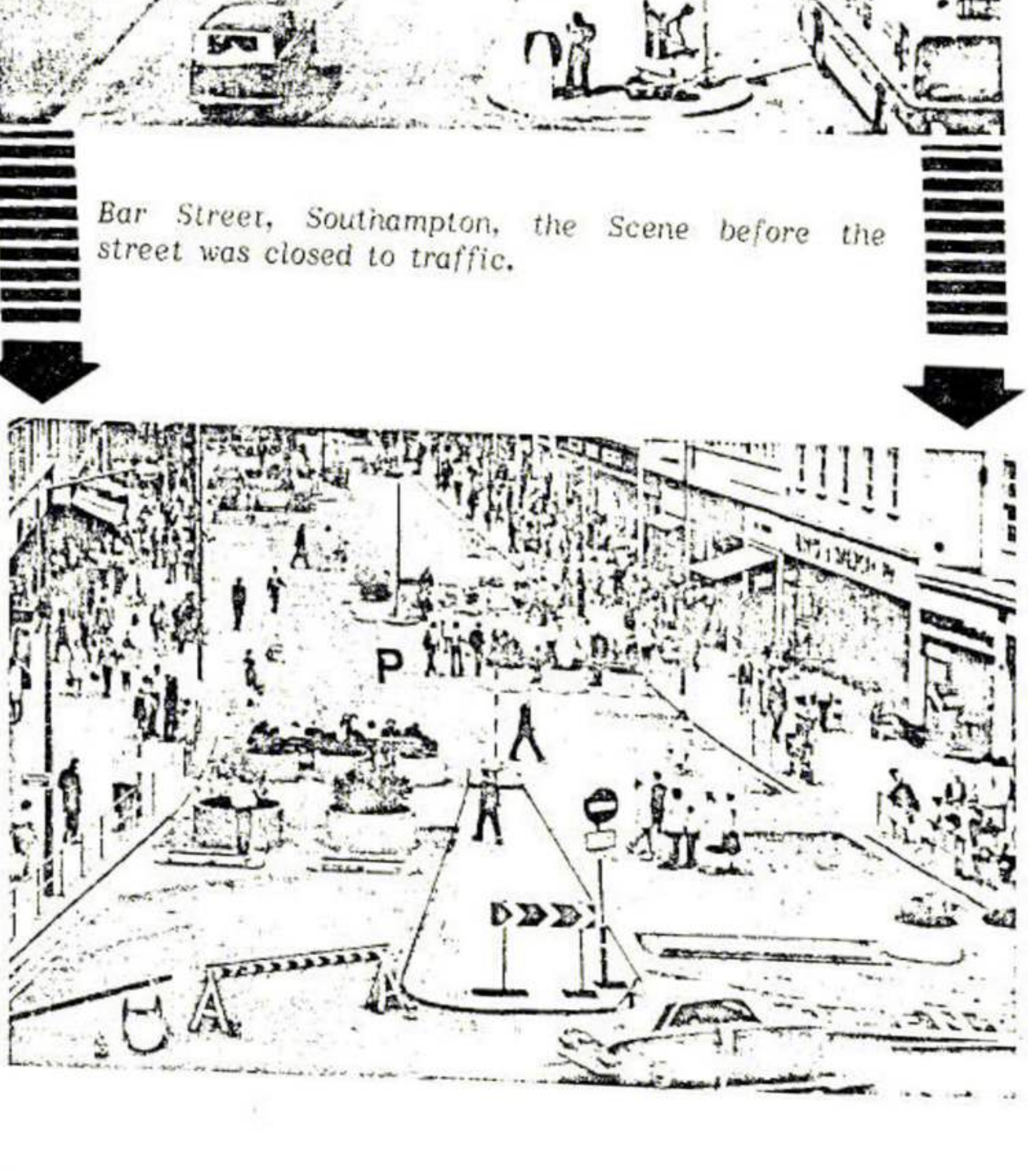


Fig. 70. The same street when experimenting it as a pedestrian street. Temporary bollards are placed to discourage traffic.

Ref. R.I.B.A. Journal "Shopping and the Town Center" July, 1963.

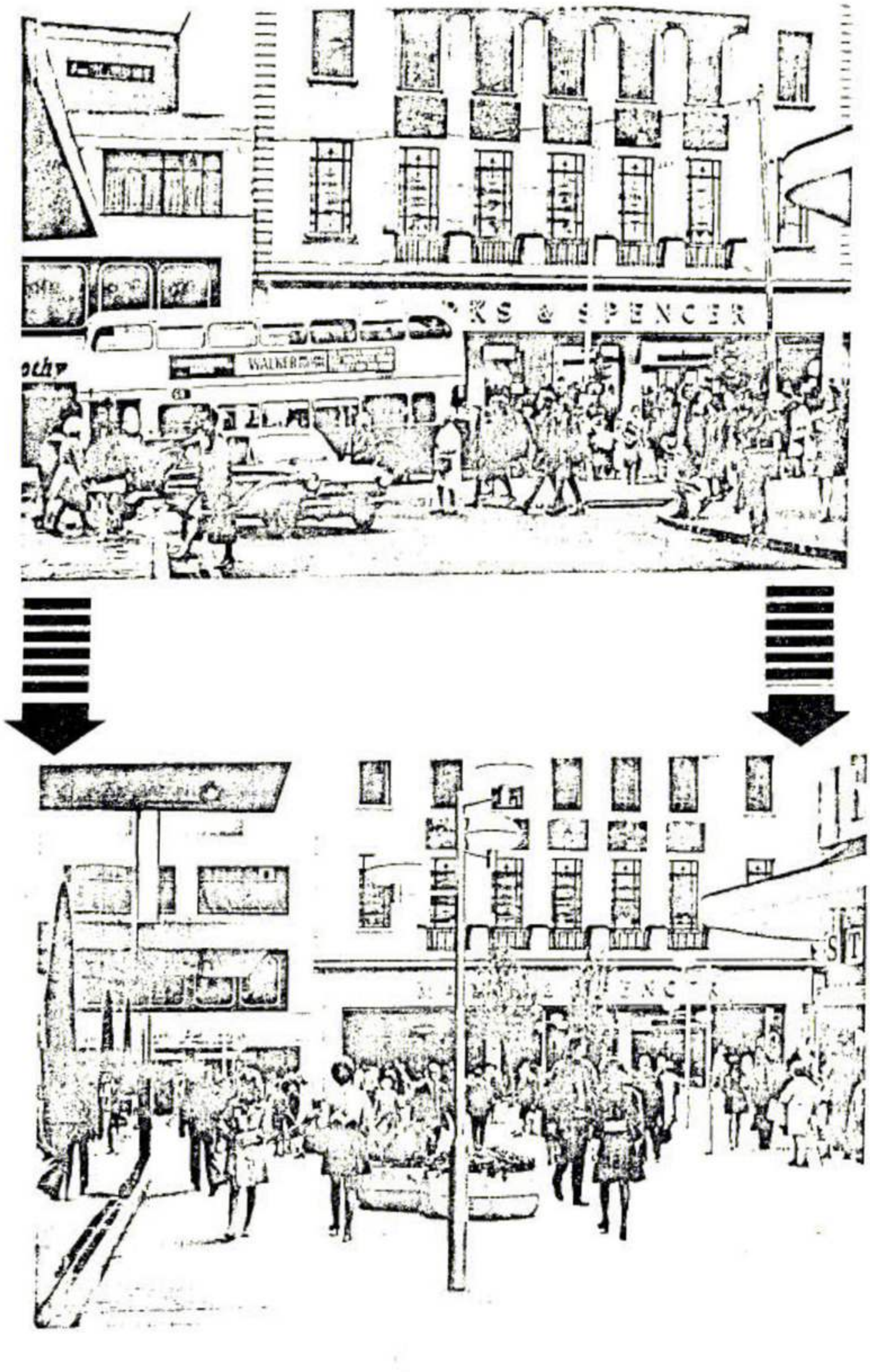


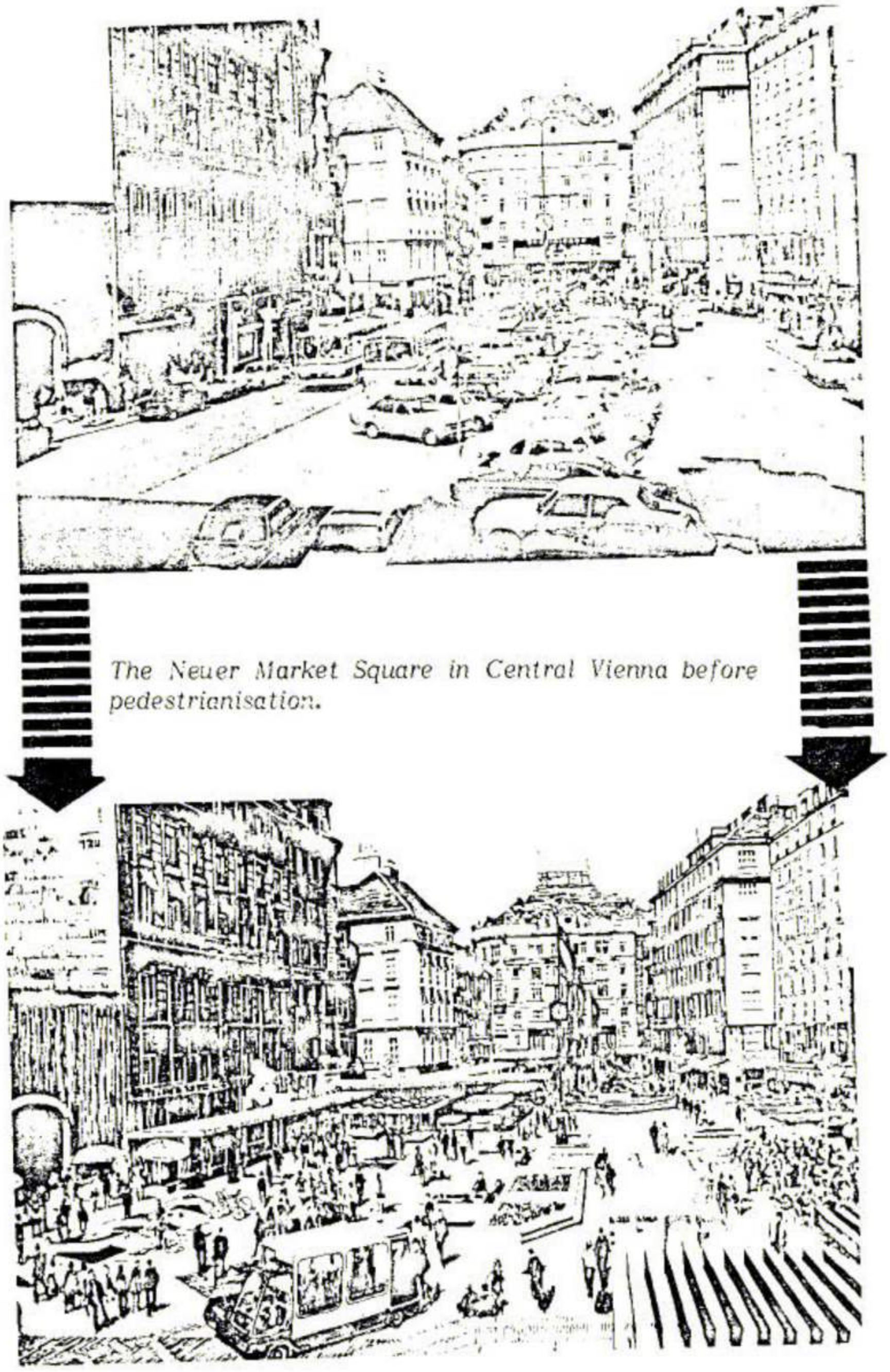
Fig. 71. Before and After Views of Union Street in Birmingham.

Courtesy of: R.I.B.A., Journal July, 1963, "Shopping and The Town Center".

The Piazza Navona in Rome demonstrates how people will profitably fill an open space once Traffic has been removed.

Fig. 72. A view of the Graben in vienna after closure to traffic, with people enjoying the Sunshine and a drink out-of-doors.

Ref. R. Zion. The Landscape Architect and the Shopping Center. I.L.A. Journal May, 1961.



The Neuer Market Square in Central Vienna before pedestrianisation.

Fig. 73. The neuer Market as it should appear when closed to all traffic, except the minibus with trees, fountains and special spaces for public events.

Courtesy: R. Zion. The Landscape Architect and the Shopping Center I.L.A. Journal May, 1961.

the street was closed to 19.300 after closure. In Norwich on a Saturday between 0.900 hours and 16.00 hours pedestrian flow increased from 25.000 to 36.000 after closure to vehicles. Ex. London Street, Norwich. Fig.(74).

There is some suspicion as to wether such increases actually mean that more people are shopping, but what seems important is that more people are enjoying low-cost leisure facilities previously unavailable to them. Clearly, as with traffic, there is evidence to show that in certain situations people will fill the pavement space available for them to move in.(1)

Effect of Innovations on Retail Sales:

Available evidence indicates that traffic bans do indeed have a positive effect on retail sales. In Vienna shop owners reported a 25% to 50% increase" in the first week after the traffic ban went into effect. In Norwich, all but two shops in the exclusion area did more business.some experiencing increasing in sales of 10% or more. In Essen the increase in trade has been reported to be between 15% and 35%, depending on the type of shop; in Rouen, between 10% and 15%. In Tokyo, of 574 shops surveyed, 21% showed an increase in sales, 60% no change and 19% a decrease: 74% of the merchants interviewed pronounced themselves in favour of the scheme.(2)

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(1) *Winslow, Joan, "Semimall Brings Shopping Back to Town", The American City, February, 1974.*

(2) *R. Zion. "The Landscape Architect and the Shopping Center I.L.A. Journal May, 1961.*

Fig. 74. London Street, Norwich in 1967 was an important traffic route through the City Center, carrying up to 600 vehicles an hour in both directions.

London Street, Norwich after closure to traffic

CHAPTER (IV)

PSYCHOLOGICAL ASPECTS IN DESIGNING SHOPPING SPACES

4.1. Environmental Perception:

When environmental planning is applied to the designing of new commercial facilities. many conditions must be analysed. criteria weighed. requirements met and problems solved. These all involve in various ways and to varying degrees the needs and desires of the shopper. It is deeply significant that the term is "Shopping center" not "Selling center". This indicats clearly that the wishes and desires of the shopper take priorty over those of the seller.(1)

the basic need of the shopper is for a conveniently accessible, amply stocked shopping area with plentiful and free parking. This is the practical need for which the shopping center was originally concieved and which many centers most adequately fulfill. Good planning however, will create additional attractions for shoppers by meeting other needs, which are inherent in the psychological climate.(2)

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(1) *Shopping Towns U.S.A. Gruen and Smith.*
(2) *Pilditch, James, Communication by Design. A Study in Corporate Identity (London: Mc Graw Hill Book Company, Inc. 1970, pp. 18-23.*

By affording opportunities for social life and recreation in a protected pedestrian environment, by incorporating civic and educational facilities, shopping centers can fill an existing void and provide the needed place and opportunity for participation in modern community life. The ancient Greek Agora, the Medieval Market Place and town, the souks Wikalat in the Middle East provided in the past prove that the shopping center can fulfill this perhaps subconscious but none-the-less urgent need of the community for the amenities of urban living.

If the shopping center becomes a place that not only provides physical living requirements, but simultaneously serves their civic, cultural and social community needs, it will make a most significant contribution to the enrichment of our lives.(1)

In designing for the public in shopping centers, the architect must put into consideration two goals: a) The environment requirements needed by the tenents or developer b) The environment needs of the user of the shopping facility.

4.1.1. Participation Action and Behaviour The Environmental Requirements Needed by the User:

Before discussing the environmental requirements it is necessary to define and clarify who the user is and hence we can define the requirments.

"Shopping" is an entirely different type of activity then "Buying". Buying is the result of a predetermined and exactly defined aim. A decision to buy a specific article leads the buyer to one specific store or even to one specific counter where he brings his predetermined "Project" to realization.

The activity of shopping is approached with a certain degree of aimlessness and usually with a generous supply of free time and a flexible amount

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(1) *B.W.P. Wells, "The Psycho-Social Influence of Building Environment Building Science, vol. 1. Great Britain Pergamon Press, 1965.*

of funds. The aim of a shopping trip is not necessarily only that of buying certain goods which are urgently needed. Shopping has become a kind of proffessional vacation.(1)

It involves the comparing of price, style and quality but it is also influenced by the desire of spending some time for sociability and a wish for exposure to human experiences and entertainment.

The typical "Shopper" may have shoping aim but in perfectly willing and, in fact, hopeful that in the pursuit of the "Shopping Activity" inspirations for the purchase of goods of all types which are not on the list may be gained. These inspirations may occur in the form of reminders concerning articles which one really needs but had not previously thought of, or emotional involvement with an article which will subsequently be purchased although not really needed. Shopping is typical of an affluent society and of a life pattern in which people have leisure time on their hands.

Shopping, when it is taken seriously, is a time-consuming and rather tiring activity.

In a shopping center, the largest part of the shopping force is represented by the suburban house wife. She is usually a woman with time on her hands, because the number of working hours which in earlier times had to be spent on cooking, cleaning, washing, child-rearing and sewing or knitting, has been vastly reduced through technical gadgets. The activity of shopping becomes for her a substitute for cultural and social experiences.(2)

To the shoperess, a shopping trip is simultaneously work and an enjoyable utilization of free time. If she has to take preschool-age children with her,

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(1) Sommer, Robert. Personal Space: The behavioral Bases of Design (Englewood Cliffs, N.J.: Prentice-Hall Inc. 1969).

(2) B.F. Skinner, Science and Human Behavior (New York: the free Press, 1953.

then she is somewhat hampered in her efficiency as shopperess. For this reason shopping centers should often provide nurseries and children's play grounds where youngsters can be "Checked in" order to help the shopperess.

Environment and Comfort of the User:

Choice for selecting a scertain shopping center by the user depends entirely on the feeling of comfort and satisfaction and safety that she experiments during the procedures.

However the consumer's choice of Shopping Center includes a number of alternatives that one could consider:

1) A short time from origin of trip to chosen shop.
2) The chosen shop easy to reach by car.
3) A short and safe walking distance from the parked car to the chosen shop.
4) Easy to find parking at or near the chosen shop.
5) Helpful personnel.
6) Clean and attractive interior.
7) A wide selection of products.
8) A good reputation.
9) Convenient open times.
10) Adequate number of personnel.

These are mainly major implications of the none architectural elements required by the user.

There are other elements preferred by the user which the architect could be the main creator:

A) Free pedestrian traffic slow uninterrupted by any kind of obstacles (Cashiers-display).

B) Space in the circulation area so as not to produce congestion or crowding in any shopping area.

C) Plazas or recreational areas to persuade the user to continue shopping after resting where they sell items of food (ice-cream, popcorn, peanuts) equipped with elements to make the atmosphere cheery, light and pleasent (music, sculpture, water - fountains, greenery).

D) Affording certain facilities to help parents to shop, while their children are kept in nurseries.

E) Affording other facilities like recordrooms, playrooms, T.V. set rooms for teenages.

F) A quick self-service cafeteria for teenagers.

G) A restaurant for older shoppers to draw the shoppers to plan on spending the day in the shopping mall.

H) Dressing rooms at oppropriate spacings and in a suitable number to save the shopper the irritation of waiting. They must be designed to give sample space for freedom of movement on trying on clothes and with suitable ventilation.

I) Toilet facilities at convenient spaces (at least every department or in a multi-storey, at least, every floor) and visible signage along the shopper's flow to indicate its direction and existence.

J) Climatic needs: In extreme hot or cold weather the shopper needs to feel protected and enjoy the weather and climate inside the shopping mall and even take it as a refuge and social place when the climate outside is in its extremeties.

K) Suitable lighting (either day or artificial light).(1)

a) **The Environmental Requirements Needed by the Tenant or Developer:**

The tenants interest in a shopping center in that on a long term basis, it develops a desirable personality to the shopping public and quickly becomes part of the shopping of the trading area.

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(1) *Joachim. F. Wohlwill, "The Physical Invironment: A Problem for a Psychology of Stimulation, "Journal of Social Issues, XXII, No. 4 (1966).*

This goal could be achieved by creating a space with all the properties of satisfying the consumer needs of the user together with giving the user the feeling that "Shopping in itself is fun" by the general design of the environment. The tenant wants his shopping area to be acknowledged by as much shoppers as possible by different ways:

Visual Perception:

a) Signage of the shopping clearly seen on highway.
b) Cleverly designed show-windows.
c) Advertisements either by Newspaper or coupons and advertised sales sent to the surrounding neighbourhood.

Physical Setting:

a) Location easily accessible and seen from a distance.
b) Flexibility in the design of the interior.
c) Lighting.

Interiors:

a) Circulation for pedestrian that unconsiously draws the user to all the different shopping facilities.
b) Attractiveness of the store to the user by location and landscope.

Attractive furnishings and ease in circulation and lighting, colors,materials, directional signs - often influence their movement within the store and their psychological acceptance of the store and their readiness to puschase the goods.(1)

Create visual appeal (control of space -too much display in a small area or a big area confuses the shopper) intimacy in design is preffered by people (several shopping outlets within the overall selling area).

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(1) *Rom. J. Markin, Retailing Management: A Systems Approach (New York, The Macmillan Company, 1971).*

A framework of merchandise created or designed to focus the impluse items in the "Hot" areas of the store. The "Hot" areas being the areas the shopper takes more time in passing by. For the more the user can see, the more she has to consider buying.

Hot Areas Could be Considered:

a) The first major selling areas the customer sees when she enters the shopping area.
b) Near the cash register (customers always have to wait for purchases to be written up and wrapped).
c) Near dressing-rooms.
d) Corners where circulating takes a longer time.
e) Ends of stalls where a change of circulation takes place.(1)

4.1.2. Landscaping and Design in Shopping Centers:

The first requirement in the design of the landscape must be a successful transfer of customers from the transport scale of the parking areas to the entirely pedestrian scale of the shopping zones. Naturally the department store is the most important element and prestige symbol for the whole development and whose strength of Buying Power should be a good advertisment in the region.(2) Owing to variations in day light and the damage done by sunlight to goods on display therefore the glass wall is an enemy of merchandising. Large expanses of glazing are only used in display windows at pedestrian levels or for restaurants and offices.

The phase(3) "Shopping should be fun" has often been applied to those centers; the environment should be so attractive that customers will enjoy shopping trips, will stay longer and return more often. Therefore spaces in the center should be more than narrow lanes between stores and have

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(1) *Rokeach, Milton, "Beliefs, Attitudes and Values (San Francisco, Calif. Jossey-Bass, 1968).*
(2) *V. Gruen and L. Smith "Shopping Towns" U.S.A. p. 160.*
(3) *R.I.B.A. Journal "Shopping and the Town Center" July 1963, p. 288-220.*

both open areas for cafés, markets and displays, and opportunities for quiet and relaxation.(1) Where fully enclosed malls are provided, tenants are encouraged to adopt completely open fronts. Where this is not possible, projecting conopies should protect both users and displays in windows. Lighting should be varied but controlled and special consideration given to the overall views of the center at night when seen from the surrounding areas. This will also involve adequate and attractive lighting in the parking areas.

All forms of omenity may be beneficial to the environment and to the actual trade. The most usual facilities are landscaped areas, fountains, ponds, sculpture, advertisement Kiosks, all of which should be integrated into the overall plan and designed to complement the center without interrupting its functional efficiency.(2)

However it is the role of the architect to be sensitive to the requirements of new modes of living. As he proceeds with his planning, he needs to be aware not only of the physical requirements of the human being but also of the social needs of the community and creating the suitable environment for socializing between the customers in an enjoyable and relaxative space.

The imaginative use of site grading by creative landscapes embalments to screen the service areas was a factor in the shoping of the plan of the parkway plaza in Gazon, California.

A basic element in any site and parking planning should be the provision for well-designed landscaped areas, which should add colour and interest to the entire area. This should result in a more aesthetically pleasing environment, an added attraction for shoppers.

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(1) *V. Gruen and L. Smith, Op. Cit., p. 147.*
(2) *Raymond G. Studer, "The Dynamics of Behavior. (New York; Holt Rinehart and Winston, 1970).*

4.2. Visual Perception:

4.2.1. Signage:

With the increase in the size and sophistication of regional shopping centers, the graphic arts have become an element of prime importance. The range for the design of graphic arts extends from, the exterior main center sign and lago (symbol), traffic directional signs in the parking areas, mall and arcade entrance signs ans special-events signs, to the interior store front signs, directional sign (telephones, lockers, restrooms, public areas and temporary store front signes).(1)

Strict Graphics and environmental design criteria should be extablished so that the shopper is easily and pleasantly orientes to all the spaces Fig. (75). This offers an oriented public that can search out their stores in an easy and orderly way.

The designer must be concerned with visually competitive or obstructive architectural forms, with space,kiosks, interior decoration or design, and also with lighting in making judgements regarding graphic concepts, design and implementation.

There are many effective ways to design the signing for store front. These signs may be in the form of individual letters of various materials-stainless steel, alluminium, plastic, porcelain enamel. The lighting may be built in as part of the lettering, or the letters may be lighted from another source.(2)

A completely anonymous shop front without any kind of sign whatever is inconceivable. If such a shop front did exist, the sign is aimed at two kinds of eye:

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(1) *Robert W. Frye and Gary D. Klein "Psychographics and Industrial Design. American Marketing Association, 1974.*

(2) *Signs, shop fronts, Debaigts Architectural Book Publishing Co. New York.*

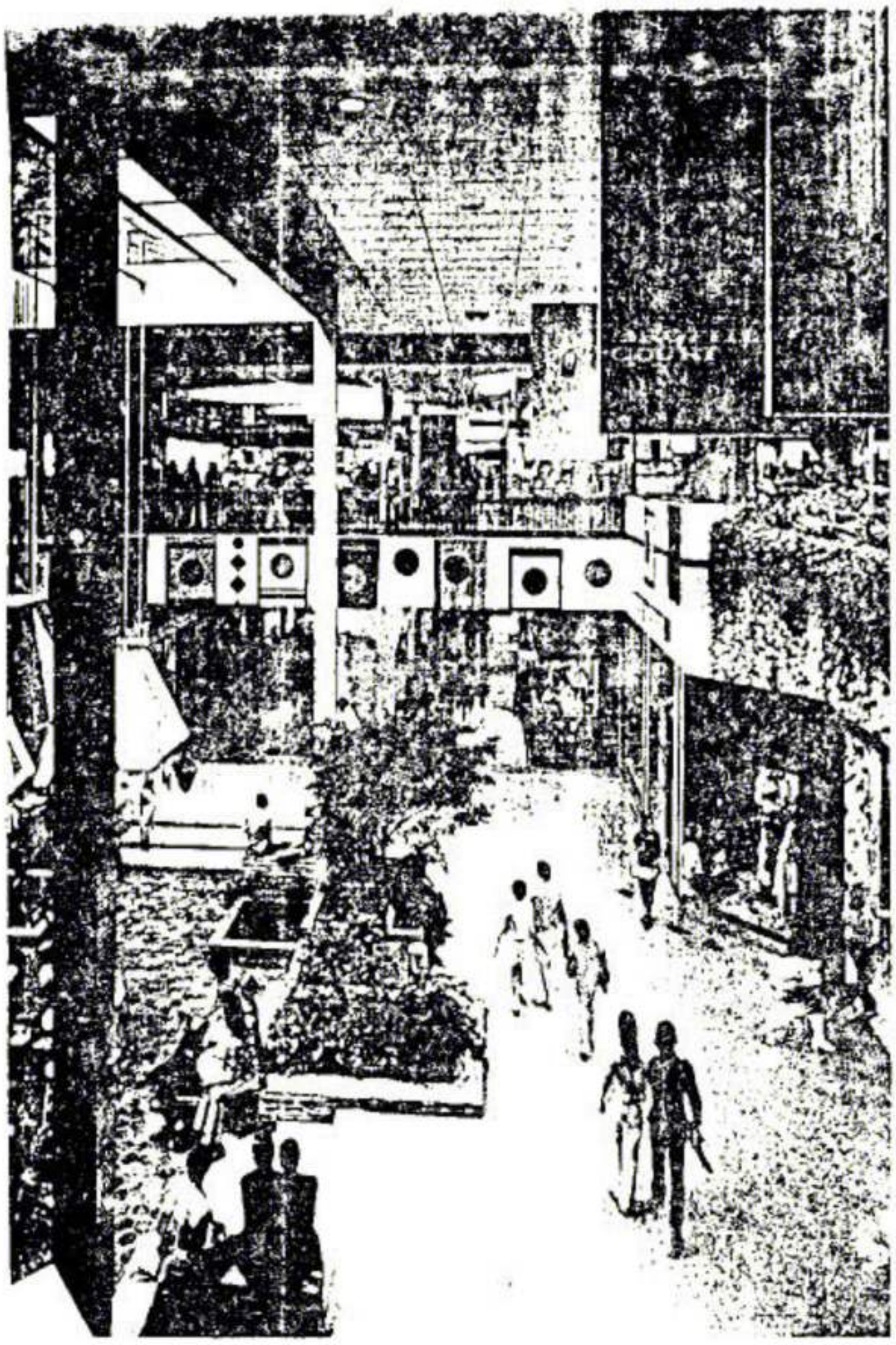
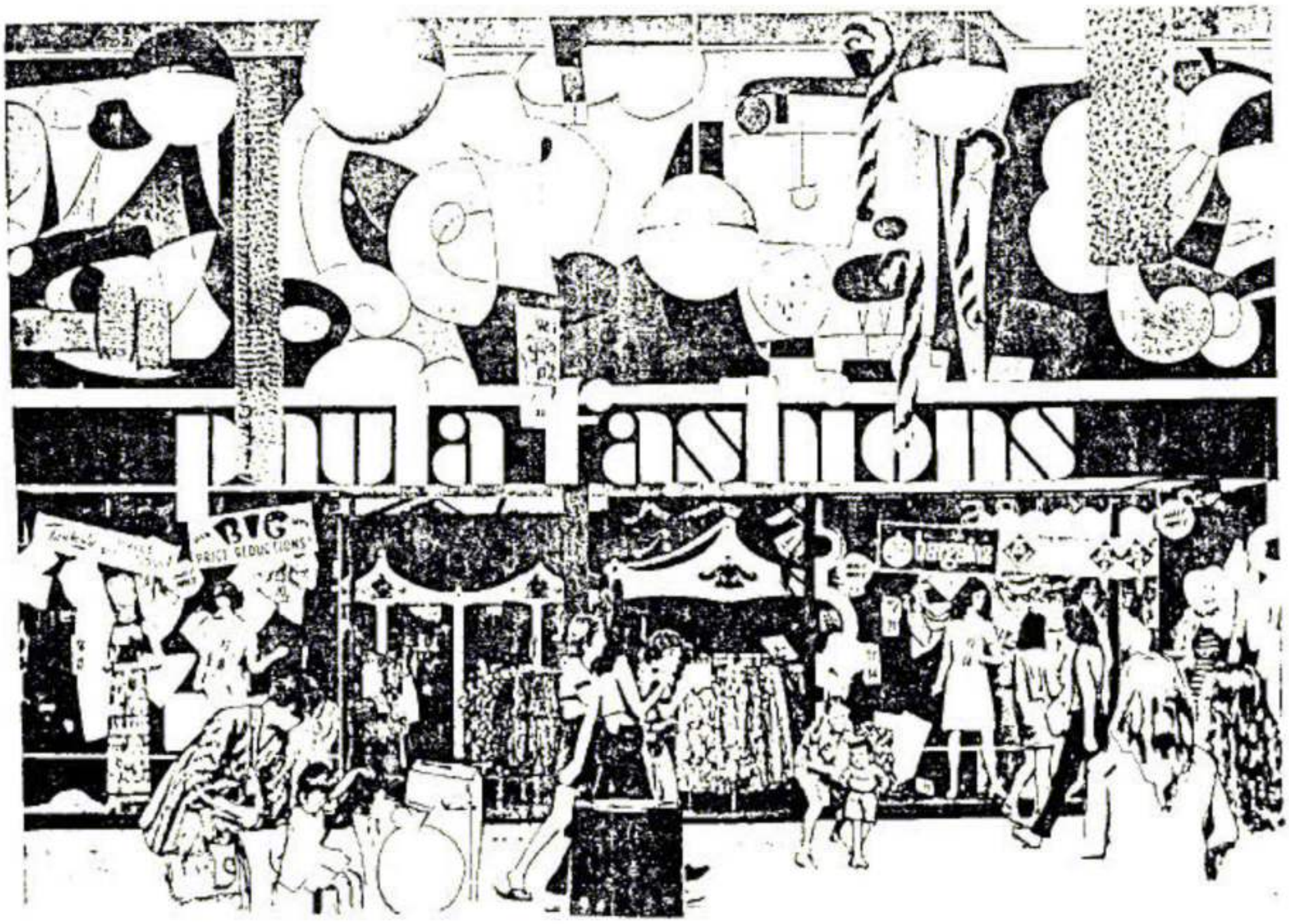


Fig. 75. Graphics should be established so that shopper is easily and pleasantly oriented to all spaces.

Penrith Plaza, Sydny, Australia Wall Mural showing supergraphics.

Below: Esplanade oxnard California Court, showing over whelming super graphics.

Ref. Signs, shop fronts Debaigts Architectural Book Publishing.



1. That of the regular customer. or the customer to whom the shop has been recommended or who has read about it or seen an advertisement. Faced with a row of shops, he wants to be able to pick out quickly the one he is interested in.(1)

2. That of the casual passer-by who, attracted by it, will approach and have a look at the products.

Signs, together with posters and shop windows, contribute to the liveliness of the mall which without them would be dull and invariably depressing.(2)

Every shop must have a particular sign that is suited to it, but conditions about the best place and best design is to have to predict the unconscious reactions that certain graphic arts and kinds of lettering will prompt in the minds of passers-by. Each type of clientele reacts differently.

Summing up, we can say that a sign may be placed either in the same plane as the shop front or at right angles to that plane.

Practical Solutions:

1. The sign is in the same plane as the shop front. The elements of the sign are painted on an apaque background that may be the shop front itself or panels in a greater or lower degree of relief.

The elements are painted, printed, or in relief on translucent backgrounds forming part of the shop front or projecting from it (boxes), these being illuminated from behind.(3)

The elements are painted on the shop window. The elements are executed in some opaque material that is either applied to or stands out from the backround, when they stand out from the bacground they can contain light fittings that will bathe them in diffused lighting at night.

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(1) Ketchim, Morris: Shops and Stores: Reinhold Progressive Library, 1948.
(2) Shop Fronts Debaigts - Jacques. Architectural book Publishing, Co. New York.
(3) Soumake, Ellis and Hellberg - Shops and Stores To-day 1956.

2. The sign projects at right angles or at an oblique angle to the shop front: If the text is a short one and the elements that make it up are kept small, it can be read horizontally but if the text is long made up of large-scale elements will be aligned vertically. Signs standing at right angles to the shop front, and in particular those that read vertically, are primarilly designed to be seen at night, they will be best executed in relief in some translucent material lit from inside or painted on translucent boxes like-wise lit from inside, or done in neon or in arrangement of light bulbs.

However it is important to note with regard to lettering illumination does not distract the eye from the shop merchandise and particularly garish effects will result if only one or two shops have back illuminated fascias, as is often permitted in the Paris Centers. The particular tenant may be highly delighted, but the effect he achieves will detract from the overall appearance, and if all the shops have them, then they will distract the Shropper's eye.(1)

On the other hand, it is also important to insist that all shops adopt whichever form of lighting is decided on also the design of a new alphabet should be universally accepted. Naturally the design must be suited to the trade, and it is usual for the more sophisticated fashion traders to go for the most imaginative forms. Good taste, quality, design flair and style are of paramount importance.

4.2.2. Shop Fronts:

In the course of the nineteenth century at least in Europe the shop, and particularly the shop front, became a theatre in which the essential activity of making purchases was added in the secondary activities of finding entertainment an association that had its roots in periods when trade had been closely bound up with popular festivals.

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(1) *Planning for people, Shopping Centers, A Developer's Guide to Planning and Design by R. Northen Frics. H. Haskoll Friba Arias FFB.*

The front of the store is its most valuable space. The store may be over a hundred feet deep but its frontage is 45 percent of its rental value. No store today can wait until customers are in absolute need of merchandises, you must create demand, you must stimulate desire. That is why shop fronts, institutional propaganda and advertising were created. Here many remarkable features have been created Fig. (76).(1)

The shop front will gain considerably if it is designed within the same intellectual context and on the basis of the same creative impulse as have governed the choice of volume in the interior.

The transition from street to shop must be smooth and unambigiuos and to recieve the customer inside within the kind of ambiance and aesthetic climate that the shop front has led him to expect.

Three variations call for special mention:

a) **The recessed entrance:**

The shift of the door back offering a right-angled corridor offers shelter and an inviting look improving the display effect. Fig. (77).

b) **The gallery:**

The outside wall of the shop itself can recess backwards leaving a gallery that can accomodate display windows at the sides and even in the middle. The passer-by finds himself drawn towards the interior of the shop. On this case the actual shop front will often consist of no more than the facia or name plate sometimes this gallery is even half window or only one step inwards.

c) The third solution used frequently in shopping centers is that the shop has no shop front and that the shop is open directly on the mall and

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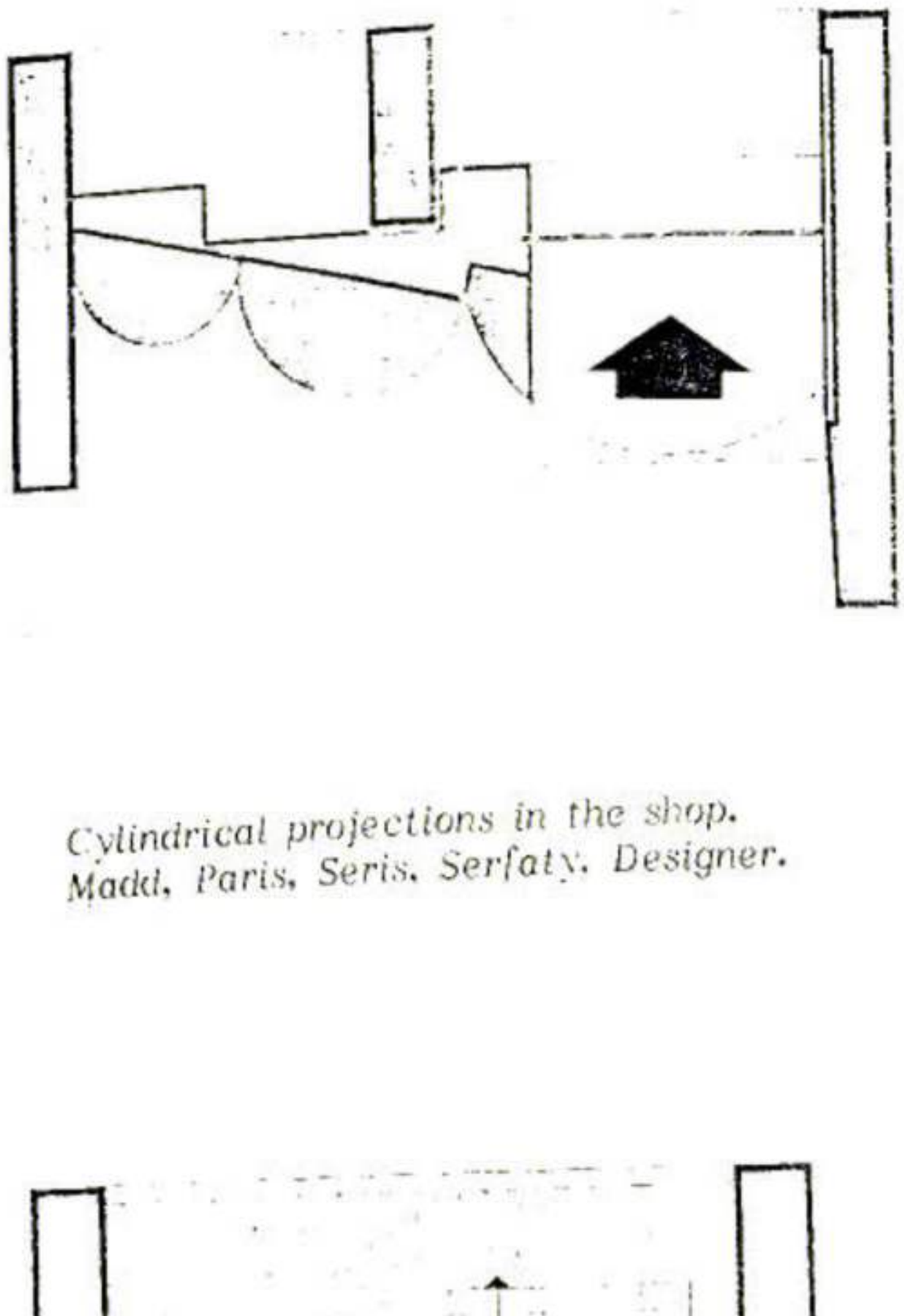
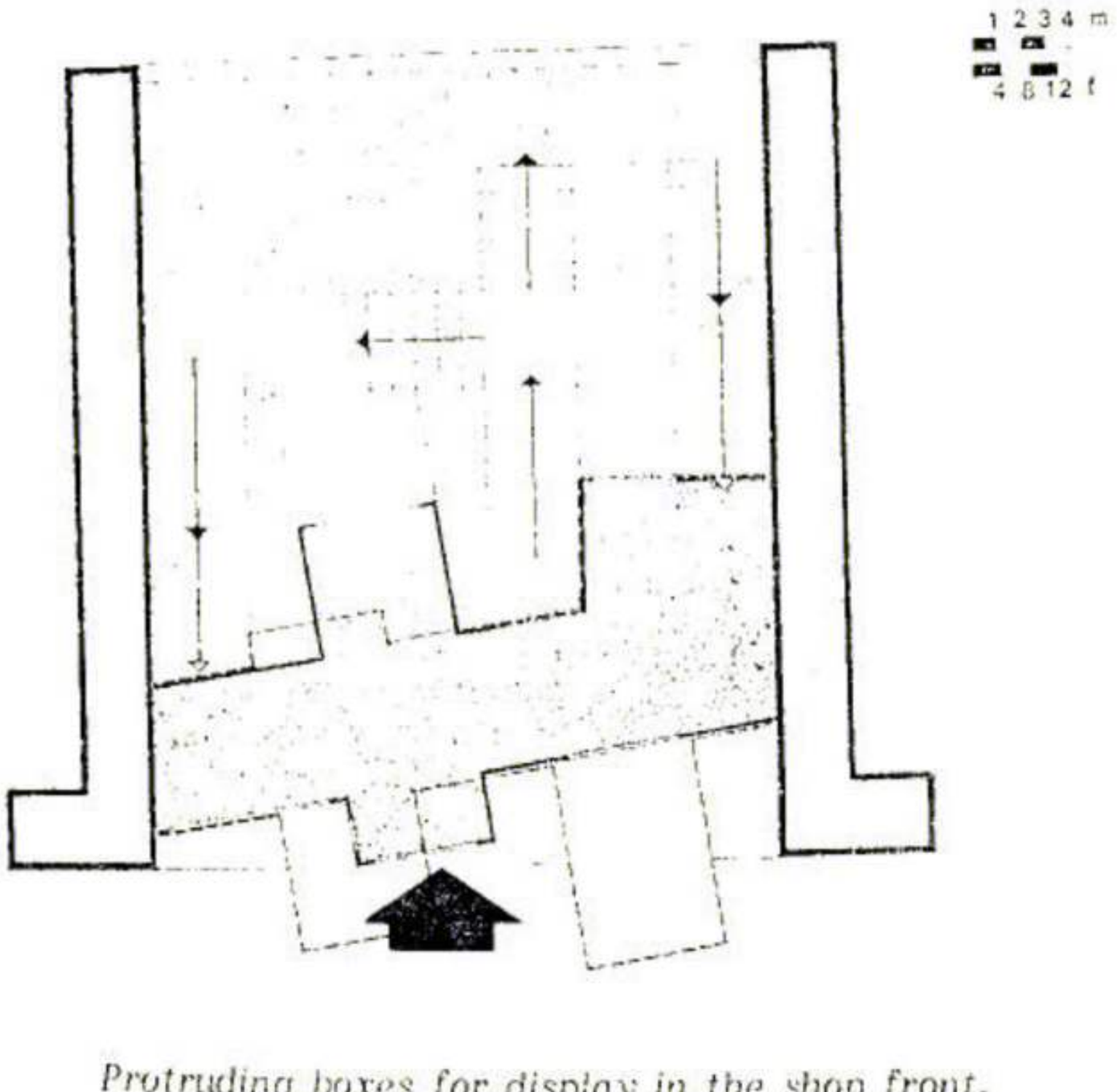
(1) *Kotler, Philip, "Atmospherics as a Marketing tool", Journal of Retailing, 49, No. 4 (Winter, 1973-1974).*

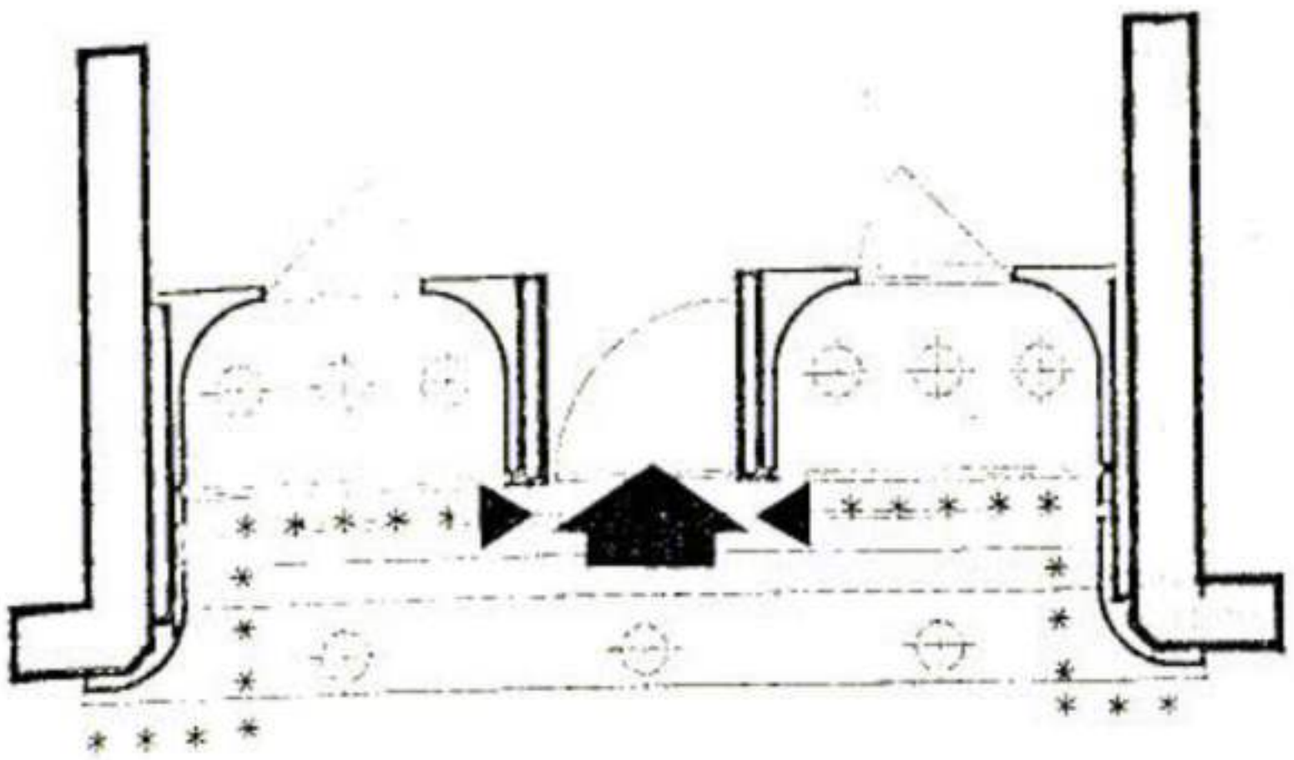


Cylindrical projections in the shop.
Madd, Paris, Seris, Serfaty, Designer.

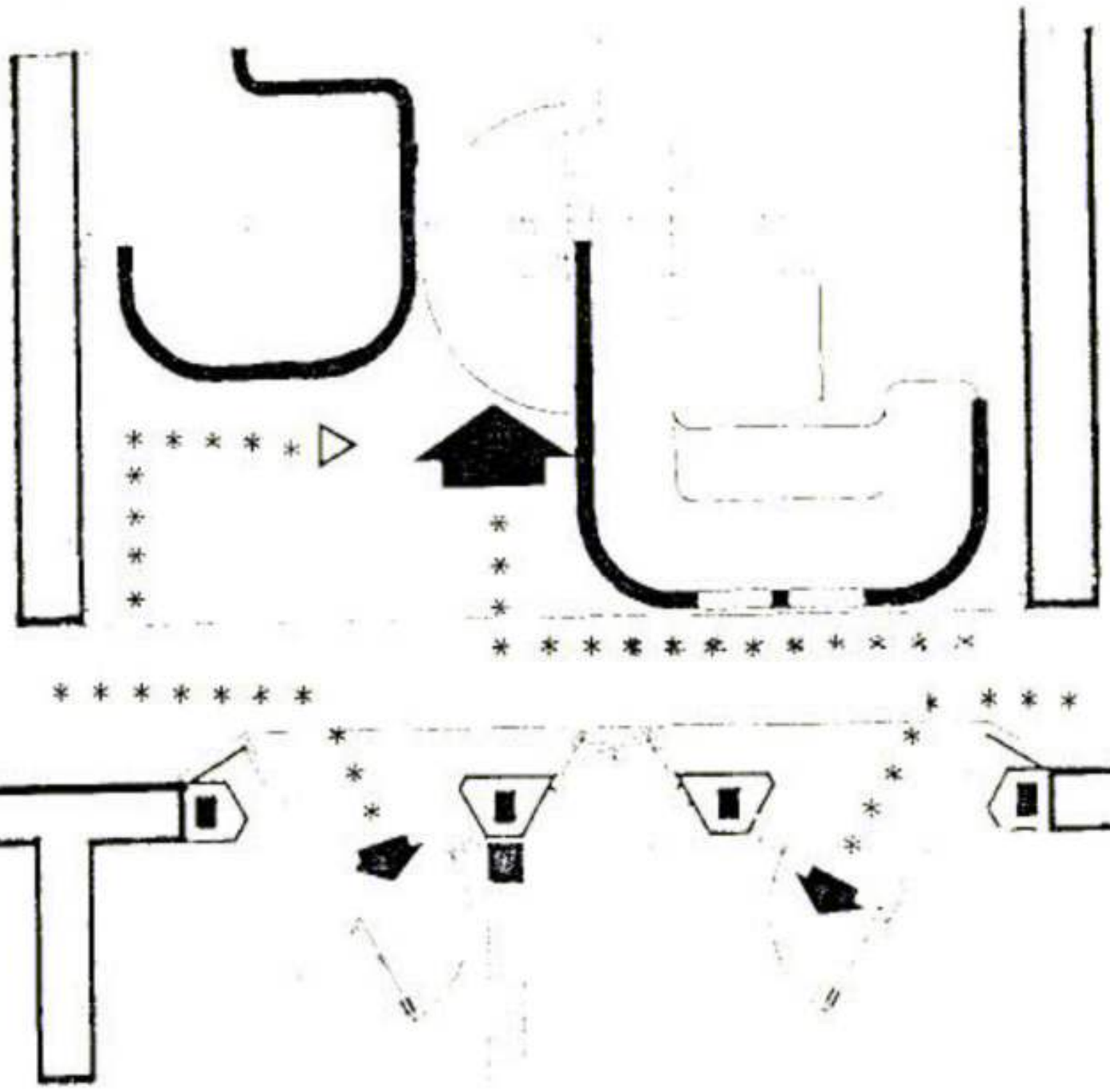


Protruding boxes for display in the shop front.
Bugatti, Barcelona.
Vincenzo, Carmenati Francia, Arch, Milano, Italy.

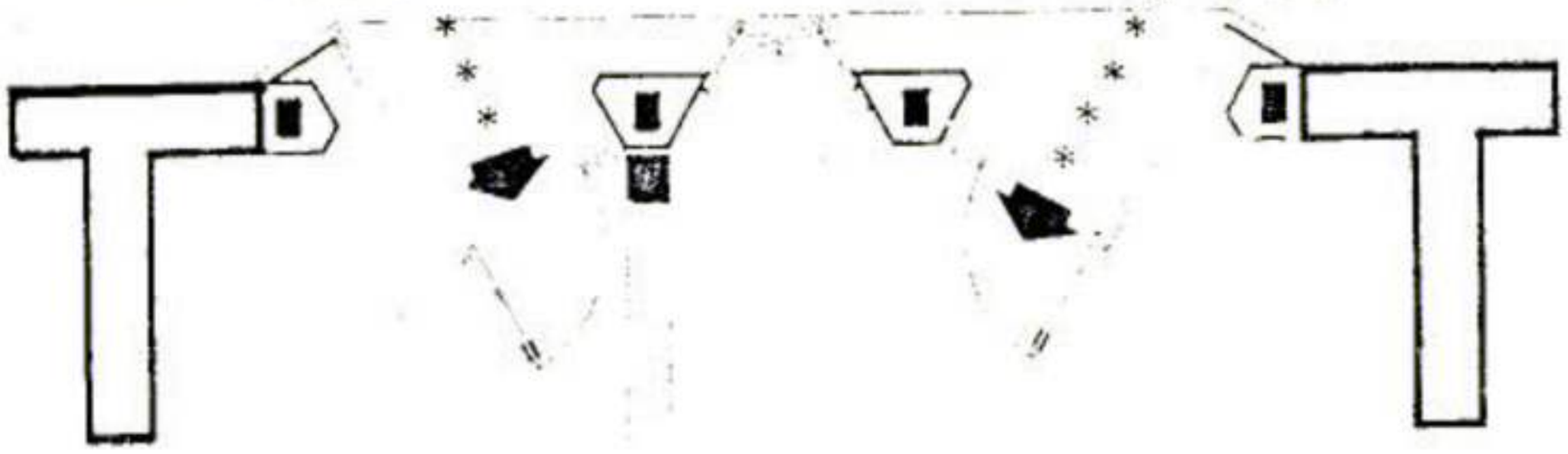
Fig. 76. Many remarkable features have been created.



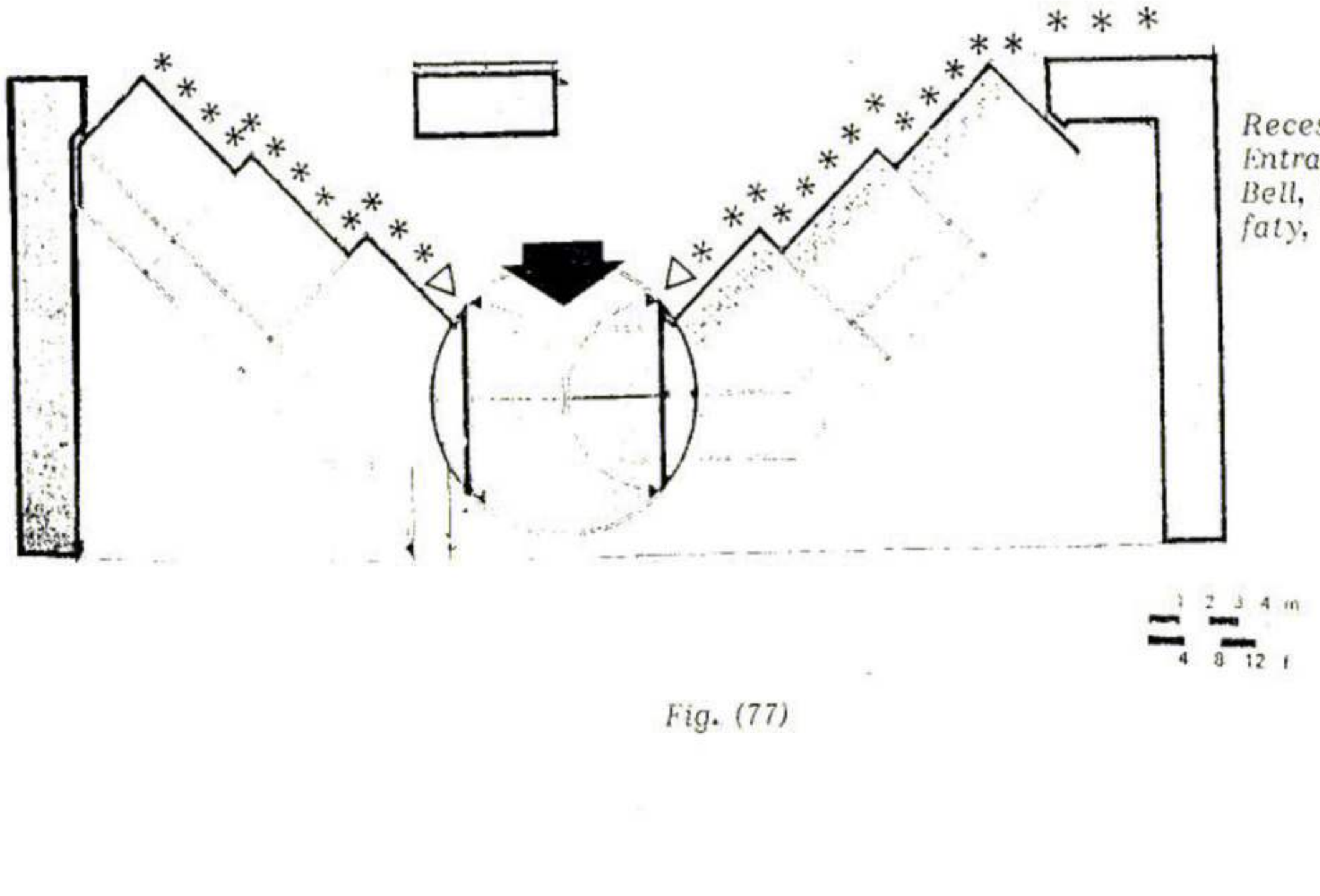
The recessed entrance, Ciro, Köln. Carl. Arch. Wien, Germany



The recessed entrance, Lead Beater and Peters, London.



Recessed Entrance.
Boffi, Paris.
H. Baley, Arch.



Recessed Entrance, John Bell, Paris, Serfaty, Designer.

Fig. (77)

the goods are displayed in the middle of the shop so that the customer unconsuously finds himself in the middle of the shop.

4.2.3. Objectives and Problems:

The modern shop must consequently offer the customer a cheerful atmosphere that will induce relaxation and even a positive feeling of well-being and in which the shopkeeper will do all in his power to present his merchandise in the most favourable conditions possible. Decor, materials and lighting are of capital importance in deciding on a furnishing layout appropriate to the particular trade in question and a logical scheme of circulation for customers and staff.

Even before the charm of the interior comes into play, it is logical that the passer-by i.e. the potential customer, should be persuaded to step inside. The most obvious means of persuasion is the clever design of the shop window.

The range of possible architectural solutions is enormous from the plate-glass wall that brings the shop into direct contact with the street to the, almost blind front pierced by a few discreet apertures. In any event the choice of front type will depend to a greater extent upon the combination of the following factors:

a) The type of business conducted and product sold.
b) The shop's commercial policy mass. clientele, luxury or mob trade, etc.
c) The nature, appearance and quality of the product sold.
d) The competition.
e) Architectural constraints, i.e. the shop's relationship to the building it occupies.

a) The Type of Business Conducted and Product Sold:

A piece of jewellry is not going to be displayed in the same way as a suitcase or a motor-cycle. Not only does each product have a different type of clientele, it also has it own particular scale, which will determine the character of the shop front.

These are two possible solutions:

- Glazing the whole front:
  this offers a large display area but, depending on the size of the object displayed may call for subdivision. But prefferable for large products.

- Subdivision within the architectural conception of the front. This is the bolder solution, announcing the tone and character of the business in a way that cannot be ignored. This type is preferable for expensive small products.

b) Commercial Policy:

This will depend on the shop's geographical position, both national and local (town, district, street). In fact the same type of business will differ according to whether it is situated in a working-class area, in a residential suburb, or in a posh quarter.

The nature of the clientele will tend to dictate the choice of shapes and materials. These may be amusing and strange but they must never make the local clientele feel ill at ease. A marble and steel extravagance, while attracting one kind of clientele, will intimidate another.

c) The Nature, Appearance and Quality of the Product Sold:

All three factors are of equal importance. For example a particular food stuff, even if it is a luxury article, will not necessary need a decorative setting.

d) The Competition:

The purchasing public likes variety and is attracted by everything new. The traditional street (shopping centers are differently concieved) presents a dismal, unattractive prospect if all the shops look the same. When a direct competitor hits a winning streak it is smarter to do something different than to copy what he has done. A new overall structure and layout plusa different use of colours and materials will have a real impact on the public by attracting its curiosity.

e) Architectural Constraints:

A shop front ought to conform to the architecture of the building the shop occupies, and the quarter in which it is situated. In the absence of detailed and binding local by-laws on this point the designer has a greater measure of freedom. He can stress the distinctive features of the existing architecture without impairing the identity. In many countries where the architecture of particular quarters is scheduled for preservation the public authorities make the tradesemen, wishing to model their shops, do so, in such a way as to make them fit as discreetly as possible into the architectural environment.

4.3. The Psychology of Perception and Human Behavior:

4.3.1. Advertisment Either by Newspaper, Coupons and Advertised Sales Sent to the Surrounding Neighbourhood:

Perception Determines Behavior:

Perception affects almost everything we do, perception determines wether we go on advertisement or not.

Changes in advertising methods in recent years have bought us face to face with those problems on perception. There is no lack of practical advertising problems before we can worry about the complexities and subtleties of stimulus variables we have to be clear about the response variable. It is agreed that rate of sales is an ultimate criterion, the ultimate response.

Ads have to attract attention, persuade, they have to be comprehended, understood, they have to produce image changes, they have to produce a willingness to buy. The problem of determining how much reach is enough is not a simple one, since it requires a determinator ot also of the alive level of given segments of the population for the specific product involved.

After the appropriate target audience has been defined, the strategy of persuasion must be determined. This can be established most easily if the advertiser can state what condition he would like his customer to be in, at the end of the advertising campaign (the goals of advertising) for instance what portion must be aware of the product, what protion must be persuaded the next time they are in the market to buy it, what portion should have tried it, and perhaps perchased it and induced to continue purchasing it?

Once a reasonable estimate of this can be stated it becomes a problem of psychological programming and how to achieve these goals through a planned program of teaching, persuading and generally influencing the consumer's behavior.(1)

That is by; repetition fig. (78) (Frequency) strategy for obtaining confidence in the manufacture. Making the message understandable, a response to a given stimulus was learned if the stimulus was repeated with sufficient frequency of rewarding conditions, emphasis was placed on repetition with reward assumed to occur with product purchase, the emphasis in repetition was so great that it led some advertisers to believe that as long they were repeated with great frequency, advetisement did not have to be liked to be effective.

In short, repetition was believed to lead to greater familiarity,and familiarity was belived to enhance chances for product purchase. So figure for a modern example of the repetition approach within a single advertisement.

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(1) *Psychology in Media Strategy edited by Leo Bogart American Marketing Association, 230 North Michigan Ave. Chicago. Illinois.*

By the end of the nineteenth century a new marketing problem was emerging. Competition was increasing and many advertising specialists began to believe that sheer repetition was not enough.(1) Fortunately, changes in the technology of colour lithography and new techniques were on hand and many marketeers realised that if their bands were to be distinguished it would be necessary to give them personality. Jules Cheret in Paris, had shown the way with his liberal use of attractive celebrities in posters for the products he was advertising as shown in Fig. (79).

The use of appealing people in advertisments developed naturally from the early use of posters featuring theatre stars to adveritise their products establishing that pleasing graphics leads to favorable association with the product a good example of early art featuring was the steinlen poster designed to convince Franch house wives to use pasteurized milk,steinlan recognized that two other subjects, animals and children also had strong associative appeal.(2) Fig. (80).

In retrospect another trend emerged, the motivation approach. Advertisers began to recognize that products were purchased for psycological satisfaction as well as product satisfaction and that many motivations could be satisfied simultaneously. Of particular importance in the principal of unconscious motivations ex. Fig. (81).

Another approach to advertisment is the Entertainment Approach. The Entertainment Approach makes an impression because they entertained while providing any solid sales message presented simply and honestly. It is important to note that this entertainment supported rather than detracted from the sales message. Fig. (82).(3)

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(1) *The Order of Presentation in Persuasion, New Haven, Yale university. Press, 1957.*
(2) *H.A. Zielake, The Remembering and Forgetting and Advertising Journal of Marketing, January, 1959.*
(3) *The History and Development of Advertising, Frank Presbary Double day, Doran, Garden City, N.Y., 1929.*

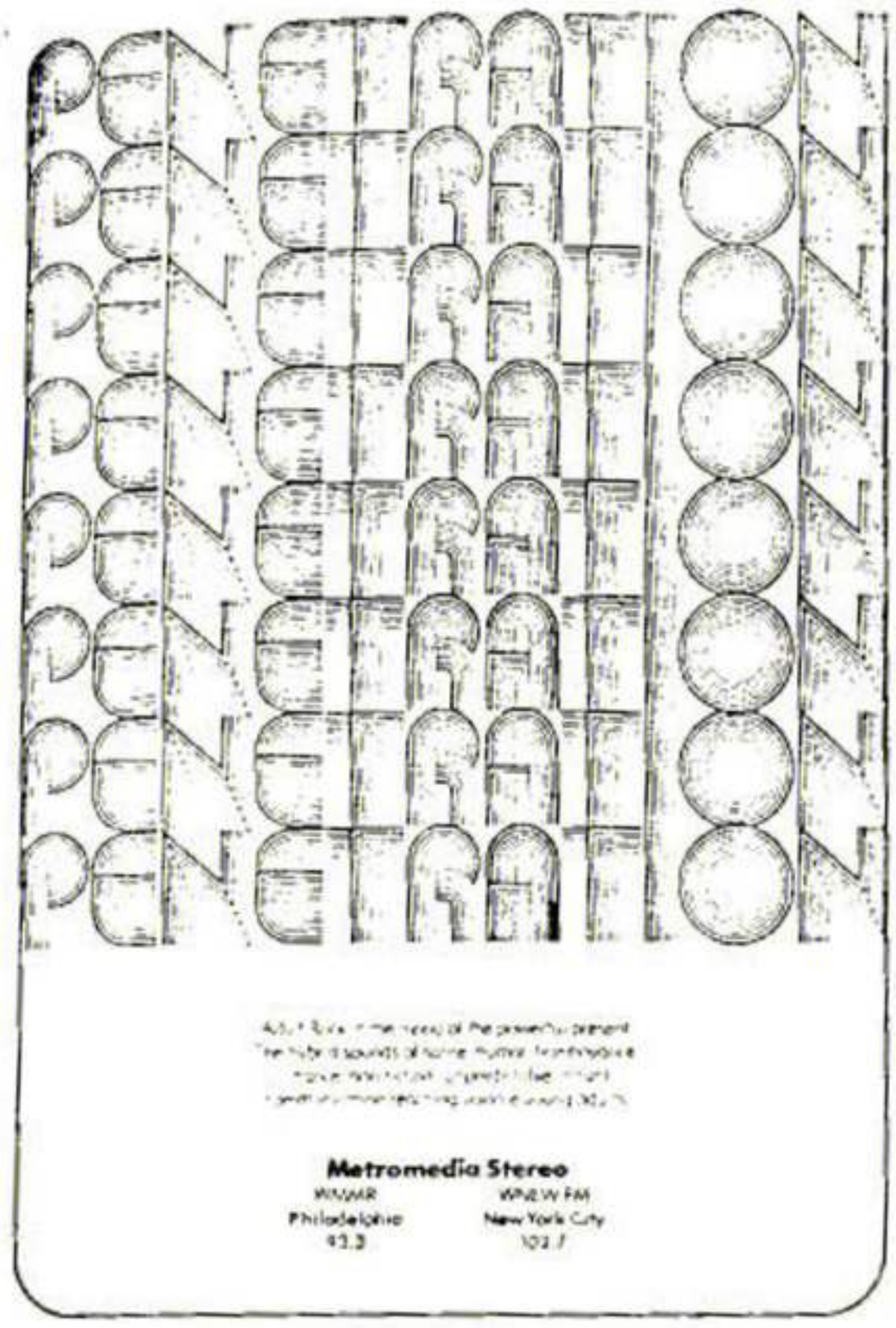


Fig. 78. Advertisement for Metromedia Stereo represents a modern example of the repetitive approach.

Fig. 79. Example of the association approach. Sarah Bernhardt was a famous French actress. The use of Appealing people.

Fig. 80. A classic example of the association approach created by the French Artist Steinless.
An early use of children and animals to create favorable attitudes.

Fig. 81. An example of the motivation approach.

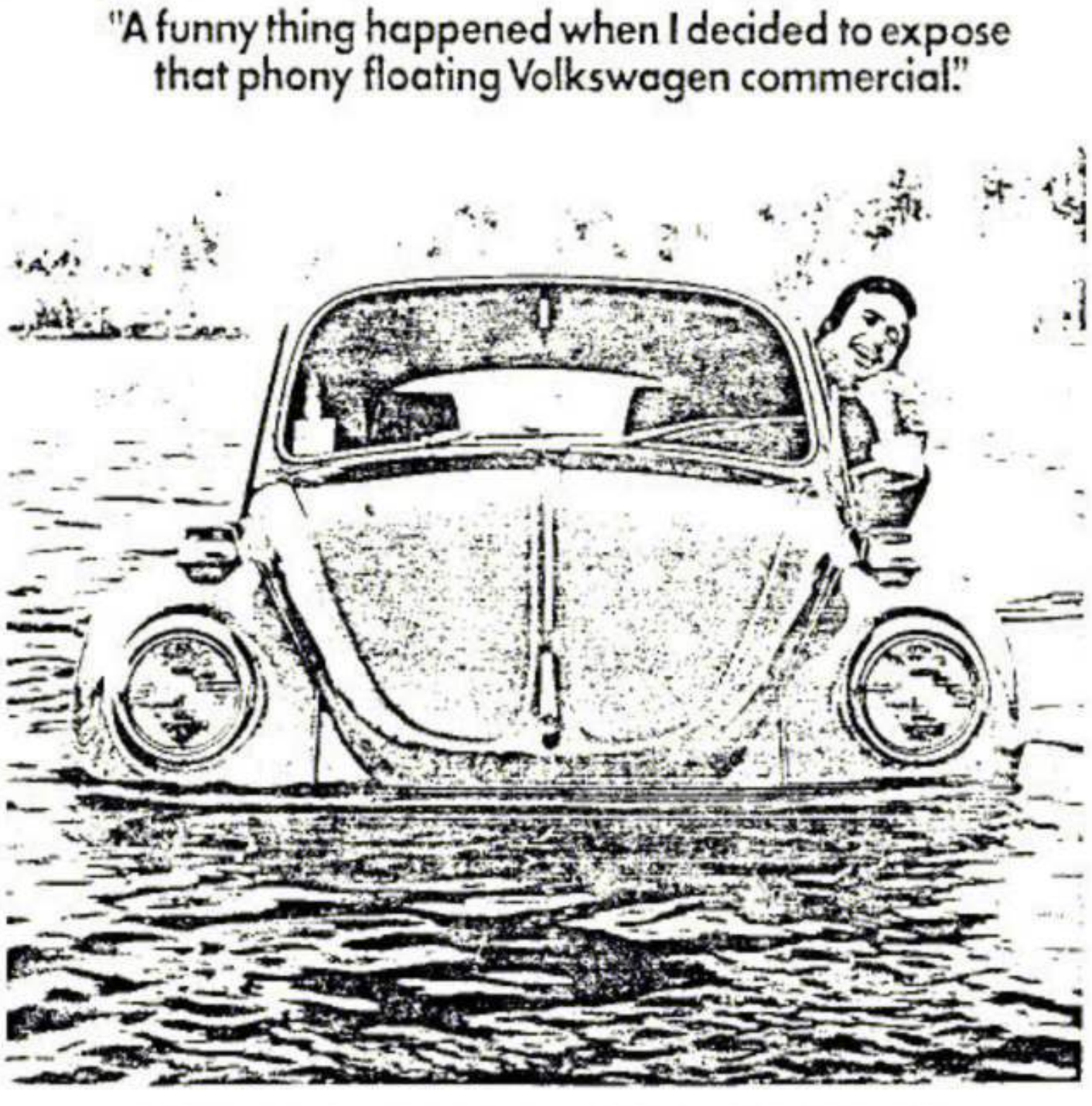


Fig. 82. The Volkswagen advertisement is a good example of the entertainment approach.

Notice that the humor emphasizes the product advantages.

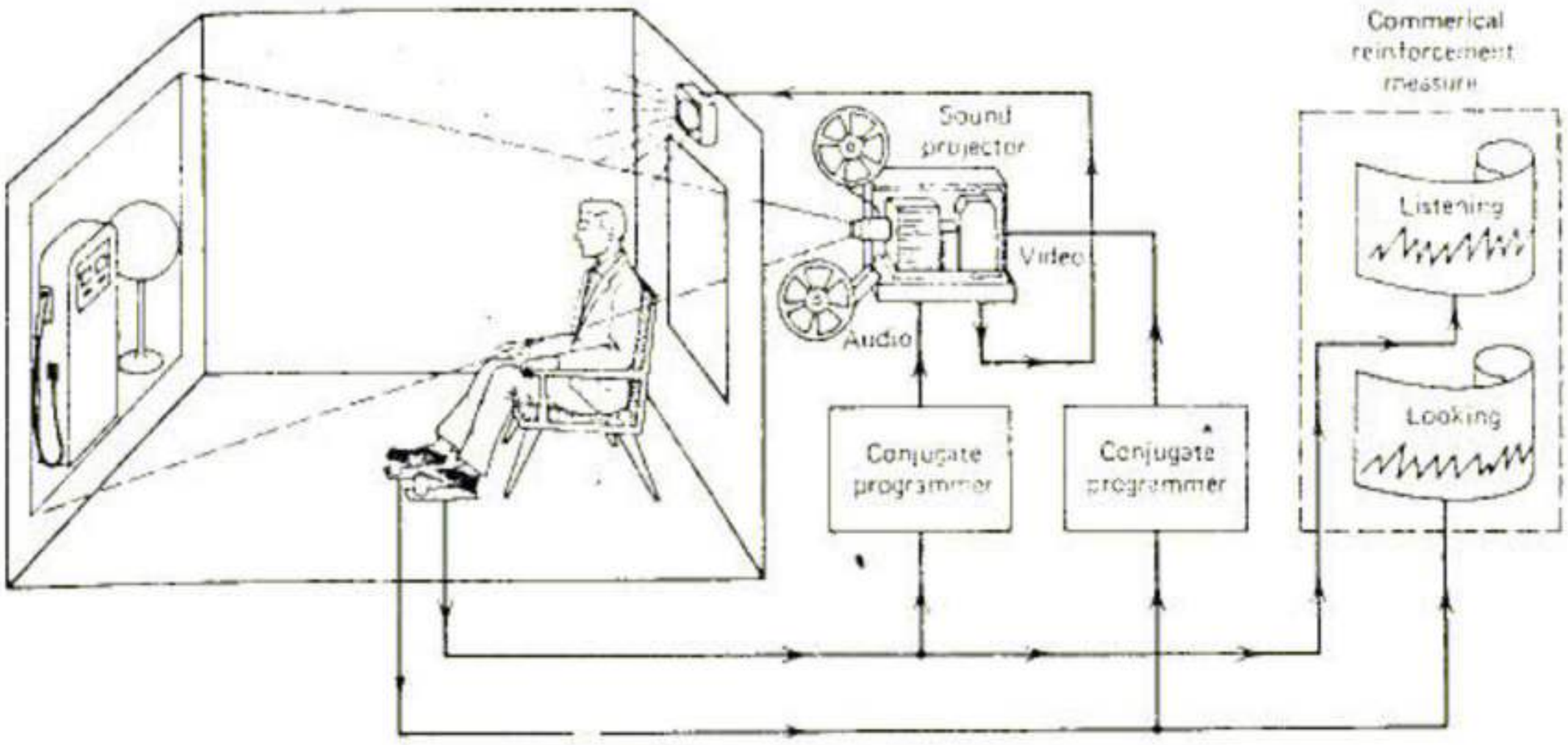


Fig. 83. Schematic representation of CONPAAD, a television commercial testing procedure.

Fig. 84. Data from Leo Bogard, B. Stuart. Tolley "What one little Ad can do"

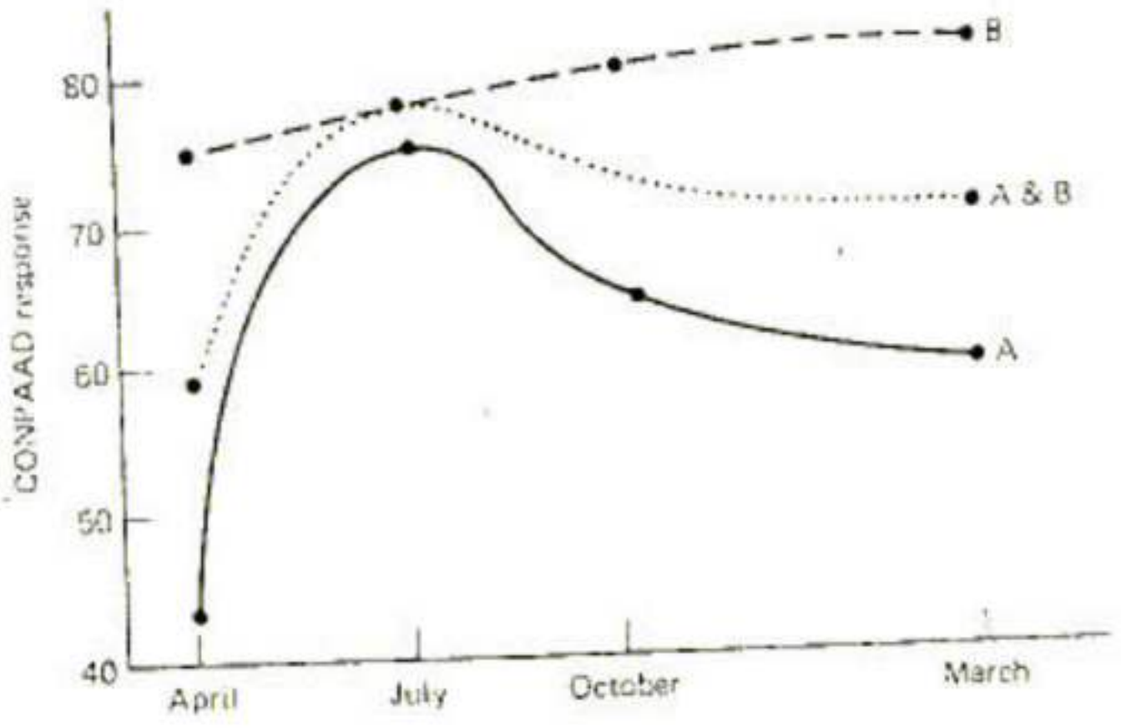
	Purchased test brand today or yesterday	Test brand purchases of those exposed to ads for test brands (test group)	Test brand purchases of those *not* exposed to test brand ads (central group)	Difference
24 packaged goods	0.50%	0.44%	+14%*	
6 nonpaired packaged goods	3.3	2.9	+15%*	

Journal of Advertising Research 1970.

Comparisonof the wearout of two commercials based on CONPAAD responses. "Saturation Effects of TV Commercials".

Journal of Advertising Research 1969.

Controlled Field Experiments.



Ref. Roger D. Blackwell, James F. Engel "Cases in Consumer Behavior", 1969.

On the whole an advertisement is now seen as part of an elaborated communication system.(1) It is not just the preparation of advertisement that must be considered, but the response.

An understanding of such factors as sensation, perception, motivation, learning, remembering, attitudes, linguistics, personality, and culture are vital in the development of effective advertising. Response to advertising is just one aspect of human behaviour and should be considered in relation to all the other internal and environmental influences.

The discussion and application of these principles may be called "Behavioural Approach". Such an approach takes its cue from the consumer or buyer. The key is to determine what consumers need and to offer it to them in a manner that will impress on them how well a particular brand will serve their needs. Fig. (83)(2)

The tenant is interested in the sales increase after that response and what are the more effective advertisements that increase in the percentage of the sales and that is why many different methods have been invented to test the various ways of advertising.(3) The first problem to consider,. in evaluating the effectiveness of and on commercial is the criterion to be used. The most desirable measure is an estimate of sales resulting from each ad or commercial that is measure attitudes before and after the ad is exposed. Any difference in attitudes between them are presumed to be the result of the advertisement. Fig. (84).

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(1) *The Shocking History of Advertising, Dutton, New York, 1953).*
(2) *The Shocking History of Advertising, Dutton, New York, 1953.*
(3) *My life in Advertising, Claude Hopkins, Harper and Bros New York, Scientific Advertising, Advertising Publications, Chicago, 1966.*

CHAPTER (V)

PHYSICAL SETTING

5.1. Introduction:

In any type of center, whatever, structural column spacings are used, the design should allow for a measure of flexibility in store partitioning.

After construction begins, changes in the tenancy may require an altering of the tenant arrangement in order to improve the groupings of related shops, to accomodate tenant needs or to free "hot spot" locations for higher rental shops or more intensive use. By providing flexibility in design as non-load bearing walls, tenant spaces can be enlarged or decreased.

5.2. Interior Design Flexibility:

Tenant partitions should be built of materials and by methods that allow for easy removal. The design should provide for future store space reallocation and for readjustments in fixturing needed as tenants expand and shift their

locations in the center. To allow for flexibility in operations, structural elements such as plumbing and heating stacks, air conditioning ducts, cores for vertical circulation toilets and stairways should be placed on end walls or on the walls least likely to be removed on enlarging a store or rediviging the spaces, rather than on side partitions between tenants.

In this way, good locations can be created and a plan can be devised which will remain workable.

In one storey neighbourhood centers, heavy masonry piers should be avoided between store fronts. Such piers are expensive to install and difficult to remove, and they reduce window frontage.

Small steel cloumns with curtain walls of light material wall boards could be used for interior partitions.

Where as small width may range from 90 to 40 ft, the width may be increased to 60 ft or more for courts and other special areas, depending on the height and treatment of the ceiling. In multilevel malls, courts offer an even greater opportunities for dramatic treatment. Here the ceiling can be as much as 50 feet higher than in the adjacent mall area. The mall in a small practical center may have a lower ceiling, 16 ft. is practical height for appearance and for keeping heating and air conditioning costs within reasonable limits. Variations in the ceiling height can be used to avoid long straight sight lines and to provide a more interesting and pleasing appearance.(1)

Since the mall usually runs between major retail tenants eitherthe department stores, or a department store and a large variety store or food storethe architect's problem is to make this distance seem short while providing enough length for an array of tenants.

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(1) *Research laboratory. "Predicting Shopping Requirements" 1967.*

If the store fronts are inviting and interesting in their variations, shoppers will not tire of walking as easily as they would if nothing distracted them from the chore of walking. However keeping the mall, length within a comfortable walking distance - bears directly on the depth of the stores.

5.2.1. Store Size:

There is a saying in the Shopping Center Industry "Any store size is all right if it is not too big".(1) Yet for possible expansion most merchants would preffer the biggest store possible. To solve this confliction the developer-owner should have structural flexibility.

Small stores add character to the center. In planing small store spaces, care must be taken that suitable depths are provided.

5.2.2. Store Width:

A standard store width cannot be given for any particular type of tenant. Merchants generally have their own idea about store width, based on their experience and study.

In nearly all-present-day centers, the architectural design calls for structures with wide spans between the structural columns. Column spacing is also affected by the pattern of space partitioning into units suitable for typical tenant layouts.(2)

5.2.3. Store Depth:

The ability to provide stores of varying depths is an asset in any center. The use of curtain walls, where possible at the rest of the store permits future deepening at minimum cost.

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(1) *For medium store sizes (in GLA) by tenant classification see "Dollars and Cents" of Shopping Centers" (Washington D.C./U.L.I. The Urban Land Institute, Trienniap).*

(2) *Holland Country Council. The Borough of Boston-A Survey of the Catchment and Retail Shopping Area, 1955.*

For flexibility in ceiling heights and interior walls or partitions a comprehensive fixturing system that coardinates dimensionally with the shell of the store building is the best solution. It provides a consistent and highly flexible relationship between all parts of the store. Forming a "Flexible salestool" responsive to new directions in merchandising and in merchandise.

Frank S. Kelly,(1) gives this vivid account, "Because department stores are usually budgeted and designed in two parts-building shells and interiors-the potential of the store as a sales tool, and its aesthetic qualities, are largely a factor of how well the two parts work together. Often. they fail to support each other and sometimes, over the life of the building they can even be in actual conflict.(2)

By using a fixed dimensional planning grid, the elements of the shell (Column and walls) coardinate dimensionally with the interiors (fixtures, partitions, decor, displays). It provides not only consistency throughout the store but also flexibility.

Three aspects of the system account for the high degree of flexibility.

(1) The dimensions of every display component are based on a multiple of the modular grid. Each component fits into any location of the store, and is interchangeable with every other component.

(2) Components are connected to supporting standards with the same detail, so that any components can be hung from any standard in the store.(3)

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(1) *Frank S. Kelly, Senior Vice President of Omniplan Architects Harrell + Hamilton.*
(2) *Shopping Towns U.S.A. The Planning of Shopping Centers. Victor Gruen and Larry Smith.*
(3) *Levin, Michael S. Measuring the Fiscal Impact of a Shopping Center on its Community Center. New York. International Council of Shopping Centers, 1975.*

This ceiling system can be a grid of structural steel channels hung from the building's - a composite of fire proofed steel beams and concrete slabs. From the grid aluminium, baffles could be hung. The whole ceiling system is based on the original dimension of the fixturing system.(1)

5.2.4. Multistorey Parking:

When a center, because of limited space, is designed multistory parking, very special structural problems arise, especially if the parking levels are above or below the merchandising levels. Column spacing must permit effective use of the parking level and that will affect the economy of the structural project. An extreme example of the integration of parking and shopping level occurs in the projected westchester terminal plaze where a two-level shopping center is sandwished between three levels of basement parking and two levels of roof parking. Column spacing in this case was selected at 30 ft in one direction and alternating 30 and 25 in the other direction. This spacing allows excellent efficiency of parking and good flexibility of tenant spaces. Fig. (85)(2)

5.3. Lighting:

5.3.1. Artificial Lighting:

Merchandisers have long recognised that carefully planned lighting is a sound investment and surveys made by trade associations indicate that lighting is of top importance in modernization. Sales increases of 20 to 40 per cent as a result of relighting are not unusual and installations in hundreds of new, successful stores over the past few years clearly establish planned lighting as a dynamic sales force. The advantages are not obtained by merely considering the type and number of fixtures to he installed. Successful store lighting is based on creating a selling environmeant and is closely integrated with the types ofmerchandise sold, merchandising methods and arrangements, architectural control of space and the design of interior finishes.(3)

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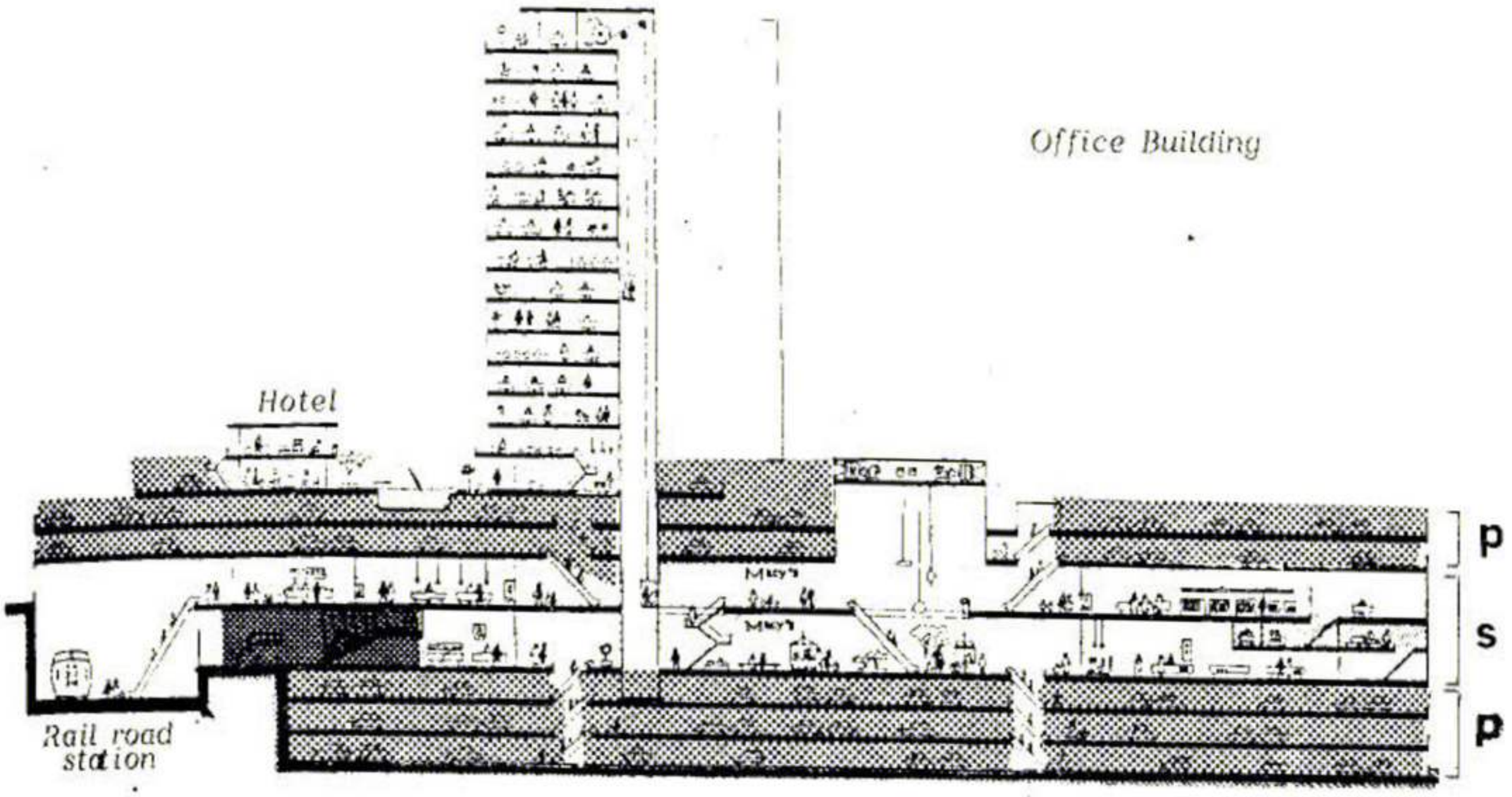
(1) *Architectural Record April, 1975.*
(2) *Redstone, Louis, G. New Dimensions in Shopping Centers and Stores, New York: Mc Graw-Hill, 1973.*
(3) *Bell, Curtis C. Shopping Center Development Guide.*



P Parking

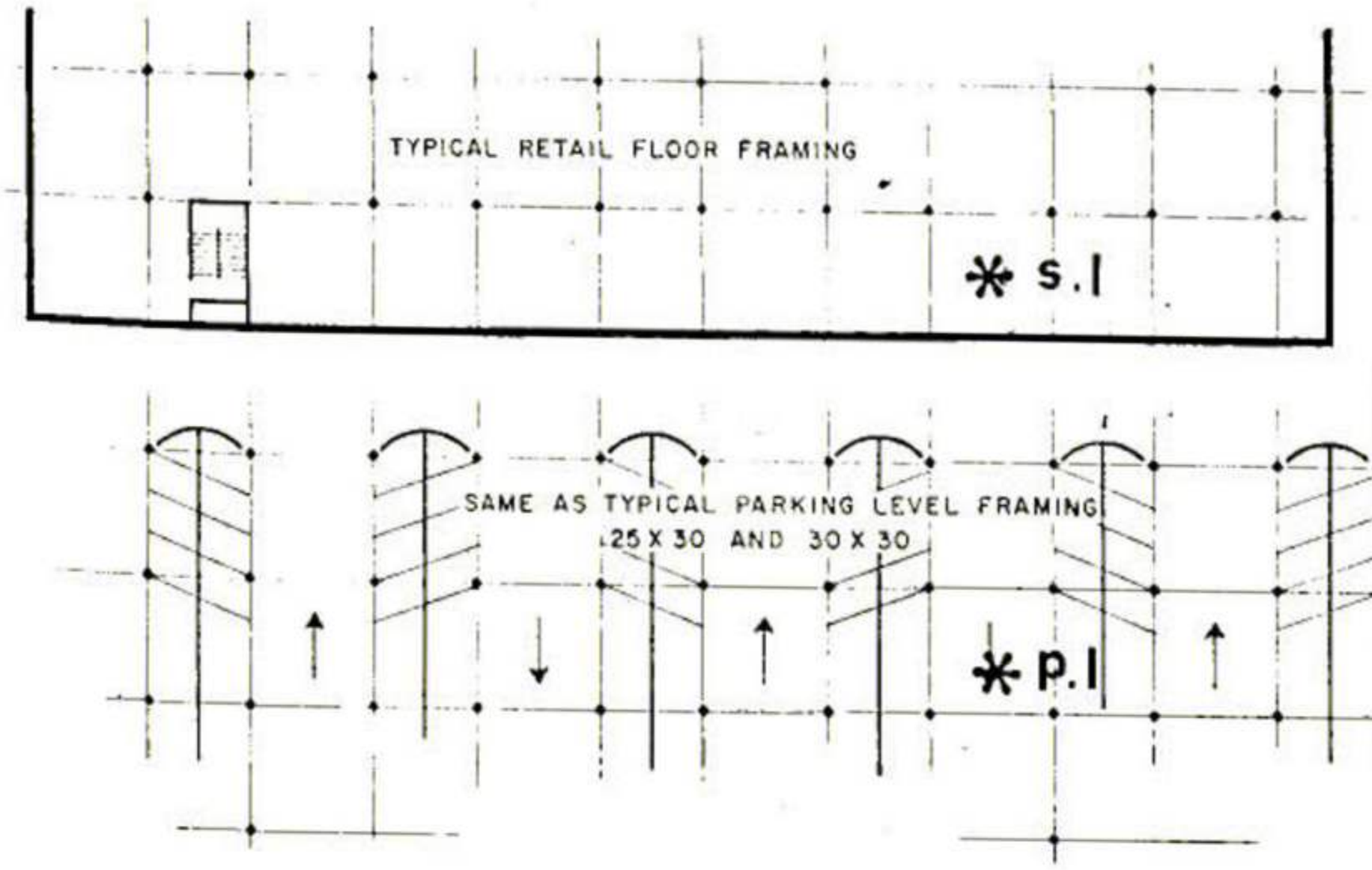
Truck Service

S Shopping areas

S.l Shopping level

P.l Parking level

Fig. 85 Section. Westchester Terminal Plaza. Partial plan of typical retail floor and typical parking level showing identical column spacing as utilized in both cases.



— *Ref. New Dimensions in Shopping Centers and Stores. Louis G. Redstone FAIA*

Three major considerations apply:

(1) Directing attention to the store itself, to areas within the stores, and to specific items on display. Traffic control, impulse sales, and emphasis on high profit items can be regulated within wide limits.

(2) Creating optimum conditions for the appraisal of merchandise, lighting is a major factor in obtaining sales appeal. It is also important in stimulating the activities of customers and sales personnel.

(3) Contributing to the atmosphere desirable for a particular type of store. From the movement of a supermarket to the quite and subdued environment of a fashion appeal shop that creates an agreable climate for the buyer.(1) Attention value, in a shopping center for example is more important than some have realized. It has been found that a center not only obtains trade from the surrounding residential areas, but a substantial amount is obtained from other towns. Thus competition between shopping centers is of great importance.

Competitiveness involves among other factors identification at a distance, shopping appearance and maximum safety for the ever-increasing pratical night shopping. It is desirable to have the name of the store readily legible from the maximum distance at which it can be viewed.

The following equation is a guide for determining "letter size" applied to signs when opaque letters appear against luminous background.

$$\text{Letter ht (ft)} \frac{\text{maximum viewing distance (ft)}}{300}$$

In the opposite case where the letters are luminous and colours and the background is opaque.

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(1) Hornbeck, J.S. (Editor). Stores and Shopping Centers McGraw-Hill, 1962.

Letter ht (ft) $\frac{\text{Maximum viewing distance (ft)}}{500}$

Another consideration is the spacing of lamps around the center to make it visible.

Spacing of lamps (ft) $\frac{\text{Maximum viewing disstance (ft)}}{1000}$

To estimate the number of lamps required multiply.

$\frac{\text{Letter ht}}{\text{Lamp Spacing}}$ X Number of Letters X 2.5

while attractive appearance in the day time is almost entirely the result of the efforts of the architect and landscape designers, at night great opportiunities are afforded by building flood lighting and landscape lighting.

Maximum convenience and safety for shopping at night means good lighting of the parking lot and walkways. Two standard proactices have evolved for parking lots - high voltage flood lights on 60' to 80' poles, and street lights around the center on 30' to 35' standards. Good practice is to space poles not more than 5 times their mounting height.(1)

Sales rooms, at least, are as a rule dependant on artificial lighting and so do the show windows especially if there is reflection in the large expanse of plate glass, as they cannot and always be installed on a slant. The emphasis is that attention should focus on the merchandise. This can be done by making it the point of maximum lightness.(2)

Generally speaking the use of suspended fixtures, lined up in large number, distroys the feeling of space and diverts the eye of the shopper from the goods on display.

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(1) *Lighting of Shops and Stores R.T. Dorsey - Store Lighting Specialist. Application Engineering Department, Lamp Division of General Electric Company.*

(2) *Architectural Forum July, 1953.*

Good lighting design will give the same space an utterly different character.

5.3.2. Natural Lighting:

Of great significance, however, is the fact that artificial lighting was not a popular asset in the lighting system of the shopping center and was only adaptable when necessary. For example in the case of the salt lake city the ZCM center Fig. (86) the site existed between existing structures and designed into an enclosed two levels shopping mall, sixty five stores are grouped around the mall. Parking had to be provided above and below the mall for 2000 cars.(1) To light themall a system of fluorescent lighting fixtures was custom-designed by the architects working with fabricators and set above opaque acrylic panels. This system is similar to the reticular ceiling and the Marlux ceiling.

As daylighting is a more popular and comfortable lighting system now architects have deviated methods shopping centers to give that effect day and night. At the Frontenac Fashion Center in St Louis designed as a square is topped with circular dome of mirror glass which daylights the area and much of the second floor day and night and reflects the activity of the store.(2) Fig. (87)

Another system of lighting is the combination of daylight and artificial light in one system as could be seen in the example of Eastridge Regional Shopping Mall, San Jose Califorinia one of the largest shopping developments in the country.

The lighting at Eastridge in the mall is based on sky-light but within each bay of skylighting has been placed special lighting fixtures used at night or cloudy days, so that the light, wether bright seen or evening always came from generally the same area of the ceiling. Fig. (88)

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(1) *Architectural Record March, 1980.*
(2) *Building For Commerce and Industry. McGraw-Hill Book Company. Edited by Charles King Hoyt, AIA.*

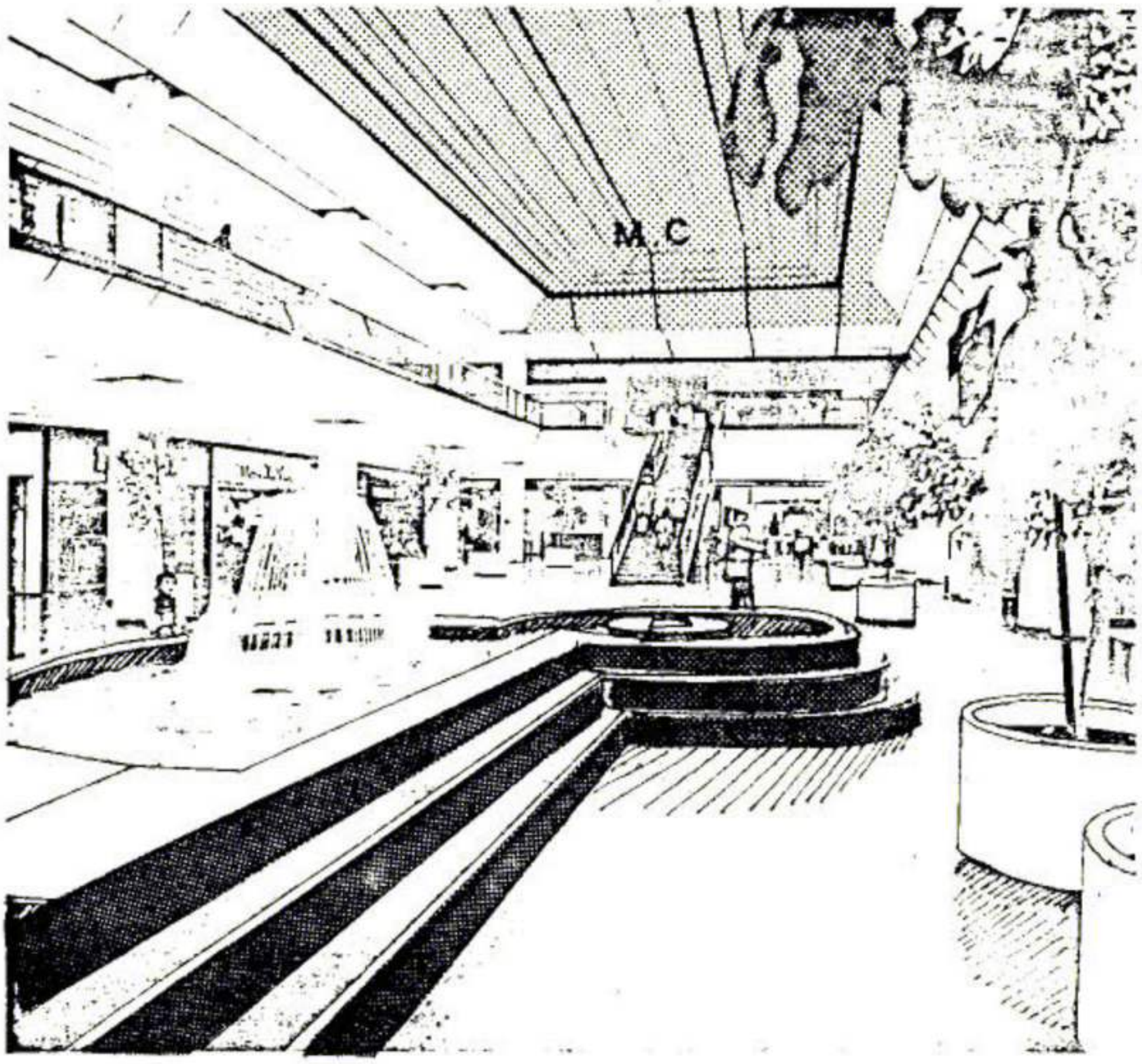
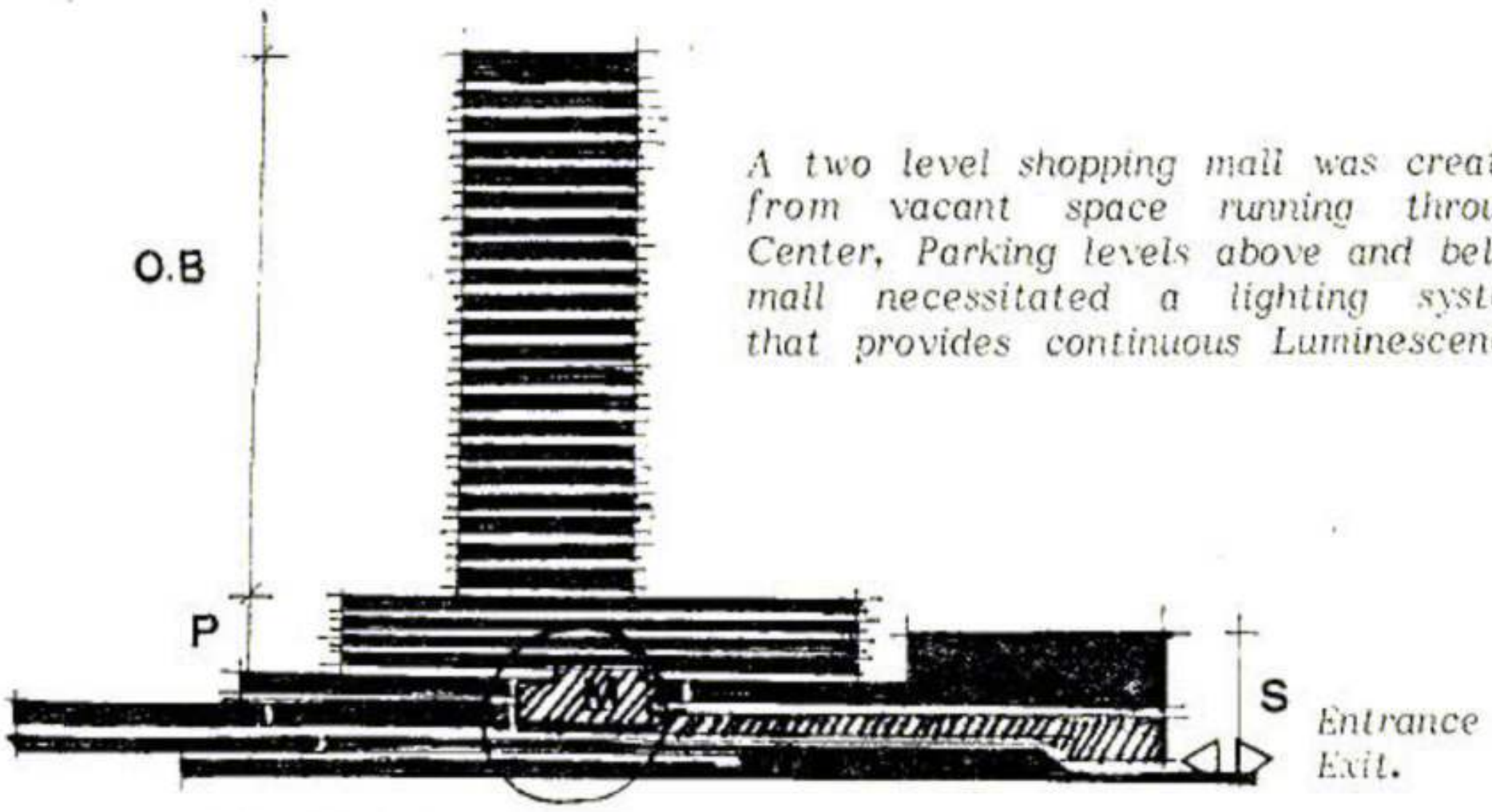


Fig. 86. On a large site in the heart of downtown Salt Lake the ZCMI Center was developed.



A two level shopping mall was created from vacant space running through Center, Parking levels above and below mall necessitated a lighting system that provides continuous Luminescence.

O.B *Office building*
P *Parking*
S *Shopping Services*
M.C *Mall Cieling*

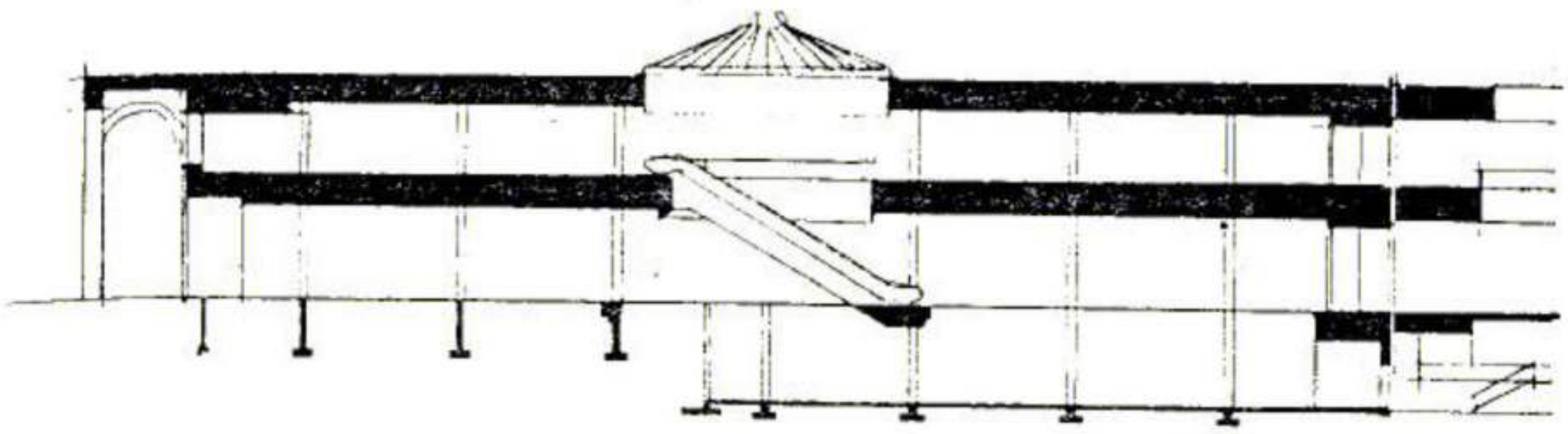


Fig. 87. The frontenac Fashion Center St. Louis, Building for Commerce and Industry.

Mc. Graw-Hill Book company Mirror-glass dome.

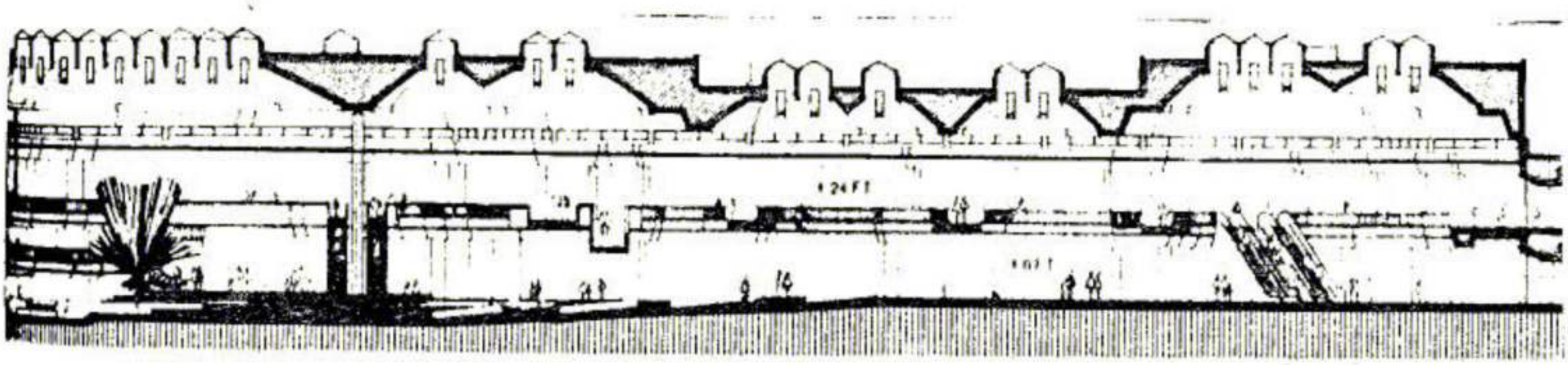
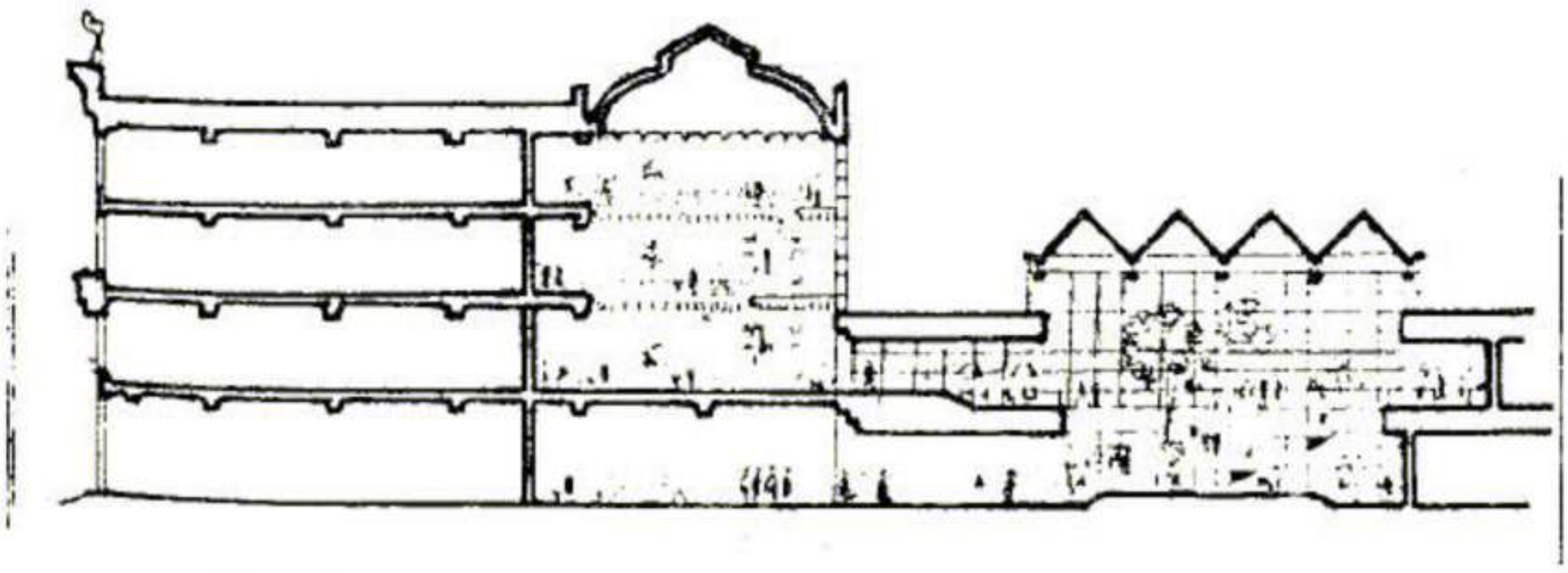


Fig. 88. Eastridge Regional Shopping Mall San Jose California Combination between Skylight and Artificial light.



The glass structure will unify spaces and generate visual excitement opening up veiws from the interior and from the street.

The Troymall, Troy, New York

Fig. (89)

Even the sides of the mall have been designed in some cases as a visual asset. In the case of the Troy Mall, Troy, New York.(1) The architect designed a glass enclosure wrapped around three sides of an existing department store. Angled both vertically and horizontally, the glass steps back from the street to a central court,creating an open plaza on the street. Fig. (89).

The architects believe the glass is more than a visual asset. A balanced air circulation system has been devised to recirculate either cool or warm air, depending on the time of year, from the glass-enclosed areas to the store spaces.

Hence from the previous facts we can deduce the importance of designing the appropriate lighting needed for the shopping center each according to its special characteristics and that it is one of the main features marking the shopping center.

5.4. Interiors:

5.4.1. A Circulation for Pedestrian that Unconsciously Draws the User to all the Different Shopping Facilities:

Department stores are reffered to in shopping center language as the "magnets" or "poles" of attraction. They achieve the quality inherent in these terms due to their size, their public image, their advertising, and the quality of their services. From the view point of creating equal well-being for all tenants of the shopping center, it is desirable to place the magnets in such manner that the shoppers traffic will flow past the doors and show windows of the small tenants stores. It is therefore desirable that they be located on the extreme ends of public pedestrian areas if there are two or more such magnets, or in the very center of the public pedestrian routes if there is only one such magnet. Fig. (90).

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(1) Architects: Elbasani Lagan Severin Freeman (Formerly the ELS Design Group) and Harrison.

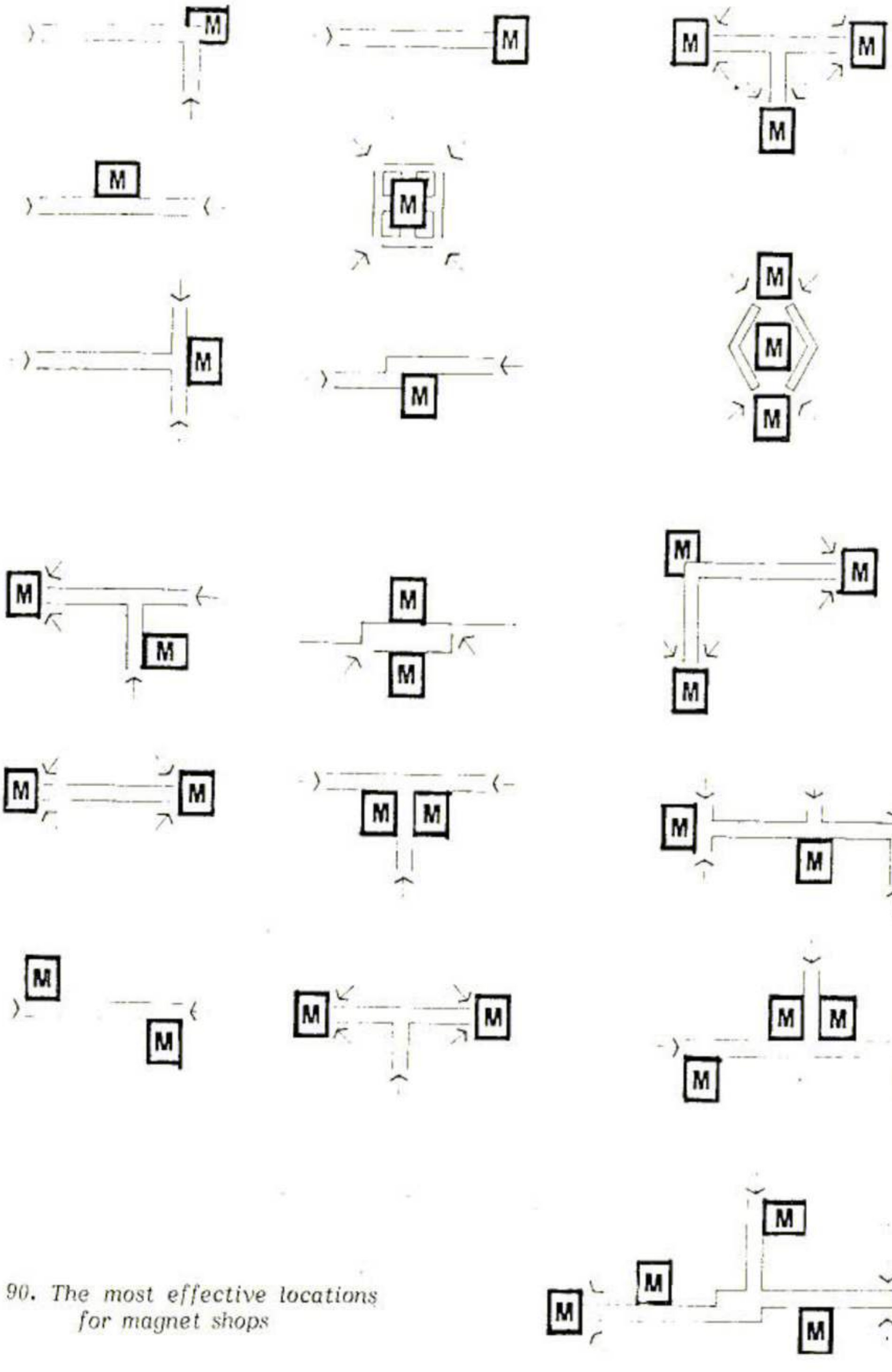

Fig. 90. The most effective locations for magnet shops

Ref. *Enclosed Shopping Centers. Clive Darlow, Architectural Press.*

The customer who seeks a wide variety of shopping experiences will prefer a center in which both large stores and many smaller ones exist.

In view of this it is therefore also necessary to bring about an area balance between large magnet stores and individual smaller business enterprises.

The task of the center planner is to shape the pedestrian ways in such manner that they offer comfort and delight.

Comfort will depend to a large degree on the walking distances necessary for shopping trip. The shorter the length to which a pedestrian walk system can be held, the greater are the chances that a shopping trip covering a good part of the entire center will be undertaken.

If pedestrian ways are overly long, then the individual customer will undertake only one part of the shopping trip, if by some infortunate circumstance, a certain part of the long pedestrian way should prove less attractive than another (this could happen if one magnet were weaker than the others) then the danger exists that one part of the entire center will "dry off".

In this connection it is interesting to note that if two or more main shopping levels are established, the shopper will willingly move from one level to the other because technological means enable us to assist the walker in successfully over-coming vertical distances (by means of escalators, moving ramps etc.). However when using two or more shopping levels (especially arranged through covered climatized mall) a strong visual connection between the two levels is essential. They are based on the fact that the upper sales levels will have to provide balconies along all sides of the public space which, at certain distances, are connected with each other by bridges. Fig. (91).

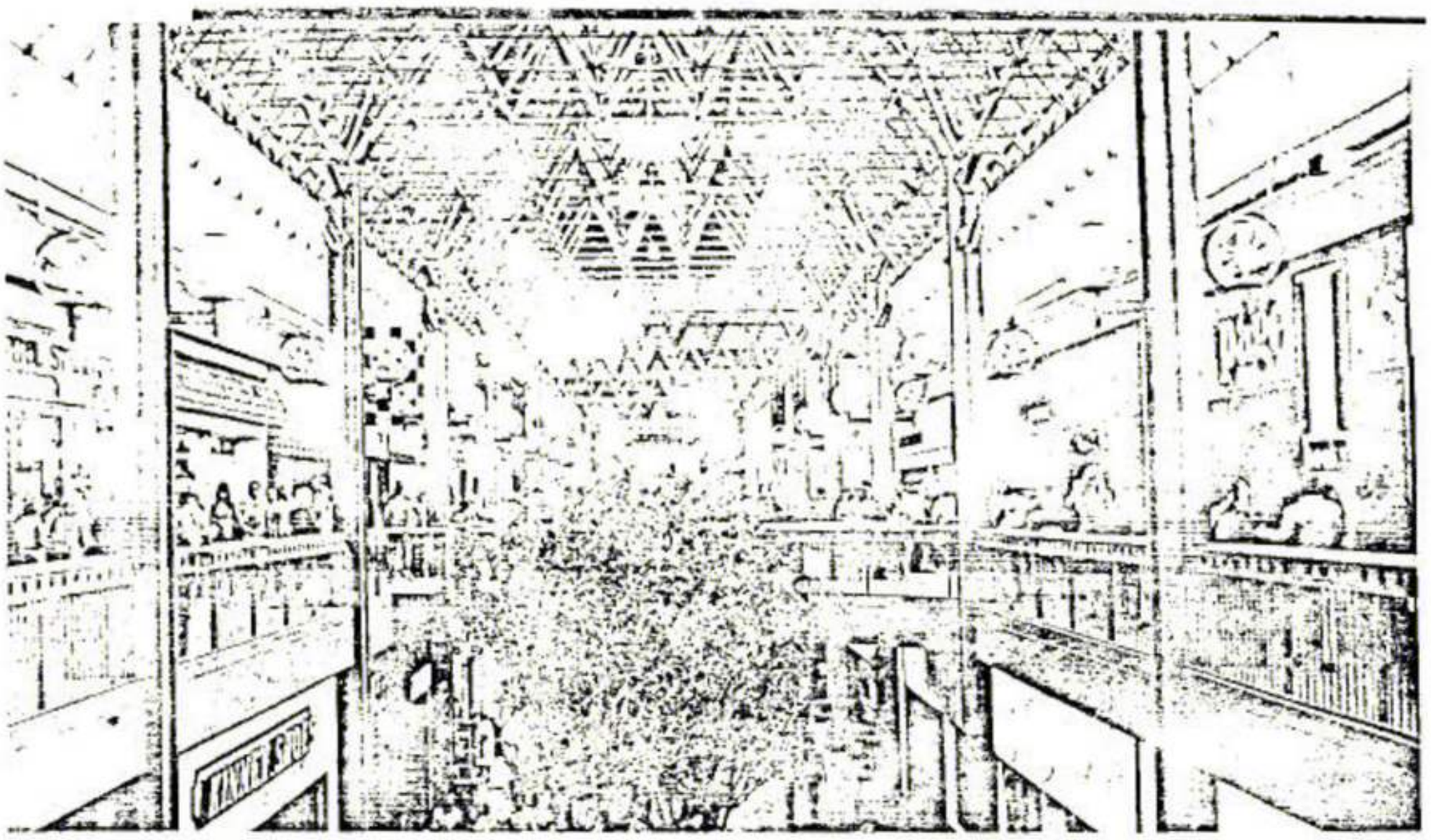

Fig. 91. Connecting bridges all along the mall.

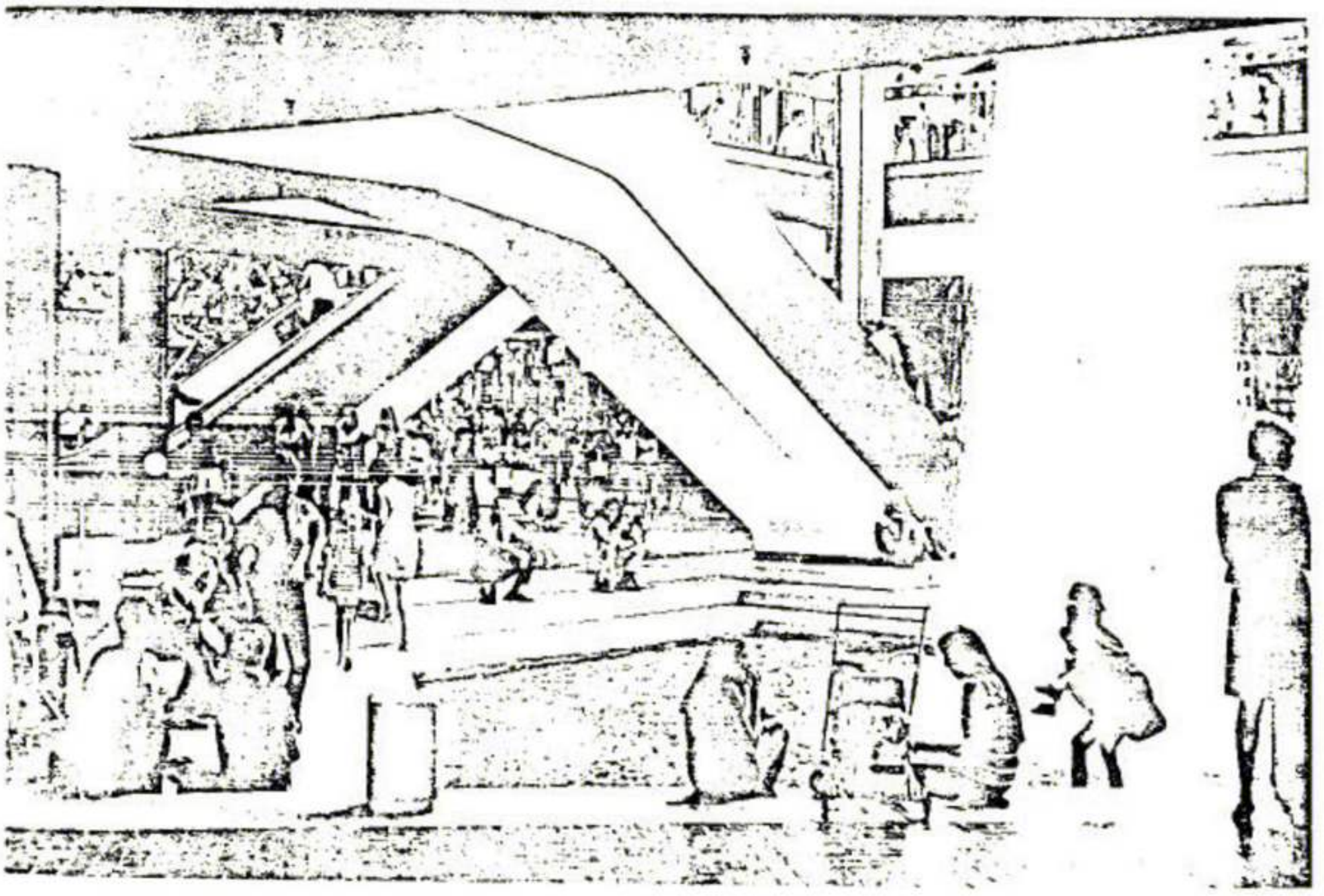

Fig. 91. Connecting bridges.

Ref. Shopping towns, U.S.A. The planning of shopping centers, by Victor Gruen and Larry Smith.

This visual experience however is essential for otherwise those shoppers who arrive in the lower sales level might never be aware of the existence of the upper one. Since access to natural light for this public pedestrian areas appears to be psychologically desirable, this need should be satisfied for the shoppers on the lower level by ensuring that the openings to upper levels are generously dimensioned. Additional attraction to vertical transportation is provided in many centers by the use of glass-enclosed elevators. Fig. (92). The ride itself is a pleasurable new experience of all age groups, and it orients the visitor to the surroundings.(1)

5.4.2. Attractiveness of the Center to the users by Location and Landscape:

Yet even if the design has successfully shortened the shopping trips; they must be enjoyable trips. The spaces must be more than narrow lanes between long rows of stores. They must represent an essentially urban environment. They should create opportunities for manifold activities. They must be busy and colourful, exciting and stimulating, full of variety and interest. They must also provide for rest and relaxation. Trees and flowers, music, fountains, sculpture and murals, and the architecture of free-standing structures are vital parts of the over-all composition. Fig. (93). Playing water appeals to the eye and the ear. e.g. Northland Center, Detroit and Eastland Center, Detroit.

Public events such as band concerts, fashion shows, special merchandising promotions, holiday celebrations, exhibitions, social events, are all part of the life in these open spaces.

Restaurants, snack bars, outdoor cafes are of essential importance. The division of the pedestrian area into a number of intimate pleasantly proportioned parts. In this way spaces of differing sizes and atmosphere will give shoppers a change of pace, there will evolve large square-shaped

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(1) *Shopping Towns U.S.A. The Planning of Shopping Centers by Victor Gruen and Larry Smith. Reinhold Publishing Corporation.*

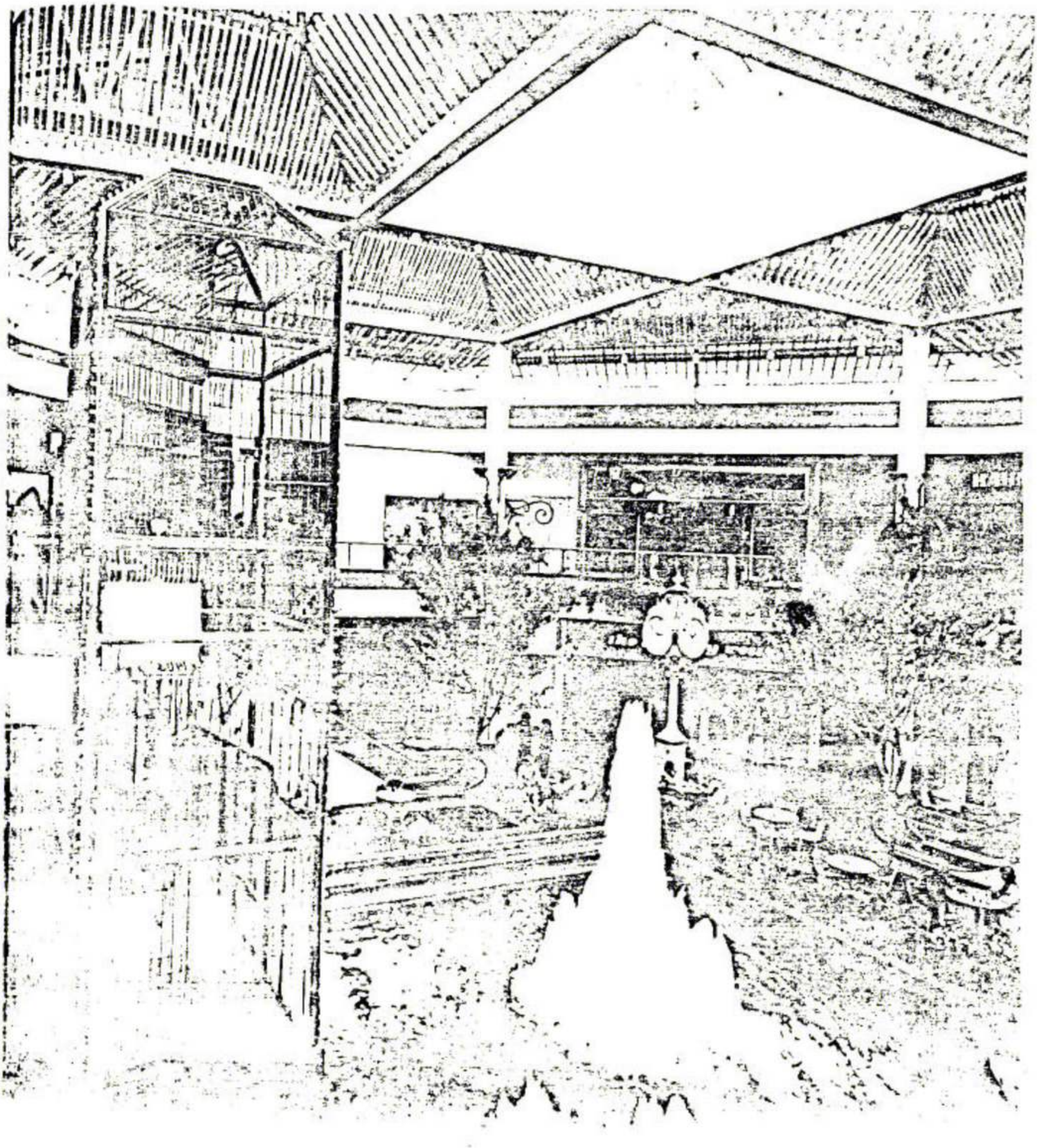


Fig. 92. Glass-enclosed elevators.

Beach Wood Place, Cleveland. Architectural Record. Feb.,1979.

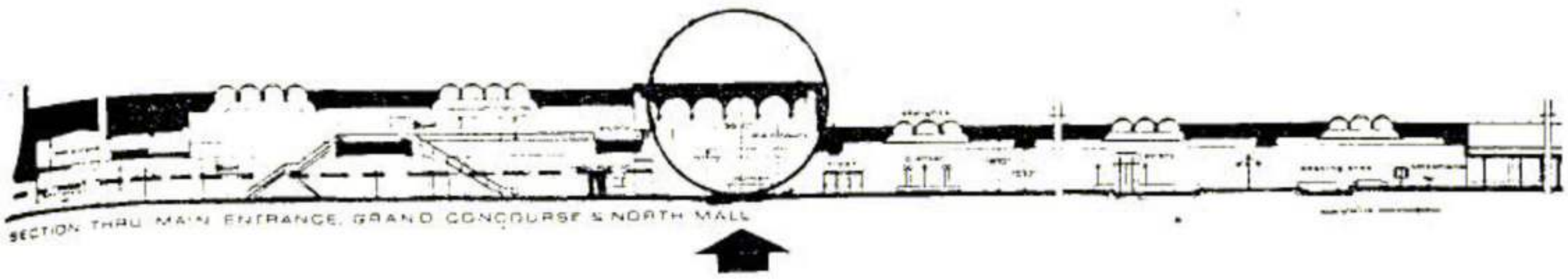
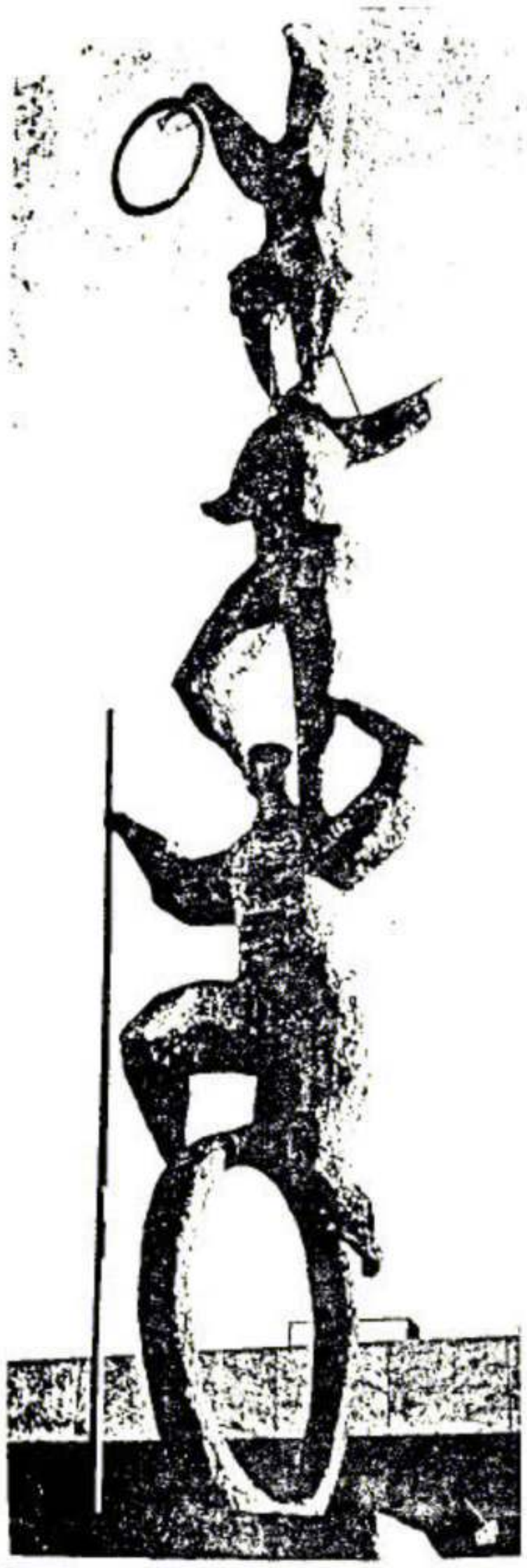


Fig. 93. Eastwood mall, Niles, Ohio. View of mall with fountains showing vaulted ceilings with lighting installations.



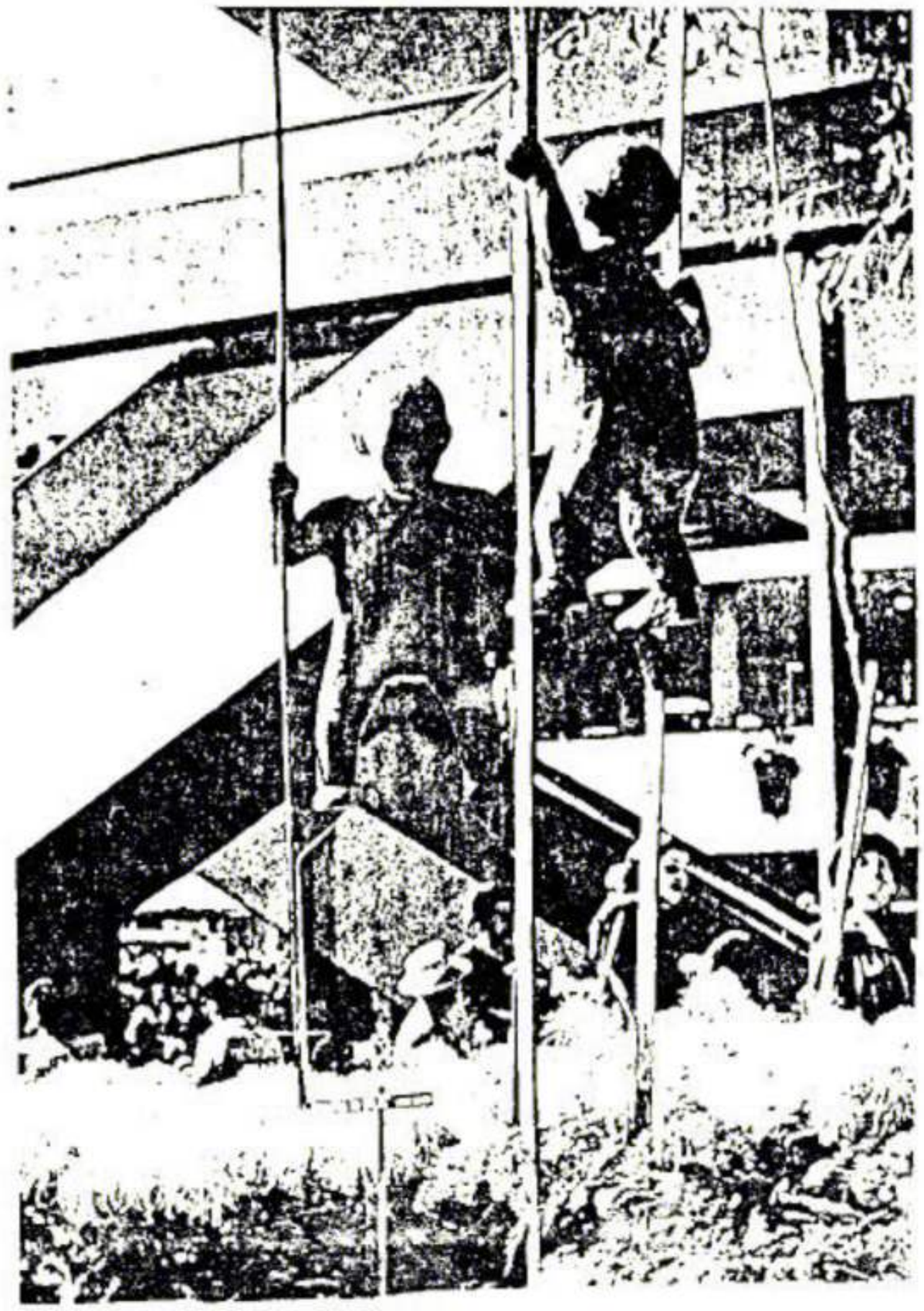
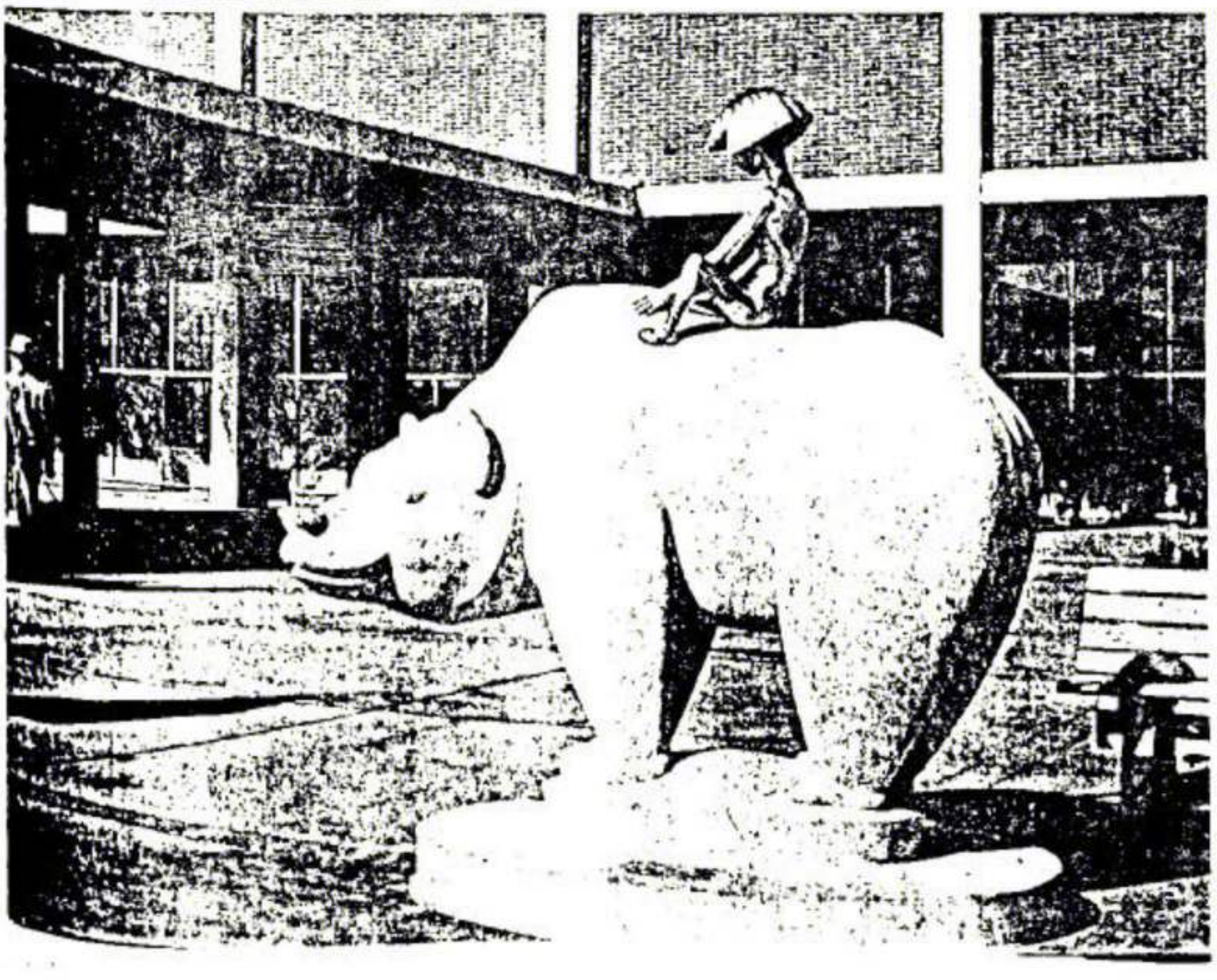


Fig. 93. Above, Sculpture in Southdale Center Unicycle Performers by Dorothy Berge.

Sculpture in Southdale Center. boys on Stilts by Louise Kruger.



Sculpture in Northland Center Bear and Boy by Marshall Fredericks.

areas (plazas and squares); wide rectangular ones (courts); wide and long ones (malls); long narrow spaces (walls and lanes).

Outdoor eating facilities depend, of course, on favorable climate. However their installation can be done by light seasonal usage material, that is ownings, wind screens, radiantly heated floor slabs e.g. Rockefelier Plaza in New York.

Landscape Elements:

In designing resting places, varying human preferences should be taken into consideration. Some people like to sit in conversational groups, others want to sit alone, and others inpairs.

Children's play area is a very popular feature in the mall Fig. (94).

Trash Containers, cigar and cigaratte receptables, telephone booths, bicycle racks, benches, lamp-posts, sign stands, should be treated as an integral part of the design program.

In order to attract, it is as well to provide special features which they are unlikely to see elsewhere.

Sculptures can possibly help; but as well as being fairly expensive they are generally static and seldom add anything to the liveliness of the atmosphere.

Fountains, on the other hand, can provide an attractive chuckling background noise, and when carefully lit can give a special sparkle to particular areas.

Fig. 9-1. The children's play area is a very popular feature on the mall.

Children's Zoo, Southdale Center, near Minneapolis.

Architects: Victor Gruen Associates.

There are many possible attractive arrangements, but care must be taken to avoid the problem of splashing, which can often be overcome by the gentle watertall principal.

Detailing of the fountain edge needs careful attention if it is not to become a seating ledge. In spite of its vulnerability to vandalism, some form of water feature is usually worth-while. Fig. (95) The Rockfeller Center.

Various forms of mobiles are sometimes used, such as the perspex tubes at Rosny 2, Paris, They can highlight an area, in addition to the colorful play feature in the middle of the center. Fig. (96)

A more expensive but attractive feature is the animated type, such as the clock of Nations of Midtown, Plaza, Rochester and Emett's Aqua Horlogical Tintinnabulator at the Victoria Center, Nottingham. With their half-hourly program of me chanical movement and music they can be fun in themselves and be of interest to children.

Another type of special feature can be one that involves some unusual way of doing something fairly normal. An example in the glass-sided cantilever lift at scarborough, Toronto. Although it provides a slower means of communication then the adjacent escalators, it is useful for disabled persons, it is a fun ride.

The design of a symbol for the center can greatly assist in providing this special identity. It can be used not only within the center itself but also in conjunction with the advertising and promotion compaigns. Fig. (97)

Also in a large parking lot surrounding the shopping center some of the users find difficulty in finding their way back to their car some tenants have found it helpful to divide the parking space into small parkinglots and marking these with marks carrying animal symbols, or letters Fig. (98).

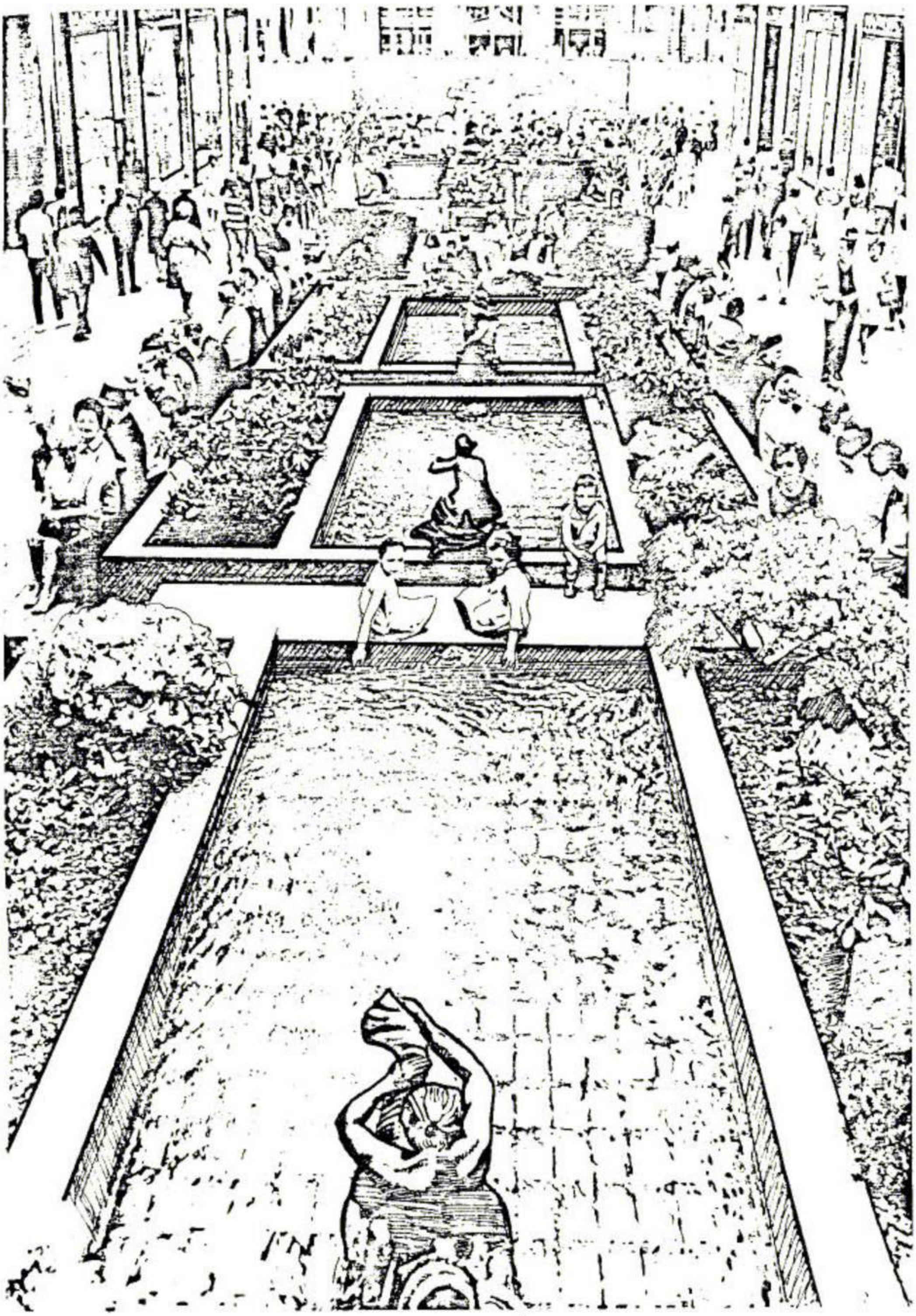


Fig. 95. The Rockfeller Center -an example of Attractiveness of water feature in the area.

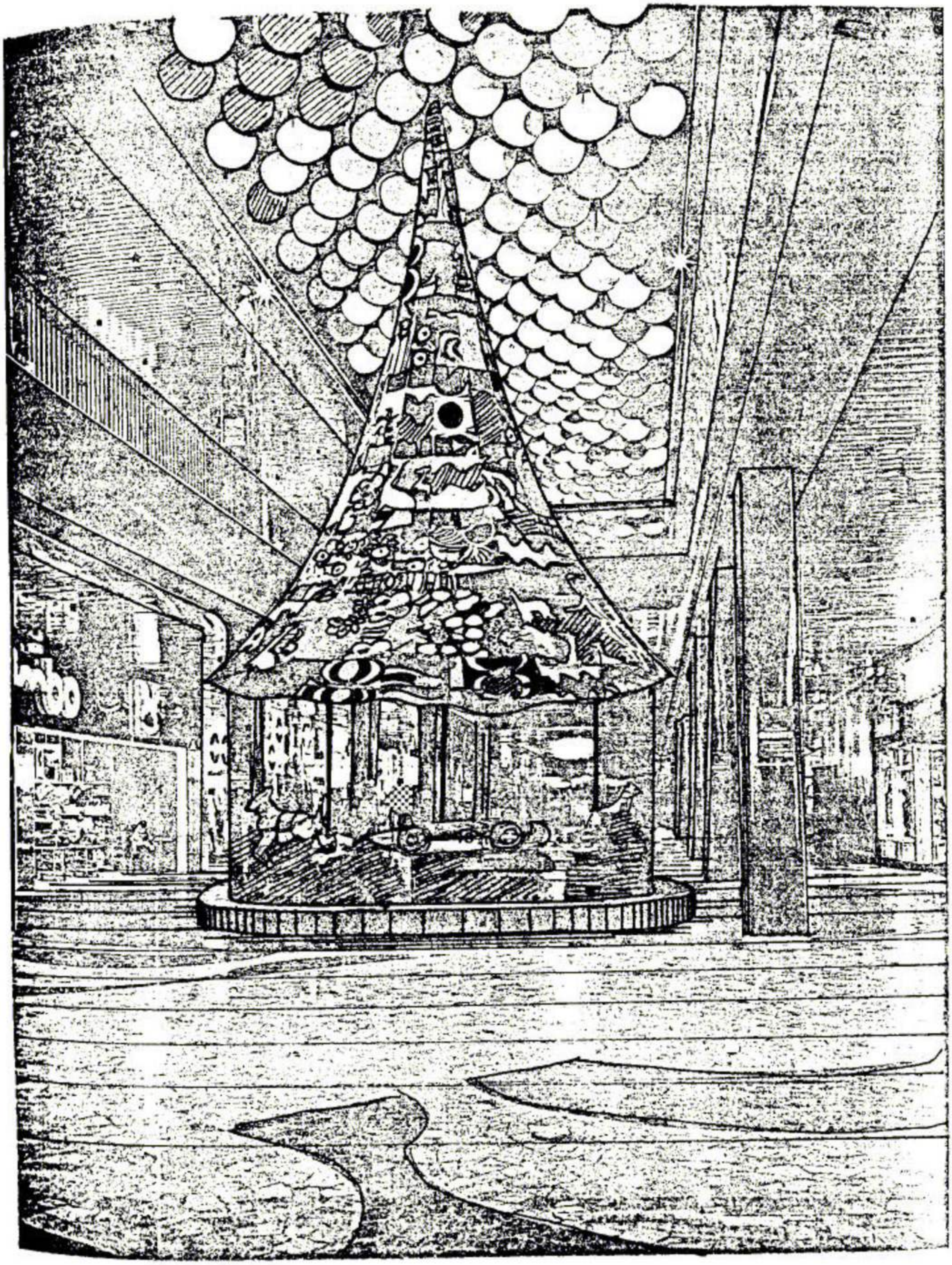


Fig. 96. Rosny 2, Paris.

Perspex Tubes highlight the area Colourful play feature.

Symbol designed for Roosevelt Field Nassau County, Lond Island, New York, as used on shopping bag.

Architects: I.M. Pei and Associates.

Fig. 97. Simbol designed for Valley Fair Shopping Center, San Jose, California Architects: Victor Gruen Associates.

Symbol designed for Southdale as used on sleeve of Center police-man's uniform.

Parking lots in southdale are marked with signs carrying animal symbols

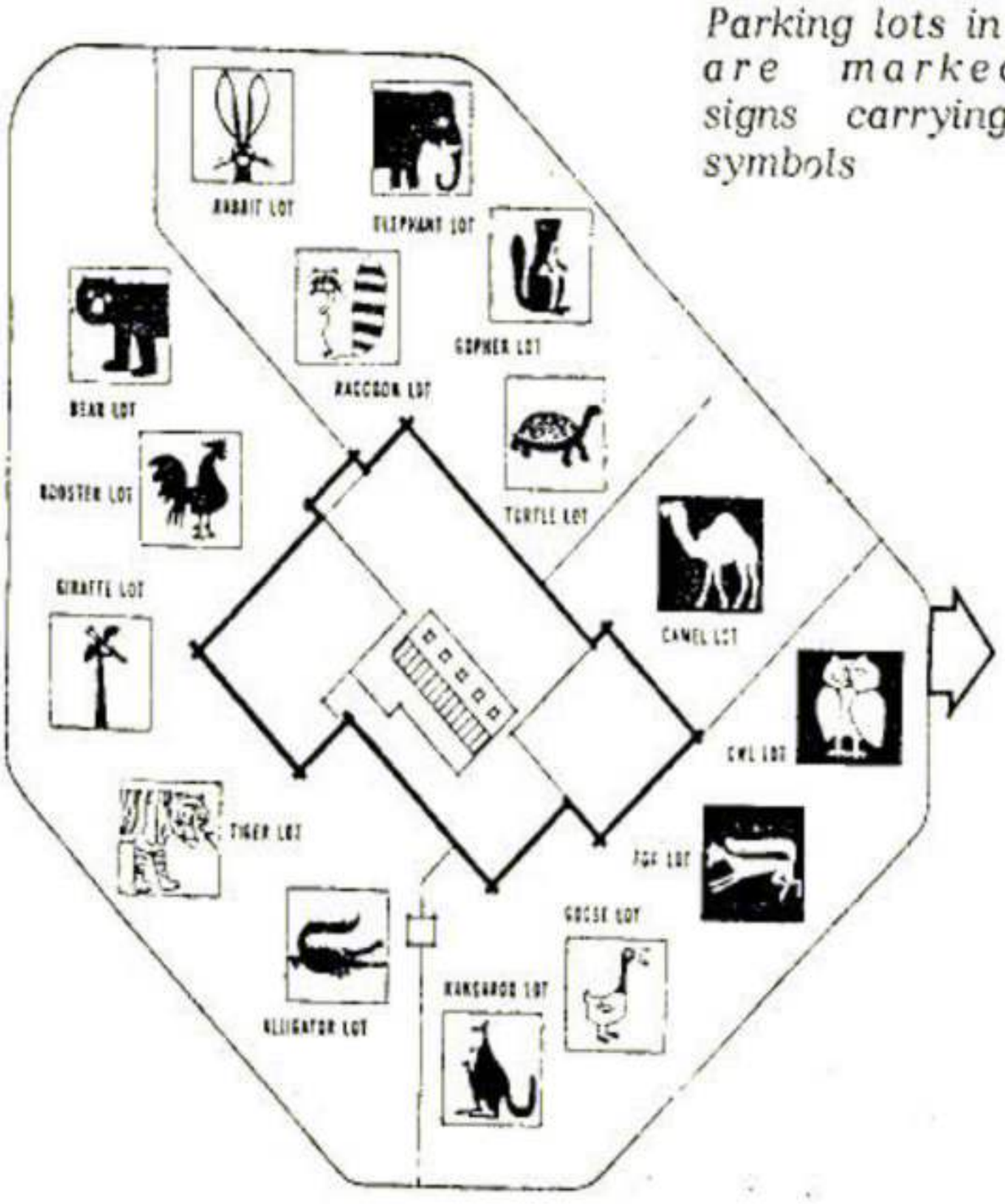


Fig. 98. Copies of this map are ditributed to shoppers at Southdale near Mineapolis.

Copies of a map with the layout of the center and the symbols with their locations are distributed to the shoppers. Fig. (99)

Integrating Art in the commercial Environment serving the public is a new idea. The architects basic concept of each of the open spaces where the original plan visualized fountains, sculpture, murals, mosaics etc. was that such an expression of art should withstand the weather and act an important role within the whole setting of the urban environment.(1)

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(1) *Shopping Towns U.S.A. the Planning of Shopping Center Victor Gruen and Larry Smith.*

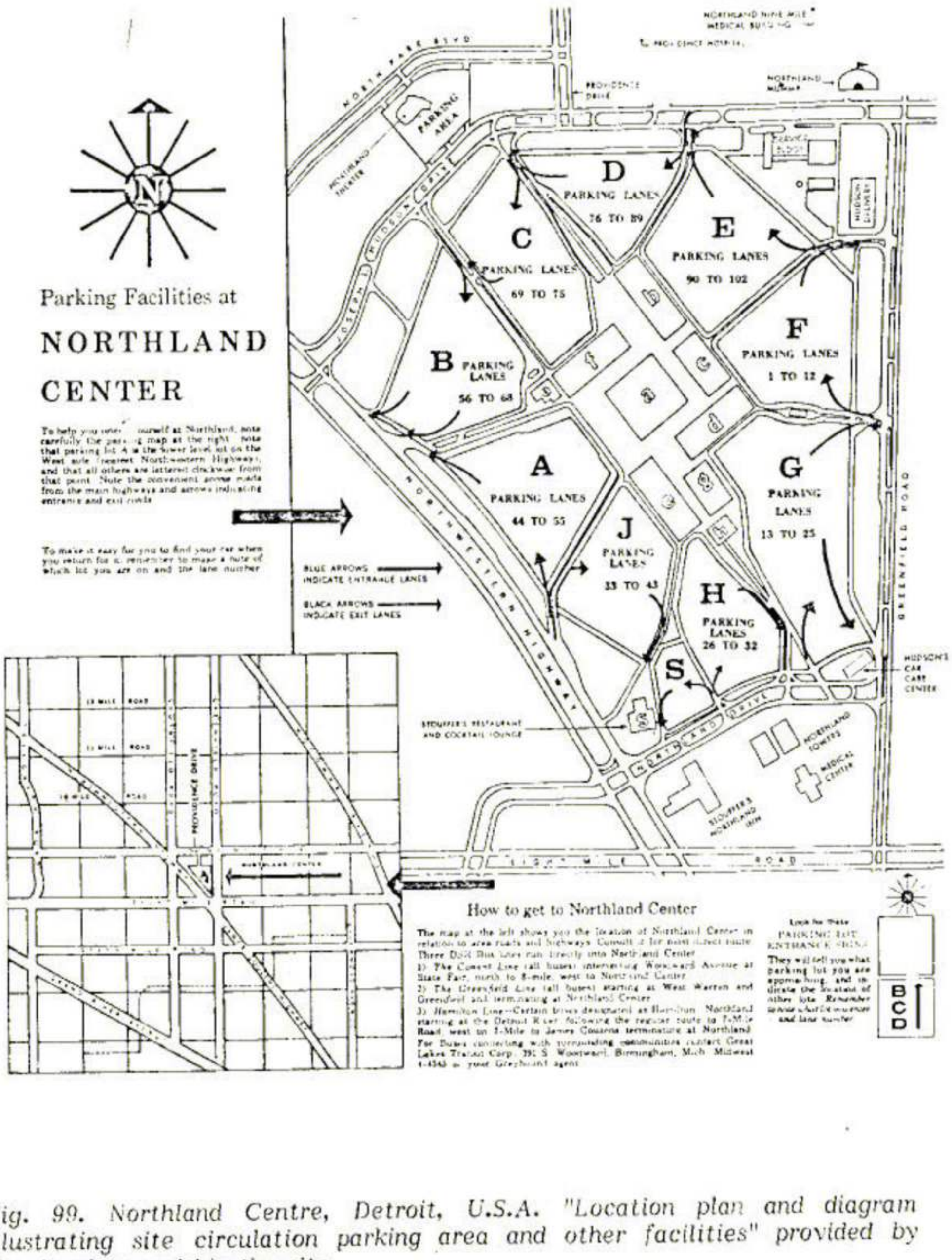


Fig. 99. Northland Centre, Detroit, U.S.A. "Location plan and diagram illustrating site circulation parking area and other facilities" provided by the developer within the site.

Ref. Regional Shopping Centers, John S. Collins.

5.5. Significant Shopping Centers:

5.5.1. Shopping Centers in America:

1) Midtown Plaza:

In the Core Area of Rochester, New York. The first step was to close two traffic conjested streets and to convert them into pedestrian ways.

The project began consisting of three subterannean levels containing a garage for 2000 cars for a population of 200,000 serving a radius of about 12,000 m. Two levels above ground for retail sales, bus terminal, restaurants, cafés, banks, a post office and the lobbies of the office and hotel biuldings which exist in the super-structure above.

All functions are arranged around a large garden court which is accessible from the city street system by arcades Fig. (100).

2) ZCMI Center: Fig.(101)

Salt Lake City, UTAH. Architects Gruen Associates Zions Cooperative Mercantile Institution (ZCMI) one of America's oldest department store in Downtown Salt lake, Utah will be rebuilt a 10 acre CBD redevelopment. 405,000 m^2 two level department store and 270,000 m^2 for fifty shops all facing the central mall space and six levels of parking to accomodate 2000 cars.

Access to and from the two sublevels of parking for both cars and delivery trucks is via down and up ramps from center of street entry lanes. Service area = 135,000 m^2.

Thus we can conclude that the Midtown Centers are closely designed and site area is very tight due to high-cost land downtown and area varies between 10 acres to 30 acres while regional centers could reach to 100 acres parking area could depend here also on surrounding parking areas and local transportation. Here the importance of easy access of pedestrians from local

Midtown Plaza: Aerial photograph showing completed outer loop road (1), the enlarged civic center, municipal parking garages (3), and in the center of the picture, the Midtown Plaza.

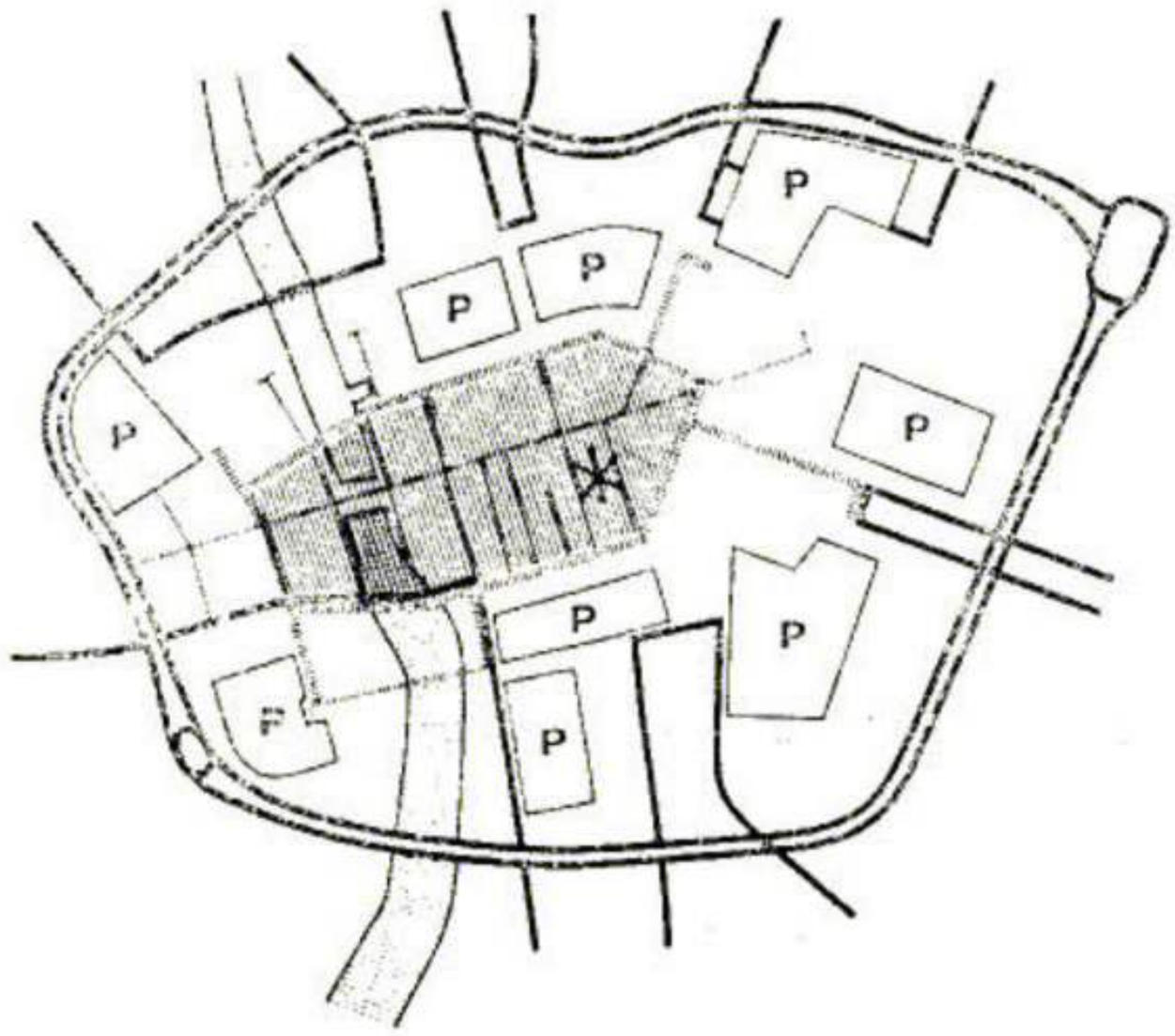
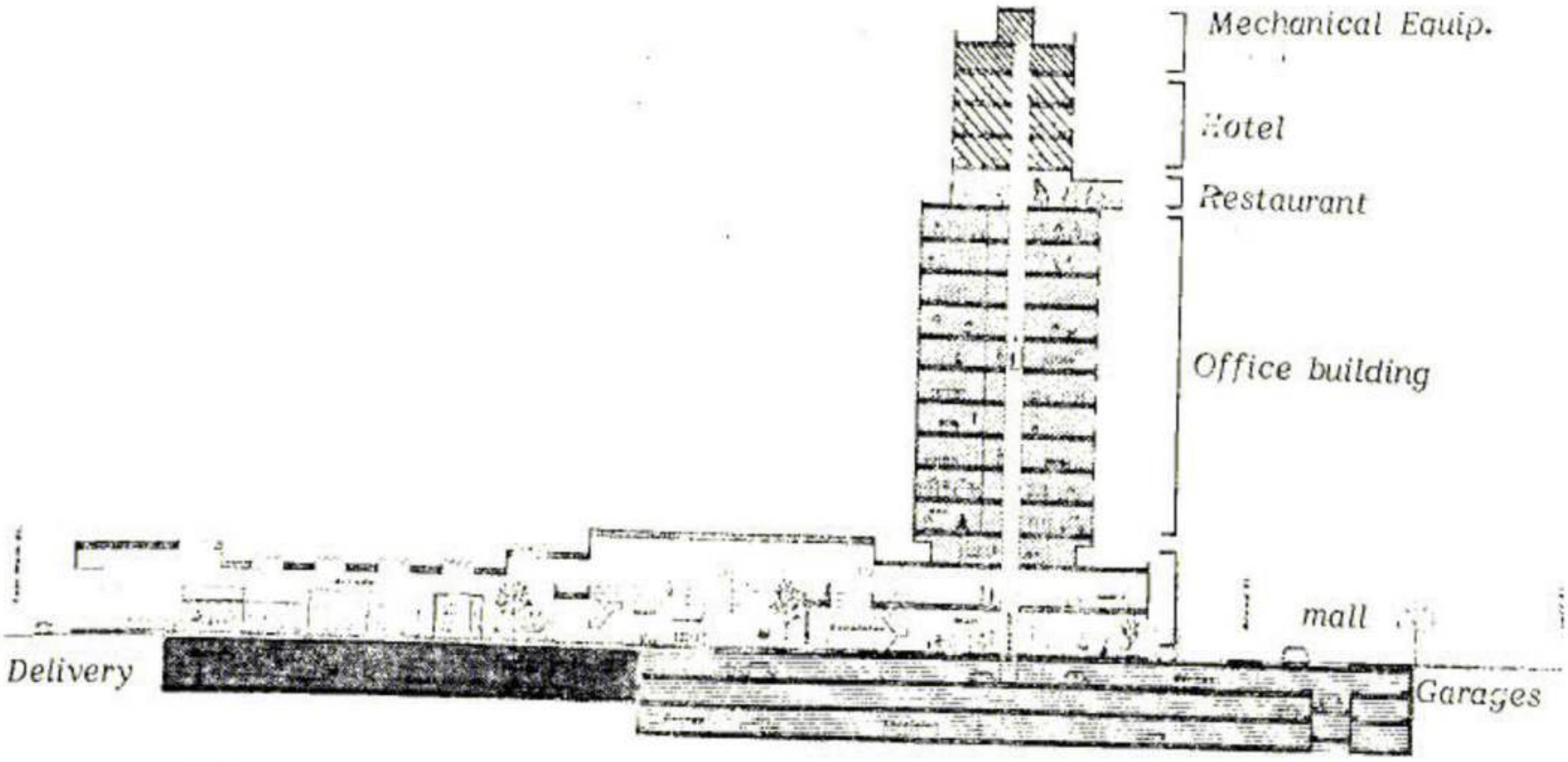


Fig. 100)

Ref. Thompson Richard Grant: A Study of shopping Centers. Real Estate Research Program, California 1961.



Midtown plaza, Section showing subteranean levels for garages, delivery roads, loading Facilities and Storage. The two levels above are for retail, Superstructures arise above the roof.

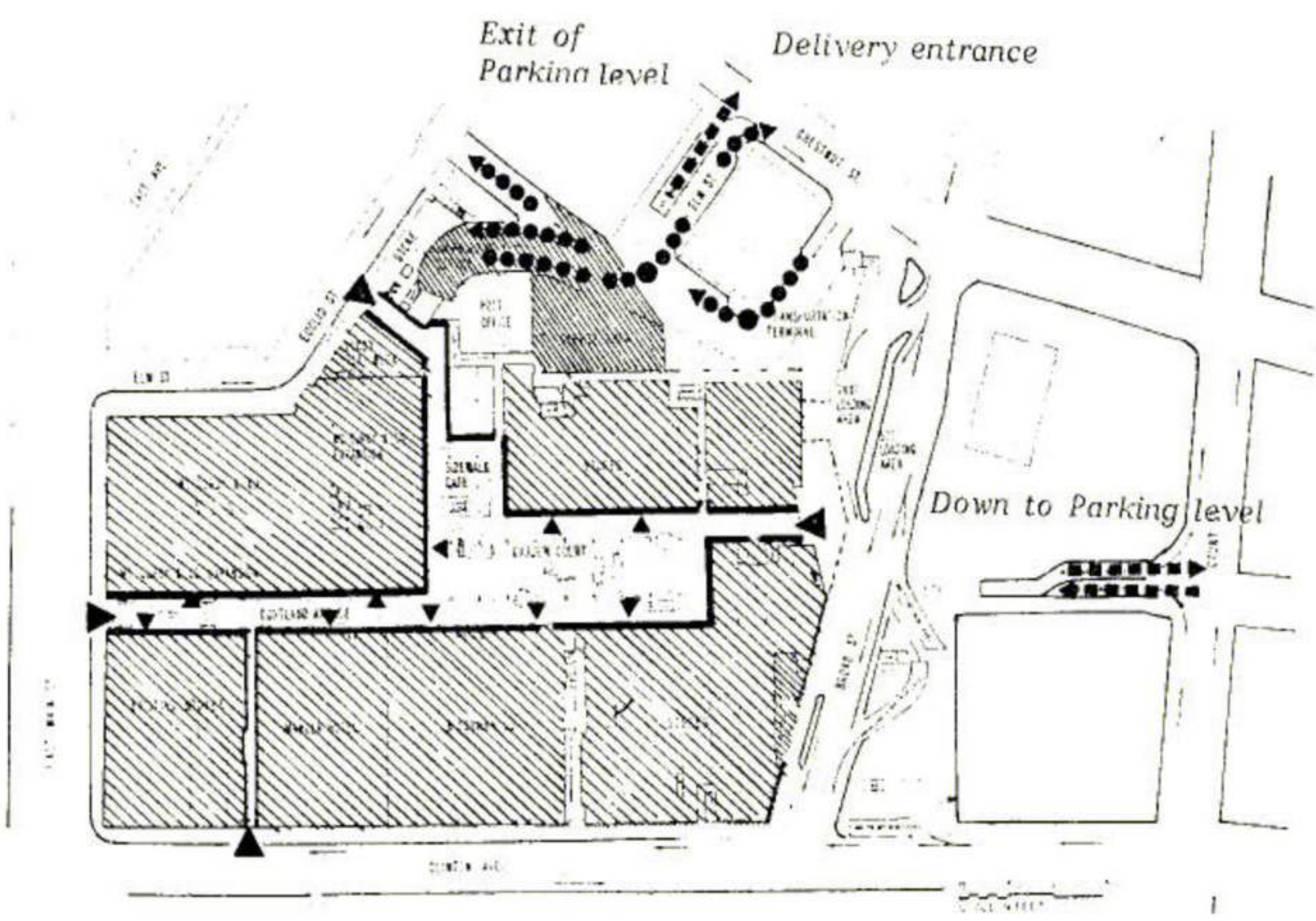


Fig. 100. Midtown Plaza: Plan of the lower Activity area.

Ref. Thompson Richard Grant. A study of Shopping Centers Real Estate Research Program, California, 1961.

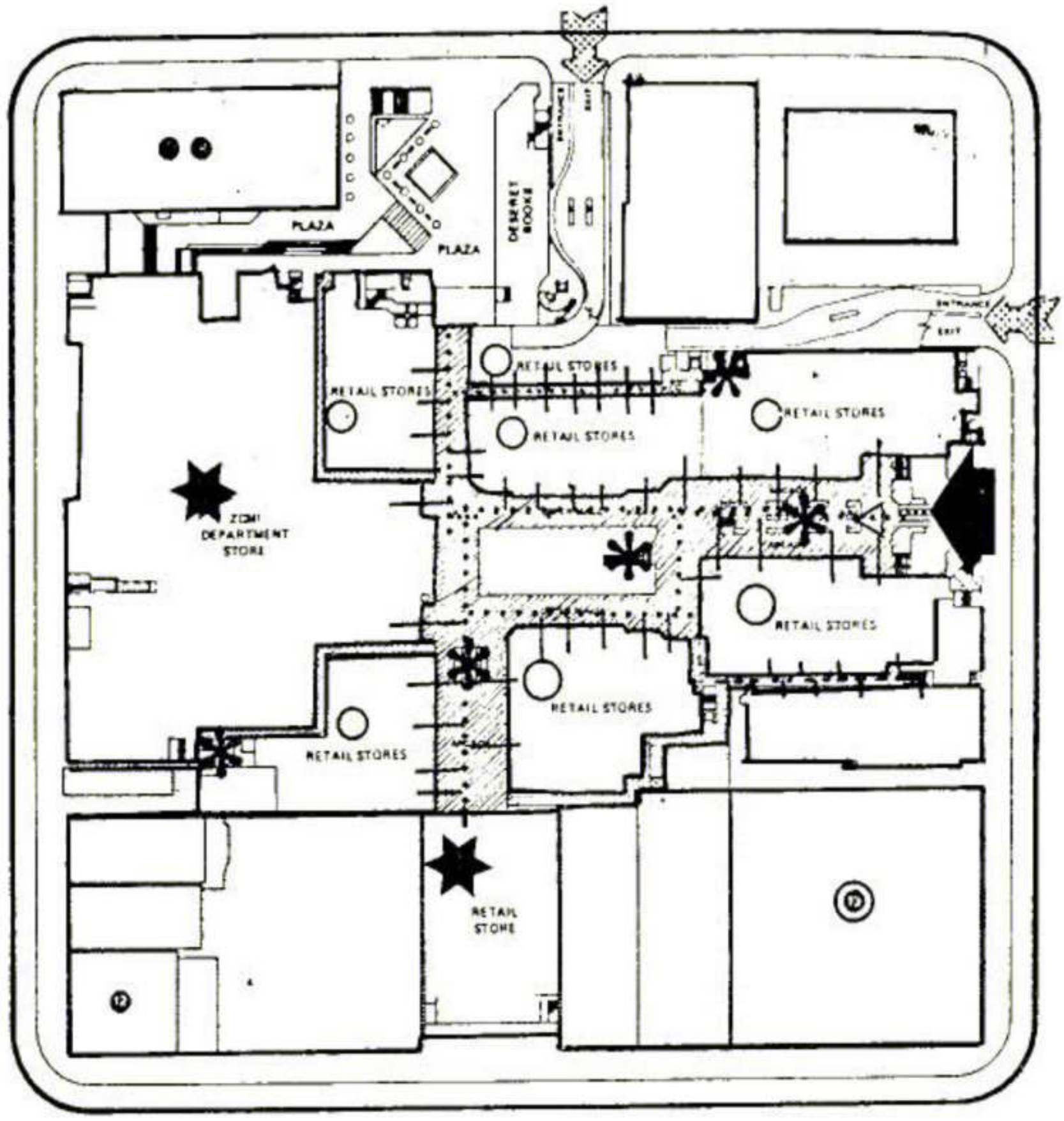
Car entrance and exit.

Department Store

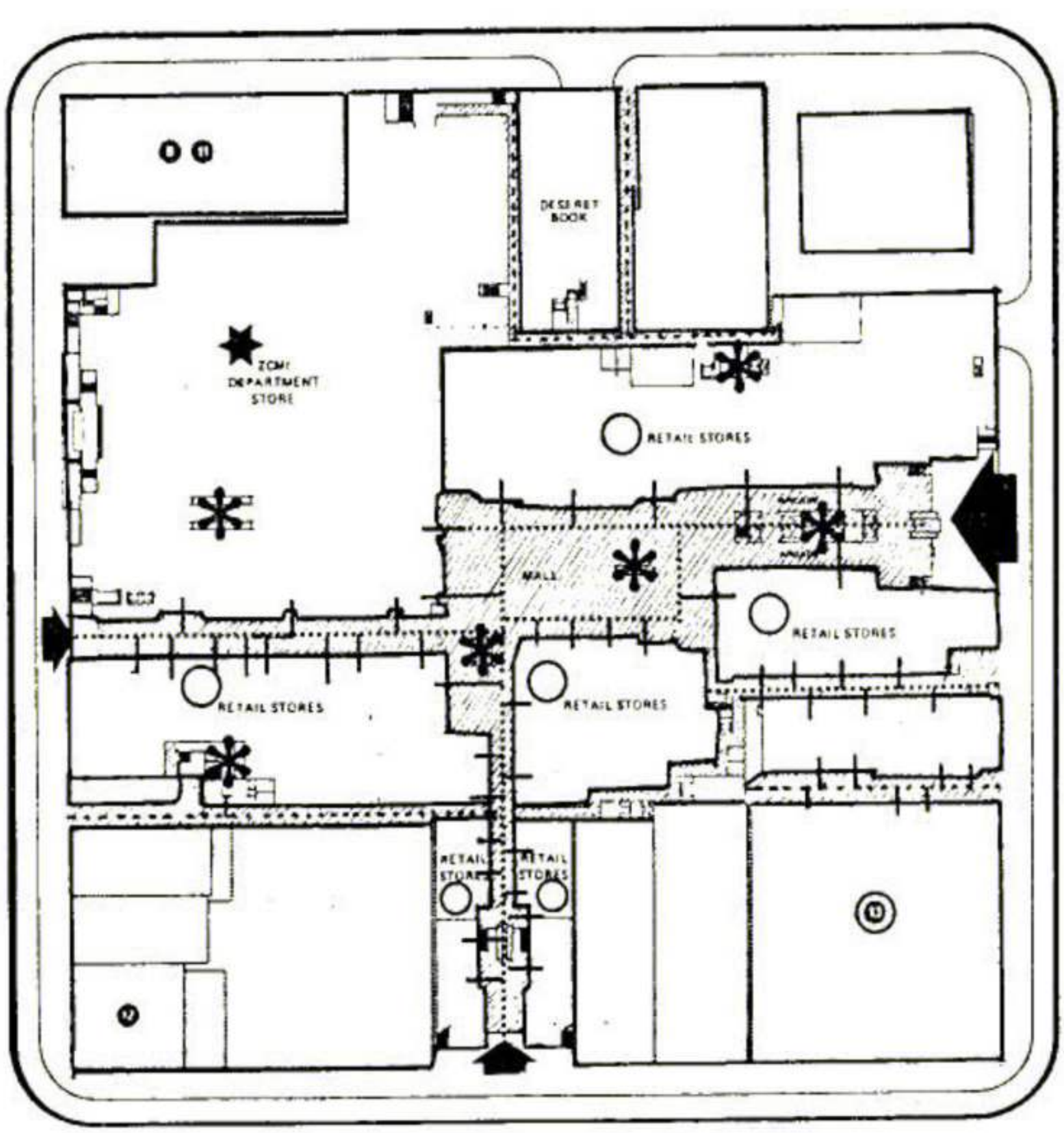
Vertical circulation

Pedestrian entrance

Retail stores.



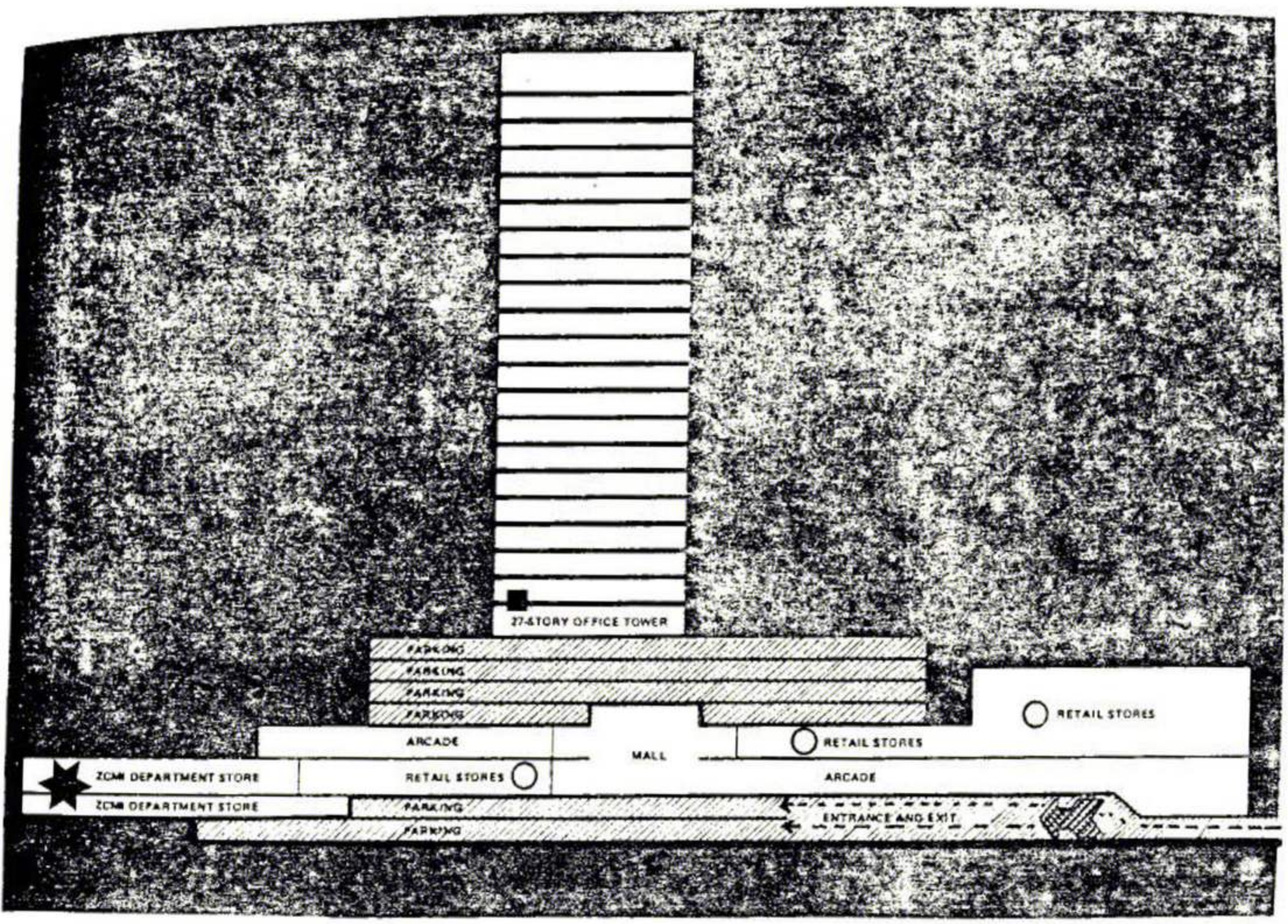
Plan of lower level



Plan of upper level

Fig. 101. Zions Cooperative Mercantile Institution Center, Salt Lake City, Utah.

Ref. New Dimensions in Shopping Centers and Stores Louis, Redstone, FAIA



Car entrance and exit

Department store

Retail Stores

Office-building

Fig. 101. Section in Zions Cooperative Mercantile Institution Center [ZCMI], Utah.

Section showing six levels of parking to accomodate 2000 cars. Project was completed in 1975.

Ref. New Dimensions in Shopping Centers and Store Louis Redstone. FAIA.

or private transportion is a criterion for the center's success and at the same time separation between the pedestrian and traffic circulation. Most of these centers have their parking in the building either in the basement or sandwiching the retail levels and a loop road surrounding the site is important to insure safe car entrance from surrounding approach roads.

Service area to total store area: 1 : 8.

Case Studies for American Regional Shopping Center:

1) The Mondawmin Shopping Center, Baltimore:(1) Fig.(102)

It is built in the Urban area of Baltimore on a vast area of about 20 acres. The building consists of two floors and a basement. There is a large parking for 4000 vehicles. There are 60 shops in the center. It is calculated that the effective trade area population amounts to 300,000 people 4 miles radius serving area. The basement accessible to vehicles contains commercial offices and storage space. Main D. Store Area = 15960 m^2,Sec. D. Store 2442 m^2, Total Store area 53854 m^2 service area = 11938 m^2 Ratio 4.5:1.

Thus we can conclude by the previous examples how cheap land area has effected this kind of shopping center. Most of its parking has been spread around the building and the easy access and short walking distance from the parking lot to the store required is the criterion of the parking success.

the importance of interesting landscape and attractive art features on site and in the interiors of these centers are a devise to encourage the customers to spend the day by providing the suitable facilities needed for every age and offering a fresh atmosphere and an out-door environment.

By analysing significant examples for American Shopping Centers we can dedicate certain standards for the different factors used for designing a similar shopping center.

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(1) Aloi, Roberto: Mercati E. Negozi, 1059 Milan p. 75.

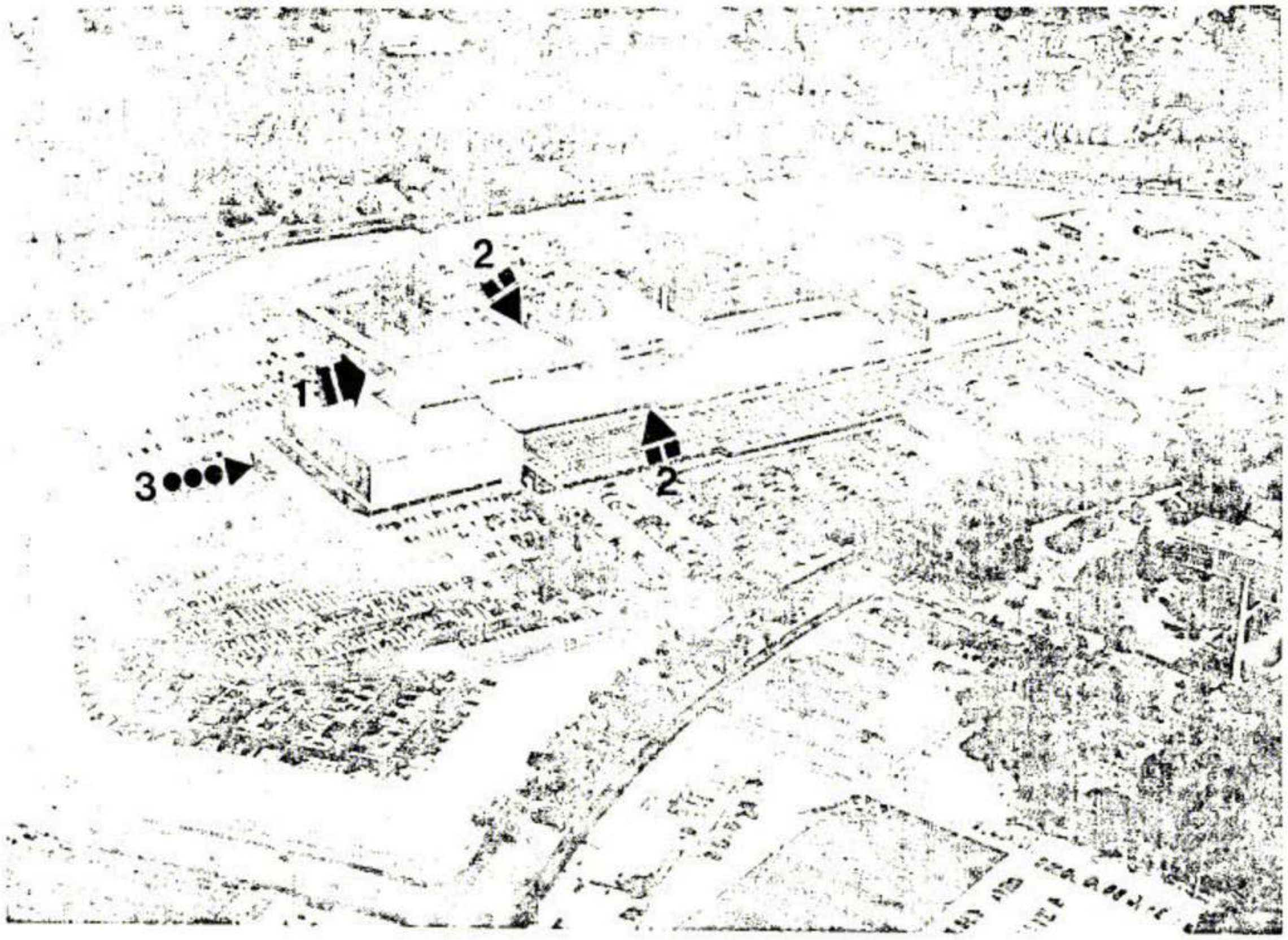
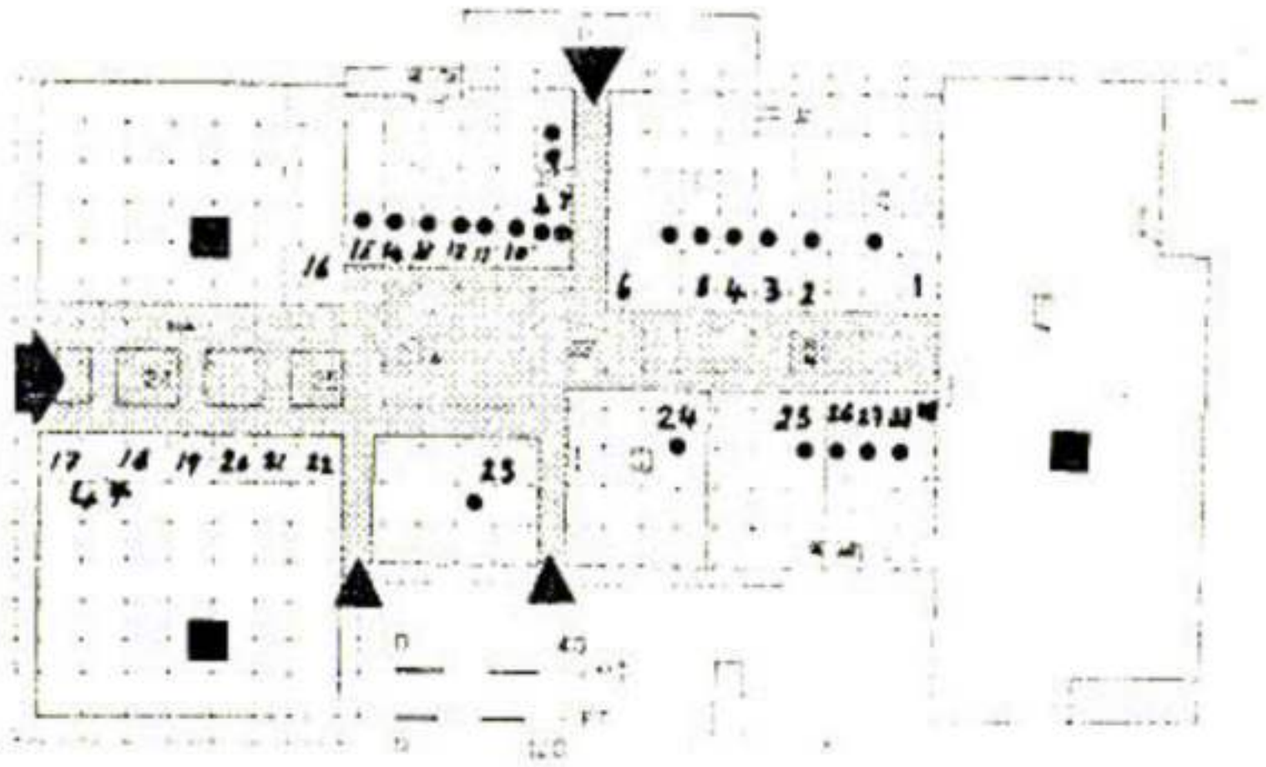


Fig. 102. Mondawmin shopping Center Baltimore.
General layout.

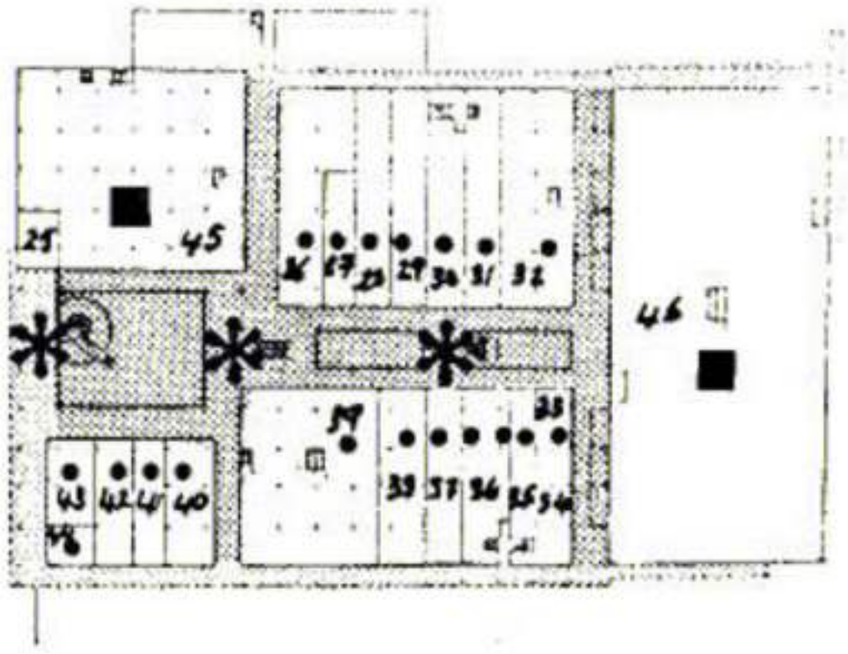
1 *Main pedestrian entrance.*

2 *Secondary pedestrian entrance*

3 *Truck entrance.*



Plans
Upper and Lower
■ *Department store*
• *Shops*
▲ *Pedestrian entrance*
✱ *Entrance from lower level*



Ref. Aloi, Roberto Mercati E. Negozi 1959, Milan. p. 75.

We can begin by stating that American standards for car owners has been deduced 330 cars/1000 persons and commercial centers have designed parking places for 1/30 of the car owners in the population served by the center or it has been calculated in some projects according to the gross leasable area as 5.5 parking spaces per 1000 s.q.ft of GLA but it could be noted that the Downtown center has parking area half that of the regional center.

3) Northgate Shopping Center Seattle, Washington: Fig.(103)

This center has a very simple plan the pedestrian mall is themain spine of the center. Beneath it is a freight tunnel, on each side are store fronts. The pedestrian mall is 14.40 m by 450 m.It consists of 68 shops - 2 supermarkets 3 restaurants, 2 Department Stores, one theatre and one bank. The total floor area is 27869.2 m^2. This Center serves a population of 150,000. This population has been calculated that 89,400 persons will be drawn up to one mile distance and 39,600 will be drawn from the next two miles and 21,000 from the fourth mile that is the maximum trading area will be four miles. The Center has parking area for 4000 cars divided around the center with a difference in front of the main store where parking level here is at the basement level.

Service area to total store area = 6480 m^2 to 27870 m^2

1 : 4.5

The main department store area is 4915 m^2

The secondary department store is 2229 m^2

The base module is 7.20 m

A medium size for the supermarket is 1062 m^2(1)

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(1) *Shopping Centers, Design and Operation Reinhold. Progressive Architecture Library p. 215.*

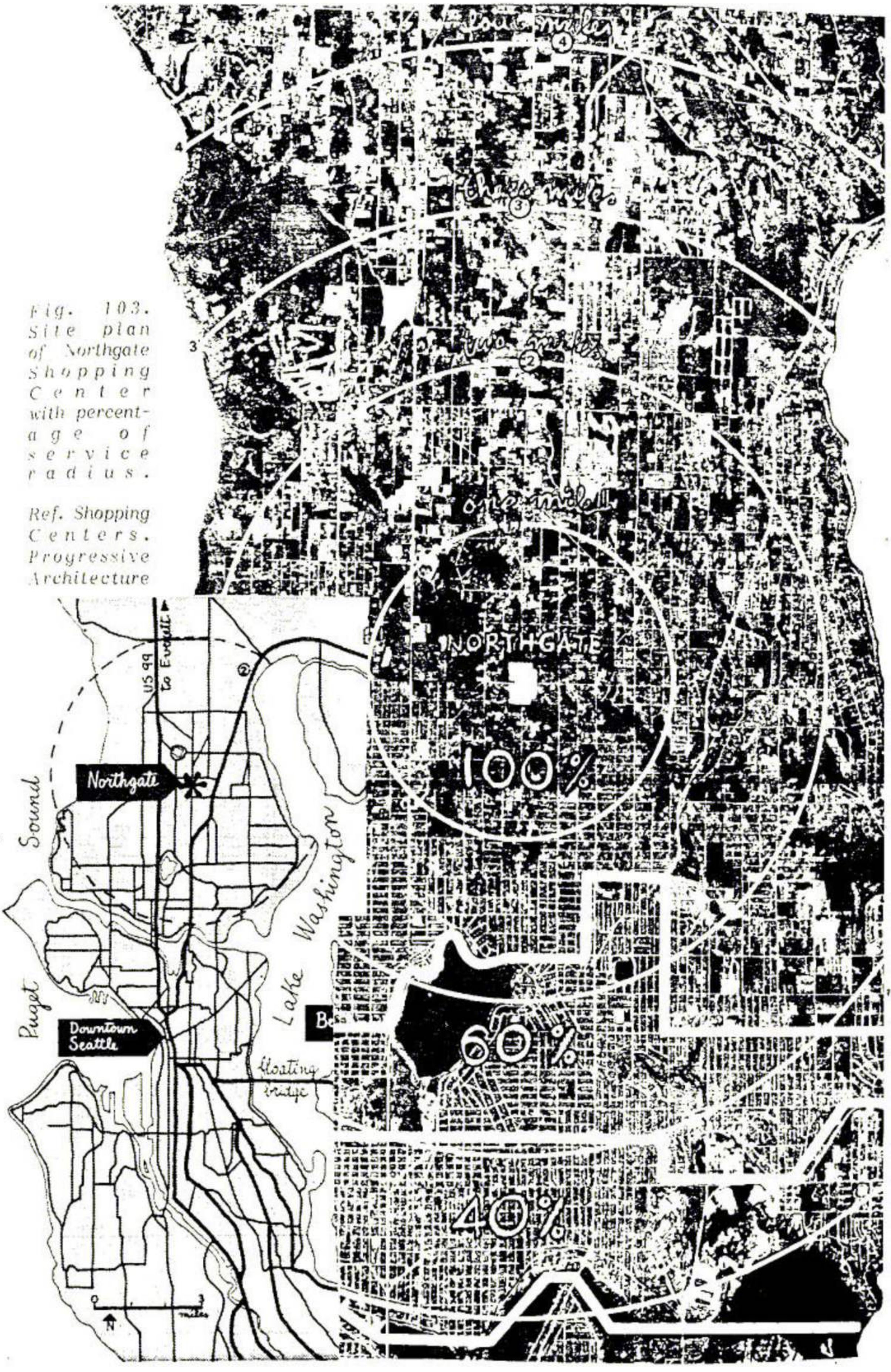

Fig. 103. Site plan of Northgate Shopping Center with percentage of service radius.

Ref. Shopping Centers. Progressive Architecture

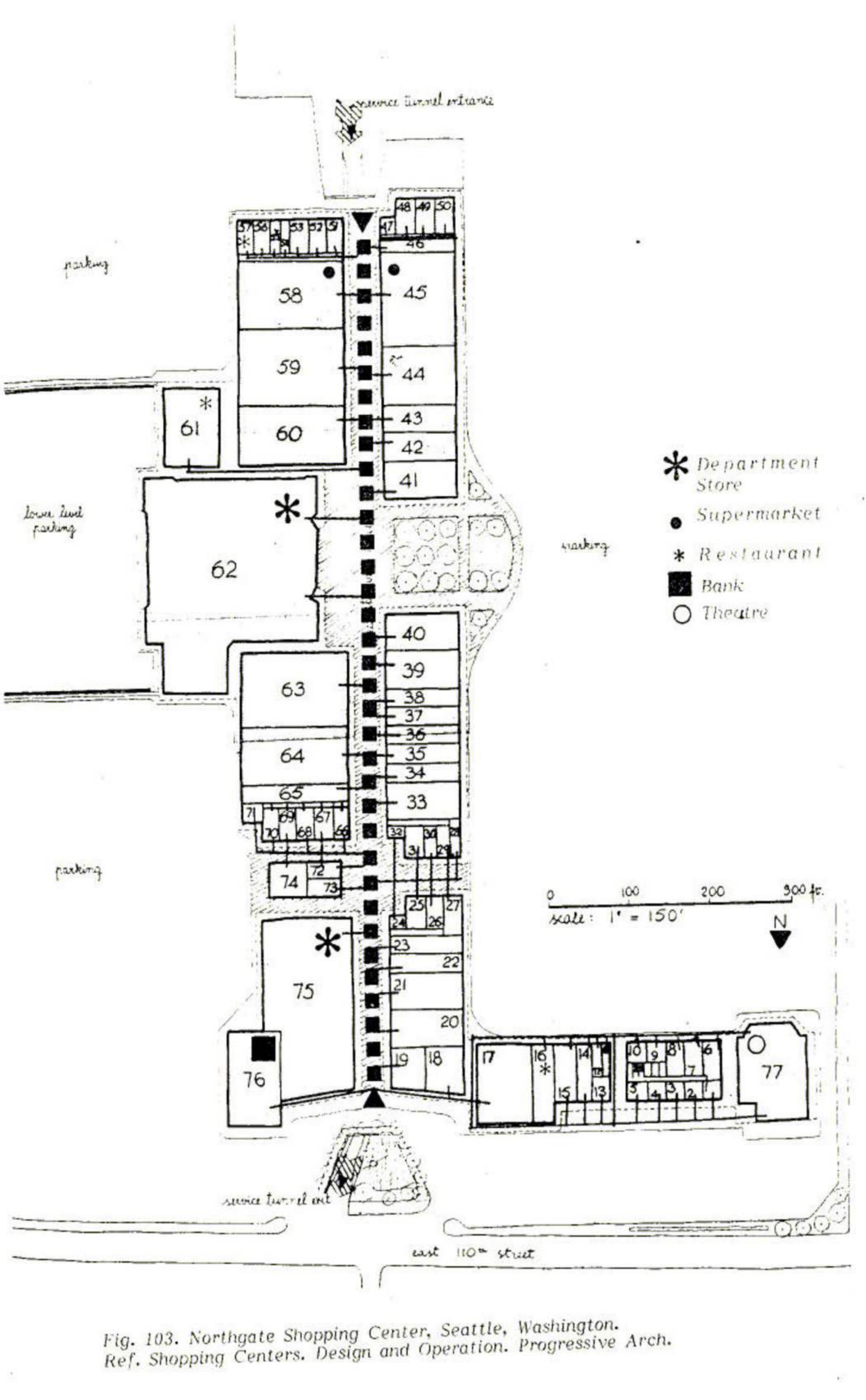

Fig. 103. Northgate Shopping Center, Seattle, Washington. Ref. Shopping Centers. Design and Operation. Progressive Arch.

AMERICAN STANDARDS FOR COMMERCIAL AREAS TAKEN FROM AMERICAN EXAMPLES

Kind of Center	Site Area m²	Population	Service Radius m	Store Area to Service malls	Parking Places	Commercial Area to Pop. Fed./1000 Per.	Category of Shops
Neighbourhood	12,000/40,000	2,500-20,000	2250-3000		60-450	1.14 - .2	30 shops 1 super-market
Community	40,000/120,000	20,000-100,000	4500-7500		500-1500*	.2 - .3	30-40 shops 1 D.S.
Main Center	160,000/400,000	100,000-25,000	120,00-150,00	4.5 : 1	2000-4000	.3 - .38	50-60 shops 2-3 D.S. 1-2 super-market

* Figures stand for 1/30 of car owners of the served population, car owners defined by American Statistics as 330 cars/1000 persoons. Commercial area to developed areas served 2.65%[*1]

[*1] Hartland Bartholomew. Land uses in American Cities. Harvard University Press Cambridge 1955.

Examples for Commercial Facilities in Europe*

Britain Taken as an Example:

The Greater London Plan of 1944 was for a series of Newtowns between England. Scotland and Wales the Population within the heavily urbanized areas was to be dispersed in Newtowns within the suburbans and Outer Rings. The regional sphere around the county of London extended to 4,600 sq. miles and the population concieved grew from 8,000,000 to 10,000,000.

Of the planned 33 newtowns eight are located within the London Region:

1) Stevenage.
2) Welwyn.
3) Harlow.
5) Hatfield.
6) Hemel-Hampstead.
7) Bracknell.
8) Crawley.(1)

Retail services in the Newtowns are arranged in the manner of Shopping Centers in the United States with a variety of facilities around a pedestrian mall or plan. The Newtowns are planned as clusters of Neighbourhoods each neighbourhood with a population of 4,000 to 8,000. It has been necessary in some towns to build garages to cover shopping center parking for automobile ownership ranges in then between 50 —— 70 percent compared with 42 percent in London and 46 percent in England and Wales. and car parking in Commercial Centers is calculated as 1/15 of Car Owners served by the Center.(2) e.g. Stevenage Town Fig. (104).

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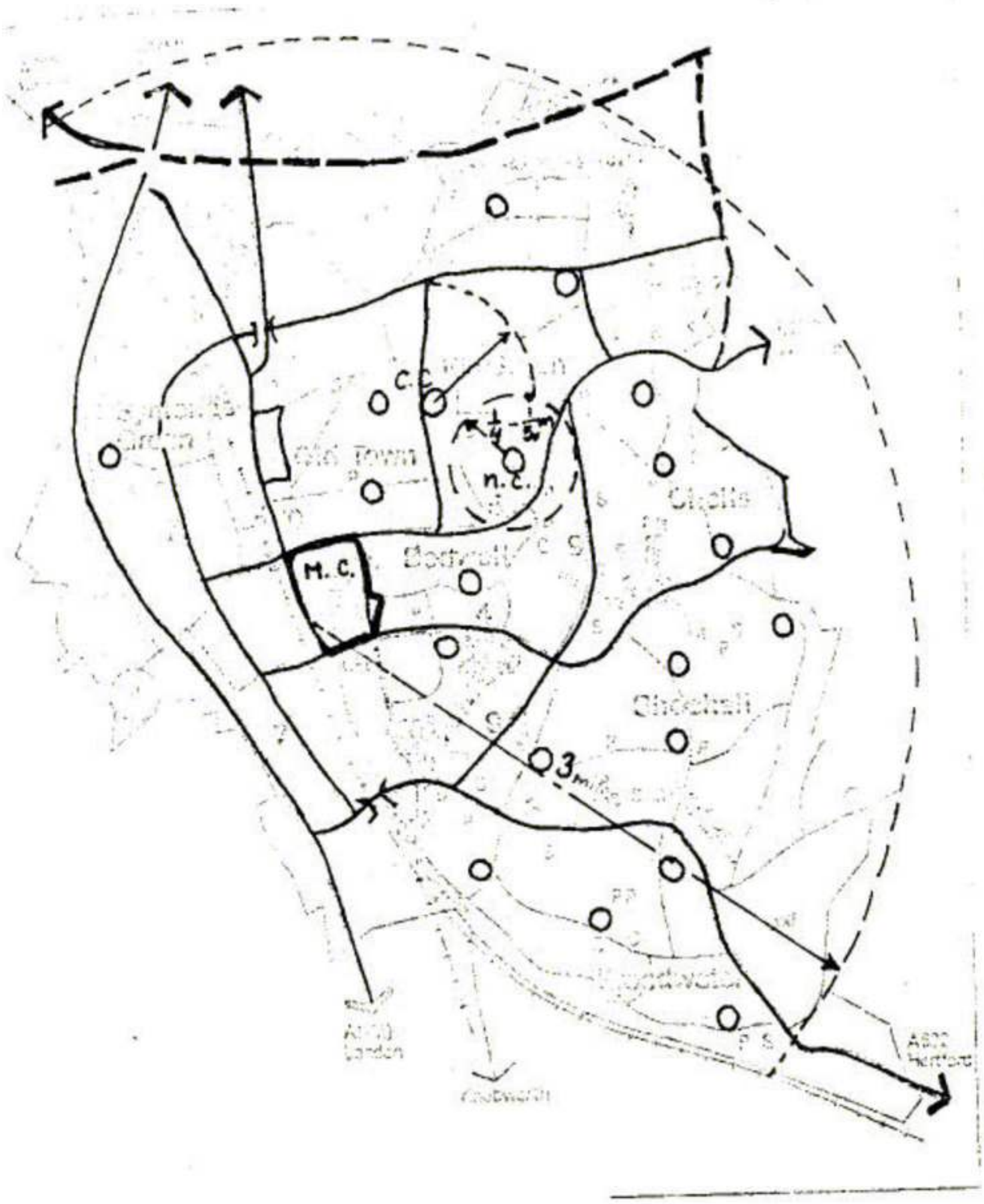
(1) *The urban Pattern. Fourth Edition. Gallion Eisner p. 378.*
(2) *Report of United Nations Seminor, London, June, 1973. The Office of International Affairs, U.S. Department of Housing and Urban Development, Washington.*



B Bus Station
H Helicopter Landing Ground
C Community and Youth Uses.
HO Hospital
P Primary School
S Secondary School
CFE College of Further Education.

Residential Neighbourhoods
Shopping
Industry
Administration
Woodland
Farmland Open Space
Recreation
R Railway Station

OUTLINE PLAN
Scale of Miles

Fig. 104. Stevenage

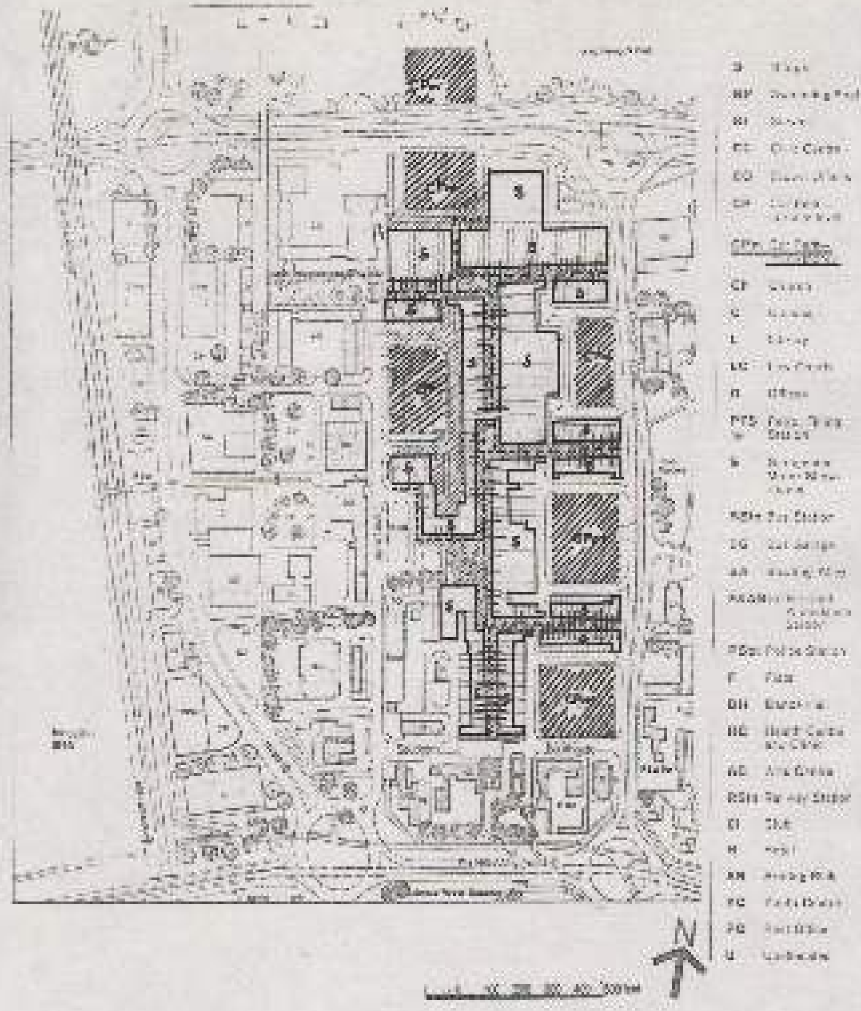


Fig. 104. Stevenage. Main Center

Shopping Facilities in France:

Bounded by a reduced perimeter of development the planners of Evry, a newtown in Essone, were planning for a population of 500,000 inhabitants 30 km from Paris on an area of 6000 hectares. Fig. (105)

Basis for the design were put down:

- A densely built town center with large public and private services. Total Area 55850 m^2. The Commercial Area covers 10.5% that is 70,000m^2 parking for the whole center is 23.5% about 13034 m^2.

Parking for the commercial facilities is 13% of the whole parking.

The main center serves 235,500 persons Fig. (106). The community center serves from 25 to 40,000 the neighbourhood center serves from 2,500 to 10,000.

Service Radius:

Service radius of the N. Center = 336 m

Service radius of the C. Center = 1320 m

Service radius of the main C. 5000 m

In the French Community for every 1000 we plan for 177 car owners.

Three neighbourhoods have been taken as eamples for the French neighbourhood on the outskirts of Paris in Every Town a new Town almost completed by 1975.

They are Every (1), Courcouronnes, Lises, Fig.(107, 108, 109).

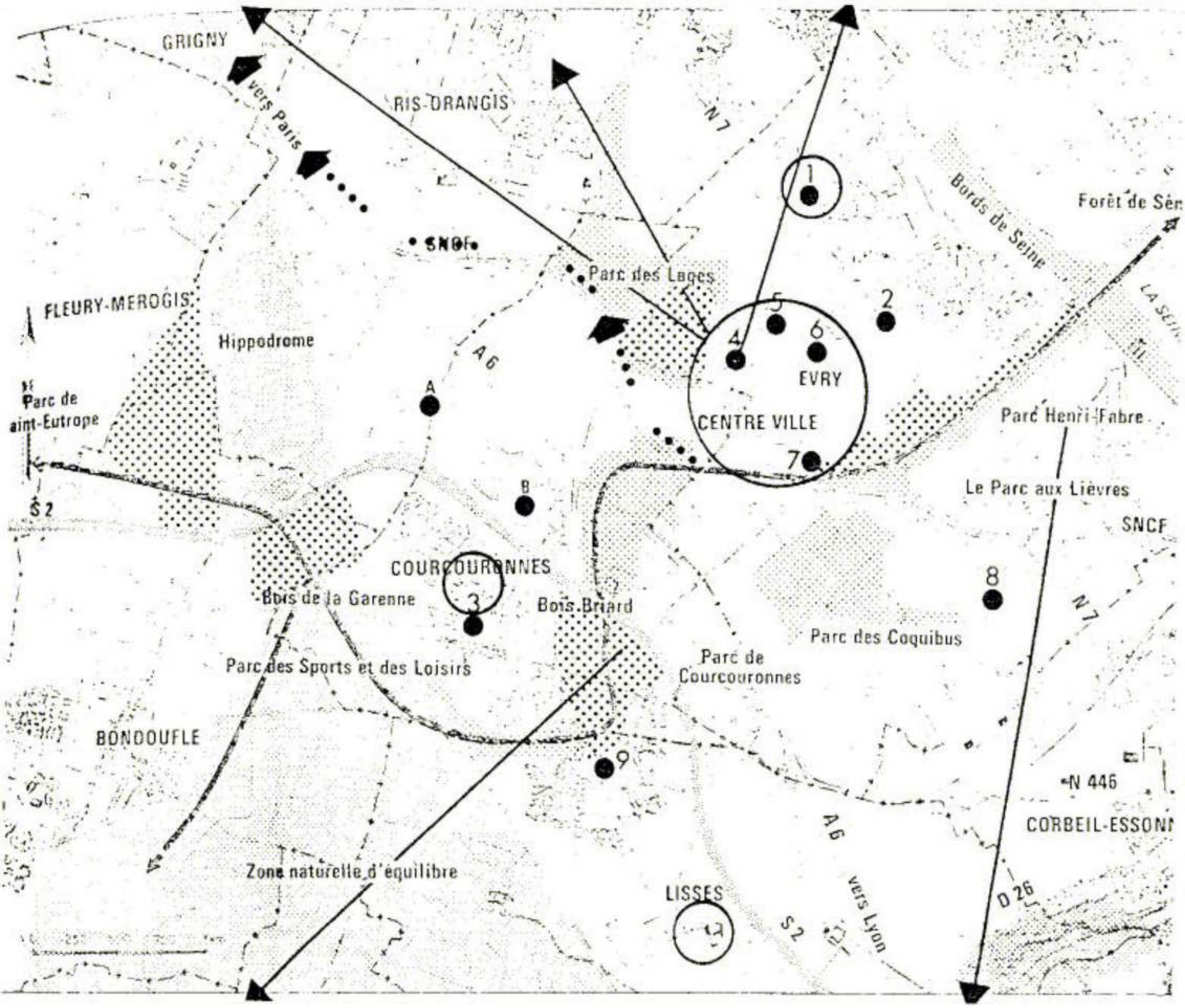


Fig. 105. Location of Every town with respect to Paris and Lyon showing the position of the three neighbourhoods Every (1). Courcouroneres and Lisses.

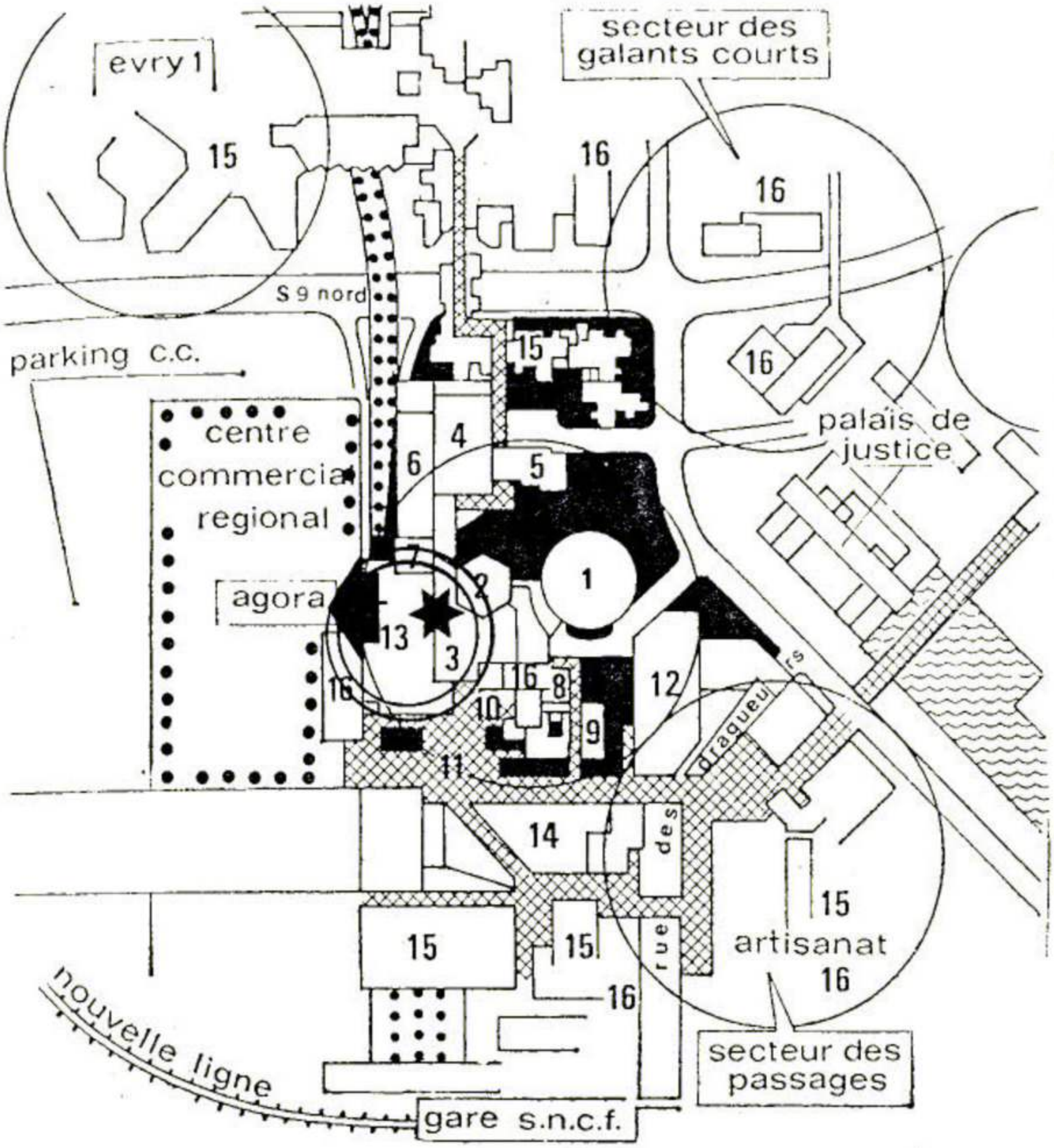


Fig. 106. Layout of Main Center Showing The attachment to a Regional Shopping Center in Every Town.

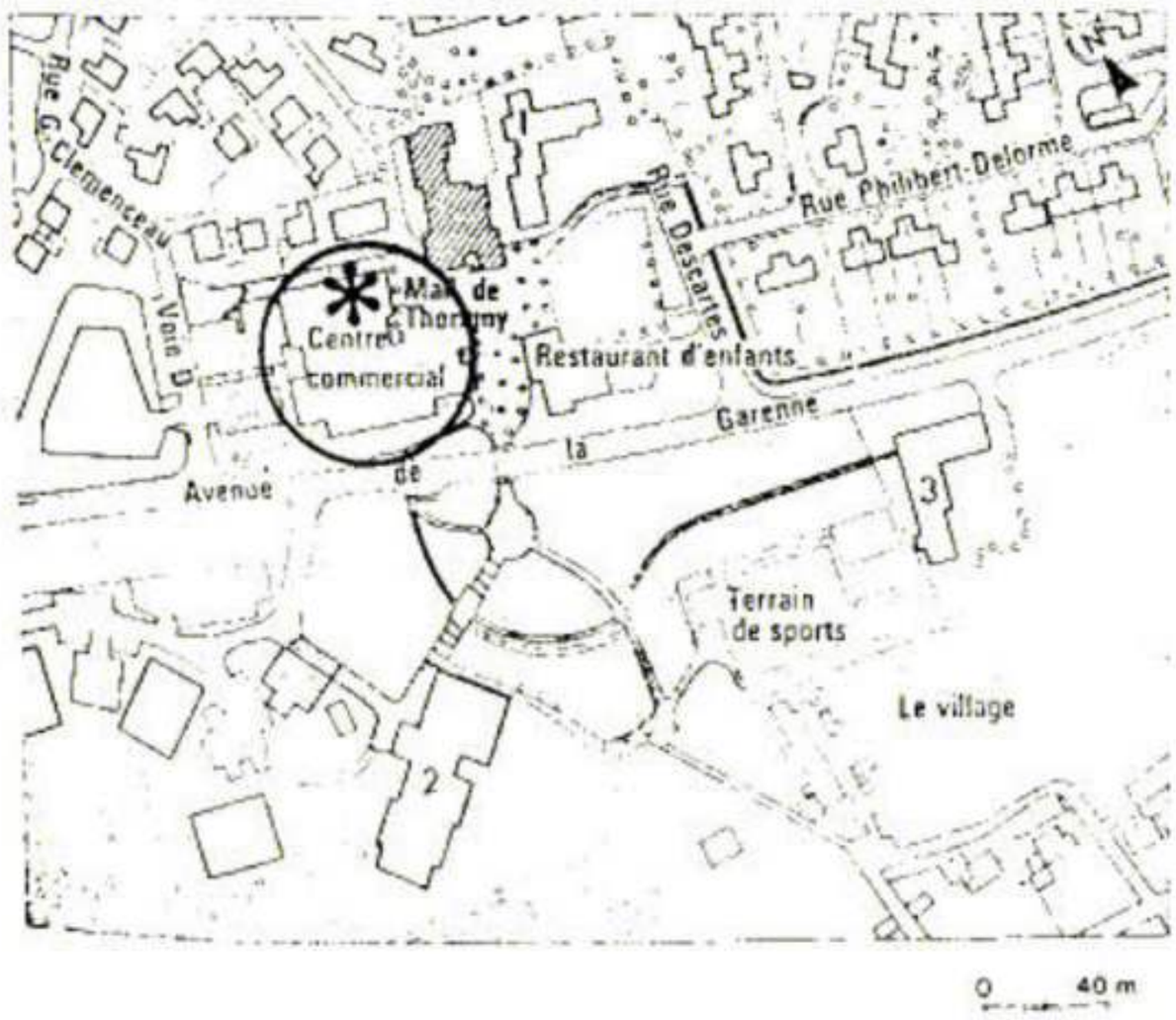


Fig. 107. Detail of Neighbourhood Center, Courcouronnes.

Ref. Cahiers De L'institut D'amenagement et D'urbanisme De La Region D'ile De France volume 52, September 1978.

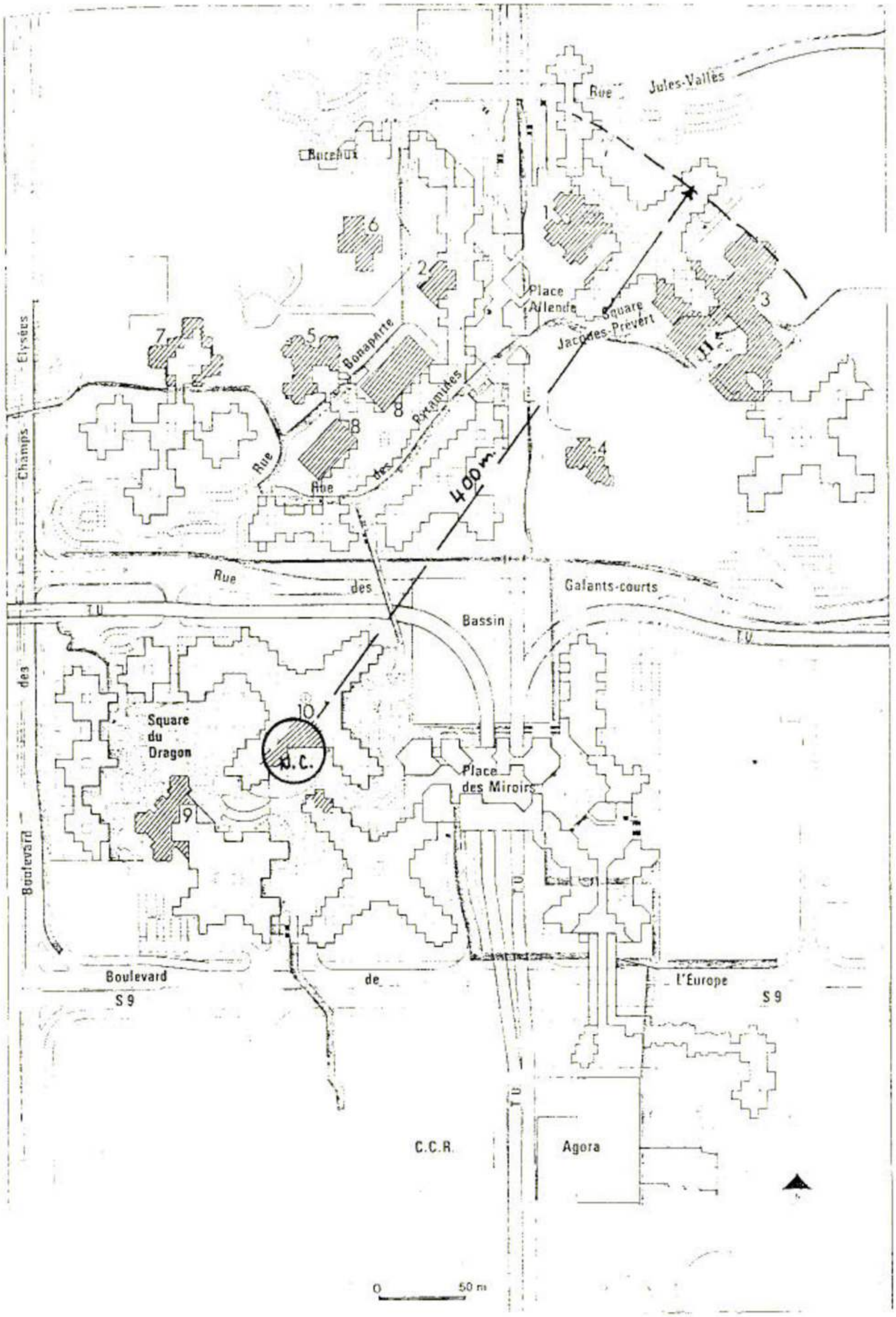
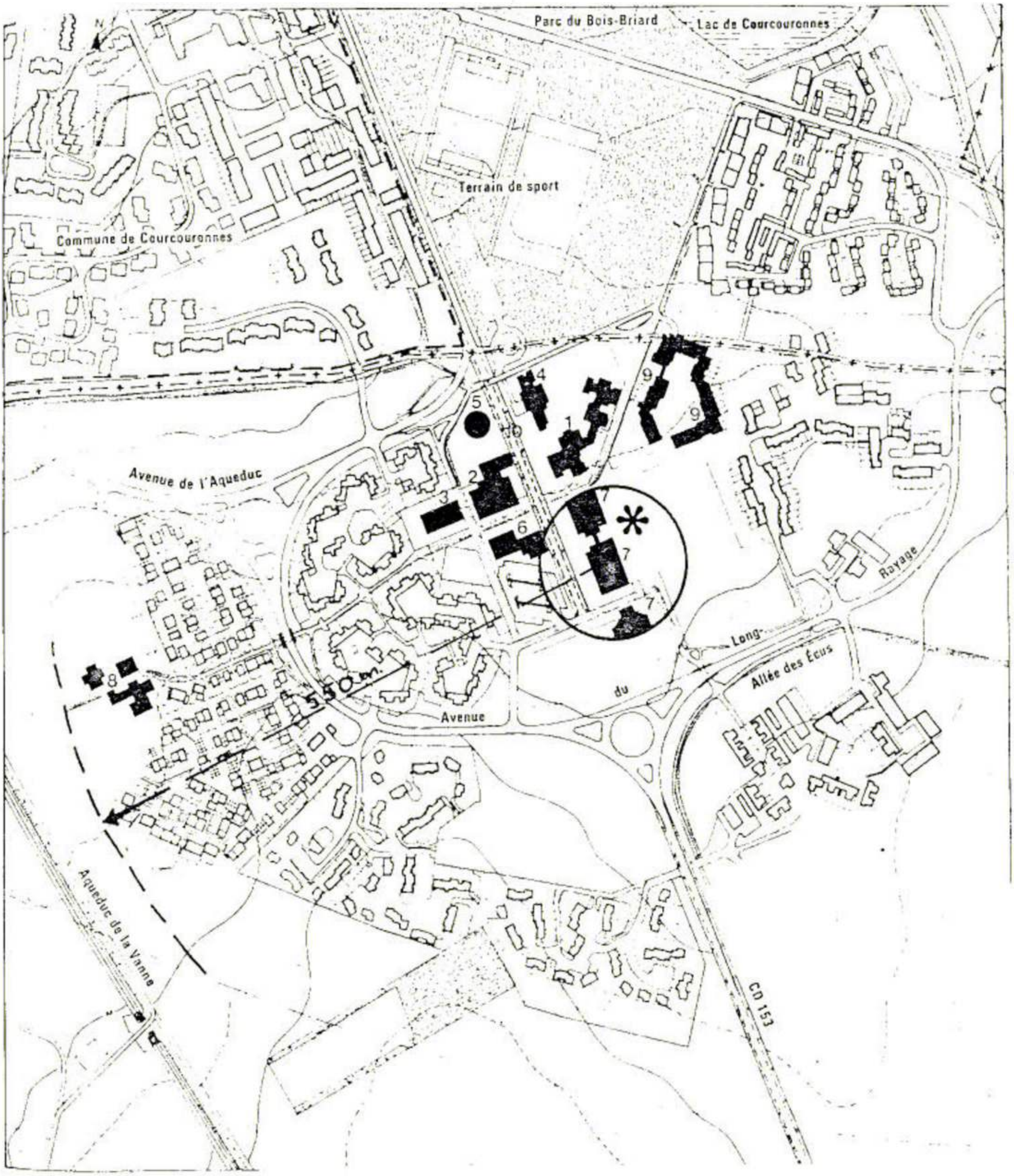


Fig. 108. Every l. One of the neighbourhoods of the maintown. Every Northof its main Center (Agora).



1. *Schools,* 2. *Gymnasium*
4. *Children's Restaurant,* 5. *Swimming Pool*
6. *Administration,* 7. *Commercial Center,* 8. *Schools*
9. *Court,* 10. *Train*

Fig. 109. Neighbourhood Center of "Lisses".

5.5.3. Shopping Facilities in Egypt:

Development of New Settlements in Egypt:

The issues behind the development strategy are; limited agricultural land and a great increase in population. Egyptian settlement is confined to less than 4 percent of the Nation's area which consists of the rich agricultural lands of the Nile River Valley and its Delta. Rapid population growth has resulted in about 8 million new residents over the past decade resulting in the population of Egypt estimated 38 million in mid 1976.

Population Density one of the highest in the world 1,230 people per square km.

In 1907 81% of the population lived in rural areas. This dropped to 56% in 1966 and expected to be 36% by 2,000. As a result cities especially Cairo and alexandria have experienced double growth. Cairo alone from 3.7 million in 1960 to 8.8 million in 1976.

President Anwar El Sadat in April 1974 responded to this problem.

"The life of the Egyptian people cannot remain confined to theDelta and the Narrow Vallery of the Nile..... We cannot wait uptill the population grows to 40 or 50 millions before we begin to act... I believe.... It is time for drawing up a new map for Egypt. This cannot be achieved by setting up scattered projects here and there. It can be done by creating areas for population concentration and new economic activities..... able to equal the pulling power of the capital....."

From hence began a series of new cities all located away from the agricultural land and surrounding the city of Cairo. Fig. (110).

Tenth of Ramadan:

The ultimate population of the city will be 500,000 and the development will be completed in four stages. The first stage development is for a population of 150,000. The new city is located in the desert 50 km east of Cairo. As regards regional road transportation, the recently widened Cairo-Ismailia desert road will be the most important route for connections to Cairo and

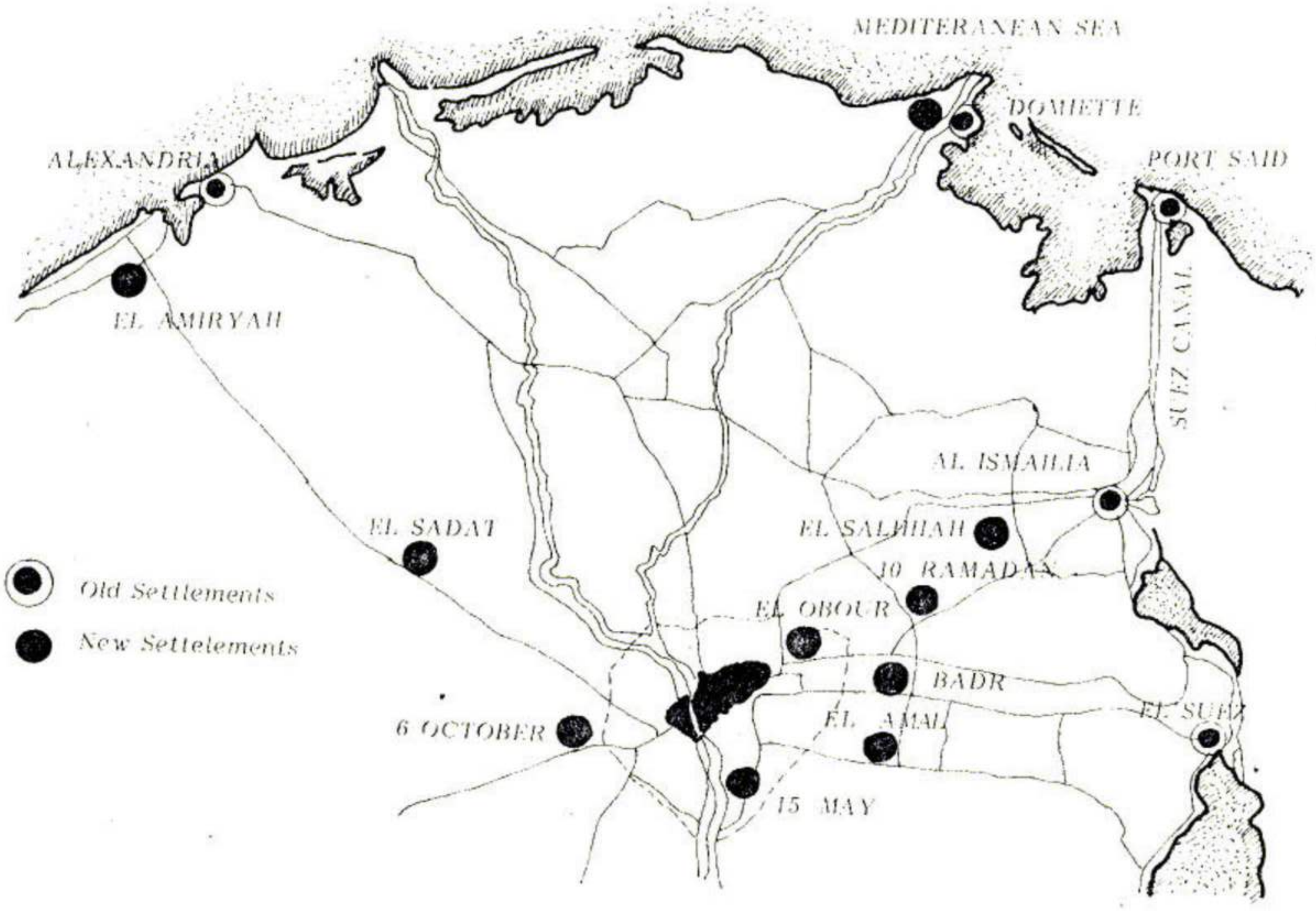


Fig. 110. SITE Plan of New Settlements.

to the Suez Canal region. The location of the City is well chosen. The distances to Cairo and other cities in the region are large enough to stimulate the city to a self-supporting cultural, social and economic life of its own. Fig. (111).

hus development of industrialization for the overriding need to provide jobs for the growing population is the criterion for the success of the city.

The initial industrial tenants will be small to medium sized companies Six public companies started construction on approximately 30 hectares of land. It is anticipated that private industry will follow when services and housing are available.

Public Commercial Services:

Public services are provided on three levels. Most of the services are concentrated on three kinds of centers.

1) The neighbourhood center: to cover the daily and weekly demands of the households.
2) The community center to cover the weekly and monthly demands of the households.
3) The city center to cover the monthly and yearly demands of the households. Fig. (112)

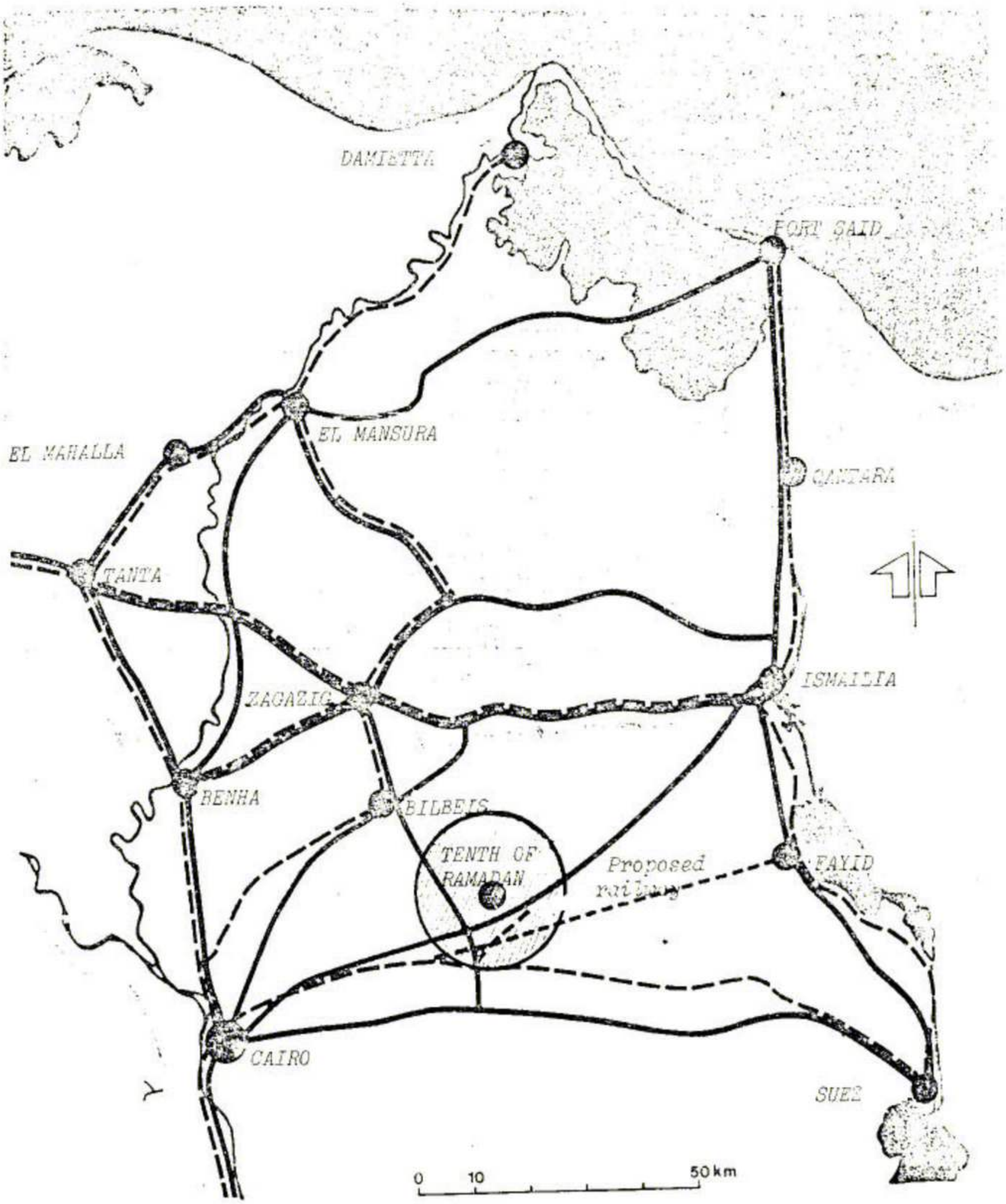
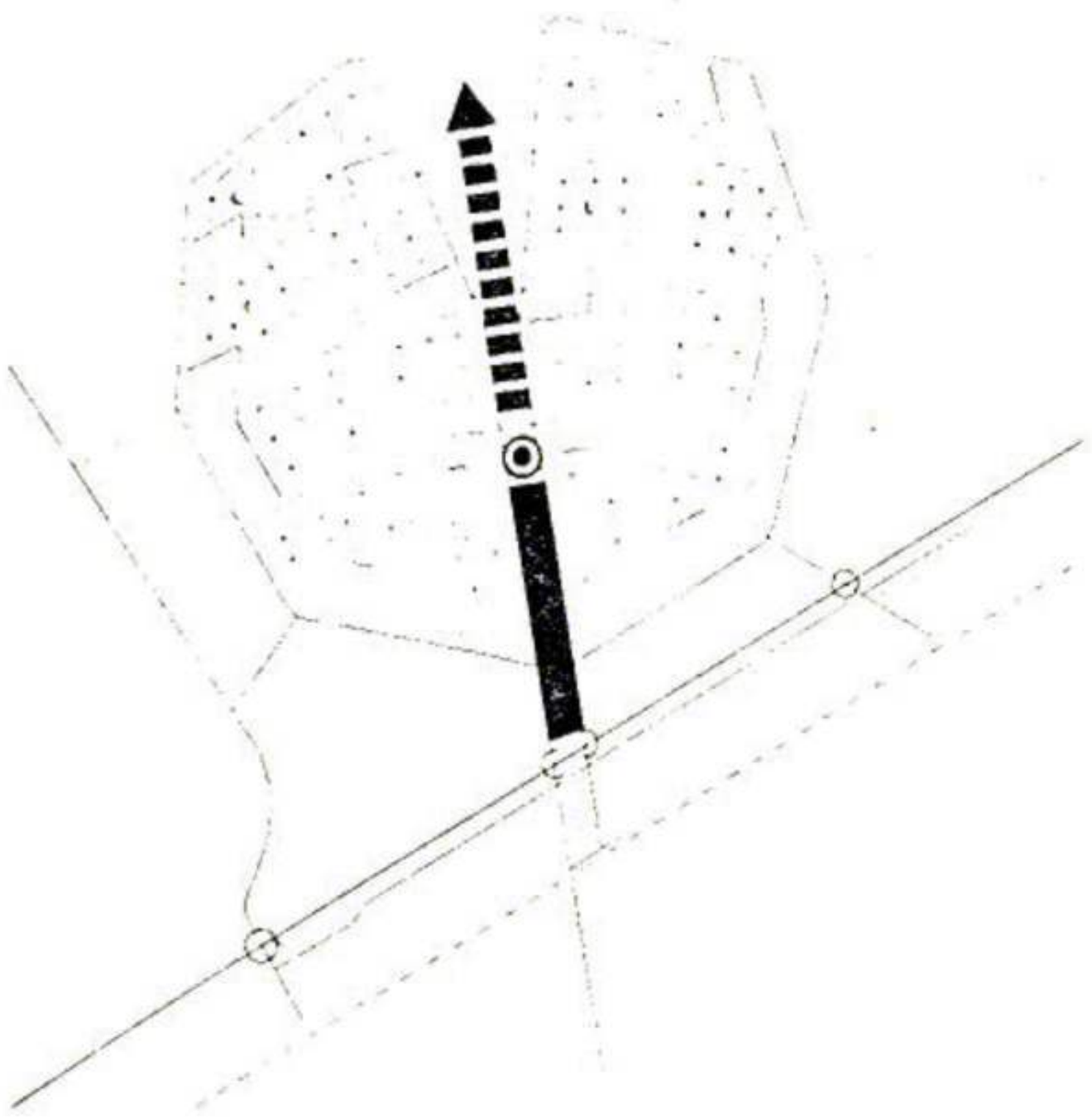


Fig. 111. Location of Tenth of Ramadan.



- *The neighbourhood centre is to cover the daily and weekly demands of the households.*
- *The community centre is to cover the weekly and monthly demands of the households.*
- *The city centre is to cover the monthly and yearly demands of the households.*

This is only a rough grouping in that there will probably be a certain degree of integation between the centres. Shops for daily needs, for example, will also be found in the community and city centre.

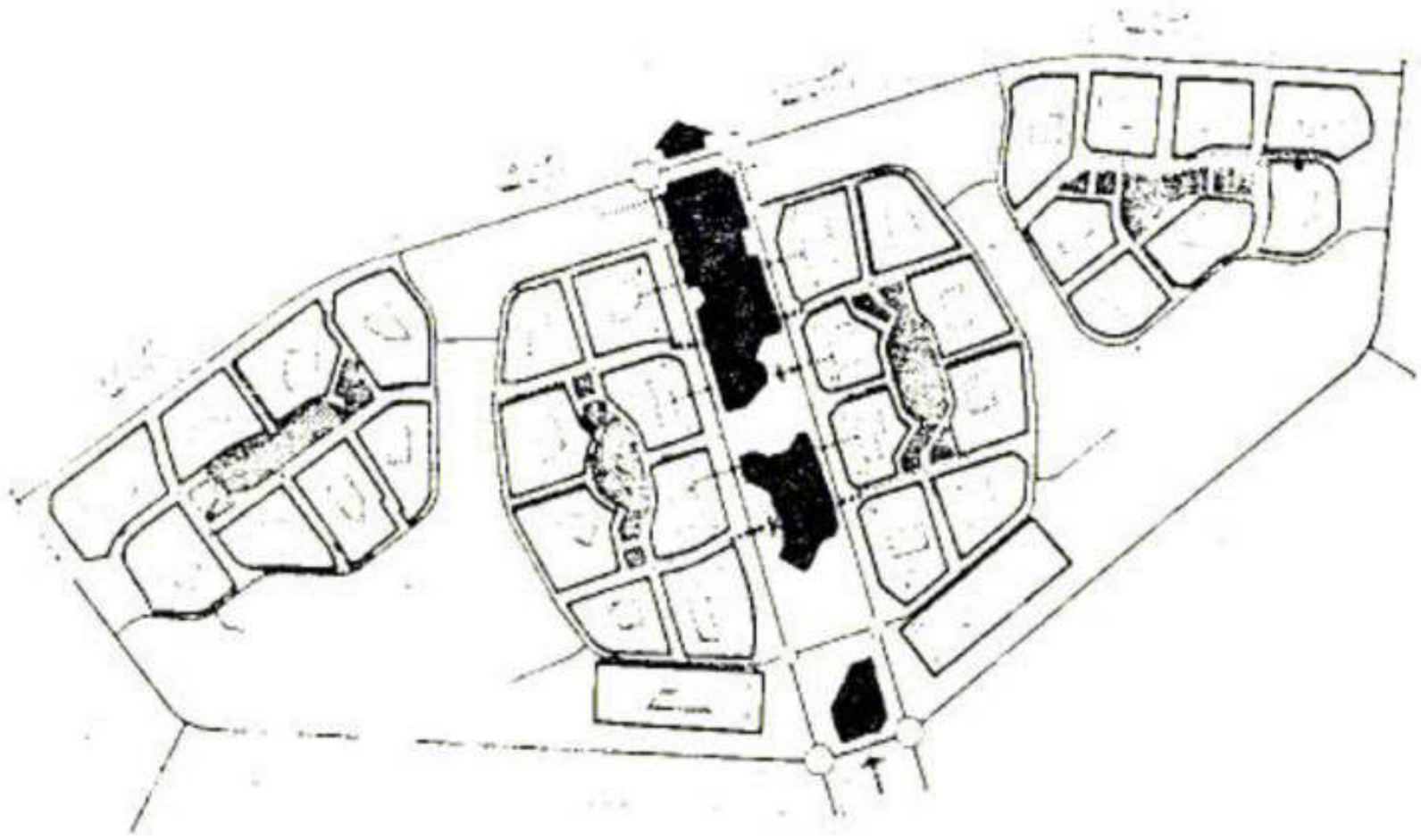


Fig.112 City Center.
commercial Services.

April 1976 Master Plan . Sweco, Shawky

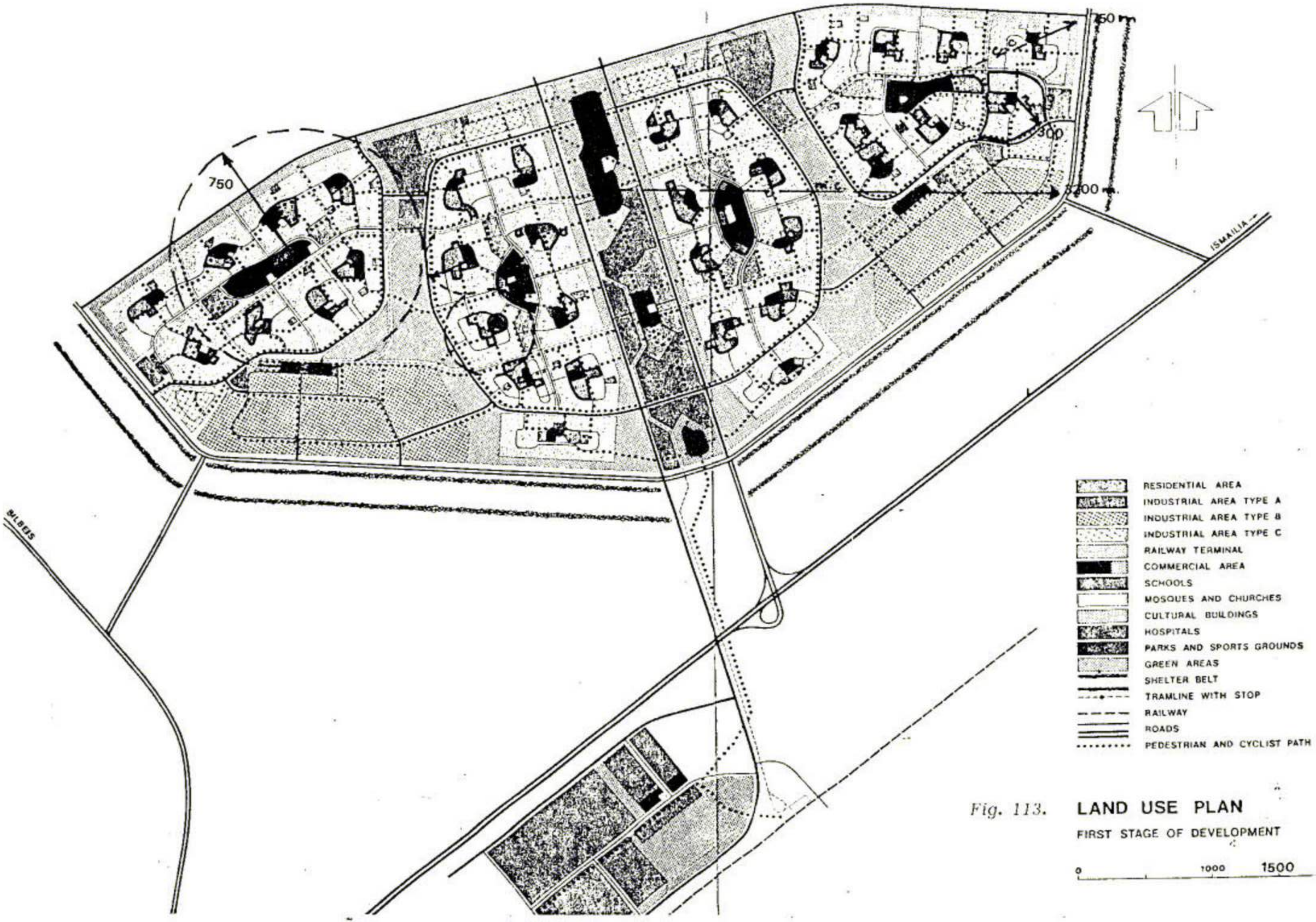


Fig. 113. **LAND USE PLAN**
FIRST STAGE OF DEVELOPMENT

Table (I)

Tenth of Ramadan:

	No.	Area	Av.
Neighbourhood	34	90.000	2.650
Community City Center	4	58000	14.500
City Center	1	45000	45000

Table (II)

Category of Shops (areas/m²):

	Small Shops A	Medium B	Large C	Total
1) Main City Center	-	22.000	23000	45,000
4) Community Centers	14,000	36.000	8,000	58,000
34)Neighbourhood Centers	76,000	14.000	-	90,000
Industrial Areas	20,000	-	-	20,000

Some of the commercial activities will be carried on in the industrial areas. Flexibility should be noted to distinguish between shopping area and workshops area.

Table (III)

Space for loading areas, private parking and open areas is allocated at a rate of 30% of the built-up area.

Commercial Areas:

Commercial areas	Building Floor area m²	Built up area m²	Site area m²
Neighbourhood Center	2,700	2,700	4,000
Community Center	14,500	14,500	22,000
City Center Stage I	45,000	45,000	68,000

Table (IV)

Landscope and parking area/m^2 for commercial buildings:

Neighbourhood Center	1,300 m^2
Community Center	7,500 m^2
City Center	23,000 m^2

Market Squares:

Community centers and the main center will be furnished with market squares for the sale of vegetables, meat, poultry etc. Part of the market squares should be provided with small shops.

Table (V)

Market Squares	Building floor Area	Built up Area	Site Area
Community Center	400	400	2,000
City Center	800	800	4,000

The Neighbourhood Center:

The walking distance used is 500 m that is why most transport to this center will be on foot service areas are fed by service roads designed as cul -de-sacs and loops or by a service court directly connected to an access road.

The neighbourhood center contains:

- Shops.
- Small handicraft workshops.
- A mosque.
- Primary school.

- Public park.
- Open space.
- Parking facilities [86 parking places].

The center is the main meeting point for the people living in the neighbourhood unit and is built around the open space which forms the intersection of the main foot paths in the neighbourhood unit. The mineret of the mosque is expected to be the landmark of the center the neighbourhood center serves a radius of 300 m Community Center.

Centers are surrounded by loops or cul-de-sacs giving access to parking areas and service courts for the shops.

The community center serves a radius of 750 m.
The main center serves a radius of 3200 m.

Al Amal Town:

On a site on the Maadi Kattamia road 36 miles from Maadi. It is only 25 km south of the Cairo-Suez road.

The authorized site is an area of 3,100 acres and is almost a square.

The expected population will be 250,000 persons density 71 persons/acre.

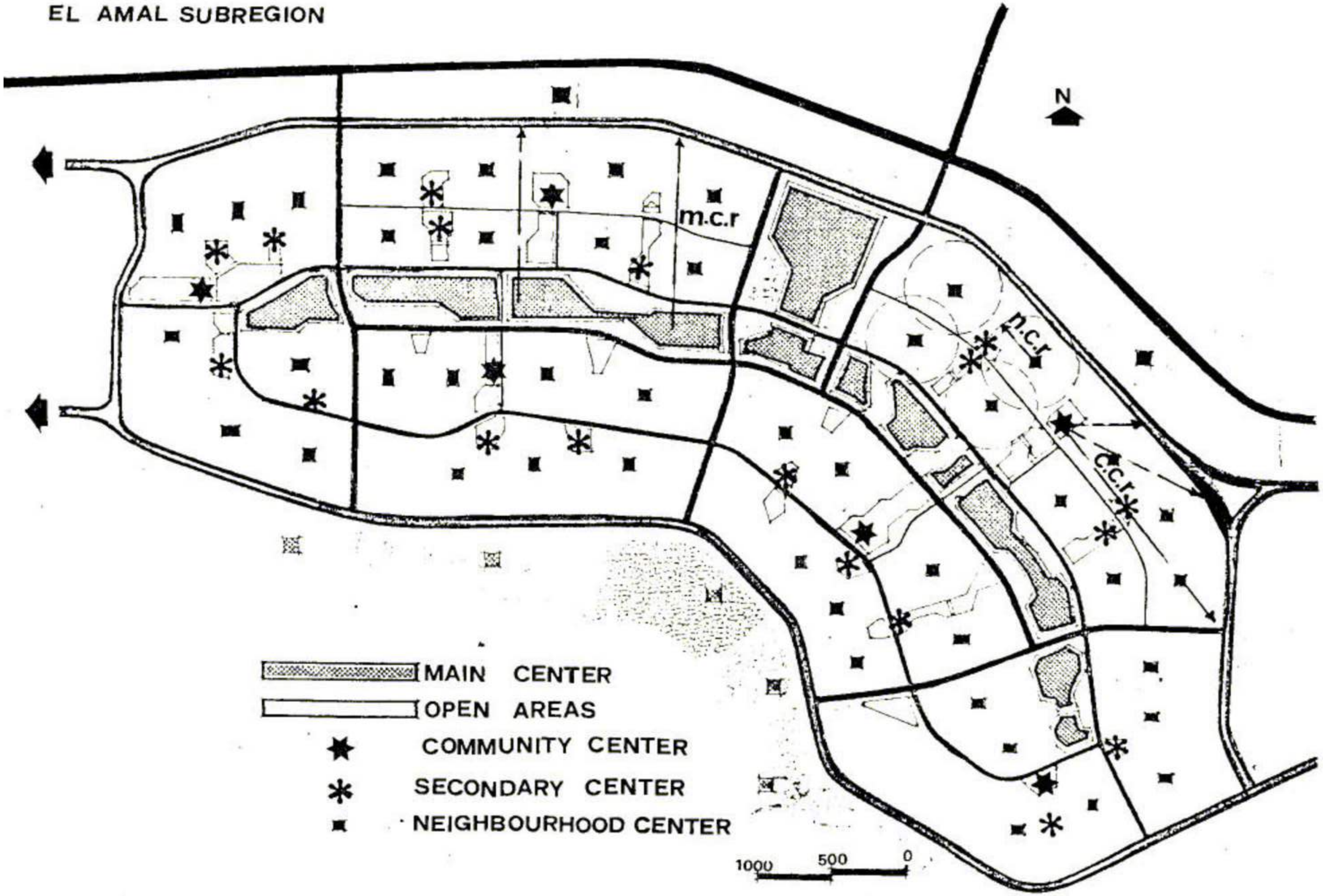
The commercial centers are 5.3% of built-up areas. Built up area is 3574 feddans.

. ' . Commercial areas are 188 feddan.

The main center is linear positioned all along the city serving on both sides 6 communities each surrounded with about 7-8 neighbourhoods amounting to 45 neighbourhoods. Each neighbourhood center serves a radius of 360m.

ig. 114.

EL AMAL SUBREGION



Community Center serves a radius of 1696 m.

The main center serves a strip of 1666 m all through the city. Fig. 114.

Sadat City:

Sadat City is to be a new Industrial City located midway between Cairo and Alexandria on the desert road 95 km north of Cairo. The City is expected to have a population of at least 500,000 after 25 years on 500,000 hectares.

The site is well served by regional transportation systems, a single railway track will connect the city to the major urban centers in Egypt. Fig. (115).

With only one person in 20 expected to own an automobile by year 28 an efficient public transportation and location of jobes to encourage walking and bicycling. The neighbourhood center has a walking radius of less than 500 meters to serve 4,000 to 6,000 residents. The district (community) center has 800 m walking radius. The service facilities are projected for the 500,000 person city on the bases of 100 neighbourhood centers each serving 5,000 persons, 16.6 district centers (each serving 30,000 persons) and 2 sector centers (each serving 280,000 persons), each sector containing 8 district centers (16 all) each district containing 6 neighbourhoods (96) Fig. (116, 117).

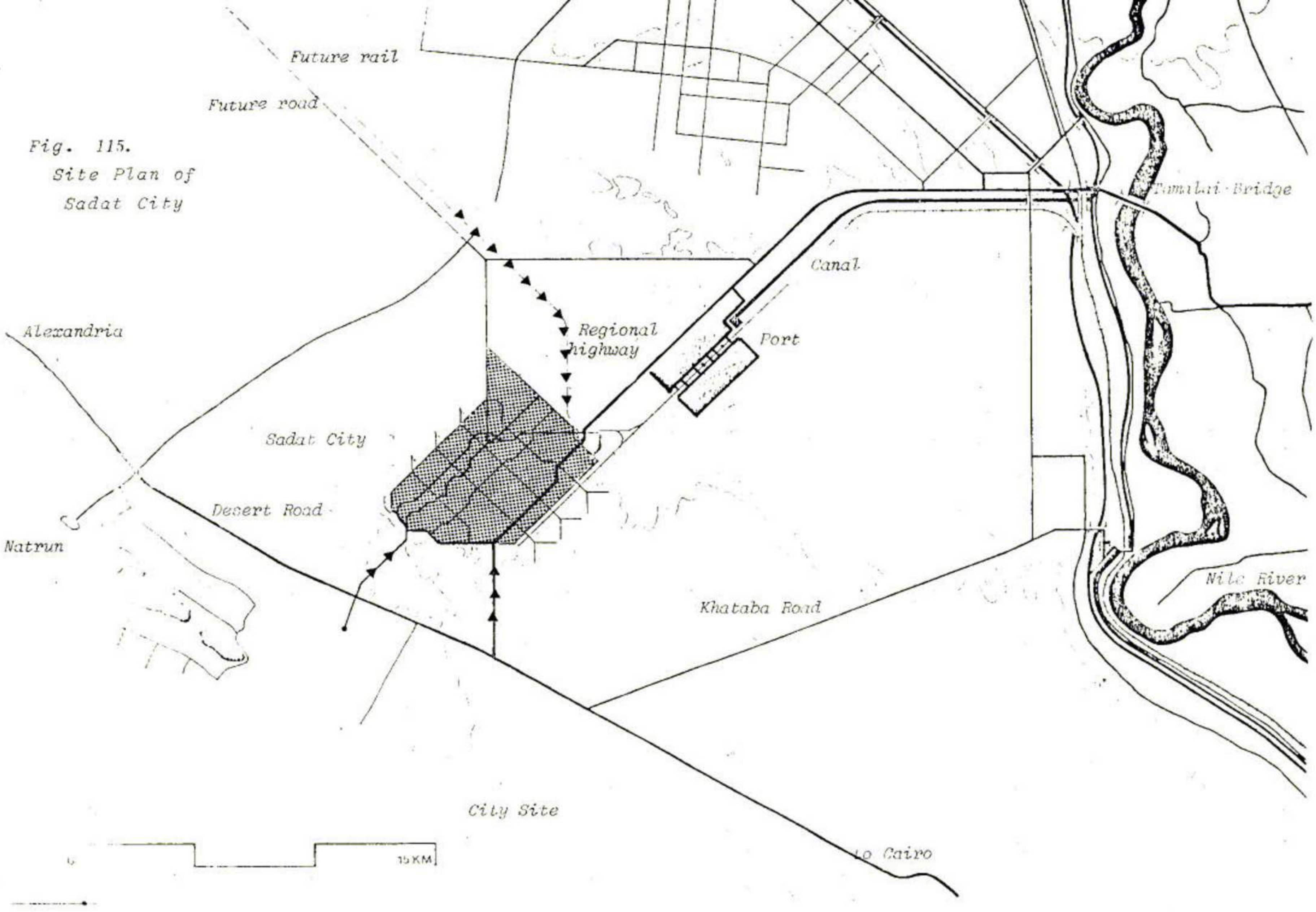
Transportation System Design:

Automobile ownership by year 25 is expected to 50 autos/1000 persons.

Parking space for about 7,400 autos (30% of the estimated 25,000 autos in the 500,000 person city) is proposed to be provided in connection with the centeral spine. Fig. (118).

Along which there is a mall. Fig. (119).

Fig. 115.
Site Plan of
Sadat City



Sadat City
Year 10 Plan.
150,000 Population

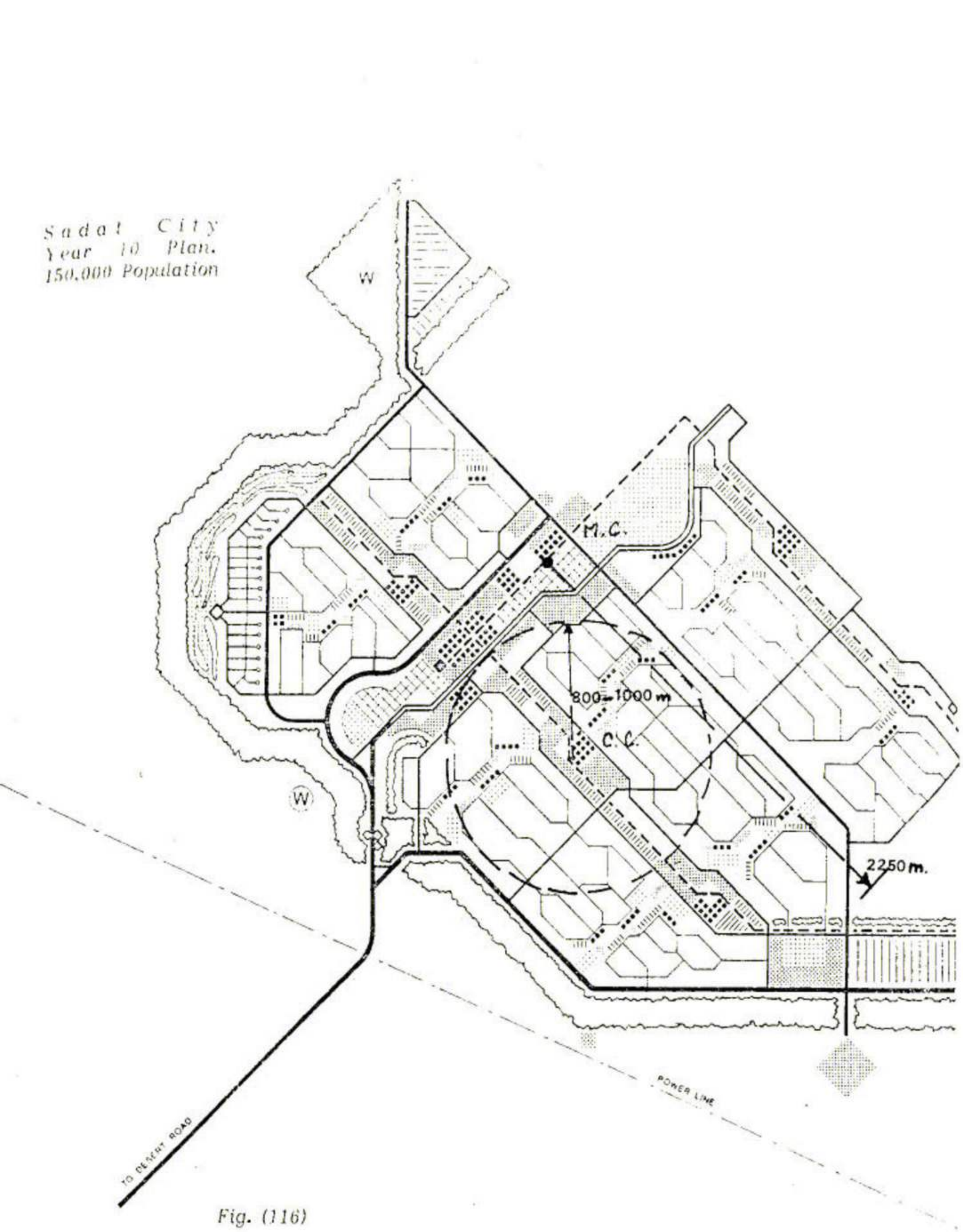


Fig. (116)

M.C. Main Center
C.C. Community Center

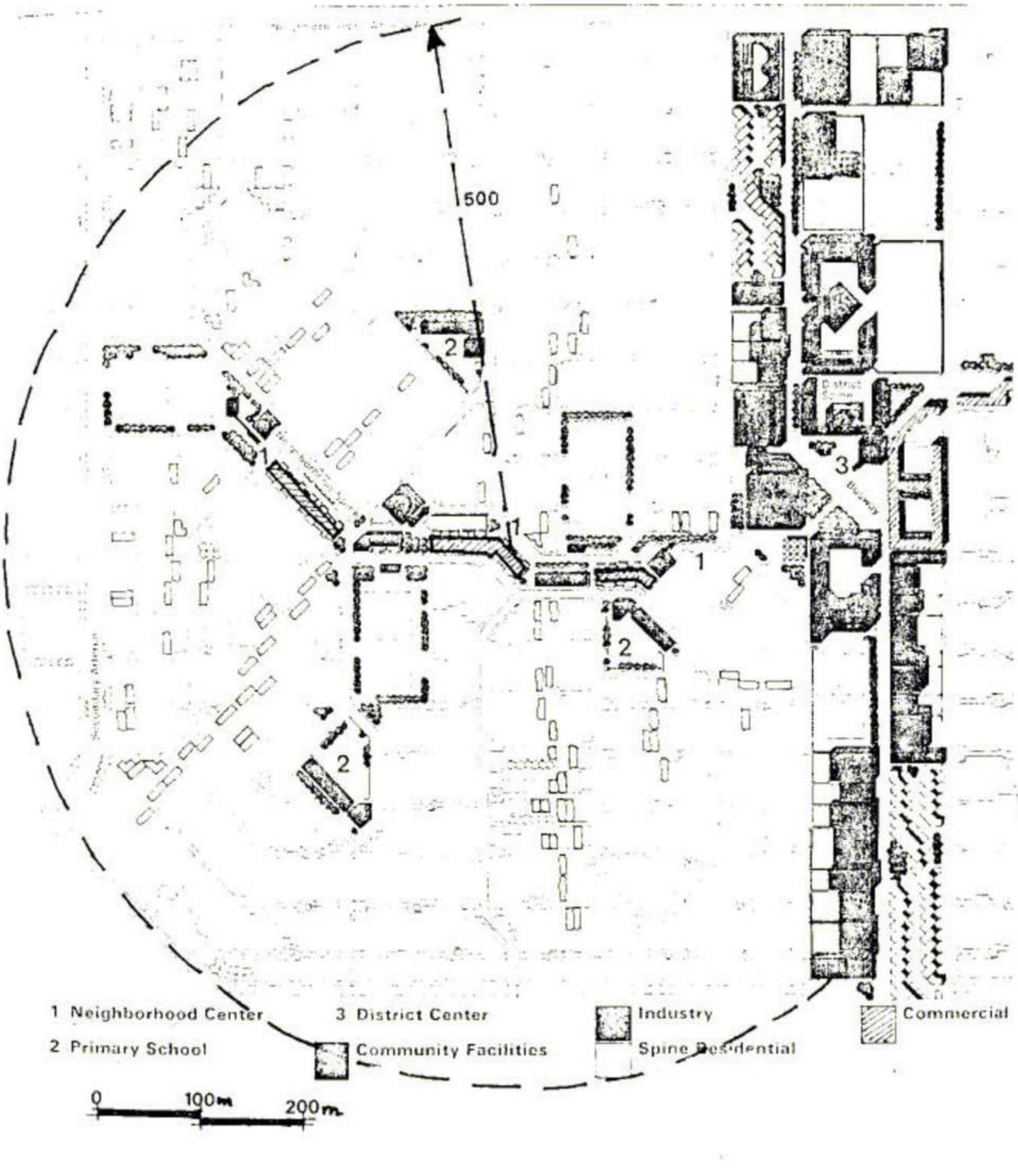


Fig. 117. Residential Neighbourhood with its Center.

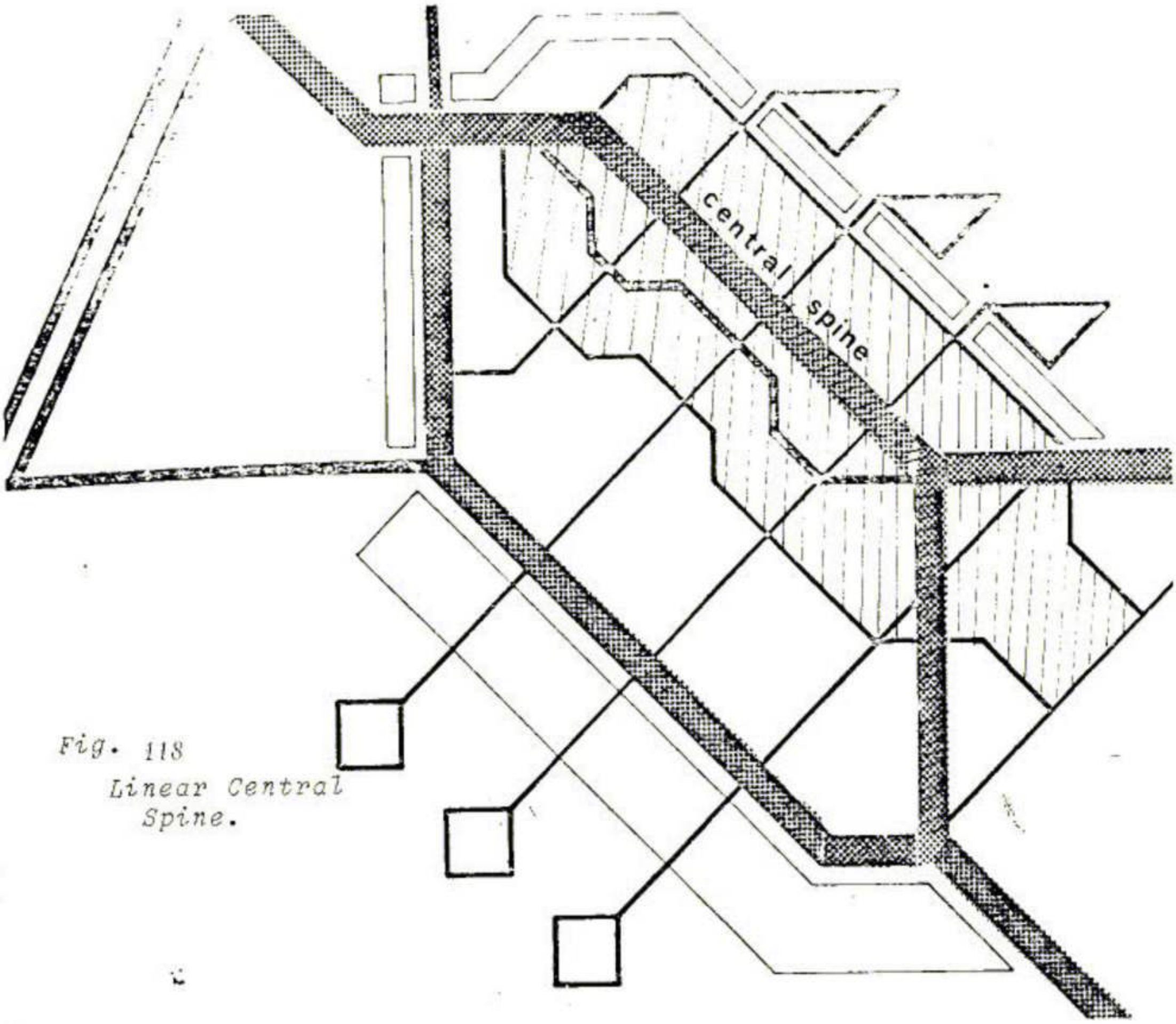
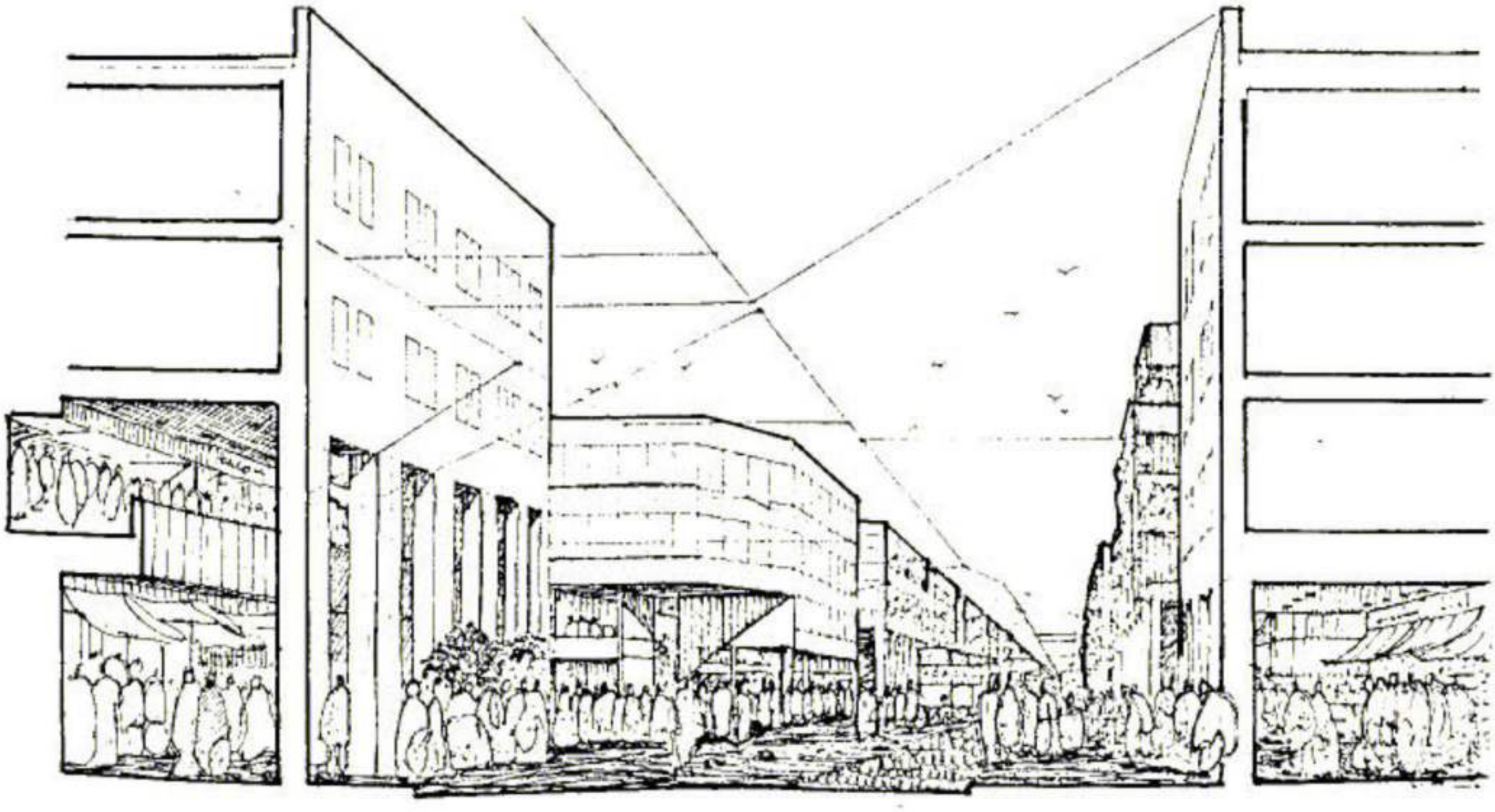


Fig. 118
Linear Central Spine.



Central Mall Arcades

Fig. 119 Status Report 2, Plan Alternatives February 1977.

Heliopolis		Nasr City		El Suez		Port Said		15th of May		El Amal		6th October		New Ameriyah		Sadat City		6th District 10th Ramadan		Land Uses
%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	%	Acre	
42	1359.5	26	1126.2	51	8311.9	39	3067	37	569	57.2	1929	50	4524	47	14157	50	14881	67	12004.8	Residential Uses
		3	133.3	17	2704.8	3	214	22	538.1					4	1207	4	1190	2	447.6	Administration
5	161.9	3	126.2	4	702.4	2	188	3	133.3	5,3	179	7	619	4,7	1414	3	1488	4	666.7	Main Centers
		10	414.3	.,5	50		12	2	54.8					.,8	25	2	595	1	119.1	Educational Uses
14	454.8	13	569	12	1947.6	22	1810	1	16.7	17	271	11,5	1048	17,7	5271	10	2976	9	1666.7	Industrial
		22	947.6	6	940.5	10	7833	12	290.5			4	381	11,9	3583	15	4464	8	1428.6	Recreational and Open
39	1261.9	4	166.7			1	83			7,8	262	19	1714							Tourism
		19	821.4	7	1162	9	702	11	266.7			8,5	762	9,5	2860	10	2976	8	1428.6	Roads
				.,5	24	5	393	10		12,7	429			.,8	240	2	595			Transportation
				2	379	9	683					8,5	762	3,2	961	2	595	1	95.2	Other Uses
3400		4520		17008		8333		2588		3538		9500		31630		31250		18750		Total/Acre Area
30,000		200,000		1,000,000		750,000		150,000		250,000		350,000		1,000,000		1,000,000		500,000		Total Population
88		44		59		90		58		71		37		32		32		27		Total Density/Acre

RELATION BETWEEN POPULATION AND COMMERCIAL CENTER AREAS IN [8] EGYPTIAN SETTLEMENTS

CITY	El Sadat	10th Ramadan	Helwan 15 May	El Amal	New District Heliopolis	Nasr City	New Amiria	6th October
Population	1000,000	500,000	150,000	250,000	30,000	200,000	1.000,000	350.000
Commercial Areas	1488Fed.	666.7Fed.	133.3Fed.	179Fed.	161.9Fed.	126.2Fed.	1414Fed.	619Fed.
Density/Feddan	672	750	1125	1397	185	1585	707	565.4

Thus we can assume a standard for the population served by 1 Feddan of Commercial Centers Areas to be approximately 900 persons.

RELATION BETWEEN COMMERCIAL CENTER AREAS AND THE TOTAL CITY AREA

CITY	El Sadat	10th Ramadan	Helwan	El Amal	New Amiria	6th October	Port Said	Nasr City
Commercial Center Areas	1488Fed.	666.7 Fed.	133.3Fed	179Fed	1414 Fed.	619 Fed.	188 Fed	126.2 Fed.
Total City Area	31250 Fed.	18750 Fed.	2588 Fed	3538Fed	31630Fed	9500Fed	8333Fed	4520Fed.
Percentage of 1/2	5%	4%	5%	5.3%	4.7%	7%	2%	3%

Thus we can assume according to the first six examples that the standard percentage that could be used is 5.2% of the Total City Area could be calculated for Commercial Center Areas.

It could be noticed that the percentage of the last two examples are different than the others. Port Said City on one hand should not be treated as an ordinary settlement being one of the major Ports on. The Mediteranean for Egyptian imports and Exports and Nasr City is partly dependent on the commercial facilities in Heliopolis and other surrounding zones.

PERCENTAGE OF PARKING PLACES IN COMMERCIAL CENTERS TO POPULATION

CITY	EL SADAT	EL AMAL	HELWAN	10th RAMADAN
Population	500,000	250,000	150,000	500,000
Car owners	50% 25,000	5% 12,500	3.4% 5060	5% 25,000
Number of Parking Places in Main Centers	30% 4,700	- -	15% 750	15.7% 3938

It is important to note that these rates are all taken from foreign rates. The Helwan and 10th Ramadan are German rates El Sadat rates are taken from "Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, 1971". El Amal Rates are not available. The main rate that 5% of the population have car owners is a very low rate and probably will prove not successful on being experienced

SERVICE RADIUS OF DIFFERENT COMMERCIAL CENTERS IN THE NEW DEVELOPMENTS

CITY	EL SADAT	EL AMAL	HELWAN	10th RAMADAN	MEDIUM
Neighbourhood Center	500m	360m	275m	300m	360m
Community (District) Center	800m	1100m	1900m	750m	1140m
Main Center	3456m	2078m	-	3200m	3000m

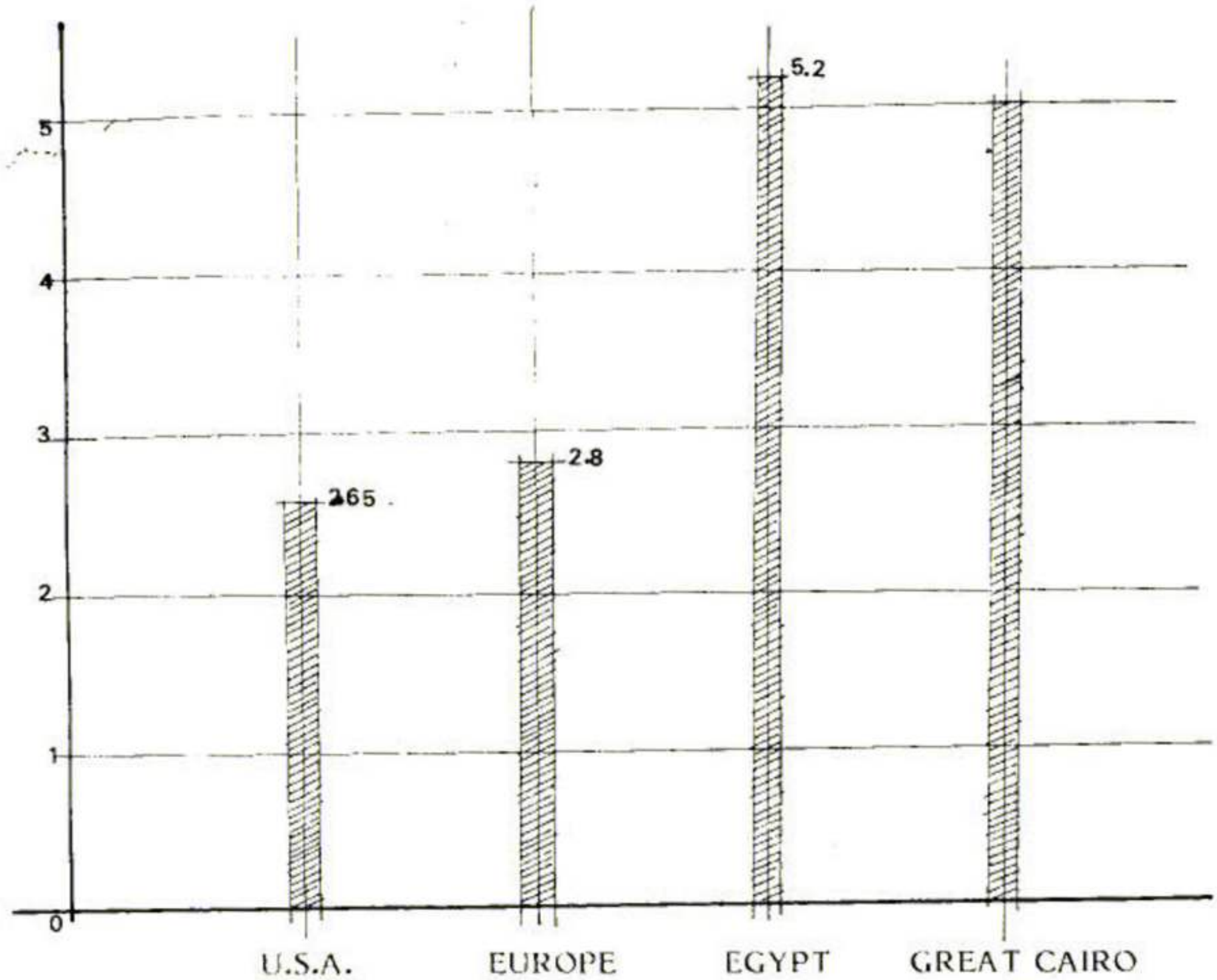
SITE AREAS OF DIFFERENT COMMERCIAL CENTERS IN THE NEW DEVELOPMENT

	EL SADAT	EL AMAL	HELWAN	10th RAMADAN	MEDIUM
Neighbourhood Center	5,000m²	5,092m²	4,592m²	4,000m²	4,700m²
Community (District) Center	32,500m²	32,000m²	48,000	22,000m²	34,000m²
Main Center	78,000	97,000m²	-	68,000m²	81,000m²

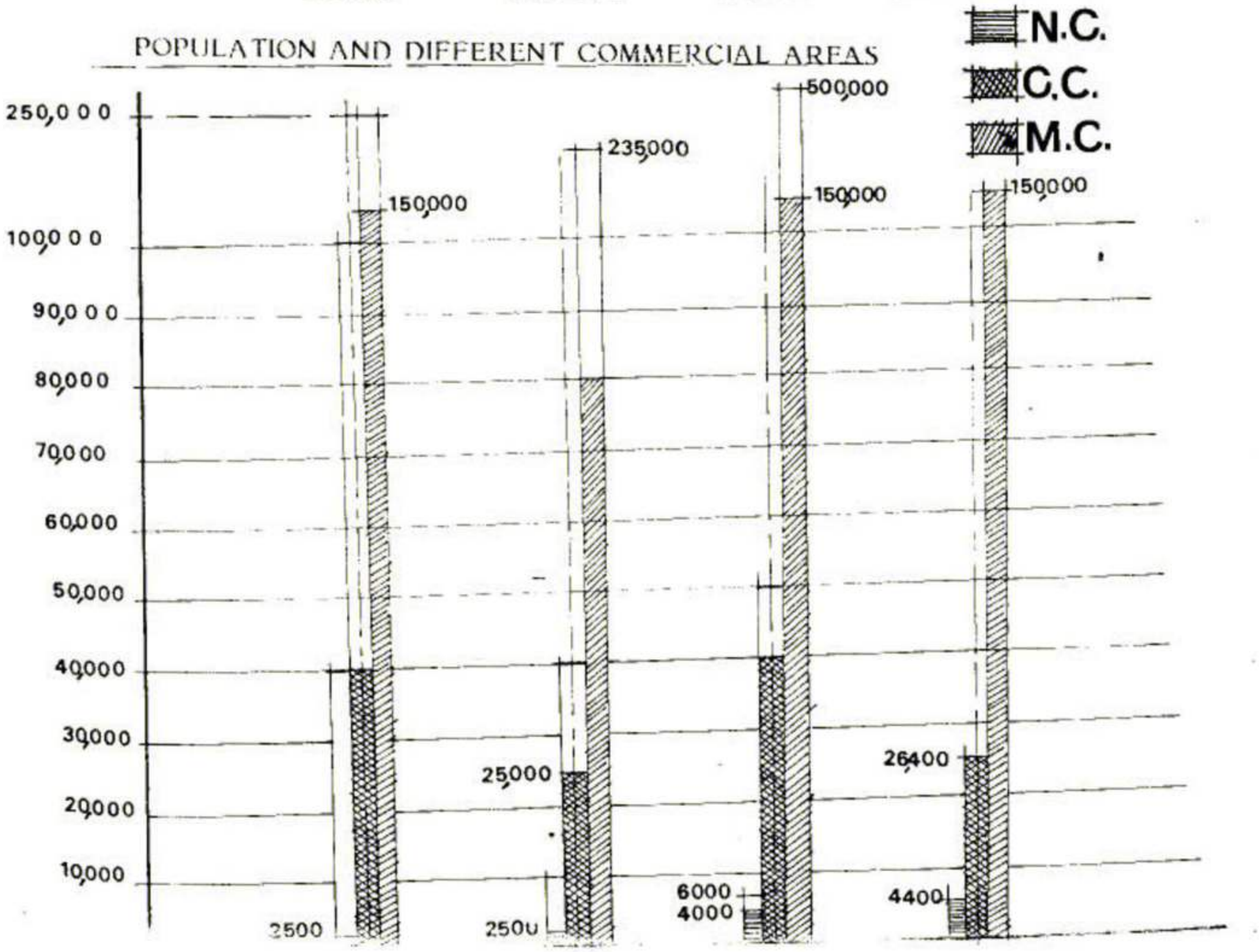
COMPARATIVE ANALYSIS IN PROPERTIES OF SHOPPING FACILITIES IN U.S.A., EUROPE, EGYPT AND GREAT CAIRO

CITIES		U.S.A.	EUROPE	EGYPT	GREAT CAIRO
Different Commercial Areas to Population Area in Feddan/ 1000 person	N. Center	1.14 .2	.2	.3 .2	.25
	C. Center	.2 .3	.3	.34 .2	.45
	M. Center	.3 .38	.47	.4	.4
Parking/Commercial Center	N. Center	248 3960	300 800	30 60	50 75
	C. Center	3960 14,850	900 1800	250 456	300 465
	M. Center	14,850 24,700	3000 4000	1,500 4000	20,000
Car-Owners/Population		330/1000	500/1000	50/1000	177/1000
Service Radius	N. Center	2250 3000m	330 850m	360m 400m	240m
	C. Center	4500 7500m	1320 2500m	1140m 2000m	1800m
	M. Center	120,000 150,000m	5000m	3000m	3000m
Commercial Site Area	N. Center	12,000 40,000m²	2,500 10,000m²	4,700m²	4,600m²
	C. Center	40,000 120,000m²	20,000 50,000m²	35,000m²	48,000m²
	M. Center	160,000 400,000m²	70,000 150,000m²	100,000m²	100,000m²
Commercial Site Area to Total Developed Area		2.65%	2.8%	5.2%	5%
Population & Different Commercial Areas	N. Center	2.500 40,000	2,500 10,000	4000 6000	4400
	C. Center	40,000 100,000	25,000 40,000	40,000 50,000	26,400
	M. Center	150,000 250,000	80,000 235,000	150,000 300,000	132,000
Category of Shops	Size	Small Med Big	Small Med Big	Small Med Big	Small Med Big
	N. Center				
	C. Center				
	M. Center				
Ratio of Car Parking in Center to car owners' in city		30%	15%	5 %	15%

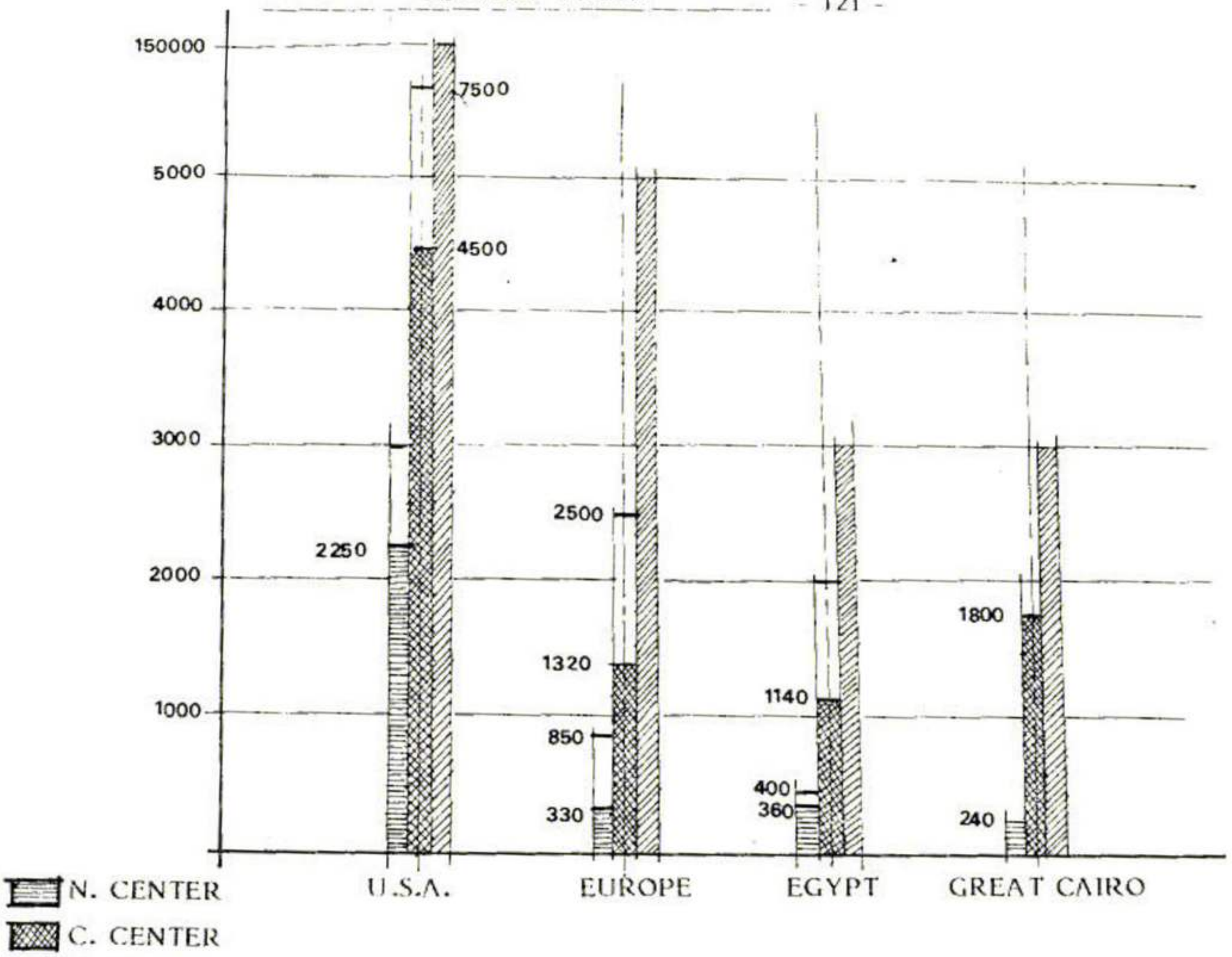
COMMERCIAL SITE AREA TO TOTAL DEVELOPED AREA



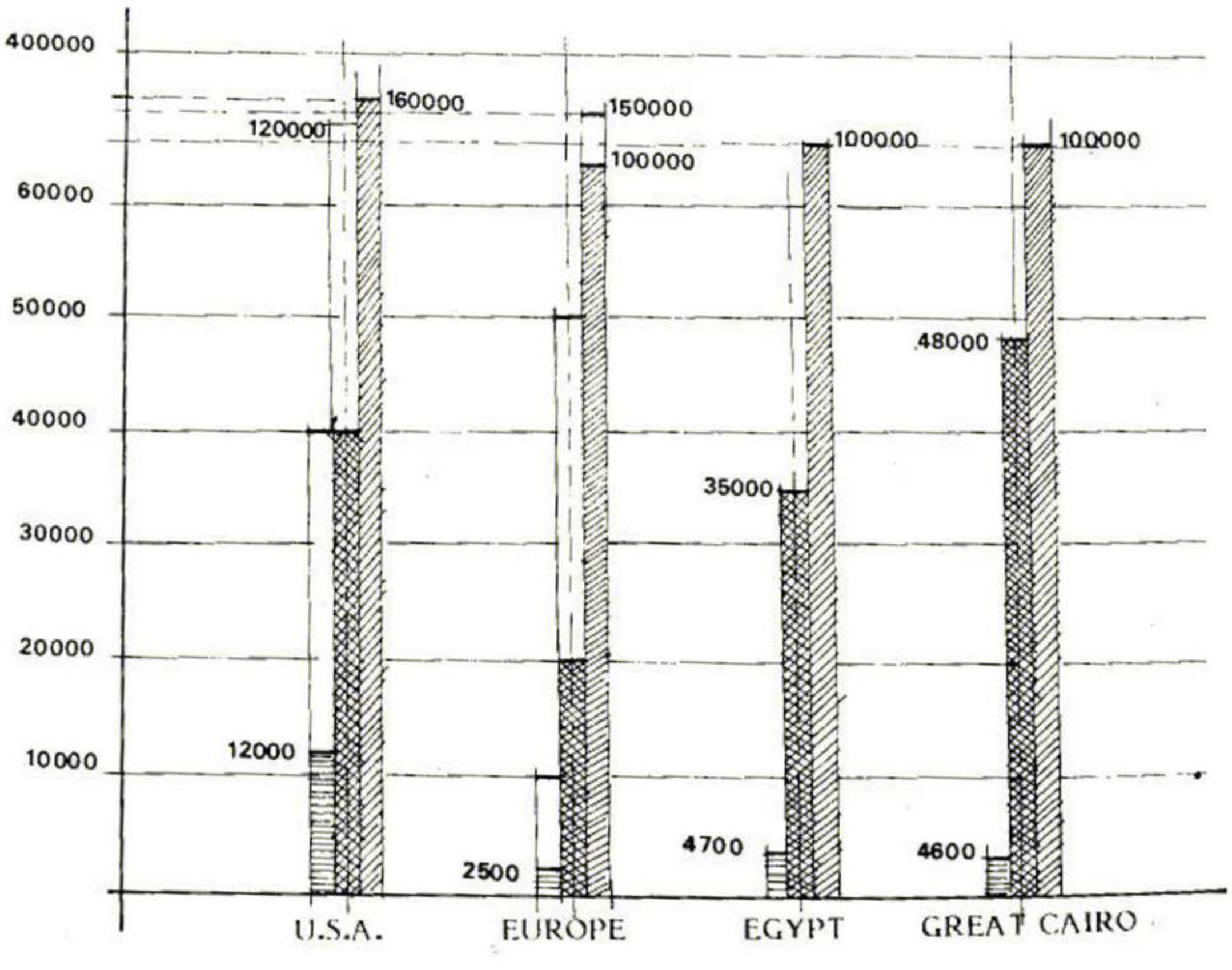
POPULATION AND DIFFERENT COMMERCIAL AREAS



SERVICE RADIUS

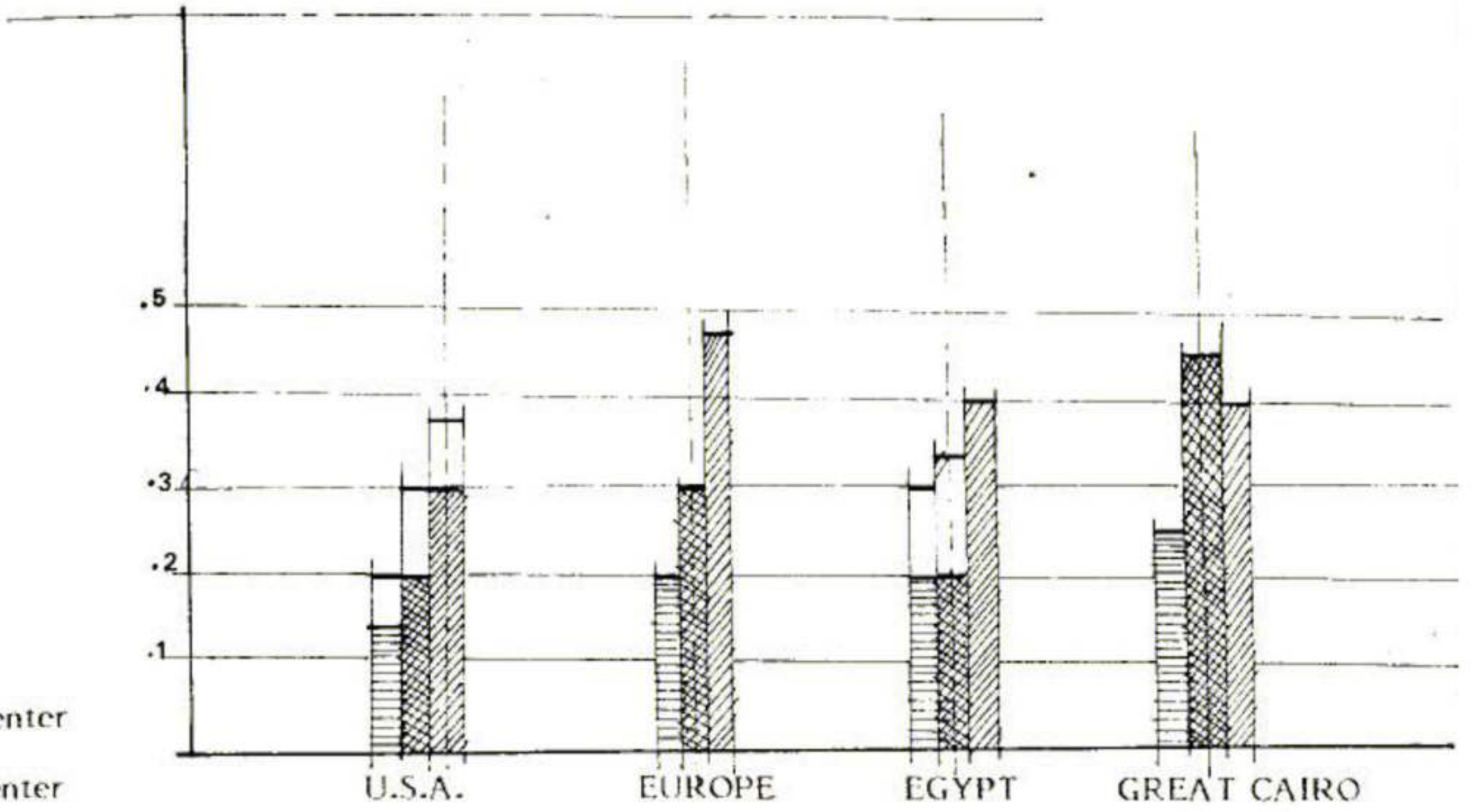


COMMERCIAL SITE AREA

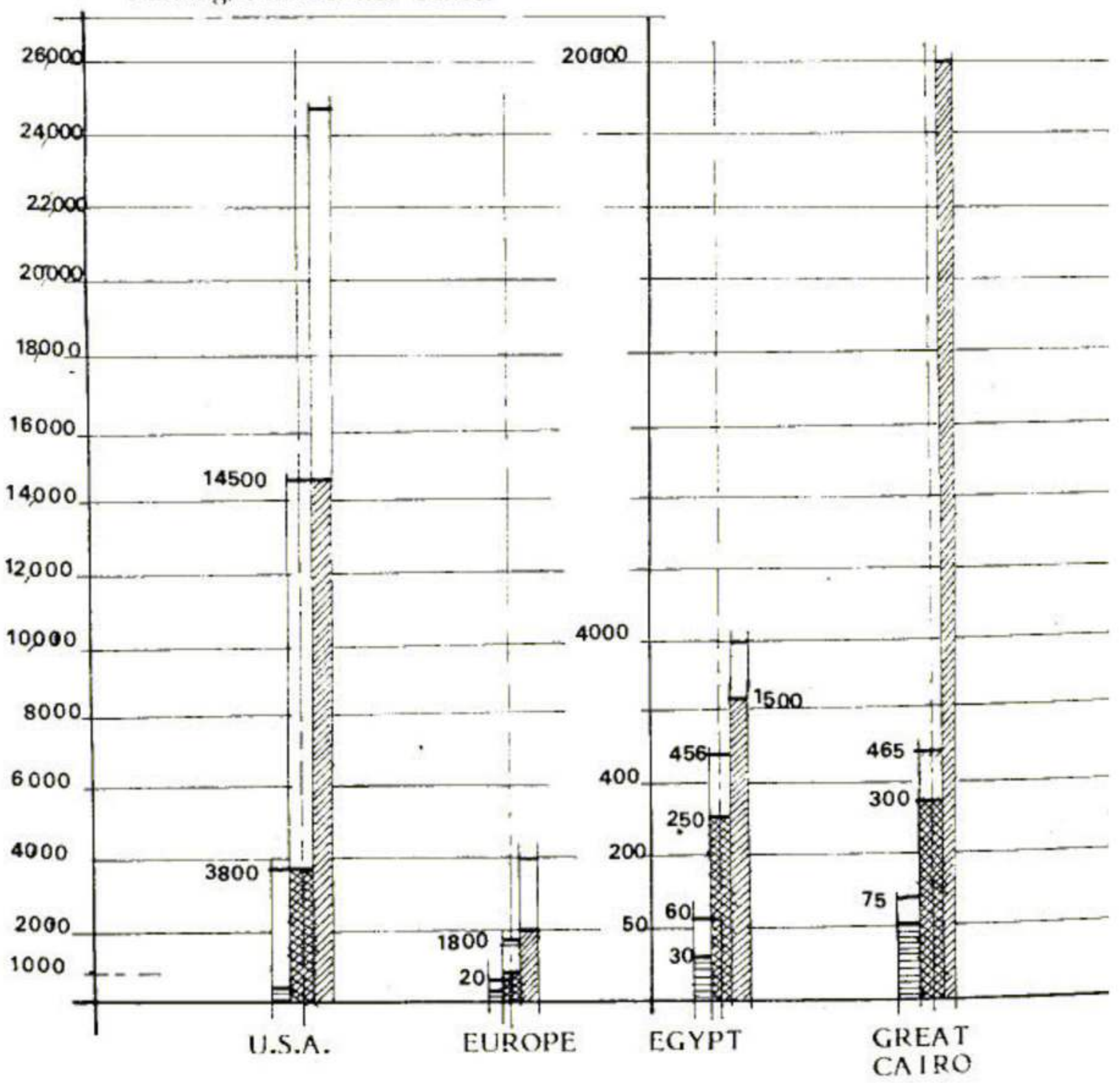


Different Commercial Areas to Population

Area in Feddan/1000 Persons



Parking/Commercial Center



CONCLUSION

Societies are the result of a conflict between different activities. Many degrees of pressure on human kind have been created and in the process, cities have developed parallel to the culture of the people.

The market and the shop belong to all dates and climates for they respond to those pressing needs of commercial exchange for the feeding of the public which are inevitably inherent in every culture and every civilization, even the most primitive ones.

The development of commercial facilities through the different ages-beginning from the Pre-historic periods up till now-has passed through different phases along with the social, economical and political changes.

In the Middle East, it should be noted that the market place mostly functioned for economic reasons, and its form and figure developed according to the political, military and economic conditions. When these conditions were settled commercial activities flourished. In the Middle East, the appearance of acceptable commercial facilities was controlled by transportation and the "caravanserais and markets" were designed to serve travellers' needs.

Beginning from the rise of Islam the market associated to social needs and could be found mainly around the mosques where the men after performing their prayers would purchase their daily needs.

Later, commercial facilities developed along streets (shopping streets) which were met at either end by the main gates of the city where goods were imported and exported. These further developed into groups of shopping facilities, with each group serving a certain merchandise (Wikala), with sleeping quarters above.

This period was the Mamluk period after which Trade and Economy suffered due to the taxes (Makous) for merchants had to pay to Lords or Princes to indulge in their own enjoyments.

This decline continued up till Mohamed Ali's period 1805 when people began to regect European Influence and rose up to progress their city with their own efforts.

Yet on the opening of Suez Canal (1869) conflicts rose between the European Countries over the control of the Middle East and ended by 1882 when England succeeded in this race. Again European conceptions invaded their Middle East Architecture apparent by the large Department Stores throughout the city.

Shopping streets again became the trend Joining Major Department Stores. These streets formed spines around which extensions of the city grew forming cells. Each cell being self-sufficient commercially e.g. Heliopolis. Manial, Giza.....etc.

Comparing to European Commercial facilities it could be said that they have always been associated with social reasons throughout the different periods according to the power ruling either King or Church [Agora. Forum].

Then during the Middle Ages there rose the concept of the covered market and the medieval shop. The radical changes in society and custom brought about wider, more complex and freer social relationships during the 18th century which stimulated the gradual transformation of the shop into Modern store.

The department store is the product of the industrial age; it results from the development of mass production and from the loss of direct contact between producer and consumer.

It is known that it was originated in Europe preceding American Department Stores which appeared in 1845 in Boston, St Louis, New York. The first Geniune Department Store appeared in the sixties in New York City where the first installation of a passenger elevator was erected. Urban Commercial Centers developed in the late forties of the twentieth century in the form of small neighbourhood centers, consisting of a supermarket, a drug store and a few service stores. This was shortly followed by the community center for specialty goods. These two types of centers were units categoring to the Main Center of the city.

A counterpart to this Main Center was the Regional Center which appeared in the Early Fifties, outside the city on the highways.

It underwent enormous changes and devices to develop and it has since become very popular as it is an expression of the increased social and economic potential of the city, the new industrial and commercial techniques and for the necessity of satisfying the demands of a rising standard of living.

These centers have derived different rules and discussions concerning their zoning, parking area, size and their different commercial functions. Also field studies have been made to define the environmental needs required by the user concerning space, light, walking distance and landscape.

This Regional Center was originally intended to support the city by promoting retailing and cultural activities away from the City Center. They have proved successful individually. Recently many Planners have lost their enthusiasm for these kinds of centers having recognized that these centers being related to the city center have become magnets for decentralization, and instead of revitalizing the Central City Areas they have contributed to the natural evolution of urban expansion while downtown is suffocating under massive circulation of people and vehicles having too little room to move.

The center of the city, after having been the core where people went to work and acting as a terminus for every kind of activity, has deteriorated due to the invasion of the vehicle and its needs for a parking area. To regain its position, major modifications should be made parallel to the development of these centers. The Tragedy of physical and economic neglect,which has disfigured so many city areas, has been made apparent in the efforts to revive city centers by conversion of traffic streets into pedestrian ways. Many examples have been exercised and have proved successful. e.g. Tokyo, Germany, London .....etc.

In Egypt, the situation is more complicated because the city has, uncontrollably and unpredictably, grown.

The car-owners have multiplied in number year after year so that the centers in large cities have become over-congested. Travelling to the center became so difficult that according to their requirements, people began to create shopping streets in every district in order to satisfy their needs.

The problem continued in every district so that the solution was, to benefit from European experience, by evacuating the vehicle from the shopping street and transfering it into a pedestrian area.

Another solution could be created in the deteriorating city centers by demolishing the old parts of the center and replanning these parts with new forms of retailing facilities and evacuating the streets of pedestrians. The main streets could be used as a traffic pathway-while pedestrian circulation is moved along bridges. e.g. Manchester Shopping Center.

The previous examples have been studied and analysed and their results have proven successful. They could be adapted in many districts in Egyptian cities. Examples here are taken where this solution could prove successful, Fig. (129).

Talat Harb

Sherif

Emad El Dine

Adly

Abdel Khaleq

Sarwat

Talat Harb Square

Qasr El Nil

Mostafa Kamel Square

Present Condition

Emad El Dine

Talat Harb

Proposed Shopping Pedestrian Street "Sherif"

26 July Emad El Dine

Adly

Abdel Khaleq Sarwat

Mostafa Kamel Square

Talat Harb Square

Qasr El Nil

Proposed Change

(120).

District is Main Center of Cairo

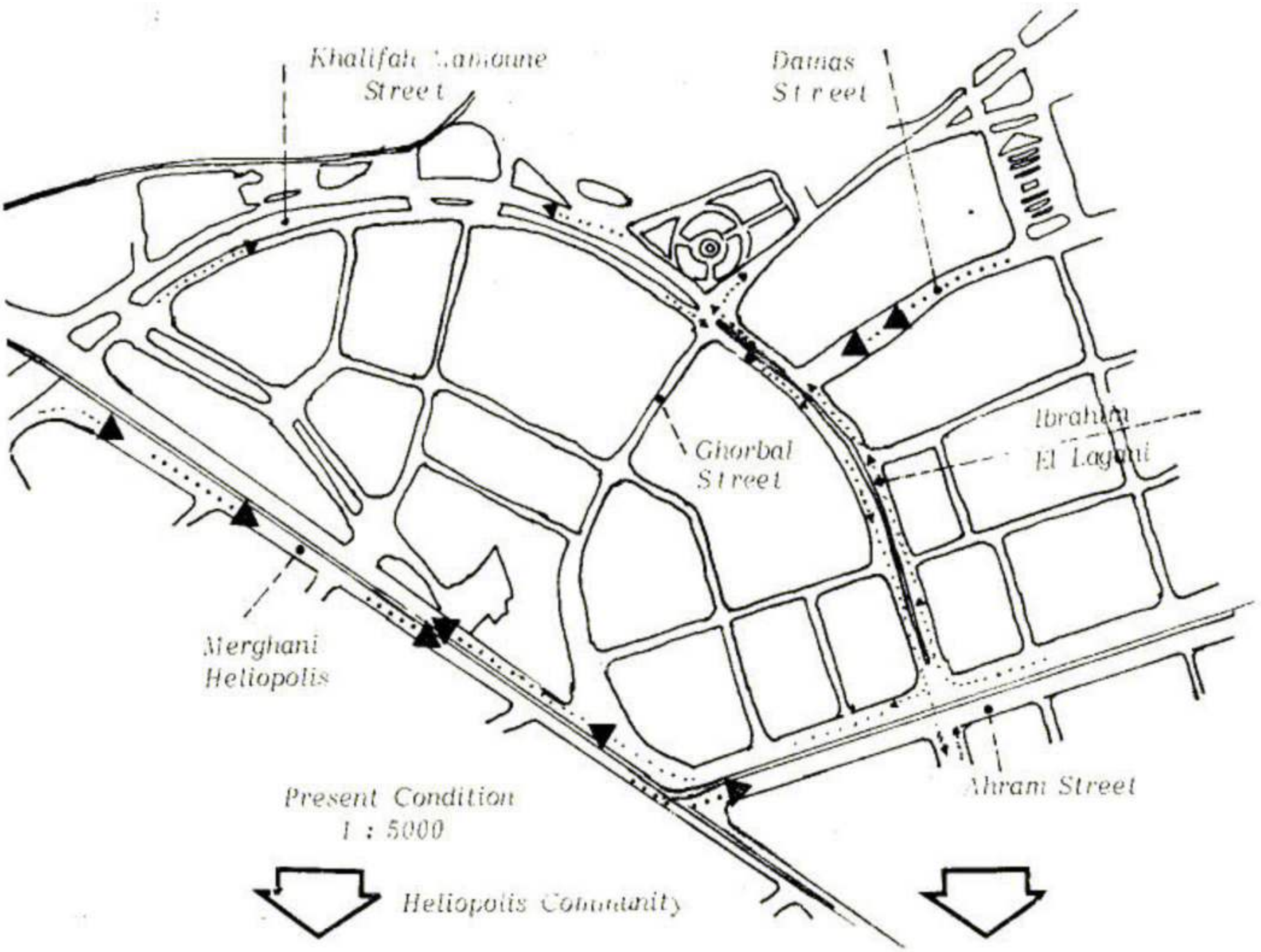
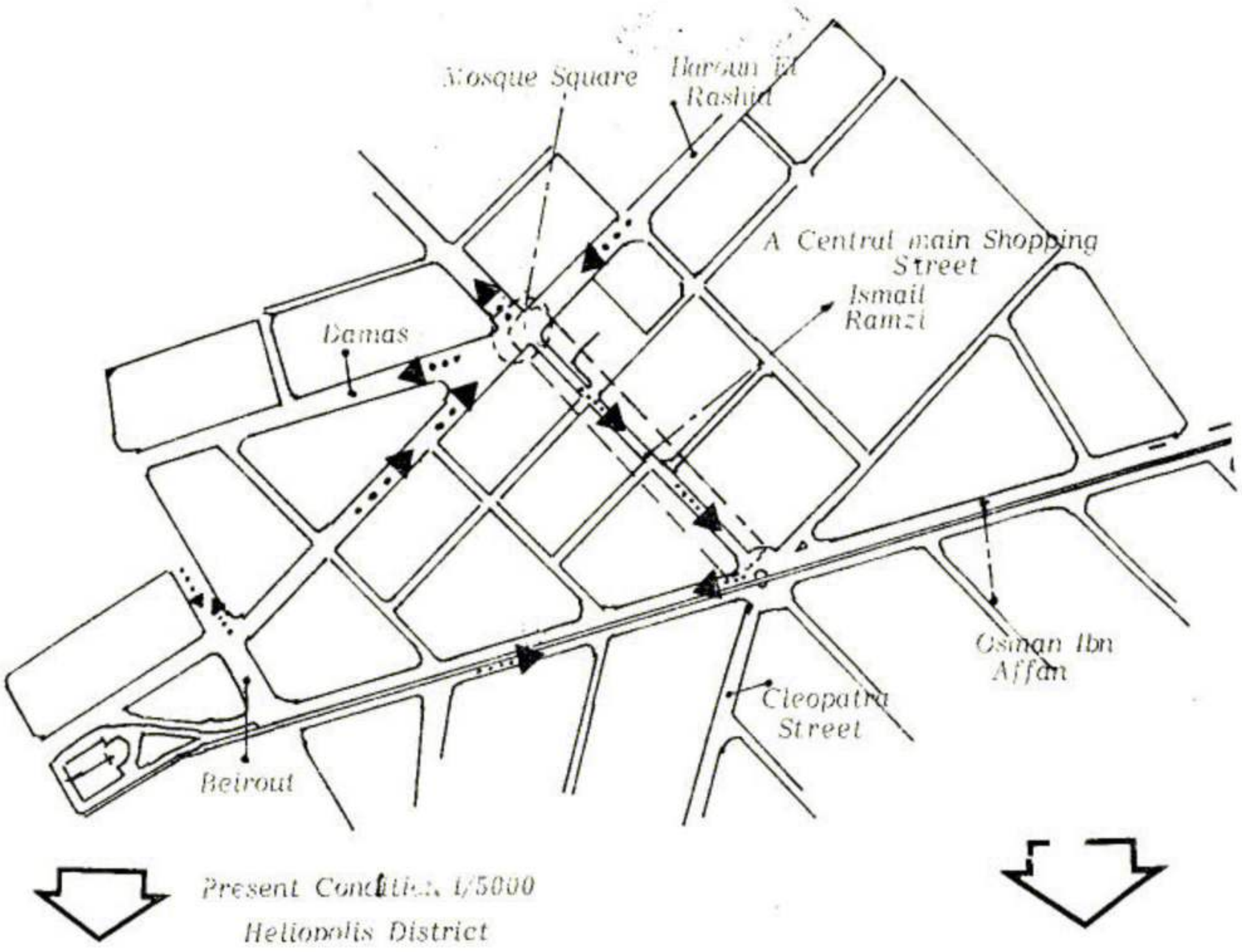

Khalifah Mamoune Street
Damas Street
Ghorbal Street
Ibrahim El Lagani
Merghani Heliopolis
Present Condition
1 : 5000
Heliopolis Community
Khalifah Mamoune
Damas Street
Ibrahim Logani Pedestrian
Shopping Street
Merghani Heliopolis
Ahram Street
Proposed Condition

Fig. (120)



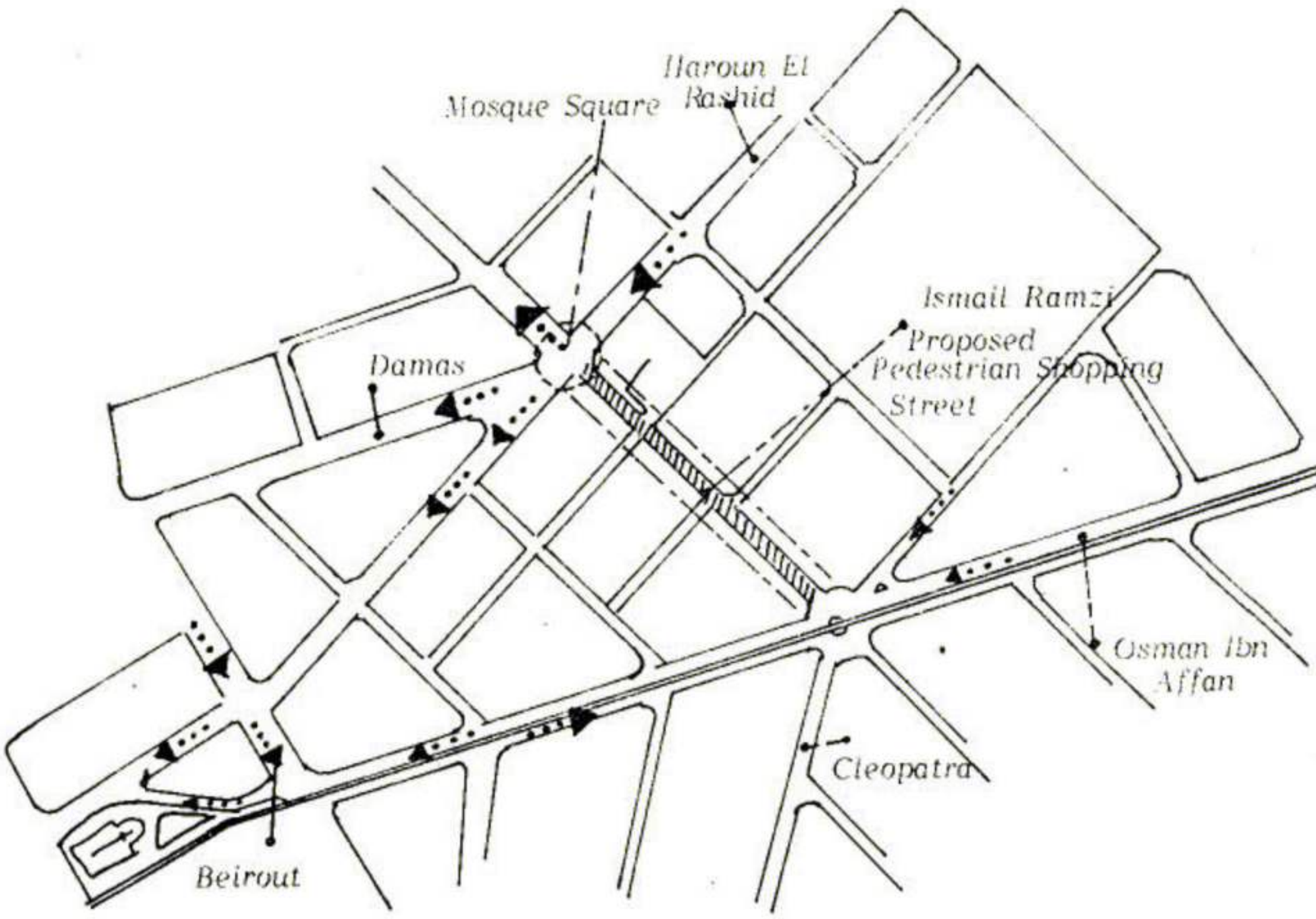


Fig.(120). Proposed Condition

After examining Towns in U.S.A., Europe, results have showed that every country has itsown standards according to its social, political and economical situations. In Egypt the examples taken of the New Towns which were studied have shown that the standards taken have mostly been imported either from the U.S.A. or Germany, with some modifications due to the Egyptian statistics of the population.

The New Shopping Areas in these new settlements have not yet been experienced by the new tenants, nd therefore we cannot determine whether they are successful or not-that is for the future to show.

BIBLIOGRAPHY OF BOOKS

1) **Abd-El-Fattah, Kamal:** B. Arch. of Egypt. Thesis presented for the Degree of Doctor of Technical Science.

2) **Adams, Thomas:** Outline of Town and City Planning, Russell Sage Foundation, New York, 1935.

3) **Alan H. Voorhees, Gordon B. Sharpe and J.T. Stagmeer:** "Shopping Habits and Travel Patterns". U.L.I. Technical Bulletin No. 24 March, 1955.

4) **Alevizos, J.P. and Beckwith, A.E.:** Downtown and Suburban Shopping Habits, Boston University 1954.

5) **Al Kalkashandi:** "Sobh El Eish" G. 3 p.432. 1913-1919. "The help of the Town".

6) **Aloi,** Roberto Mercati E Negozi 1959. Milan.

7) **Anderson, W.J. Spiers, R.P. and Dinshoor, W.B.:** "The Architecture of Ancient Greece" Batsford (1927).

8) **Arab Antiquities Conservation Commitee.**

9) **Arab Republic of Egypt,** Ministry of Housing and Reconstruction, September, 1977.

10) **Ardaln, N.:** The Sense of Unity, University of Chicago, Press, 1975.

11) **Ashour, Said:** Mamlukein Period (Cairo, 1965).

12) **Atkins, C.R.:** People and the motor car, University of Burmingham 1964.

13) **Baker, G. and Funaro B.:** Shopping Centers-Design and Operation. Reinhold 1951/1956. Parking, Reinhold, 1958.

14) **Bartholomew, Hartland:** Land Uses in American Cities. Harvard University. Press, Cambridge, 1955.

15) **Bell, Curtis, C.:** Shopping Center Development Guide.

16) **Beman, Arthur K.:** "Appraising Shopping Centers" April, 1959.

17) **Berry, B.J.:** Geography of Market Centers and Retail Distribution. Prentice-Hall, 1967.

18) **B.F. Skinner:** Science and Human Behavior (New York, The free Press, 1953).

19) **Bogart, Leo:** "Psychology in Media Strategy. American Marketing Association, 230 North Michigan Ave, Chicago, Illinois.

20) **Bouri, Maurier and Others:** "Golden Ages of the Great Cities".

21) **Breasted,James, Henry:** Ancient Times, "A History of the Early World". Ginn. and Co. Boston, 1914.

22) **Britton, J.N.H.:** "Regional Analysis and Economic Geography".

23) **Burns, W.:** British Shopping Centers, Leonard, Hill, 1959.

24) **B.W.P. Wells:** "The Psycho-Social Influence of Building Environment". Building Science, vol. 1. Great Britain, Pergamon, Press, 1965.

25) **Cahiers De L'institut D'amenagement et D'urbanisme:** De ia Region D'ile De France Volume 52, September 1978.

26) **Canoyer, H.G.:** Selecting a store location, Department of Commerce, Washington D.C.

27) **Cox, R.K.:** Retail site Assessment Business Books, 1968.

28) **Collins, S. Jones:** Regional Shopping Centers.

29) **C.T. Jonassen:** Shopping Centers Versus Downtown, Bureau of Business Research, Ohio State University, 1955.

30) **Danz, E.:** "Architecture in the Sun". Thames and Hudson, London, 1974.

31) **Darlow, Clive:** Enclosed Shopping Centers, Architectural Press.

32) **Davis, D.:** History of Shopping, Routledge and Kegan Paul, 1966.

33) **Darwin, G., Stuart and Robert B. Teska:** "Who Pays for what". a cost Revenue Analysis of Suburban Landuse Alternatives, Urban Land vol. 30 March, 1971.

34) **Debaigts:** Signs. Shop Fronts, Architectural Book, Publishing Co., New York.

35) **Devlin, George A.:** "New Directions in Parking Design", Urban Land vol. 34 No. 5 (May 1975) and George, E. Kanean and David K. Witheford, "Parking not Design Standards", Traffic Quarterly, vol. 27 No. 3 (July, 1973).

36) **Dichter, E.:** Handbook of Customer Motivation, Mc-Graw Hill.

37) **Donald F., Mulvihill:** Geography, Marketing and Urban Growth, Kent State University, Ruth Cope Mulvihill.

38) **Double Day:** Frank Presbary, Doran, Gorden City, The History and Development of Advertising.

39) **Downs, R.M. and Stea D., Maps in Mind:** Reflections on Cognitive Mapping, New York: Harper and Row, 1977.

40) **Duntoon, Maxwell C. Fr. Pud:** A Better way for the Suburbs (Washington, D.C.U.L.I., The Urban Land Institute 1971).

41) **Dutton:** The Shocking History of Advertising, New York, 1953.

42) **Eisner, Gallion:** The urban Pattern, Fourth Edition "City Planning and Design" Third Edition, 1975.

43) **Ellwood, Leon W. and Robert Armstrong:** "Shops, Stores and Shopping Centers", April, July and October, 1952.

44) **El Makrizy:** Prophesis and Considerations in Memory of Writings and Ruins (Boulak, 127) Writings, "Manners to know Mamluk Kingdom" Rewritten in Cairo, 1934-1939,
Gani El Asfar 27 Writings, the writings 3/211, Writing 3/149-150.

45) **El No ery:** End of Art in Making out (Writings).

46) **Farag, Fouad, El Kahira,** vol. 1,2,3, Cairo, 1946.

47) **Fine, Isodore:** "Retail Trade Area Analysis" University of Wisconsin, 1954.

48) **Fisher, Howard T.:** "The Development of Planned Shopping Centers", 1951.

"Economics of Urban and Suburban Shopping Centers", 1952.

"The Impact of New Shopping Centers upon Established Business Districts", 1950.

49) **Fletcher, Banister (Sir):** A History of Architecture in the Comparative Method, Edition Batsford, 1954.

50) **Frederick, Gibberd:** "Town Design" Great Britain, 1955.

51) **Frics, R. Northen, H. Haskoll Friba Arias FFB.:** "Planning for People, Shopping Centers". A Developer's Guide to Planning and Design.

52) **Fruin, John, J.:** "Pedestrian Planning and Design", New York. Metropolitan Association of Urban Design and Environmental Planners, Inc. 1977.

53) **Fry, M. and Drew, J.:** Tropical Architecture in the Dry and Humid Zones. Batsford. London, 1964.

54) **Fry, Robert W. and Gary D. Klein:** "Psychographics and Industrial Design": American Marketing Association, 1974.

55) **Gamble, C.:** "Parking at Shopping Centers", Florida Planning and Zoning Association.

56) **Gary M.:** "History of the Greek World" from 323 to 146 B.C. Methuen (1932).

57) **Giedion, Sigfried:** "Space, time and Architecture". Harvard University Press, Cambridge Mass, 1943 revised 1954.
"Architecture and the Phenomena of Transition".

58) **Glotz, G.:** "The Aegean Civilization", Translated by M.R. Dobie and E.M. Riley, Kegan Paul, 1925.

59) **Gray, J.G.:** Pedestrian Shopping Streets in Europe, 1965.

60) **Gruen, Victor and Larry Smith:** "Centers for the Urban Environment" Survival of the Cities, New York.
"The Heart of Our Cities" Thames and Hudson,1965.
"Planning for Shopping" January, 1965.
"Dynamic Planning for Retail Areas" Harvard Business Review 1954.
"Traffic Impact of Regional Shopping Centers", March,1953.
"Shopping Towns, U.S.A. The Planning of Shopping Centers".
"Shopping Centers of Tomorrow" January, 1954.
"Architecture and Sculpture-The Northland Regional Shopping Center", May, 1955.

61) **Guilio, C. Argan:** "Planning and Cities, The Renaissance City.

62) **H.A.B.:** The Travels of Ibn Batouta.

63) **Halim, H. Aref:** Town Markets old and New, 1960, Cairo.

64) **Hall, Frank D.:** "How Shopping Centers are Financed". July, 1957.

65) **Hamdan, Gamal:** "Personality of Egypt" Studies in the Ingeniuty of the Place. The World of Books.

66) **Hamlin, Talbot:** "Architecture through the Ages", G.P. Putnam's sons, 1940.

67) **Harcourt, Bracc:** New York, 1961. The City in History. Its Origins its transformations and its Prospects.

68) **Haskell:** The New Deal in old Rome.

69) **Heopli, Roberto Aloi:** Mercati E. Negozi.

70) **Holland Country Council:** The Bureau of Boston, A Survey of the Catchment and Retail Shopping Areas.

71) **Hornbeck, J.S. (Editor):** Stores and Shopping Centers, McGraw Hill, 1962.

72) **Hoyt, Homer:** "Market Analysis of Shopping Centers" Technical Bulletin No.12 October, 1949.
"Classification and Significant Characteristics of Shopping Centers", 1958.
"Building for Commerce and Industry", Mc Graw-Hill Book.
A Re-Examination of the Shopping Center Market, Technical Bulletin No. 33, September, 1958.

73) **Ibn Batouta:** Tohfa El Nozar Fi Gharaib El Amsar Wa Agaib El Asfar (Paris 1880).

74) **Ibn Dokian:** Al Antissar lewasta Akd El Amsr 5/47.

75) **Ibn Mematy:** Dewary Rules.

76) **J.A. Lowden:** "Retail Store Locations" October, 1958.

77) **Jacobs, J.:** The Economy of cities, Jonathen Cape, London, 1969.

78) **Jonassen C.T.:** Shopping Centers Versus Dountown Ohio State University, 1965.

79) **Ketchim, Morris:** Shops and Stores, Reinhold Progressive Library, 1948.

80) **Lane, Edward:** Customs of the Modern Egyptians, London, 1860.

81) **Lawrence, A.W.:** Greek Architecture, Pelican, History of Art, Great Britain.

82) **Ledislos-Segoe:** Local Planning Administration, International City Managers Association.

83) **Levin, Michael S.:** Measuring the Fiscal Impact of a Shopping Center on its community. New York, International Council of Shopping Centers, 1975.

84) **Maher, Souad:** Marine in Islamic Egypt and the remaining monuments (relics).

85) **Mazwell, Jean:** Le Surce en Egypte Etude de Geographic Historique et Economique.

86) **McKeever, J.:** Ross-Shopping Center, Zoning, Technical Bulletin 69 Washington U.L.I.
Shopping Centers: Principles and Policies Technical Bulletin No. 20.

87) **Meinecke, Michael:** Islamic Cairo.

88) **Mumford, Louis:** Culture of the Cities.

89) **Olgyay, V.:** Design with Climate, Princeton, University Press, 1963.

90) **Pilditch, James:** Communication by Design. A study in corporate Identity (London: Mc Graw-Hill Book Company, Inc., 1970.

91) **Pirennel, Henri:** Medieval Cities, Trans Frank Halsey Princeton Press, 1925.

92) **Rams, Edwin, Med:** Analysis and Evaluation of Retail Location, Reston, Virginia, Reston, 1976.

93) **Raymond, G.:** Studer, "The Dynamics of Behavior" "New York, Holt Rinehart and Winston, 1970).

94) **R.D. Martienssen, M. Arch.? D. Litt (Rand) A.R.I.B.A.:** "The Idea of Space in Greek Architecture".

95) **Redstone, Louis, G.:** New Dimensions in Shopping Centers and Stores, New York, Mc Graw Hill, 1973 FAIA.

96) **Renard, Georges:** Guilds in the Middle Ages, London, 1919.

97) **Research Laboratory:** "Predicting Shopping Requirements", 1967.

98) **Richard P. Doßer:** Aip. Environmental Design.

99) **R. Nelson, Op. Cit.:** "Outlying Shopping Centers vs. Downtown Retail Trade" October, 1957.
"Selection of Retail Locations".

100) **Robertson:** Handbook of Greek and Roman Architecture.

101) **Rokeach, Milton:** "Beliefs, Attitudes and Values" "San Fransisco, Calif.: Jossey-Bass, 1968).

102) **R.T. Dorsey:** Lighting of Shops and Stores-Store Lighting Specialist. Application Engineering Department.

103) **R. Zion:** The Landscape Architect and the Shopping Center, 1961.

104) **Rubenstein, Harvey M.:** A guide to site and environmental planning, New York, John Wiley and Sons, 1969.

105) **Simms, Eleonar:** Trade and Travel, Markets and Caravanserais.

106) **Smith, Larry:** "In Traffic Impact of the Automative Shopping Center", 1954.
Urban Land Institute Shopping Centers Re-Studied, vol. I.

107) **Sommer, Robert:** Personal Space, The behavioral bases of Design (Englewood Cliffs, N.J., Prentice Hall-Inc., 1969).

108) **S.O. Kaylin:** Case Studies in Shopping Center Development and Operation, New York, 1974.

109) **Stokols, D.:** Origins and Directions of Environment. Behavioral Research. Theory, Research and Applications New York, Plenum Press. 1977.

110) **Sweco:** Shawky Zeitoun April, 1976.

111) **Urban Land Institute:** "Shopping Centers-An Analysis" (Mott and Wehrly). Technical Bulletin No. II, 1949.
"Dollars and Cents of Shopping Centers" (Washington D.C./ U.L.I. Trienniap) 6th Edition 1975.
"Shopping Centers" Re-studied vol. I. Parking Requirements for Shopping Centers.

112) Wilbaum, Applebaum: "Guide to Store Location", 1968.

113) Witterspoon, Robert,E. Jan P. Abbett: "New Ways of Land use".

114) W.L. Garrison et al.: Studies on Highway Development.

BIBLIOGRAPHY OF MAGAZINS

American Institute of Planners Journal: "Shopping Streets and the Pedestrian rediscovered" M.R. Wolfe. Feb., 1962.

"Market areas of Shopping Districts": D.A. Peterson November, 1963.

" A Retail market potential model", T.R. Lakshmanan and W.G. Hansen, May, 1965.

Architectural Design: "Nordweststadt Center, Frankfurt, Feb., 1966.

Architects Journal: "The out-of town Shopping Center", Dec., 1964.

"Shop spaces" [Fixtures and Equipment) Feb.. 1966.

"Shop Spaces" [Design of foodshops] Feb., 1966.

Architectural Forum: "New thinking on Shopping Center". V.Gruen and L. Smith March, 1953.

Must Shopping Centers be inhuman" J.W. Rouse, June. 1962, July, 1953.

Architectural Record: "Regional Shopping Centers" K.C. Welch. March, 1951.

"Shopping Centers", Oct. 1953.

"Commercial Buildings, Signs and Symbols": Sept, 1956.

"Facilities for Retailing", May, 1961.

"Basic Necessities of Store Design". L.J. Israel, June, 1964.

"Shopping Centers and Stores" April, 1966.

"New Approach for Shopping Centers" V. Gruen, April. 1968.

Feb., 1979; April, 1975; March, 1980.

Architectural Review: "Regional Shopping Centers" July, 1951.

"Supermarkets" E. Beazley, Nov., 1966.

Institution of Municipal Engineers Journal: "Provision of car Parks in Shopping and Commercial Centers", Oct., 1961.

Journal of Marketing: Guidlines for a store-location strategy study W. Applebaum, Oct., 1966.

Architecture d'Aujourd'hui: "Sun and Architecture".

Architectures Francaise: "Shops and Shopping Centers" No. 278-280.

Shopping Center Age: "Shopping Centers of the future" March, 1963.

R.I.B.A. Journal: September and October 1960, "Shopping and the Town Center" July, 1963.

Traffic Quarterly: "Layout and Design of parking Lots: Aesthetic Consideration January 1952.

Automative Safety Foundation: "What Parking means to Business" November, I, 1955.

T.P.I. Journal: "Changing Shopping Habits and their inpact on town planning W.L. Waide Sept./Oct., 1963. "Local Changes in Shopping Potential" Sept./Oct., 1965.

U.L.I.: Community Builders Handbook Executive Edition, (Washington, D.C., 1960).

Technical Bulletin 24 (Washington D.C.,1955).

Shopping Center World: "S.O. Kaglin "Selecting the Best Site for a Shopping Center" vol., 2, No. 5 (June, 1973).

"Marketing Technical Information to Non-Technical Audiences" M.Sc. in M.I.T. June, 1977.

The 212 Standard metropolitan Statistical Areas of the U.S. Bureau of the Ansus 1960 having 50.000 or more Urban Population.

Progressive Architecture Library: Shopping Centers Design and Operation.

Report of United Nations: Seminar. London. June. 1973. The office of International Affairs. U.S. Dep. of Housing.

Status Report 2,Plan Alternatives February 1977.

Journal of Retailing 49: "Atmospherics as a Marketing Tool". Kotler. Philip. No. 4. (Winter 1973-1974).

Yale University, Press, 1957: "The Order of Presentation in Persuasion" New Haven.

Journal of Marketing: "The Remembering and Forgetting and Advertising" H.A. Zielake, January. 1959.

Scientific Advertising: Advertising Publications My life in Advertising. Claude Hopkins, Harper and Bros. New York, Chicago, 1966.

Journal of Social Issues XXII, No. 4: "The Physical Environment: A problem for a Psychology of Stimulation". Joachim. F. Wohlwill (1966).

Journal of the American Institute of Architects: "Cities old and New". Hammarstrand. Nils, New York, 1926.

M.Sc. Thesis by Arch. Ibrahim Abou Eish, Ain Shams University.

Institute Francais de Damas: Artisans et Commercants an Caire au xville sciele I-II 1973, 1974.

بسم الله الرحمن الرحيم

التغيرات الاجتماعية وتأثيرها على التطور المعمارى للمراكز التجارية (فى مصر)

رسالـــة

مقدمة مـــن

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للحصول على درجـة الدكتـوراه

فـى

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جامعـة عـين شمـــــس

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ملخص الرسالـــة

عنوان الرسالة :

" التغيرات الاجتماعية وتأثيرها على التطور المعمارى للمراكز التجاريـــــة " ..

الرسالة المقدمة من السيدة المهندسة / بشاير السيد محمد خيـــــرى للحصول على دركة دكتوراه الفلسفة فى الهندسة المعمارية تحتوى علـــــى دراسة عملية وميدانية عن التغيرات الاجتماعية وتأثيرها على التطـــــور المعمارى للمراكز التجاريـــة .

وقد قامت الباحثة بعمل احصائيات وزيارات ميدانية ورسومات بيانية وصلت بها الى نتائج ومقاييس معمارية للمجتمع المصرى مع مقارنـــــــة تحليلية للمجتمعين الامريكى والأوروبى .

وقد شملت الدراسة تأثير العوامل الاجتماعية فى العصور والبـــــلاد المختلفة على المراكز التجارية ، كذا دراسة العوامل الاجتماعيـــــــة والاقتصادية والتخطيطية التى تتحكم فى موقع ومقاسات وتصميم هذه المراكز مع التعرض للمشاكل المعاصرة التى تتعرض لها الشوارع التجارية فـــــى بلاد مختلفة .

وتحتوى الرسالة على خمسة أبواب :

الباب الأول :

مقدمة للرسالة ويتناول أهمية موضوع البحث ثم يناقش التغيـــــرات الاجتماعية فى التاريخ وتأثيرها على عادات التسويق ابتداءا من عصـــــر ما قبل التاريخ وخلال الحضارات المختلفة بمؤثراتهم المختلفة .

الباب الثانى :

يحتوى على الاستراتيجية المعاصرة للمراكز التجارية (تطور المركز التجارى فى المدينة) من حيث النظريات المختلفة ، والموقع وعلاقته بطرق المرور حوله ، والتعريفات القياسية لمختلف المراكز مع عرض لمختلف اتجاهات التصميم وتحليلها .

الباب الثالث :

ويشمل هذا الباب تحليل وتقييم وتصميم مختلف أنشطة التسويق فى المنطقة ويحدد العوامل الاجتماعية والاقتصادية التى يجب أن يسبق تحديدها موقع وحجم المراكز التجارية مع احصائيات وتحليل حركة المرور حول هذه المراكز ، ويتناول الباحث المشاكل المعاصرة التى تواجه الشوارع التجارية فى مدن مختلفة ،ويناقش الحلول لحل هذه المشاكل .

الباب الرابع :

يقوم الباحث باستنباط العوامل السيكولوجية المؤثرة على تصميم المراكز التجارية . وينقسم هذا الباب الى ثلاثة أقسام :

القسم الأول : يتناول احساس الفرد السيكولوجى للبيئة ويشير الى حركة الافراد داخل الفراغات التجارية مع دراسة التشكيل الفراغى ليتناسب مع هذه الحركة .

القسم الثانى : يناقش موضوع التتابع البصرى داخل الفراغ المعمارى .

القسم الثالث : يتضمن سيكولوجية الرؤية البصرية وحركة الانسان مع تحليل الانماط المختلفة للاعلانات وتأثيرها على الفرد .

الباب الخامس :

يحتوى هذا الباب على المكونات الانشائية للفراغ التجارى من حيث المرونة فى المساحة ، العرض ، العمق ، الاضاءة مع حلول وأمثلة مختلفة .

ويخلص هذا الباب الى تحليل ومناقشة النتائج التى استنبطها الباحث من خلال الاحصائيات والبيانات التى تخص الخدمات التجارية المختلفة فى أمريكا وأوروبا ومصر وتحديد معدلاتها مع مقارنة تحليلية لهذه النتائج المستنبطة فى رسومات بيانية لتوضيح الفروق بينهم وقد وضع الباحث بعض التطبيقات على بعض الشوارع التجارية فى مصر بهدف تحسين وظيفتها والارتفاع بالقيمة المعمارية مع تحقيق مرونة الحركة وتدل مقارنة هذه النتائج على اختلاف هذه المعدلات باختلاف المستوى الاجتماعى والثقافى .