Morphostructure of an organic Town:

AHMEDABAD

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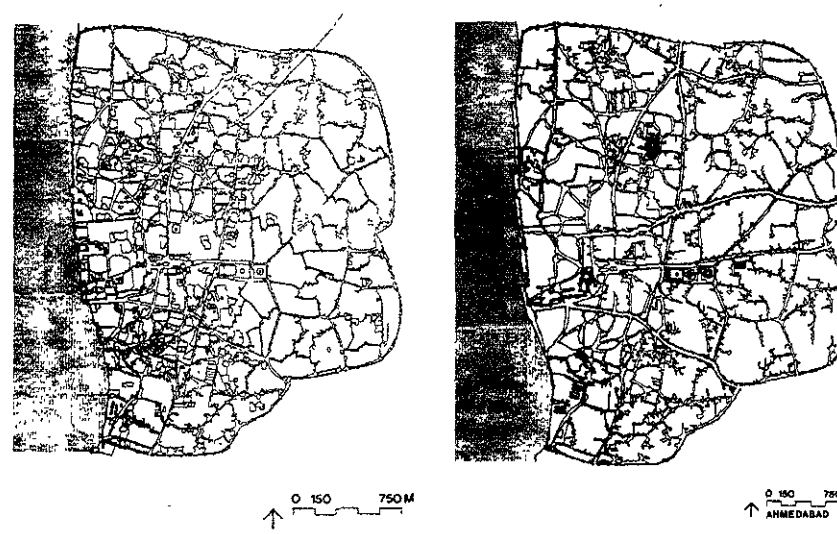
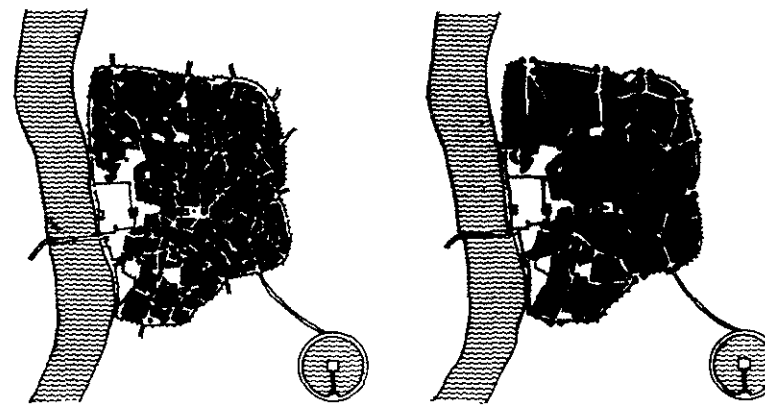
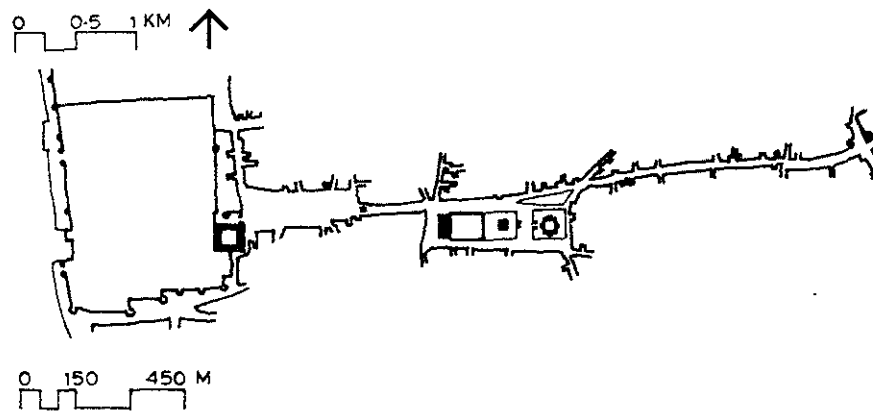






The city map prepared in 1878 shows the street pattern still undisturbed by the new roads. (Fig. 37).

Street pattern as it exists today. Note new roads inserted in the old pattern. A and B indicate the clusters studied in detail later. (Fig. 38).

Drawing showing overall shape of the city of Ahmedabad in relation to the River and a circular lake. Note the major streets leading to the central area from different city gates. The lower plan shows the "Maidan" and fort area on the left and the mosque complex in the centre. (Fig. 39).

The word 'Morphostructure' is constituted by combining 'Morph' and 'Structure' meaning form and structure. It expresses the unified idea of these two aspects in the study of form and structure of a city. At a given point in space and time, the form of a city expresses the forces and circumstances which shape it. In its physical sense, the form is the ordered arrangement of city elements like sectors forces. Form of an Indian city, typically, is a dense mass of built forms made porous by house courts, public spaces and winding narrow streets.

Related to topography, climate, technology and cultural pattern, these forces imbibe qualities of par-

ticularity and generality in city forms. These qualities polarise into many cities given similar contexts. And when the contexts change, the city forms also change. It is these components of context which generate 'City Form' and also the elements of a city. If climate played an important role in the form making process of a city, it also played significant role in form making process of the house and all that is in-between the city and the house.

Structuring is the manner in which the component parts of the complex whole are arranged and interrelated to make an entity. In this case they are the elements of physical urban environment and the entity thus structured is the city. Structuring involves the process of organizing these elements together with or without the possibility of their subsequent growth. It is the actual fabric of built forms, open spaces and streets resulting from human effort to resolve the natural and social forces to create a suitable environment for habitation. Due to variations in natural and social context, different patterns of urban structuring have emerged. Community structuring also expresses evolution of form right from the beginning of a town or a city to the present day. In this process, man has created a variety of environments, both consciously and sub-consciously. He being a social animal, the final result of his efforts reflects a life style and culture of which he is a part.

Central Bazar in front of the Mosque Complex. (Picture 1975). (Fig. 40).

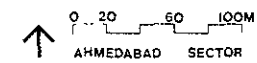
The two tombs that form part of the Mosque Complex. (Fig. 41).

Role of geometry is important in the study of city forms. Yet a lot could be learnt from cities which were built on organic principles of planning. Basically, there are two types of plans which could be related to the formconcepts. The 'organic plan' and the 'geometric plan'. Most of the Indian cities are based on organic principles and planning, Jaipur is the most significant one.

Organic development of cities shows situation to situation built up. Natural features and circumstances were incorporated and often they became important elements in the overall design. Quite often the drainage channels on the surface of a piece of land were covered to make streets — this generally resulted into a branching pattern of street lay-out. A kind of street hierarchy similar to a drainage hierarchy. With few predetermined elements located strategically in relation to land, the design of these cities was a process of step by step development. A kind of infill within the broad framework. This, however, does not exclude rational thinking and considerations for contextual forces. As a matter of fact, organic planning yields beautifully to the context in an almost hand and glove relationship. Free of pre-conceived formalistic patterns, it emerges as a most natural form. Even, in case of geometrically planned cities like Jaipur, one can find the development of interior portions of the city inspired by organic planning.

Ahmedabad, located on the eastern bank of the river Sabarmati, was founded by Sultan Ahmedshah in the year 1411 A.D.. It was located close to the earlier trading town of Asval founded in 11th century by Asha Bhil. The city of Ahmedabad came about as a result of Ahmedshah's desire to replace the old Hindu capital of Anhilwad Patan about 100 kms. north of the city he founded. Ahmedshah invited and encouraged craftsmen, and traders to come to Ahmedabad and settle here from the people of different crafts and trades and untill 1500 A.D., the city of Ahmedabad grew and flourished.

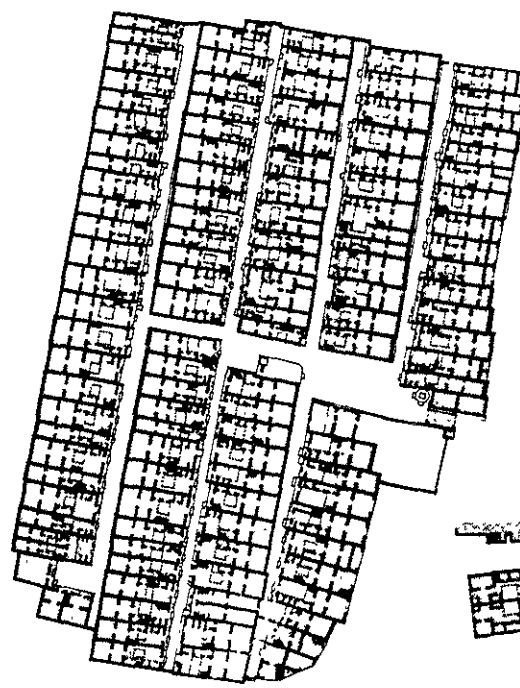
The city started to decline after 1500 A.D. and was taken within the domain of Moghul Empire in 1572 and after that brought the prosperity back to Ahmedabad. In 1757, it came under the Maratha rule. It was annexed to the East India Company in 1817 A.D.. The city came under the British rule after the trea-

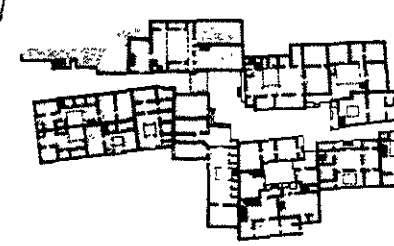


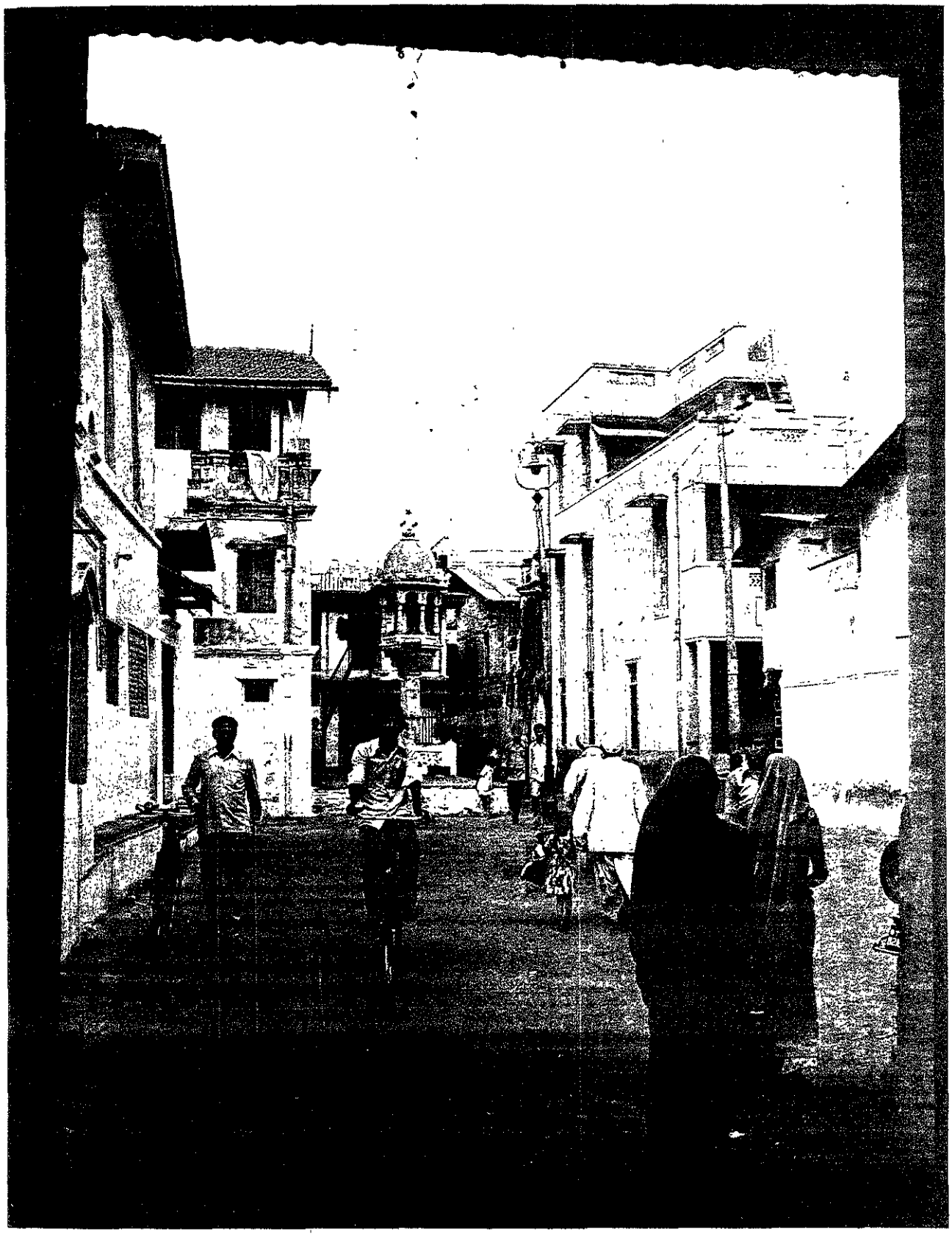
Parts of the city districts showing two residential sectors within the city district. (Fig. 42).

Two 'Pols' one of which has many 'sub-pols'. These were controlled areas with a gate at the entry of every 'Pol'. (Fig. 43).

View from the entry gate of large pol. (Fig. 44).







ty with Peshwas at Poona and Giakwad at Baroda. The city retained its individuality and the British could not take full control. With the independance of India in 1947 A.D., Ahmedabad became a part of Bombay state. 1960 marked the birth of Gujarat with Ahmedabad becoming the capital city. It retained that status until recently when new capital, Gandhinagar, was built.

There are no strong features around Ahmedabad which could govern its delineation. The city is built more or less on flat land with few water bodies. Few hillocks and depressions that were there have changed beyond recognition. However, the river Sabarmati became the key feature in the formation of the city., Most dominant elements of the city are located on the eastern bank of the river. These elements are the Royal Quarters, the Maidan and the Mosque complex originate from the river and follow the main street, now called Gandhi Road. This road runs west to east and terminates at the other end of the city where the Railway Station was built at a later stage. This primary street is the key element in the structuring pattern of Ahmedabad. Major commercial functions were located along this street.

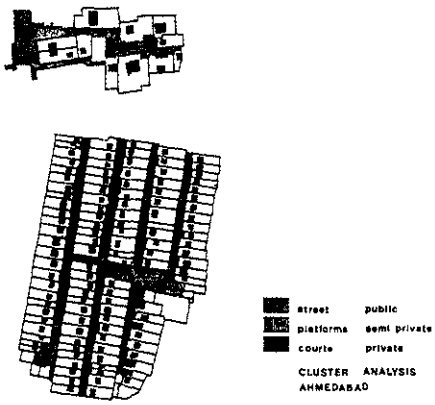
The form of the city is somewhat semi-circular with main complex at the center. The shape is obviously affected by the river and is typical of town developed on a river bank. The city, enclosed by a strong fort wall, has a mixed pattern of activities and street layout. The branching street pattern of Ahmedabad is typical and can be classified in a hierarchical organization with the three categories of street.

Ahmedabad, like Delhi and many other Indian cities, is characterised by the two distinct city forms with strong edges formed by the fortification wall and the river. The city within the fortwalls is a dense mass of built form made porous by small house courts, public spaces and winding narrow streets accentuated by a temple and a wall at almost every major turn of the street. Many of the wells were filled up after the city got its water supply system. New City is spread out and its form is rather vague, mostly in the form of plots after plots of land with buildings along the roads. There is not only a strong character difference in terms of physical appearance, the old city and the new city are almost two separate entities.

There is a very sharp difference in the density pattern of the walled city and the outer. The walled city is completely built with two to four storeyed structures closely knit with and winding lanes.

Small, but numerous house courts give it a honeycomb texture. The outer city on the other hand is sparsely built with society houses invariably independent house type structures on plots with marginal spaces around the houses. The form idea has reversed — the open court in the core of the older city house has disappeared. The built form is the core with open space around the house in the new city. This generally due to the building code and not climatic or social factors. Wider streets and fair amount of plantation give a very different character to the outer city with a very loose city texture. The two segments of the city have nothing in common.

The planning concept, it seems, must have evolved around the central area called Bhadra 'A'. the Bha dra fort makes an axis with the three gates 'B'. On the south side of the axis is the main mosque com-



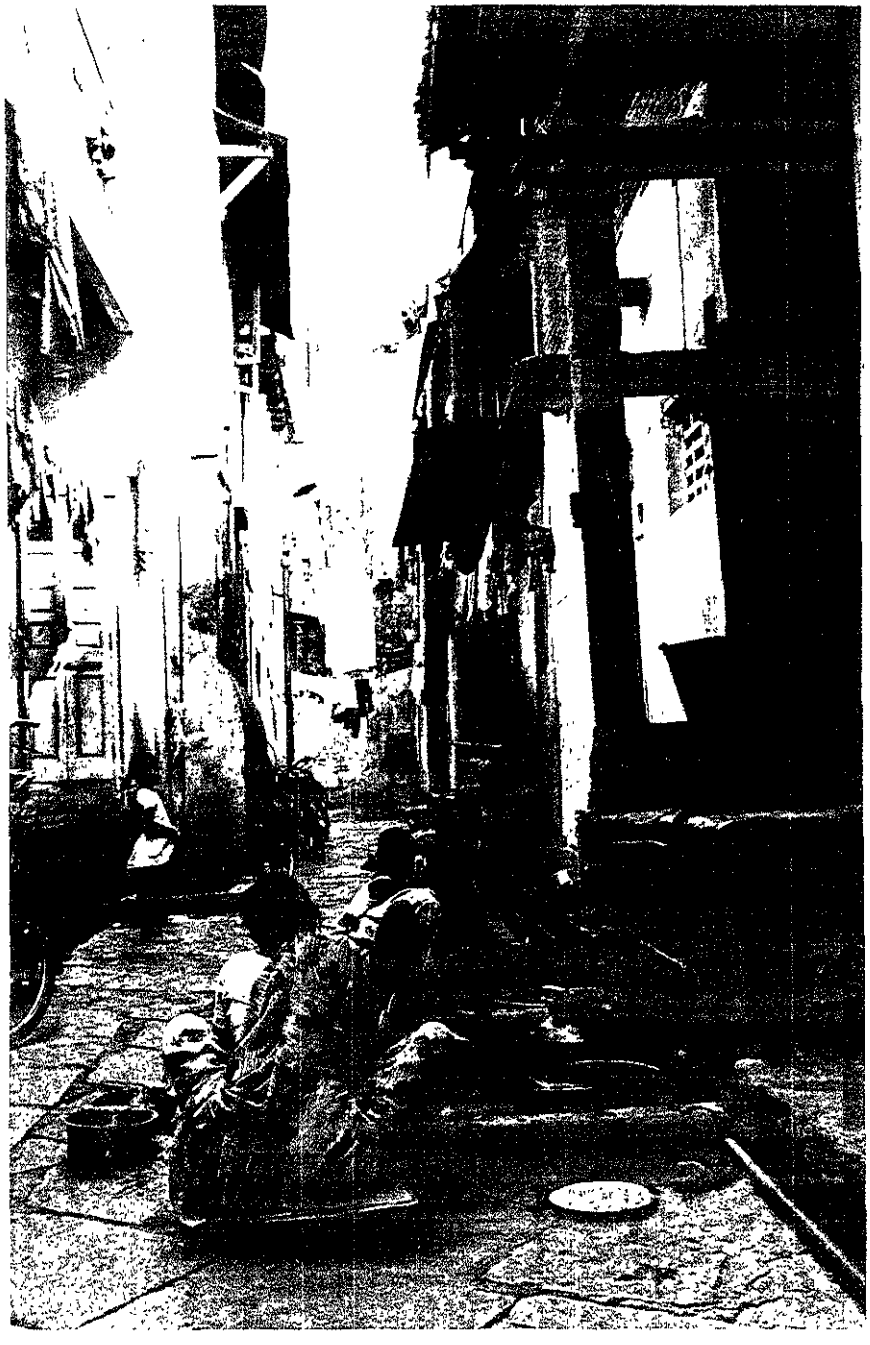
plex with the King's and the Queen's Tombs 'C'. Further south and somewhat east of this complex spatial sense, the area is the main wholesale and retail trade centre of the town. It is the busiest part of the town and at the same time choked with congestion, overcrowding and chaotic traffic conditions.

The structuring system begins with the connection of numerous city gates to the central area. Most of the major streets are these streets which also establish the major linkages to the city's central part.

Construction of Ellis Bridge in 1892 considerably affected the growth pattern of Ahmedabad. The city started growing on the western bank of river Sabarmati. The major institution located on this side of the river was Gujarat College in the year 1879. In the last couple of decades, most of the city growth has taken place on this side.

Sectors:

The formation of sectors in Ahmedabad is not as clear cut as in the case of Jaipur where the grid pattern of the street layout has sub-divided the city into clearly identifiable sectors. However, the branching and irregular street pattern has created sub-divisions of irregular form. The overall character of these sectors is



Opposite page. Areas in the 'Pols' having different privacy levels. (Fig. 45).

A typical 'pol' scene where household activities extend. Water tap is a later addition to the 'pol'. Originally rain water was collected in an underground watertantank. Ref. house section. (Fig. 46).

dense with compactly packed houses. It gains porosity by virtue of courtyards within the houses and due to streets which also act as open spaces. Most of the houses are two to three storeyed high and have inclined roofs. This character gets interrupted due to additions, alterations and constructions of new buildings in a different idiom.

A street, irrespective of size and type, is the key element in sectors. More than a mere route, it is a space and a focus community activity. Generally speaking there are three categories of streets in an Indian city. Each category of street makes a context within a sector. An order of hierarchy, both functional and visual can be perceived for the street system. In this order three categories of streets exist which have a changing pattern of activities as the order of street changes. Short distances and compact texture generated narrow and irregular streets.

Primary streets are the major links generating at city gates and leading to the central part of the city. Most of the commercial activities are concentrated on these streets. Also, significant, visual features tend to occur on these streets or on the junction of other streets with these streets. Diversity of functions and major movement create intense activity on these streets.

Secondary streets also serve as links and commercial streets. But, here the commercial activity tends to become more specialised. One street may specialise in gold and jewellery, while another in food grains and spices, third one in cloth and fourth in paper, stationary etc. For these streets, the difference from primary street lies in their specialised use in trade and related landuses generated thereby. The upper floors which were mostly used for residential

purposes have been taken over by commercial offices.

The extended use of shopping at ground floor levels add to the sense of continuity at the city level. The scale of these streets narrows down and the traffic confusion increases because of pedestrian and slow moving traffic. Even these streets cannot really take the car. Many functions such as shopping, movement, access to the upper floor etc. get mixed.

The third order of streets (commonly known as 'pols') form the housing clusters. Linkages get localised and there is hardly any commercial activity within these clusters. Mostly pedestrian in scale, these street clusters are often closed on one end with control gate on the other.

A typical house in a pol. (Fig. 47).

Sometimes a group of such clusters are converted to one common space which is controllable by a gate.

Transitional elements connecting houses with the streets play an important role. Platforms and steps are used for sitting out and socialising with the neighbours. Also, many household activities spill over into these streets making them really lively community places.

These street clusters can be considered as micro-neighbourhoods and are usually inhabited by one community group. Introvert and quiet in nature, the quality of these places is evocative of community interaction and play areas for children. Form of clustering is significant in giving textural quality to the sectors and thereby to the whole city.

House - 'Pol' connection is important. Small platform known as 'otla' is a vital transitional element harbouring activities and social interaction. (Fig. 48).