

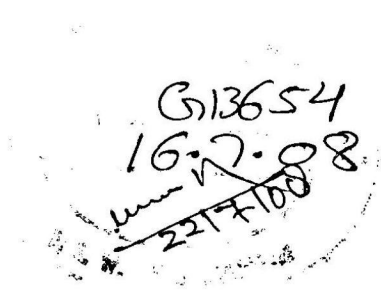
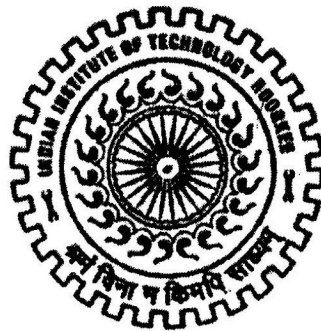
DESIGN STRATEGIES FOR URBAN INSERTION: CENTRAL CORE, NAGPUR

A DISSERTATION

*Submitted in partial fulfillment of the
requirements for the award of the degree
of*
MASTER OF ARCHITECTURE

By

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JUNE, 2007

CANDIDATE'S DECLARATION

I hereby certify that the work, which is being presented in the dissertation, entitled **DESIGN STRATEGIES FOR URBAN INSERTION: CENTRAL CORE, NAGPUR** in partial fulfillment of the requirement for the award of the Degree of **MASTER OF ARCHITECTURE** submitted in the **Department of Architecture & Planning** of the Indian Institute of Technology, Roorkee is an authentic record of my own work carried out during the period from June 2006 to June 2007 under the supervision of **Dr. Pushplata**.

The matter embodied in this dissertation has not been submitted by me for the award of any other degree.

Place: Roorkee

Dated: June 29, 2007


(BHATIA NEETI GAURISHANKAR)

CERTIFICATE

This is to certify that the above statement made by the candidate **BHATIA NEETI GAURISHANKAR** is correct to the best of my knowledge.

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framed for the new intervention in the core area which basically aim at improving the quality of the city centre of Nagpur by creating it as a hub of activities for the people, where all people gather together for satisfying their aspirations & needs; which is economically successful; rich in culture that is flexible enough to adapt the changing needs of the society without prejudicing the quality of life for future generations.

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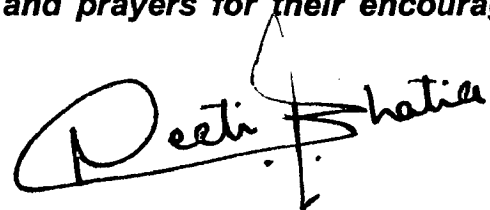
I am deeply indebted to Prof. S.K. Mishra for the valuable suggestions given to me throughout my thesis.

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The acknowledgements will not be completed till I express my regards and thanks to my Parents for their blessings and prayers for their encouragement and support.

A handwritten signature in black ink, reading 'Neeti Bhatia'. The signature is written in a cursive style with a large initial 'N' and a long horizontal stroke.

(BHATIA NEETI GAURISHANKAR)

Dated: June 29, 2007

ABSTRACT

Neighborhoods, communities, cities or regions, all need good cores to be successful and well functioning core acts as a heart of the city helps preserve and communicate the communities history, helps build a sense of community and binds the entire city together . Today these cores are experiencing a lot of problems due to the increasing pressure of activities and these cores need to cope up with all the new interventions in its existing fabric.

The focus of the thesis is on the urban insertion in the city cores, so that the future intervention in the central core areas of the fast developing cities like Nagpur are in unison with the already present fabric of the core. From the literature review the significance of the cores and the growing need for planning of the new developments is understood. Study of similar cases have been taken up to understand the various approaches adopted for urban insertion in the core areas. The basic aim in developing the core area is achieved through designing an attractive public environment in all the cases.

Having studied the context of Nagpur it can be found out the core Sitabuldi acts as a major commerrail area in the heart of the city attracting the inhabitants of Nagpur for a variety of purposes. The central core of Sitabuildi has been studied in detail to identify the problems and issues, and thereafter suitable zones for new intervention have been identified. Detailed study of these zones and the issues of the core form the basis of the strategies and design proposals. Guidelines and recommendations

framed for the new intervention in the core area which basically aim at improving the quality of the city centre of Nagpur by creating it as a hub of activities for the people, where all people gather together for satisfying their aspirations & needs; which is economically successful; rich in culture that is flexible enough to adapt the changing needs of the society without prejudicing the quality of life for future generations.

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INTRODUCTION

1.1 BACKGROUND

City is a multifaceted element comprising of various areas serving different purposes to its inhabitants to live, to work and to enjoy. City is by many is described as a human being comprising of brain, heart, lungs, etc. in the form of civic areas, places for relaxation and breathing spaces as parks and gardens.

Cities are continuously in the flux of change. With time the needs of people change, which changes their lifestyle and perception and drives them towards striving for a better environment. The cities today in the process of development have reached its zenith, expanding & swallowing the outer boundaries they were planned for. But still the extents of the city still maintain a strong bonding with the central core, which forms the heart of the city.

Urbanization affecting a large number of people directly has an impact on the core of the city with its location being most prominent offering high potential land with high land prices, better infrastructure and thus is the first to hold the eyes of the developers.

The core serves a wide range of users from the retail shop owners, wholesalers, the vendors, the purchasers; all contributing to the density of the area keeps increasing with time.

1.2 PROBLEM IDENTIFICATION

As the city is undergoing urbanization it is important to keep the essence of the city core intact. In this process center experiences a lot of intervention with the changing land use, Changing F.A.R, etc. Cities with historical importance, face lot more challenges striving hard to hold on to he values.

These cores time tested and time worn are accessible in terms of many conflicts. It is as area of special interest in which the conflicting indices are at their peak because of the positivities of the hardware and software available.

In this process of redevelopment it faces a lot of problem of shrinking road widths due to more inflow of traffic, land use incompatibility with the existing land use increasing parking requirements, intervention with the imageability of the spaces.

As the city is undergoing urbanization it is important to keep the essence of the city core intact.

Nagpur, with its strong historical significance and its prominent location is on the track of urbanization and is undergoing development at a very fast pace. The transformation of the city has affected the city core of Sitabuldi, generating a need for planned intervention in order to regularize the growth further. Sitabuldi has the highest density of population due to the compactly arranged shops and residential areas. The area everyday acts as a magnet to large group of people from distant places and offers itself to them in the form of market for trading, manufacturing, for recreational purpose, commuting as it located in the heart of the city and other allied activities.

The realization of the need of planned insertion in the a central core forms the basis of the thesis, and shall deal with identification of the problems due to the new architectural intervention in an existing central core of Nagpur, its impact on the existing fabric. Taking up the existing fabric of Sitabuldi, studying the existing hardware of the core, its layers of gradual development so that future intervention is in unison with the already existing one.

This shall be done by studying similar developments already carried out in other cities in the form of case studies and by studying various theories already experimented by the designers in similar situation and identifying some of them which can be applied to the case of Sitabuldi in Nagpur .

1.3 AIMS AND OBJECTIVES

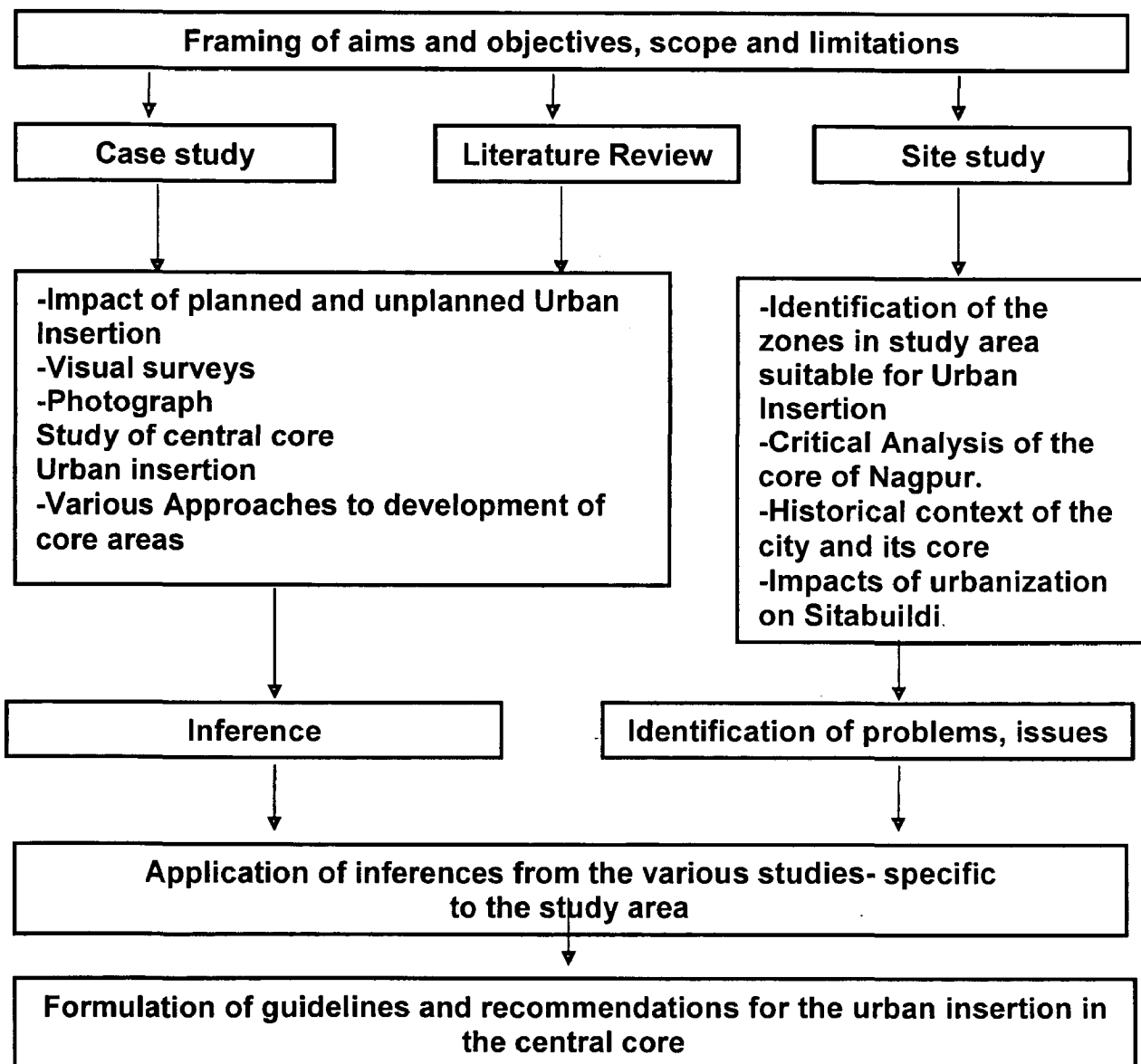
Thesis aims at-Planning urban insertion, so that the future intervention in the central core areas of the fast developing cities like Nagpur is in unison with the already existing one.

Objectives of the thesis are-

- Understanding and evaluating the cultural collage of the city and the urban elements which have affected the evolution of the city cores.
- Understand the existing fabric of the Core of Nagpur i.e. Sitabuldi, studying the existing hardware of the core, its layers of gradual development.
- To formulate a framework for guiding future development in the central core areas in general and for Nagpur in particular.

1.4 METHODOLOGY

The methodology of the study, to achieve the above aim and objective begins with the identification of problem, framing of the aims and objectives followed by simultaneous theoretical review and similar case studies. Based on the study and analysis, strategies and guidelines are framed.



1.5 SCOPE AND LIMITATIONS

The thesis Planning of Urban Insertion: Central core, Nagpur will limit itself to only few parcels of land in the central core of Sitabuildi, which are situated close to each other lying on the main spine of the city.

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides an introduction to urban insertion in general and there importance. It discusses briefly the relevant literature on core areas; concept of urban insertion: causes of urban insertion; general approaches adopted by designers.

2.2 SIGNIFICANCE OF HISTORICAL CORES

Neighborhoods, communities, cities or regions, all need good cores to be successful. The term core is used to describe an area with concentrated and compatible mix of urban land uses that serves as a node of activity within a city or a region. Cores form multifunctional places of entertainment, work places.

The historical perspective provided by thinkers like Winston Churchill, Lewis Mumford, Victor Gruen, Louis Kahn, Le Corbusier state that attractive, highly accessible cores and community centers -- and similar concentrations of mixed use -- build community, increase personal opportunity, reduce costs and improve the environment and facilitate city or regional growth.

Core by many is described as the heart of the city. A well functioning core acts as a nucleus of the city helps preserve and communicate the communities' history, helps build a sense of community and binds the entire city together even the expanding boundaries of the city.

A core offers an access to the widest possible range of opportunities to the city dwellers and this has always been an essential role of city cores. It contains features reflecting the culture and history of a community are often embedded in these cores. And therefore an old city centre preserves and communicates the community's history and culture which should be preserved, enhanced and made available to all. Today the new developments coming up are diverse in nature and have no relation to the context of the city. The core considered to be the cathedral of the city by Victor Gruen generates a reality and "sense" of community which people can relate them with. This feature of the core is becoming more important in view of the increasingly diverse and transient nature of the new societies.

Most of these cores take up a prominent location in the city and therefore they are easily accessible from all direction. Good cores often provide the best opportunities to walk in their communities. Reduce the negative effects of sprawl and achieve conservation and efficiency in both urban and rural environments by reducing the scattering of job and commercial destinations.

Cores have an ability regenerate themselves and their communities as they offer mix of land uses ranging form residential, commercial, administration in contrast to the new commercial centers which are designed as single-use developments and have which are likely to become obsolete with time due to adjust to economic, social and technological changes in the society.

2.3 NEED FOR PLANNING OF NEW DEVELOPMENTS

Central cores are no longer the only providers of goods and services to their communities. The sub urbanization of metropolitan areas has changed the way

consumers shop by pulling them away from traditional business districts. With expansion of the towns taking development beyond their original boundaries, big-box stores malls and superstores are outnumbering commercial districts. Chain superstores are growing bigger as they strive to offer one-stop shopping for consumers by filling greater and greater square footage with more product lines. New technology has become another factor threatening the old cores as many stores offer online shopping or new conveniences.

These challenges have placed multiple stresses on old cores that must fight disinvestments and look for ways to attract new businesses and customers.

In the recent past, cities worldwide have begun focusing on redeveloping and revitalizing their Central Areas. This has been motivated by various factors such as:

The strategic location of the central city districts in regard to transport and business; Many consumers are tired of the homogeneity and impersonality of shopping malls, big-box businesses, and chain stores. People value personal attention, name recognition, quality merchandise, and exemplary service — all potential features of traditional commercial districts, Because consumers are more mobile today than several decades ago, the market area that a downtown or neighborhood commercial district can potentially serve is much greater than it used to be, the changing economics of the city, with 'new economy' drivers, the impact of globalization, and the mobile population ; The rediscovery of the city centre as a viable business market; Identification of new markets within the central cities due to the potential that they offer, which have been previously neglected; and the recognition that vibrant urban centers play a key role in shaping the society with the strong historical and the cultural background that they offer, More and more people enjoy visiting historic

places for everyday business and leisure activities. Traditional community centers offer unique shopping in historic environments.

This results in considerable insertion in the existing fabric. The Insertion being carried on in the central cores is mainly in the form of the changing land uses due to the new market trends with a drift from the smaller retail shops towards the new concepts of anchor stores. The strategic location of the cores attracts a lot of business due to which the potential of the core increases resulting constant flux of change in the activities in the core areas that serve a wide range of users with their varying needs and requirements.

Resulting in considerable insertion in the existing fabric in terms of –

- Changing land use
- F.A.R.
- Traffic requirements
- Intervention in the imageability of space

Circumstance under which Urban Insertion happens:

- Increasing pressure for development- More remunerative uses in the centralized locations.
- High land value.
- Changes in the development control rules.
- Changing land use- Obsolescence of use/ structure/ style
- Destruction- Natural or Man Made

2.4 APPROACHES TO PLANNING OF THE CITY CORES

Victor Gruen Compares the centre of a city to the heart of a human and lists down various approaches to planning of the city cores which are high vitality, intensive activities, superior environmental qualities, good accessibility, and suitable uses.

High Vitality: The core is at a maximum, when primary functions of a city are carried out successfully, without strain. Possible if the secondary functions or the utilitarian functions are able to perform efficiently. These would be the water supply, sewage disposal & all means of transportation.

Intensive Activities: A healthy urban pattern, created by the compact arrangement of suitable uses in the cores forms the basis for activities such as working, dwelling, shopping, sight-seeing, participating in civic social, cultural & recreational events. Any center with these healthy conditions should be able to attract great no. of people, or activity participants.

Superior Environmental Qualities: In the long run, a core would succeed only if it has the environmental qualities that positively affect the well-being, safety, comfort & pleasure of such activity participants.

Good Accessibility: Assuming that we have created a center with all those criteria, it would not functionless it was within convenient reach of those wanting to become activity participants. People and goods both must be transported easily from the entire region, requiring both private or individualized transportation, as well as public or mass transportation. Once the people have reached, there needs to be adequate core transportation system whether it is by foot or some other means of short distance conveyance.

Suitable Uses: Representing the highest expression of urban activity.

The government, the central offices for health, transportation, welfare. The main offices of large & small corporations, banks, retails & wholesale trades, services of all types. Theatres & concert halls, libraries & museums, higher institutes of learning in the field of education. Recreational & leisure activities such as restaurants & bars, cinemas, clubs cafes, entertainment centers, etc.

2.5 PRINCIPLES OF MAKING A SUCCESSFUL URBAN ENVIRONMENT

A successful urban environment would be those areas within towns, cities and the countryside that are physically accessible to everyone, where the people feel secure, which attracts people for a variety of purposes. It would be a place which they can relate with themselves. To make a successful public environment Ian Bentley has lists down seven principles of making a responsive environment which are permeability, variety, legibility, robustness, appropriateness, richness and personalization.

According to Bentley only a place which is easily permeable i.e. it is easy to be reached and where it is convenient to move within can be successful. Therefore permeability of a place is the most important aspect. A good public place should provide a mix of culture, entertainment, leisure, recreation, civic life. It should offer people to the people variety, which is the most important aspect. Choice of activities for people of all age, social groups, etc. helps in attracting people for a plays an important part in creating a lively image of any place.

Places should have a clear image i.e. it should be legible, be easy to understand and easily identify the purpose of the space. A place that has a clear image of what and whom it is for, and that are easy to understand through the medium landmarks,

gateways, focal points. Places should be capable of changing in response to economic, social and technological. A public places should be such that it people can relate with themselves through culture, architecture, historical significance etc, and therefore it should have an identity, responding to and reinforcing distinctive patterns development and culture.

Places which can be used for many different purposes offer the users more choices than the places which are designed for individual use, therefore a design should be robust in character and easily adaptable to the changing uses.

Places are designed for people and they should be able to easily understand the purpose of the place, therefore they should be designed in a way which can be easily understood by the users. Therefore to create a good and successful design of a public place an attractive public environment should be created

2.6 THE ARCHITECTS ROLE IN PLANNING AN URBAN INSERTION

The architect plays an important role in the development of the central core area. The architect has a range of responsibilities which starts from the site selection and land acquisition for the future development, the environmental planning, the accessibility, planning of the centre, and for facilitating future development each of which are discussed further:

Site selection and Land acquisition: Achieved on the basis of study of the influence area, as far as economic and accessibility aspects were concerned.

Environmental planning: Introduction of green areas safeguarding the environmental character of the area.

Accessibility: Provision of easy access and egress in all directions. Provision of Parking spaces within and at further distances from the core areas keeping in mind the different users of the core.

Planning of the center core: The balancing of the open, semi-open and enclosed spaces. Location of areas like parking keeping in view the location of various uses.

Creation of focal points and magnets.

Provision of Future Enlargement : Determining the requirements ahead of time.

Architecture: To achieve impressiveness in the elements of design, attracting the attention of a large population of the people in order to achieve the full use of the potential of the site.

2.7 CONCLUSION:

From the literature review it can be concluded that cores form the nucleus of any city and that a successful urban core is very essential for any city to survive. But due to the changes taking place in the society there is an increasing pressure and that the cores need to cope up with the ongoing changes due to technological, social and economic advancements. From the study it can be inferred that for the cores to be well functioning core they have to be designed as attractive public environment.

CASE STUDIES

3.1 INTRODUCTION

The chapter deals with the proposals for organizing a planned growth in the [recants of Sitabuildi. The policies, design proposals are a outcome of the study and analysis done in the previous chapters on the situations of the existing cores, and on the cases studied having similar context. The primary objective of the design strategies for renewal in Sitabuildi is to encourage renewed interest in living, working, and shopping in the central core through the creation of a high-quality, easy-to-use physical environment, one that enhances the everyday urban experience. The studies selected are the case of city core of Coventry, the downtown Orlando in florida and the

3.2 CASE STUDY 1: CASE OF COVENTRY, U.K.

3.2.1 Description

One of the oldest settlements in the midlands. The thriving medieval city is evident from the old monuments St. Micheals Spire, Holy Trinity Church and Christ church – the basis of the traditional description of the “City of the Three Spire” The city centre has experienced a lot of redevelopment, revitalization due to the belief of the people there that the city centre acts as a reflection of the values of the city. The need of the planning the development of the core area arose from the devastation caused to the central area during wartime.



Figure 3.1 Coventry city centre location

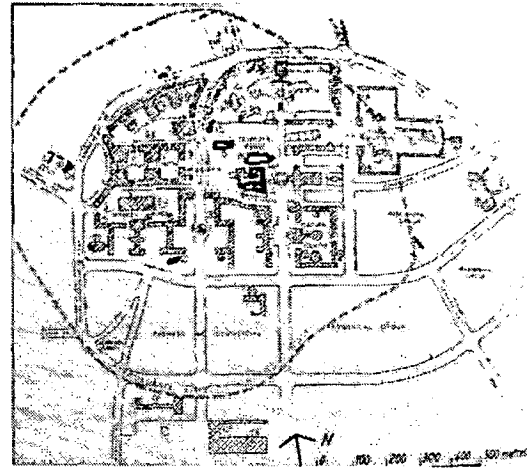


Figure 3.2 Coventry city centre plan with proposed land uses

(source: City Centre Redevelopment, John Holliday)

3.2.2 Need for planning of urban insertion

The need for rebuilding of the city center with adequate provision for shops, cultural, and civic buildings to serve not only to a large population but also to act as a center to the surrounding suburbs. Need of shifting the industries which before war were mixed with the shopping and business areas. The existence of wholesale market in the central core which could be shifted to the suburbs with the main precinct with shopping facilities.

Need for mixing of activities so that central area could cater to large no. of people by establishment of central offices. Meeting the needs of an expanding population: proposing of 5 theatre from only 3 present. Proper transport facilities to cater for local, country, long distance services.

3.2.3 Philosophy

To redevelop comprehensively around the core of the Cathedral and Holy Trinity Church and to provide large open spaces, in contrast to the traditional high density

building within the town walls. Through vehicular traffic has been diverted from Broadgate, while accessibility is retained

The development of the City Centre will be promoted and encouraged as an attractive, vibrant and accessible focus to meet the needs of all the community and to fully develop its role.

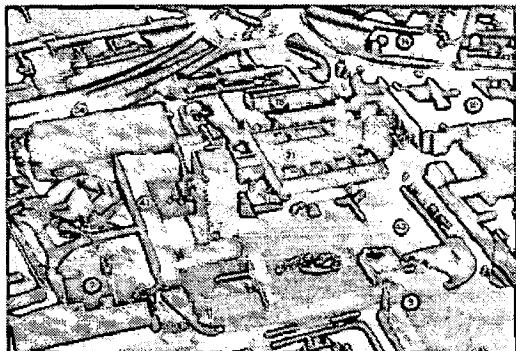


Figure 3. 3 Model of the new insertions in North East Central area



Figure 3. 4 Model of the new insertions in South East Central area

(source: City Centre Redevelopment, John Holliday)

3.2.4 Design Strategies adopted for Central Core of Coventry

A Vibrant and Entertaining Market Place- This objective is achieved by focusing more on development of new shopping and social, community, leisure and tourism schemes which is made possible by combination of redevelopment, refurbishment and extension

A Living Heart-The core is promoted and encouraged to provide a living heart for the city through the identification and promotion of a mix of residential, employment and education sites and areas.

Warm and Welcoming Public Spaces- Improvements to the environment of City Center is promoted and encouraged. This is done through a combination of major

environmental improvement schemes, smaller scale improvements and greening exercises.

Accessible to All- Improvements to accessibility to and within the City Centre to provide access for all sectors of the community is promoted and encouraged by preparing schemes to make crossing the major road by the pedestrian easier, by provision of adequate supply of car parking for shoppers, and making schemes like opening some streets for car traffic and parking in the evening. And special attention is given the needs of the disabled people

- Sparkling through Good Design and Management- Improved design and management of the City Centre is promoted and encouraged through partnerships with landowners, developers, businesses and the City Centre Company. This includes proper lighting and through development of public art schemes and through identifying distinct areas of the city centre.

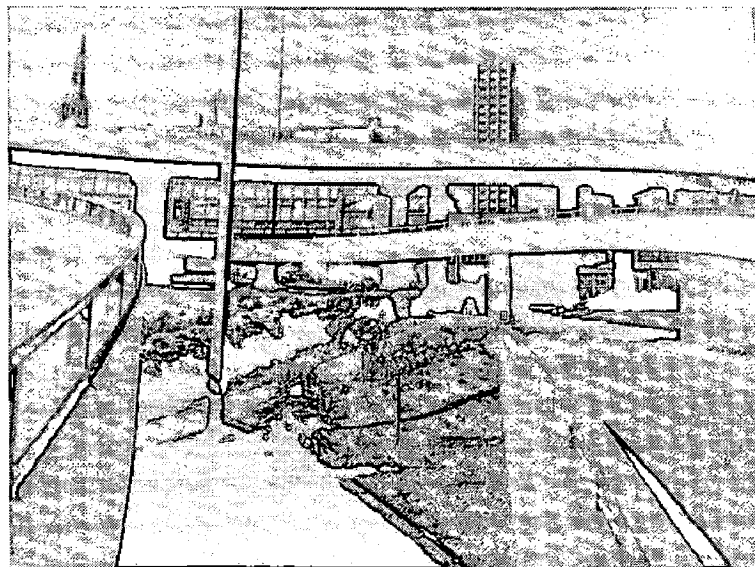


Figure 3. 5 View of separate vehicular and pedestrian accessibility

(source: City Centre Redevelopment, John Holliday)

3.3 CASE STUDY 2: DOWNTOWN ORLANDO, FLORIDA

3.3.1 Description

Orlando is the premier city in Central Florida, and downtown is its heart. Orlando has a rich and varied history.

3.3.2 Need for planning of urban insertion

Like downtowns in many American cities, Downtown Orlando started to decline in the 1960s with the advent of suburbia. Rapid growth in both the physical size of the city and in population provided new housing and commercial opportunities outside the core. As residents vacated downtown neighborhoods for new developments on the outskirts of town, businesses located in the heart of the city struggled with the loss of their client base.

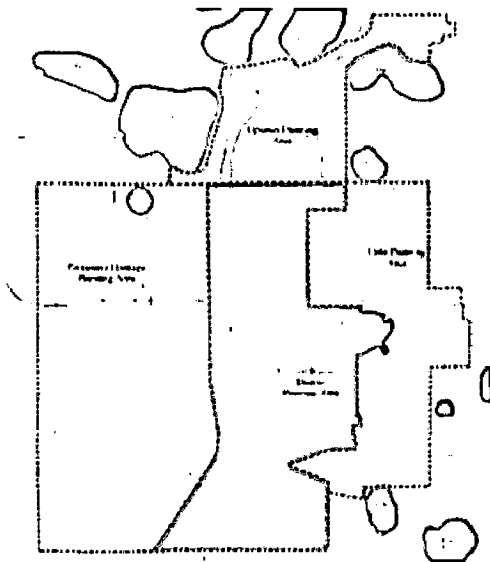


Figure 3. 6 Orlando City centre location plan

(source: www.archnet.com)

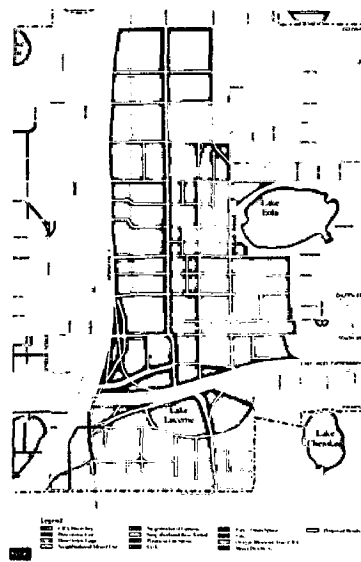


Figure 3. 7 Land use plan for Downtown Orlando

(source: www.archnet.com)

3.3.3 Philosophy

The philosophy that goes behind making a successful city centre in the Downtown Orlando focuses on creating the core as a place for families and individuals to live, work and enjoy and a place for arts, cultural and educational experiences, neighborhood and specialty shopping, safe and exciting neighborhood experiences, and the office address. The Downtown Outlook vision incorporates the principles of sustainability and livability as essential building blocks. Sustainability forms the basis of the Plan by evoking the ideals of a balanced community that equally accommodates development and the environment, commerce and society, and the essential balance between the past and the future.

3.3.4 Strategies Adopted for Downtown, Orlando

Sense of Place: For Downtown Orlando to thrive, people need a reason to be there, and they need to believe they are in a special place. The Plan incorporates downtown's entrances, open spaces, streets and buildings.

Integrated Land Uses- Downtown will be a sustainable community when people are present 24 hours a day, 7 days a week. Integrating land uses, such as encouraging residences above shops and offices, will provide opportunities for this type of interaction downtown.

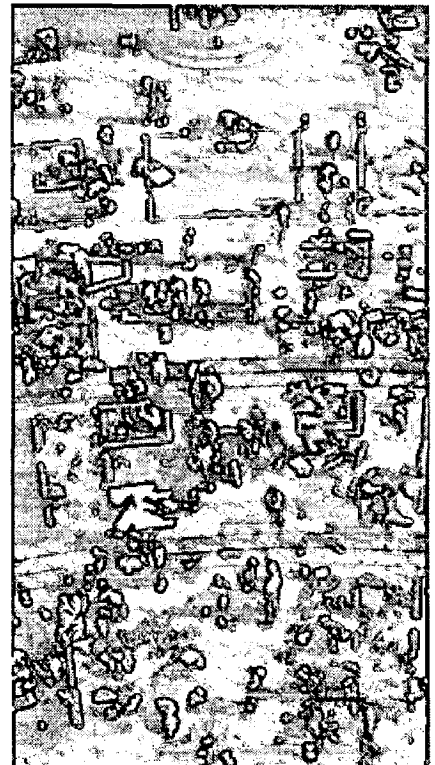


Figure 3. 8 View of Public open space in Downtown

(source: www.archnet.com)

Transportation Connectivity- To be a sustainable community, downtown must be fully accessible. The existing grid street pattern provides a high degree of accessibility. The plan for downtown will address improving vehicular circulation, as well as ensure adequate pedestrian, transit and bicycle access to houses, jobs, shopping, and entertainment.

Human Scale of Development- Downtown Orlando must continue to be a people-sized place. Streets should be wide enough to accommodate vehicles, but not so wide that pedestrians are afraid to cross. Buildings should be designed to accommodate the privacy of their inhabitants, but not so private that they isolate themselves from the people outside.

Pedestrian Orientation- Development should be oriented to the pedestrian and accommodate the automobile. A pedestrian-oriented community provides more opportunities for social interaction than an automobile-oriented community.

Working towards the Vision- A sustainable community is one that develops and improves over time. Communities are not built overnight, they are built over many years, and each individual action should contribute to the overall vision. To achieve the community's goals, government and private developers will need to be vigilant in ensuring that short-term decisions contribute to the long-range vision for downtown. Both short and long-term goals and implementation strategies have been incorporated in this plan to achieve the community vision.

3.4 CASE STUDY 3: DOWNTOWN MINNEAPOLIS AND NORTH LOOP

3.4.1 Description

The city of Minneapolis is located in the southeastern Minnesota in a rapidly growing metropolitan area. The city center is 1,791 acres comprised of five distinct neighborhoods within its boundaries. This part of the city consists of high skyscrapers, thriving retail, numerous parks.

3.4.1 Need for planning of urban insertion

Downtown Minneapolis is home to a rapidly expanding population of more than 30,000 residents plus a large no. of people visiting the core for daily for various purposes. There are several challenges that the users of downtown Minneapolis had to face due to the increasing urban activity in the downtown. The increase in the density of activities resulted in increase in the land consumption and open spaces being swallowed by the built spaces.

The increase in the no. of users of the area meant increase in the no. of vehicles resulting in increasing traffic congestion. The decreasing funding availability for new infrastructure projects. And the increasing density of the area was leading to decrease in quality of air and water.

3.4.2 Philosophy

The development of downtown area of the Minneapolis is through enhancing the quality of public realm though making complete communities which are economically successful, outward looking and adaptable region which is rich in culture and environment, where all people, working together, are able to meet their aspirations and needs without prejudicing the quality of life of future generations.

Connectivity: An interconnected street grid facilitates easy linkages between places.

Pedestrian-Friendly: Taking measures to enhance pedestrian safety, function and aesthetic character improve neighborhood livability.



Figure 3.11 Plan of proposed pedestrian corridors in Downtown Minneapolis (source www.ci.minneapolis.mn.us)

Traffic Calming: Widening sidewalks and reducing vehicular capacity on selected city streets “calms” vehicular traffic and creates a zone of activity designed to accommodate pedestrians, primarily, and to facilitate vehicular access to building sites, secondarily.

3.5 CONCLUSION

The basic aim in all the case studies has been to hold the attention of people in the central core for various purposes of jobs, business, housing, and entertainment. This objective is achieved through a no. of strategies adopted of creating a mixture of suitable land uses in the core. Improving the connectivity of the core to the rest of the town so that it gives easy access to the people from all around the town. Making the core a safe and secure place for the public through reducing the traffic congestion,

improving the pedestrian environment, giving breathing spaces to the core to make a successful public realm.

NAGPUR THE CONTEXT OF THE STUDY

4.1 INTRODUCTION

This chapter discusses the study area Nagpur's central core of Sitabuildi. Its general profile, historic evolution, and its general architectural heritage value. The focus of this chapter is on understanding the context of study area. An attempt is made to understand the problems and issues in the central core Of Sitabuildi. Considering the rapid transformation of the area into an urban centre the problems and issues are also discussed under this head.

4.2 NAGPUR: THE CONTEXT OF STUDY

Nagpur city is one of the important cities in Maharashtra as well as in a country and it is located at geographical center of India. The city is well connected by rail, road and air with rest of the country. Three National Highways are passing through the city. Nagpur is also the second capital of Maharashtra state.

4.2.1 Location

Nagpur is a city in the central part of India. In Maharashtra State. Geographically, Maharashtra is located 16.40 N to 22.10 N and 72.60 E to 80.9 E
Nagpur district is located between 21*45 N to 20*30 N and 78*15 E to 79*45 E, which essentially indicates that Nagpur district is located in the Deccan Plateau.

The adjoining districts are Bhandara on the east, Chandrapur on the south, Amravati and Wardha on the west and in the north shares the boundary with Madhya Pradesh.

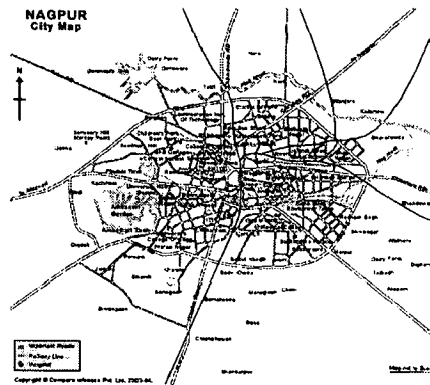


Figure 4.1 Nagpur city Map

4.2.2 Climate

Nagpur faces extreme variations in temperature with very hot summers and very cold winters and a relative humidity of 60 per cent. Nagpur district enjoys three major seasons. Monsoon sets in the month of June. It is at its peak in July and August. July end and first two weeks of August is the best time to enjoy rain in Nagpur district.

Summer is really hot. Temperature shoots up to 45 degree Celsius. Sometimes even higher than that but for only few days

The maximum recorded temperature till date was 47.8 degree Celsius on 26th May, 1954. The minimum recorded temperature of 3.9 degree Celsius was on 7th January, 1937. The mean annual temperature of the city is maximum 33 degree Celsius and minimum 23 degree Celsius. Wind blows with maximum (20 Km / Hrs or higher) in the month of February and on set of monsoon season i.e. in end of May and first week of June. This is due to generating low pressure area in this region. Nagpur district receives rainfall from the South-westerly monsoon mainly in the

months of June, July, August and September. July and August are the months during which the maximum rainfall as well as maximum continuous rainfall occurs

4.2.3 History of the town: Evolution & Stages of Growth

The present city was founded in the early 18th century by Bhakt Buland, a Gond prince of the kingdom of Deogad in the Chhindwara district. Seeing the advantage of civilized life in Delhi, he started to build Nagpur as his new capital. His successor Chand Sultan continued the work. On Chand Sultan's death in 1739, disputes regarding succession arose and Raghuji Bhonsle, the Maratha governor of Berar, helped to restore the elder son to the throne. As the dissensions continued, Raghuji Bhonsle again intervened in 1743, and the control of Nagpur slowly passed on from the Gonds to the Marathas. It became the capital of the Bhonsles.

With the Bhonsle dynasty came the vast class of cultivators in Vidarbha. Raghuji's successors lost some territories to the Peshwas of Pune and the Nizam of Hyderabad. In 1803, Bhonsles (along with their allies Scindias [Shinde] of Gwalior) at Assaye and Argaon (Argaum). In 1811 Pindaris attacked Nagpur. Bhonsles again lost to the British in 1817 and Nagpur came under British influence. In 1853 Raghuji III died without an heir to his kingdom. As a result, the city lapsed into British control under Lord Dalhousie's Doctrine of Lapse. { This policy was one of the reasons which led to the Indian War of Independence [Sepoys' Mutiny : as referred to by the British] in 1857}

In 1861, Nagpur became the capital of the Central Provinces. The advent of the Great Indian Peninsula Railway (GIP) in 1867 spurred its development as a trade centre. After Indian independence, Nagpur became the capital of Madhya Bharat

state (C.P. and Berar). In 1960, the marathi majority Vidarbha region was merged with the new state of Maharashtra and Nagpur was designated the second capital of Maharashtra state, alternating with Mumbai (Bombay) as the seat of the Maharashtra state legislature

Nagpur city founded by the Gond king "Bakht Buland" of Devgad. He founded the city by joining the twelve small hamlets formerly known as "Rajapur Barasa" or "Barasta"

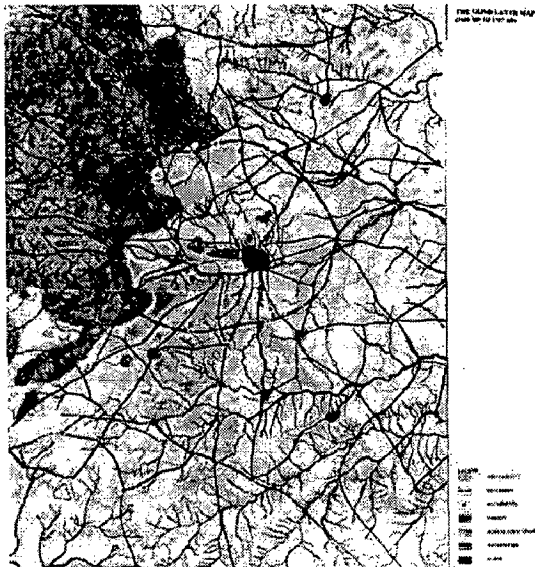


Figure 4.2 Map of Nagpur during the Gond Period

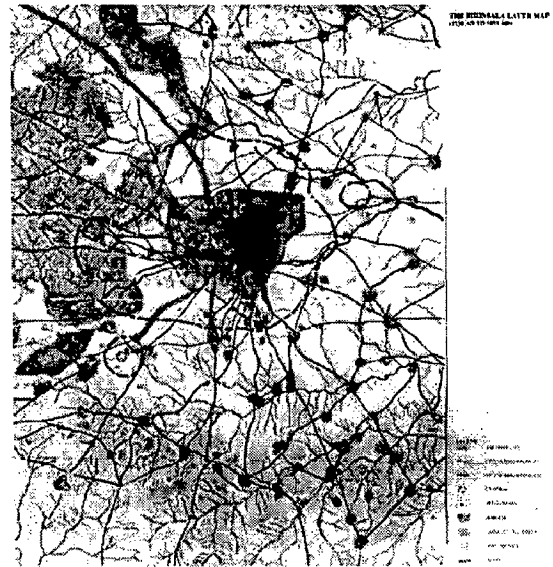


Figure 4.3 Map of Nagpur during the Bhosla Period

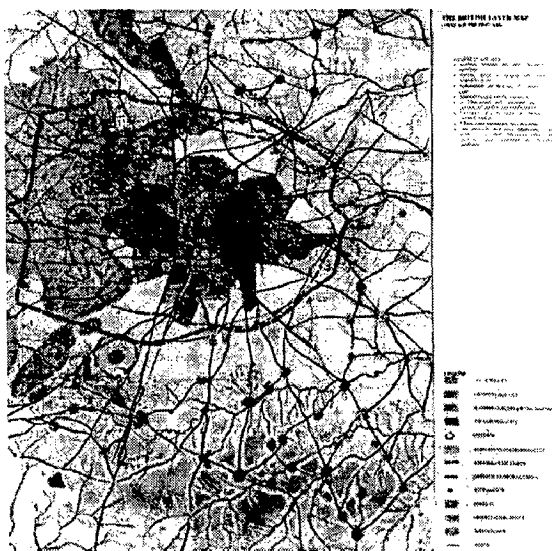


Figure 4.4 Map of Nagpur during the British Period

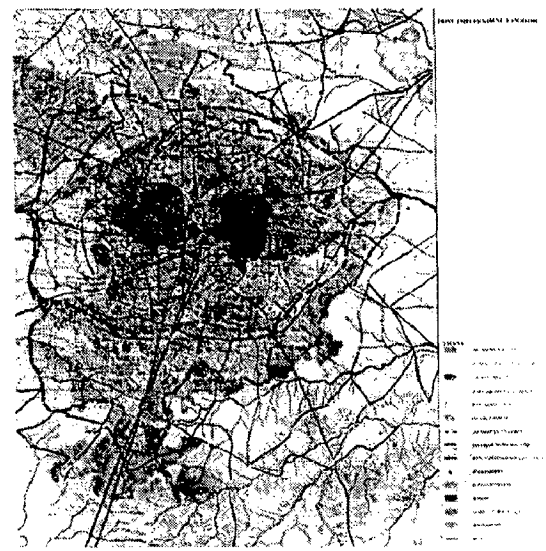


Figure 4.5 Map of Nagpur Post British Period

?	Nagpur becomes the capital of the Bhonsles
1769	Nagpur burnt in 1769 and again partially burnt in 1811 by the Pendharis
1817	The battle of Sitabuldi & Nagpur fought which secured British influence in these territories
1853	Nagpur was incorporated into the British territory.
1854	Mr. Mansel takes charge of Nagpur as the first commissioner
1861	Nagpur city becomes the capital of Central Provinces
1867	First train steams out of the city
1901	C.P. Club founded
1911	The Hitavada a leading english daily launched
1912	Foundation stone of Vidhan Sabha laid
1923	Nagpur University founded
1934	Gondwana Club founded, Nav Bharat a leading Hindi daily launched
1947	AIR founded
1950	Nagpur made capital of M.P. state
1956	Dr. Ambedkar converts thousands of dalits to Buddhism at Deeksha Bhoomi
1960	Nagpur passed onto Maharashtra State

Figure 4.6 Tables showing the milestones in the evolution of Nagpur

4.3 THE PRESENT CITY

The city of Nagpur one of the best known cities of central India. From 18th century has historic importance, possesses the ancient relics of the great ruler, which expresses its significance in history as well. Nagpur once being the capital of Central Province in 20th century, still maintains its status as being the second capital of Maharashtra. Nagpur having the wealth of Natural resources and singnificance from the past is emerging as a fast developing cities with rapid growth of commerce industrialization and transportation.

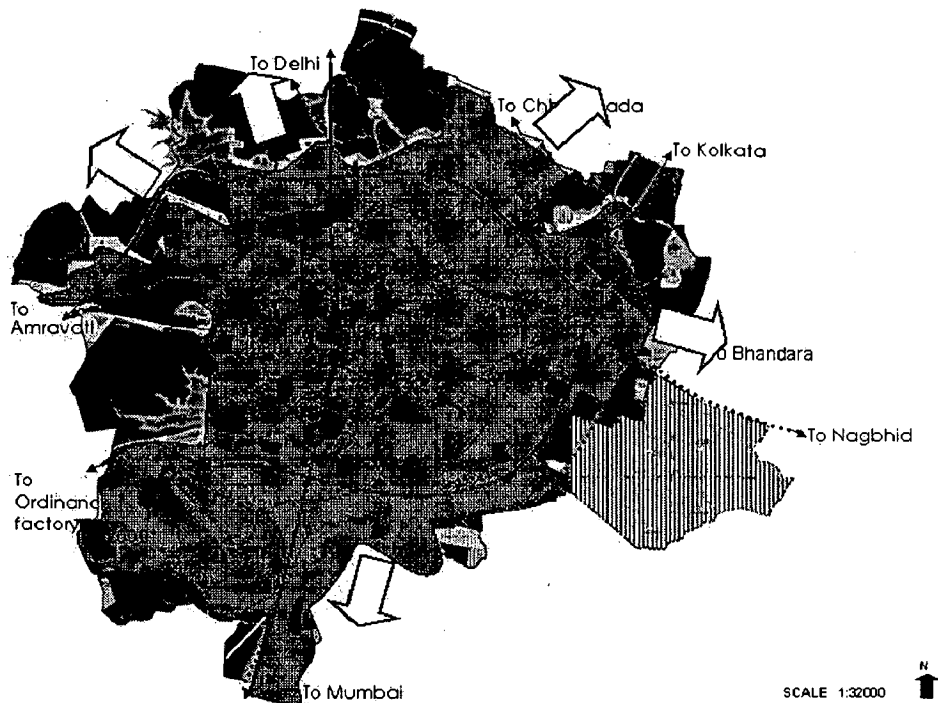


Figure 4.7 Changing boundaries due to growth of Nagpur

4.3.1 Population Density

Napur being located central India acts as a magnet to the nearby area of Maharashtra and Madhya Pradesh and is therefore experiencing a surge in the population that is supports. Due to the absence of other similar size prominent city with a radius of 500 kms major population has been attracted towards it for its

sustenance, which resulted in the growth of population from 8.6 lakhs in 1971 to 20 lakhs in 1991 which is more than double, and the current population is about 24 lakhs, growth rate in between 33% to 48%, from 1911 to 2001. Presently the city supports a population of 26 lakh within an area of 235 sq. km.

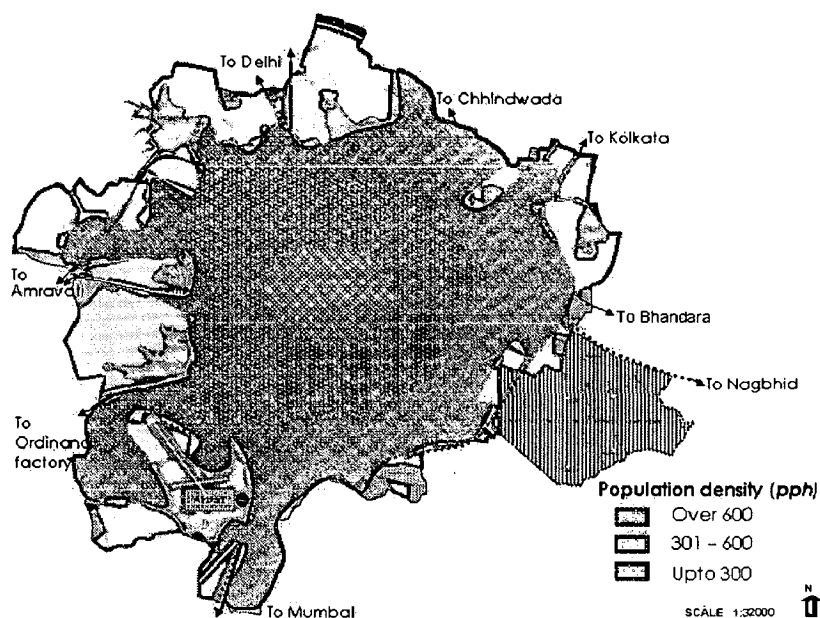


Figure 4.8 Distribution of Population in Nagpur

The population of Nagpur is not evenly distributed, with the area of Gandhi Bagh, Itwari and Sitabuildi in eastern and central Nagpur having a high density of population for various purposes. The density of population goes on decreasing as we

City	Planning area	Population in 2005	Population in 2001	Decadal growth rate 1991-2001	Compounded annual growth rate	City functions
Nagpur	235.21 sq.km.	26 lakh	2 lakh	26%	2%	Tourism, administration, trading, industry

move outwards with the areas of Sadar, Dharampeth, Wardman Nagar and towards the fringes of the town the population density is the lowest.

4.3.2 Land Use

The land use plan shows that there is an equal distribution of landuses in Nagpur with residential area, commercial areas, all over the city. The administrative function of the city are located only in the central part near the core of the area. Major transportation nodes are located around the central or the eastern part of the city.

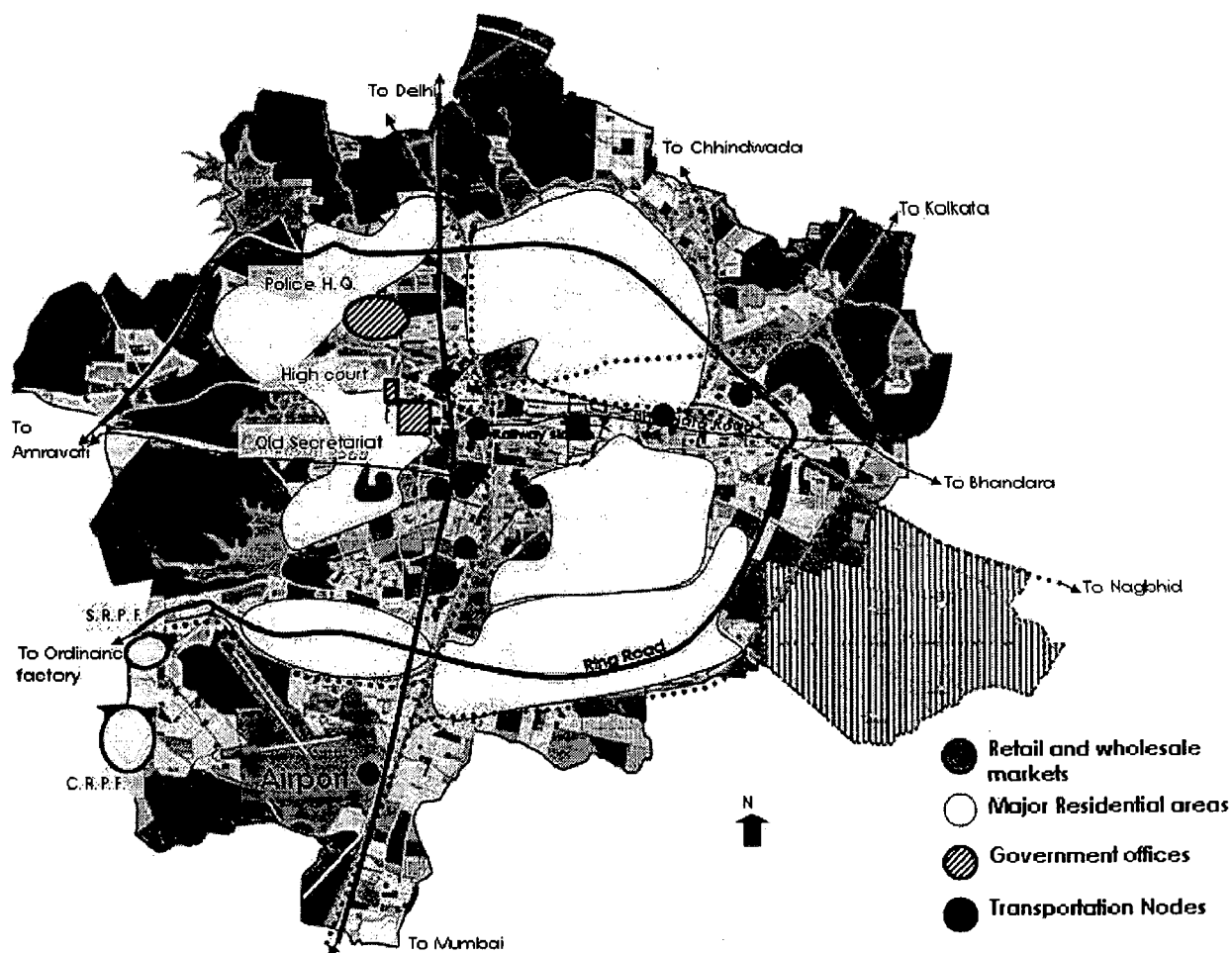


Figure 4.9 Land use in Nagpur

market acts as a collection and distribution centers of agricultural produce and other consumer goods, which are supplied to the city and region through retail centers.

The major retail centers viz. Sitabuldi, Sadar and Gokulpeth usually deals with local products and daily needs procured from wholesale markets, within and outside the city. Sitabuldi market, because of central location and good accessibility by roads and rail has emerged as CBD catering to the consumers' needs of the city and the region.

4.3.4 Socio Cultural Understanding

The people of the city are known for their distinct behavioral pattern of their cultural look towards life. Different classes of society of different religious, Hindu, Muslim, & Christians, are happily living together with understanding of each other and each others traditions and cultures ultimate result is good quality of social life which made Nagpur as most livable city.

On the whole, people are very much religious and follow their traditions, cultures and social values. Most of the people are educated and involved in educational and cultural activities within or outside the city. They have accepted modern way of life but haven't forgotten their cultural heritage and traditions. They have changed their traditions according to modern way of life. The behavioral pattern was changed but not cultural and social values.

4.3.5 Socio Economic Understanding

Though Nagpur is an important administration centre with an advantageous geographical location. Nagpur has all the ingredients for emerging as a high quality

service centre. The region around Nagpur has a large number of engineering colleges with about 8,600 engineering students graduating every year. Nagpur's unique location also makes it a logical and ideal location for a passenger and cargo hub given its strategic position in national and international railway and aviation routes. It may also work on its potential to develop into a significant medical hub, tourism gateway to the hinterland and a power generation centre for the region. A possible trigger for Nagpur's efflorescence is the Multimodal International Hub Airport at Nagpur (MIHAN) project. Besides an international airport, the proposed project envisages the creation of a road-rail terminal, a special economic zone (SEZ) and other urban amenities to meet the needs of the working population in around the proposed airport. The SEZ will provide the right platform for exploiting the latent economic potential of the city, which has the potential to create over 1.2 lakhs jobs.

4.4 CONCLUSION

City of Nagpur has grown from a hutment to a colony to a settlement further expanding to be a village then to a small town and gradually increasing in population, in size to get bigger. And therefore the transformation of the town has been an ongoing process. Therefore Nagpur has its future laid on a very strong cultural and historical background as its foundation for future growth.

Urbanization and the process of development are on a fast track and are aiming towards zenith expanding and swallowing the outer boundaries of the city earlier planned. But still these expanding boundaries have maintained a strong bond with the central core of Sitabuildi.

Sitabuldi area act a major city center with high class Shopping area, workplace, public buildings, etc. On the whole, total city is still dependent on, the main business district i.e Sitabuildi area for all functions. So there is need to reduce the concentration of activities in the old core for better functioning of city and old core.

DETAILED STUDY OF SITABUILDI AREA

5.1 INTRODUCTION

This chapter discusses in detail the central core of Sitabuildi its significance and the present city core in terms the land uses, physical condition, the character of the core, the architectural character, etc. An attempt is made to understand the problems and issues in the central core Of Sitabuildi. Considering the rapid transformation of the area into an urban centre the problems and issues are also discussed under this head.

5.2 STUDY OF THE CORE: SITABUILDI

Sitabuildi, with the potentiality that it offers of high resources, its prominent location being in central Nagpur, has gained importance through out history both in pre British and post British periods. Sitabuildi with its location in the map of Nagpur is equidistant from all the residential, administrative, from the old and the new retail and commercial areas, the important transportation nodes due to its central location. The central core lies on the Main arteries of the town that is the Wardha Road going North-South and the Amravati Road that continues further through the town from East to West The whole city of Nagpur, depends on this main business district of Sitabuildi area for all the major functions of the core ranging from cultural, commerce, and Public buildings.

Sitabuildi, the core area acts as the major city center with high class shopping area, workplace, public buildings, etc. In spite of the city emerging and supporting a population of a million people, inhabited in 235.21 sq. km. of the region in its boundaries, Sitabuildi still remains the main business district of Nagpur. Sitabuildi today is at the verge of being converted into urban districts.

As the city grows its demand for commercial space increases because of better accessibility to all parts of the city.

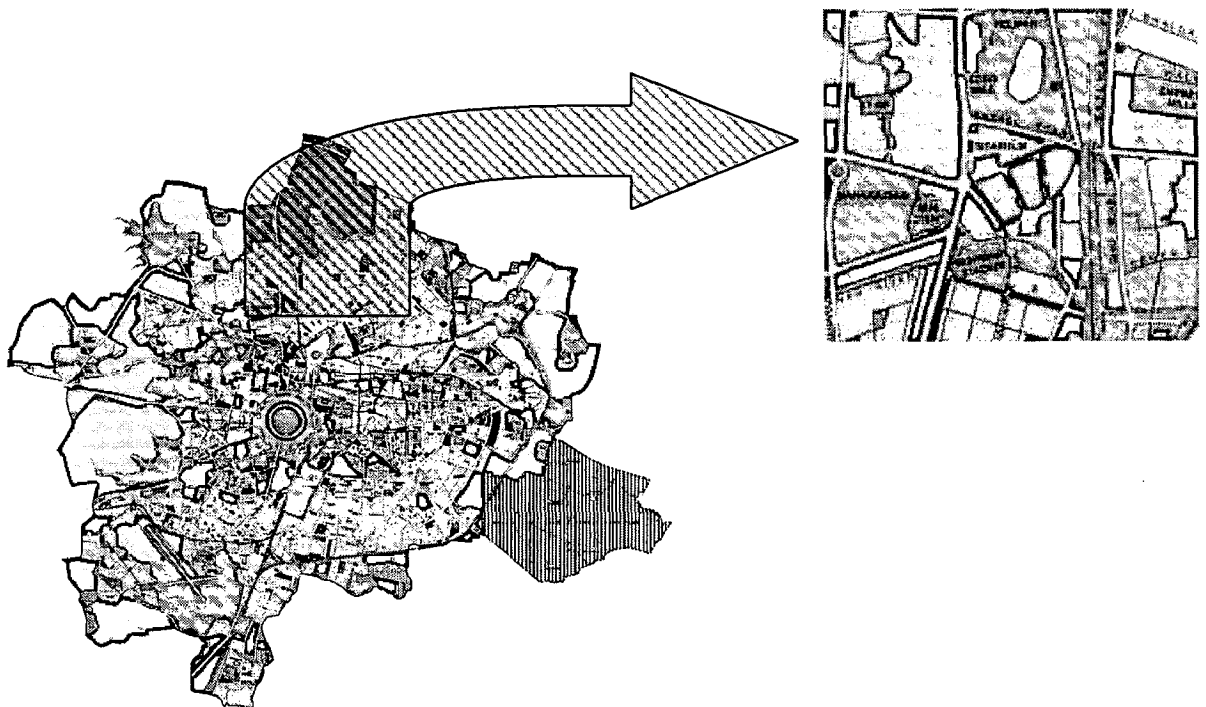


Figure 5.1 Location of the Central Core, Sitabuildi

5.3 PRESENT SITUATION

The old core has distinct form defined by edges on all sides. The old core is defined by physical characteristics as use of space, activities, and inhabitants, building type, texture form etc. The Nagpur old core shows intense commercial activity along the major roads, predominant mixed land use. The core supports a wide range of activities ranging from residential, retail, and wholesale.

The Core is studied on the basis of its accessibility from the surrounding areas, the land use and the gradual changes in that land use, the conditions of the buildings in its boundaries, the no. of stories the building cover to know the overall character, the ratio of the built with the open spaces, the elements of imageability that are the Edges, Districts, the Nodes, Landmarks and the Paths

5.3.1 Approach

Sitabuldi which forms the core of the city is centrally located and is well connected to the entire town. The core lies along one of the major spines of the city i.e. Wardha road that runs north-south and which connects the core to another commercial area of Sadar and the southern part of the core.

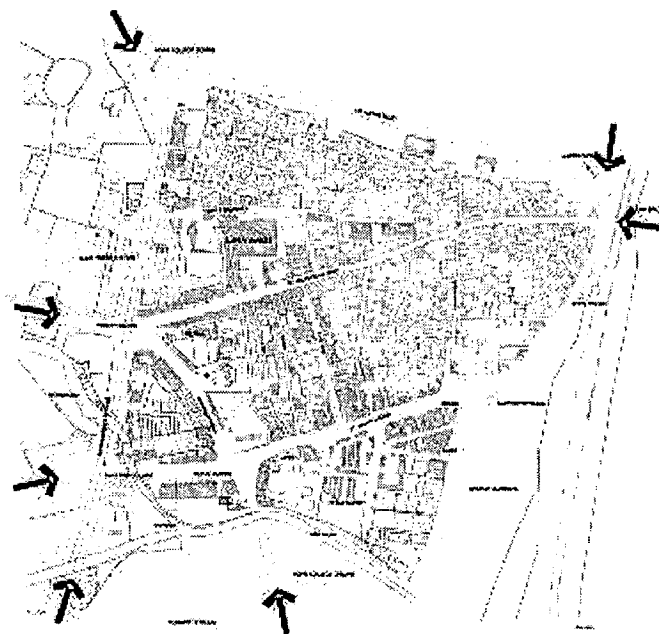


Figure 5.2 Plan showing approaches to the Core area

Two major roads Amravati road and the North Ambazari Road connects the core to the western Nagpur. The eastern Nagpur has access to the core through Manas

Square by Shukrawari Tank road. The core is well connected to the major transportation nodes i.e. the railway station, airport and bus stations as it is located in the centre of the area.

5.3.2 Landuse

The major retail centre of Sitabuildi earlier had most of its land occupied for residential purpose by the Bhosles. Gradually there is a decline seen in the residential sector as the commercial sector of the Sitabuildi took over.

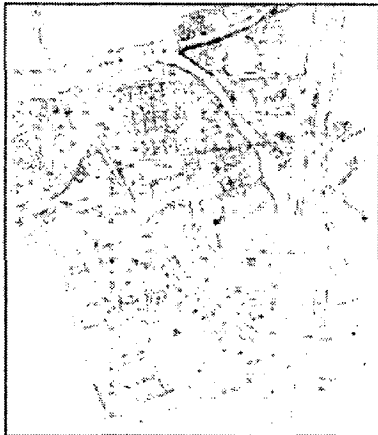


Figure 5.3 Plan showing the residential landuse dominate in the area earlier

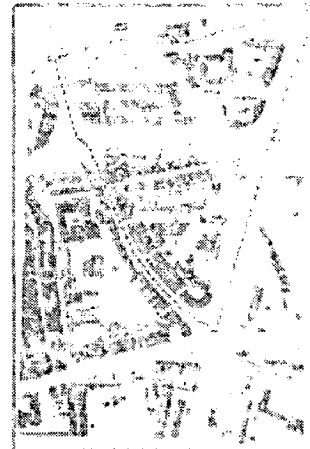


Figure 5.4 Plan showing the gradual change in landuse



Figure 5.5 Plan showing the present day land use

The residential sector which occupied 61% of land of the core area in 1971 which further reduced to 56.5 % in 1981 and further reduced to 49% in 1991.

The major cause of decline in the residential sector was the growth of the commercial sector which showed considerable increase from 8% to 14.3% to 20.5% in the 1971, 1981 and 1991 respectively. Open spaces has also seen a decline in the area with more and more spaces being occupied by the built-up and the infrastructure like roads.

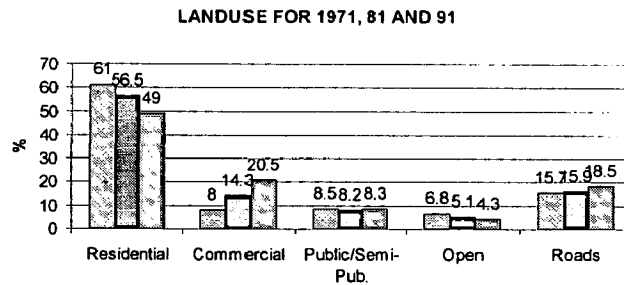
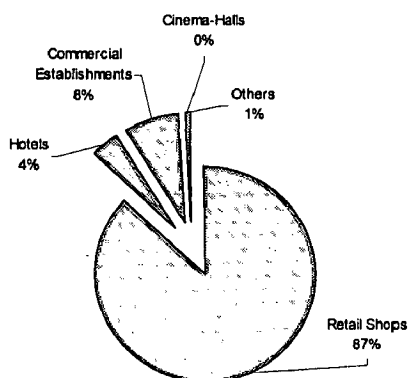


Figure 5.6 Graph showing the changes in land distribution in Sitabuildi area (source: Nagpur Municipal Corporation)

Further break up of commercial land use in Sitabuildi area in the shows major dominance of the retail market, followed by the other commercial establishments. Lodging sector still here has a less percentage. Although the area had the max no. of theaters in the vicinity, none of them is in good running condition and attracts very less crowd.



Distribution by Type

Figure 5.7 Diagram showing the Distribution of Commercial Land use in Sitabuildi (source: Nagpur Municipal Corporation)

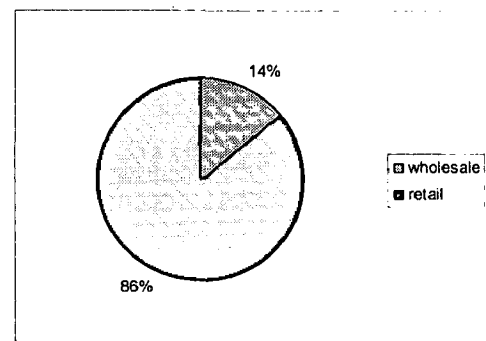


Figure 5.8 Diagram showing the Distribution of Commercial Land use in Sitabuildi (source: Nagpur Municipal Corporation)

The market is divided into wholesale sector and retail sector with the contribution to the economy of wholesale sector is only 14% with major revenue being generated by the retail sector.

5.3.3 Built Vs. Open Spaces

Doing the study of Built vs. open spaces it can be seen that the entire central core of Sitabuildi has a compact built form. The old core has a compact built form and very fine grain texture in residential zone of the area, which gradually becoming loose in peripheral areas. The foot prints of the buildings show that it has informal arrangements of buildings and most cases the buildings are interlinked with each. There is no relationship between the built and the open spaces. The open spaces are only a result of residual spaces left by the building.



Figure 5.9 Plan showing the ratio of Built vs Open spaces

5.3.4 Physical Conditions

Through visual survey done the physical conditions of the structures was analyzed on the basis of need of repair they would need. It was seen that mostly the residences which took their position in the core when residential land use dominated the core have become obsolete and they are fast being replaced by commercial buildings.

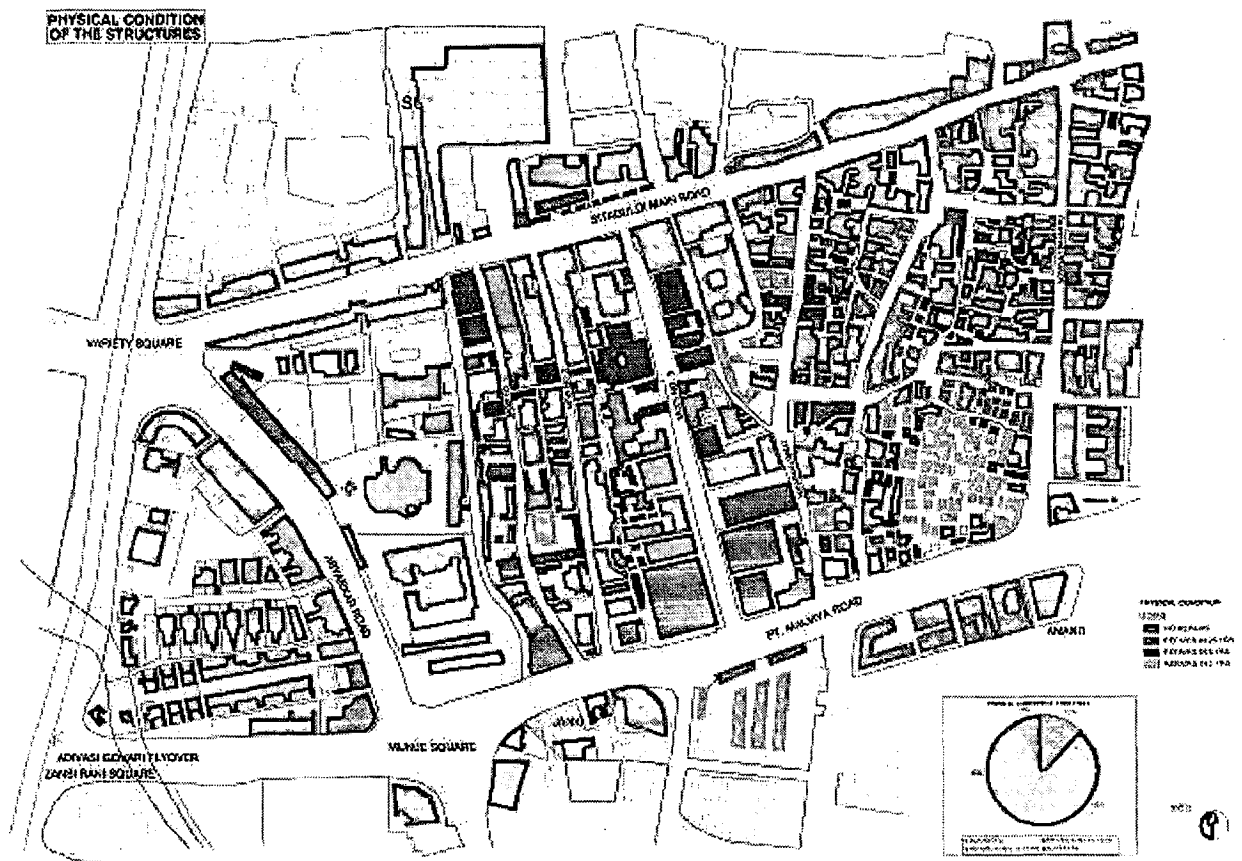


Figure 5.10 Plan showing the physical condition of the existing structures

It was analyzed that around 12% of structures are already in dilapidated state. Around 45% of the structures would be requiring repairs in the next 5 yrs. The structures which do not need immediate attention are around 36%. And the structures which are in good condition are only 7%.

5.3.5 Number of Stories

Sitabuildi has a max of double storied and single storied structures giving it a low rise character through out. It is seen that left portion of Sitabuildi which is dominated by commercial zone and is of high land value have low rise structures that too are in a dilapidated state. The buildings which are more than 2 storeys high are mostly commercial buildings.

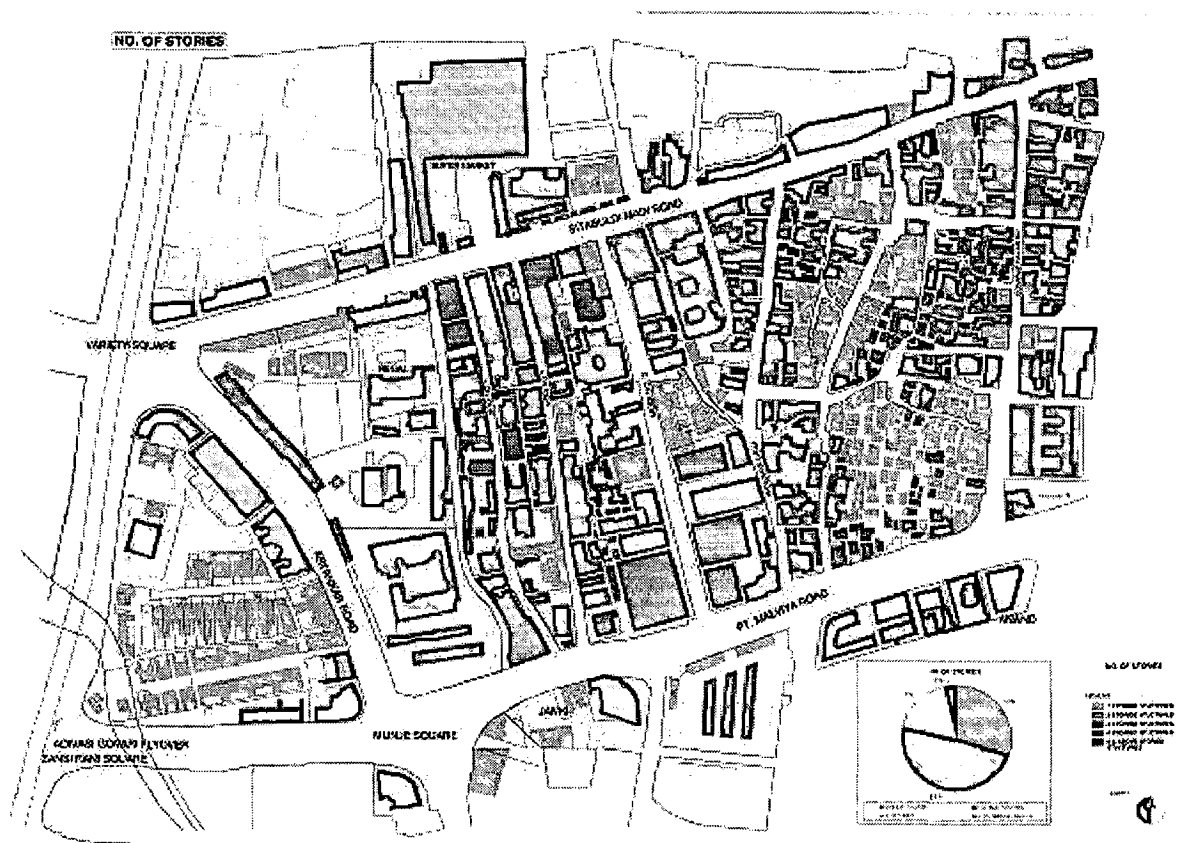


Figure 5.11 Plan showing the No. of Stories of the Structures in Sitabuildi

Structures with double storied are the max with 48%. Single storied structures make a total of 30% amongst all the structures. Only 18% of the structures in the vicinity of Sitabuildi go up to three stories and a negligible amount of structures have stories 4 or above.

5.3.6 Paths

These linear movements spaces are integral part of whole image to the a other elements of imageability resulting into a total image of an area or city. Proximity of special features, landmarks, concentration of special use of activity, special quality of streets gives prominence in minds of people.

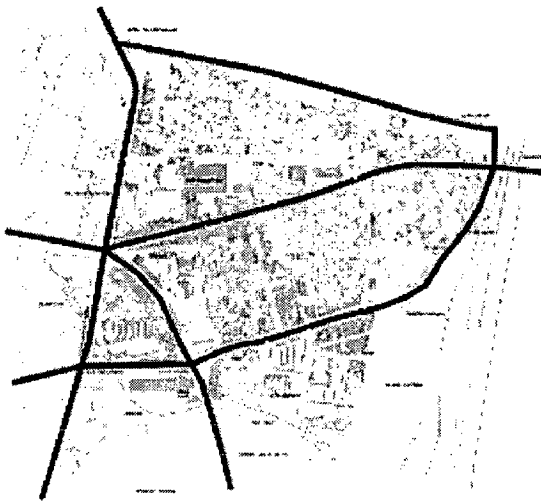


Figure 5.12 Paths of Sitabuldi



Figure 5.13 View of a street in Sitabuldi

Commercial use and its concentration along the major streets joining variety square, Jhansi Rani square and Bank of Maharashtra square are identified it as a major part. Other streets, also has a same image but of different quality.

Where these roads are the major movement corridors in old core have another importance due to many schools, palace, temples are located along the road.

One the whole the old core is structured with nodes, defined by edges penetrated by paths and sprinkled with several landmarks, such as temples and shrines in the old core.

5.3.7 Edges

The old core manifests different types of edge condition. The area is bounded by a green patch of zoo on western side, the old area Itwari on one side. Sitabuildi fort on one side road on eastern side and Yashwant stadium on the other . The nag river around which the settlement of the Nagpur started goes through this traditional city. The old area abutting the Sitabuildi on one side has different grains and texture with compact build form. It consists of the mixed land development incorporating residential commercial use inside the fortification of the old city Steel Bridge.

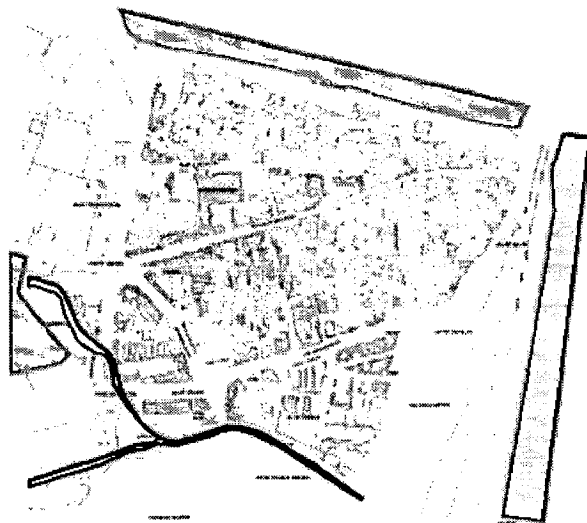


Figure 5.14 Edges forming Sitabuildi

5.3.8 Districts

The old core has fine grain and introvert building type with courtyards. Mixed use of buildings for residential, commercial purpose and intense commercial and religious activity gives totally different character to the old core. Most of the districts of the old

core are read as mohallas or pura which strongly associated with the period of establishment and the ethnic origin of the inhabitants.

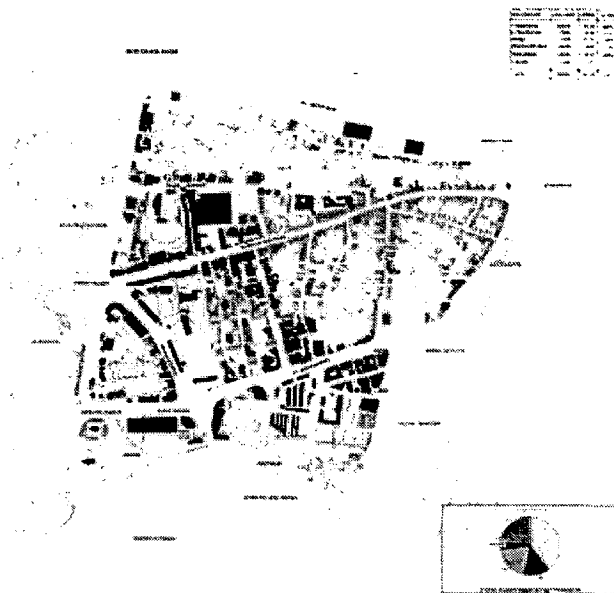


Figure 5.15 District of Sitabildi

5.3.9 Nodes

Major activity nodes are government building, cinema theatres, and other linear commercial nodes like Sitabildi main road.

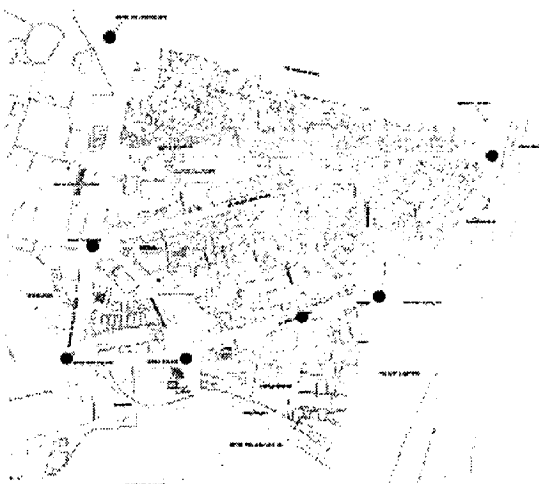


Figure 5.16 Nodes in Sitabildi old core

Major traffic junctions are also nodes as these are the points to decide your direction of movements. People perceive the nearby elements to major traffic junctions for their decision-making. Apart from these, the various temples precincts and educational buildings formed important node varying intensity.

5.3.10 Landmark

Landmarks are the physical elements having strong visual potential to be a visual node. They are identified as strong physical form.



Figure 5.17 Plan showing the Landmarks in Sitabuldi old core

The structures built by Bhosle belongs to the former category are in the heritage list of buildings to be preserved. The gate, the step well are overpowered today by the development around it, and they lose its importance as they are not visible from the main street or the jazzy shop fronts.

The cinema theaters like Regal theatre, or the variety theater which gives the name of the square also acts as a landmark. The old building of 'The bank of Maharashtra' which stands tall also forms a landmark on the Pt Malviya Road.

Apart from these, there are several small temples, shrines, monuments which act as landmarks. Thus these are local level landmarks helping people to perceive to the old core area and its religious character. Religious attachment to these landmarks increases its value as landmarks. Mostly people have tendency to rely upon these small landmarks.

5.3.11 Traffic Aspects

Sitabuildi having intense commercial and economic activities, and being located in the centre with the two major arteries crossing form this area i.e. the Wardha road and the Pt. Malviya road and they contribute to the congestion on the road. These roads are congested due to traffic resulting from intense commercial developments. Proximity of Nagpur railway station, Santra market, Yeshwant Stadium and few cinema halls adds to the problems. The road from the variety square to the Manas square is a one-way and rest all the streets are two way. A flyover linking Moris College square to Rahate colony square takes through traffic to the airport.

Even though there is a flyover the traffic on the surface creates a lot of chaos. The road capacity is too less to support to traffic volume today which has resulted in serious traffic conditions, like traffic congestion. Delays, air and noise pollution. Here the improvement of traffic conditions should be given prime importance. The road needs to be improved in terms of carriage width, footpaths etc. Segregation of traffic area + different points has to be thought. Time level segregation of traffic to be introduced.

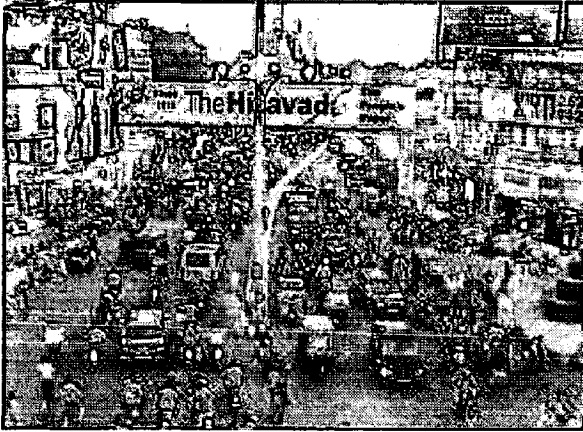


Figure 5.18 Heavy traffic on the Abhyankar Road

- Main Sitabuildi Road being one way and major commercial streets has maximum traffic movement which is beyond the capacity of a road. Here efficient traffic management and road improvement need to be given first priority.

The Abhyankar road which was a one way earlier has heavy traffic and is width

- From the traffic composition it can be seen that the percentage of cyclists and motorist is maximum at each location. This shows that two wheelers being important mode of transport.

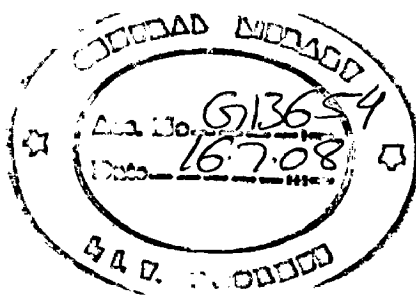
- The local buses are common mode of public transport. The bus routes to be restricted or diverted.

- The hierarchy of roads is not appropriate. At the top level there are major roads. These roads pass through the centre of areas and do not cater to the entire area. As a result the remaining area is served by access roads or lanes which are too narrow.

- The mixed land uses at various locations have created bottlenecks

5.4 ARCHITECTURAL CHARACTER

The built form is derived out of a small element like inside space, enclosed space and open spaces. These are major architectural elements. The location of these is according to the needs, functions of the activities.



5.4.1 Building typology

The area has its own architectural style. The physical environment is the strong aspect, which gives the area its own identity and character to draw the image that needs to be conserved.

The climatic consideration is major part to an architectural character but only in the old residential structures i.e. the Wada with a central courtyard. The new rebuilt houses seem to be designed on other basis. The old streets in the core area which have commercialized over the period of time have lower floors of commercial activities and upper floors utilized for residences. The commercial structures which are coming up have no relation to the old character of the buildings.

The traditional building form is derived out of the small elements like inside space, enclosed space and open spaces. The location of these is according to the needs and functions performed by the residents. Timber frame is the chief method of construction of wadas, which is not suitable for today.

There is seen a gradual change in the land use of the area, from only residential to conversion of the fringe of the areas into commercial use.

This activity of replacing the old obsolete uses with new ones is fast transforming the Sitabuildi area into a commercial hub of the town. No proper frontage is available to the buildings, as a result the houses about the roads and there is no visual -physical barrier between houses and road. The skyline is dominated by the low rise structures which but now in many areas are being disturbed by new mid rise constructions.

5.4.2 Facades

In the residential areas old wadas in stone and brick masonry with timber frames, sloping roofs and heavy decorations in woodwork on facade show the balance between vertical and horizontal lines.

Visual pollution can be seen throughout due to advertisement banners, hoardings and electrical poles on the roads.

Modern buildings which are coming up in this area have facades with plain continues parapets of balconies; stand in contrast to the traditional buildings. There is no continuity from past to the present in architectural style. Control in facade of this area is an important issue.

5.4.3 Streetscape

Streetscape is very important to study because the street line is formed by the buildings. The buildings close to each other have typical street facade along the street. Streets which have mostly residential structures are typical projected wooden balconies or ornamented carved wooden brackets as shown create an interesting pattern. This pattern is often disturbed by the newly constructed buildings.

Streetscape is composed of built form facades, geometry of streets and landscape and urban graphics. Streets in this area are a mixture of old traditional buildings and new modern buildings.

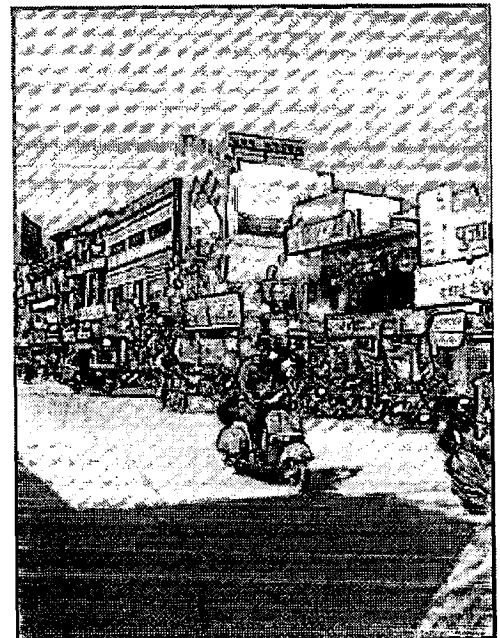


Figure 5.19 Sign boards governing the streetscape

5.5 DELINEATING PROJECT AREA

Due to the prominence that the central core of Nagpur has today and in the past has led to a lot of changes with the passage of time and the present day core faces a lot of conflicts. The new buildings are fast replacing the old ones, the core is delineating on due a lot of reasons.

Sitabuildi today is loosing its prominence due to the increasing size of the city and the no. of suburban centers coming up which are less chaotic, more organised, better planned and which have better infrastructure to provide the to users in contrast to the city core which lacks organisation due to its unplanned growth does not provide good infrastructure to the people.

The core of the Sitabuildi is delineating on the basis of the loosing historical importance, because of structures of Bhonsle period the tradition layout of the commercial district which is under the treat of the changes coming up. The old core is a major link between the old fabric and the new. The core is becoming obsolete due to the kind of land uses it supports have become obsolete and there are new commercial centers coming up in its competition with new type of land uses.

There is an increasing pressure on the core due to the increasing intensity of activities and the new developments are more business oriented and The kind of development Kind of development taking place due to the increasing pressure on the core have no relation to the context of the core. The land needed for the intense activities are much higher than the land available in the vicinity of the core.

The land value in Sitabuildi is very high and there is a drive to make the full use of the potential of land so development are taking place on a very fast pace plugging the core with more congestion.

5.6.2 Traffic Aspects

Problems

Sitabuldi due to high concentration of activity experiences heavy traffic congestion during peak hours due to high population densities, commuters and insufficient roads width. Parking facilities provided are too less and therefore vehicles have to be parked on the streets which has resulted in obstruction to the moving vehicular and pedestrian traffic. The movement of vehicles dominates the area and there is no consideration for pedestrian circulation in the area. The bus stops on the major streets create traffic delays.

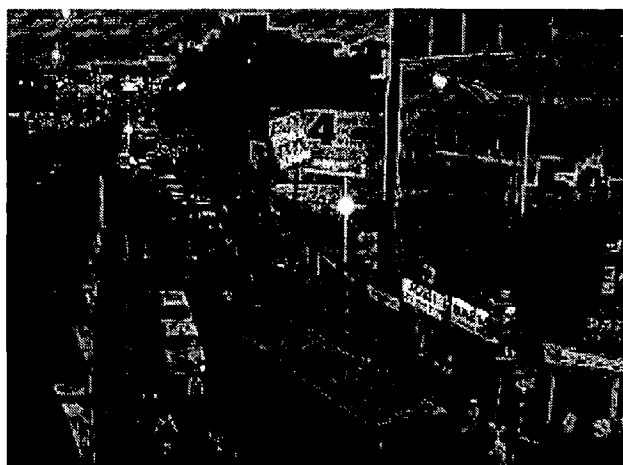


Figure 5.21 Traffic management needed at variety square

Issues

- Need for efficient traffic management.
- Parking facilities at appropriate locations.
- Provisions for pedestrians and cyclists.
- One-way traffic approach.

5.6.3 Parking

It has been found that street parking is the principal cause for delays on roads since there are no adequate parking facilities along the major routes. It causes obstruction to pedestrians, the available the parking facilities are only near Municipal Corporation building; less to serve the purpose. Therefore facilities need to be provided.

The parking of the vehicles on the street also has affected the image of the place which shows the area for the public is dominant of with the core

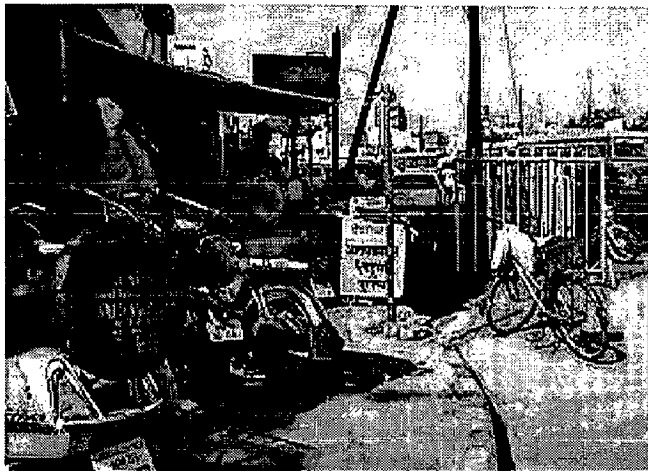


Figure 5.22 Parking encroached on pedestrian side walk

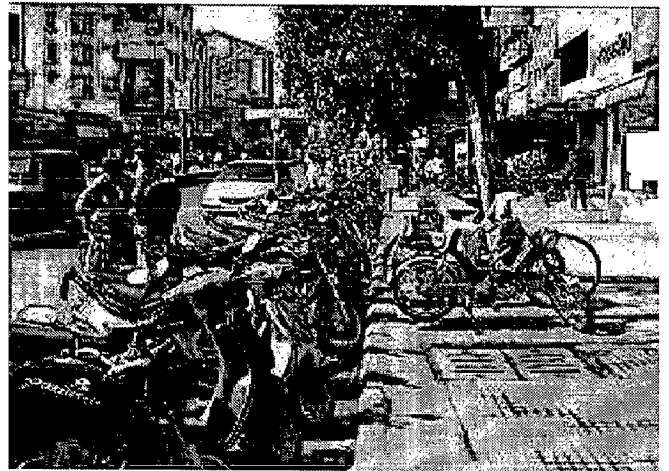


Figure 5.23 Parking along Pt. Malviya road

Issues

Provision of on surface and basement parking lots

5.6.4 Informal sector

The informal activities are mostly concentrated along the major commercial street, near Sitabuldi road and Pt. Malviya road. They attract a considerable amount of customers and also create problems in traffic flow and to pedestrians. The hand carts moving or standing obstruct the traffic. It caters to a considerable percentage of the population and therefore their presence is must Indian culture.

Problems

Informal markets have encroached on footpaths, roadsides etc. resulting in traffic problems and obstructions to pedestrians. These shops attract people and during peak hours this areas become overcrowded. The parking areas have also been encroaching upon by the informal sector.



Figure 5.24 Informal Market on road to Mahajan Market



Figure 5.25 Informal Market along Wardha road

Issues

- The location of the informal sector.
- Increasing informal sector in commercial areas.

5.6.5 Visual aspects

Problems

The architectural character show that the along the major streets the distance between the opposite buildings is too less. The buildings area constructed on the edge of the roads with no set backs at most of the locations. The problem of visual

pollution is created due to the presence to electric poles and wires and jazzy shop fronts with hoardings arranged in irregular manner.

Issues

- Changing skyline and streetscape.
- Visual pollution.
- Renewal approach in terms of visual aspects.

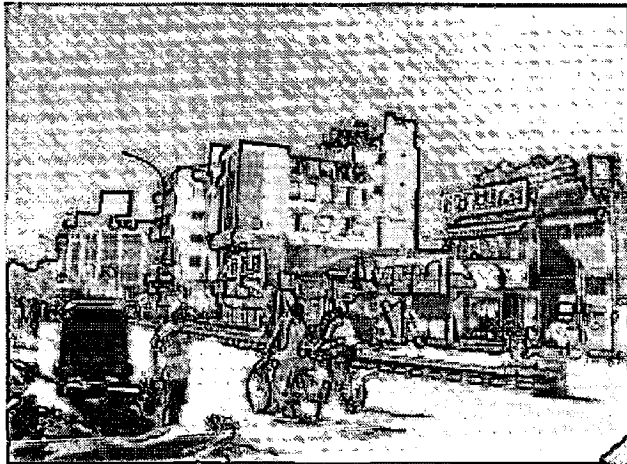


Figure 5.26 Changing skyline along Pt. Malviya road



Figure 5.27 Hoardings along Abhyankar road

5.7 CONCLUSION

The core of Nagpur being the oldest and the largest retail market has seen a considerable change in the land use.

The core is today facing no. problems such as intensifying activities, traffic congestions, and lack of parking spaces, the haphazard arrangement of informal markets, and the change in the imageability of the core. Core being the oldest and the largest retail market is giving up due to its loosing prominence, and better

infrastructure provided by the new commercial development at new location around the town.

The detailed study of the area in terms of the land uses, the accessibility, the conditions of the built environment, the study of the built and open spaces, the overall character of the town, the visual analysis etc. done in the chapter, it can be seen that the commercial zone with the high land values, dilapidated structures, loosing image has a lot of potential which can be utilized to revive back the essence of the old core.

DETAILED STUDY OF THE SELECTED ZONES

6.1 INTRODUCTION

Based on the analysis of the study area, Sitabuildi the central core of Nagpur, zones for urban insertion are identified. The chapter gives a description and analysis of each of these individual identified zones.

6.2 CRITERIA FOR SELECTION OF POCKETS

The parcels of land in the core area which have an potential for future development are identified by the study of the core area on the basis of Land use, Land value, the physical situation of the structures, the inflow of the concentration of people, the underutilized potential of the land, the land ownership, etc.

These pockets are grouped under six zones; they are illustrated in the figure 6.1.

These parcels of land are located close to one another. The Zone A is the parcel of land lying along the Abhyankar road. The zone B is the large parcel of land lying along Wardha road. Zone C is the existing Mor Bhawan Bus Stand. Zone D is the land on Variety square. Zone E is the vacant land in the Mahajan Market area. The land in Zone F lies on the Pt. Malviya road. Zone G is the land lying at the corner of Munje Square.



Figure 6.1 Plan showing the identified zones for urban insertion

6.3 DETAILED STUDY OF THE SELECTED AREAS

6.3.1 Detailed Study of Zone A

Zone A is located in the centre of the Sitabuildi area. The plot has access from the two major roads are the Sitabuildi main road, the Abhyankar road , and the land is under private ownership and was given for lease to the present occupied retail shop keepers.

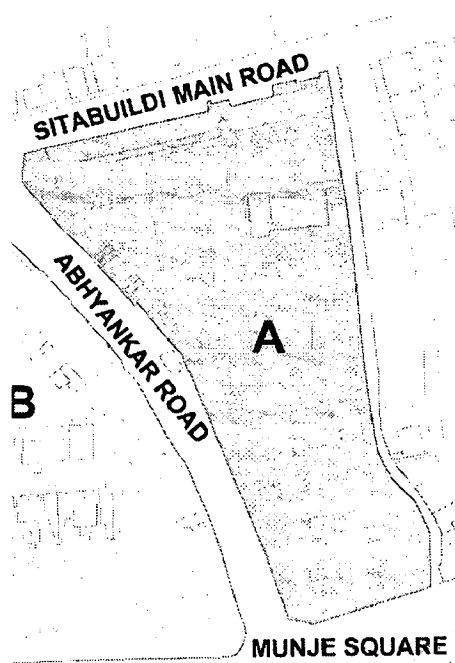


Figure 6.2 Plan showing Zone A

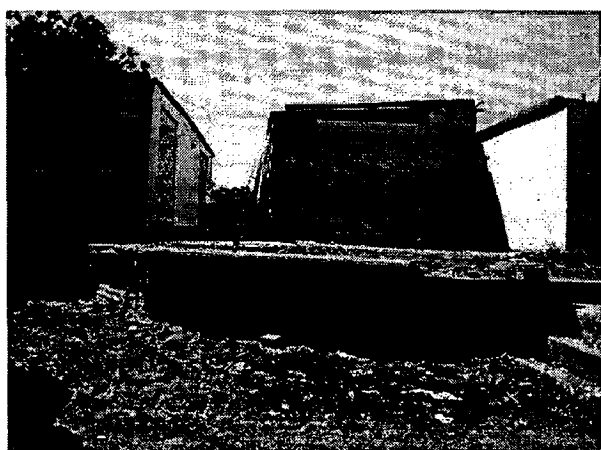


Figure 6.3 Tank which comes under the heritage list



Figure 6.4 The unauthorized construction in Zone A

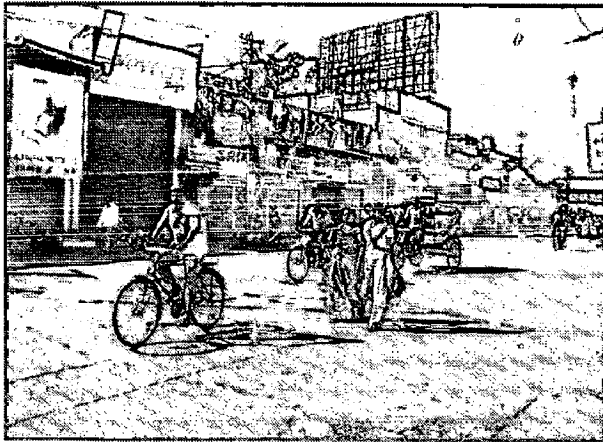


Figure 6.5 The shop line in Zone A along Main Sitabuildi road



Figure 6.6 Dilapidated structures in Zone A

Analysis of Zone A

Zone A lies in the commercial area of the core and is abutting the residential area which falls on the right hand side of the core area. The land is partially utilized by commercial development and partially by residential development.

The structures facing the Main Sitabuildi road are the only structures which are in good condition but the irregular arrangement of the jazzy boards the does not give a pleasing appearance. The site consists of an old Regal theatre which is also dilapidated and is not functioning presently. The residential development on the site is mostly of ground floor structure which also in dilapidated state and demand demolition. The space in the south of the plot is occupied by a Government School for girls.

The zone lies in a high land value zone with a very high land value on the edges and it goes on decreasing towards the interiors of the site. The main reason of the land to be selected is due to the under utilization of the potential of land with a high value of Rs 13,130 per sq.m. The existing structures are almost in dilapidated situation and have become obsolete.

The land has a lot of open space in the centre which is not utilized for any purpose. In spite of the open area available on the site there is no provision of parking done in the zone and therefore the only option left is the on street parking done on the Abhyankar road and Main Sitabuildi road creating non pedestrian friendly atmosphere.

6.1.2 Detailed Study of Zone B

The Zone B is located right in the centre of Sitabuildi surrounded by road with heavy traffic on all three sides. The western edge of the zone is abutting road which acts as one of the major arteries of the town joining the Railway station and the Airport. The north eastern edge is abutting the Abhayankar road. The land is under the ownership of the state government.

Analysis Of Zone B

This zone is at the arrival point for the people coming from the east, West and south Nagpur, therefore this parcel is the first to form an image of the central core.

The land use plan shows the peripheral space being utilized for commercial purpose, where as the spaces in the centre of the plot has two storied structures utilized, with ground floor being utilized for commercial spaces and the first floor utilized for residential purpose.

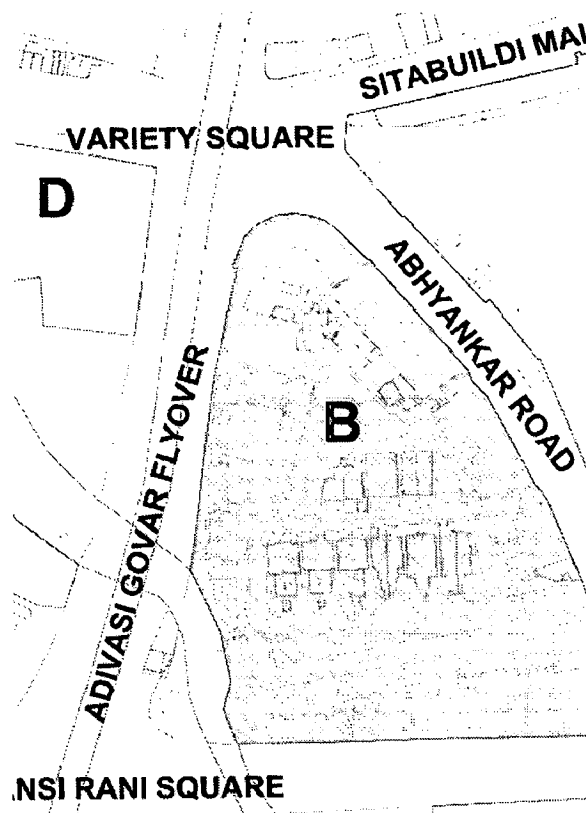


Figure 6.7 Plan showing Zone B

All the residential structures on the site are in dilapidated conditions and require immediate attention. Only some of the commercial establishments at the outer periphery are in good conditions. The parcels of land within the zones have varying landvalue ranging from Rs, 13,130 per sq.m. on the periphery which reduces to Rs, 6300 per sq.m. within the plot, due to the under utilized potential of the land.

There are no deliberate open spaces in created in the zone the open spaces are a result of residual spaces left by the buildings. There are no parking lots created in the zone and as a result the parking for vehicles by the people is done on the Wardha road Abhyankar road or the Pt. Malviya road which creates unfavorable conditions for the pedestrians.



Figure 6.8 Informal markets along Nag River flowing by Zone B

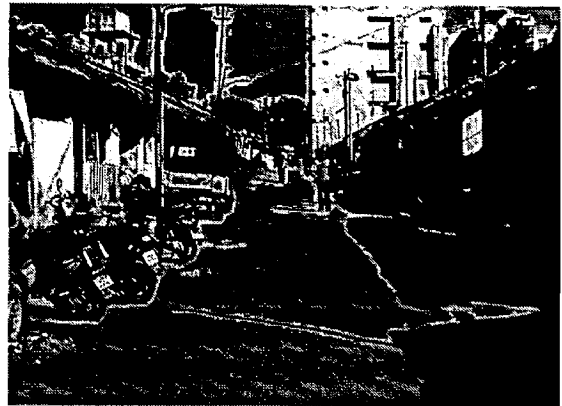


Figure 6.9 Dilapidated residential structures in Zone B

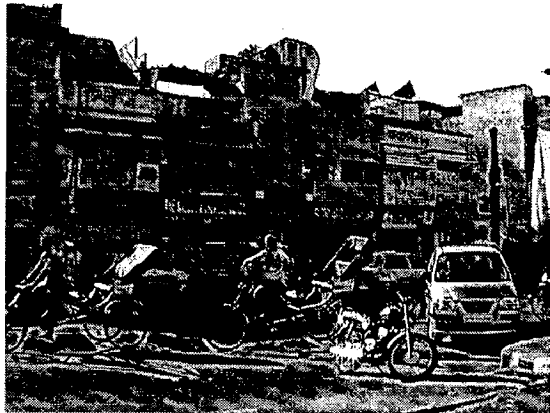


Figure 6.10 Dilapidated structures in Zone B



Figure 6.11 Road side informal market in Zone B



Figure 6.12 Structures in Zone B which are in good condition



Figure 6.13 Dilapidated residences of Zone B

6.2.3 Detailed Study of Zone C

The parcel of land is located on the junction having highest traffic movement in the area i.e the Munje Square.

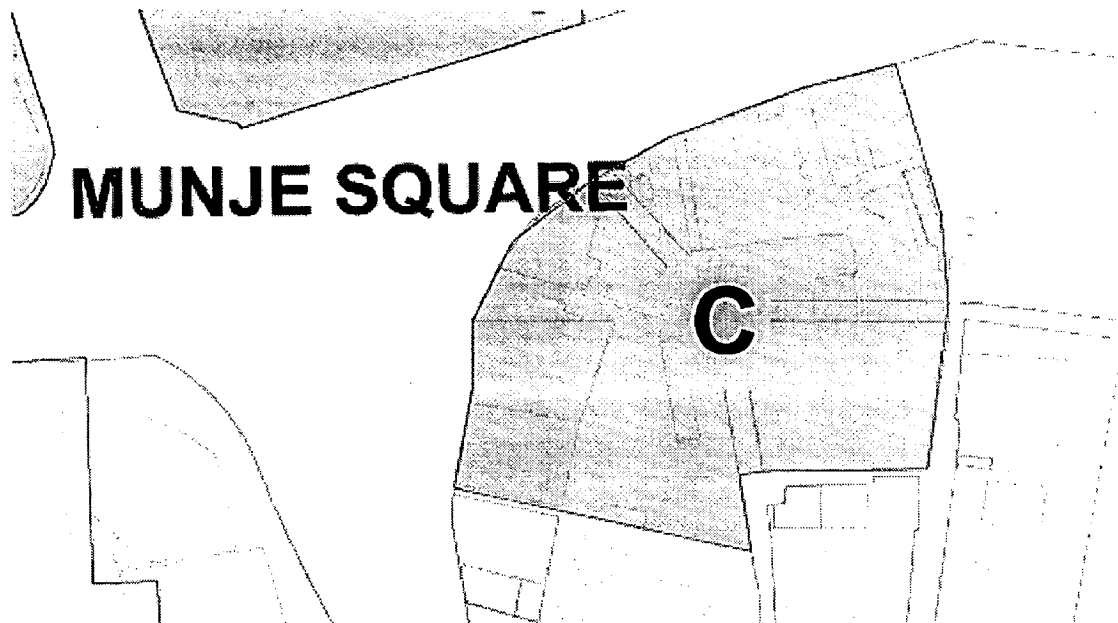


Figure 6.14 Plan showing Zone C

Analysis of Zone C

Zone E is the parcels of land which is lying on the Munje Square which is the area of highest land value in the central core. The Zone consists of structures which have become obsolete in respect of the structures and would require repairs in the near future. Moreover the building use have become obsolete in terms of the activities that are incorporated in the it and the parcel of land have a greater potential that could be utilized in contributing to the creation of commercial in the central core.

The parcel of land is centrally located and can be accessed from the busy Munje square.

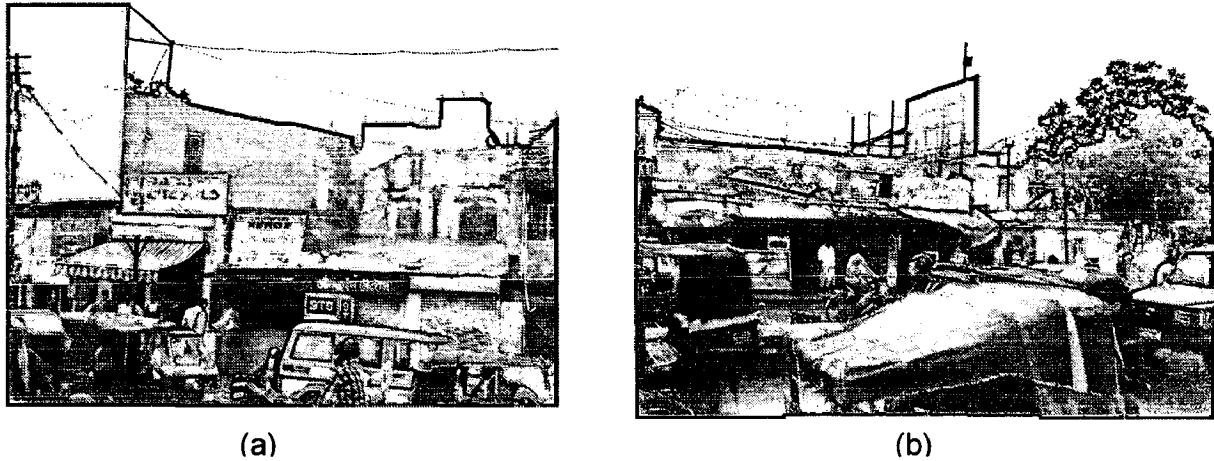


Figure 6.15 (a) (b) Dilapidated structures of Zone C

6.2.4 Detailed Study of Zone D

Zone D, presently lying vacant is utilized as the parking lot and is the only parking lot for the visitors of Sitabuildi. The access of the Zone is through a narrow street from the Main Sitabuildi Road which is a one way.

Analysis of Zone D

The land is presently being used as the only parking lot for Sitabuildi area for long term as well as short term parking lots. This plot is surrounded by structures which are mostly three or four storey and it the access to these structures is only through this parking lot.

The access to the site is through a very narrow lane which is used as two way lane having mostly residential development on one side and commercial development on the other and has temporary shops located on the road itself which creates chaotic condition. The zone is under the ownership of the Nagpur municipal corporation.

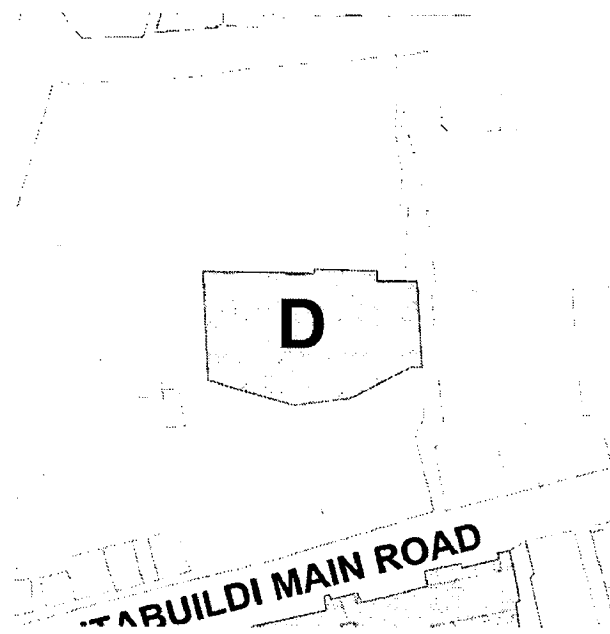


Figure 6.16 Plan showing Zone D



(a)



(b)

Figure 6.17 (a) (b) Haphazard parking in the Mahajan Market

6.2.3 Detailed Study of Zone E

This parcel of land in the vicinity of Sitabuildi is utilized presently as Mor Bhawan Bus Stand acts as the bus stand for local buses and is under the ownership of the State Government. The Zone C is located adjoining the green patch of Maharaj Bagh zoological Park. The plot lies on the busy Rani Jhansi square.

Analysis of Zone E

The zone utilized presently as the bus stand is planned to be relocated in the near future by the Local planning authority and therefore the land shall be rendered ripe for urban insertion.

The zone has a rare site location right in the centre of the core area with its boundaries surrounded by the green patch of Maharaj Bagh Zoological Park. One of the edges of the site is defined by the Nag River which is proposed to be restored by the planning authorities.

The plot is linear and has its access on the busy road joining Rani Jhansi square and variety square. The site has a high land value as it is located on one of the major spines.



Figure 6.18 Mor Bhawan bus stand which is proposed to be relocated

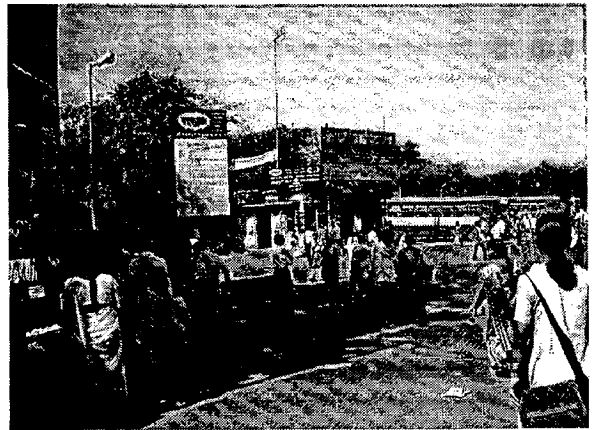


Figure 6.19 Approach to the Mor Bhawan bus stand

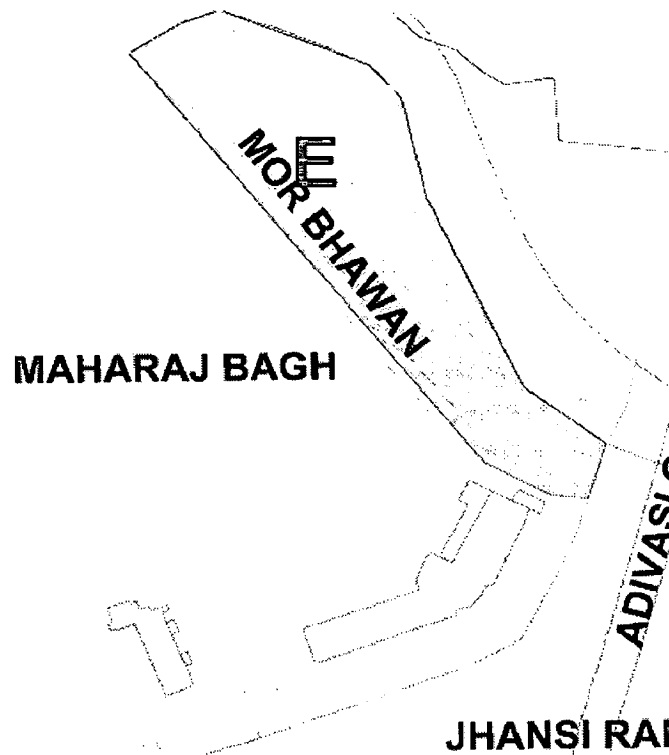


Figure 6.20 Plan showing Zone E

6.2.6 Detailed Study of Zone F

The zone F identified for urban insertion is the present Netaji Market which is used as an vegetable market as present. The zone is approached by the Pt. Malviya road and is under the ownership of the Nagpur Municipal Corporation.

Analysis of Zone F

The land used for commercial purpose lies in the maximum land value area and has considerable potential for development. The periphery of the plot along the main road has only ground floor construction used for only retail purpose. The internal space is occupied by two storied structures used as a vegetable market and the structures are in dilapidated state and require immediate repairs.

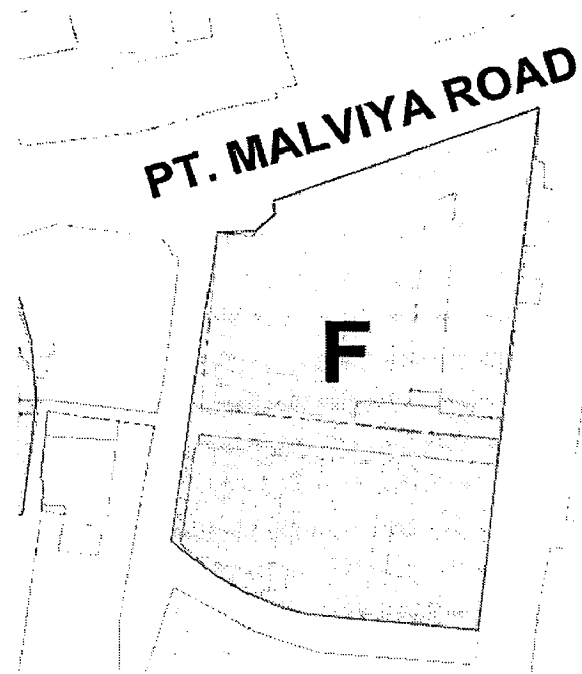


Figure 6.21 Plan showing Zone F



Figure 6.22 Zone F identified for Urban Insertion

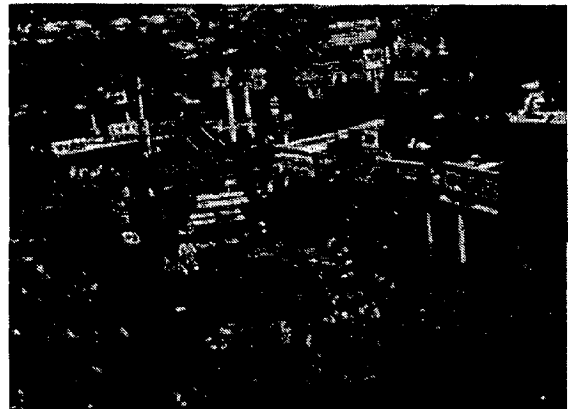


Figure 6.23 The front street line shopping in Zone F



Figure 6.24 Dilapidated vegetable market



Figure 6.25 Dilapidated structures of Zone F

The access of the zone is through the narrow lanes on both the sides which are occupied by the hawkers in a haphazard manner. There are no parking place provided for people coming to the market and therefore the parking is done mainly on the busy Pt. Malviya road or the narrow access to the plot from both the sides.

In a nutshell the vision of future for the core area is

'To improve the quality of the city centre by creating it as a hub of activities for the people, where all people gather together for satisfying their aspirations & needs; which is economically successful; rich in culture that is flexible enough to adapt the changing needs of the society without prejudicing the quality of life for future generations.'

7.3 STRATEGIES FOR GUIDING THE URBAN INSERTION IN THE CENTRAL CORE OF SITABUILDI, NAGPUR

In order to achieve the desired goal in the central core of Sitabuildi the development of the core shall be directed towards it using the following strategies for the planning of the core.

Traffic Management

- Reducing the congestion in the city through the revision of the circulation pattern of the traffic to reduce the chaos generated through it

Mixed Use Development

- Mixed Use Development: In order to encourage the development of Commercial hub, a wide range of commercial uses and activities should be interwoven within the existing Sitabuildi area.
- Creating a Commercial Hub: Commercial areas should be developed throughout the downtown, at different scales and formats depending on the location where that development is occurring.

- Encourage retail uses that promote extended hours of operation - such as restaurants, coffee shops, bookstores, and the like - in pursuit of city streets that are lively at most hours of the day and night.

Shaping the Core through the Design of Buildings

- Establish critical mass at selected locations: Rather than designate a requirement for at-grade retail everywhere within the Project Area, this plan proposes that retail development should occur first at specifically identified streets and intersections, particularly those that already have a physical infrastructure that can accommodate such uses.
- Appropriate amount of space: To ensure that the central core is active and healthy, unnecessary overbuilding of activity spaces should be avoided so that there is a balance of in the space needed and the space available. It is important to ensure that the ground-level design for any downtown building is scaled and proportioned in such a way that its use can be changed over the years from housing to office to retail space and back again, according to the demands of the marketplace.
- Flexible Buildings: The core should be designed with buildings that are flexible enough to accommodate the changes with time in terms of the amount of space needed and the changing nature of the activities performed.
- Visually pleasing Architecture: To ensure the presence of people, architecture should allow for highly visible displays and street settings helps to create safe and attractive places to spend time in.
- Design that enhances retail environments: It is important that pedestrians feel comfortable enough to shop. The goal is to have people buy more, enjoy themselves, and return with their friends.

Safety

- **Secure Environment:** To ensure safety in the hub there should always be somebody coming and going – whether it is to and from their job or for recreation. Therefore it is important to avoid thinking of a part core part as the place where people work, another part as the place where people are entertained, another where people live, and so on.

Pedestrian Oriented Design

- **Pedestrian circulation:** The central area is dominated by vehicles, vehicular movement, and large expanses of parked cars at the expense of Pedestrians. Preparing a layout of hierarchy of streets for pedestrians, separating their intermingling with the fast traffic, making the pedestrians feel secure to walk.
- **Encouraging pedestrianization:** Providing secure walkways for the pedestrians which provides them security against traffic & harsh climate.

Creating An Attractive Public Realm

- **Creating open space:** Improving the quality of the congested central core by providing open spaces/green spaces which act as lungs of the area where people could find a respite from the busy activities of the cores.
- **Interactive spaces:** Retail development should be combined with place making elements – a public plaza, public art and/or a water fountain, a vest-pocket park.
- **Creating vistas / view corridors:** Identifying the existing focal points and creating new such focal points for creating interesting vistas.

7.4 GUIDELINES

7.4.1 Revision of the Movement of Traffic through the Core Area

The main movement corridors in the area are identified and suitable solutions to reduce the congestion on the major shopping streets are suggested. Major problem of congestion in the city core is due to the increasing traffic in the area due to the increasing no. workers, visitors and passer by's as the roads around sitabuildi are the main arterial roads of the city. Another major problem of the congestion created is the presence of on street parking on the Main Sitabuildi road, Abhyankar road and the Pt. Malviya road.

Proposals

Traffic flow is proposed to be directed in a loop form by one way traffic for better management. Traffic which enters the core area through the variety square is taken through the existing one-way Main Sitabuildi road which is the major movement corridor and shall be retained as a one-way.

Another major traffic generator for the core is Manas square which takes traffic to and fro Rani Jhansi Square with Munje square being the most chaotic. This corridor shall be made one-way with traffic moving from manas square towards Jhansi Rani Square.

Therefore a loop is formed which takes the traffic from the Variety square to Manas Square towards Rani Jhansi Square.

The connecting road from variety square to munje square which was an one-way traffic carrier but two way traffic was permitted later on, shall be restored to one-way traffic movement road carrying traffic from the Variety square towards Munje Square.

The Road width remain the same as removal of on street parking would solve the problem.

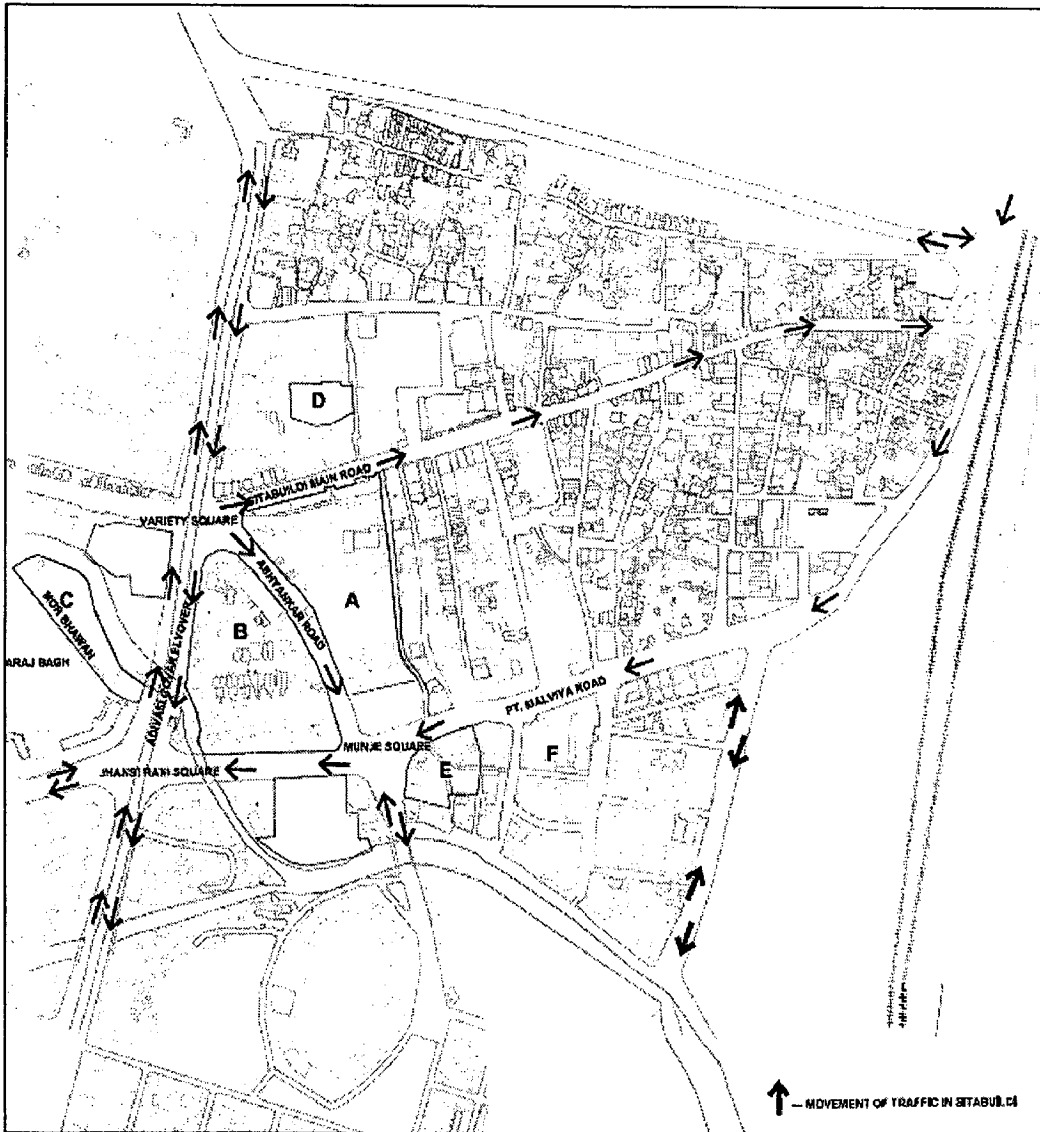


Figure 7.1 Plan showing the proposed traffic circulation for Sitabuldi

7.4.2 Landuse

All the pockets selected are in the part of the area where commercial activities are dominant and these zones are all ripe for the development of the commercial sector. These zones offer high potential for commercial growth. Therefore the focus is on creating a commercial hub with well distributed activities which attract large crowd for

various purposes. Creation of a commercial hub would require activities which ensure people for various purposes such as for work, for shopping, recreation, for relaxation, etc.

Land use for the individual zones should not be thought of as separate pockets but in relationship to each other. Therefore land uses for each of the blocks are assigned keeping in mind the development of the entire core in unison.

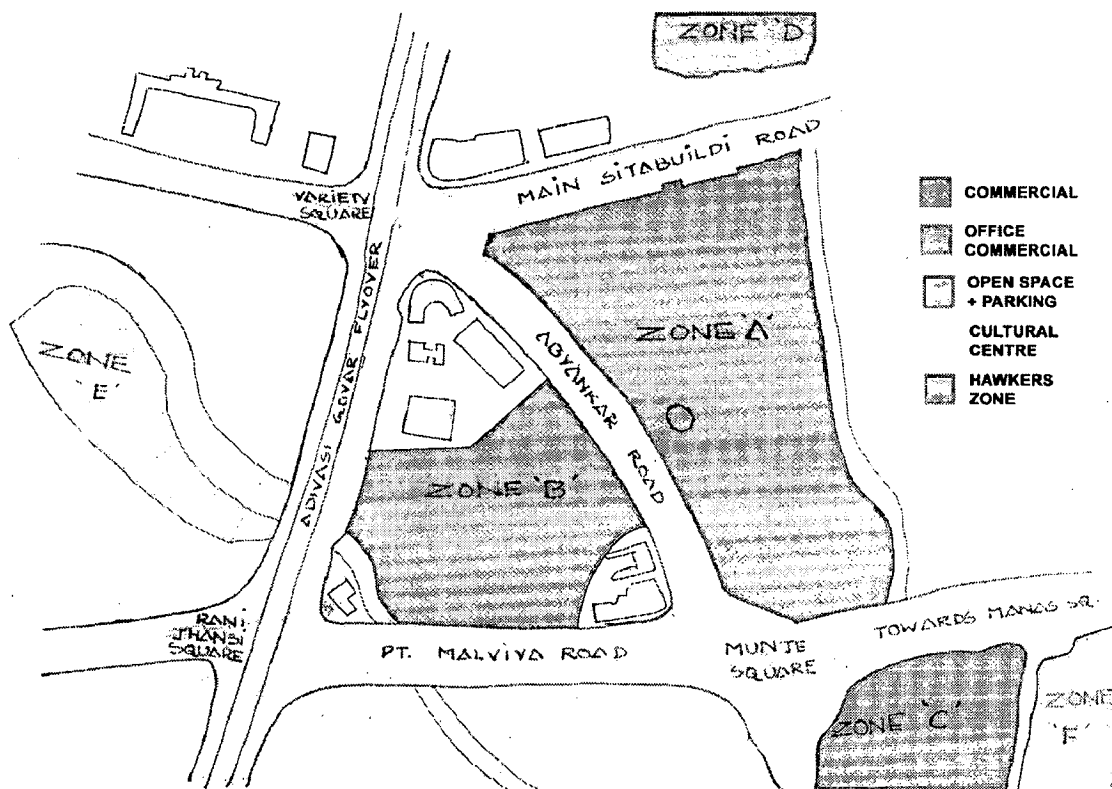


Figure 7.2 Sketch showing the proposed land uses in the selected zones

Zone A

The Zone A due to its location with dense residential sector on one side and itself being in the commercial side of the area shall be planned as a commercial zone.

To ensure that there is not a sudden outburst of retail or shopping areas and the shopping areas be lying vacant for a long time entertainment activities shall be provided to ensure the presence of people in this zone.

These landuses shall be accompanied with the provision of active and passive open spaces would also result in making the space livelier.

The zones shall be provided with less intensive Office commercial development.

Sufficient parking spaces shall be provided within the zone to compensate the removal of on street parking on Main Sitabuildi road and Abhyankar Road.

Zone B

Zone B is the destination while entering Sitabuildi from all three sides of Eastern Nagpur, Southern Nagpur and Western Nagpur.

There fore it shall be developed majorly as a commercial zone.

As is forms the arrival point to Sitabuildi it shall be planned with a large no. of planned active and passive open spaces to create a sense of inviting the visitors.

Office commercial development shall not be encouraged in Zone B as these spaces become dead after evening.

Sufficient parking spaces shall be provided on surface and in the basement for the visitors and to compensate the removal of on street parking on Wardha road, Abhyankar road and Pt. Malviya road.

Zone C

Zone E which lies on one of the corners of Munje Square shall be developed as mainly office commercial sector.

The ground level activity shall be not used for office spaces but it should be provided with activities such retail or restaurants which would encourage public movement therefore keeping the busy Munje Square lively.

Parking for this zone and its near vicinity shall be provided in the basement of the building block.

Zone D

The existing parking lot serves as a parking space for long time as well as short time parking.

As it serves as the only parking lot to the area, the parking shall be divided into two parts, and short term parking lot and long term parking lot shall be provided on the ground level and in the basement level for the traffic coming from Variety Square.

Due to its location in between building which are four to five storeys high and it being the access to the surrounding buildings shall be developed as an open space on the ground level along with covered short term parking lot for the visitors.

Zone E

Zone C due to location in a comparatively silent vicinity due to it being surrounded by the green patch of Maharaj Bagh Zoological Park shall be provided with use such as a cultural and conventional centre which would incorporate spaces for exhibitions, theatrical spaces which would enhance the calm surrounding of the zone.

Zone f:

Zone F which is presently used by hawkers shall remain as a hawker's zone and for the traffic coming from Manas Square towards Munje Square parking lot should be provided in the basement.

7.4.3 Built Form And Massing

7.4.3.1 Zone A and Zone B

The built form of the two zones i.e Zone A and Zone B shall be dealt in relation to each other as the land use for the two zones have been marked as commercial, entertainment nodes in the central cores and the architecture of these zones should give an character to the entire area.

Guidelines

The architecture of the area should not spoil the street shopping concept of Sitabuildi area and therefore a continuous line of shop line be developed keeping the whole concept of street shopping of Sitabuildi connecting the two zones as one.

The rest of the area in the zones shall have spaces for various activities as retail, entertainment spaces, commercial office spaces for creating a commercial hub with public space well integrated in the form of distinct public, semi public and private spaces.

A maximum F.A.R of 2 shall be provided for any commercial space

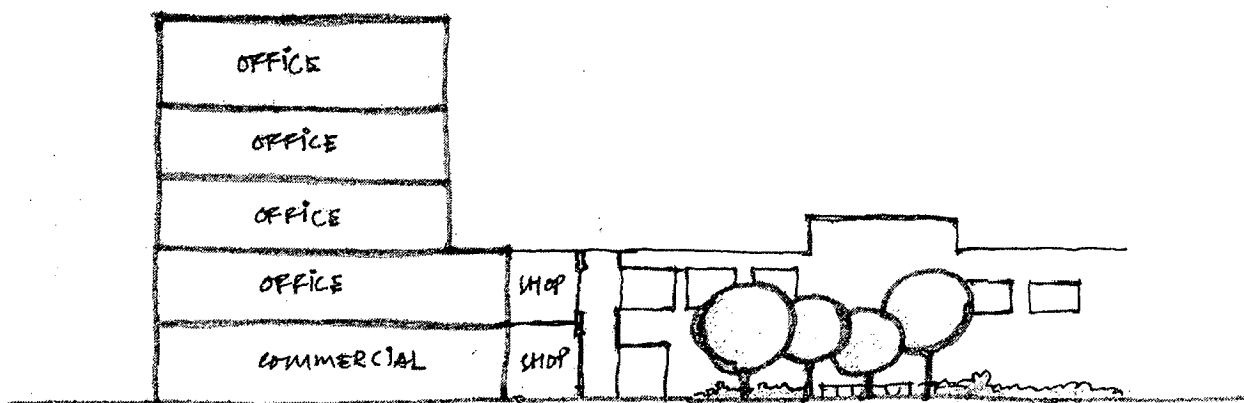


Figure 7.3 Relationship of open space and the built up with public semi public and private

spaces

The shopping line should have a height not more that 10 mt. with ground and first floor construction with shops on both sides with corridor in the outer edges.

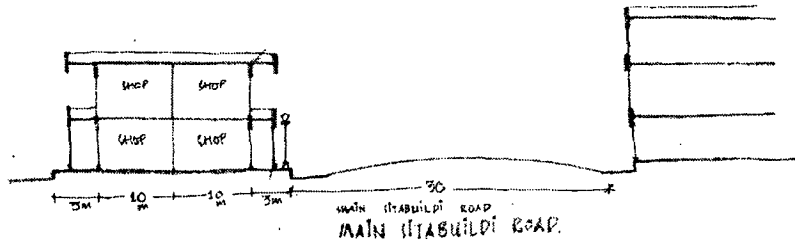


Figure 7.4 Street shopping line along the Main Sitabuldi Road

The front façade of the shopping line shall have a colonnaded continuous space of width at least 2 mt.

The colonnaded space should be set at 1 mt from the edge of the road.

The front of the building facing the road on any side shall maintain the colonnaded space.

All structures in the area should be permitted with the building height not more than G+1 on the outer periphery of the sites and to provide a better scaled environment the building shall have a set back on the second floor in case the building goes higher than that.

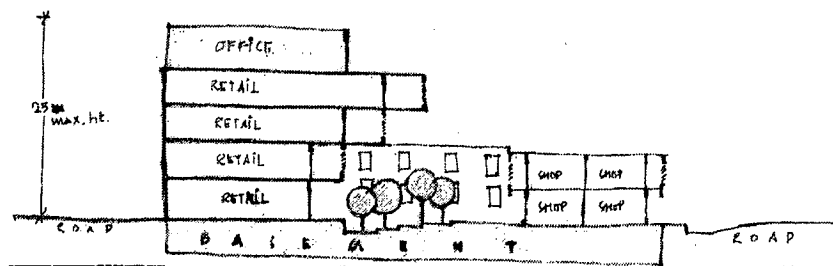


Figure 7.5 Gradual increase in height

The building height shall not go above five stories in any situation i.e the height shall not exceed 25 mts.

The entry to the built shall be given from an open space provided for public gathering.

The shops abutting the street should be set at 3 mts from the street line to accomodate public movement at street level.

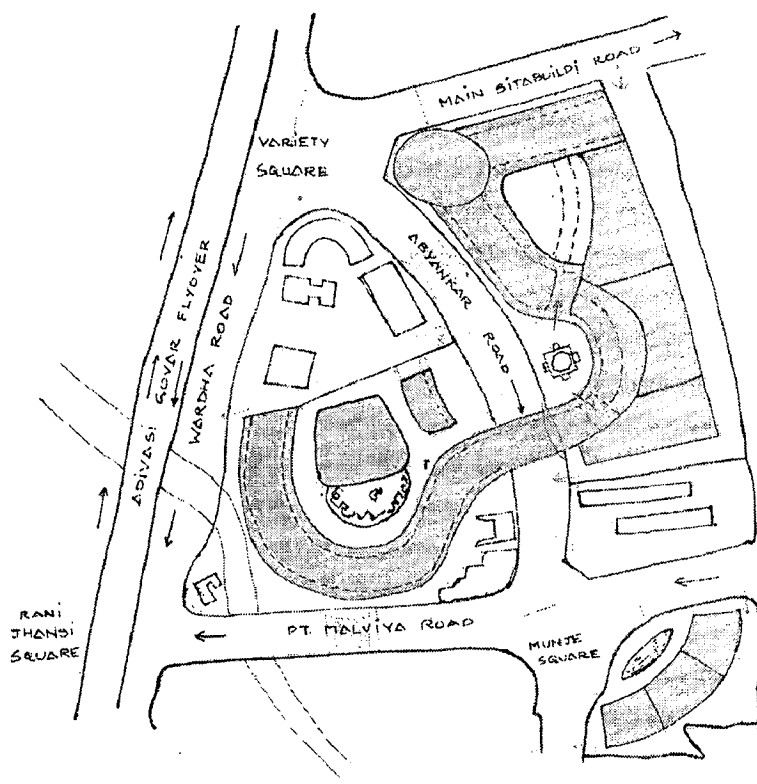


Figure 7.6 Proposed Urban insertion in Zone A

7.4.3.2 Zone B:

Zone E has a strong potential of being a land mark as it is at the end of many view corridors.

The commercial development shall maintain the height of office commercial spaces as in the zone A and should not exceed 25 mts of height.

The base of the building with five stories shall be made such that it appears that the base is supporting the height of the structure. The base of this building should be of the lower two stories.

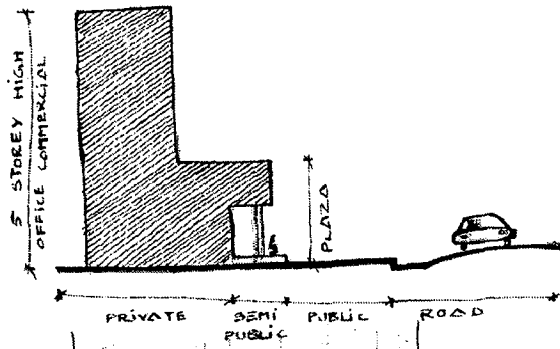


Figure 7.7 Base of the building supporting the height

The lower two floors shall have retail or entertainment space with the same character i.e the colonnaded corridor all along the front façade and entry to the office block shall be through this plaza.

The front open space should be equal to the foot print of the structure having the max height.

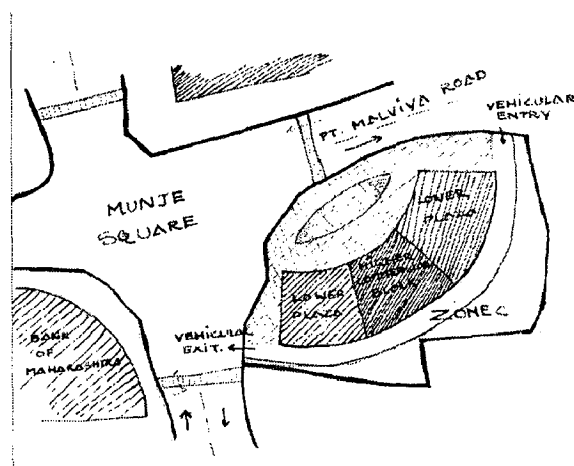


Figure 7.8 Proposed Urban Insertion in Zone B

7.4.4 Pedestrian circulation:

Pedestrian sidewalks should be designed all along the major roads of sitabuildi i.e the Main Sitabuildi road, Abhyankar road, Wardha road and Pt. Malviya road and shall be raised above the height of the road.

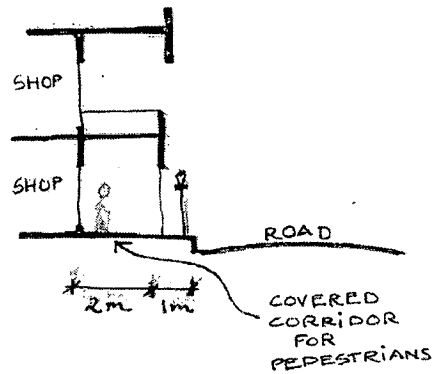


Figure 7.9 Pedestrian corridor along the road

As a means to reinforce a pedestrian scaled environment the front line of all street line shops is set back from the road at a distance of three metres.

The pedestrian corridor be shaded by the building line of the first floor which shall be at least projected out 2 mt. creating colonnaded verandah.

The side walk shall be covered with the corridor created by the projected first floor shops.

A uniform pedestrian sidewalk be provided throughout the core area with min widthth of 3 mts.

Where ever building does not shade the side walk, dense foliage shall be used to provide shade to the side walk.

To create a pedestrian friendly environment, bulb outs in the sidewalks shall be made to reduce the speed of the vehicle so that the pedestrians feel secure while walking on the roads.

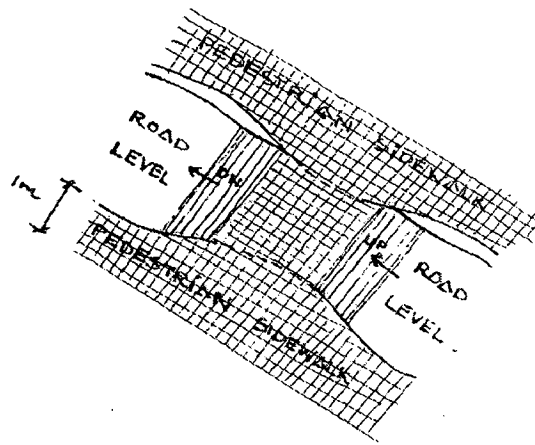


Figure 7.10 Sketch showing bulb outs in pedestrian sidewalks

The road at the bulb outs shall be raised and shall be paved instead of a tar road for the physically challenged for easy crossing of the heavy traffic roads.

Similarly at the junctions where the traffic volume is high, the road level shall be raised and paved.

The pedestrian side walks be enhanced with uniform design of illumination fixtures, furniture and where ever possible dense plantation shall be provided.

The entry to the parking lots should be perpendicular to the road and not along the road to minimize the hindrance created to pedestrians.

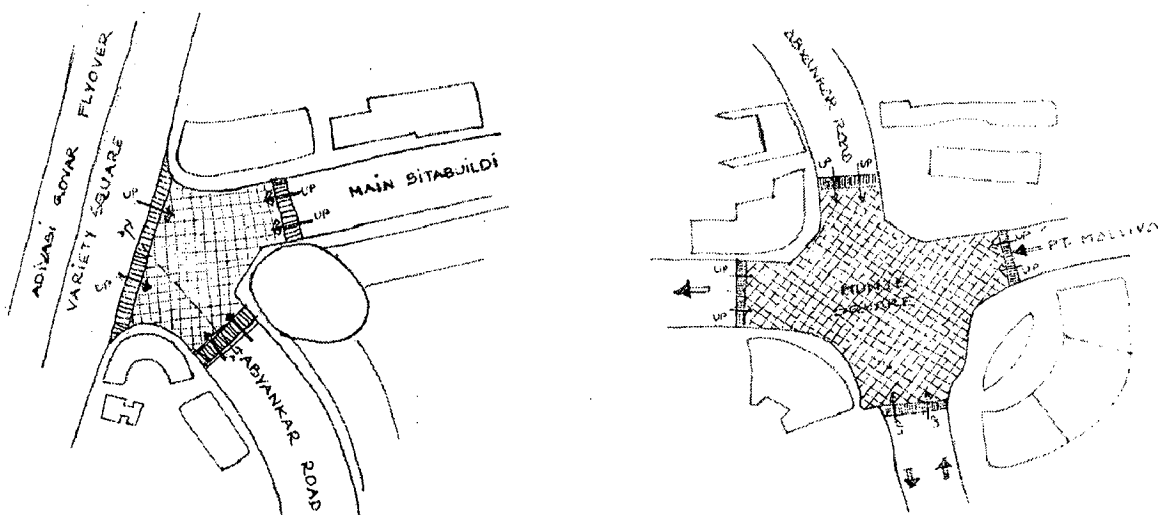


Figure 7.11 Sketch showing the paved intersections of Variety Square and Munje Square

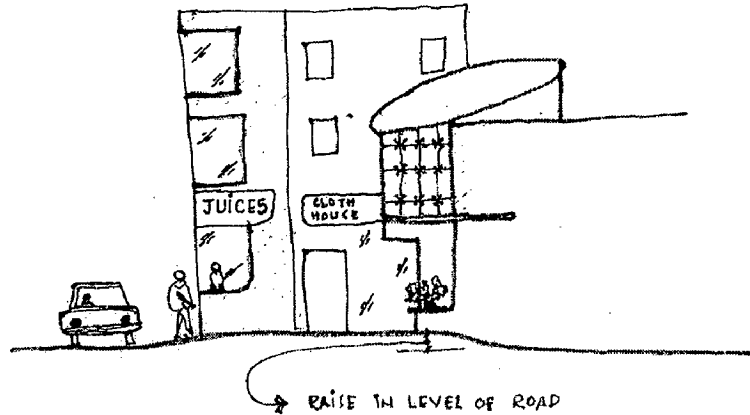


Figure 7.12 Section of road at variety square

7.4.5 Open Spaces:

Zone C to be provided with active open spaces and passive open space with a surface parking lot and park providing access to the surrounding structures.

Public open spaces should be located in such a way as to complement the function of a building's main access points and street level retail uses.

The higher part of the building should be compensated with open space equal to the foot print of the built up given in front ground floor for public movement.

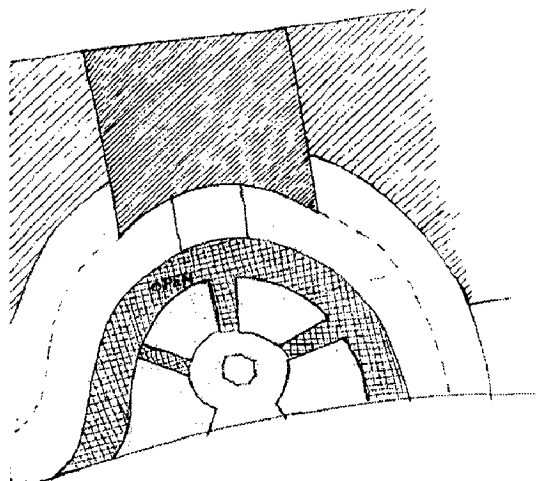


Figure 7.13 Open space in front of the mid rise structure

7.4.6 Developing View corridors:

The new development should enhance the view corridors by creating landmarks at the end of each view corridor thus creating focal points.

The road patterns of Sitabuildi is such that there is a lot of scope of developing a no. of focal points in the selected zones which can give an sense of identification to each pockets , which are identified.

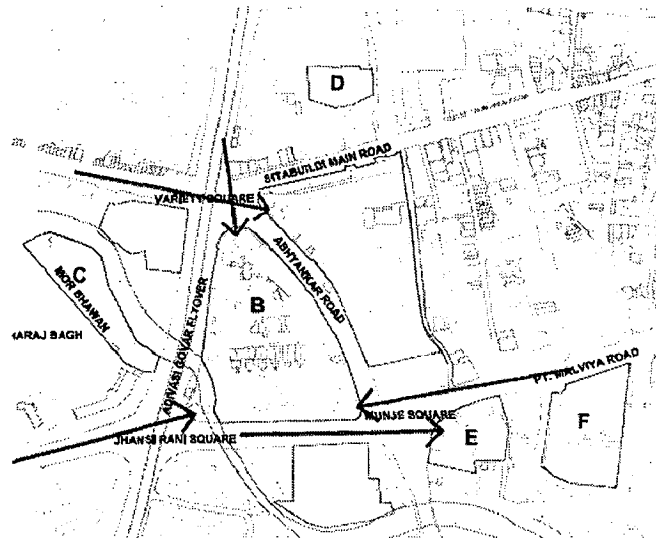


Figure7.14 Plan showing existing view corridors

7.4.7 Parking

Parking to be provided in the Zone D shall be for long term as well as short term parking, with long term parking to be provided in the basement and short term parking to be provided on the surface for the visitors and shall be regulated with the difference in parking fee, with the fee for basement parking being less and by charging higher for the surface parking.

Each off street parking space provided for major vehicles shall not be less than 20 sq. m. area for 4-wheelers, and for scooter and cycles the parking space provided shall not be less than 2 sq.m. and 1.5 sq.m. respectively.

In each of the Zone basement parking lots should be provided with adequate vehicular access to a street by ramps with a slope of 1:10. with separate entry and exit points

The access to the parking lots should not hamper the pedestrian movements and the ramps should be perpendicular to the side walks and not parallel to them.

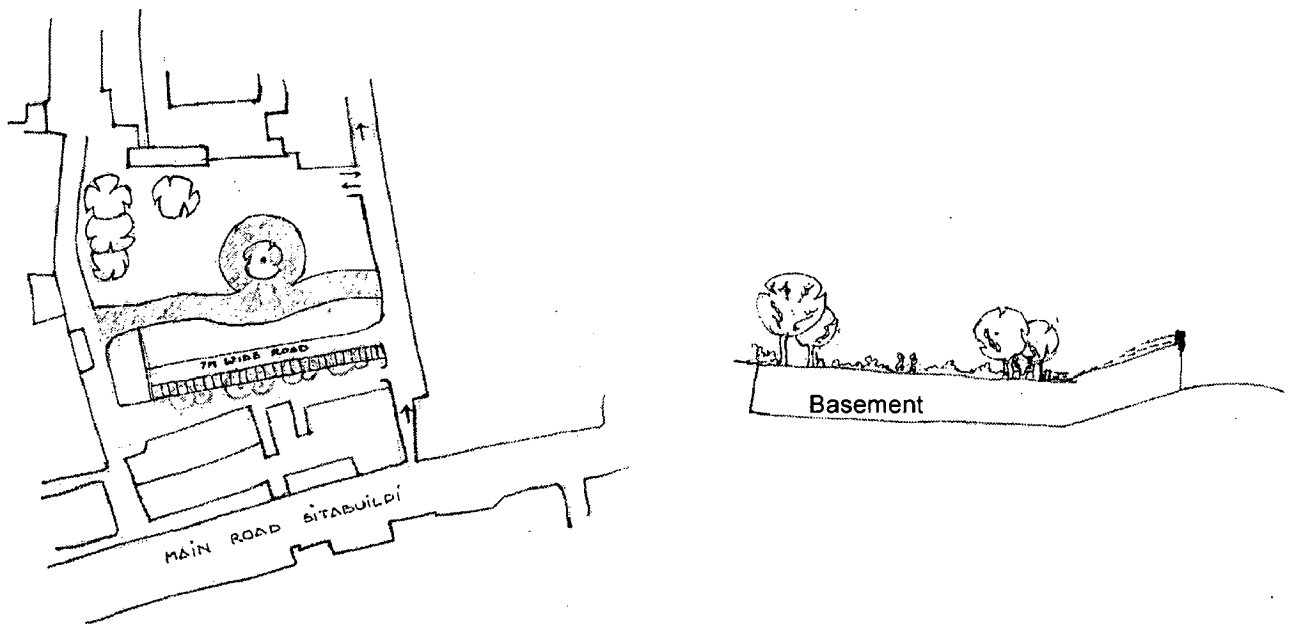


Figure 7.15 Plan of Zone D as a passive open space with surface parking lot.

7.5 CONCLUSION

In this chapter the aim of shaping the development of Sitabuildi to create a commercial hub which has an attractive public environment is done through the means of better traffic flow, Distribution of land use in an even manner, by shaping the built form, through making a place more pedestrian friendly rather than vehicle dominated.

CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

The chapter discusses the whole summary of the thesis and general recommendations for the future development of the central core of Sitabuildi are given.

8.2 SIGNIFICANT FINDINGS OF THE THESIS

City is a multifaceted element comprising of various areas serving different purposes to its inhabitants to live, to work and to enjoy. With urbanization the cities are in a constant process of transformation and growth. The cities today in the process of development have reached its zenith, expanding & swallowing the outer boundaries they were planned for. But still the extents of the city still maintain a strong bonding with the central core, which forms the heart of the city.

Core by many is described as the heart of the city. A well functioning core acts as a nucleus of the city helps preserve and communicate the communities' history, helps build a sense of community and binds the entire city together even the expanding boundaries of the city.

But due to urbanization the cores are losing their prominence and are no longer the only providers of goods and services to the communities. The technological, social, economical development has affected the central cores to great extents of making people repel from it.

The old cores have today become obsolete with respect to the old buildings, the old types of land uses, the chaotic conditions due o poor infrastructure. Therefore in a drive utilize the full potential of the cores, today the core is experiencing a lot of intervention. The insertion in the fabric of the core is in terms of the changing land use, the increasing F.A.R. the increase in the traffic and the roads not being able to support the increasing no. of four wheelers and two wheelers as they were not designed for them and the alterations being carried in the imageability of the space.

Circumstances created due to these reasons generate the need for reviving these old core areas. Restorations of these cores with the original concept of being a place for the people to come along for various purposes of working, living, and socializing has gained a lot of popularity. There are various approaches adopted all over the world for planning of these core areas, some of which are studied through literature review and case studies.

From the relevant literature related to the urban insertion the concept of urban insertion is studied. Various approaches adopted by of the planning of the future urban insertion are studies.

The basic aim in all the case studies has been to hold the attention of people in the central core for various purposes of jobs, business, housing, and entertainment. This objective is achieved through a no. of strategies adopted of creating a mixture of suitable land uses in the core. Improving the connectivity of the core to the rest of the town so that it gives easy access to the people from all around the town. Making the core a safe and secure place for the public through reducing the traffic congestion, improving the pedestrian environment, giving breathing spaces to the core to make a successful public realm.

As in the world, India too has been associated with the word 'Urbanisation' from the past. Places for public have been given a lot of significance right from the history. Being a developing country India is undergoing development at a very fast rate and this is being facilitated by the cities being urbanized at a great speed. In the central part of India, Nagpur with its prominent location is one of the fastest growing cities. Through the study done, it can be seen that the growth of Nagpur has led to the expansion of the city boundaries, which is leading to delineation of the central core which has a lot of Significance.

The core of Nagpur is facing a lot of conflicts in between the old fabric and the new intervention. The new buildings are fast replacing the old ones, the old concept of shopping and other commercial activities are been taken over by new alien ways. The detailed study of the area in terms of the land uses, the accessibility, the conditions of the built environment, the study of the built and open spaces, the overall character of the town, the visual analysis etc. done in chapter 5 it is evident that the core is today facing a no. of problems such as intensifying activities, traffic congestions, lack of parking spaces, the haphazard arrangement of informal markets, the change in the imageability of the core.

Based on the problems and findings from the analysis suitable pockets are identified in the commercial zone, analyzed and suitable proposals are given in the form of guidelines which help achieve the vision formed for the area to facilitate a planned future development of the central core of Sitabuildi.

8.3 GENERAL DESIGN RECOMMENDATIONS FOR CENTRAL CORE, SITABUILDI

General recommendations are framed based on the analysis of the central core of Sitabuildi. It is proposed that the six zones identified in the central core of Sitabuildi which are in the commercial zone of the core be developed in an organised manner to enhance the commercial environment of the core.

The future proposals are designed -

- To direct the attention of the people from the suburban commercial districts to the tradition area of the city.
- To enhance the retail environment of the core
- To utilize the potential of the land to the fullest.
- To organize the future growth of the core
- To revive back the character of the old core
- To provide higher standard of design.

These following objectives shall be achieved by following the strategies framed to achieve a core with high quality, by creating it as a hub of activities for the people, where all people gather together for satisfying their aspirations & needs; which is economically successful; rich in culture that is flexible enough to adapt the changing needs of the society.

This shall be achieved through traffic management, mixed use development, shaping the core through the design of buildings, safety, pedestrian oriented design and creating an attractive public realm

Recommendations:

The land use in the area shall be decided on the broader level i.e. keeping the entire area in vision for organised and uniform growth of all the zones in the central core of Sitabuildi.

The vacant or the land ready for new intervention be developed as mixed use commercial zones providing services for a variety of purposes.

The entire development of the core be directed according to the human scale and therefore the built form should be low rise with exceptions of structures going higher which substantiate with open spaces in front.

Building components that offer protection to the pedestrians such as canopies, covered corridors should be introduced in the design, as a means to encourage pedestrian activities and where ever there are no buildings sidewalks be shaded with dense foliage trees.

Design public spaces in central core of Sitabuildi which can be easily used by creating spaces close to where they work or live.

Side walks be built to a min width of 3 mts. to provide comfortable pedestrian circulation.

Open spaces should connect directly to city streets and they should be well-integrated into the public domain.

Design streets and buildings to avoid long stretches of blank, inactive building walls.

Encourage spill over activities like restaurant, etc in the connecting plazas to make the place more lively.

The new construction in the central core of sitabuildi should be designed to enhance the existing view corridors.

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