

**TOWARDS THE ENLIGHTENMENT THROUGH THE  
DEADNESS:  
URBAN RENEWAL IN MOTIJHEEL COMMERCIAL AREA OF  
DHAKA CITY**

MOTIJHEEL, DHAKA

By

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Seminar II

ARC 512



Inspiring Excellence

Submitted in partial fulfilment for the requirements  
For the degree of Bachelor of Architecture  
Department of Architecture  
BRAC University  
Summer 2017

## ABSTRACT

Dhaka city has undergone radical changes in its physical form, not only in its vast territorial expansion, but also through internal physical transformations over the last decades. In the process of urbanization, the physical characteristics of Dhaka city are gradually changing as plots and open spaces have been transformed into building areas, open squares into car parks, low land and water bodies into reclaimed built-up lands, etc. Such unplanned urban fabric creates urban problems in CBD (central business district) zones like motijheel. From the very beginning of our independence, motijheel commercial area has grown as the main central business district (CBD) of Dhaka city because of its rapid pace of commercial development. But, the process of development and growth in this area followed a spontaneous but unplanned manner. As a consequence, this CBD is continuously challenging three major urban problems: congestion, constriction and transparency - which are often considered as factors that necessitate urban regeneration. This thesis mainly focuses on the transparency issue along with another two issues. Here the word transparency is used to portray the solid –void situation that used to take place in time basis in motijheel depending on the work schedule. This particular CBD starts to work very actively from the very beginning of the day but gets to shut down very soon with the closing hour of offices. This is how it begins to create a massive void where a very little vehicular movement and human activity is found at that hour. So, basically the aim of this thesis is to incorporate some necessary functions and programs here and rethink the building-road relationship of this CBD as well to make it vibrant and active simultaneously at night too like other CBD such as kawran bazar.

## ACKNOWLEDGEMENTS

Whatever I have cherished, achieved and learned through this project is only the implement of my learning of last 5 years. It wouldn't be possible if there weren't some supports of some people around me. I would like to begin by thanking **Almighty Allah** for giving me such a wonderful and eventful life. He has always given me what I have never imagined to get in my life and blessed me with wonderful parents. The undying and unconditional supports of my parents have helped me to shape myself up. They have always been so supportive and helpful that they have made my life so much easier. Next, I would like to thank my elder brother, Adnan Sharif, who has always helped me throughout every step of this journey. He has been a constant support during this process.

The next set of appreciations should go to my university teachers who have helped me to complete these 5 years. First and foremost, I would like to thank Ar. Abul Fazal Mahmudun Nobi who has inspired me the most during my student life. I have never interacted with such an amazing and soulful person before and I am thankful to Allah that he has given me the opportunity to meet him. Next, I would like to thank my course instructors, Ar. Sajid Bin Doza, who has pushed me to the limit, Ar. Tanjina Khan and finally Ar. S M Kaikobad without whom this project would not have been possible.

This thesis would not have been accomplished without my classmates, seniors and juniors. I would like to thank Jannatun Nahar Anifa, S M Tamim Salehin, Mahmud Zawad Hossain, Rifat Salman and all others who has always been so supportive. I owe my gratitude to my beloved juniors who helped me get through this project. They are raihan rafiq, nurul, raihan mridul, shishir, jobair, nipu, tanjim and all the warriors who helped me to complete my journey.

# Table of Contents

## Chapter 1: Introduction

- 1.1 Background Of The Project
- 1.2 Project Brief
  - 1.2.1 Name Of The Project
  - 1.2.2 Client
  - 1.2.3 Location
  - 1.2.4 Site Area
- 1.3 Project Introduction
- 1.4 Problem Statements
- 1.5 Project Rationale
- 1.6 Aims And Objectives Of The Project
- 1.7 Programs
  - 1.7.1 Proposed Programs

## Chapter 2: Site Appraisal

- 2.1 Site Location
- 2.2 Historical Background
- 2.3 Current Scenario
- 2.4 Site Topography
- 2.5 Swot Analysis
  - 2.5.1: Strength
  - 2.5.2: Weakness:
  - 2.5.3: Opportunity
  - 2.5.4: Treat

## Chapter 3: Literature Review

- 3.1 Dhaka City
- 3.2 Historical Background
- 3.3 Land Use Pattaern: Site Topography
- 3.4 Transportation Service And Management
- 3.5 Summery Of Issues Plaguing Dhaka
- 3.6 Development Proposal For Dhaka
- 3.7 Projects By Rajuk
- 3.8 Detail Area Plan (Dap) (2005-2015)
- 3.9 Urban Design And Public Place
- 3.10 Urban Design And Public Place
- 3.11 Elements Of Urban Structure
  - 3.11.1 Networks
  - 3.11.2 Good City Form
  - 3.11.3 Buildings
  - 3.11.4 Open Spaces
  - 3.11.5 Evolution Of Urban Form
  - 3.11.6 Good City Form
  - 3.11.7 Town Squares

- 3.11.8 Street Vendors
- 3.11.9 Food Vendors
- 3.11.10 Elevated Rail (Monorail)
- 3.11.11 Mixed-Use Development

## **Chapter 4: Contextual Analysis**

## **Chapter 5: Case Study**

- 5.1 Local Case Study
  - 5.1.1 Karwan Bazar
- 5.2 International Case Study
  - 5.2.1 La Rambla Street

## **Chapter 6: Programme and Development**

- 6.1 Existing Programmes In The Site
- 6.2 Requirements Of Surrounding Area
- 6.3 Proposed Programs
  - 6.3.1 Office Spaces
  - 6.3.2 Shopping
  - 6.3.3 Hawkers Market
  - 6.3.4 Convention Center
  - 6.3.5 Recreational Facilities
    - Cbd Oriented Facilities
    - City Oriented Facilities

## **Chapter 7: Conceptual Stage and Design Development**

- 7.1 Introduction
- 7.2 Analysis And Decisions
- 7.3 Concept
- 7.4 Design Development
  - 7.4.1 Public Amenities
  - 7.4.2 Open Market
  - 7.4.3 Roadscape
- 7.5 Master Plan
- 7.6 Architectural Drawings (Sections)
- 7.7 Visualizations

## **Chapter 8: Conclusion**

## **Reference**

# Chapter 1: Introduction

- 1.1 Background Of The Project
- 1.2 Project Brief
  - 1.2.1 Name Of The Project
  - 1.2.2 Client
  - 1.2.3 Location
  - 1.2.4 Site Area
- 1.3 Project Introduction
- 1.4 Problem Statements
- 1.5 Project Rationale
- 1.6 Aims And Objectives Of The Project
- 1.7 Programs
  - 1.7.1 Proposed Programs

# CHAPTER 1: INTRODUCTION

## 1.1 BACKGROUND OF THE PROJECT

Like many other cities in the world, Dhaka, the Capital of Bangladesh is also the outcome of spontaneous rapid growth. As the growth of population in Dhaka is taking place at an exceptionally rapid rate, it has become one of the most populous Mega Cities in the world.

Dhaka City has undergone radical changes in its physical form, not only in its vast territorial expansion, but also through internal physical transformations over the last decades. These have created entirely new kinds of urban fabric. In the process of urbanization, the physical characteristics of Dhaka City are gradually changing as plots and open spaces have been transformed into building areas, open squares into car parks, low land and water bodies into reclaimed built-up lands, etc. Such unplanned urban fabric creates urban problems in CBD (central business district) zones.

However, Open transparent spaces are necessary elements in Dhaka city with different sort of functional and leisure activities for the dwellers. So, it requires to rethink, review and improve the quality of the physical urban environment through some collective approach.

## 1.2 PROJECT BRIEF

1.2.1 Name of the Project: TOWARDS THE ENLIGHTENMENT THROUGH THE DEADNESS: URBAN RENEWAL IN MOTIJHEEL COMMERCIAL AREA OF DHAKA CITY

1.2.2 Client: RAJUK / Dhaka South City Corporation

1.2.3 Location: Motijheel commercial area, Dhaka city: towards doinikbangla mor from shapla chatter.

1.2.4 Project type: urban(self-proposed)

1.2.5 Site Area: 3.48 acres

### 1.3 PROJECT INTRODUCTION

The business zones in Dhaka are not appropriately arranged. Motijheel, karwan Bazar, farm-gate is the most busy and haphazard commercial area. Individuals endured with numerous urban issues. These problems are possible to solve with a proper planning. If we don't start to plan this area, and address the urban needs in future it's going to be very difficult to deal with. People design only their own building here, ignoring the impact of the surrounding and effect of the encompassing. But in a city like Dhaka we have to deal with these urban issues, there can't be any single building standing out alone neglecting the context. This project comes with these thoughts that we have to start planning. We should design these commercial buildings and its surroundings according to their urban needs.

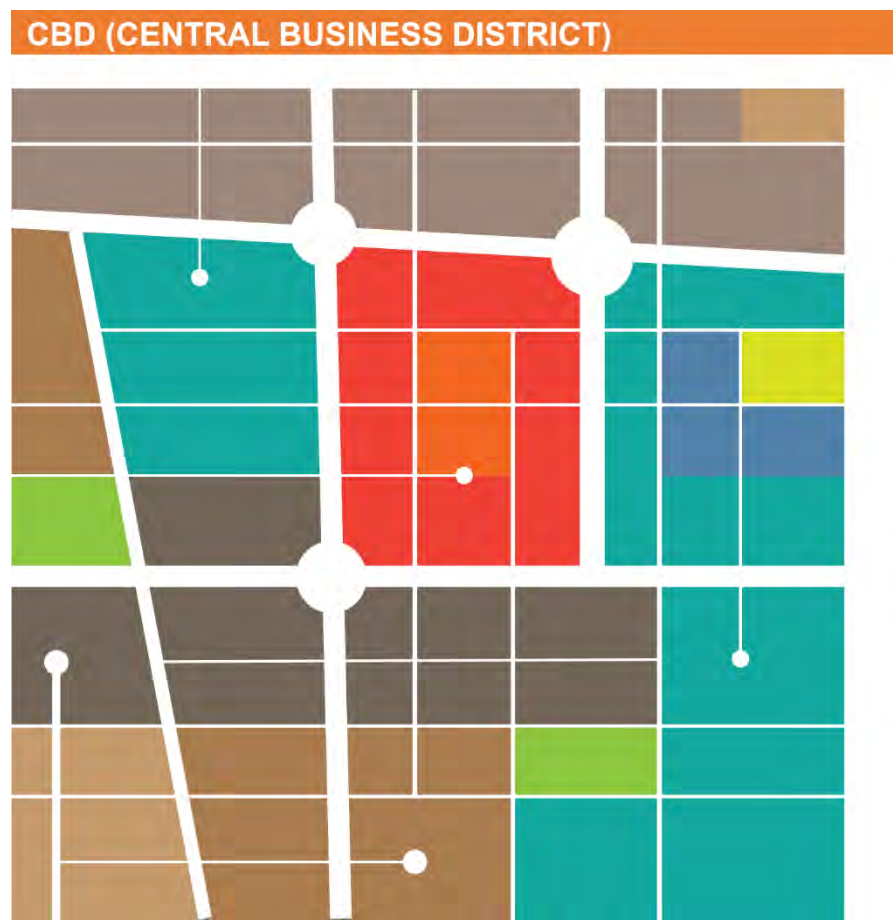


Figure 1 source: Author

- According to the encyclopaedia of World Geography, CBD is- "... the nucleus of an urban area that contains the main concentration of commercial land use". Being the focus of financial, economic and administrative activities of the cities, the importance of CBD sometimes exceeds the regional boundary and become a hub of national or global significance. Although flourished in the western

world initially, it did not take long to realize the need of CBD by the developing



countries. The growth of such commercial hub in Dhaka City, the capital of Bangladesh, does not follow any systematic process.

#### **1.4 PROBLEM STATEMENTS**

From the very beginning of our independence, Motijheel Commercial Area has grown as the main Central Business District (CBD) of Dhaka City because of its rapid pace of commercial development. But, the process of development and growth in this area followed a spontaneous but unplanned manner. As a consequence, this CBD is continuously challenging two major urban problems: congestion and constriction- which are often considered as factors that necessitate urban regeneration. The study identifies the traffic jamming problem of Motijheel with the characteristics of high volume-capacity ratio, illegal on street parking, inefficient management of public transport system and absence of pedestrian friendly facilities. The issue of constriction is addressed as lack of opportunity for horizontal development of the CBD due to its densely developed surrounding area. Because of growing in an unplanned way there are some space left as urban grey space which has the capability to be turned into urban positive interactive spaces. Public open spaces are significant substance to improve social control among the city dwellers in order to create a healthy society urban environment. In this manner, this project discusses some strategies to recover and design these spaces that will help to make it functionally more well-organized and efficient.

## **1.5 PROJECT RATIONALE**

From side to side practical study of the Motijheel commercial area of Dhaka, some basic problems can be identified easily. Mismatched co-existence of the office building, insufficient pedestrian facilities, unauthorized illegal roadside trading -all these resulting in traffic congestion, lack of sufficient parking, illegal occupancy, and noise from the roadway. Again, the absence of recreational area, adequate food shop turns these CBDs into a place which one wants to leave as early as possible. So here some improvisation can make a promising change in the lifestyle of the dwellers. With a visible and strong transparent connection and easy public access for the user can cause interest in people with some activity spaces where users can stop or take a pause. Moreover, with the target to attract the pedestrians using the government land and sharing policies, a walkable healthy environment through solid and void can be ensured with some entertainment facilities for the users and residents. Moreover since it is a commercial zone this area becomes silent after a certain period of time every day. This 'un-happening' condition in a central part of the city brings insecurity and lack of privacy.

Basically as an architect's tendency of dreaming about something and then making it real is common. But in this case, what was once the reality of our society has now become a mere dream and through this project it is tried to go back towards that reality.

## **1.6 AIMS AND OBJECTIVES OF THE PROJECT**

This thesis aims at how to improve the daily used roads and routes in order to increase the scope of interaction. So the end result may come how to generate responsive spaces and bring life into them solving the public issue with a pedestrian corridor and road edges along with some functional public facilities.

- Understanding the urban context of Motijheel commercial zone in Dhaka city in order to apply some collective solution
- Finding out the urban problems that are caused by individual building complexes

- Realizing the fact of how a commercial building could have been designed which will address the urban needs
- Parallel comparing with some existing example around the globe
- Designing some interactive public spaces which is required in such commercial zones
- Making a transparent space through solid and void maze of commercial building in motijheel
- Eliminating unsafe conditions and ensuring security at night time through some designed structures and policies
- Enhancing the aesthetic quality of the study areas in motijheel
- Maximizing the use of the space in front of the commercial buildings through the improvement of accessibility and pedestrian facilities.
- Regenerating spaces that are dead (literally and symbolically) in the shadow of the tall buildings
- Improving the connections among adjacent neighbourhoods through the redevelopment of the grey spaces
- Developing a strategic plan that will improve the current conditions of the spaces that are studied in motijheel in order to apply that in other similar CBD areas.

## **1.7 PROGRAMS**

### **1.7.1 Proposed Programs**

- ART GALLERY
- Shopping mall
- Hawker market
- Food court
- Public toilet

- Restaurants
- Bus stop
- Office space
- Gymnasium
- Indoor games
- Library
- Observatory room

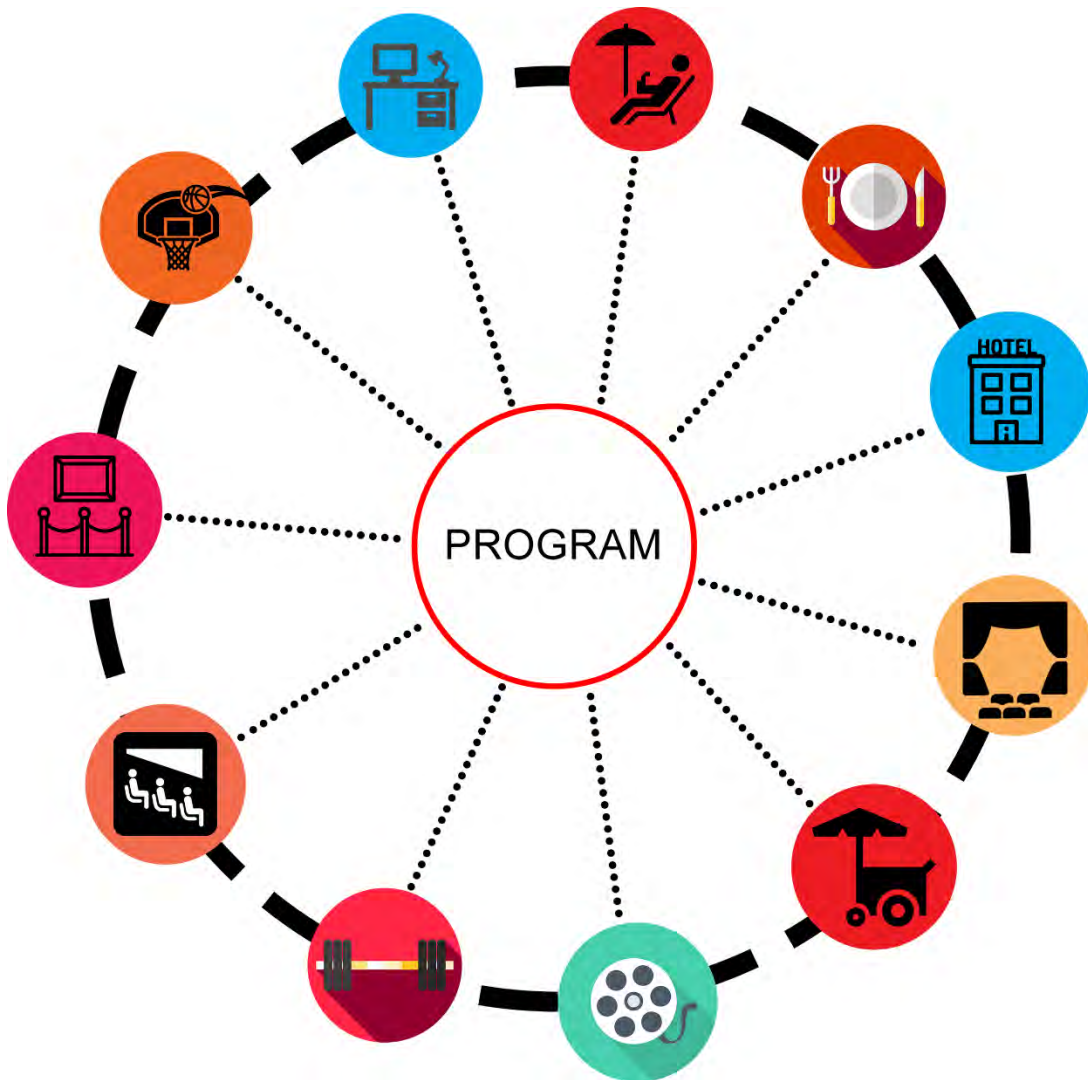


Figure 2 source: Author

# Chapter 2: Site Appraisal

- 2.1 Site Location
- 2.2 Historical Background
- 2.3 Current Scenario
- 2.4 Site Topography
- 2.5 Swot Analysis
  - 2.5.1: strength
  - 2.5.2: weakness:
  - 2.5.3: opportunity
  - 2.5.4: treat

## CHAPTER 2: SITE APPRAISAL

### BACKGROUND OF THE SITE

Motijheel, Dhaka a historical place in Dhaka developed in the Mughal period and now represents the prime commercial area of the capital city. The area was widely known as the Mahal of Mirza Mohammad Mukim. There was a large pond within the boundary of the Mahal which was named as pond of Sukaku Mahal. This Sukaku dighi was subsequently came to be known as Motijheel. Mirza Mukim was the daroga in charge of the Mughal Nawara Mahal during the subadari of Mir Jumla (1660-1663 AD). Mirza Mukim's residence was on the southern side of Purana Paltan Maidan (presently the area of Dhaka Stadium). There were two big hillocks, one inside the Mahal and the other in the outside, of which one still lies in the premises of Bangabhaban. Tradition goes that Mirza Mukim had to lose all his assets for the activities of his mentally derailed children. His daughter is said to have thrown everyday a piece of her ornaments into the pond of the harem. Perhaps the dighi of Sukaku Mahal was subsequently known as Moti-Jheel (Pond of Pearl). Later on the place came to be known as Motijheel after the name of the Pond of Pearl.

### 2.1: SITE LOCATION

1 The site is situated along with the shaplachottor node. The road which is mainly focused starts from shapla square towards doinik-banglamor is known as motijheel road. The distance between these two nodes is approximately 0.77 km. Internal secondary roads are seen connected with fakirapool and dilkhusha area. Insufficient road width and lack of pedestrians are major characteristics of the site. Parked tempo and buses are seen all over the roads which creates traffic congestion and jam. Unplanned commercial structures causes the scarcity of breathing space. At present head offices of a number of industrial establishments exist in Motijheel. Since almost all the buildings of this area are the offices of commercial concerns the area is known as Motijheel Commercial Area.



Figure 3 source: google earth



Figure 4 source:www.videoblocks.com

### **2.3: HISTORICAL BACKGROUND:**

After Indian subcontinent became independent of British rule in 1947 and Pakistan was created, Dhaka restarted its life as capital of Est. Pakistan. Migration of people from India caused 10.3% increase in population. Dhaka's area increased from 6 sq. Miles in 1947 to 25 sq. Miles in 1962. Population Increased from 2.1 lakh in 1941 to 5.5 lakh in 1961. According to available information.

- New industries grew and business expanded.
- Motijheel Commercial area and New Market in Azimpur area developed as shopping centres according to plans.
- Motijheel-Gulistan area became the modern urban core and the CBD.
- The Chawk, Patuatuli and Shadarghat remained the traditional centre of the city.

Thus in Dhaka, according to Rosie Majid Ahsan. Like in other eastern cities, developed two commercial nodes with distinctive characteristics –

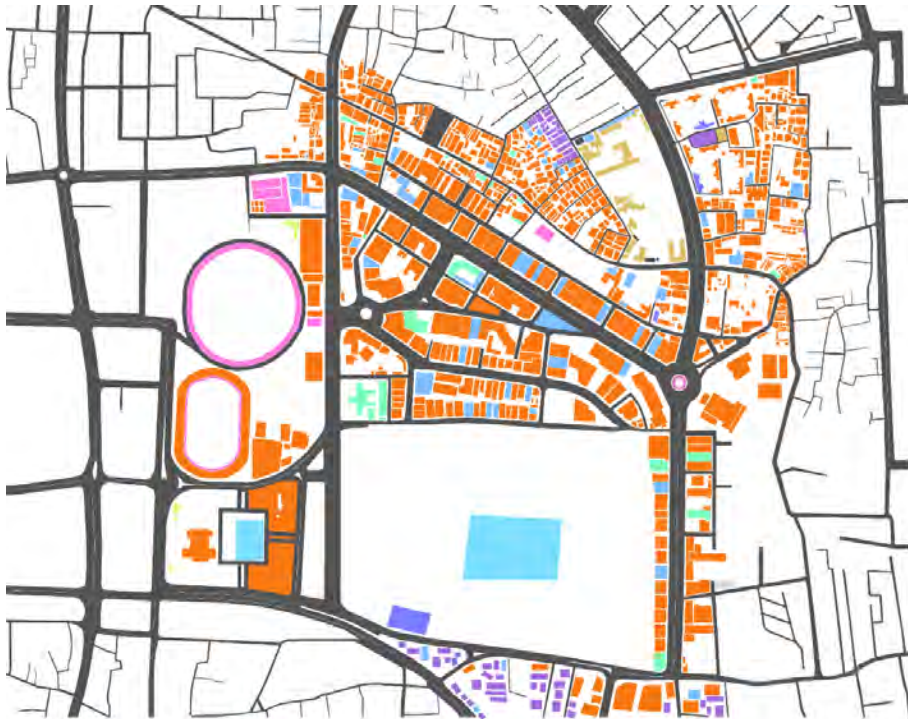
- I) The indigenous centre and
- II) The modern centre.

The landscape of Dhaka city has been undergoing rapid alteration with the economic and political changes in the country since the creation of Bangladesh .The city is developing northward through expansion of the upper class residential area .The retail trade areas are also projecting itself towards the northern part of the city . The retail business centre which had developed in Gulistan area changed its characteristic totally as it become the centre for political friction. As such ,the shopping areas, like olden days ,are growing along the major roads .Some of these are using only the street level frontage forming a ribbon pattern .Others are clustering at nodal points.

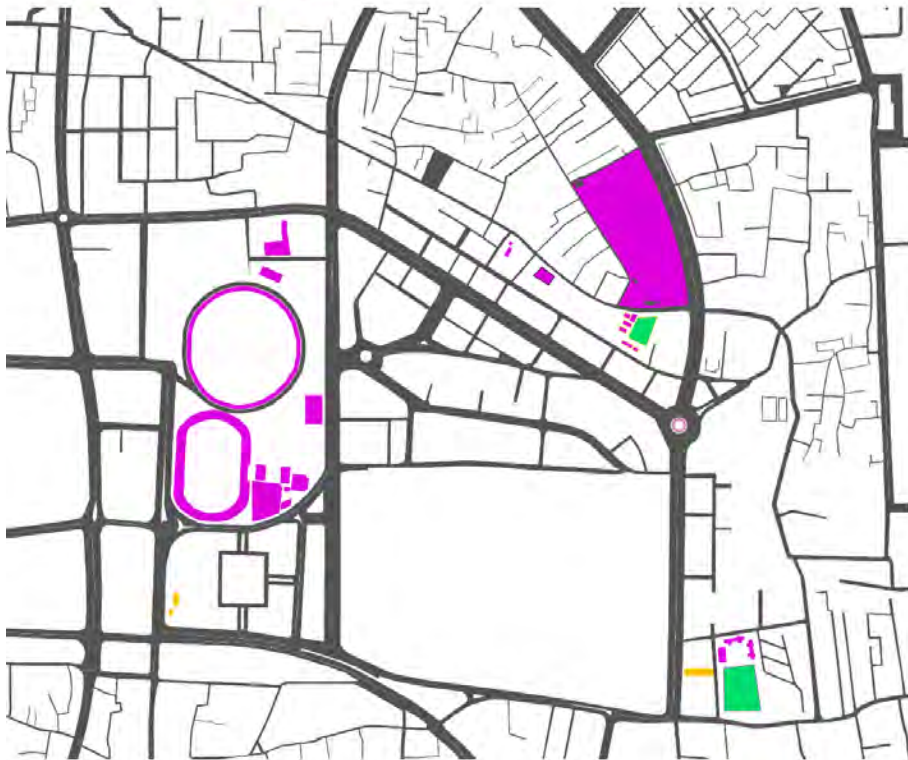
Activities of the CBD also had been diffused giving way to the old system of specialized shopping streets along the road front of the buildings.

**Some maps are depicted here to portray the whole site and surroundings.**





- RESIDENCE
- COMMERCIAL
- MIXED USE
- SPORTS AND CLUB
- ADMINISTRATIVE
- WATER BODY
- HOTEL AND RESTAURANT
- THEATER
- PUMP
- MOSQUE
- INSTITUTE



- STADIUM AND SPORTS CLUB
- GREEN
- THEATRE AND CINEMA HALL



■ private  
■ gov



■ AGB COLONY  
■ BANGLADESH BANK COLONY  
■ KAMALAPUR COLONY

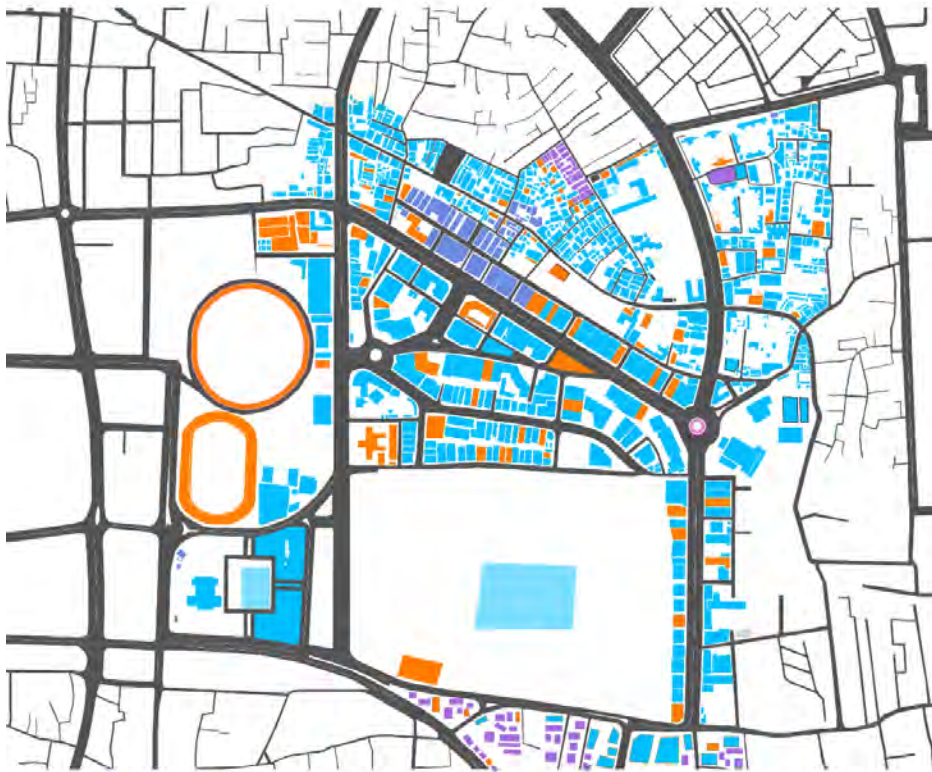
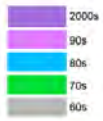




Figure 5 source: Author

## 2.4: CURRENT SCENARIO:

Increase in population of Dhaka city (10.7 million in 2007) and infrastructural improvement e.g. dual Dhanmondi, Karwan Bazar and Gulshan area influenced a tremendous development of multi-storied shopping plazas with modern escalators, elevators, central air conditioning and undergoing parking.

Gulshan Avenue has turned into an area for posh restaurants, private banks, offices and specialized shops.

Gausia hawkers market exhibits a unique combination of traditional and modern system,

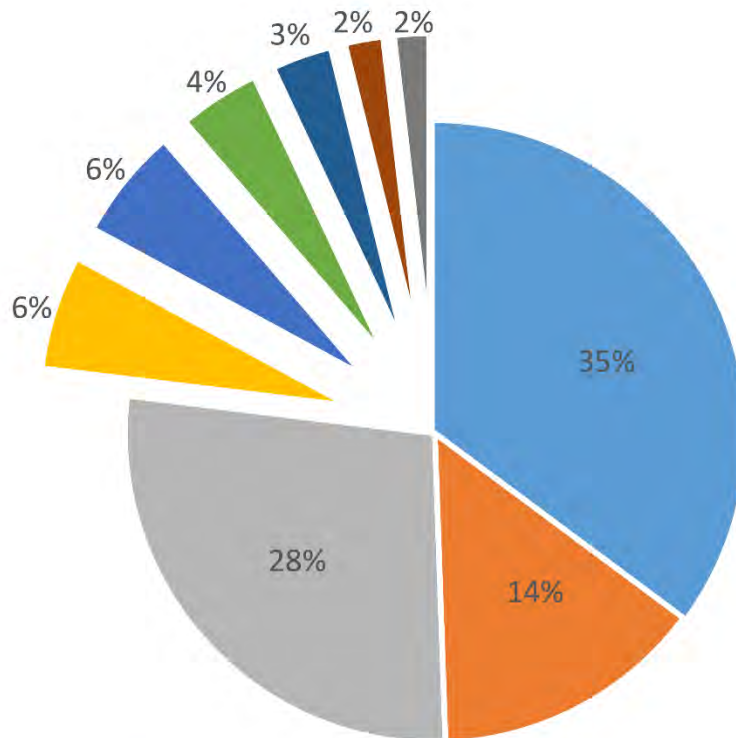
one storied tin shaded stalls with split level A.c.s in the passage .Demolition of Gulistan, the famous cinema hall buildings and removal of “Mir Zumla cannon” from the centre place of the Gulistan area is another change worth mentioning.

Uttara, a recent planned model town, comprises a shopping area which can be identified as an outlying shopping district with its new glorious shopping plazas.

A typical characteristic of an indigenous commercial centre is the mixing of the business and residences at the same place. Survey shows that during Pakistan period about 50% of the shop owners in the Chawk, Patuatuli and Banglabazar area lived along with their shops, whereas Gulistan and Motijheel areas were totally devoid of residential population.

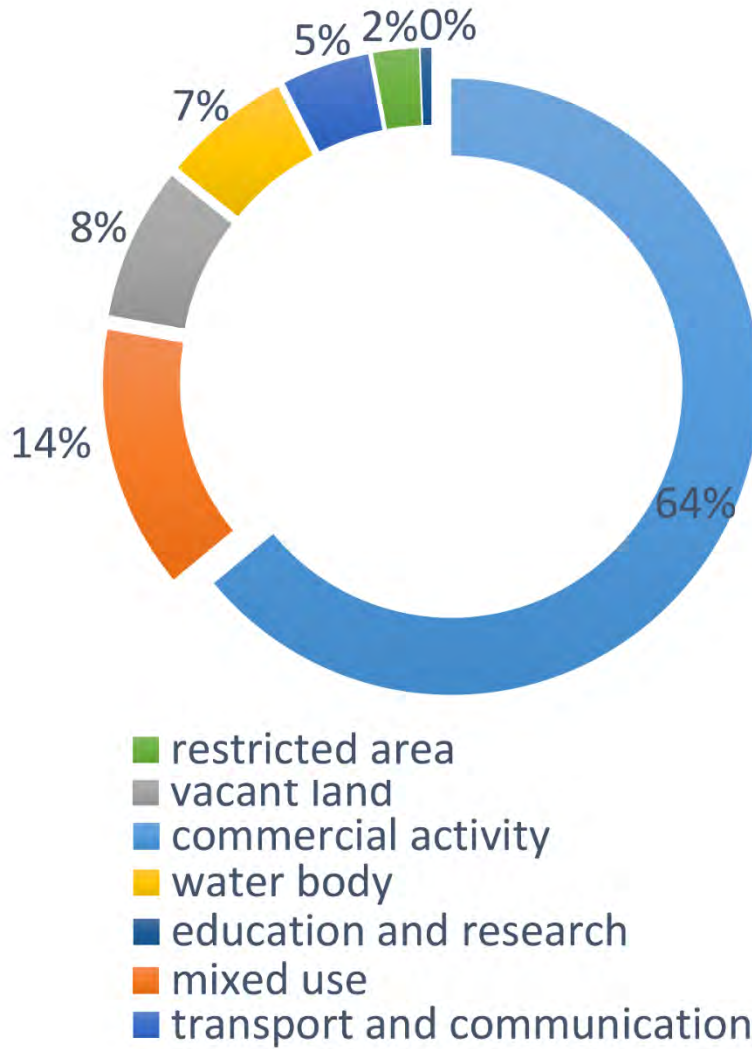
In Master Plan of Dhaka City 1959 , Motijheel was demarcated as a commercial area but not a CBD. After the independence of Bangladesh in 1971, Motijheel grew as a dynamic administrative and commercial area and served the purpose of CBD for the capital. Around 64% of the total lands in Motijheel are used solely for commercial activities, whereas 13.78% are designated as of mixed land use.

- LAND USE PATTERN OFF SURROUNDING AREAS OF MOTIJHEEL



- mixed use
- commercial activity
- residential
- open space
- water body
- transport and communication
- education and research
- restricted area
- institutional

- LAND USE PATTERN OF MOTIJHEEL AREA



## 2.2: SITE TOPOGRAPHY

The topography of the site is plain land. The soil condition of the area is good. It is in the low danger zone in the site amplification map of Dhaka City for earthquake. The area is also free from flood affected zones.

## **2.5: SWOT ANALYSIS:**

### 2.5.1: STRENGTH:

- One of the most connected place of the city.
- Various transportation system working, thus ease of mass access.
- Close proximity to monorail station project and car parking building project
- Close to landmark and important structures.

### 2.5.2: WEAKNESS:

- Poor traffic management.
- Poor waste management.
- Undefined public places

### 2.5.3: OPPORTUNITY:

- Has the potential to be developed in a vibrant CBD by incorporating diversified use.
- Potential public and civic places can be created.
- Create a transportation hub for monorail, bus station and other public vehicles, which will integrate with the office and commercial space
- Developed a Recreation and breathing space

### 2.5.4: TREAT:

- Threat of developing unplanned haphazard commercial spaces
- Misuse of government plot, and turn into small industrial zone
- Lack of diversified use as only commercial development is currently planned.
- Can be developed as a commercial dead zone, where no public spaces are allocated.

# CHAPTER 03: LITERATURE REVIEW

- 3.1 Dhaka City
- 3.2 Historical Background
- 3.3 Land Use Pattern: Site Topography
- 3.4 Transportation Service And Management
- 3.5 Summary Of Issues Plaguing Dhaka
- 3.6 Development Proposal For Dhaka
- 3.7 Projects By Rajuk
- 3.8 Detail Area Plan (Dap) (2005-2015)
- 3.9 Urban Design And Public Place
- 3.10 Urban Design And Public Place
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  - 3.11.1 Networks
  - 3.11.2 Good City Form
  - 3.11.3 Buildings
  - 3.11.4 Open Spaces
  - 3.11.5 Evolution Of Urban Form
  - 3.11.6 Good City Form
  - 3.11.7 Town Squares
  - 3.11.8 Street Vendors
  - 3.11.9 Food Vendors
  - 3.11.10 Elevated Rail (Monorail)
  - 3.11.11 Mixed-Use Development



## CHAPTER 03: LITERATURE REVIEW

### 3.1: DHAKA CITY:

Dhaka city has undergone with massive changes in its social, economical, political, morphological and psychological aspects. Only these three facts are enough to give an impression

- 1947: Capital of Provincial East Pakistan: 336,000 inhabitants
- 1971: Political centre of new Bangladesh: 1 million inhabitants
- 2001: World's first megacity in a less developed country: >10 million inhabitants

Since the aim of this thesis is to incorporate some necessary functions and programs here and rethink the building-road relationship of this CBD as well to make it vibrant and active simultaneously at night too like other CBD such as Kawran Bazar, so by no means this is an attempt of city planning proposals or reformations but rather an analytical view of how the already planned development projects can be integrated, first in an urban scale and then on a city scale into a singly defined entity to achieve maximum efficiency. Since the idea sought after in this paper works with existing proposals of various developments, the planning issues are not scrutinized at all. Yet, it is important to analyze the city from various aspects map that is ever evolving at a rapid pace. No idea for the city should be conceptualized without a sound background of all the issues affecting the city. In this chapter, such an attempt is made to know the city better, not just from the viewpoints of urban issues but rather an overview of an array of perspectives on Dhaka and then arrive at a summary of the problems the city faces and current development proposals. Dhaka is now a member of the —mega-cityll family of the world. Dhaka, the fifth largest mega city, comprises Dhaka City Corporation (DCC) and five adjacent municipal areas i.e.

Savar, Narayanganj, Gazipur, Kadamrasul and Tongi (BBS, 1991). The area of Dhaka mega city is 1,353 km<sup>2</sup> of which DCC occupies 276 km<sup>2</sup> (BBS, 2001). According to United Nation Population Fund (UNFPA) the total population of Dhaka mega city is now over 12.3 million of which population of DCC is about 8.4 million. According to Bangladesh Bureau of Statistics, population of Dhaka mega city and DCC is about 9.9 millions and 5.3 million, respectively (BBS, 2001). The population density of DCC is 19,286 per km<sup>2</sup> which is more than double of the mega city average of 7,918 per km<sup>2</sup>.

The city is situated between 23°42' and 23°54' north latitudes and 90°20' and 90°28' east longitudes. It is surrounded by the river Buriganga on the south, Turag on the west, Tongi river on the north and Balu river on the east (Banglapedia, 2003). The geographical location and administrative units of the city is given in Figure 1.1. The city usually experiences characteristics of tropical monsoon climate with an annual average temperature of 25°C and 2000 mm of average annual rainfall (Wikipedia 2011). There are a number of services providing organizations. Of them, the key organizations are Dhaka City Corporation (DCC), Dhaka Metropolitan Police (DMP), Dhaka Water and Sewerage Authority (DWASA), Dhaka Electric Supply Authority (DESA), Titas Gas Limited, Bangladesh Telephone and Telegraph Board (BTTB), Rajdhani Unnayan Kortripakkha (RAJUK), Dhaka Electricity Supply Company (DESCO) and Department of Environment (DoE) serving city dwellers with specific utilities (Siddique et al., 2000). Area under jurisdiction of different authorities serving Dhaka also varies. Dhaka Metropolitan Area (DMA) is somewhat larger than the DCC, and currently holds 21 police Stations. Dhaka Statistical Metropolitan Area (DSMA), which is considered as Dhaka Mega city. Rajdhani Unnayan Kartripakkha (RAJUK) has a Strategic Planning Zone-wise definition of Dhaka city which is known as Dhaka Metropolitan Development Plan (DMDP).

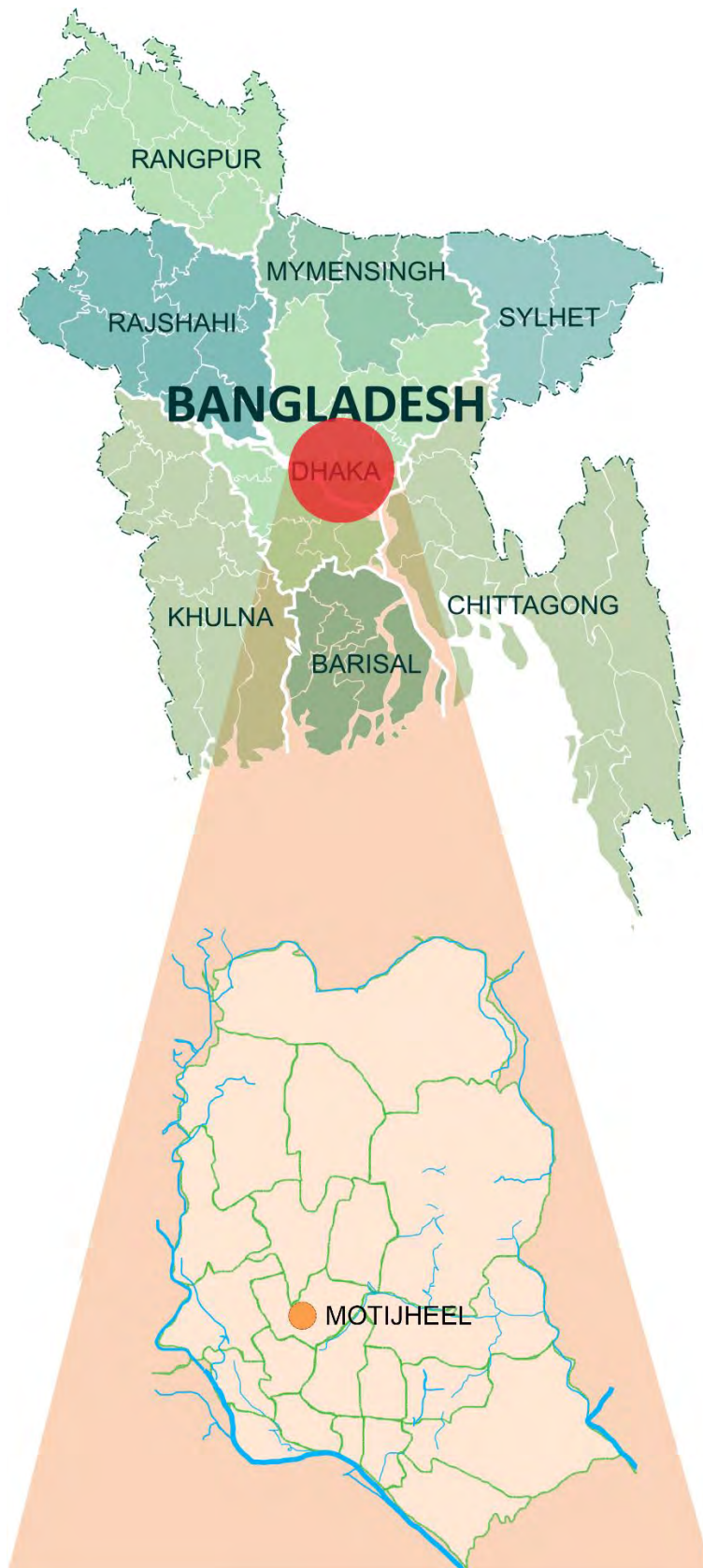


Figure 6 source: author

It currently consists of total 26 zones of which 19 may cover Dhaka Statistical Metropolitan Area, though the total area is about 1528 km<sup>2</sup> (DMDP, 1997). Boundary of different authorities, and built up and low-lying areas of Dhaka city respectively. But it is true that most people think that Dhaka means the municipal corporation and few adjoining developed areas. Historical sites and nature spots such as the Lalbagh Fort, Ahsan Manzil Museum, Bahadur Shah Park, Curzon Hall, Baldha Garden, Ramna Green, Suhrawardy Uddyan (Garden), National Park, Botanical Garden, Dhaka Zoo, Shaheed Minar, National Museum stand as witnesses to the legacy of Dhaka. Figure 1.3 depicts location of historical places of Dhaka city. Most of the government and non-government regulatory and administrative headquarters are situated in Dhaka. The advantage of multi-way communication system with all districts, location of primary international business house,

trade and commerce play as the primary pull factor. Rapid and unplanned urbanization, commercial development, along with population pressure have made Dhaka an environmentally polluted city in the world. The surrounding river systems have become badly polluted due to chemical and microbial contamination by the industries situated on the banks of the major rivers and untreated sewerage discharge from large part of the city. The groundwater level of the city is also being affected with a fall of more than 0.75 meter per year (Hasan, 1996).

### **3.2: HISTORICAL BACKGROUND:**

The existence of a settlement in the area that is now Dhaka dates from the 7th century. The city area was ruled by the Buddhist kingdom of Kamarupa and the Pala Empire before passing to the control of the Hindu Sena dynasty in the 9th century. The name of the city may have derived after the establishment of the Goddess Dhakeshwari's temple by Ballal Sena in the 12th century. Dhaka and its surrounding area was identified as Bengalla around that period. The town itself consisted of a few market centers like Lakshmi Bazar, Shankhari Bazar, Tanti Bazar, Patuatuli, Kumartuli, Bania Nagar and Goal Nagar. After the Sena Empire, Dhaka was successively ruled by the Sultanate of Bengal as well as interruption of governors from the Delhi Sultanate before being taken over by the Mughals in 1608. The development of townships and housing has resulted into a significant growth in population came as the city was proclaimed the capital (Rajmahal) of Bengal under Mughal rule in 1608. Mughal subahdar Islam Khan was the first administrator of the city. Khan named the town "Jahangir Nagar" ( **জগ** ; City of Jahangir) in honor of the Mughal emperor Jahangir, although this name was dropped soon after Jahangir's death. The main expansion of the city took place under Mughal general Shaista Khan. The city then measured 19 by 13 kilometers (12 by 8 mi), with a population of nearly one million people. British East India Company in 1765 gained right to collect revenue (Diwani right) and later took over governing in 1793 when Nawabs of Bengal were forced to abdicate all their authority over Bengal, Bihar & Orissa & the city passed on to total British control. The city's population shrank dramatically during this period as the prominence of Calcutta rose, but substantive development and modernisation eventually followed. A modern civic water supply system was introduced in 1874 and electricity supply launched in 1878. The Dhaka

Cantonment was established near the city, serving as a base for British and Bengali soldiers. During the abortive Partition of Bengal in 1905, Dhaka was declared to be the capital of the newly established state of East Bengal and Assam, but Bengal was reunited in 1911. Following the Partition of India in 1947, Dhaka became the capital of East Pakistan. The city witnessed major communal violence following the partition of India. A large proportion of the city's Hindu population departed for India, while the city received a large influx of Muslims. As the center of regional politics, however, Dhaka saw an increasing number of political strikes and incidents of violence. The adoption of Urdu as the sole official language of Pakistan led to protest marches involving large crowds. Known as the Bengali Language Movement, the protests resulted in Pakistani police firing which killed a number of peaceful student demonstrators. Throughout the 1950s and 1960s, Dhaka remained a hotbed of political activity, and the demands for autonomy for the Bengali population gradually gained momentum.

The 1970 Bhola cyclone devastated much of the region, killing an estimated 500,000 people. More than half the city was flooded and millions of people were marooned. With public anger growing against ethnic discrimination and poor cyclone relief efforts from the central government, Bengali politician Sheikh Mujibur Rahman held a nationalist gathering on March 7, 1971 at the Race Course Ground. An estimated one million people attended the gathering, leading to the March 26 declaration of Bangladesh's independence. In response, the Pakistan Army launched Operation Searchlight, which led to the arrests, torture and killing of thousands of people. After nine months of bloody battle with Indian Army and Mitra Bahini, the Pakistani Army surrendered to the Indian Army on December 16 marking the end of the independence war of Bangladesh. As the nation's capital, Dhaka saw a rapid and massive growth of the city population in the post-independence period, as migrant workers from rural areas across Bangladesh moved to the city. The growth of commerce and industry along with the city's population has created further challenges to services and infrastructure. A real estate boom has followed the expansion of city limits and the development of new settlements such as Uttara, Mohammadpur, Bashundhara, Mirpur and Motijheel.

### **3.3: LAND USE PATTAERN:**

Historically, the use of land for development of city started from the present old town and along the bank of Buriganga River. Later it expanded towards the north, and the flow of expansion was more or less continued in most of the regime though the remarkable growth was observed after the independence. Dhaka City Corporation (DCC), central nerve of the Dhaka Mega City, presently covers more than 25 percent of the total land area of mega city. In fact, after the liberation war, the physical feature of the main city has been changed and covered by rapid development both by the government and private sectors. These include development of commercial, industrial, educational, health, communication and residential sectors. Presently, the city development including all the above sectors covers approximately 40 km from north to south and 14 km from the east to the west (DCC, 2004). Many areas of the eastern part of the city, being low lying, support agricultural practices, which ultimately meet a major part of the regular vegetables demand of the city dwellers.

### **3.4: TRANSPORTATION SERVICE AND MANAGEMENT:**

According to the National Encyclopedia of Bangladesh (Banglapedia), the roads of Dhaka city occupy only 8% (2,230 km) of the total surface area whereas according to standards, at least 25% is required to facilitate a smooth transport system (Banglapedia, 2003). The width of the city roads vary from 6m to 40m, though some of the roads are found to be less than 6m in width in the old town (Meenar, 2000). The total length of the DCC roads in another report is 1,968 km, (Rahman, 1998) but according to DCC officials, the length is 2,300 km, of which 200 km are main thoroughfares, 110 km secondary roads, 152 km feeder roads and the rest are narrow lanes and by-lanes (The daily Star, January 18, 2004). The transport The high concentration of tanneries in the Hazaribagh area is the main source of water, air, soil pollution resulting occupational health problems. 27 Environment and Social Situation network of Dhaka city is shown in Figure 2.5. It is important to note that 300,000 rickshaws of Dhaka city account for 56% of the total vehicles which occupy 73% of its road surface (Ahmed, 1998 in Siddiqui and others, 2000). But the DCC has the registration for only 88,000 rickshaws (The Daily Star, Oct 26, 2003). The total number of registered motor vehicles up to 2002 in Dhaka was 293,973, which accounted for 39% of the total transport mode, whereas walking and

rickshaws share 45.8% and 15.2%, respectively (BRTA, 2001). However, the government has taken initiatives to remove unregistered rickshaws and restricting their movement in some of the main roads. With rapid urbanization and excessive growth of population and settlements, the city failed to upgrade its road transport and network system, even though the growth of motor vehicles per year is about 6-7%, which is equal to or may even be more than the average population growth, (Siddiqui and others, 2004; DTCCB, 2002). Of the proposed total of 59 electronic traffic signals, a few have already been installed in different parts of the city, particularly, in Gulshan and Dhanmondi. This will be controlled by the DCC as soon as the installation is completed. According to a daily newspaper, nearly 80% of the licenses of taxicabs are illegal though they regularly ply the roads along with the huge number of nonmotorized vehicles (rickshaws) and create severe traffic congestion (The Daily Star, 22 September, 2003). Bangladesh Road Transport Authority (BRTA), with the total manpower of 291, is responsible for the control and management of road transport (BRTA, 2004). The Dhaka Metropolitan Police (DMP) is responsible for traffic management. The DMP comprises a total of 2,008 people including 479 traffic sergeants and 1,406 constables (DMP, 2004). These two organizations work as the supreme authority of controlling the total road transportation and managing the traffic of Dhaka city, with the necessary participation of a few other organizations such as the DoE, DCC, BRTC and the private transport sectors. Bangladesh Inland Water Transport Authority (BIWTA) deals with the development, maintenance and control of inland water transport. The river port established on the Buriganga River at the extreme south end of the city is used for water transport communication to all over the country. Bangladesh Railway is responsible for railway communication throughout the country. The largest station, the Kamalapur Railway Station, is situated at Kamalapur, close to the Motijheel area. The Civil Aviation Authority of Bangladesh (CAAB), an autonomous body is situated in the northern part of Dhaka. CAAB deals with all the aspects of aviation including airports, runways and air traffic control, control towers, operation and administrative buildings, car parking, air navigation, radio communication system, etc. Both domestic and international flights are handled at this airport.

### **3.5: SUMMERY OF ISSUES PLAGUING DHAKA:**

First, there appears to be no coherent vision for addressing Dhaka's current fractures and impending futures. What passes for a master plan is a jumble of outdated and uninspiring zoning regulations and building by-laws. The destiny of the city has been given over to bursts of ad-hoc and uncoordinated decisions. There is simply nothing in place that guarantees the art, science, and business of city-building. Second, the institutions entrusted with the planning and management of Dhaka have amplified the crisis. This is Dhaka's dreadful fate. The city's biggest nemesis are those who are entrusted with our destiny. With failures in urban planning and management, development in the last twenty years or so have fallen largely to private interests, which often act without regard to natural processes and resources, urban context, or social obligations. Third, one can vandalize a city by building it. The very process of building and developing a city, if not undertaken with knowledge of urbanism, can destroy the qualities that are at the heart of urban life. Every day the people of Dhaka negotiate increasing signs of a civic deterioration that is, ironically, amplified in the name of building, development and progress. Fourth, Dhaka is a traffic catastrophe, a narrative that needs no repeating. The street has become a circus that vividly depicts our general social behavior: self-centered, undisciplined, and life-threatening to others. Fifth, Dhaka's environmental pollution is calamitous. There are factories in the city, brick kilns in paddy fields, and automobile exhaust everywhere, and yet Dhaka's citizens and authorities carry on with nonchalance -- economic interests dominate life and well-being. Sixth, open spaces -- urban spaces, water bodies, parks -- are the most important ingredients of a city, like lungs to the body, and yet they are vanishing one by one in an avalanche of greed and manipulation by private interests often in partnership with the authorities. (Ashraf, 1998)

### **3.6: DEVELOPMENT PROPOSAL FOR DHAKA:**

Since the idea of Dhaka Neural Network revolves primarily around the integration of existing development proposals, it is very important to dig out such proposals from all the various agencies employed in such endeavors and bring them to a common platform. Some projects are contradictory to each other and many are yet very controversial. As this paper looks at the idea from a conceptual point of view, it is not necessary to delve too deep into each proposal and fine tune the integration but rather, the following lists of



relevant projects are important in providing the context and forming elements of the Dhaka Neural Network.

## **PROJECTS BY RAJUK:**

### **ONGOING PROJECTS:**

#### **New Township/ Housing Projects:**

- Purbachal New Town at Yousufgonj and Rupgonj
- Uttara Residential Model Town (3rd phase)
- Detailed Area Plan (DAP) Project
- Jhilmil Residential Area
- Nam Village/Villa Apartments at Banani and Gulshan

#### **LAKE IMPROVEMENT BEAUTIFICATION:**

- Integrated Development of Hatirjheel Area Including Begun Bari Khal Project
- Gulshan-Banani-Baridhara Lake Improvement & Beautification Project
- Uttara Lake Improvement & Beautification Project

#### **CAR PARKING:**

Multistoried Car Parking-cum-office Building at Gulshan-1

#### **ROAD CONSTRUCTION:**

- Purbachal Link Road (Debogram to Progoti Sharai)
- Link Road between Bijoy Sharani and Tejgaon Industrial Area
- Internal Roads of Purbachal New Town
- Internal Roads of Uttara Residential Area (3rd phase)

And at many other places

## OVERPASS:

Overpass at many places for convenient and comfortable experience for city people

## FLYOVER:

Flyover at Badda and malibag area

## REHABILITATION APPARTMENT PROJECTS:

Rehabilitation for affected families at Hatirjheel Project Area

## FUTURE PROJECTS: NEW TOWNSHIP DEVELOPMENTS:

- Savar
- Gazipur
- Keraniganj
- East side of Dhaka

## MAJOR ROAD PROJECTS:

- Extention of Madani Avenue to the Balu River(Proposed Eastern embankment)
- Widening of link Road from Indira Road to Phanthapath
- Link Road from near Sonargaon Hotel to Mohakhali Rail Crossing (along the railway Track & Behind Primeminister's offices)
- Link Road from Malibagh to Janapath
- Extension of Link Toad from Notre Dame College to Janapath □ Construction of Road from Kadamtali to Monikdee
- Constriction of Road from Bashabo Jame Mosque to Trimohonee to Shekher Bridge via Nandipara
- Construction of different internal Roads at DND Area

## APPARTMENT PROJECTS:

- 20,000 Apartments at Purbachal New Town
- 22,000 Apartment at Uttara Residential Area (3rd Phase)
- 10,000 Apartments at Jhilmil Residential Area

#### CAR PARKING:

Multistoried Car Parking at Dilkusha Commercial Area

### **3.7: DETAIL AREA PLAN (DAP) (2005-2015):**

The Detailed Area Plan which is the outcome of the last several years of extensive activities related to the preparation of physical plan of Dhaka, marks the completion of the process undertaken by the Rajdhani Unnayan Karttripakkha with the assistance of UNDP and UNCHS to prepare Dhaka Metropolitan Development Plan (DMDP) under the project Preparation of Structure Plan (SP), Urban Area Plan (UAP) and Detailed Area Plan (DAP)- Metropolitan Development Plan Preparation and Management in Dhaka,, (UNDP No. BGD/88/052 and TAPP No. TA/BGD/88-052). DMDP is a three tier plan package of which 1st two tiers, viz. Structure Plan and Urban Area Plan were prepared during 1992-1995 period by the joint team of Consultants from home and abroad and counterpart experts employed by RAJUK. After a long gap, RAJUK initiated the task of preparation of Detailed Area Plan for the entire RAJUK area. In order to complete the task efficiently, RAJUK divided its control area into five groups and several locations and awarded five local consultancy firms with the work. The work was designed to be accomplished in five reports based stages spread over two years. Due to the problems of Mauza map collection and very complicated and time consuming physical feature survey process based on Global Positioning and Geographical Information System, time over run was unavoidable. As such, it took almost four years to complete the task. This is the final output of the process of preparation of the Detailed Area Plan to guide the development of Dhaka in a planned manner befitting standard urban living of 21st century. This Final Report (Report-V) is the fifth of the series of the reports to be submitted under the Detailed Area Plan (DAP) for Group-C area. The Final Report is the most important report to be

submitted as per TOR. The report describes about the Mauza level detailed development proposals on the basis of present situation. It incorporates the survey results, findings of stakeholders, consultations, formulation of planning principles and standards, development activities and proposals of other development agencies, private sectors and NGOs, integrated planning proposals, the broad land use plan and policies for existing and new urban areas and the detailed area plans.

### **3.8: URBAN DESIGN AND PUBLIC PLACE:**

Actually urban space, public space or place, civic space, community, neighborhood are very closely related. They are all both prior and pro concerns of urban design. There is no commonly agreed definition of urban design. “ ..... (Urban design) Located in a “gray area between planning and architecture” (Davis, 1982, planning and architecture) Urban design concerns the arrangement, appearance and functionality of towns and cities. In particular the shaping and uses of urban public space. It has traditionally been regarded as a disciplinary subset of urban planning, landscape architecture, or architecture. In more recent times has been linked to emergent disciplines such as landscape urbanism. So, urban design is the tool for shaping urban spaces which includes cities and towns and specially shaping of public spaces. That indicates that a city or town without proper public spaces indicates poor urban. Urban design theory deals primarily with the design and management of public space (i.e. the 'public environment', 'public realm' or 'public domain'), and the way public places are experienced and used. Public space includes the totality of spaces used freely on a day-to-day basis by the general public, such as streets, plazas, parks and public infrastructure. A civic center is a prominent land area within a community that is constructed to be its focal point or center. The notion of civic center has changed by time and still varies city to city. It usually used to contain one or more dominant public buildings, which may also include a government building. But recently, the term "civic center" has been used in reference to an entire central business district of a community or a major shopping center in the middle of a community. In this type of civic center, special attention is paid to the way public structures are grouped and landscaped. In some American cities, a multi-purpose arena is named "Civic Center", for example Columbus Civic Center. Such "Civic Centers" combine venues for sporting events,

theaters, concerts and similar events. Though the parameters & design elements of urban design or planning are too vast & immense in area and volume, one thing is obvious that it is the people or the dwellers or users that are the most essential concern of urban design. In a public space it is the behavior of public and using pattern of the place that determines livability, compatibility of the space and denotes how much effect it leaves upon the user as well as the city dwellers.

### **3.9: Elements of Urban Structure:**

City planners must weave a complex, ever-changing array of elements into a working whole: that is the perennial challenge of city planning. The physical elements of the city can be divided into three categories: networks, buildings, and open spaces. Many alternative arrangements of these components have been tried throughout history, but no ideal city form has ever been agreed upon. Lively debates about the best way to arrange urban anatomies continue to rage, and show no signs of abating.

#### **3.9.1: Networks:**

Every modern city contains an amazing array of pathways to carry flows of people, goods, water, energy, and information. Transportation networks are the largest and most visible of these. Ancient cities relied on streets, most of them quite narrow by modern standards, to carry foot traffic and carts. The modern city contains a complex hierarchy of transportation channels, ranging from ten-lane freeways to sidewalks. During the nineteenth century, rapid urban growth and industrialization caused overcrowding, pollution, and disease in urban areas. After the connection between impure water and disease was established, American and European cities began to install adequate sewer and water systems. Since the late nineteenth century, cities have also been laced with wires and conduits carrying electricity, gas, and communications signals.

#### **3.9.2: Buildings:**

Buildings are the most visible elements of the city, the features that give each city its unique character. Residential structures occupy almost half of all urban land, with the

building types ranging from scattered single-family homes to dense high-rise apartments. Commercial buildings are clustered downtown and at various sub centers, with skyscrapers packed into the central business district and low-rise structures prevailing elsewhere, although tall buildings are becoming more common in the suburbs. Industrial buildings come in many forms ranging from large factory complexes in industrial districts to small workshops.

### 3.9.3: Open Spaces:

Open space is sometimes treated as a leftover, but it contributes greatly to the quality of urban life. "Hard" spaces such as plazas, malls, and courtyards provide settings for public activities of all kinds. "Soft" spaces such as parks, gardens, lawns, and nature preserves provide essential relief from harsh urban conditions and serve as space for recreational activities. These "amenities" increasingly influence which cities will be perceived as desirable places to live.

### 3.9.4: Evolution of Urban Form:

The first true urban settlements appeared around 3,000 B.C. in ancient Mesopotamia, Egypt, and the Indus Valley. Ancient cities displayed both "organic" and "planned" types of urban form. Since the 1950s, city planners have increasingly paid attention to the economics of urban areas. When many American cities experienced fiscal crises during the 1970s, urban financial management assumed even greater importance. Today, planners routinely assess the economic consequences of all major changes in the form of the city. Several basic concepts underlie urban and regional economic analysis. First, cities cannot grow if their residents simply provide services for one another. The city must create products which can be sold to an external purchaser, bringing in money which can be reinvested in new production facilities and raw materials. This "economic base" of production for external markets is crucial. Without it, the economic engine of the city grinds to a halt. Once the economic base is established, an elaborate internal market can evolve. This market includes the production of goods and services for businesses and residents within the city. Obviously, a large part of the city's physical plant is devoted to

facilities for internal transactions: retail stores of all kinds, restaurants, local professional services, and so on.

Modern cities are increasingly engaged in competition for economic resources such as industrial plants, corporate headquarters, high-technology firms, and government facilities. Cities try to lure investment with an array of features: low tax rates, improved transportation and utility infrastructure, cheap land, and skilled labor force. Amenities such as climate, proximity to recreation, parks, elegant architecture, and cultural activities influence the location decisions of businesses and individuals. Many older cities have difficulty surviving in this new economic game. Abandoned by traditional industries, they're now trying to create a new economic base involving growth sectors such as high technology.

#### 3.9.5: Good City Form:

A most useful guide in this enterprise is Kevin Lynch's *A Theory of Good City Form* (Cambridge, MA, MIT Press, 1981). Lynch offers five basic dimensions of city performance: vitality, sense, fit, access, and control. To these he adds two "metacriteria," efficiency and justice. For Lynch, a vital city successfully fulfills the biological needs of its inhabitants, and provides a safe environment for their activities. A sensible city is organized so that its residents can perceive and understand the city's form and function. A city with good fit provides the buildings, spaces, and networks required for its residents to pursue their projects successfully. An accessible city allows people of all ages and background to gain the activities, resources, services, and information that they need. A city with good control is arranged so that its citizens have a say in the management of the spaces in which they work and reside.

#### 3.9.6: Town Squares:

A town square is an open public space<sup>[2]</sup> commonly found in the heart of a traditional town used for community gatherings. Other names for town square are civic center, city square, urban square, market square, public square, and town green. Most town squares are hardscapes suitable for open markets, music concerts, political rallies, and other

events that require firm ground. Being centrally located, town squares are usually surrounded by small shops such as bakeries, meat markets, cheese stores, and clothing stores. At their center is often a fountain, well, monument, or statue.

### 3.10: Street Vendors:

According to the Dhaka City Corporation there are around 90,000 street vendors in the city. They operate mainly in Motijheel, Baitul Mukarram, Gulistan, Shahbagh and New Market Areas. Street vending is considered an illegal trade and the street vendors face constant harassment from the authorities. The vendors have to pay a sizeable part of their income as bribes in order to keep plying their trade. According to one report,<sup>2</sup> vendors in the New Market area pay Tk 2,00,000 a month to a gang that shares the collection with the law enforcement agency. Each vendor in this area pays around Tk 200 a month to run their business. In other areas such as Baitul Mukarram, GPO and Purana Paltan vendors pay the police Tk 5 daily to avoid harassment. According to the Bangladeshi delegates who had attended the Asian Regional Workshop on Street Vendors held on February 10-12, 2002 in Bodh Gaya, India, the street vendors of Bangladesh were more vulnerable than those in the neighbouring countries due to poverty, lack of space for vending and lack of awareness about their rights. The positive aspect is that there is a fair level of unionization among them. There are several unions working among street vendors. The most important is the Bangladesh Hawkers' Federation as it is linked to the trade union federation of the ruling Bangladesh National Party. The federation has been negotiating with the government for a policy on street vendors. The first step towards this direction is of forging alliances with other trade unions of street vendors so that a national alliance emerges. This can in turn pressurize the government to take up the issue of a national policy for street vendors. However till such a consensus emerges, the street vendors in Bangladesh will continue to be regarded as illegal traders and will continue to be harassed by the authorities. Political parties in Bangladesh continue to render lip service to street vendors, without doing anything concrete to improve their insecurity. For example, a news item in a popular daily in Dhaka newspaper had the following headline: "Huda assures hawkers to protect their rights". The report noted that while addressing a rally organised by Bangladesh Hawkers'



Federation at Dhaka, barrister Nazmul Huda, communications minister, assured hawkers that he would provide them all support to protect their rights and continue their profession in the city. He added that the government is „pledge bound“ to protect the human rights of the citizens. After these statements, the minister launched on an attack on the opposition saying that they wanted to disrupt the development efforts of the ruling party and the people (hawkers) should ensure that these people are not voted into power. It hence appears that the hawkers were brought there mainly to support government policies and not for any concrete legal benefits. This approach is not unique to Bangladesh alone. In most countries where the number of street vendors is large, the ruling parties mobilise them for their political purposes. Due to their insecurity, street vendors tend to flock to these parties for protection. These parties use street vendors for their political gains, though the vendors themselves do not get any tangible benefits from this alliance.

### 3.11: Food Vendors:

Food vendors are an important feature in the cities of Bangladesh. A paper by Qazi Saif Uddin Ahmad, social welfare and cultural officer of Dhaka City Corporation provides interesting information on these vendors. He notes that the street food industry provides employment to women and migrants with low educational background. The prices of street food are low and the urban poor benefit from this. Day labourers, rickshaw pullers, migrants from rural areas and the homeless depend on street food vendors for their nutrition. However, because of poor hygiene people often fall ill after eating street food. They are mainly victims of water borne diseases. Ahmad feels that there must be cooperation between the municipalities and the police for proper management of street food vending. He suggests that municipalities can formulate rules and regulations for the management of street food vending, but these need to be enforced by the police. Hence the need for cooperation between the two authorities. How far this is feasible is anyone’s guess. It is the experience in India that such rules only help increase rent-seeking among corrupt officials. They may not help in improving hygiene. A study conducted by the Intermediate Technology Development Group<sup>6</sup> on food vendors in Bangladesh and Sri

Lanka notes that as street vendors are in the informal sector, there is no systematic documentation of the number of street food vendors.

### 3.12: Elevated Rail (monorail):

The new Urbanaut Monorail Technology is an environmentally friendly, non-polluting transportation system that can relieve today's congested and unhealthy transportation environments. The Urbanaut vehicles run on top of a narrow guide way that is approximately one-half the width of the vehicle. They are stabilized and locked to the guide way by a uniquely shaped center guide rail on top of the runway; derailment is virtually impossible. The center guide rail is the primary guidance, and has many functions. It carries concealed power rails and electronic conduits for operation of vehicle and is also used for switching of the vehicle at all speeds.

For elevated guide ways, a standard, inverted U-Shaped beam way is applied that can bridge long spans between foundations. The cross section is engineered so the beam's inside open space is usable for many functions. The dynamic forces acting laterally and longitudinally on the Urbanaut vehicle interact very close to its low center of gravity, which also coincides with the shear center of the beam way. Such innovative concepts create minimum rotation and moments on the vehicle bogie and the guide way and simplify, to a large degree, the overall monorail system, resulting in a much lighter and simpler vehicle, considerably less cost to install, manufacture and operate and maintain. At surface, on a bridge deck or in a tunnel, only the top slab of the guide way is needed. In contrast to the straddle type monorail systems, which envelope and are dependent on a large massive beam, the Urbanaut is considerably smaller and lighter. Its smaller guide way is half or less the width and size of conventional transit and existing maglev systems, a major cost saving in comparison. Since the vehicle is stabilized by two drive wheels the center rail can be removed in enclosed areas and maintenance facilities and the vehicles then moved at will. This feature further effects the costs positively.

The Urbanaut is not dependent on a massive beam way as used in the straddle-type monorail systems, which use numerous wheels along the sides of the beam way to

stabilize the very tall vehicle. Urbanaut is designed and engineered so that dynamic forces acting laterally and longitudinally on the vehicle interact very close to its low center of gravity (COG).

### 3.13: Mixed-use development:

It is the practice of allowing more than one type of use in a building or set of buildings. In planning zone terms, this can mean some combination of residential, commercial, industrial, office, institutional, or other land uses.

Today's thoughtfully designed and visually striking mixed-use buildings are symbols of modernization and regeneration. Unlike traditional single-use office blocks which draw in commuters during the day and then close at night, these people-centric developments bring a vibrant 24-hr lifestyle to sometimes run-down areas of the city.

Depending on its size a mixed-use building can incorporate offices, flats, retail malls, restaurants, cinemas, health clubs, plazas, galleries and gardens. Designed to complement the urban fabric and reflect the aspirations of the local community, they allow people to live, work and enjoy leisure activities at a single convenient location. Mixed-use allows developers to tailor the blend of elements in order to make the buildings more economically viable – on the ground floor, for example, shops may provide a better return on investment than offices. Importantly, planners favor them for the social benefits they can provide, such as the potential to include affordable housing in the residential mix.

Usually built on brown field sites, the buildings require complex infrastructure, including transport links, car parking and delivery access. Mixed-use presents many technical challenges: for example, the position of the load bearing structures has to change from level to level, going from the rigid grid of the underground car park to column-free retail space, then to residential room layout. Fire engineering is another key element in creating vibrant, attractive open spaces.

# CHAPTER 04: CONTEXTUAL ANALYSIS

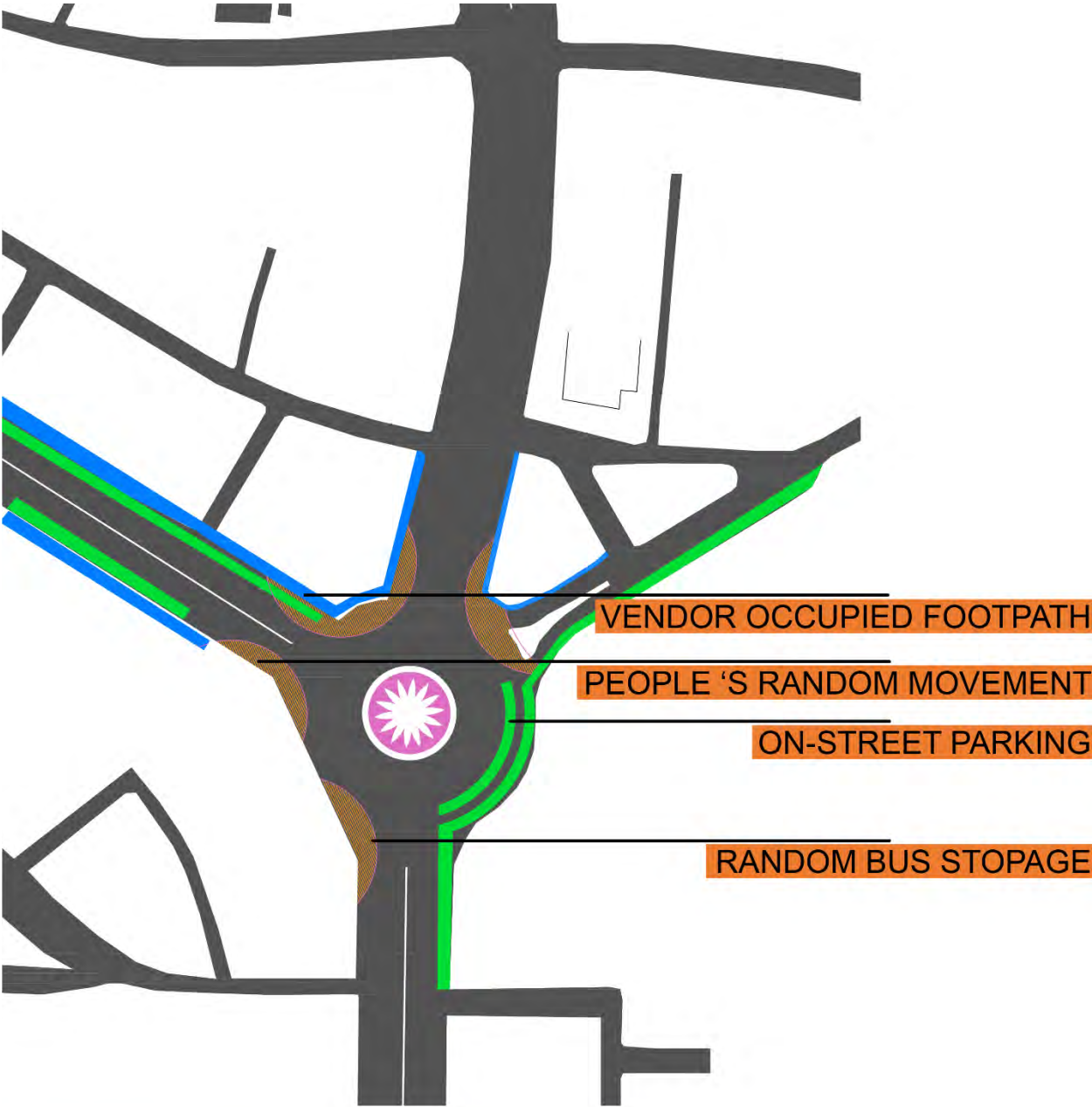
## CHAPTER 04: CONTEXTUAL ANALYSIS

"Blended utilize urban complex is built up when only two distinctive urban capacities are joined (for instance shopping offices with work offices in workplaces), however significance of multi usefulness develops when one prevails with regards to consolidating a substantial number of urban capacities inside one physical structure." Victor (Grue, 1973, survival of urban areas)

The idea of blended utilize can be followed back to the established Greek time frame when shippers led their exchange at the Agoras. However, these were open commercial centers and the ordinary blend utilize that we know today took its root in Medieval Europe when town squares turned into the center of any significant settlement. These town squares turned into the exchanging places for organization of traders where various bars and cabins would likewise mushroom to give hotel and pleasantries to these individuals. Through advancement these exchanging focuses have developed into the cutting edge blended utilize focuses. These focuses are normally situated at the downtown area or the C.B.D s, far from neighborhood.

In Bangladesh, ten to fifteen years back there was no large scale shopping centers except for the New Market and adjoining Gausia. But these centers are right in the middle of residential areas. The reason is people tend to do shopping in and around their residential areas and most of the shoppers commute by rickshaw. So we see commercial complexes to develop within residential areas. When residential apartments are built in prime locations they compete with commercial development since the economic return from such schemes are greater than that from housing schemes. As shops run successfully when located near the street, the first few floors are developed as shopping spaces while upper floors are left for residential or office spaces thus evolved the mixed use centers, like Eastern plaza and Shanti nagar twin tower.

If we look at the urban use pattern of Chawk bazaar area at the beginning of the century we will see that the commerce and trading areas were consisted of buildings with shops at street level and the upper two floors were residences. So we see the concept of mixed use here , the only difference is that these would spread horizontally as there was a limitation to vertical circulation while their modern counterpart would rise to higher heights because of efficient and mass vertical circulation (ex. Lifts, escalators. etc.)



**SHAPLA CHATTAR**

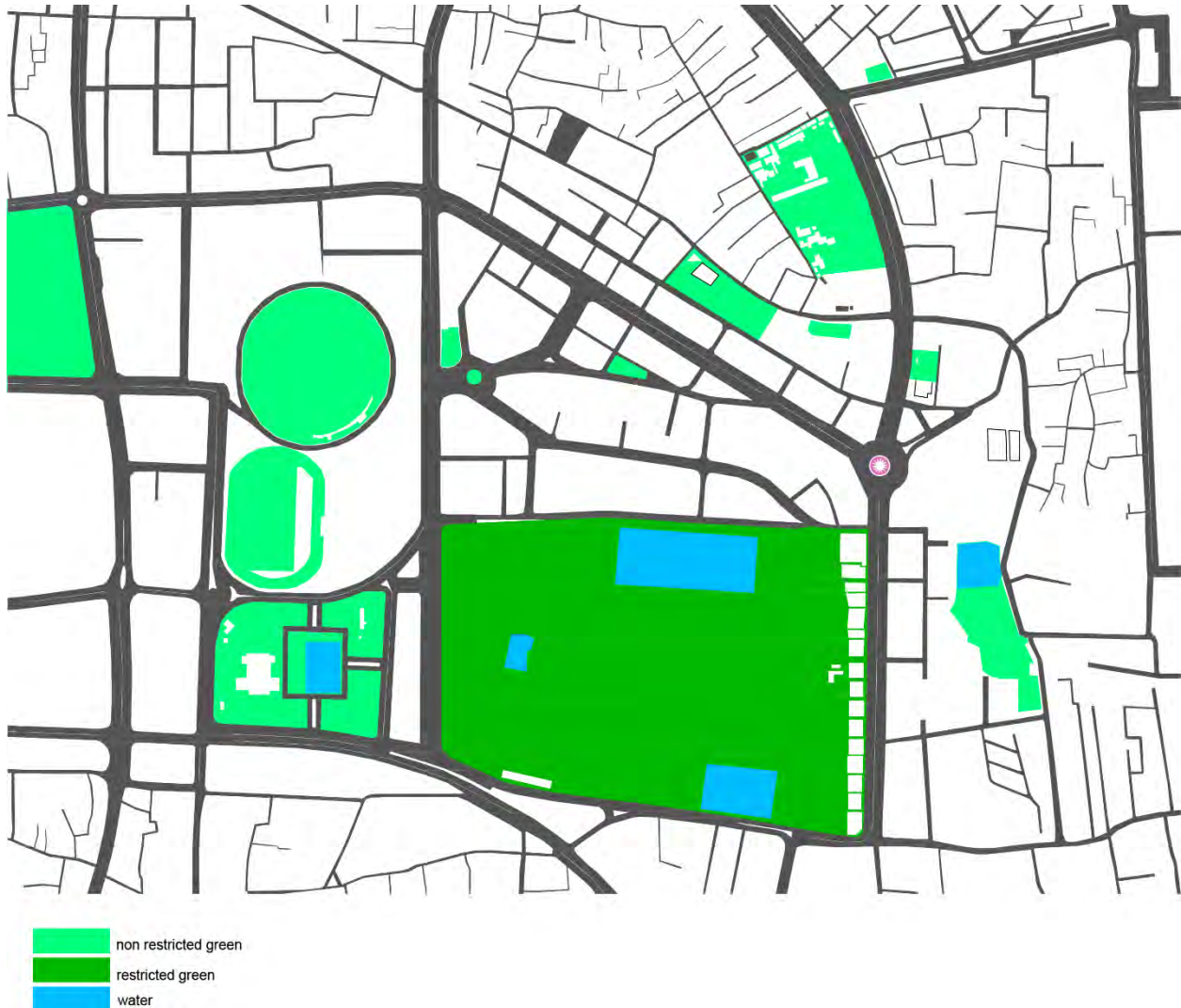
Motijhel is one of the major CBD area in our country. Unlike other CBD areas, motijhel do not have any co existing residential zone. This makes this part of this city so busy and rough. People who work here get exhausted. There is no recreational space in this huge area. No one can take a short breath for reenergize himself. Where people of most developing countries, build recreational spaces and working places together.

In any major nodal point of any city, traffic is one of the big problems. Motijhel is one of the busiest transport hubs in Dhaka city. People from all over the city come here and meets. Most of the banks, major corporate head office, insurance office, and shops are situated here. Our national Mosque Baitul mukarram also situated here. The human traffic is huge. To serve this large amount of consumer many street shops, food stall, vendors sits here and there. They block the roads, take the footpaths. There is no place for walking. A place must be designed for hawkers. Hawkers market is one of the solutions to control chaos.

Everything you see here is going through a haphazard manner. There is no system or any kind of urban planning applied. Thousand of cars, parks beside the main road. It makes the roads so narrow, vehicular movement become close to impossible. Buildings need to provide adequate car parking. Big commercial complexes should hold a car parking arrangement for the nearby area. Car parking tower or basement car parking is the only option in a CBD area.

The owner of commercial building never cares about these problems. They don't make their buildings according to the urban needs. The government also neglects these issues. A mega city like Dhaka can never run efficiently, if there is no proper urban planning. Every building, every structure should response to the urban needs.

Motijhel area lacks green spaces. Visually almost no green line is out there. People need to have more greenery for recreation. It helps to maintain the balance. Concrete junks affect the human mind, a breathing space is essential.



Urban life demands various kind of activity. People used to go to fitness centers. That needs to be close with the working place. So as shopping centers, convention centers, health club, restaurants etc. Art gallery, installation exhibitions, Cineplex, an auditorium also comes with it. All of this program must be situated side by side with the commercial zone.



So there is lot of function goes at a time in a CBD area. A commercial complex or mixed use building needs to provide all the urban services. Hold different kinds of function in one complex. These are all interconnecting and very hard to combine at a same time. That's the biggest challenge of designing any mixed used project in an commercial area. The vision is to create a flagship project, which will demonstrate the economic and social value of building high density structure, at major transport nodes



Figure 7 source: author

# Chapter 5: Case Study

## 5.1 Local Case Study

### 5.1.1 Karwan bazar

## 5.2 International Case Study

### 5.2.1 La Rambla Street

## Chapter 5: Case Study

### 5.1: LOCAL CASE STUDY

#### 5.1.1: KARWAN BAZAR:

Kawran bazaar a wholesale market place near the farm gate area of Dhaka city. Kawran sing, a marwari merchant originally established it in the late eighteenth century. In the late nineteenth century, the place was developed as a market for selling pottery, crockery and other household products. These products were earlier sold at a market near the ambar shah mosque by the side of the rail line that passed across the city. Later, the market grew in size and was shifted to a neighbouring large and open area, which was at some distance from the rail line. The market got a new name kawran bazaar. On the west of it passes an important street of the city, the kazi nazrul islam avenue. Offices of many government agencies, autonomous bodies and big companies are now located in the area surrounding the market. Pan pacific hotel sonargaon, a five-star hotel is located at one end of the market.

There are hundreds of small temporary shops in and around the market. The market has separate blocks for wholesale trade in fish, vegetables and rice. There is also a permanent shade for rows of shops that sell grocery items and toiletries. Fish, vegetable and other products are brought to the market from all over Bangladesh. Some goods are imported from abroad. Every night hundreds of trucks bring goods to the various shops of the market. Indigenous means of transport like the vans or pushcarts also carry goods to the shops or from them to purchasers' addresses. Traders of this market export vegetables, fish and other agricultural goods not only to different medium and small markets of the dhaka city or of the suburbs but also to foreign markets, especially in the middle-east. Most shops in the market are of the sole proprietorship type, while some are partnerships. Every day's transaction volume of the market is almost 50 million taka.

- Density comparison between three major CBDs

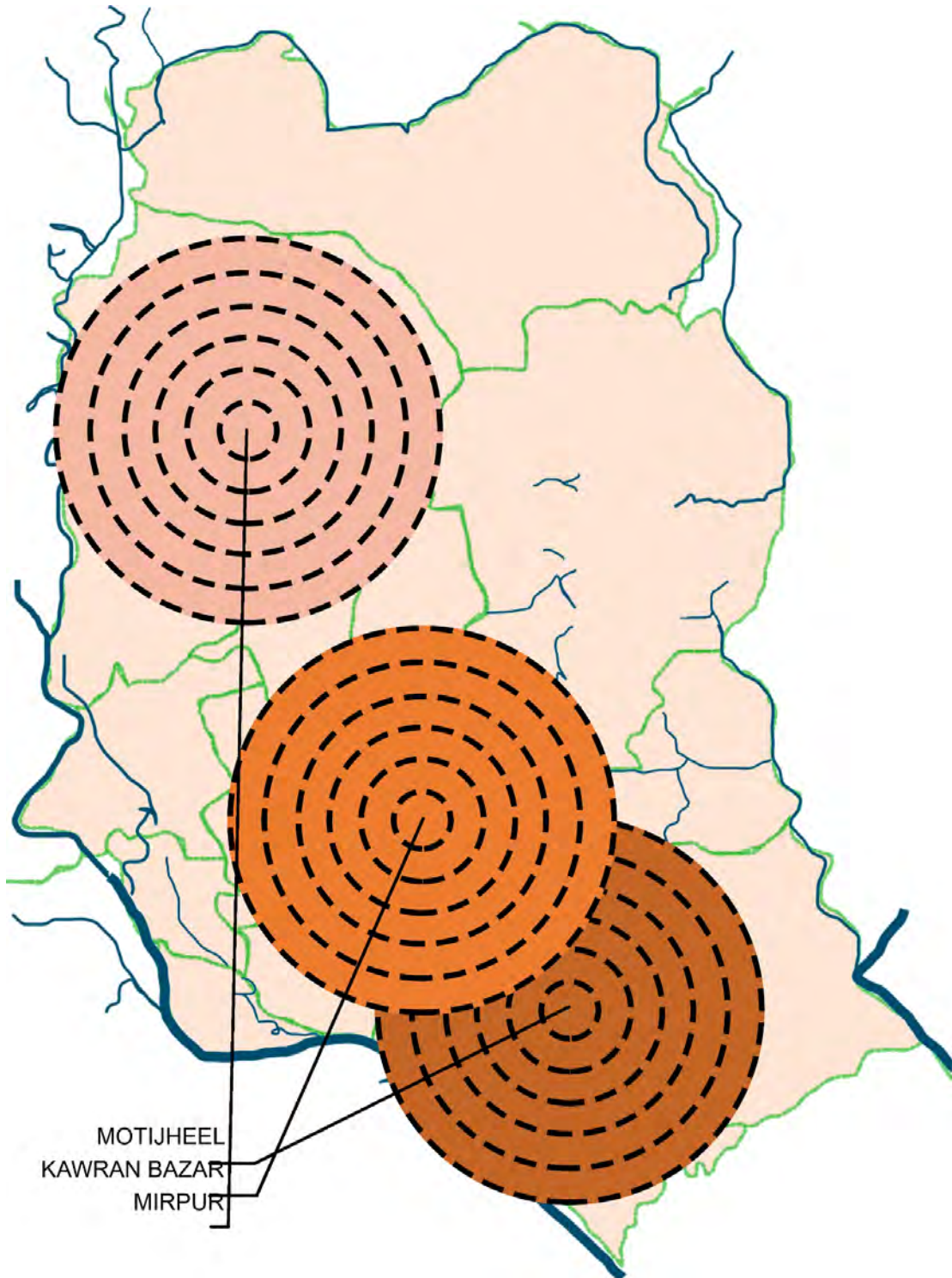


Figure 8 source: author

In case of CBD motijheel compared to CBD kawran bazar and CBD mirpur the density profile shows that within the 500 meter distance around the centre of the CBD, the density is lowest amounted to 483.33 person/hectare (calculated from GBL 2004). Then it tends to increase gradually outward up to 2000 meter from the centre. Suddenly the density tends to fall within next 500 meter distance. This density variation in various segments is the clear reflection of habitation pattern, business and commercial land uses, offices uses etc. But the central part of the motijheel area, the density is the lowest. Various reasons can be attributed or attached behind this lowest density. It can be mentioned that within 500 meter from the centre of the CBD there is no residential use. People come to CBD for various working purposes and they go back to their own residence after finishing their work mostly at evening hour. Beyond 500 meter distance from centre of the CBD up to 2000 meter the density tends to increase. The main reason behind this is that the longer the distance from CBD, the higher is the residential and mixed land uses resulting higher population density. Immediately after 2000m distance there is a little fall in density. The reason behind this is the increase in some uses such as education, water bodies, restricted area and decrease in other uses planned residential. Within next 500 meter distance the population density again tends to increase.

## DENSITY MAP OF DHAKA

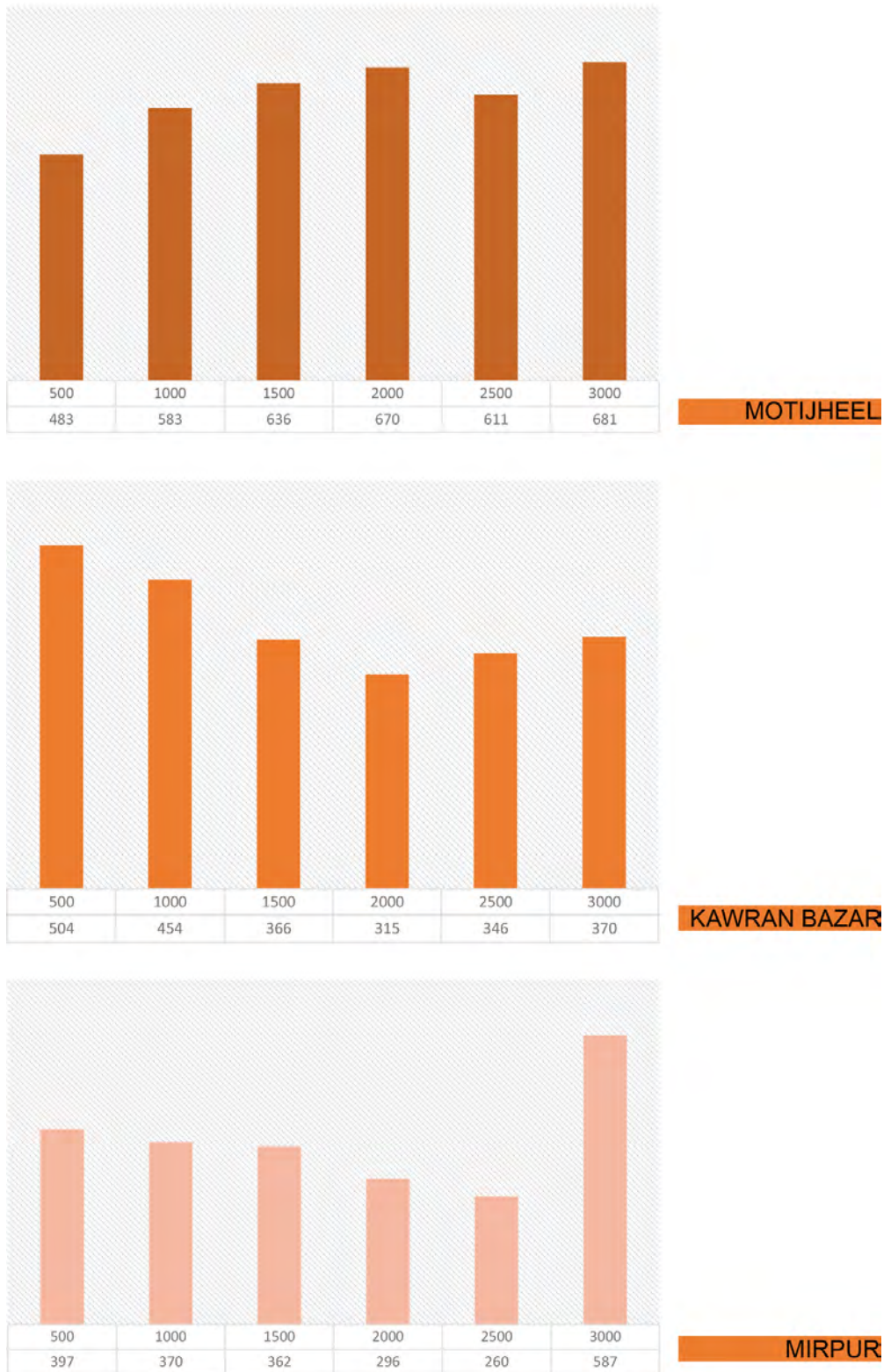


Figure 9 Imperial Journal of Interdisciplinary Research (IJIR) Vol-2, Issue-10, 2016

## 5.2: INTERNATIONAL CASE STUDY

### 5.2.1: LA RAMBLA STREET:

La Rambla Street, also called Las Ramblas, is the most famous walking street in Barcelona. La Rambla goes from Plaça de Catalunya to the Port Vell harbour of Barcelona and borders the Raval and the Gothic areas of the old city. Las Ramblas is a popular place to stay for visitors to Barcelona because of its central location and lively atmosphere. The street La Rambla has around 80 to 100 million pedestrians a year and many visitors stay in hotels on Las Ramblas.

The Spanish poet and friend of Salvador Dali, Federico García Lorca, once said, 'It is only street in the world, which I wish would never end'. Lorca said that in the 1930ies and since then La Rambla has changed a lot. I think he would still love it though.

Today La Rambla is crowded and has many tourist shops. But La Rambla is still special and you cannot really say that you have visited Barcelona. On a sunny day La Rambla often looks like sea of people, when you gaze at it from the top at Plaza Catalunya, but there is always room for one or two more and we must never forget that people make the Rambla special, so don't miss a stroll down La Rambla to savour the atmosphere of this famous Barcelona walkway.



Figure 10 source:www.tes.com

# Chapter 6: Programme and Development

6.1 Existing Programmes In The Site

6.2 Requirements Of Surrounding Area

6.3 Proposed Programs

6.3.1 Office Spaces

6.3.2 Shopping

6.3.3 Hawkers Market

6.3.4 Convention Center

6.3.5 Recreational Facilities

- Cbd Oriented Facilities
- City Oriented Facilities



## **CHAPTER 06: PROGRAMME AND DEVELOPMENT**

### **6.1: EXISTING PROGRAMMES IN THE SITE:**

- office and commercial spaces
- Urban resting place
- Car parking and Car repairing workshop
- Public transport station
- WASA water pump station
- Small slum of 30 families
- Street Vendors
- Restaurants and street food stall
- Garbage collectors shop
- Store house
- Private residence
- Police box

### **6.2: REQUIREMENTS OF SURROUNDING AREA:**

- Recreational activity
- Public gathering spaces
- Public transport station
- Hawkers market
- Park and visual green
- Proper car parking

### **6.3: PROPOSED PROGRAMS:**

### 6.3.1: OFFICE SPACES:

Fully rentable office towers is important as a part of CBD zone. Offices are organized into two zones:

- Public oriented offices: Travel Agency, Banks, Customer Care, etc.
- Client oriented offices: Specialized offices, Head-quarters, etc

### 6.3.2: SHOPPING:

Building up the CBD region, shopping region is basic. The different merchandise will guarantee a social and monetary blend of individuals. There will be 300 shops. Distributing 15,000 sft for these shops.size of the shops will shift as substantial, medium and little.



Figure 11 source: author

### 6.3.3: HAWKERS MARKET:

There are so many street vendors on shapla chottor site. They seats haphazardly and make chaos. There should be defined place for them. They will pay rents for it. Government gets revenue from here. People also come to this fixed places for street shopping.

### 6.3.4: CONVENTION CENTER:

To serve the CBD as well as the city, this mixed-use rentable program will ensure a lot of activity. It can serve as business conference centre, convention hall, exhibition hall and community centre.

### 6.3.5: RECREATIONAL FACILITIES:

The whole city individuals require the recreational offices. The CBD region is generally so concerned. So there must be a resting place. They could enjoy a reprieve and relax. Additionally enhance the clients gatherings and make dynamic quality.

Recreational Facilities are grouped in 2 zones:

#### CBD ORIENTED FACILITIES:

- Restaurants
- Fitness Centre
- Library
- Games Centre
- Indoor Games
- Observatory room

#### CITY ORIENTED FACILITIES:

- Amphitheatre
- Exhibition Centers

- Street Food Facilities
- Rstaurant
- Public toilet
- Bus stop
- Pedestrian facilities

# Chapter 7: Conceptual Stage and Design Development

- 7.1 Introduction
- 7.2 Analysis And Decisions
- 7.3 Concept
- 7.4 Design Development
  - 7.4.1 Public Amenities
  - 7.4.2 Open Market
  - 7.4.3 Roadscape
- 7.5 Master Plan
- 7.6 Architectural Drawings (Sections)
- 7.7 Visualizations

# **CHAPTER 7: CONCEPTUAL STAGE AND DESIGN DEVELOPMENT**

## **7.1 INTRODUCTION**

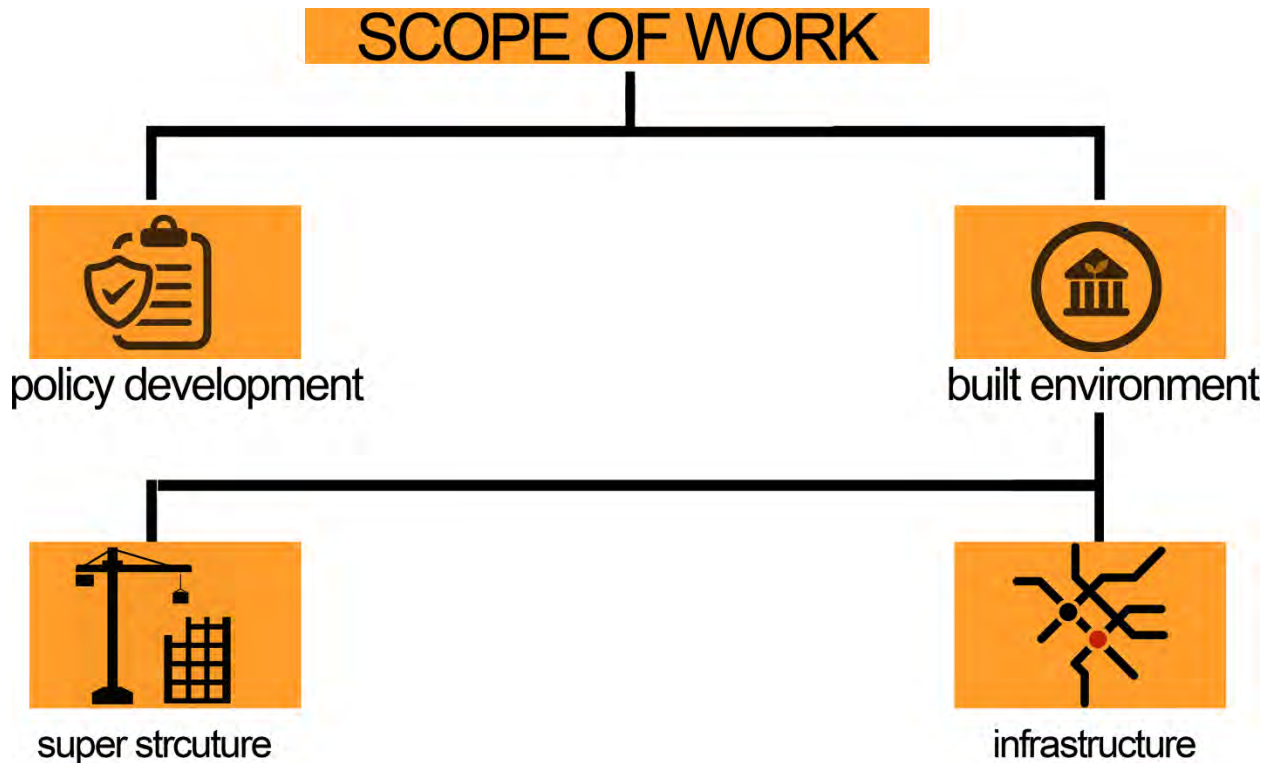
Like many other cities in the world, Dhaka, the Capital of Bangladesh is also the outcome of spontaneous rapid growth. As the growth of population in Dhaka is taking place at an exceptionally rapid rate, it has become one of the most populous Mega Cities in the world.

Dhaka City has undergone radical changes in its physical form, not only in its vast territorial expansion, but also through internal physical transformations over the last decades. These have created entirely new kinds of urban fabric. In the process of urbanization, the physical characteristics of Dhaka City are gradually changing as plots and open spaces have been transformed into building areas, open squares into car parks, low land and water bodies into reclaimed built-up lands, etc. Such unplanned urban fabric creates urban problems in CBD (central business district) zones.

However, Open transparent spaces are necessary elements in Dhaka city with different sort of functional and leisure activities for the dwellers. So, it requires to rethink, review and improve the quality of the physical urban environment through some collective approaches.

## **7.2 ANALYSIS AND DECISIONS**

In Master Plan of Dhaka City 1959 , Motijheel was demarcated as a commercial area but not a CBD. After the independence of Bangladesh in 1971, Motijheel grew as a dynamic administrative and commercial area and served the purpose of CBD for the capital. Around 64% of the total lands in Motijheel are used solely for commercial activities, whereas 13.78% are designated as of mixed land use.



### **Shapla chattar, balaka chattar and dilkhusha chattar**

shapla chattar, balaka chattar and dilkhusha chattar the entire motijheel c/a is served by three minor collector roads and some access roads. The average width of the carriageway of these minor collector roads is approximately 46 feet but with the parked vehicle it is 30' location of bus stoppages which are illustrated here are mostly illegal with a temporary set up and without any supporting infrastructure like a planned bus stop according to Bangladesh national building code 25, commercial buildings that are six storied or higher, must have one parking space for each 200 square meter floor area the available capacity of the designated parking areas in this area is 172. However, the average parking accumulation is 468.

Motijheel c/a has no further opportunity to expand its physical boundary but it is noteworthy that around 8 percent of lands still exist as vacant or unconstructed in this area. 56.2 percent of the buildings constructed in this area are below six stories, 30 percent are within 7 to 10 stories and only 13.8 percent are above 10 stories scope for vertical expansion which will make a proper utilization of this highly valued land.

Motijheel experiences a visible change at night time. The whole area becomes lifeless being empty while other parts of the city undergoes tremendous busy schedule. Actually the night life of motijheel is so solid and dark because most of the commercial building completes its working hour within evening and people starts to leave the area at that moment. So this area needs to get some transparency to cope with the other parts of the city and work as a proper CBD.



**7.3 CONCEPT**

From the earliest starting point of our freedom, motijheel business region has developed as the principle focal business area (CBD) of Dhaka city in view of its fast pace of business improvement. In any case, the procedure of advancement and development here took after an unconstrained however spontaneous way. As an outcome, this CBD is ceaselessly testing three noteworthy urban issues: clog, tightening and straightforwardness - which are regularly considered as elements that require urban recovery. This proposal basically centers around the straightforwardness issue alongside another two issues. Here the word straightforwardness is utilized to depict the strong – void circumstance that used to occur in time premise in motijheel relying upon the work routine. This specific CBD begins to work effectively from the earliest starting point of the



day yet gets the chance to close down soon with the end hour of workplaces. This is the means by which it starts to make an enormous void where a next to no vehicular development and human movement is found at that hour. Along these lines, fundamentally the point of this proposal is to join some vital capacities and projects here and reevaluate the building-street relationship of this CBD too to make it energetic and dynamic all the while during the evening excessively like other CBD, for example, kawran bazar.

ANALYSIS	DESIGN DECISION
Lack of green	Introducing green horizontally and vertically
Haphazard vehicular movement	Bus stand and passenger waiting
Parking on road	Parking facility public and private
Uncomfortable office space	Properly designed office
No space for pedestrian	Designing walkways
Haphazard food stall on footpath	Food court
Lack of urban facilities for the residential neighborhood	Open market, gym , library, multipurpose hall
Lack of visual connection with functions and people	Creating underground connection, visual connection towards the whole area

Figure 12 source: author

## 7.4 DESIGN DEVELOPMENT:

Actually the whole design development is described in three parts here.

- Public amenities
- Open market
- Roadscape



Figure 13 source: author

### 7.4.1: PUBLIC AMENITIES:

Public amenities are resources, conveniences, facilities or benefits continuously offered to the general public for their use and/or enjoyment, with or without charge (e.g., restrooms, information displays, public telephones, rain shelters, drinking fountains, etc.)



- **Relationship between building and road:**

The primary objective in designing sidewalks in the district is to provide a continuous system of safe, accessible pathways for pedestrians on both sides of all streets.

**Frontage Zone**

The Frontage Zone is the area between the Pedestrian Zone and the street-wall. In locations where buildings are adjacent to the sidewalk, the Frontage Zone provides a buffer for pedestrians from opening doors and architectural elements. The Frontage Zone is the space for sidewalk cafes, store entrances, retail displays or landscaping, and it is important that these elements do not infringe upon the Pedestrian Zone.

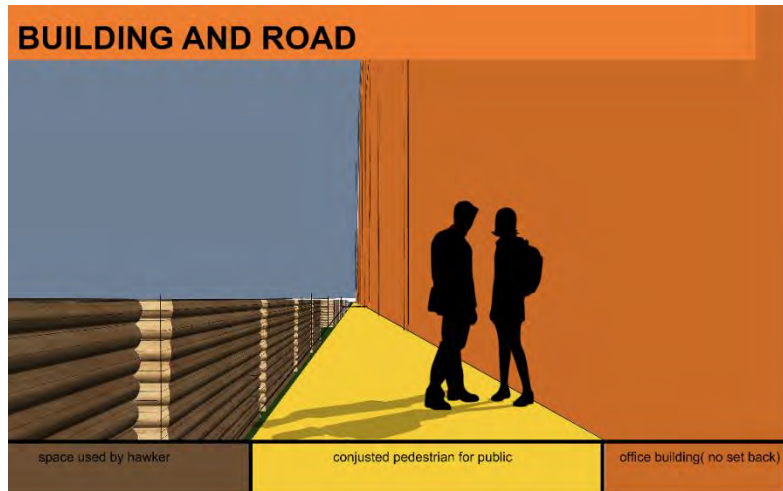


Figure 14 source: author

**Street Wall**

To maintain a consistent street wall, avoid large gaps between buildings, unless that is used for outdoor amenity space, such as a plaza or forecourt.

**Pedestrian**

The Pedestrian Zone is the area of the sidewalk corridor that is specifically reserved for pedestrian travel. It should be well-lit and functional in all weather conditions. This zone must be free of any physical obstructions to allow for unfettered pedestrian movement. Street furniture, plantings, outdoor seating, surface utilities, and other elements belonging to the Frontage Zone or Greenscape/Furnishing Zone should not protrude into the Pedestrian Zone.

### 7.4.2: OPEN MARKET:

The term open market is used generally to refer to an economic situation close to free trade. here, to make the area active at night time a open market is proposed to be built for the vendors and the some shop owners.specially all the daily necessary items will be sold here.



TARGET PEOPLE AND TARGET GOODS

- **Market and street relationship:**

In motijheel, the continuous building facade and boundary makes the area more solid. It destroys the appeal of the public places and ruins people's interest to visit there. So to make the place transparent, a void space is needed to attract the people. And eventually to break the monotonous facade, an underground market is proposed for a healthy and comfortable public experience.

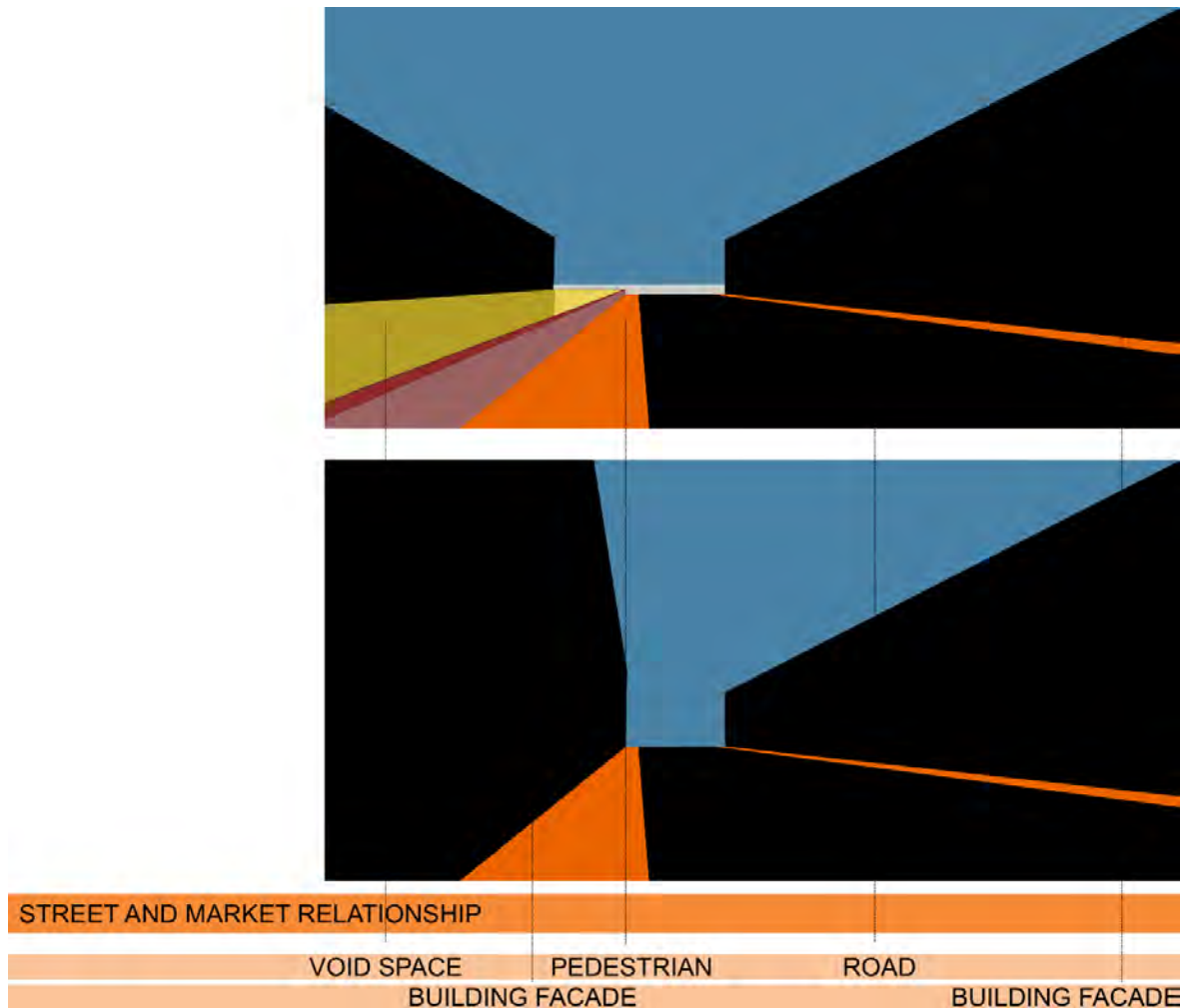
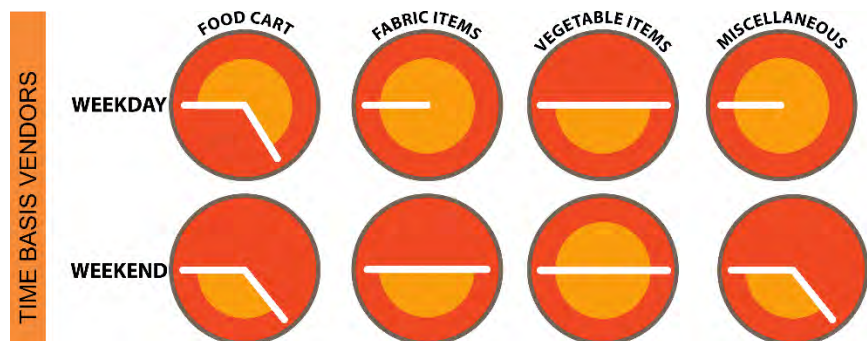
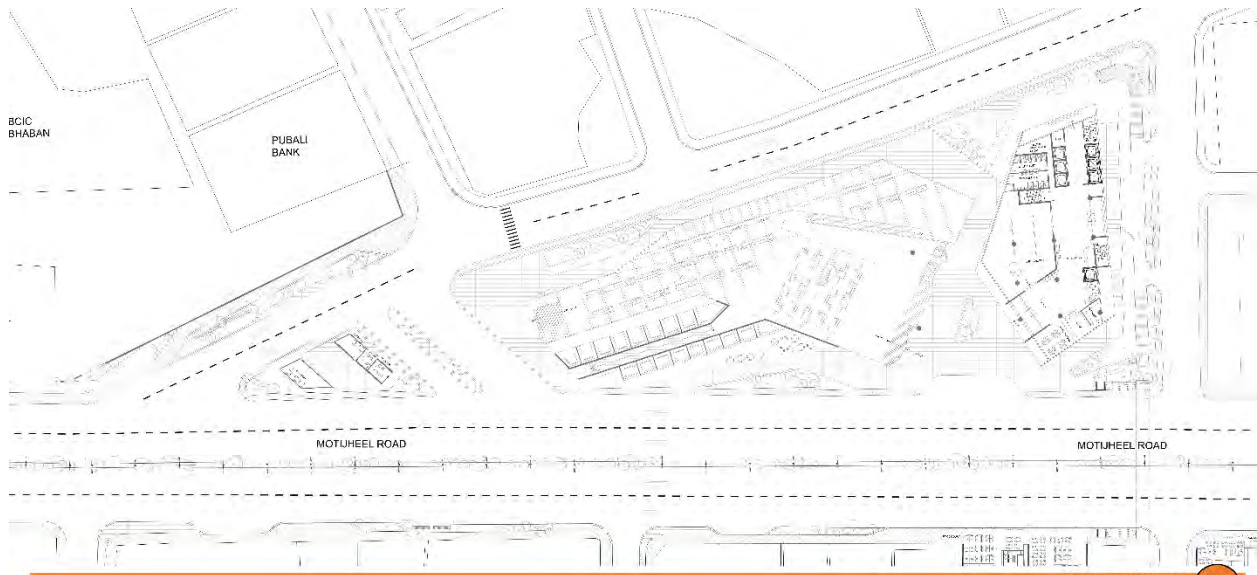


Figure 15 source: author



- **Open Market's Plan:**



- **Open Market's Section:**

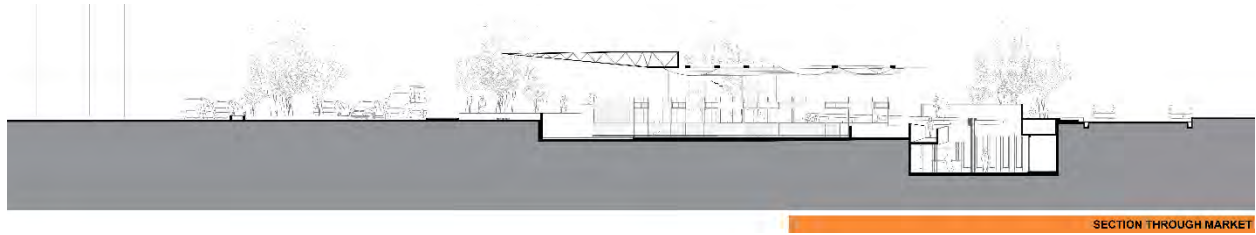


Figure 16 source: author

### 7.4.3: ROADScape:

The recent condition of the street and pedestrian is very messy and not walkable. This situation is created through the self oriented and developed urban fabric. specially in motijheel building form denies all the urban issues and comfort zone for public that is supposed to be provided in a cbd. so to rethink the streetscape scenerio the massing of the building can be designed in a way so that it gives an extra ordinary comfortable experience to the community.

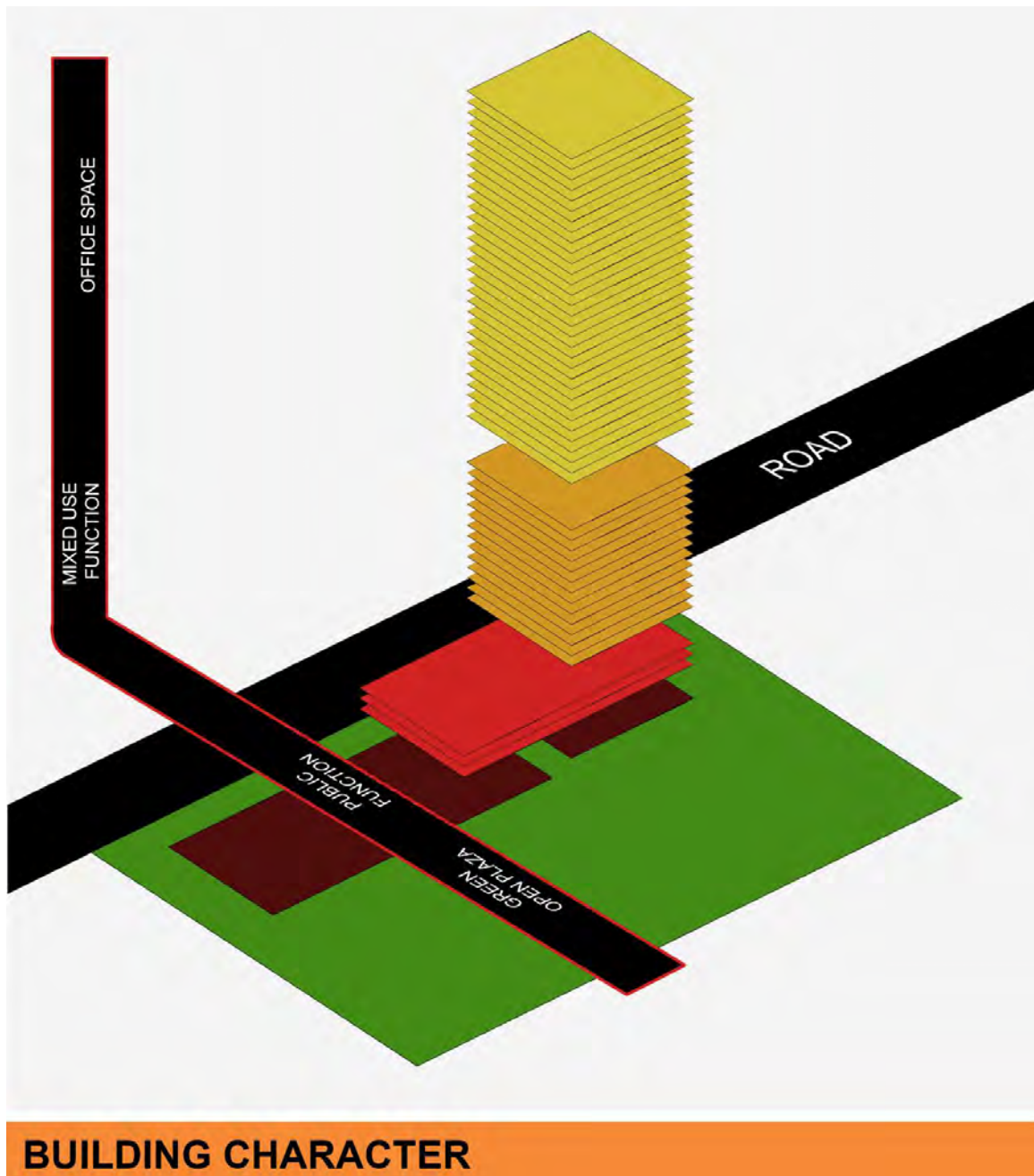
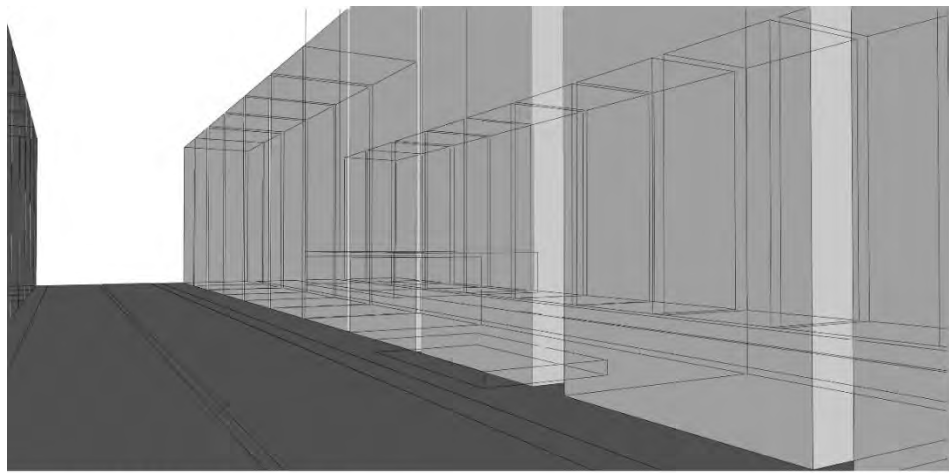
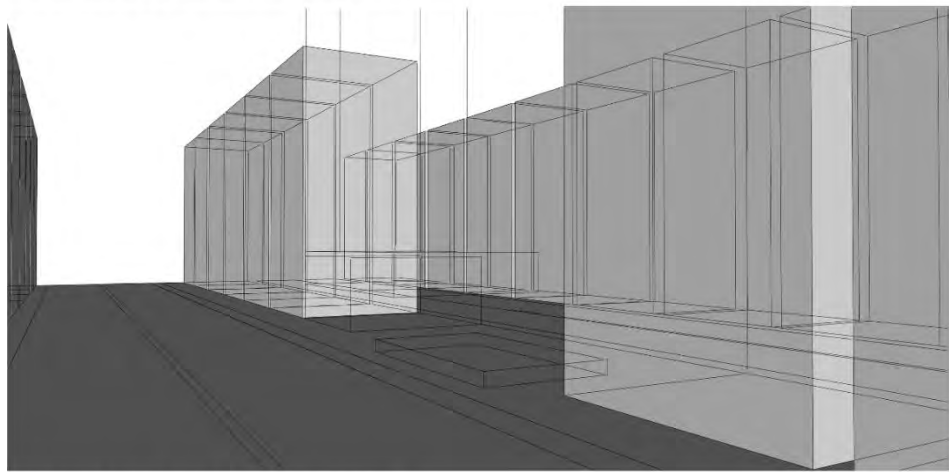


Figure 17 source: author

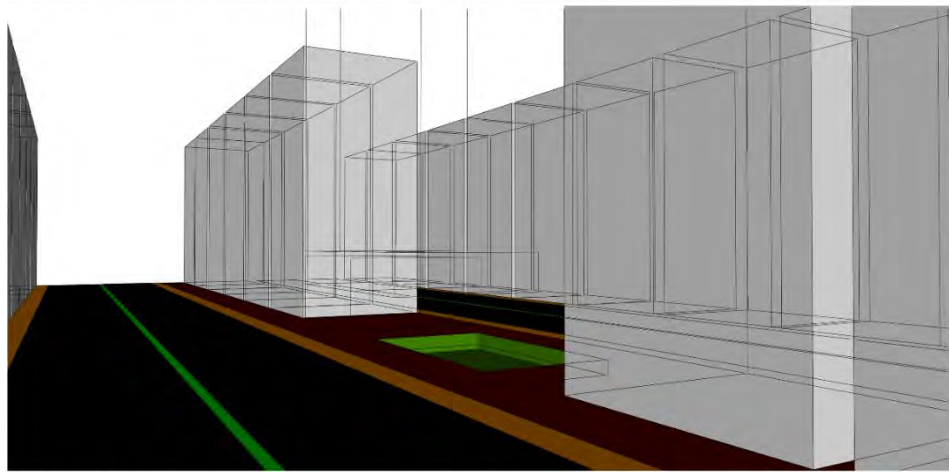
- **Mass development :**



**CONGESTED BUILDING BLOCK**



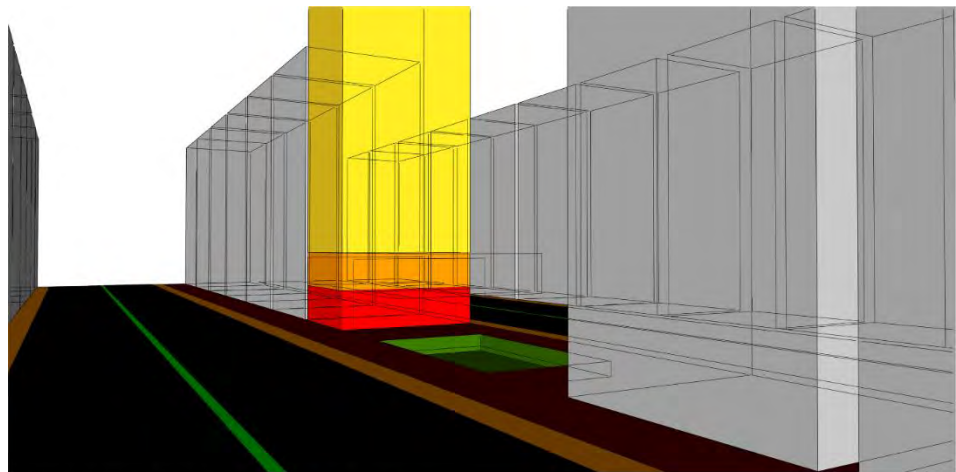
**PREPARING FOR REPLACEMENT**



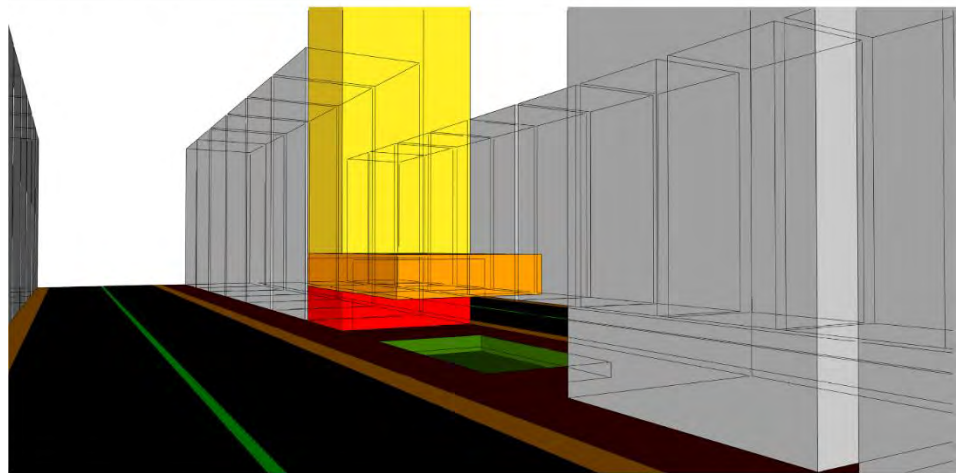
**SUNKEN SPACE TO REDUCE VISUAL OBSTACLE**

*Figure 18 source: author*

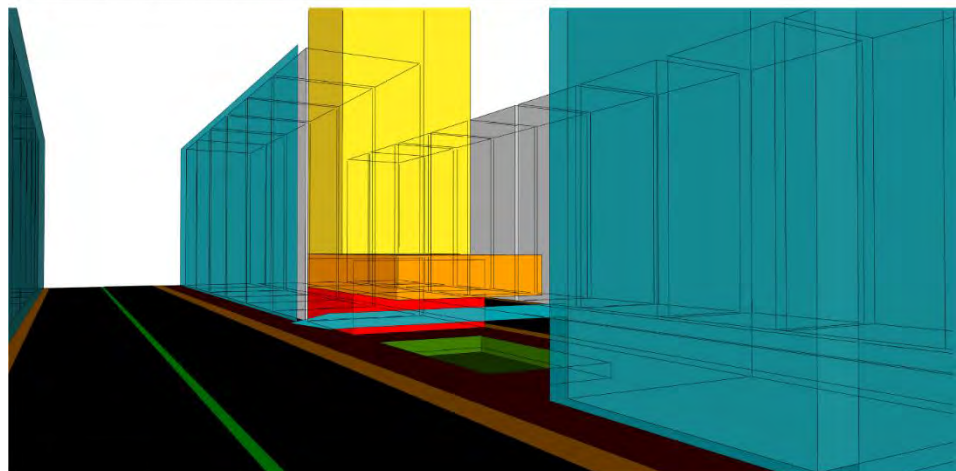




ESTIMATED OFFICE BUILDING



EXTENDED PODIUM LEVEL



BREAKING THE WALL

*Figure 19 source: author*

- Time based function at different level of the building

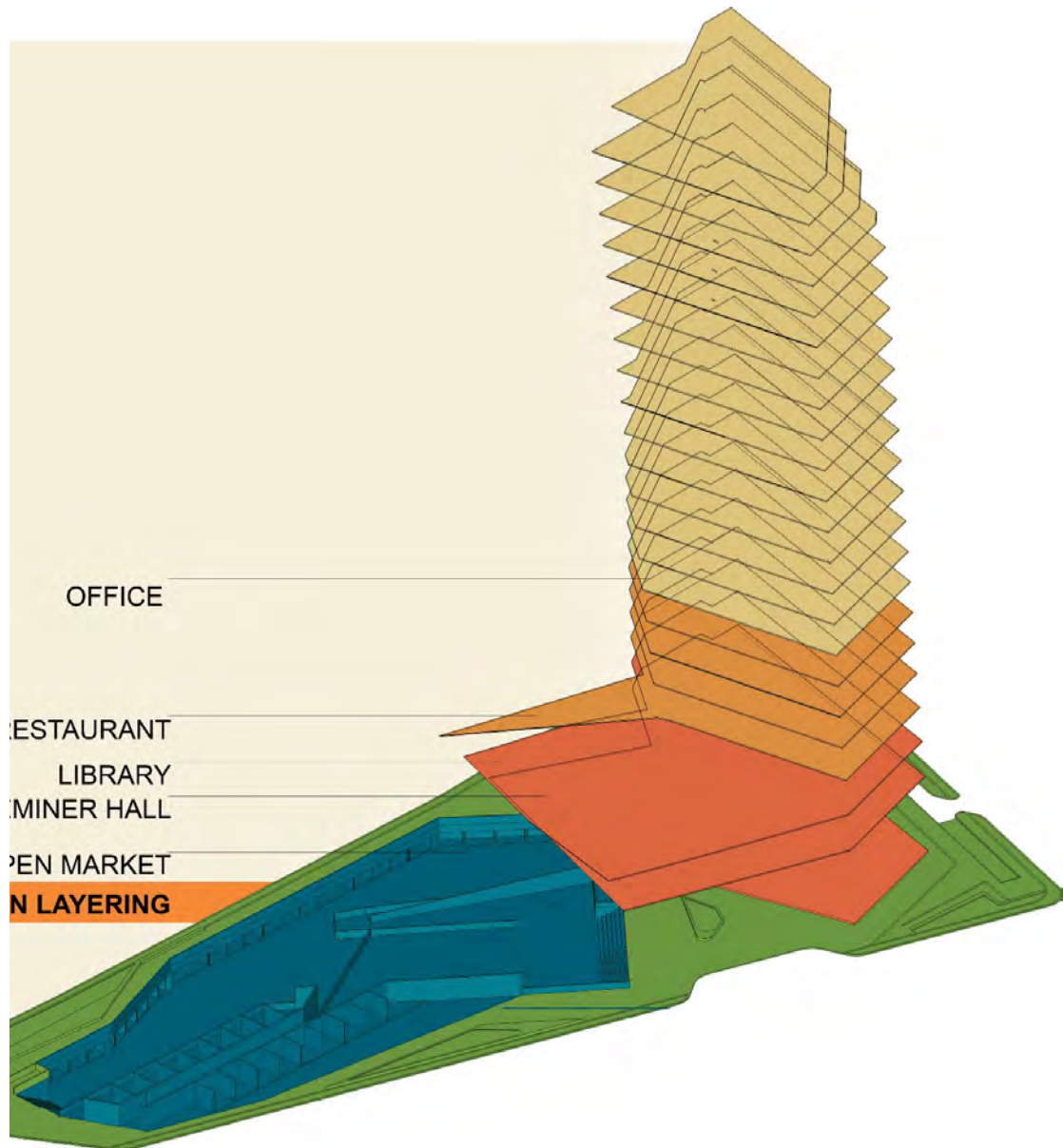
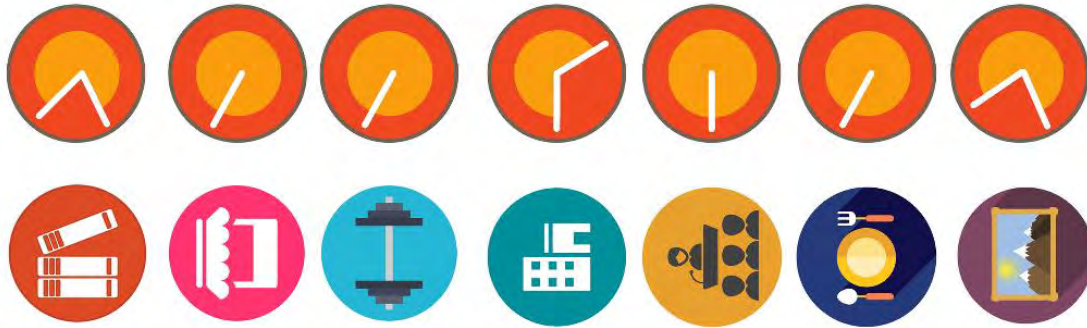


Figure 20 source: author

- **Different floor plans of multiple storied building:**
- Ground floor plan (top right)
- 1<sup>st</sup> floor plan (bottom right)
- 2<sup>nd</sup> floor plan (top left)
- 3<sup>rd</sup> floor plan (bottom left)

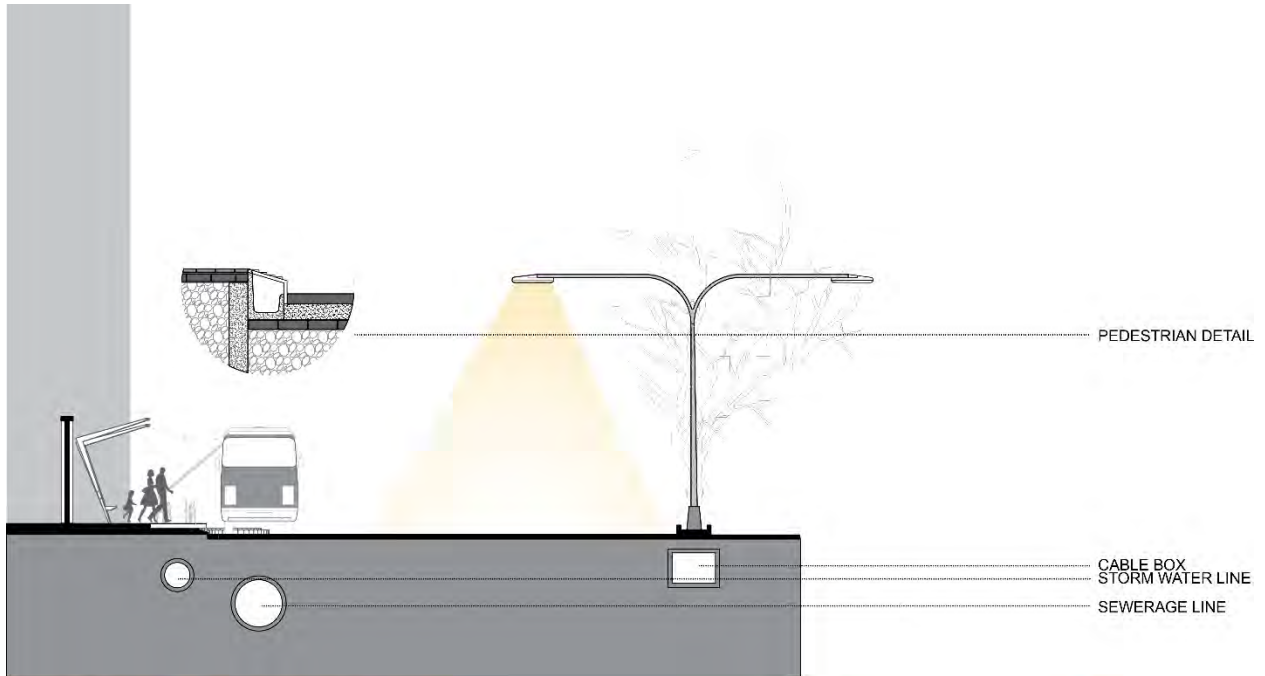


## 7.5 MASTER PLAN:

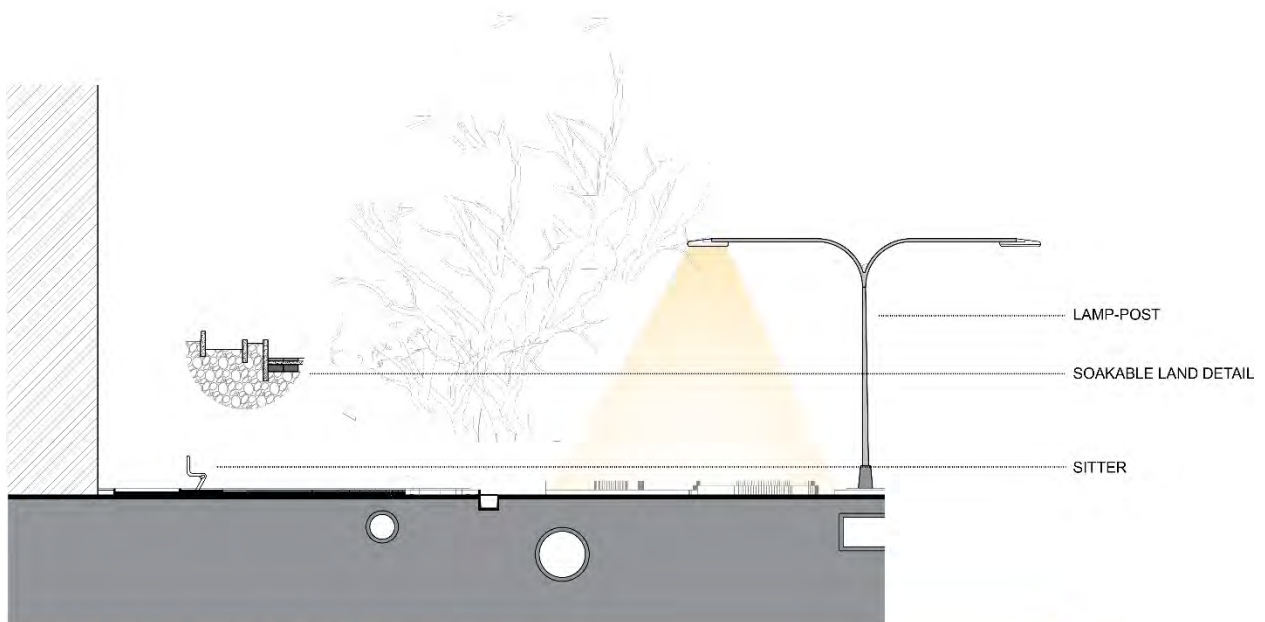


Figure 21 source: author

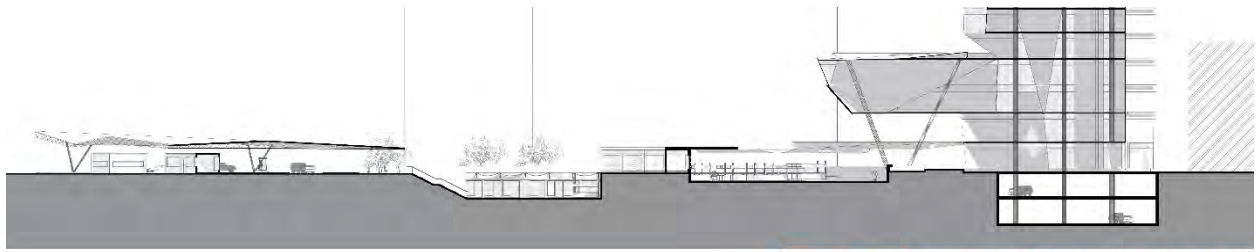
## 7.6 ARCHITECTURAL DRAWINGS -SECTIONS:



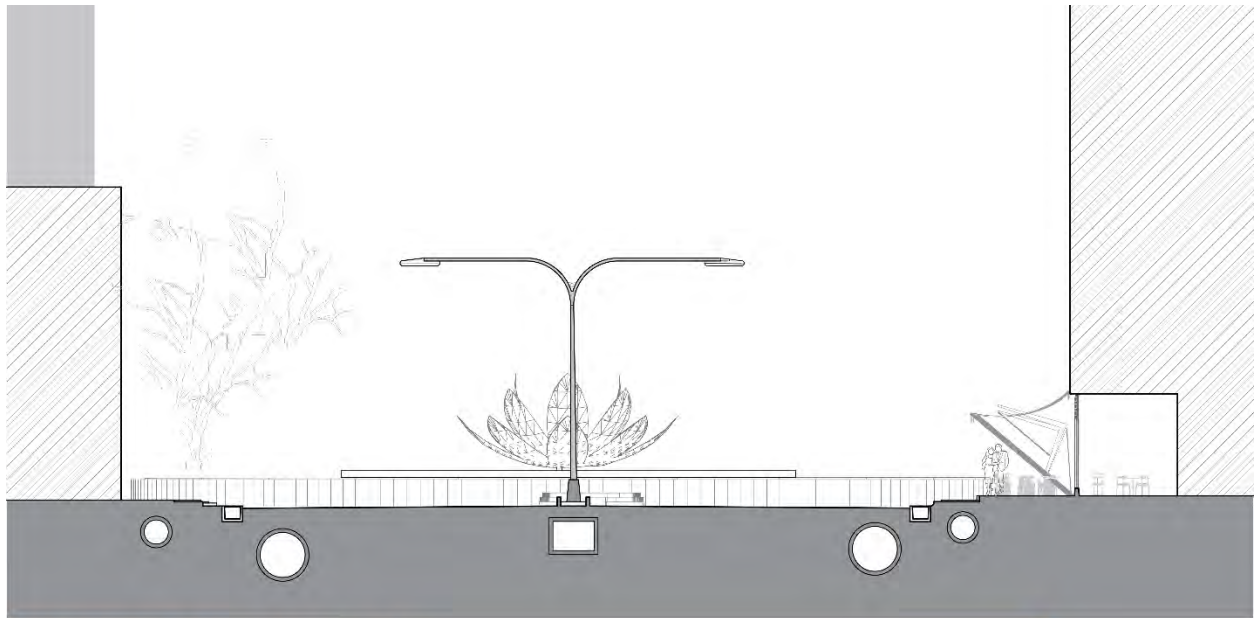
SECTION THROUGH BUS STOPPAGE



SECTION SHOWING PUBLIC AMENITIES



SECTION THROUGH MULTI STORIED BUILDING, OPEN MARKET AND ROAD



SECTION THROUGH FOOD COURT

## 7.7 Visualizations:



**PUBLIC TOILET**



**ROAD SIDE RESTAURANT**

Figure 22 source: author



**BUS STOPAGE**

*Figure 23 source: author*





**OPEN MARKET NIGHT TIME**

*Figure 24 source: author*

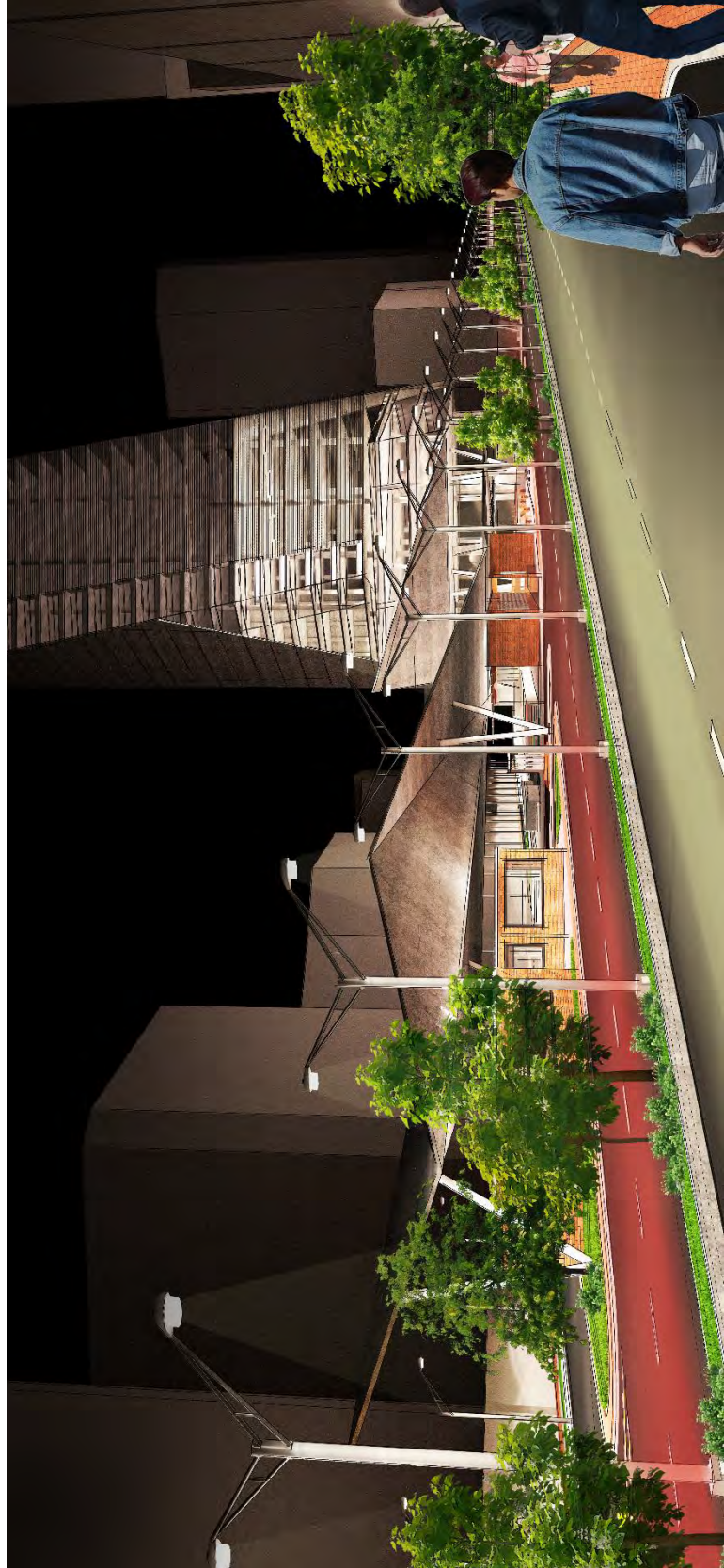


Figure 25 source: author

ROADSIDE VIEW

# Chapter 8: Conclusion

## CHAPTER 8: CONCLUSION

Basically as an architect's the tendency of dreaming about something and then making it real is common. But in this case, what was once the reality of our society has now become a mere dream and through this project it is tried to go back towards that reality. From side to side practical study of the Motijheel commercial area of Dhaka, some basic problems were identified easily. Mismatched co-existence of the office building, insufficient pedestrian facilities, unauthorized illegal roadside trading -all these resulting in traffic congestion, lack of sufficient parking, illegal occupancy, and noise from the roadway. Again, the absence of recreational area, adequate food shop turns these CBDs into a place which one wants to leave as early as possible. So here this sort of urban improvisation can make a promising change in the lifestyle of the dwellers. With a visible and strong transparent connection through this designed open market and easy public access for the user can cause interest in people with some activity spaces where users can stop or take a pause. Moreover, with the target to attach the pedestrians using the government land and sharing policies, a walk-able healthy environment through solid and void which is ensured with some entertainment facilities for the users and residents. Moreover being a commercial zone since this area becomes silent after a certain period of time every day, the rethinking process of building mass can ensure that This 'UN-happening' condition in a central part of the city which brings insecurity and lack of privacy will no longer be a problem anymore.

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