

**CIVIC BUILDINGS EXTERIOR TRANSITION SPACES**

**A STUDY OF CITY SQUARE, NAIROBI**

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Bachelor of Architecture Honours (U.O.N)

**A Research Project Submitted in Partial Fulfillment for the  
Award of Degree of Masters of Architecture of the University of  
Nairobi**

**2011**



**DECLARATION**

This thesis is my original work and has not been presented for a degree in any other university.

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## **DEDICATION**

This work is dedicated to my parents Mr. Ernest and Mrs. Apofiah Kinuthia for encouraging and believing in me, my sister; Bayx, brothers: Mwangi and Masha for pushing me to go the extra mile. This study would not have been complete without your support.

## **ACKNOWLEDGEMENT**

Glory to God for His faithfulness, I have walked in his favour day by day.

I acknowledge with gratitude the invaluable advice and assistance given to me by various persons during the entire duration of my study. Though, it is not possible to mention everyone who has enormously contributed to this research report. I wish to however, mention the following individuals for their tremendous assistance.

I wish to express my indebtedness to my dedicated supervisors, Prof. Robert Rukwaro and Dr. Tom Anyamba for their advice, guidance, encouragement and positive critique in the course of this study. My appreciation also goes to all the lecturers of the Department of Architecture and Building Science at; University of Nairobi, Jomo Kenyatta University of Agriculture and Technology, Ardhi University (Tanzania), Addis Ababa University, Makerere University and University of Oslo. Their commitment and encouragement has been inspirational and opened up my understanding of the urban environment and beyond.

Special regards goes to my fellow classmates, who challenged me to think out of the box. The administrative Department of the Architecture and Building Science, University of Nairobi, Norad's Masters Degree Program for giving me the opportunity to learn

more about my environment and beyond. Very special goes to staff of Ministry of Public Works specially Architectural Department and City Council of Nairobi, Urban Planning Department officers for their valued contribution.

I finally but not least wish to salute and sincerely appreciate my entire family and friends for your encouragement and prayers.

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## **DEFINITIONS AND ACRONYMS**

Bouleuterion	a building which housed the council of citizens in Ancient Greece.
Civic buildings	refer to buildings that are necessary for exercising the tasks of the government
City Square	a planned open area framed by Civic buildings in the City.
Transition space	the path from the main gate to the building's entrance door
BC	Before Christ
CBD	Central business district
CCN	City Council of Nairobi
CCTV	Closed circuit television
CSP	Case Study Protocol
GIS	Geographical information system
Ha	Hectare
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KICC	Kenya International Conference Centre

NCMP	National Capital Master Plan Dodoma, Tanzania
NOMA	Norad Masters Degree Program
R.R.I	Rapid Results Initiative
UON	University of Nairobi
Washington D.C.	Washington District of Colombia

## **ABSTRACT**

Exterior transition spaces are more than a building's foreground separating the entrance and other parts. Kenya's seat of government buildings which frame the city square and the exterior transition spaces have not appreciated the human scale, not to mention accessibility of able and physically challenged. It has also been observed that the function and character of the buildings have not been enhanced to create connectivity.

The main objective of this study was to find out the relationship of the civic buildings' exterior transition spaces with the city square. Qualitative research was appropriate to emphasize the cause and impact of the city square as a transition space through a descriptive case study. Structured observations and interviews were used to collect data from architects, urban planners, civic society and buildings users.

It was evident from the case study that the civic buildings played an important role of enclosing the city square. The open spaces were interconnected physically and visually. Understanding the different types of human impairment and security measures came out as necessary in order to create usable exterior transition spaces.

Based on the findings of this study the introduction of vegetation as physical barriers, maintenance of the existing footpaths for interconnectivity, extension of the transition spaces activities to the square and clear separation of pedestrian and vehicular entry and exit points is recommended. Security impact on civic buildings' exterior transition spaces and design consideration for accommodating the physically challenged are areas also recommended for further study.

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

Granted city status in 1950, Nairobi is Kenya's capital city with over three (3) million people. The business and administrative function of the city are situated in the central area which is referred to as the central business district (CBD). Settlement in Nairobi began in the central area like many other cities of the world; consequently this area has seen the most land use changes (Morgan, 1967).

Following independence in 1963, the boundaries of the city were enlarged from the 'old city'; an extension of the previous extensions carried out in 1900, 1926 and 1941 respectively as shown in Figure 1.1.

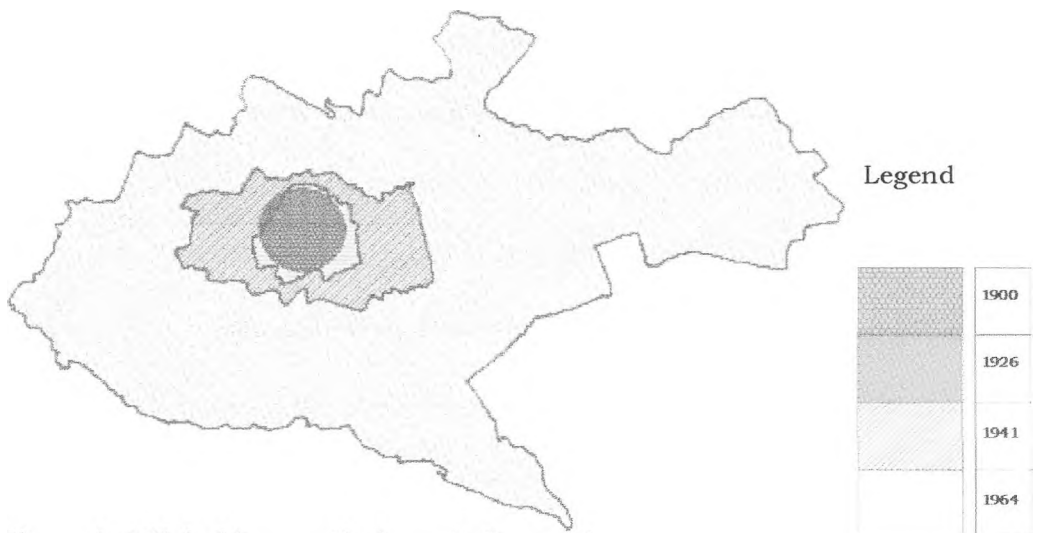


Figure 1: 1 Nairobi's growth through time and space.

Source: Tiwari, 1980.



A study by Morgan (1967) shows that the decision to build a railway line linking Uganda with the Coast was taken soon after Britain was committed to the colonization of East Africa in 1895. The work started at Mombasa ending up at Port Florence (now Kisumu), the destination of the railway line. Morgan (1967) and White, Solberman and Anderson (1948) noted that on opening of the railway in August 1899, the Government Administration was transferred to Nairobi, the government administration was at the time in Machakos.

The administration preferred to be near the railway line, not 20 to 30 miles away from it. The arrival and interference of the second authority was not greeted with much enthusiasm by the railway line, whose freedom of action particularly in matters of land was thereby restricted.

At the turn of the 20<sup>th</sup> century, according to the 1948 Nairobi Master Plan, a noticeable feature of Nairobi scene was the physical disparity between the apparatus of the Government Administration and that of the railway Administration. The railway had huge funds at its disposal with a highly developed technical and Administrative staff. Its buildings were numerous and substantial. In contrast the Provincial Government had a paucity of staff and they were miserably accommodated in corrugated iron structures.

Simpson (1913 cited White, Solberman and Anderson 1948 p.13) report on sanitary matters in East African Protectorate, Uganda and Zanzibar described the temporary structures offices as the most decrepit looking structures. They were overcrowded, inconveniently arranged and the sanitary arrangement very defective.

The 1948 Nairobi Master Plan proposed close proximity of government offices and the rest of the commercial activities area. This was despite arguments to the contrary that had been advanced in academia at the time. The plans vision was to develop the central area exclusively for commerce and indoor recreation ridding it off activities such as industries, warehouses and assembly shops. It was an essential part of the 1948 Master Plan that there was adequate space reserved for official buildings. This meant the provision of space for all buildings necessary for the functioning of the Local Government and of the civic cultural activities closely related to the civic authority.,

The essence of democracy consists in the balance of power between the executive, legislative and judiciary. The way these elected and self appointed bodies relate to the ultimate sovereignty of the people (Jenks and Valentine 1987).

## **1.1 Background of the Problem**

Civic architecture should be timeless in the same sense that the constitution itself should be; a manifestation of a set of principles and binding relationships that can like muscles, be flexed over time with each new generation according to R. N. Swett ( speech, November 26<sup>th</sup> 2008). Civic buildings in the current study refer to buildings that are necessary for exercising the tasks of the government. Since public interest prevails; the buildings roles are mostly social, military, civic, religious, community or commercial building are among the buildings that should stand out (Conway and Roenish, 2005). Important government and civic buildings are often monumental, for example Washington D.C capitol, their size dictated partly by the numbers of people using them and partly by the need to suggest their dignity and significance.

Civic buildings are products of planning, designing and constructing form, space and ambience that reflect functional, aesthetic and symbolic considerations. At their best, the buildings nurture and define a nation's identity. The buildings spatial design goal is to create a series of highly dynamic, coherent and intuitive spaces, to foster frequent and meaningful contact between citizens and also encourage an increasingly diverse population to use them.

The exterior of any building is what we see first and it is easy just to concentrate on the façade, the path from the main gate to the building entrance provides ample opportunity for a pleasant, interesting and functional transition space. The spaces are important in creating a comfortable environment and integrating the exterior and the interior spaces. Booth (1983) argues that transition space is necessary to physically separate an entrance from other areas. Thus a space that is neither indoors nor outdoors, allowing for a slow change between the two.

To see a building well from its approach the space about it should not only be large enough or small enough but should also of the right shape and the spatial quality to compose with the structure and o best display it. Such spaces are volumetric expression of the site structure (Simonds 1998). Just as all buildings have a purpose, so should the open spaces that they define or enclose. Such spaces must be clearly related to the character, mass and purpose of the structure. The present study therefore attempts to find out architectural elements that define civic building exterior transition spaces and to also establish architectural interconnectivity of the civic structures within Nairobi city square.

## **1.2 Problem Statement**

Most civic buildings within the city square do not have well articulated transition space interconnecting them. Architecturally the buildings transition spaces have not appreciated the human scale, accessibility of able and physically challenged, function and character the buildings. This aspects have not been their approach to have adequate transition spaces between the gate and building's entrances. No effect has been put to create a comfortable and intergrated exterior and interior environment. The issues such as the function and character of the buildings have not been enhanced to create interconnectivity with the city square. This study is set to find out how civic building exterior transition spaces can be architecturally responsive to the users human scale, accessibility and security.

## **1.3 Objective of the study.**

The main objective of this study is to find out the relationship of civic buildings' exterior transition spaces within the city square

The objectives of these study are:

- i. Identify architectural elements that define the civic building's exterior transition spaces, for the spaces to work.
- ii. Establish architectural interconnectivity of the civic buildings transition spaces with the city square.

- iii. Determine the activities that are carried out in the civic building transition shapes.
- iv. Identify the relationship of the city square and the civic buildings transition spaces.

#### **1.4 Research questions**

- i. What are the architectural elements that define the civic buildings transition spaces?
- ii. How should architectural elements defining the civic Building transition spaces interconnect with city square?
- iii. What are the activities that are carried in the transition spaces?
- iv. What is the relationship between the civic building exterior transition space with the city square?

#### **1.5 Justification of study**

Just as buildings have a purpose, so should the transition spaces enclosing and defining these buildings. Such spaces must be clearly articulated to relate with the mass, character and purpose of the structure. Transition spaces interconnect spaces linking or separating activities. They create an effective halt or rest area and disperse crowds within spaces linked by common space. In civic buildings the transition spaces should be extensions of the civic functions enhancing the buildings' surroundings, while

creating an invigorating sense of movement for able and physically challenged people.

The study goal was to provide an accurate and complete architectural description of the case, the principal benefit of the case study was to expand our knowledge about the variables in human behaviour. Identification of the architectural attributes of transition spaces will provided a basis for civic building transition space design. The findings will also lay a basis for further research on civic building interconnectivity through transition spaces.

### **1.6 Assumption of the study**

To achieve the set out objectives of the study, the researcher made assumptions that the grid iron layout design of Nairobi CBD was largely intended as a democratic tool to distribute land and define boundaries between public and private ownership. Civic building transition space should respect human scale, enhance its surroundings and create an invigorating sense of movement. The Nairobi Master Plan (White, Solberman and Anderson, 1948 p.58) Civic centre open space zoning considered a well designed transition space to physically interconnecting the civic building in their own tree shaded surroundings. The proposed area was neither too small for use nor too large to be appreciated as a whole by a human being. It has also been assumed that in terms of man

power Nairobi is equipped with qualified professionals capable of designing and redesigning functional civic building transition spaces.

### 1.7 Scope of the study

This study broadly focused on architectural attributes of transition spaces, entryway of the civic buildings as defined within the city square. According to the Nairobi Master Plan (White Solberman and Anderson,1948 p.60) zone 1, as in Figure 1:2, city square area extended to and was bounded by:



Figure 1: 2 Historic Nairobi pre 1960 information.

Source Moss 1999

- Sadler road currently Koinage Street



- Portal Street currently Banda Street
- Victoria Street currently Tom Mboya Street and
- White House Road currently Haile Selassie, including the entire frontage to the East African highway currently Uhuru Highway.

For the purpose of this study the city square is defined by Harambee Avenue, Parliament Road, City Hall Way and Taifa Road.

Figure 1:3 shows the square's boundaries.

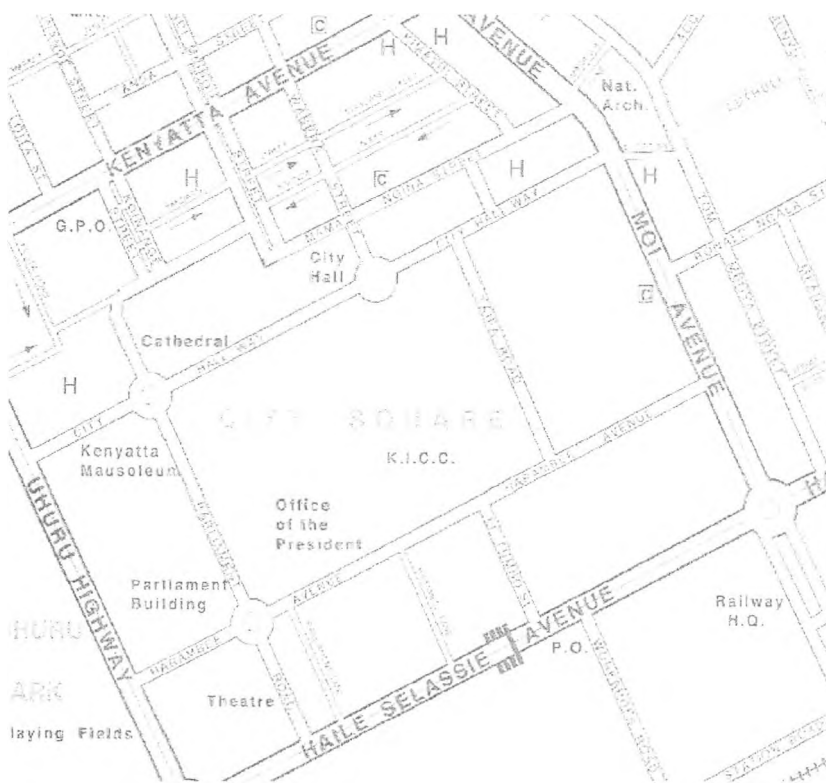


Figure 1: 3 City Square boundaries.

Source Moss, 1999

### **1.8 Limitation of the study**

This research was carried out within a specified period and with limited resources. To overcome the two constraints a manageable and representative site was chosen i.e. the city square. Descriptive case study was the preferred research strategy in examining the contemporary phenomenon within real life context. The time allocation and objective of the study dictates observation and conducting personal interviews to be the main research instruments. Same open-ended questions were asked to all interviewees to facilitate faster interviews that could be easily analysed and compared. For observations, an observation checklist was used to provide a structured way to observe. Other constraints were lack of detailed historic maps or diagrams on the study area and bureaucracies in obtaining information from various authorities on time. This necessitated making frequent and periodic visits to the source of information and also studying existing similar projects as case studies.

### **1.9 Structure of the study**

Chapter one is an introduction audit it encompasses background of the problem, problem statement, assumptions, objectives, scope and limitations of the study.

Chapter two dwells on the literature reviewed and it introduces the conceptual background of the research problem. Generally the review has focused on factors that explain the architectural consideration in designing civic building transition spaces. A brief historic survey of architecture of democracy is reviewed to appreciate how the civic buildings were designed in relation to transition spaces. Security as a fundamental role in designing transition spaces was reviewed. Accessibility for the able and the physically challenged was also brought out. The chapter concludes by identifying architectural transition attributes to be analysed in the study area.

Chapter three presents methodology and deals with the methods applied in carrying out the research study. It is organized in sections as; research design, case study protocol, sampling design, research tools, data collection, data analysis and presentation. The analysis involved collecting the relevant supporting documents and reviewing them against the primary data. Previous research studies and other secondary data were used to evaluate and compare the existing scenario.

Chapter four is on data analysis and presentation. This chapter interprets and explains the findings with regard to the study objectives.

Finally chapter five presents the conclusions and recommendations. Areas that need further research are suggested.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Nairobi, the capital of Kenya, is a city of over three million people and home to Kenya's seat of government. The city according to Tiwari (1981 p.123) was first incorporated in 1900 as the township of Nairobi, and the city status was granted in 1950. At present, the city is not only important to East Africa, but also to Africa as a whole. Nairobi is home to many international companies and non-government organizations. It is also on the crossroad of the Trans-African Highway and the Northern Great Rift, making it one of the most prominent cities in Africa politically and financially. (Anon 2008)

The chapter reviews previous studies done at global, continental and nationwide levels that assist in understanding the research problem. The review has focused on factors that explain the architectural consideration in designing civic building transition spaces. Sir Christopher Wren famous words "Architecture has its political uses: public buildings being the ornament of a country. It establishes a nation, draws people and commerce, makes the people love their native country which passion is the original of all great actions in the commonwealth." This statement clearly

highlights the importance of civic buildings and their place in a society or a nation.

## **2.1 The Architecture of Democracy**

Valentine (1987) noted that architectural modes and fashions sweep over countries with the neutrality of a disseminating technology, unconcerned with such things as ideals and social philosophy. Building types and methods also travel across political boundaries with supreme indifference to the character of the government. Valentine (1987) Osbert Lancaster showed that the governments of Hitler, Stalin and Roosevelt of the 1930s, all produced heavy monumental buildings. A style dubbed 'deflowered classicism' by Frank Lloyd Wright. The only way to identify a special political persuasion then was by the flags and symbols, the swastika or hammer and sickle in the pediment, or the soldier's helmets.

In the mid 20<sup>th</sup> Century centralized regimes in Brasilia or Moscow sported a 'democratic' modernism. According to Aldo Rossi, there appeared to be no direct connection between style and ideology. Frank Lloyd Wright and Vincent Scully who wrote books connecting architecture and democracy were in the end, unable to relate social organization, ideology and institutionalized forms of government with a typology and style of building.

Architecture of democracy is neither a single style nor a set of buildings; it does not become apparent at first glance. Rather it emerges slowly to our understanding. Investigating the particular articulations of style and the iconography adopted by the various governments helps to explain the functioning of that particular government. That is the balance of power between different democratic institutions.

### **2.1.1 Agora: market place and centre of democracy**

Valentine and Jencks (1987) discuss the Architecture of democracy from a historical perspective starting from the agora, to the forum and the piazza. Agora is described as distinctively Greek mixture of public realm, containing most of the public buildings equivalent to modern democracies, often grouped in a loose U- shape around a plaza or slope centre. Greek culture reached its zenith during the 5<sup>th</sup> century BC. Athens had become a democracy, Socrates's and Plato's schools of philosophy flourished, and the Athenian leaders Pericles began construction of the Acropolis. Architecture played an important role at the agora, the civic center of the city, which housed the bouleuterion, the governmental building where democracy was invented and first flourished. Each city had a bouleuterion, a meeting place for the town council. After destruction in the Persian wars the agora was rebuilt in a more

geometric fashion, built in periclean architectural style, like the Parthenon (Borden et al.2008).

### **2.1.2 Forum: celebration of central power**

Greek ideas were absorbed by the Roman Republic into a complex structure that blended monarchical, democratic and aristocratic elements, emphasizing the latter. These were embodied in a forum, a meeting place and market place at the centre of every Roman town. A typical forum was a public square, surrounded by monumental buildings, including a senate, basilica and temple. Roman fora were redesigned, added on and rebuilt until it took a new connotation of imperialism. Civic functions went beyond the show of power to the daily operations of a large bureaucracy necessary to coordinate the building of an orderly empire and staff of an increasingly powerful emperor. This was the precursor to Washington D.C's Federal Triangle or the ubiquitous Federal Buildings, where grandeur is replaced by faceless edifices.

### **2.1.3 Piazza**

Italian Palazzo Pubblico and French Town Hall developed from Belfry, adjacent to a public square used for public meetings. French town halls frequently combined a ground level market hall with governmental spaces. Between years 1400 and 1600, rectangular commercial centers were built in Northern Europe. In



subsequent ages, palazzo represented the public realm, because it symbolized the heart of communal Rome. The oval Piazza surrounded by government buildings became a monumental symbol of place and grandeur. (Valentine, 1987).

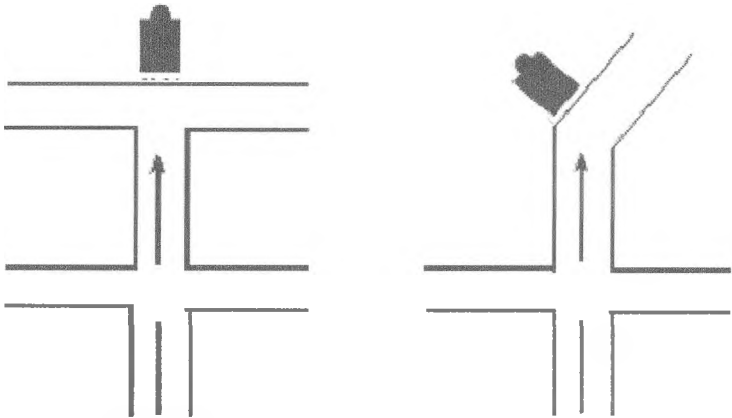
## **2.2 Civic building**

Civic buildings refer to buildings that are necessary for exercising the tasks of the government, since the public interest prevails; the buildings roles are mostly social. Silver (2000) notes that civic buildings are not straightforward types so much as they are public, designed to be well-mannered elements of a general municipal environment. He further notes that some civic buildings are deliberately monumental, decorated and eclectic formal, as attempts to concordant the building in the public view. Civic buildings should be in close proximity to one another for efficiency of operation. The isolation and concentration of government functions has been the trend lately, although some older capitals have continued to scatter important public buildings widely across the various parts of the city (Vale 2006). According to the Nairobi Master plan space was reserved for official buildings (White et al 1948). Undoubtedly the civic buildings are always subject to security concerns. The 11<sup>th</sup> September 2001 attack on the Pentagon in America awakened the need for security and its central role in designing of civic buildings. In its aftermath most

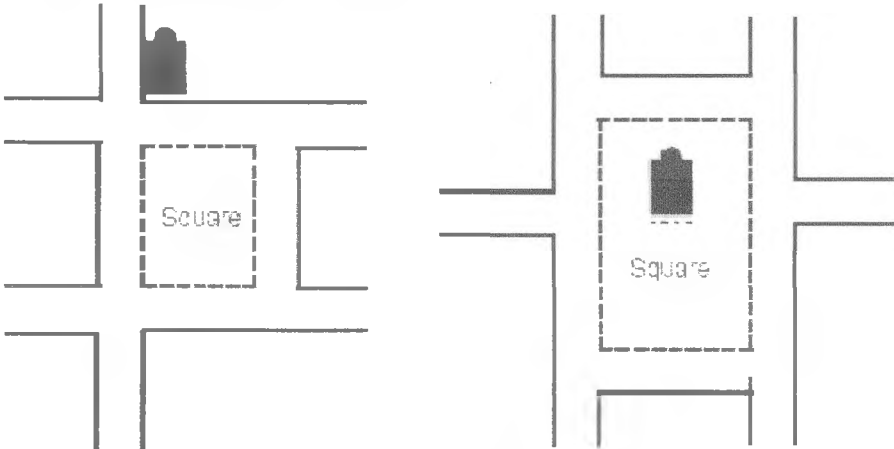
governments have tightened security in sections of their city centres or CBDs.

**2.3 Civic building placement**

Davie Western Theme Development Manual (Anon 2008) stated that civic buildings placement requirements vary by site. In general, civic buildings should be sited in locations of particular geometric importance, such as anchoring a major public space or terminating a street vista (Figure 2.1).



The Civic buildings terminates the view of a street.



The Civic buildings anchor the from within the Square.

The Civic buildings anchor the Square at a prominent corner.

Figure 2: 1 Civic building placements.

Source, Anon, 2008.

### 2.3.1 Three arms zone: Abuja

Vale (2006) state that post colonial period led to design efforts to clarify independent countries statues. Abuja adopted an American-style constitution and its planner and designer Kenzo Tange envisioned a monumental city with a vast Washington Mall-like central axis, aligned with a distant hilltop just as in Canberra (Figure 2:2). According to Elleh (1997) zoning was a major functional catalyst in Abuja design. The central axis leads to the ‘three arms zone’ at the foot of Aso hill, where the three branches of government were located in a circle.

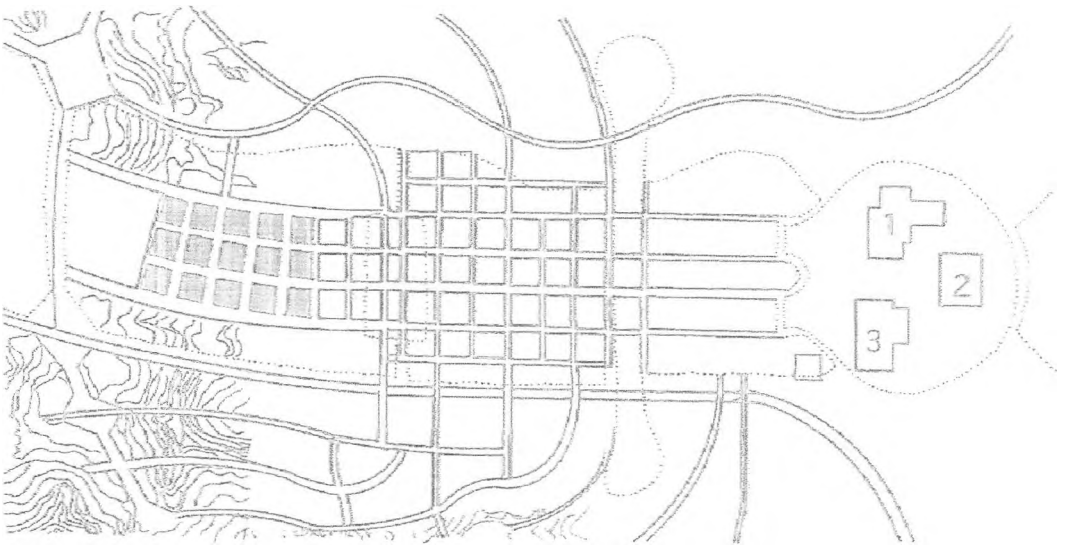


Figure 2: 2 Abuja Nigeria, 1981 Master Plan showing the three arms zone. (1) Aso Castle –the Presidential Complex, (2) National Assembly, (3) The Supreme Court.

Source, Elleh, 1997.

The design objective was to have the three branches of government (Figure 2:3) oversee one another, a figurative rendition of the constitution specifications for a government based on checks and balances.

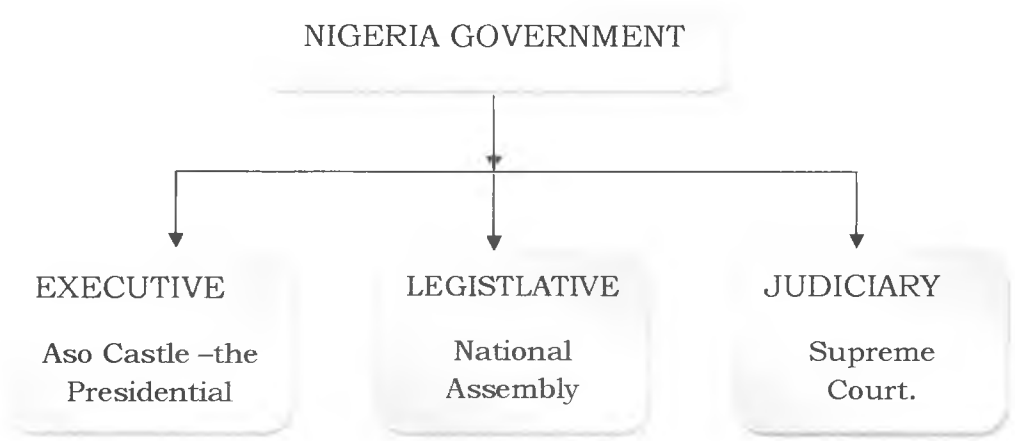


Figure 2: 3 Abuja three arms zone anemogram representation  
Source; Kinuthia, 2011.

Ikoku (2004) also notes that the three arms zone as the principal node of the capital city is aesthetic as well as symbolic in meaning. The node lies within the central area which is the hub of the nation and the centre of a gigatic multicultural community. Ikoku (2004) further notes that although the seat of government is impressively located and inviting exploration, it is inaccessible. Abuja situation is not a response to the global implications of the American September 11<sup>th</sup> 2001 catastrophe as the three arms zone has always had this defensive ambience.

### **2.3.2 Mixed-use area :Dodoma**

In urban design terms, Dodoma tends towards monumental axially, equipped with a network of pedestrian pathways. Designed by Conklin Rossant firm, the design intent is radically modest (Figure 2.4). Dodoma was designed as an anti-monumental capital, in contrast to the usual heavy reliance on axially and a separate zone for government functions. The proposal emphasized residential areas and public transport. The city centre was kept low-rise and pedestrian oriented. Instead of an isolated district for government, a mixed-used area was proposed whose largest proposed building was a sports stadium. Much of the modesty was undercut, however, by a separate proposal to erect a party headquarter and interim Parliamentary complex separate and above the cultivated understatement of the main town (NCMP. Dodoma, Tanzania 1976).

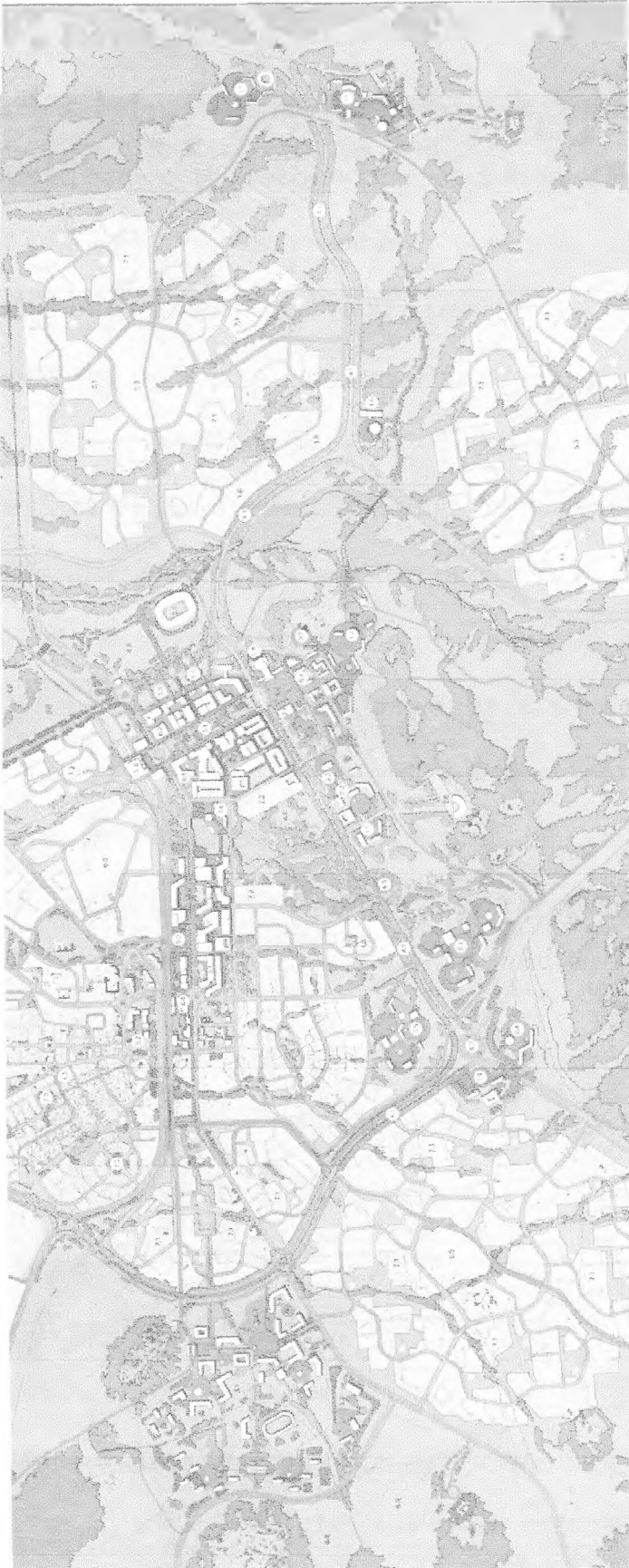


Figure 2:4 Dodoma National Structure.

Source National Capital Master Plan Dodoma, Tanzania, 1974

### **2.3.4 National Mall: Washington District of Columbia**

In the United States, the architectural evolution of Washington D.C capitol parallels the increasingly powerful nature of the government as it evolved over 200 years. Pierre L'Enfant original plan placed the capitol on Jenkins Hill which he described as a pedestal waiting for a monument. Radical axes connected the capitol with other government buildings, including the president's house, all subservient to it. These two buildings were at the ends of two axes, whose intersection was to be marked by a monument of George Washington and to be joined by a formal mall, parks, monuments, museums and canals. L'Enfant plan inaugurated modern capital city planning, putting in sharp focus the relationship between political and physical networks.

While the two figureheads of power were expressed in the architecture, other elements of the new government were not. The Supreme Court was not treated as an equal in either plan or presence. Nowhere was the public or press included in the design, nor a designated arena for public gathering. Around the government centre, L' Enfant built up the city of Washington by superimposing grand avenues diagonally over a traditional street grid in the tradition of Versailles. Governmental buildings were arranged in a circle and the city was organized on a grid, expressing respectively the balance of power and equality of

citizenship (Valentine 1987). Following the war of 1812, according to Gournay (2006), the capitol was slightly modified. However, L'Enfant plan for the city was all but forgotten.

McMillan Commission appointed in 1901 renewed L'Enfant original concept of a 'Grand Avenue' mall (Figure 2:5). It produced models of the Washington Mall. Pennsylvania Avenue, Neo-classical facades of museums and government building juxtaposed with modern buildings define a highly decorated street of great complexity where unity is achieved through the use of materials and the repetition of small scale cues. Different buildings add to the richness by externally expressing their functions.

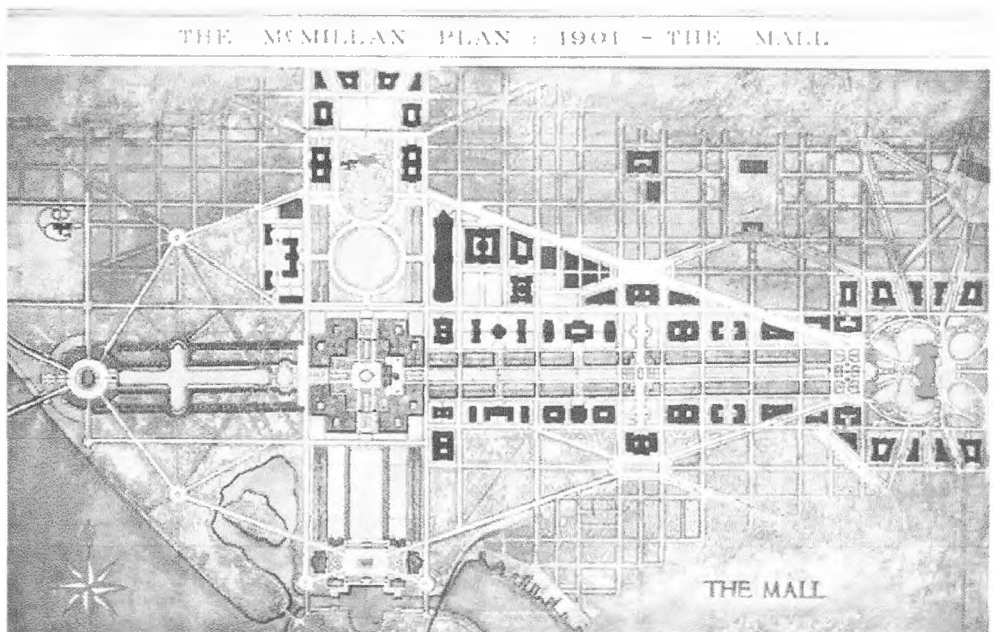
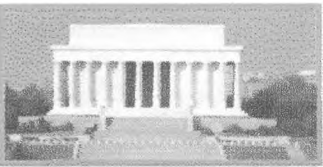
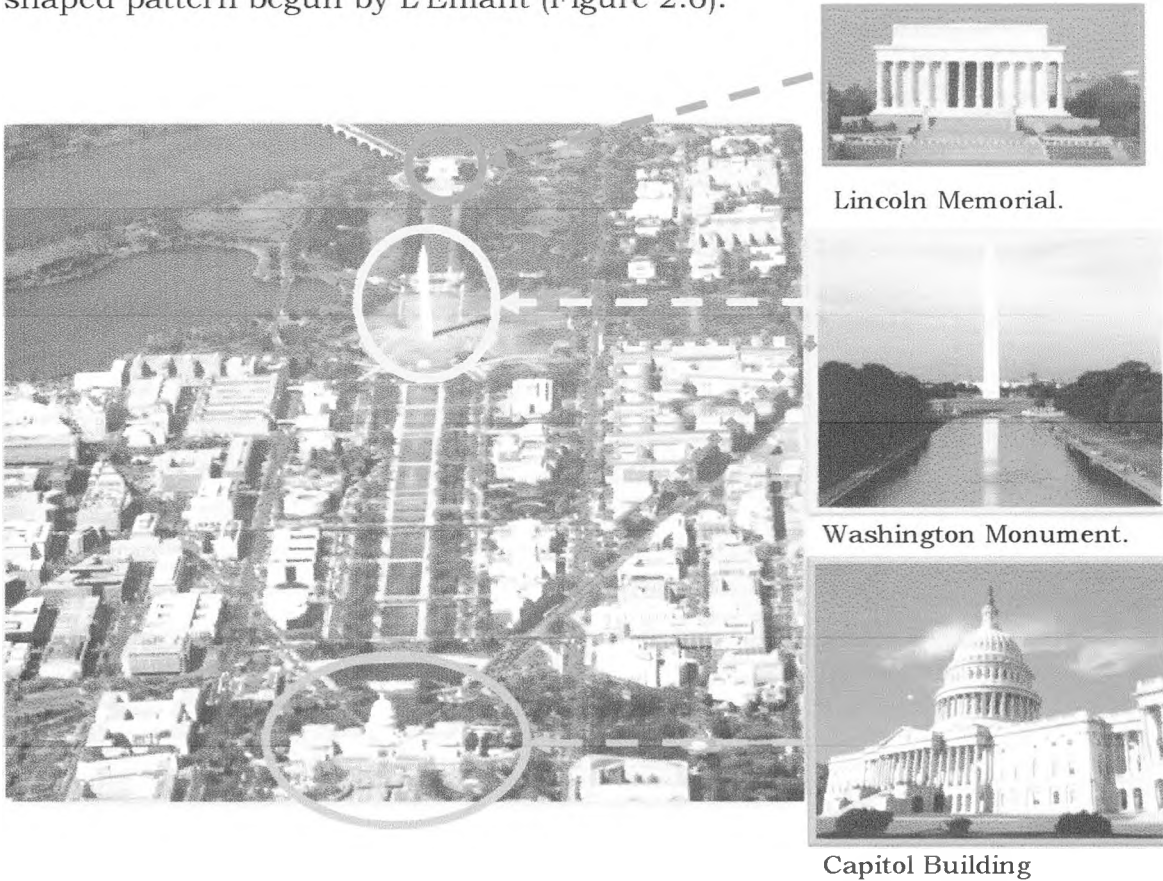


Figure 2: 5 The McMillan Plan 1901-the Mall.

Source [www.wikipediawashingtondc.com](http://www.wikipediawashingtondc.com) March 2011



The height control in Washington limits the effectiveness of the roof line as a decorative element according to Moughtin et al. (1999). The new plan introduced the axial arrangement of museums, monuments and office buildings that now characterize the city's monumental core. The shoreline of the Potomac was reclaimed for public monuments and completed the diamond-shaped pattern begun by L'Enfant (Figure 2:6).



Lincoln Memorial.



Washington Monument.



Capitol Building

Figure 2:6 overview of the National Mall in Washington DC shows the Lincoln Memorial at the top. In the middle is the Washington Monument with the Capitol Building at the very bottom. To the left is the Tribal Basin with the Jefferson Memorial to the left.

Source [www.washingtonhistory.org/dc/discoverourterritory](http://www.washingtonhistory.org/dc/discoverourterritory) [Accessed March 2011]

The Federal Triangle, located in the northeast corner of the diamond-shaped governmental centre of the city was filled in with fortress-like office buildings done in stripped classicism which created an unfortunate precedent for heavy smug buildings (Vale 2006).

#### **2.3.4 Civic Centre: Kenya**

Civic centers that encompass and surround public buildings serve as the front porches of our public institutions our post offices, courthouses, museums, libraries and seat of government. Cities with thriving civic spaces benefit from a strong sense of community and when such places are lacking, people feel less connected to each other and to the place where they live.<sup>1</sup> Lynch (1960) defines a civic centre as a prominent land area within a community that is constructed to be its focal point or centre.

According to White, Solberman and Anderson (1948) adequate space was reserved for official buildings in Nairobi (Figure 2:7). This meant provision of space for all buildings necessary for the functioning of the government of the country as a whole. The future problem then was extension of this centre to house the legislative and central administrative offices without the social,

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<sup>1</sup> PPS: Projects for Public Spaces.< <http://www.pps.org/civic-centres/approach>> [18 May 2011]

cultural and economic disadvantage of creating a separate capital such as New Delhi and Canberra.

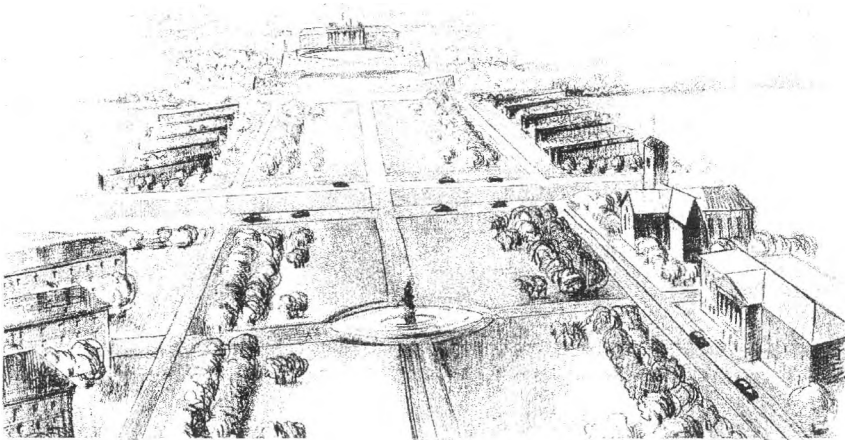
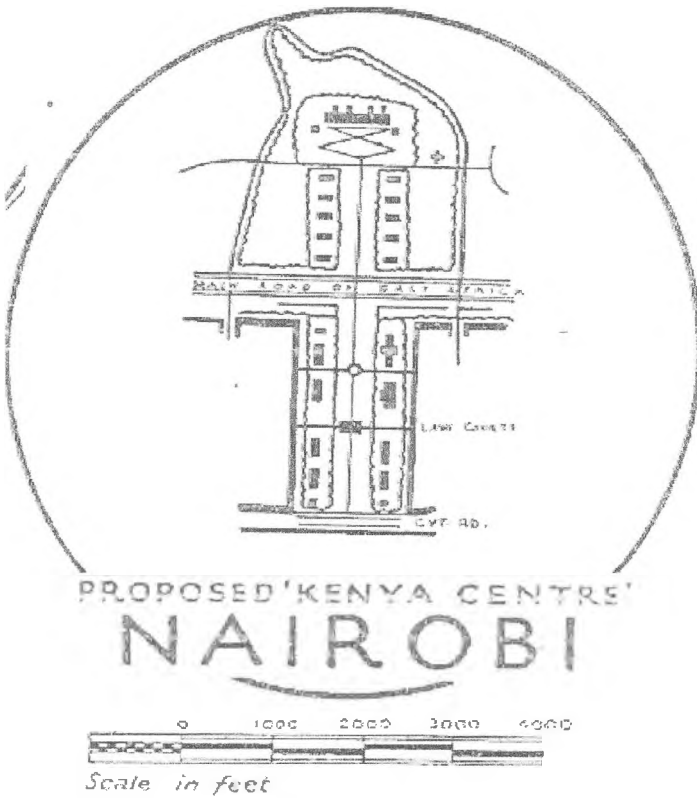


Figure 2:7 Proposed 1948 Nairobi Kenya Centre Plan and a perspective representation.  
Source White, Solberman and Anderson, 1948.

The Master plan accepted the fortunate position of Nairobi's civic centre. The site was immediately adjacent to the commercial, business, railway centers, the government house site and the official residential area on Nairobi Hill. The plan suggested an extension of this centre to a widened Government Road to the east and a considerable extension for government purpose to the slopes of Nairobi Hill to the west. The general conception was a ceremonial open space in the centre, commanded by new government buildings at one end and the Law Courts against a background of architecturally controlled commercial offices and entertainment building at the other end. The presence of the law courts was by no means the main reason for the decision of the master plan to utilize the city square as the point of departure for the Kenya centre.

### **2.3.5 City Square: Nairobi City square**

In urban planning, a city square or an urban square is a planned open area in a city, usually or originally rectangular in shape. Some City squares are large enough that they act as a sort of "National Square"<sup>2</sup>. The Square represents a psychological parking place within the civic landscape. City squares are often centrally located in a historic place not attached to a particular building, rather, it often encompasses one or more complete city blocks and

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<sup>2</sup> City Square [http:// en.wikipedia.org/wiki/city\\_square](http://en.wikipedia.org/wiki/city_square) [30. May 2011]

is usually bounded by streets on all four sides. Sometimes it contains a major monument and attracts a variety of users and activities Marcus and Francis (1997).

Moughtin (2003) states that a city square is one of the most important elements in city design an area framed by buildings to the greatest advantage. Great civic compositions such as St. Mark's square Venice and St. Peter square Rome are unique in the relationship between space the surrounding buildings and the dome of the sky. Moughtin further states that there is danger in attempting to transfer design concepts effective in a particular time, place or culture to a different setting.

In the 1948 Nairobi Master Plan, a total area of 174.5 acres was reserved for a city square, unlike Union Building group in Pretoria, where majority of government activities are already housed in other parts of Pretoria and on the extravagant and inhuman scale of Washington D.C., New Delhi and Canberra centers. The Nairobi Master Plan avoided the total lack of adequate space. In size the proposed centre compared with the Louvre and Tuileries Gardens in Paris. Well known example of human monumental scale, neither too small for use nor too large to be appreciated as a whole by a human being. Particular stress was laid on planting of trees in the centre, subordinating majority of the centre's buildings to trees.

Considering that Nairobi is within the tropics only a few miles from the equator it would have been a tragedy if the European conception of a civic square was adopted, (White, Solberman and Anderson, 1948).

#### **2.4 Building and transition spaces.**

In any composition there is need to emphasize some parts and subordinate others as part of the art of design. In this way a relationship and proportion can be established. For civic buildings the dramatic effect is lost if they are haphazardly scattered. By grouping them around a central place as a dominant element in the urban scene, a city takes on a unified form (Moughtin 2003). The path between the main gates to a building's door provides ample opportunity for a functional, aesthetic and symbolic transition space.

The door has been one of the most important elements in architectural design since antiquity, the transition from one domain to another (Elleh 1997). Simonds (1998) stated that buildings are to be spaced out in such a way as to permit full and meaningful integration with other structures, spaces and the landscape. The transition space may extend the function of a building or it may serve a separate function in itself, but whether or not it is directly related to its structure in use it must be in

character. Such places, be they public squares, courts or plaza become so dominant and focal in most architectural grouping that the very essences of the adjacent structure is distilled and captured there.

#### **2.4.1 Security**

In designing transition space security has a fundamental role. Boundary definers are interruptions in the sequence of movement along access paths and serve to create perceptible zones of transition from public to private space. U shaped buildings, high walls, fences, locked gates and doors are some representation of real barriers, while symbolic barriers representation include open gateways, light standards, a short run of steps, planting and change of texture of walking surface, symbolic or real both serve a common purpose. To imply levels of space change creates security within the built environment, for example Sir Edwin Lutyen design for the Viceroy's house and Mughal garden built in New Delhi between 1920 and 1931 respectively. The layered space uses symbolic barriers to define territorial zone, the public approach to the building is clearly defined by the string use of symmetry (Backhaus and Murungi 2002) (Figure 2.8).

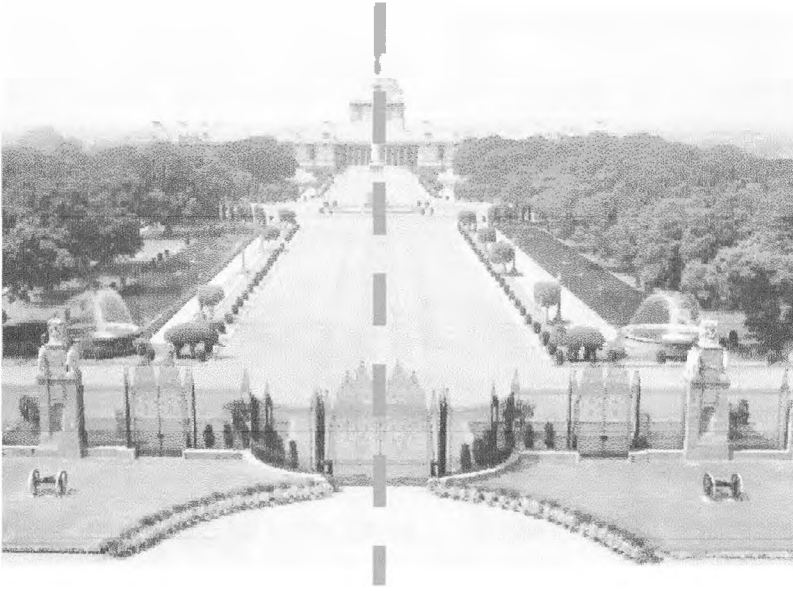


Figure 2:8 Landscape symmetry of Vicerory's house public transition space, which follows the buildings formal symmetry.  
Source, [http://en.wikipedia.org/wiki/New\\_Delhi](http://en.wikipedia.org/wiki/New_Delhi) [Accessed March 2011]

### **2.4.2 Access**

Access for physically challenged people to public buildings and facilities in cities has become an important part of the political agenda. The Constitution of Kenya (2010) section 54 (1) (a) acknowledges that persons with disability are entitled to reasonable access to all places, public transport and information. According to Shakespeare (1998) who further stated that many public authorities internationally are promoting strategies for accessible built environment. The range of abilities among people is highly varied. Impairment of the physically challenged includes visual, mobility, hearing, manual and learning (Harris, Dines and Brown, 1998).



There is more awareness in particular that physically challenged people in their everyday lives have to confront hostile built environment, where access to buildings, street and places is often impossible. From steps to the absence of induction loops in public and civic building, disabled people have to confront built environment which were never designed to cater for a range of bodily difference, ignorance of sign language generally excludes the deaf and hard to hear from a range of public places.

Accessible walkways in the transition spaces should consist of closed loops rather than dead ends. Waiting areas in these spaces are an added advantage. The areas preferably should be located within 90,000 mm from the building entry to avoid traffic congestion, parking should relate directly to the building which it serves (Harris, Dines and Brown, 1998).

#### **2.4.3 Ground/ Paving treatment**

Ground treatment is immediately apparent to the pedestrian forming a stimulating visual treatment making walking attractive. Moughtin, Taner and Tiesdell (1999) identify two types of floor planes within the city; the hard pavement and the soft landscape areas. Square's are categorized as a hard pavement area, since majority of the planned open space is paved (Moughtin 2003). The function of any paved area is to provide a hard, dry, non-slippery

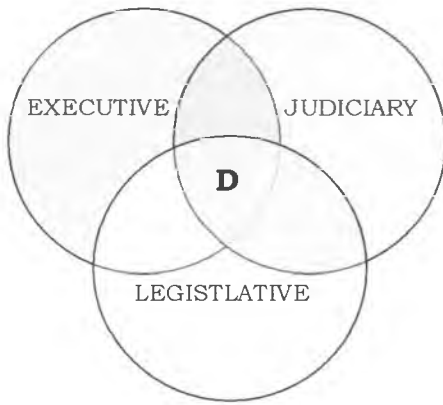
surface which can carry wheeled and pedestrian traffic. Soft landscape function is to introduce nature into the built environment. Paving can be designed to provide a sense of direction, the pavement patterns having the potential of becoming a language which can be read, memorized and impact meaning.

Paving design considerations are pattern, movement, uses, texture, drainage system, safety, durability, maintenance, context, character, permeability and flexibility as analysed by Dee (2011). Cost has also been brought out as a consideration by Moughtin, Taner and Tiesdell (1999). Ground materials and landscaping leading to a building entrance should be designed to minimize the potential soil and water into the building. Rough textured ground surfaces are appropriate at these areas, combined with landscaping that keeps soil and foliage away from the path of entry.

Patterning of the paving can be introduced to develop a decorative rhythm. The use of textured paving at road crossing points is essential to allow the blind and partially sighted to successfully negotiate dangerous points in the environment.

## **2.5 Literature Review: Summary**

The essence of democracy consists in the balance of power between the executive, legislative and judiciary (Figure 2:9).



**LEGEND**

**D** - Democracy

Figure 2:9 Democracy representation: Architecture should make it clear where it lies and how it works.  
Source Adopted from Jenks, 1987

Jenks and Valentine (1987) analyses of the history of democracy describe it as the superior form of government while politics the art of attaining and disposing power. The agora was brought out as a distinctive Greek mixture of public realm containing the bouleuterion. Roman republic absorbed the Greek agora ideas into a forum, a precursor of Washington D.C federal triangle typically a public square surrounded by monumental buildings.

Jenks (1987) further compares government building destructive nature to the urban fabric and sense of place with the shopping centre over the years destructive, pompous and sometimes even boring.

Vale (2006) and Moughtin (2003) urge that civic buildings should be in close proximity to one another for efficiency of operation. The buildings location on site was also brought out as important by

Davie western theme development manual (Anon 2008). The buildings should be sited in locations of particular geometric importance, such as anchoring a major public space or terminating a street vista as stated in.

In civic buildings placement Abuja's three arms zone is brought out by Elleh (1997) as a contradiction to the intentions for the city by being isolated in an exclusive zone of power making it intimidating as a place of public gathering. The mall Washington D.C mall design. National Capital Master Plan Dodoma, Tanzania (1974) planned to correct colonial social urban injustice and to centralize the capital city for the sake of development. Dodoma's Master Plan was more conservative and people oriented. It was equipped with a network of pedestrian pathways and mixed use on shared areas to echo their Ujamaa democracy.

The National Mall was the centerpiece of the 1901 McMillan Plan. Governmental buildings were arranged in a circle and the city was organized on a grid (Valentine 1987). In Kenya the 1948 Nairobi Master Plan proposed a civic centre as the reserved space for civic buildings. Particular stress was laid on planting of trees in the centre, subordinating majority of the centre's buildings to trees.

In civic building and transition space, buildings are to be spaced out in such a way as to permit full and meaningful integration with

other structures, spaces and the landscape (Simonds 1998). In designing transition space security has a fundamental role as, boundary definers. Accessibility within the transition spaces should be accommodative to able and physically challenged people; catering for a range of bodily difference according to Shakespeare (1998). Transition space, a building's foreground has physical definitions, exists somewhere and can be described as geographical coordinates with site plan references. The space also creates a visual impact impression of a building's entrance. As a transition space squares are probably the most important element in city design according to Lynch (1960) and Alexander (1987), by which a town or city is both decorated and given distinction.

In a square building's should form a continuous surface presenting an architectural unity. Moughtin (2003) notes that transition space can be strengthened using either colonnade, arcades as continuous features linking the ground floor of individual buildings in a covered walkway. This is an architectural feature first mentioned by Vitruvius in the way Greek designed their forum.

Nairobi City square offers an opportunity of interconnecting the Civic buildings transition spaces architecturally to each other and the square itself. The nature of the enclosing building's roofline, the height of enclosing building in relation to the space, voids

between the buildings, presence or absences of architectural defining elements and the overall shape are important qualities of the square and the surrounding buildings. Transition spaces are important in creating an integrated exterior and interior environment.

## **2.6 Conceptual framework**

The conceptual framework was a research tool intended to assist the researcher develop awareness and understanding of the situation under scrutiny and to communicate this. Transition spaces are products of planning and designing that reflect functional, symbolic and aesthetic considerations. In this study an attempt is made to find out the importance of civic building exterior transition spaces and how the city square can interconnect the civic buildings within its boundaries. The conceptual framework will be discussed under the following subtitles;

- relationship of variables
- conceptual and
- operational definitions.

### **2.6.1 Relationship of variables**

Variables refer to differences. They are attributes or qualities of the cases that are measurable or recordable. There are two major

forms of variables that is the independent and dependent variables. The independent variables are the causes. These are factors that explain variation in the dependent variable. Dependent variable is the outcome the research is attempting to predict or explain (Kombo and Tromp 2006 P.21). In the current study exterior transition space is the independent variable while civic building is the dependent variable. This is illustrated in (Figure 2:10).

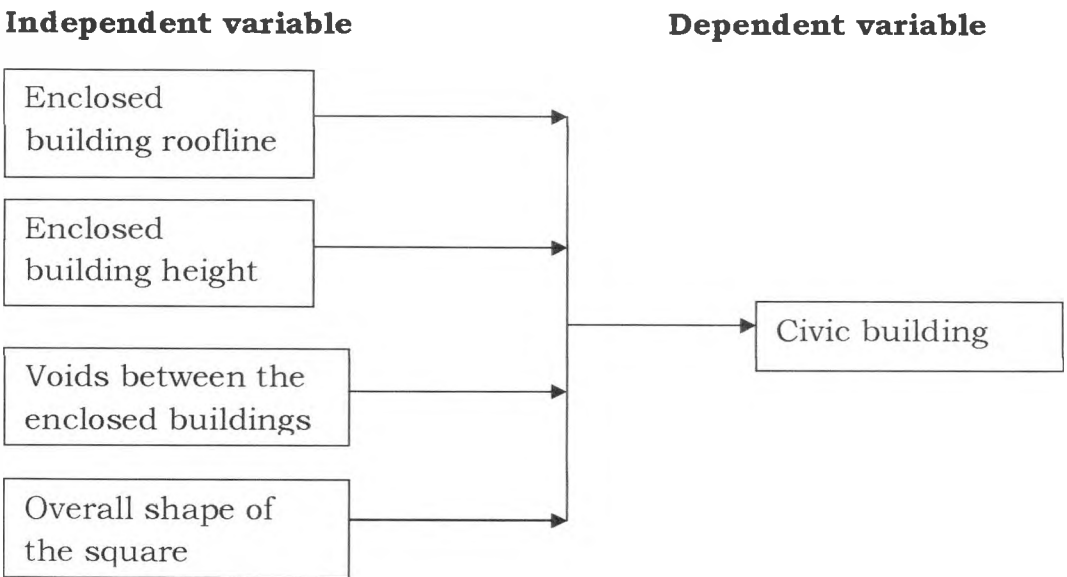


Figure 2:10 City square, as the exterior transition space is the independent variable. Source : Kinuthia 2011

### 2.6.2 Conceptual definition

Architecturally civic buildings can be described as typologies associated with function. To appreciate these buildings from their approach the transition space should not only be large enough or

small enough but of the right shape and spatial quality displaying the structure at its best. Such spaces are volumetric permitting full and meaningful relationship with other structures and the landscape. The importance of these spaces is to create a comfortable environment, integrating the exterior and the interior spaces.

### 2.6.3 Operational definition

Operational definition takes a variable from the theoretical or abstract to the concrete by defining the variable in specific terms used to measure or manipulate the variable (Marczyk et al. 2005). Transition space in the current study is the path from the gate to the building's entrance. This is illustrated in (Figure 2:11).

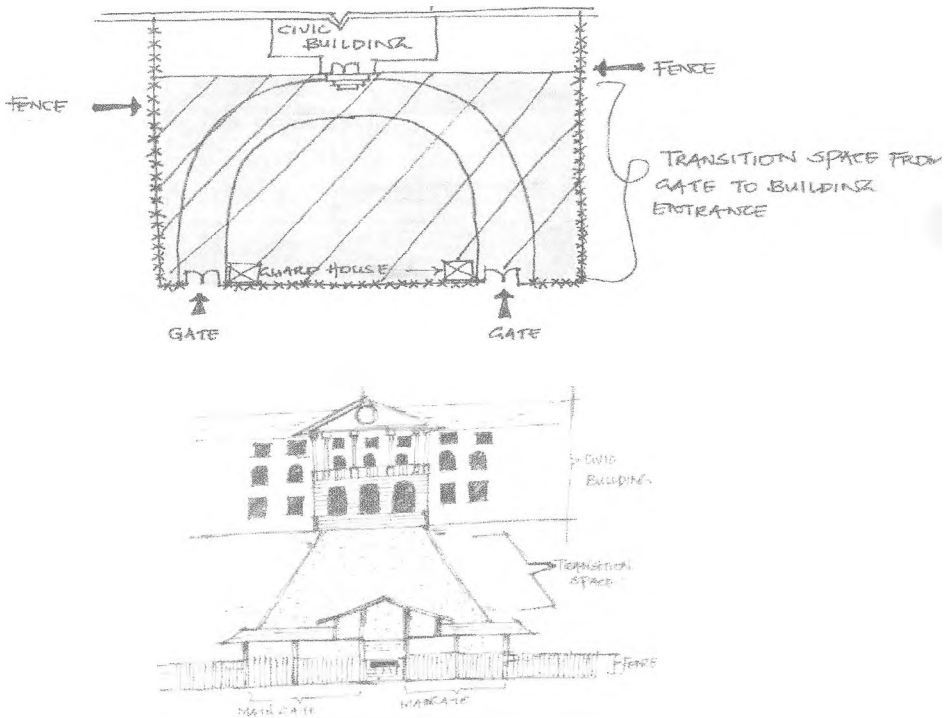


Figure 2:11 Transition space Operational definition.  
Source Kinuthia, 2011



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The purpose of research is to answer questions and acquire new knowledge. This chapter deals with the description of the method applied in carrying the research study systematically to solve the research problem. Qualitative research was appropriate to emphasize the cause and impact of the city square as a civic buildings transition space through descriptive case study analysis. The goal of the case study was to provide an accurate and complete description of the City square as the civic building transition space. The principal benefit of the study is to expand our knowledge about the variations in human behavior.

#### **3.1 Research design**

Yin (2003, P.20) colloquially defines research design as a logical plan for getting from here to there, where here may be defined as the initial set of questions to be answered, and there is some set of conclusion about these questions. Between “here” and “there” may be found a number of major steps, including the collection and analysis of relevant data. Kothari (1985, P.17) argues that the function of research design is to provide for the collection of

relevant evidence with minimal expenditure of effort, time and money.

The research design used in this study was descriptive case study. The case study design employed depended on, first the research questions; what are the architectural qualities of the city square and surrounding civic buildings, how does the city square enhance the civic buildings transition space interconnectivity, and the importance of exterior transition space architecturally. Secondly it depended on the lack of control over actual behavioural events as the researcher and thirdly on the fact that the focus was on a contemporary as opposed to a historic phenomena. The case study focused on one unit of analysis, transition space, but simultaneously takes account of the context, city square, encompassing many variables selected purposefully for being information rich.

### **3.1.1 Case study protocol**

Yin (2003) and Eisenhardt (1989) both highlighted the need for a case study protocol that is used as a guide in conducting case study research. According to Yin (2003) such a protocol should have the following sections;

- an overview of study
- field procedures

- case study questions and
- a guide for the case study report.

The case study protocol proposed here was formulated for this report; the structure and context are summarized in (Table 3:1).

Table 3: 1 Case study protocol outline.

<b>Section</b>	<b>Contents</b>	<b>Purpose</b>
General	<ul style="list-style-type: none"> <li>• Overview of research project ( chapter one)</li> </ul>	Provide a brief overview of the research project and case study method
Procedure	<ul style="list-style-type: none"> <li>• Research design</li> <li>• Research site</li> <li>• Sampling techniques</li> </ul>	Detailed description of the procedure for conducting the case.
Research instruments	<ul style="list-style-type: none"> <li>• Interview schedule utilizing open ended questions</li> <li>• Interview checklist</li> <li>• Observation checklist</li> </ul>	Research instruments developed utilizing guidelines by Yin (2003). It is recommended that research instruments be highly structured to facilitate the data collection process.
Data analysis guidelines	<ul style="list-style-type: none"> <li>• Conceptual framework               <ul style="list-style-type: none"> <li>➤ Relationship of variables</li> <li>➤ Conceptual definition</li> <li>➤ Operational definition</li> </ul> </li> <li>• Overview of data analysis</li> </ul>	Guidelines for data analysis based on guidelines provided by Miles and Huberman (1994) and Yin (2003).

	process <ul style="list-style-type: none"> <li>• Qualitative analysis             <ul style="list-style-type: none"> <li>➤ Contextual spatial analysis</li> <li>➤ Descriptive analysis</li> <li>➤ Comparative analysis</li> </ul> </li> </ul>	
Appendices	<ul style="list-style-type: none"> <li>• Interview schedule</li> <li>• Interview checklist</li> <li>• Observation checklist</li> </ul>	Template schedule and checklists for data collection.

Source: Kinuthia, 2011.

### **3.2 Sampling design**

The aim of sampling is to save time and effort, but also to obtain consistent and unbiased estimates of the population status in relation to the research problem (Sapsford and Jupp 1996, P.25). The unit of analysis was external transition spaces of the civic buildings within the city square. The buildings were analysed as structures defining the Square. The people interviewed included building users to get their perception of the civic structure and the square, Ministry of Public Works architects and local authority architects (Urban Design and Development section) as custodians of the civic buildings. Town Planner from the Ministry of Nairobi Metropolitan Development to expound on the contemporary nature of the square verse the 1948 concept. Safer cities highlighted security issues.

### **3.2.1 Research site**

The study was carried out in central business district, Nairobi. Purposive sampling was used to select CBD since it's the heart of the Kenya's government, housing majority of civic buildings in Nairobi. In the CBD, the city square was purposively selected as the study site.

### **3.2.2 Target population**

Due to its proximity and the number of civic buildings framing it, the city square is a rich research area with a good target population of nine civic buildings namely; Attorney General Chambers/State Law Office, Sheria House, Harambee House, Public Service Commission Building, Old Treasury/Foreign Affairs Office, KICC, Jogoo House A and B, High Courts. City Hall Building, Holy Basilica and Parliament Buildings are still civic buildings but cut off by City Hall Way and Parliament Road respectively, enclose the square on the northern and western side.



Figure 3: 1 City square, research site bordered by City Hall Way, Taifa Road, Harambee Avenue and Parliament Road.

Source: [www.googleearth.nairobi.com](http://www.googleearth.nairobi.com), 2011

### **3.3 Research tools**

The span, time allocation and objective of the study dictates observation and conducting personal interviews to be the main research instruments. The same open-ended questions (Appendix A) were asked to all interviewees, to facilitate faster interviews that can be easily analysed and compared, while a structured observation list (Appendix C) was formulated from the literature review summary to provide a structured way to directly observe. Both instruments were semi structured allowing the researcher to be an onlooker and also question researcher preconceptions. Data was collected in a descriptive account to help understand the architectural qualities of the square as the transition space and surrounding building highlighted in the literature review.

### **3.4 Data collection**

The procedure employed in data collection during the study were; primary and secondary data. Primary data is first hand information, collected afresh and for the first time. The secondary data is the one from previous studies conducted on the same or similar study and act as guides in the study. Secondary data was important in the theoretical understanding of the study area. (Table 3.1) correlates the instrument, data needs, data source and variables assessed. Multiple source of evidence obtained facilitated

triangulation, field observation, interviews, review of historic account - reports, journals, books, the internet all triangulated on the same set of research questions.

Table 3: 2 Correlated data collection instrument, needs, source and variables assessed.

<b>Instrument</b>	<b>Data needs</b>	<b>Data source</b>	<b>Variable assessed</b>
Observation	<ul style="list-style-type: none"> <li>• Nature of the enclosing building</li> <li>• Height of building in relation to size of square</li> <li>• Degree of three dimensional modeling</li> <li>• Presence or absence of architectural defining elements</li> </ul>	<ul style="list-style-type: none"> <li>• Site plan</li> <li>• GIS map</li> <li>• Photographs</li> <li>• Sketches</li> <li>• Building users</li> <li>• Architects</li> <li>• Urban planners</li> <li>• Civic society (safer cities)</li> </ul>	<ul style="list-style-type: none"> <li>• Building's roofline</li> <li>• Buildings height</li> <li>• Void between buildings</li> <li>• Ground surface texture, lawns, footpath number and width, vehicular access, water features, gates and boundary fences</li> </ul>
Interviews	<ul style="list-style-type: none"> <li>• Overall shape of the space</li> <li>• Peoples attitude,</li> </ul>		

	opinion and needs		
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Source: Kinuthia, 2011

### **3.5 Data analysis and presentation**

Data analysis is a practice in which raw data is ordered and organized so that useful information can be extracted, suggesting conclusions and supporting decision making. The analysis of data and interpretation of result is necessary to build up an intellectual model where relationships involved are brought out carefully to draw informed inferences, also to ensure that results are seen in light of the set objectives. Data analysis entailed data verification and representation and was done through qualitative analysis method. Familiarity with various tools and manipulation techniques in case study is helpful according to Yin (2003), each case study should have a general analytic strategy defining priorities for what to analyze and why. Of the three strategies highlighted by Yin (2003) namely; theoretical propositions, rival explanation framework and developing case descriptions.

#### **3.5.1 Qualitative analysis**

This form of research involved description seeking to describe and analyze exterior civic building transition spaces, a case study of the Nairobi City square. Qualitative research was appropriate to



emphasize the cause and impact of a functional civic buildings transition space. This included computation of maps, photographs, diagrams and textual write-ups, designed to refine and distill the data collected. Data analysis techniques used are as contextual spatial analysis, descriptive analysis and comparative analysis.

**Contextual spatial analysis:** This involved physical mapping of the civic square and defining the civic buildings using geographical information system (GIS), site plans and photos to bring out the site plan of the square's overall shape (figure 3:3).

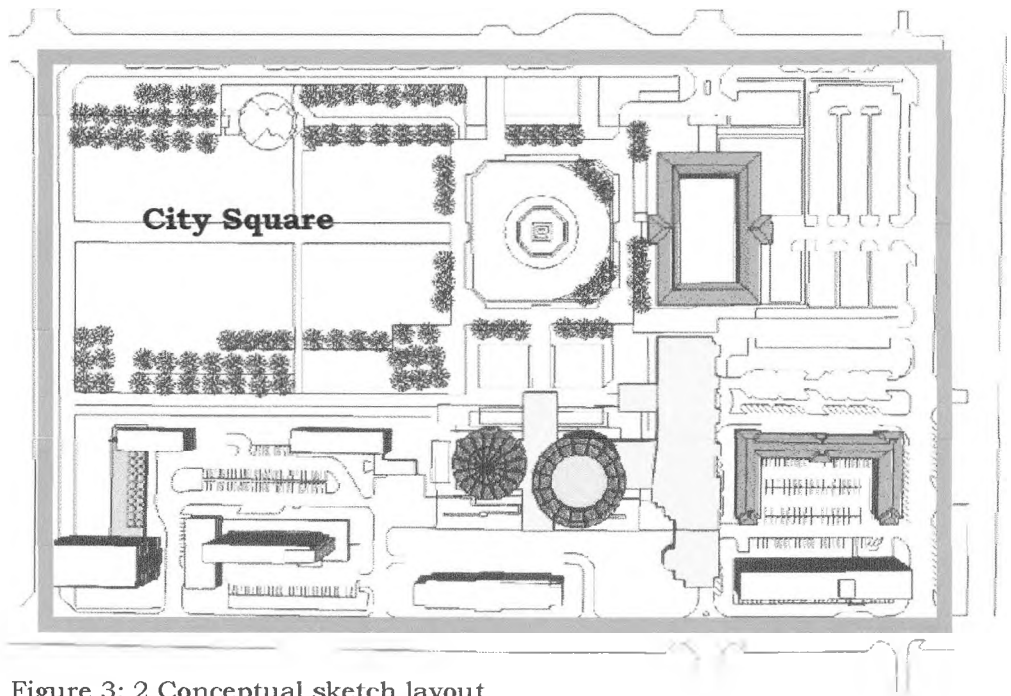


Figure 3: 2 Conceptual sketch layout.

Source Kinuthia, 2011.

**Descriptive analysis:** This involved main studied civic building inventory describing the relationship between the civic structures

and the square, providing simple summary about user analysis and the attitude of designers/professionals.

**Comparative analysis:** This involved a brief comparison of the Nairobi civic building placement with Dodoma and Abuja Civic building placements.

### **3.5.2 Data presentation**

Data presentation was done descriptively using maps, photos, sketches, tables and analytical diagrams that simplify the data for ease of understanding and interpretation.

## **CHAPTER FOUR**

### **DATA ANALYSIS**

#### **4.0 Introduction**

Volume in architecture can be seen to be either a portion of space contained and defined by walls, floor and ceiling, or a quantity of space displaced by the mass of a building (Ching 2007). The study analysed the quantity of space displaced, defining the exterior transition spaces. The civic buildings chosen for study framed the city square i.e.; State Law Office/Attorney General's Office, SheriaHouse, Harambee House, Public Service Commission Building, Old Treasury Building/Ministry of Foreign Affairs, Kenyatta International Conference Centre, Jogoo House A and B, High Court, City Hall, Parliament Building, the late Mzee Jomo Kenyatta's mausoleum, Holy Family Basilica and Garden Square Restaurant.

The buildings exterior transition spaces were descriptively analysed against the city square as an exterior transition space. The descriptive analysis limited itself to physical perceptible objects. The main objective was to uncover the role of the transition spaces. Figure 4:1 mapped out the city square from an urban context within Nairobi County/City and its central business district.

Nairobi County



Nairobi central business district map

Nairobi City square

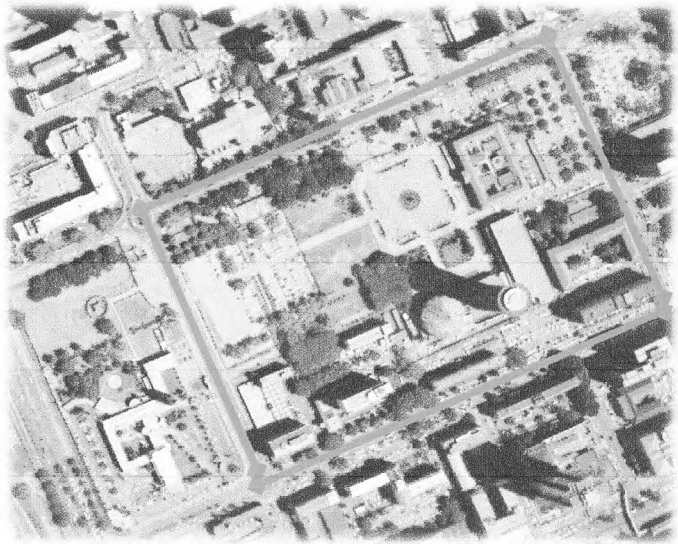


Figure 4:1 City Square contextual spatial analysis.  
Source: Field Survey, 2011

### 4.1 Transition spaces

Exterior building transition spaces are necessary to physically separate an entrance from other areas. The spaces are neither indoors nor outdoors, and allows for a slow change between the two. The buildings' exterior transition spaces and the city square were analyzed against the independent variables and the spaces attributes highlighted in chapter three of this report and Table 4:1.

Table 4: 1Transition spaces outline analysis.

<b>Transition spaces attributes</b>	<b>Independent variables</b>
<ul style="list-style-type: none"> <li>• Human scale; the built environment being close in size to the human body.</li> <li>• Character of the buildings.</li> <li>• Activities carried out in the transition spaces.</li> <li>• Accessibility to able and physically challenged people at all times.</li> <li>• Security: as exhibited by symbolic and real boundary definers' elements.</li> </ul>	<ul style="list-style-type: none"> <li>• Enclosed buildings roofline</li> <li>• Enclosed buildings height</li> <li>• Voids between enclosed building</li> <li>• Overall shape of square.</li> </ul>

Source: Kinuthia, 2011.

## **4.2 Contextual and spatial analysis**

### **4.2.1 Architectural elements definers**

In the analysis, architectural elements are the physical components that define the exterior transition spaces. The civic buildings were analysed as the main component since they were the main defining components. The buildings spatial design goal is to create a series of highly dynamic, coherent and intuitive spaces, to foster frequent and meaningful contact between citizens and also encourage an increasingly diverse population to use them. Figure 4.2 shows the building inventory and Table 4:2 analyses of the architectural elements identified in the study site.

### **4.2.2 Open spaces interconnectivity**

The symbolic effect of the seat of Kenyan government was brought out in the city square. Grouping the civic buildings around the square created a dominant unified urban form and also allowed interconnectivity of the open spaces; the physical interconnectivity enriched the city square as a transition space. The interconnectivity identified was pedestrian routes. The open spaces were architecturally designed with intricate footpath systems. Based on the transition spaces attributes the interconnectivity of the buildings transition spaces with city square were analyzed as shown on Figure 4:3 and Table 4:3.



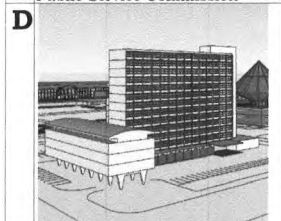
Sheria House



State Law/ Attorney General Office.



Public Service Commission



Harambee House: Office of the President ( Executive arm)



Old Treasury Building/ Ministry of Foreign Affairs



Kenyatta International Conference Centre (KICC)

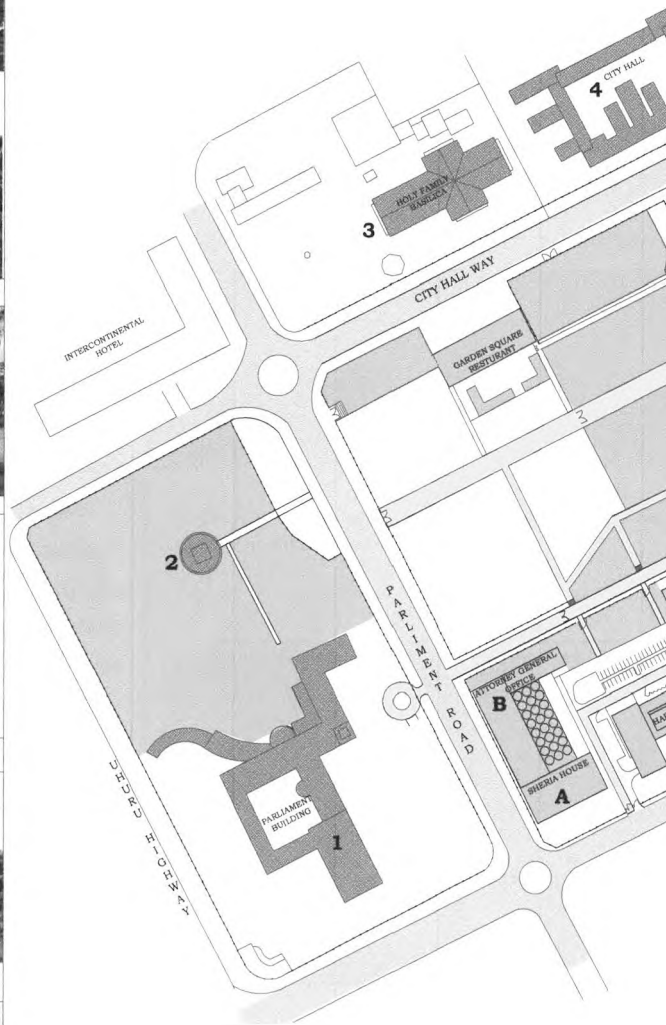
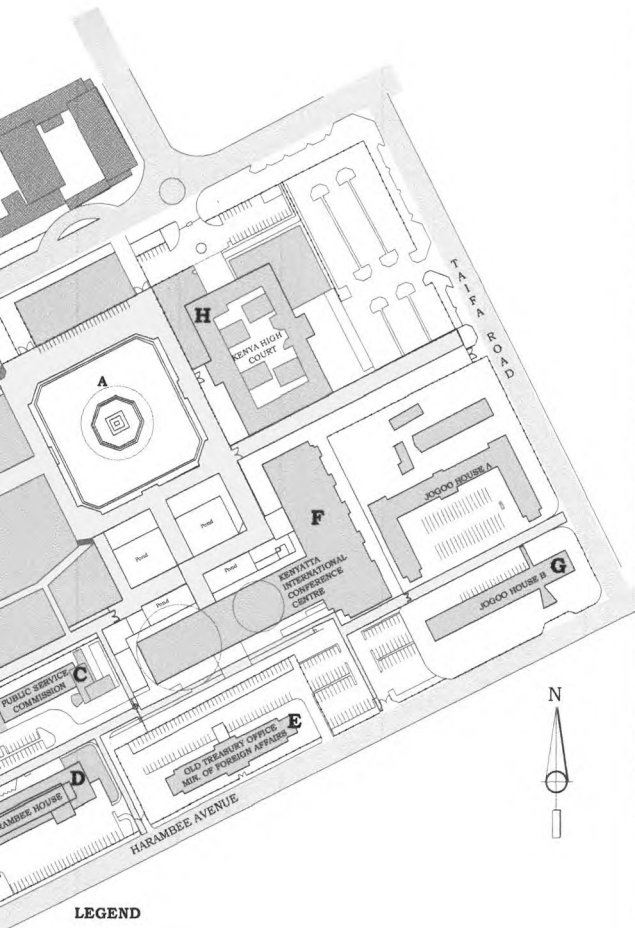





Figure 4:2 Buildings inventory.  
Source Field survey, 2011.



**LEGEND**

Streets/Roads

-  MAIN STUDIED CIVIC BUILDING (A-H)
-  MINOR STUDIED CIVIC BUILDING (1-4)
-  LAWN



**G**  
Jogoo House view from Harambee Avenue and Taifa Road junction. Jogoo House A 10 storeys towers Jogoo House B 5 storey building. The architectural language is different.



**H**  
Kenya Supreme High Court



**1**  
Parliament Building: Legislative arm



**2**  
The late Mzee Jomo Kenyatta's Mausoleum



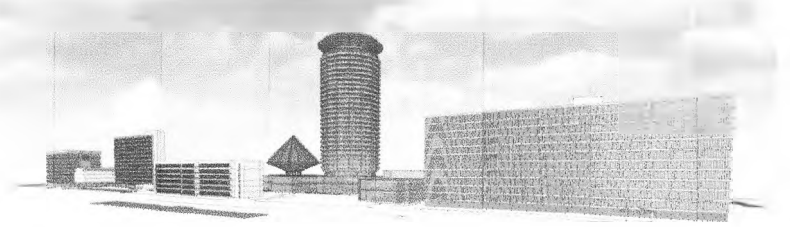
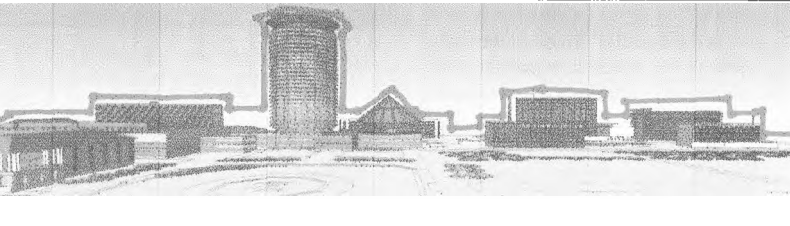
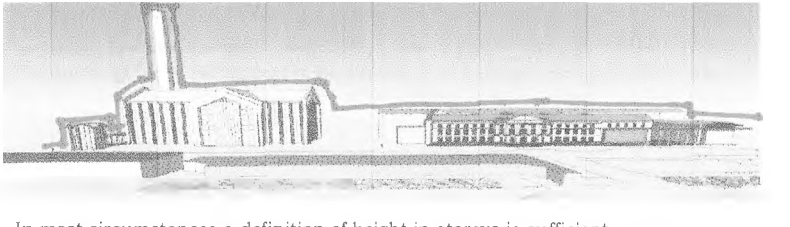
**3**  
Holy Family Basilica



**4**  
City Hall Building



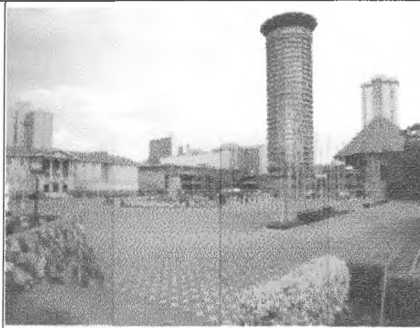
**Table 4: 2 Architectural elements that define the civic buildings transition spaces**

Transition spaces attributes	Variable assessed	Photographs/illustrations of architectural elements	Analysis
<ul style="list-style-type: none"> <li>• <b>Human scale</b></li> <li>• <b>Character</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Buildings' rooflines</b></li> <li>• <b>Buildings' heights</b></li> </ul> <p>Within Nairobi CBD boundaries there was a rich variety of townscape that has evolved over time. Majority of the built form were relatively high rise.</p> <p>Importance of Nairobi City was to some extent reflected in the existing clustered high buildings.</p>	 <p>Buildings' heights reflect the character and urban form of the surrounding area.</p>  <p>Buildings' heights are normally expressed in two ways, either in the number of storeys or absolute meters.</p>  <p>In most circumstances a definition of height in storeys is sufficient.</p>	<ul style="list-style-type: none"> <li>• Seeing the details of a building are best achieved at a distance equal to the largest dimension of the building, the eye can be moved horizontally, the critical dimension is the height.</li> <li>• The nature of the buildings that enclosed the city square contributed largely to defining the character of the transition spaces; the varying building heights created different scales and character of the transition spaces.</li> <li>• The roofline profiled created a magnetic effect to the viewer due to the aforementioned attributes, thus attracted the eye to the contrast.</li> <li>• The city square was an area characterized by civic buildings ranging from two to thirty storeys in height. The actual floor-to-floor height varied between the different civic buildings due to function, uses or design considerations. High Court building façade completed the shorter side while KICC building façade framed the taller side, at the same time decorated Nairobi's skyline.</li> </ul>

- **Character**
- **Accessibility**

**Voids between buildings**

Civic buildings were necessary for exercising the tasks of the government. Since the public interest prevails the buildings' roles were mostly social



K.I.C.C building plaza: the repeated pavement design added to the spaces aesthetic character.



The space defined by State Law Office, Harambee House, Public Service Commission and Sheria House was poorly designed to cater for pedestrian and vehicular circulation



The civic buildings played an important role in defining the enclosed space.



The buildings' steel railing fences were intentional to create civic buildings edges identity and offer security. The types of fence were largely governed by the degree of screening, security, strength required and cost.

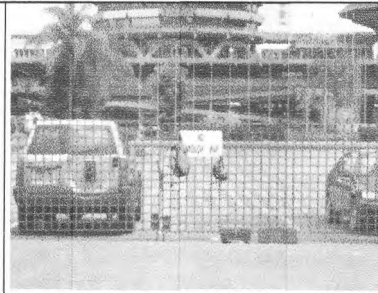
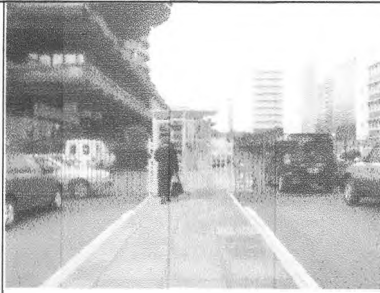
- Architecturally the transition spaces of the civic buildings were interconnected, but due to the nature of business/functions of the buildings, time, users' needs and property demarcation the designed interconnection routes were controlled or permanently locked. Apart from Kenyatta International Conference Centre all the other civic building used the square as rear entrance.

- Scored on the three forms of access set out by Carr et.al (1992), this is the civic buildings fares;
  - Visual access: people could see the building structure but were restricted on how and when to use them. They did not feel welcomed by the intimidating atmosphere.
  - Physical access: the general public was allowed restricted access on official matters.
  - Symbolic access: the animated objects (security guards and police) as well as inanimate objects (no way through signs, steel fencing, and locked gates) were a menace rather than inviting.

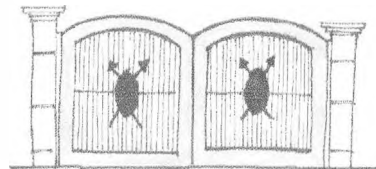
- **Security**
- **Accessibility**

Real and symbolic barriers

Barriers should be light and visually as transparent as possible whilst still achieving the necessary separation.



Controlled access to K.I.C.C building with real barriers, a revolved access controlled gate and a locked gate with a no through way communication.



Uniformed patrol guards

Shield concept gate, the shield design added interest to the surround. Traditionally the shield is a tool of defense.



Old Treasury/ Ministry of Foreign Affairs vehicular entrance security gate. The steel fence allowed uninterrupted vision from Harambee Avenue.

High Court gate 1; public entrance transition void exhibited security, grandeur and a feeling of justice.

- Security should not be an overriding factor in designing the buildings' transition spaces. The gates and rising barriers were used to control access through the fences.
- Security within the city square was in three main forms, i.e. physical barriers, uniformed patrol and electronic security surveillance
  - ✓ The physical barriers, i.e. fences and gates allowed uninterrupted vision. It was important not to obstruct sight lines. Gates' designs were used to add interest to their surroundings and also extended the structure promotional activities, largely to very good effect.
  - ✓ The uniformed patrolling were at best a reassurance and a fear reducer that acted as deterrent to the-would-be offender.
  - ✓ CCTVs were distinctively designed within parts of the square at strategic points instead of uniformed patrolling.

• **Accessibility**

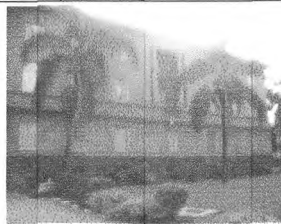
Ground surface, lawns, footpaths, vehicular access, landscaping features.



K.I.C.C paving blocks ground surface. Consistent use of the paving materials and pattern developed a decorative rhythm.



State Law office tarmac ground surface formed a continuous monotonous hard landscape



High court lawns had limited access and were fenced off from the public creating only visual linkage. The lawns were occasionally used by staff for outdoor activities for example launching of their strategic plan.



High Courts concrete pavement blocks proved an anti-slip finish.



The short steps separating the transition space with the building's screening area that led to the entrance of the High Court were symbolic barriers.

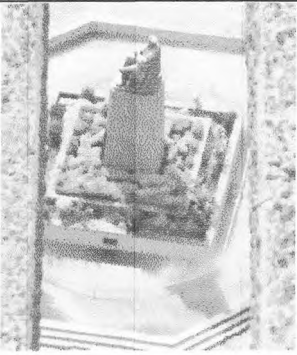
- The pavement slabs or tarmac leading to the buildings' entrances were appropriate to keep soil away from the buildings interiors. Kenyatta International Conference Centre change of texture and colour of the pavement slabs added to the aesthetic aspect of the space, reduced monotony and directed the eye towards the built structures.
- For clearly defined footpaths Kenyatta International Conference Centre stood out. The footpaths were also used as vehicular circulation and were wide enough to accommodate both circulations. K.I.C.C also boasted of a landscaped transition space through its plaza.



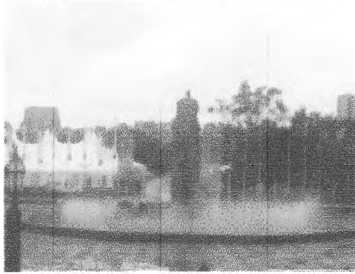
K.I.C.C entry water ponds provided distinct and contrasted effect with the hard landscape.



High Court the naked blind boy clutching a fish portray justice as naked, blind and slippery like fish



- Presence of water features was an invaluable asset particularly in the manmade environment; the moving water had inestimable value that provided natural stimuli through High Court and K.I.C.C plaza transition space.



The Late Mzee Jomo Kenyatta statue and fountain focal point.

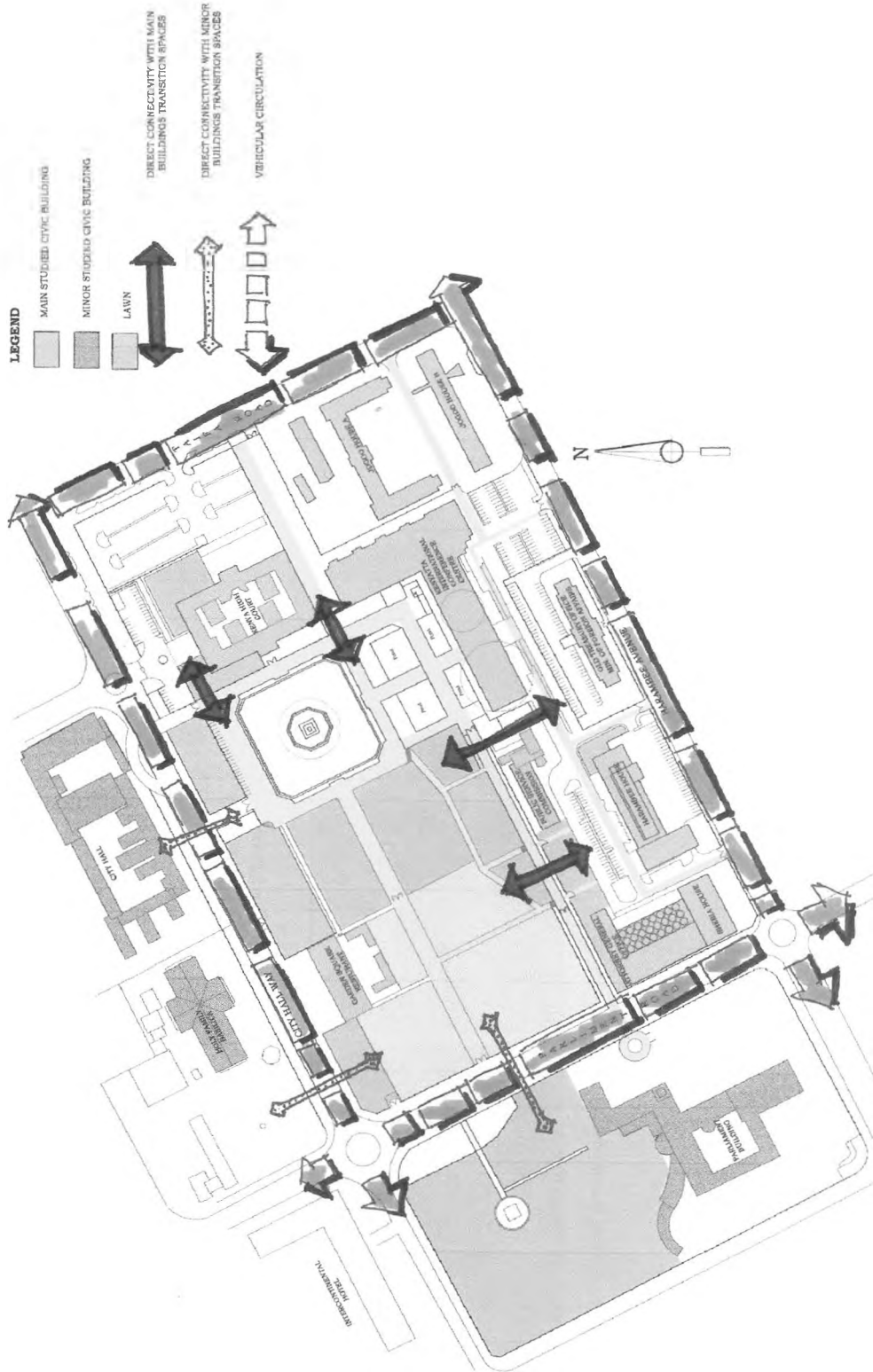

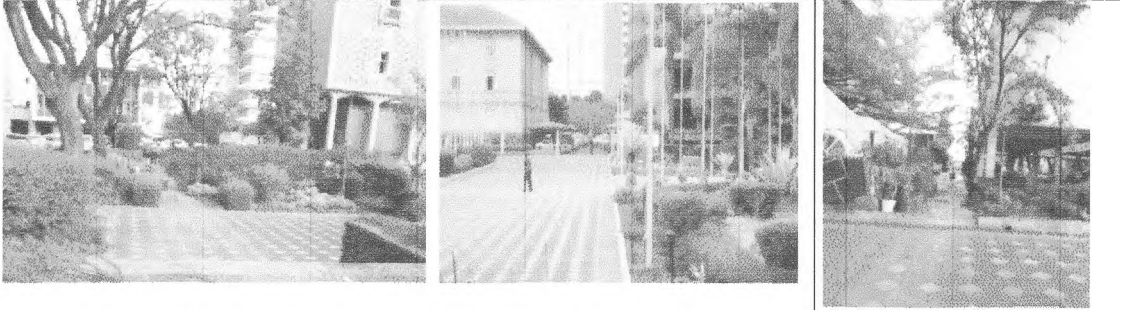


Figure 4:3 Interconnectivity analysis.

Source Field survey, 2011

Table 4:3 Architectural interconnectivity of civic buildings' transition spaces with city square.

Transition spaces attributes	Photographs	Analysis
<p><b>Human scale</b></p> <ul style="list-style-type: none"> <li>• These were the elements that permitted positive feeling by being 'close in size' to the human body</li> </ul> <p><b>Accessibility Security</b></p>	<p>Footpaths; these were the predominant elements designed to enable people observe the open spaces while moving through it.</p>  <p>City Square foot paths lead to the civic buildings' transition spaces, kerbs and hedges clearly defined the paths. The hedges were also effective deterrent which discouraged pedestrian passage. Ground material were worn out due to non maintenance.</p>	<ul style="list-style-type: none"> <li>• City square had an intricate system of paths that led to the civic buildings. The paths were wide enough from 2000mm. They catered for a range of bodily differences.</li> <li>• Due to mainly security concerns, most of the paths have been permanently locked.</li> <li>• The civic buildings' facades, footpath kerbs, lawns and ponds gave the footpaths a continuous character.</li> </ul>
	 <p>Permanently locked and access controlled path access point.</p> <p>The only open inter connecting path from the square to the civic buildings' transition spaces. A restaurant occupied part of the path's width.</p>	





K.I.C.C plaza well defined paths and water ponds contributed to the buildings grand entrance architecturally.

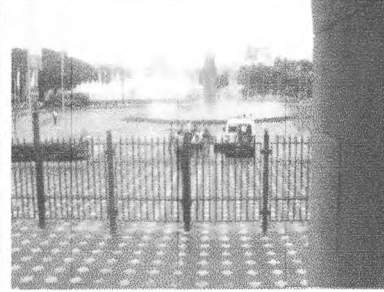
Security: Real boundary definers' elements



The gates and fences restricted movement and controlled security.



High Court gates and fence had visual connectivity.



- The steel fences and gates were edges within the study area erected to restrict and control interconnectivity.
- All the civic buildings that enclosed the city square were fenced off.
- From the interviewed Ministry of Public Works architects and City Council of Nairobi officers, the edges were erected to demarcate each building's plot size.

### 4.2.3 Transitions space activities

Activity in the square was important for its vitality and visual attraction. It was important to understand the design concepts effective in the particular setting. For Nairobi on the tropics and few miles from the equator (Figure 4:4) it was importance to subordinate majority of the buildings with trees as stated in the Nairobi Master Plan 1948 (White, Silberman and Anderson, 1948 p.58).



Figure 4:4 Map of Kenya illustrating the relation of the equator and Nairobi City.

Source [Image online] Available at: <<http://www.worldatlas.com>> [Accessed on 18<sup>th</sup> November 2011]

The square represented a psychological parking place within the civic landscape. It created a gathering place for the people, humanizing them by mutual contact and providing them with a shelter against the haphazard traffic. It also freed them from the tension of rushing through the web of streets.

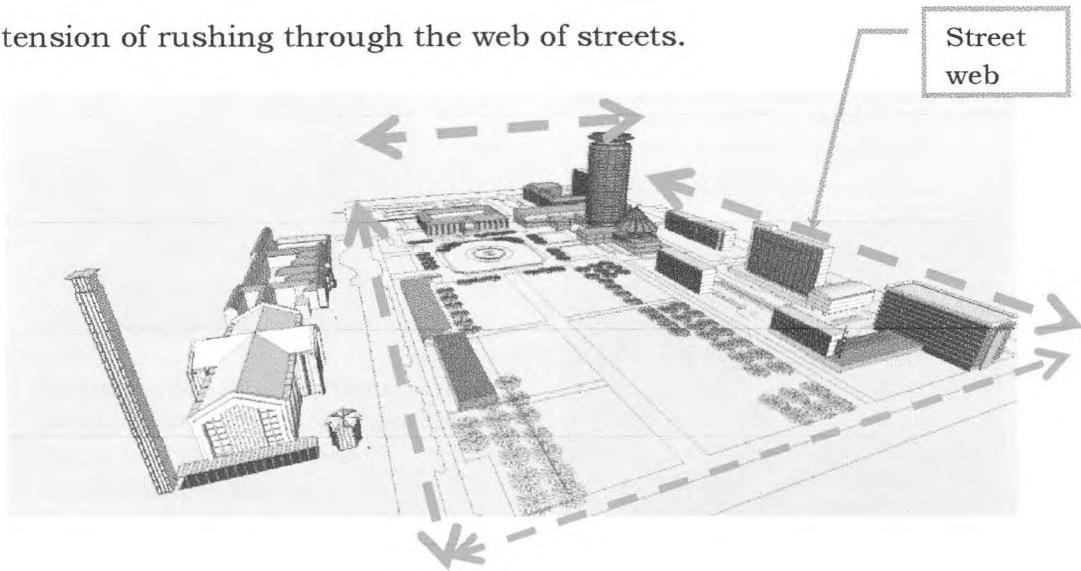


Figure 4:5 City square psychological parking place.

Source Field survey, 2011

Activities carried out in the transition spaces are mainly dependant on the nature of buildings. The buildings' transitions are pedestrian and vehicular circulation areas. Due to their small scale and competition between vehicular and pedestrian circulation the spaces did not enhance the civic buildings' beauty, apart from Kenyatta International Conference Centre, if accessed through its plaza. It was also the same in directional clarity that led to the building's entrance from the transition spaces.

Table 4: 4 Transition spaces' activities.



Sheria House, Attorney General's Office/ State Law Office, Harambee House and Public Service Commission Buildings.



Kenyatta International Conference Centre transition space from Harambee Avenue

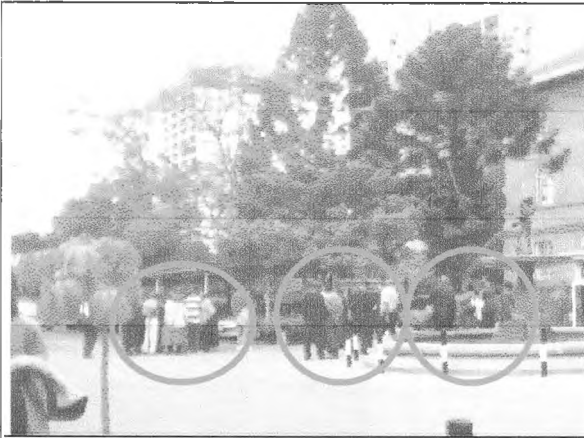


High Court's transition space.

Vehecular circulation and parking are the dominant activities within the spaces.



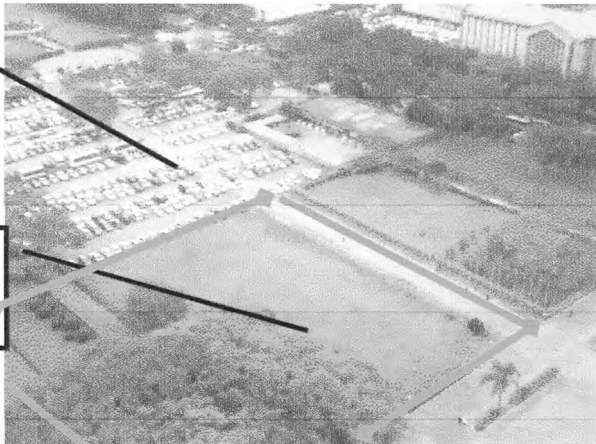
High Court's lawns were occasionally used for internal functions by staff.



During working hours people gathered in groups within the High Court transition space.

Car parking area

Comesa Grounds



K.I.C.C Comesa grounds is multi functional, part of it is a busy traffic island which is used as a car parking area. The lawn area is a hiring ground for different functions. The grounds encourage public interaction.



President Kibaki flagged off the Kenya Commercial Bank 2011 safari rally at K.I.C.C grounds.

Source [Image online] Available at: <<http://www.watalii.com>. [Accessed on 10<sup>th</sup> November 2011



Kenyatta International Conference Centre is a major landmark within the City Square and Nairobi City. The structure acts as a photo backdrop for locals and tourists.

Source Field survey, 2011.

#### **4.2.4 The relationship between city square and civic building transition spaces.**

In the built composition there is need to emphasize some parts and subordinate others In this way a relationship is established between the different elements of the composition. The emphasis and subordination of the composition formed a continuous surface and presented to the viewer an architectural unity. City square was characterized by the clustered civic buildings and the Intercontinental Hotel. High Court, Kenyatta International Conference Centre, Public Service Commission Building and State Law/Attorney General Office opened directly to the square while Harambee House and Sheria House related to the open space. Jogoo house A, B and Old Treasury Building did not relate to the square's open space. The other buildings that form the square's enclosure were Parliament Building, the late Mzee Jomo Kenyatta's

mausoleum, Holy Family Basilica and City Hall Building but they were cut off by Parliament Road and City Hall Way respectively.

The physical and visual relationship of the transition spaces and the city square depended on the architectural elements that defined the open spaces. The footpaths formed the basis of the physical relationship. The designed footpaths from the city square to the transition spaces offered a variety of routes to the pedestrian users.

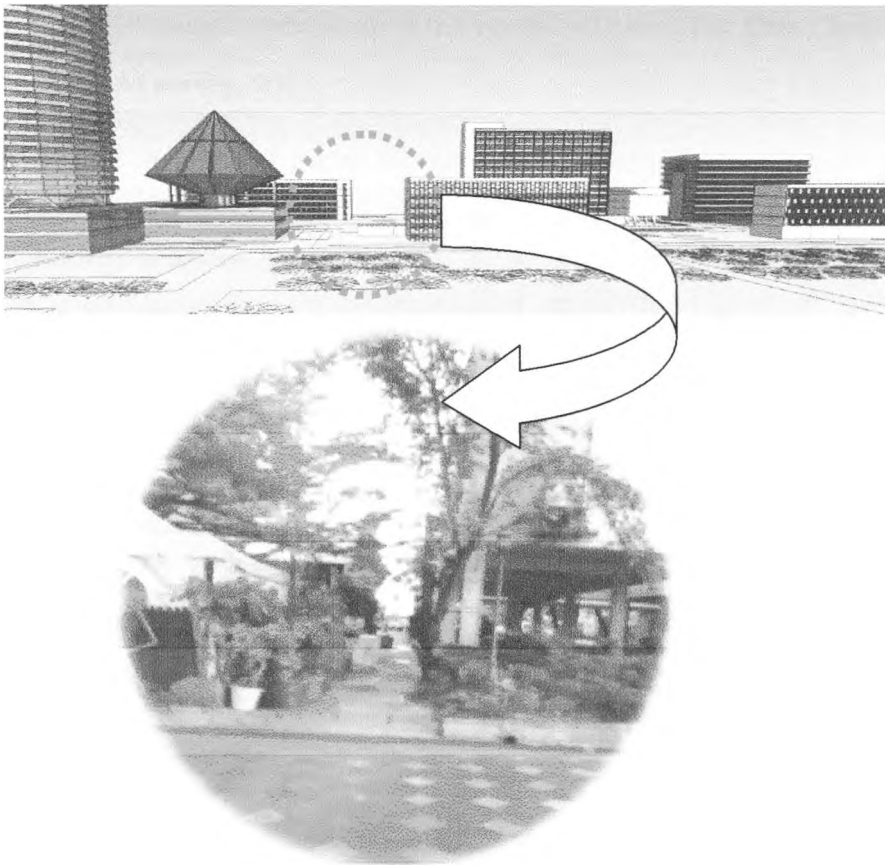


Figure 4:6 Physical relationship of the square with the buildings, transition spaces through Public Service Commission Building and KICC Building



Figure 4:7 Physical relationship of the square with the High Court Building transition space.

Source Field survey, 2011

The steel fence and gates formed the visual relationship.

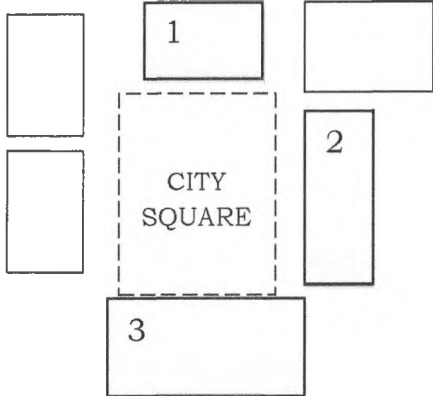

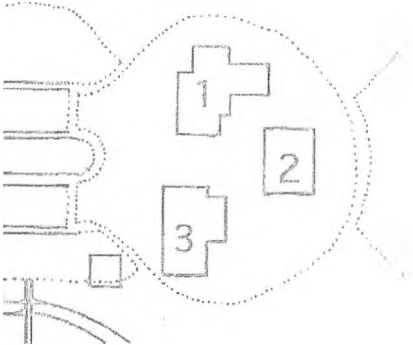
## **4.3Comparative Analysis**

### **4.3.1 Building placement comparative analysis**

Nairobi civic building placement was compared with Dodoma's and Abuja's civic building placement, their master plans proposal were their source of comparison as shown in Table 4:5.



**Table 4: 5 Buildings placement comparative analysis**

County	Kenya	Tanzania	Nigeria
Seat of government City	Nairobi 1948	Dodoma 1973	Abuja
Civic building design organization	<p data-bbox="343 216 710 248">Civic centre: city square</p>  <p data-bbox="363 738 782 834">(1)The Supreme Court, (2),Harambee House Office of the President (3) National Assembly</p> <ul data-bbox="343 890 691 956" style="list-style-type: none"> <li>• Clustered buildings organization</li> </ul>	<p data-bbox="832 216 1006 248">Mixed used</p>  <p data-bbox="846 738 1251 834">(1)Parliament Buildings and National Headquarters, (2) High Court</p> <ul data-bbox="832 890 1290 993" style="list-style-type: none"> <li>• Linear buildings organization closely related to Processional Way</li> </ul>	<p data-bbox="1336 216 1812 248">National Mall: three arms zone</p>  <p data-bbox="1367 731 1779 828">(1) Aso Castle –the Presidential Complex, (2) National Assembly, (3) The Supreme Court.</p> <ul data-bbox="1336 890 1831 918" style="list-style-type: none"> <li>• Zoned buildings organization</li> </ul>

	<ul style="list-style-type: none"> <li>• The civic buildings were planned in their own tree shaded surroundings freely planted to allow the most appropriate building shape and orientation to suit any purpose.</li> </ul>	<ul style="list-style-type: none"> <li>• Carefully modulated and articulated to human scale, between three and four storeys in height.</li> <li>• The plan advocated for socialism and self-reliance man-made structures integrated with the natural landscape.</li> </ul>	<ul style="list-style-type: none"> <li>• Abuja Mall's width matched the grand proposition of the building franking it; to mimic Washington D.C. Zoning was a major functional catalyst.</li> <li>• It was envisioned as a monumental city with a central axis leading to the three arms zone, the three arms of government located at the foot of Aso Hill.</li> </ul>
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Source White, Silberman and Anderson, 1948, Limited, 1976 and Elleh, 1997.

#### 4.4 Summary of findings

The civic building transition space is more than a building's foreground. It creates a visual impact impression of the entrance. Analysis of the transition spaces and the city square found the following based on the research questions (Table 4:6)

Table 4:6 Research questions and summary of findings in the field

	<b>Research questions</b>	<b>Summary of findings</b>
1	Architectural defining elements?	<ul style="list-style-type: none"> <li>• The transition spaces were well defined architecturally; the civic buildings played an important role of enclosing the city square and formed voids within the study area.</li> <li>• The hard landscaped features i.e. the barriers and the ground material were visible and reinforced the definition of the spaces.</li> <li>• The gate and fences formed an identity of the structures within the central business district</li> <li>• Water features/structures played focal role to the landscape. In addition to their cultural and aesthetic intentions, the sculptures also provided orientation functions.</li> <li>• The late Mzee Jomo Kenyatta statue water fountain evoked government memories of the former president rule.</li> </ul>

2	Architectural Interconnectivity of the civic buildings' transition spaces with the square?	<ul style="list-style-type: none"> <li>• It was evident that the number of alternative interconnectivity routes through the buildings' transition spaces to the city square were considered early in design.</li> <li>• There is at least one direct physical route from the buildings' transition spaces to the city square. Apart from Kenyatta International Conference Centre the other eight studied buildings use the square as a back entrance, mainly used by staff.</li> <li>• Security concern was the major reason for limited or no interconnectivity between the transition spaces.</li> </ul>
3	Transitions' spaces activities?	<ul style="list-style-type: none"> <li>• The buildings' transition spaces were mainly car parking areas during working hours. There was little space let for the pedestrian apart from circulation footpaths.</li> <li>• Users of the civic buildings seeking services would gather in groups as they waited to be served. For example in the High Court transition space people gathered in groups after or before a hearing.</li> </ul>
4	Relationship between the Square and transition spaces	<ul style="list-style-type: none"> <li>• The square and transition spaces were visually connected; the employed barriers were visually as transparent as possible whilst still achieving the necessary separation and security.</li> <li>• The square and transition spaces were also</li> </ul>

		<p>physically connected; existing footpaths were designed for the spaces to interrelate.</p> <ul style="list-style-type: none"><li>• Due to the limited areas of the buildings' transition spaces, city square offered an open space that could be used to support the civic buildings activities such as gathering areas or rest areas for the users.</li></ul>
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Source Field survey, 2011

## **CHAPTER FIVE**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusion**

Civic buildings' exterior transition spaces should be architecturally responsive to the users' human scale, accessible to able and physically challenged people and secure at all times. Nairobi's civic buildings' functions and character enhance these transition spaces. In response to the human scale the varying buildings' heights and rooflines created different scales and character of the transition spaces. Due to their limited volumetric spaces there is pedestrian and vehicular circulation conflict. The role of footpaths is to ensure clear directional clarity from the gate to the building's entrance. These elements also permit positive feeling by being close in size to the human body.

Providing continuous and free from obstruction access route is the most important way of ensuring the civic buildings' exterior transition spaces and the city square's interconnectivity. The design consideration of these spaces should emphasize the architectural defining elements identified in the data analysis. Understanding the different types of human impairment and how they might affect access route is also necessary in order to create usable exterior transition spaces. There is need of rest/gathering

areas to enhance the transition spaces. As people wait to be served city square's well designed rest areas off the pedestrian and vehicular circulation would offer a secure space and also avoid congestion within the circulation routes.

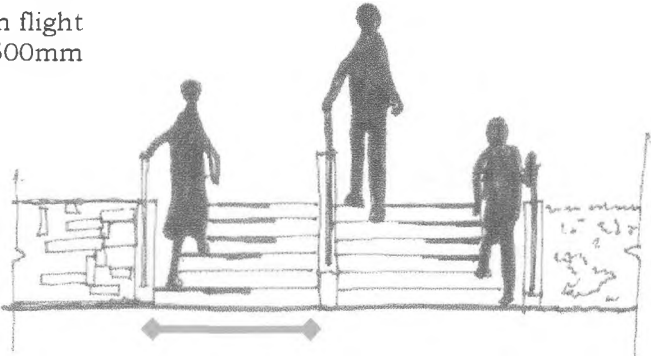
Designing the transition spaces is inseparable from security. It should, however not be an overriding factor. How we view, enhance and implement security within the city square, in this case through design, can make a significant contribution in creating secure exterior transition spaces.

Civic buildings and the spaces around them should be vital places in the city. The buildings seek to be the best and most imaginative buildings for the city rather than seek to be the most creative ones in the city. As a growing modern city, Nairobi has the opportunity to develop a world class city square, framed by civic buildings and designed to exhibit the structures to the greatest advantage.

## **5.2 Recommendation**

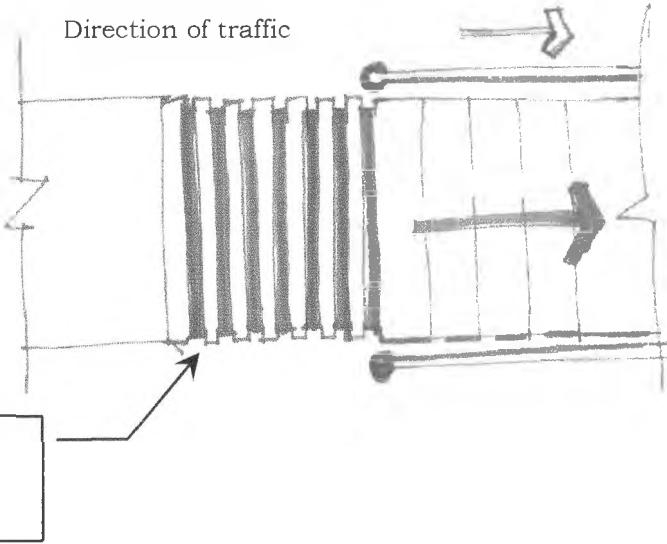
At their best the civic buildings display and convey desired elements of the National culture. Frequent and meaningful contact by the public through the city square should be encouraged. Table 5:3 contains the recommendations of the undertaken research study.

**Table 5:1 Research questions and recommendations of the research study**

	<b>Objectives</b>	<b>Recommendations of study</b>
1	Identify buildings' transition spaces architectural defining elements.	<ul style="list-style-type: none"> <li>• The transition spaces are well defined with mainly symbolic barriers i.e. fences and gates which allow uninterrupted vision but create an intimidating atmosphere. The no way through signs, steel fencing, locked gates are menacing rather than inviting.               <ul style="list-style-type: none"> <li>✓ Symbolic barriers which include open gateways, light standards, a short run of steps, planting and change of texture of walking surface are recommended.</li> </ul> </li> </ul> <div style="display: flex; align-items: center; justify-content: center; margin-top: 20px;"> <div style="margin-right: 20px;"> <p>Maximum flight height 1500mm</p> </div> <div style="text-align: center;">  <p>Minimum width per flight 1500mm</p> </div> <div style="margin-left: 20px;"> <ul style="list-style-type: none"> <li>➤ Vertical heights between a short run of steps landing should be minimized to accommodate individuals with limited strength.</li> </ul> </div> </div>



		<ul style="list-style-type: none"> <li>✓ Where possible vegetation should be used as physical barriers to introduce nature into the built environment.</li> </ul>
2	<p>Establish architectural interconnectivity of the buildings transition spaces with the square</p>	<ul style="list-style-type: none"> <li>• The different pedestrian routes from the square to the buildings transition spaces and vice versa offer a choice to the users. It is therefore recommended that             <ul style="list-style-type: none"> <li>✓ It is therefore recommended that, the existing designed city square footpaths should be repaved and slight curves introduced. Slight curves would be more interesting than straight lines.</li> <li>✓ Small units and coloured pavement blocks be introduced. They would be more interesting and sympathetic to the human scale than large slabs. Coloured pavement blocks would introduce a decorative rhythm to the footpaths.</li> <li>✓ Textured paving at road crossing points should be essential to allow the blind and partially sighted to successfully negotiate dangerous points.</li> </ul> </li> </ul>

	 <p data-bbox="1326 246 1895 382">Tactile warning strips as devices to warn hazardous areas add value to the open spaces. Dimensions of warning strips should be sufficient to forewarn pedestrians.</p>
<p data-bbox="113 693 435 946">3 Determine activities that are carried out in the transition spaces</p>	<p data-bbox="466 693 2020 946">The transition space should extend the function of a building. As public buildings frequently used by a number of people waiting/rest or gathering areas are recommended. Since the buildings transition spaces are limited in size, the city square would offer a well designed and accessible rest/waitin or gathering areas free from the circulation routes.</p> <p data-bbox="466 987 2020 1017">The different demarcated areas within the square i.e. Comesa grounds, KICC plaza, Global garden and</p>

		Garden Square Restaurant will create different rest areas. Offering a choice to the users (Figure 5:1).
4	Identify relationship of the city square with the buildings transition spaces.	<ul style="list-style-type: none"> <li>• By grouping the civic buildings around the square as a dominant element in the urban scene, Kenya's seat of government took on a unified form. <ul style="list-style-type: none"> <li>✓ Architecturally the square was an accessible and usable pedestrian transition space to the civic buildings framing it. The square was designed to create effective rest areas and disperse crowds from the adjacent transition spaces. It is therefore important that proper and adequate outdoor furniture is provided at strategic areas within the square (Figure 5:2).</li> <li>✓ Pedestrian and vehicular entry and exit points should be clearly separated. The exiting entry and exit points to the buildings' transition should to be retained for vehicles as shown in (Figure 5:3). Pedestrians should enter and exit through the city square as they would have more room to circulate and appreciate the civic buildings.</li> </ul> </li> </ul>



Figure 5:1 City square zones.

Source Field survey, 2011

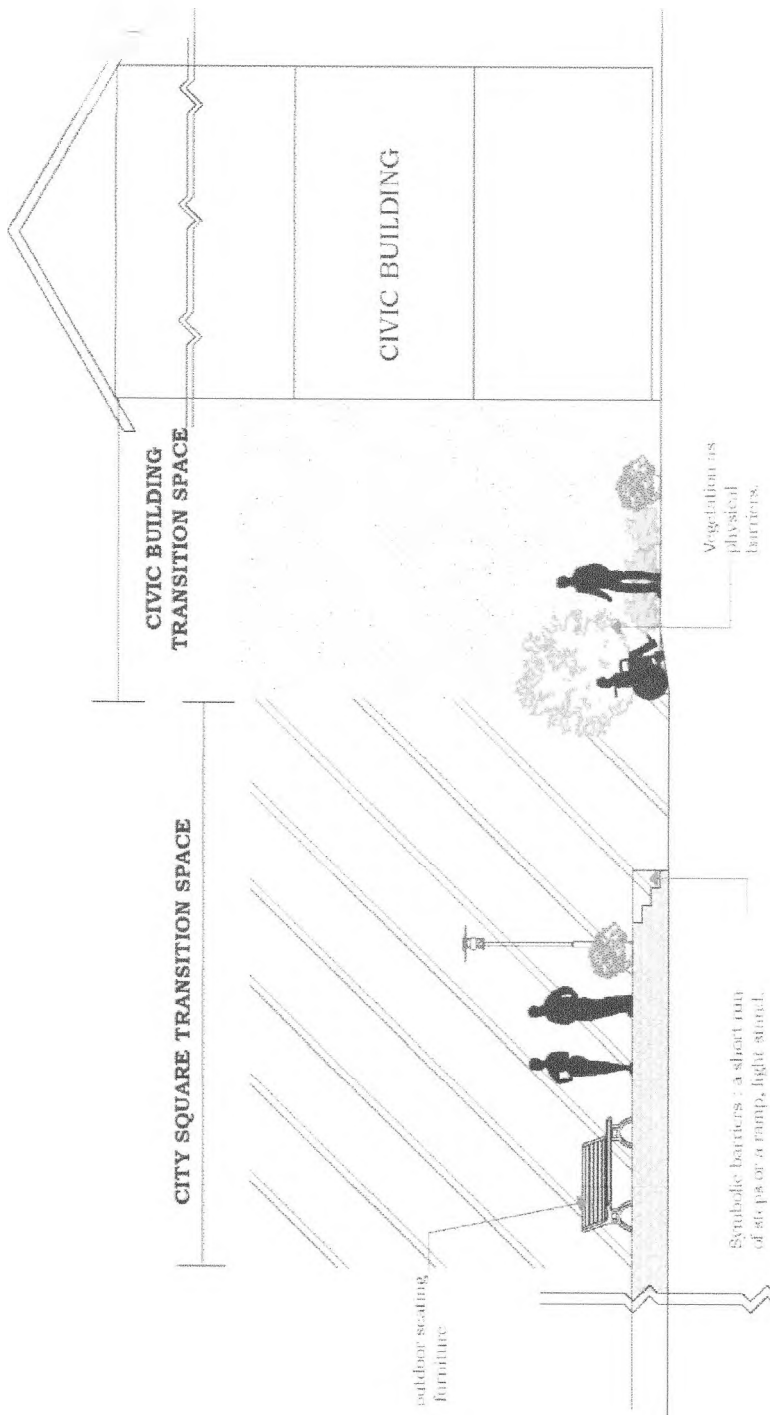


Figure 5:2 Recommended architectural defining elements.

Source Field survey, 2011

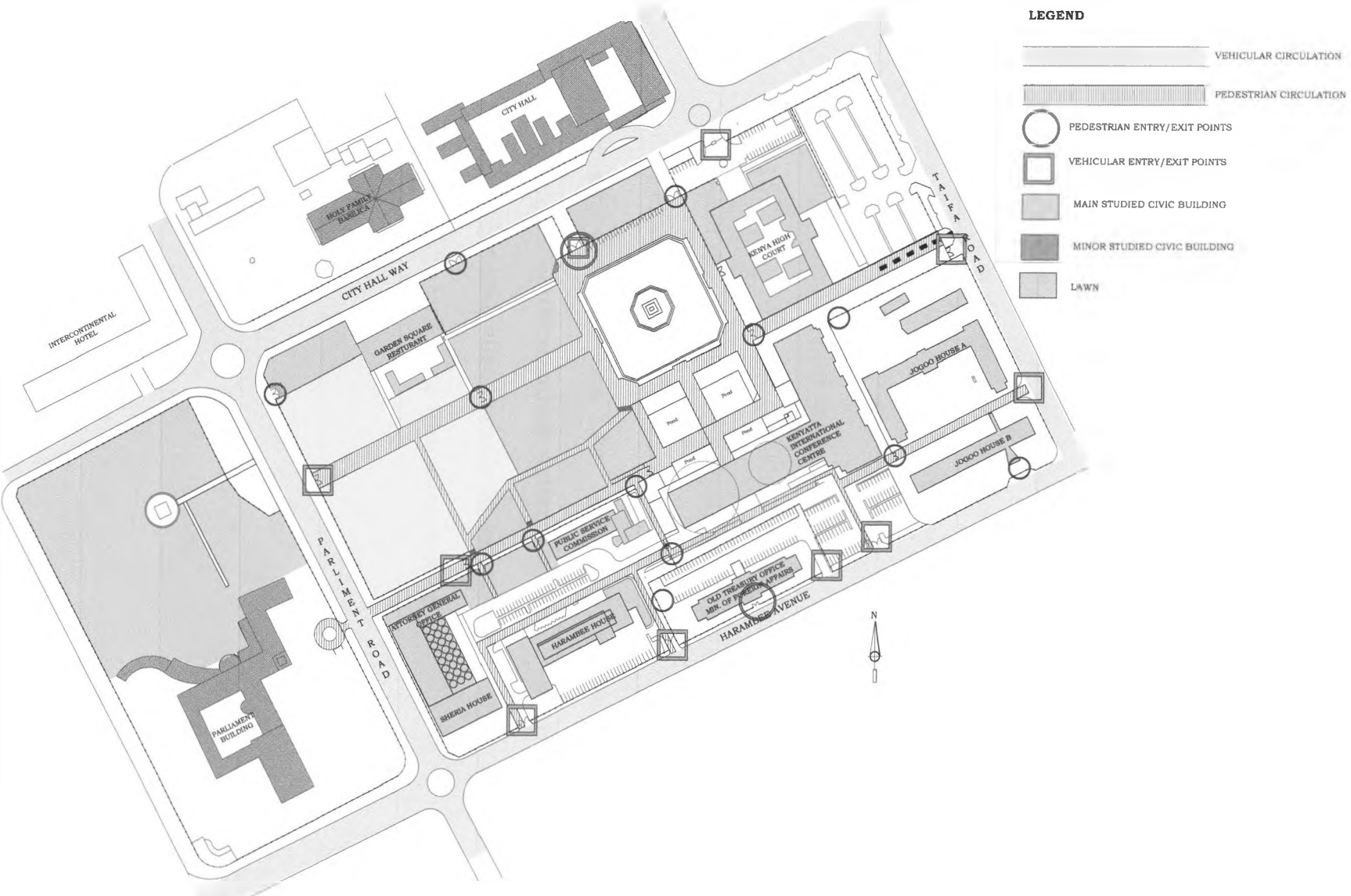


Figure 5:3 Recommended pedestrian and vehicular circulation.  
 Source Field survey, 2011.

## 5.4 Further areas of research

The following are recommended as further areas of research

- Security impact to transition spaces design. Design of any building's transition space is inseparable from security, but it should not be an overriding factor. For civic buildings security is observed in different levels; the public realm and the private realm. How security should be integrated in transition spaces design adaptable to the changing security measures is a growing need. For example Kenya's "Operation Linda Nchi, 2011" fight against Somalia Al Shabaab terrorism has awakened the need for security and its central role in designing of the exterior transition spaces.
- Design considerations for accomodating the physically challenged. Understanding different types of impairments and how they might affect access is necessary in order to create usable public buildings' transition spaces.

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**APPENDICES**

**APPENDIX A**

**UNIVERSITY OF NAIROBI**

School of the Built Environment

DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

Title: **CIVIC BUILDING EXTERIOR TRANSITION SPACE**

**A STUDY OF CITY SQUARE**

Interview schedule for: Architects, civic society, urban planners and building users.

Declaration: The information given will be treated with confidentiality and used for academic purpose only.

Name of interviewer: Hellen Muthoni Kinuthia

**Transition space is the path from the main gate to the building’s entrance door.**

**City square is defined by City Hall Way, Taifa Road, Harambee Avenue and Parliament road.**

1. Are the civic building’s entrances into view from the gate  
 .....accessible and  
 accommodative to able and disabled  
 people?.....
  
2. Is the footpath or designated foot circulation leading to the  
 building entrance well defined having directional  
 clarity..... wide enough to accommodated  
 able and disabled people?.....how, is it by use of  
 kerbs, lawns, water features or any other feature?  
 .....

3. Other than functioning as a circulating route to the building, does the transition space enhance the building beauty?  
.....
4. Is the space assigned any other function for example fire assembly point?.....
5. The fences and gate do they interrupt or control the sequence of movement along access path?.....
6. How can the civic buildings enclosed by the city square be interconnected through the transition space?  
..... Would their interconnecting pose a security threat?.....
7. Do you agree or disagree that presences of fences and gates enhance the civic buildings security?.....how?.....
8. In your own opinion can the transition space be strengthened using either colonnade, arcades as continuous features linking the ground floor of individual buildings in a covered walkway?  
.....

## APPENDIX B

### UNIVERSITY OF NAIROBI

School of the Built Environment

DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

Title: **CIVIC BUILDING EXTERIOR TRANSITION SPACE**

### A STUDY OF CITY SQUARE

#### INTERVIEWER CHECKLIST

	<b>Protocol questions</b>	<b>Source of evidence</b>
1	Does the nature of the enclosing buildings affect the degree of squares enclosure	Photographs, GIS maps, illustrations.
2	The ground material on the pedestrian and vehicular circulation does it minimize the potential of soil and water into the buildings	
3	Civic buildings architectural interconnectivity	Photographs, GIS maps, architectural drawings, interview of urban/town planners. MOW and CCN architects
4	Overall shape of city square	
5	Possible transition spaces interconnectivity facilitating accessibility	



## APPENDIX C

### UNIVERSITY OF NAIROBI

School of the Built Environment

DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

Title: **CIVIC BUILDING EXTERIOR TRANSITION SPACE**

### A STUDY OF CITY SQUARE

Observation check list

Name of observer: Hellen Muthoni Kinuthia

<b>Data needs</b>	<b>Variable assessed</b>	<b>Remarks</b>
<ul style="list-style-type: none"><li>• Nature of the enclosing building</li><li>• Height of building in relation to size of square</li><li>• Degree of three dimensional modeling</li><li>• Presence or absence of architectural defining elements</li></ul>	<ul style="list-style-type: none"><li>• Building rooflines</li><li>• Building heights</li><li>• Void between buildings</li><li>• Ground surface texture, lawns, footpath number and width, vehicular access, water features, gates and boundary fences</li></ul>	