A PROJECT REPORT

ON

PROPOSED PUBLIC LIBRARY FOR, OKO ERIN COMMUNITY, ILORIN WEST L.G.A, ILORIN KWARA STATE

BY

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HND/23/ARC/FT/0040

SUBMITTED TO DEPARTMENT OF ARCHITECTURAL TECHNOLOGY INSTITUTE OF ENVIRONMENTAL STUDIES, KWARA STATE POLYTECHNICILORIN

INPARTIAL FULFILLMENT OF THE AWARD OF HIGHER NATIONAL DIPLOMA (HND) IN ARCHITECTURAL TECHNOLOGY KWARA STATE POLYTECHNIC, ILORIN KWARA STATE.

JULY, 2025.

DECLARATION

I declare that this Project is a product of my personal research work. It has not been presented for the award of any degree in any Polytechnic . The ideas, observations, comments, suggestions-herein represent my own convictions, except quotations, which have been acknowledged in accordance with conventional academic traditions.

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CERTIFICATION

I certify that this Research Project entitled **Public Library** was carried out by **Omoniyi Ayinde Habeeb**, Matric No: HND/23/ARC/FT/040 under my supervision and has been approved as meeting the requirements for the award Of HND in Architectural Technology, of Kwara State Polytechnic, Ilorin, Kwara state, Nigeria.

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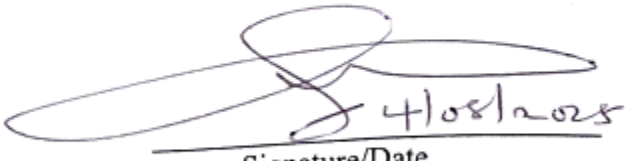

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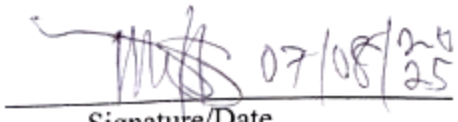

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EXTERNAL EXAMINER

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DEDICATION

I hereby dedicate this project research to God Almighty, whose grace and guidance have brought me to this stage. And to my beloved family, for their unwavering love, prayers, and support throughout my academic journey.

ACKNOWLEDGEMENT

First and foremost, I give all glory and thanks to God Almighty for the strength, wisdom, and grace to successfully complete this project.

I would like to express my sincere appreciation to my project supervisor, Architect TOMORI J.M, for her guidance, constructive criticism, and consistent support throughout the course of this research.

I would like to appreciate my project coordinator Arc OLAREWAJU F.A for his guidance, support, and his word of encouragement throughout my academic sections.

My heartfelt gratitude goes to the entire staff of the Department of Architecture, whose teachings, encouragement, and academic support laid the foundation for this work. Your dedication and commitment to students success are deeply appreciated.

I also thank my parents and family for their endless love, prayers, and moral support. Your belief in me kept me going even during the most challenging times.

To my friends and colleagues, thank you for your collaboration, insightful discussions, and for sharing this journey with me.

Lastly, I acknowledge everyone who contributed in one way or another to the success of this project. Your support did not go unnoticed.

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ABSTRACT

This project explores the design of a contemporary public library that integrates functionality, sustainability, and cultural relevance within an urban context. The increasing demand for community-focus ed spaces in growing cities like Ilorin has led to the need for libraries that not only provide access to information but also foster a sense of community and connection to their environment. This design seeks to address this issue by creating a public library that meets modern information needs while reflecting the cultural and climatic characteristics of its region. The research examines spatial planning, material selection, and facade treatment as tools for achieving environmental efficiency and cultural expression. Case studies of successful public libraries were analyzed, and interviews with architects and potential library users were conducted to understand user preferences and local design values. The resulting design proposal features flexible learning spaces, community areas, efficient natural lighting strategies, and natural facade elements. The project concludes that incorporating cultural identity and sustainable design principles in public libraries enhances both the user experience and the architectural character of urban community spaces.

CHAPTER ONE

1.0 Introduction

A library is a collection of sources, resources, and services, and the structure in which it is housed; it is organized for use and maintPained by a public body, an institution, or a private individual. In the more traditional sense, a library is a collection of books.

Public libraries are government institutions – they are funded by and an integral part of the civic system of a specific state, county, or city. Public libraries serve their communities. They differ in response to the size, location, and specific needs and resources of the community they serve.

In this paper an extended understanding of the public library in the early twenty-first century, and its epistemic functions, is presented. It is based on an analysis of longitudinal focus group data collected from public library users in two nations of the UK for a part-time doctorate awarded in 2020. The period of data collection fell towards the end of a long period of austerity in respect of public library funding in the UK that resulted from the global recession of the early 21" century (Appleton et al,

2018, p. 275)

The importance of informational exchanges between public library staff and users, and in user-to-user interactions as transactional capital (Kostagiolas, 2013) is uncovered as a key component of value relevant to the epistemic functions of the public library. This main finding is discussed with reference to the concept of the public library

as 'public sphere' (Habermas, 1962), as elaborated below. The novelty of the contribution is evident in the context of the prior work in Library and Information Science (LIS) on public library value that is dominated with accounts of societal and/or economic impact, frequently derived from quantitative studies (Appleton et al., 2018). The report of this research also adds an important perspective to the domain of Information Society Studies where, to date, the place of the public library as public sphere has been treated as peripheral.

Furthermore, unlike other work that brings the theme of public libraries together with important community interests such as democracy, the conclusions presented here draw on findings from a robust empirical study, rather than rely on rhetoric or unfounded assumptions (Jaeger et al., 2013).

In the account below, the context for the empirical work is set through the presentation of a review of previously published research on the role of the public library, drawing attention to work that identifies the public library as a public sphere. There then follows an explanation of the research design for the empirical study, and the implementation of the approach to data collection that involved the organisation and hosting of a total of 24 focus group meetings with active public library users between 2015 and 2018. The main results from the analysis of the focus group data are then presented. These preface a discussion of the role of the public library in the early twenty-first century, and its functioning as a public sphere.

1.1 DEFINITION

A public library is a community or social institution that is established by law financed by public funds or government, open to all without any descrimination, for the general and easy access to wide range of information, educational, and recreational resources in the community. It typically offers books, magazines, newspapers, digital media and various programs and services, also provide available books for borrowing to support literacy, lear 2 cultural enrichment.

1.2 BACKGROUND OF STUDY

The earliest records of a library institution as it is presently understood can be dated back to around 5,000 years ago in the Southwest Asian regions of the world. One of the oldest libraries found is that of the ancient library at Ebla (circa 2500 BCE) in present-day Syria.

In ancient mesopotamia around 2500 BCE the sumerians established temple libraries that housed clay tables containing cuneiform scripts which records law, business transactions, and literary works. These early libraries were primarily accessible to priests, scholars, and scribes but they laid the idea of a centralized repository of knowledge.

As civilization rose and fell the concept of libraries continued to evolve.

In ancient greec in around 5000 BCE, the library of Ashurbanipal in nineveh was renowned for its vast collection of clay tables which includes works on Mathematics, Astronomy, and Medicine.

The modern concept of a public library, however began to take shape during the industrial revolution in Europe and North American.

In the 18th century the idea of library accessible to the general public began to take shape, particularly in Europe.

The first true public library is often credited to the Boston public library, is established in 1848 in the United States. Throughout the 19th century the United States and Europe, Fueled by the belief in the importance of literacy and education for a democratic society.

The introduction of new technologies, such as computers, the internet, and E-books has trans· 3 d the way people access and interact with information.(@ wekipidia.ng).

1.3 STATEMENT OF PROBLEM

A careful study of public libraries as revealed that not much has been done in assuring the easy accessibility of a public library design. most public library have only one entrance and have only steps to access it.

Natural ventilation is not much effective in the design, and that makes the building not to be conducive for studying.

In addition, the design always have the issue of no car parks or inadequate parking space for the public library users.

1.4 AIM AND OBJECTIVES OF THE STUDY

1.4.1 AIM

To design accessible, functioning and sustainable structure to enhance meaningful utilization of space for the promotion of literacy and disseminate daily useful information that meet the needs of people in the community it serve.

1.4.2 OBJECTIVES

-To design a cool, welcoming, and inviting atmosphere that encourage people to visit, explore, and utilize library services.

-To design a library with dedicated space for children, teens, and adults that promotes reading, literacy programs, and educational activities.

-To design a public library with a celebrated veranda, steps, and ramp to ensure that everyone regardless of their disabilities and status in the community have equal access to the library.

- To design a well orientated structure to enhance the ventilation of the interior part of the building structure

1.5 PROJECT JUSTIFICATION

The proposed public library located on a site beside Excel global world telecom at Atiku Abubakar Road Oko Erin Community, Ilorin Kwara State. It is to create a well designed public library to serve as a vital

resource for the community, providing access to books, digital media, information, that support education and lifelong learning, and to ensure that all community members have equal access to the information and educational resources.

1.6 RESEARCH METHODOLOGY

Conducting research on Public libraries requires a detailed and systematic approach to uncover insights about library operations, user experiences, and resource effectiveness. Here's a deep dive into the research methodology for public libraries, covering key aspects and detailed steps.

Familiarize yourself with the public library's context, including its mission, services, user demographics, and challenges.

Scope and Objectives: Define the specific areas of focus (e.g., user satisfaction, resource usage, digital integration).

- Case study
- Oral interview
- Literature review
- Online review

1.7 CLIENT BACKGROUND

Oko Erin Ilorin South/East Local Government has made significant progress in recent years. Kwara state government has constructed several roads, provide electricity to several communities (Oko Erin), and built schools and health care center to improve the standards of living of the people in the community.

Overall, Ilorin South/East Local Government is a vibrant and dynamic

area with a rich history and culture. Its strategic location and vast natural resources make it an important economic hub in Lagos State and Nigeria at large.

1.8 LIMITATION

The limitations experienced during this course of study include:

Finance: Funding the project re 6 :h has been surmounted task which God has intervened in its management.

Visit some public libraries, the library workers requested for money before I will be allowed to do any research or snap pictures.

1.9 SCOPE OF THE STUDY

Numerous educational, recreational, and communal activities take place within a public library. The scope of this project is limited to a thorough study on the adequate provision of functional library spaces and supporting facilities that make up a modern public library. The design will emphasize accessibility, comfort, and community engagement, catering to a diverse range of users such as students, researchers, families, and individuals. The development will reflect a contemporary urban hub with considerations of sustainability, technology integration, and community outreach. Facilities provided within the library will cater for learning, relaxation, creativity, and basic services to enhance the quality of life and knowledge sharing among the community.

This scope focuses on the design and functionality of a public library,

emphasizing:

1. Accessibility:Easy access to information and resources.

2.Comfort: Comfortable spaces for reading, learning, and community engagement.

3.Community engagement: Spaces and programs that foster community interaction.

4. Sustainability: Environmentally friendly design and practices.

5. Technology integration: Inc 7 ating technology to enhance learning and community engagement.

The facilities to be provided in the public library will include:

1. Reading Areas:Quiet spaces for studying and reading.

2. Reception/Information Desk:A welcoming area for users to ask questions and seek assistance.

3.Community Lounge:A shared space for community events, meetings, and activities.

4. Multimedia Room: A space for audiovisual materials, presentations, and workshops.

5. Children's Section: An area designed for kids with interactive materials, toys, and activities.

6. Outdoor Reading Garden:A peaceful outdoor space for reading and relaxation.

7.Makerspace:A collaborative area for creative projects, innovation, and skill-building.

8. Special needs section:An area designed for people with disabilities with furnitures that will make the area comfortable for them to study.

9.Computer Lab:A space with public computers and internet access for research and learning.

10. Exhibition Space:An area for showcasing local art, exhibits, and community displays.

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CHAPTER TWO

2.0 LITERATURE REVIEW

2.0.1 WHY PEOPLE USE PUBLIC LIBRARIES DESPITE ONLINE RESOURCES

Public libraries offer a unique physical space that complements digital information, providing a welcoming atmosphere, access to specialized facilities, and opportunities for collaboration, innovation, and community engagement. From an architectural perspective, libraries are designed to support learning, creativity, and community development, making them an essential resource for many people.

- Welcoming atmosphere: Libraries are designed to be welcoming and inclusive, providing a comfortable space for people to learn, socialize, and engage with their community.
- Flexible spaces: Modern libraries often feature flexible spaces that can be adapted for various uses, such as study areas, meeting rooms, and community events.
- Computer labs and digital media suites: Libraries often provide access to specialized facilities, such as computer labs, digital media suites, and recording studios, that support digital creativity and learning.

2.1 EVOLUTION OF BUILDING TYPOLOGY OF PUBLIC LIBRARY

A public library was established in Rome by the first century BC, in the Atrium Libertatis (see History of libraries & Classical period and Gaius Asinius Pollio & Later life). However, the first major public library is said to have been established in Athens by Pisistratus

in the sixth century BC

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(see Library of Alexandria & Historical background), and by the end of the Hellenistic period, public libraries are said to have been widespread in the Eastern Mediterranean (see Library of Alexandria & In antiquity).

In Cesena, Italy, the first community-run public library, the Malatestiana Library, was established in 1447, provided both secular and religious texts in Latin, Greek, and Hebrew, and was fully open to all members of the public.

At the start of the 18th century, libraries were becoming increasingly public and were more frequently lending libraries. The 18th century saw the switch from closed parochial libraries to lending libraries.

However, up until the mid-19th century, there were virtually no public libraries in the sense in which we now understand the term, i.e., libraries provided with public funds and freely accessible to all.[27] Only one important library in Britain, namely Chetham's Library in Manchester, was fully and freely accessible to the public.

2.2 Challenges peculiar to Public library building

Design Challenges:

- Balancing traditional and modern design: Reinterpreting century-old architectural hierarchies to meet modern needs while preserving heritage.
- Incorporating technology: Integrating digitalization, new information technologies, and equipment like printing and scanning services.
- Flexible and adaptable spaces: Creating multifunctional areas that

accommodate various user needs, such as workspaces, learning areas, and community engagement.

2.3 SOLUTION PERCULIAR TO THIS BUILDING TYPOLOGY

- Comfortable environment: Providing good lighting, thermal comfort, and noise management.
- Accessibility and parking: Ensuring easy access and sufficient parking facilities.
- Aesthetics and ambiance: Incorporating elements like soft furnishings, plants, and aquariums to create a welcoming atmosphere.

Community Focus:

- Understanding community needs: Engaging with the community to design libraries that reflect their needs and wants.
- Inclusive and creative spaces: Creating areas for diverse users, including maker spaces, lounges, and kids' areas.
- Balancing bureaucracy and creativity: Managing tensions between traditional library ideologies and modern design practices.

Sustainability and Maintenance:

- Energy-efficient design: Considering the environmental impact of library design and operations.
- Maintenance and upkeep: Designing libraries that are easy to maintain and repair.
- Future-proofing: Planning for flexibility and adaptability in library design to accommodate future needs.

2.4 REVIEW OF LITERATURE OF PUBLIC LIBRARY

Library and Information Science (LIS) researchers readily acknowledge

the commonly held view of public libraries as publicly accessible buildings that house collections of print material (e.g., Campbell, 2013, p. 8), where members of the community may develop literacy and learning (e.g., Brophy, 2001, p. 14; Foster and Ford, 2003; Rice, McCreadie and Change, 2001). These researchers have also long argued that public libraries represent so much more than these epistemic functions for which public libraries are traditionally known (e.g., Hoggart, 1957; Norcup, 1997; Williams, 1966), with multifunctional roles that span many different types of community provision over and above information services (e.g., Sprensen, 2021). Some commentators, such as Chowdhury et al. (2008, p.
4) have bemoaned the dangers of the traditional picture of public libraries as 'very limited and unhelpful' because it 'omits the various other activities which take place within a library, as well as the roles played by a library in human life and society in general'.
Other valuable activities performed by public libraries are often framed as supporting society to uphold desirable aspects of functioning cohesive communities, such as democracy, social inclusion, and emancipation (e.g., Black, 2000, pp. 3-4; Black and Pepper, 2012, p. 465; Brophy, 2006, p. 3;
Sorensen, 2021). The regeneration of communities, for example, is a modern-day function of the public library (Goulding, 2006). Key to these functions is social capital, i.e., the resources that individuals access through membership of a network, a theme frequently invoked by LIS researchers with reference to community-focused public library

services and their outcomes (e.g., Goulding,
2004; Goulding, 2013; Hillenbrand, 2005; Johnson, 2010; Johnson, 2012; Kranich, 2001; Sorensen,
2021). Värheim (2007), for example, has identified that social network building for community development and the promotion of citizenship can be prompted by the face-to-face meetings and activities organised by public library services. Simil 12 ohnston and Audunson (2019) argue that public libraries provide valuable spaces in which immigrants' political and social integration into local communities can be facilitated and supported. Social capital is generated within public libraries because they are spaces in which neighbours, friends, and strangers engage with one another (e.g., Sprensen, 2021), often in an unplanned manner, leading to the creation of new social networks (Aabe et al., 2010, p. 25). Communities that have good social capital, it has been argued, offer levels of social engagement, with characteristics that include citizenship and civic participation (Goulding, 2004, p. 3). Linking social capital with public libraries and public library usage is also often discussed with regard to the socialisation and integration of established and newcomer immigrant communities into local communities (e.g. Audunson et al, 2011; Khoir et al, 2017).

Other forms of capital are also discussed in the context of public libraries. Of particular value to this study is the articulation offered by Kostagiolas (2013). He argues that public libraries manage and distribute intellectual capital that comprises three forms:

- Human capital: the knowledge, experience, competencies and creativity of public library staff
- Organisational capital: the infrastructure of the public library including, for example, its classification scheme, the automated circulation system, etc.
- Relational capital: relationships between the public library and its stakeholders

He also identifies the role of hur [13] nd relational capital in generating 'transactional capital', manifest as the outcomes of exchanges (of information, support, guidance, or advice) between two or more people. Others who have applied concepts of capital generation to the context of public libraries have highlighted its value principally from a staffing perspective (e.g., White, 2007a; White, 2007b).

Consideration of public libraries as sites for capital generation may be limited because library staff are unaware of the outcomes of the social relationships that they develop with users (Johnson, 2012).

The role of the public library has been theorised in studies that adopt the notion of the institution as a public sphere, often in the literature of Information Society Studies. Here reference is made to Habermas' initial definition of the public sphere as a 'society engaged in critical debate' (Habermas,

1962), as well as to that of Hauser (1999), which privileges the places in which such debate may ensue: 'a discursive space in which individuals and groups associate to discuss matters of mutual interest and, where possible, to reach a common judgement about them' (p.

61). For example, Widdersheim (2017) explains the public sphere as a complex social phenomenon composed of three layers - infrastructure (the physical space), people (within the space), and communication (between the people) - noting their presence in public libraries.

Much published work on the public library as a public sphere privileges the first of these layers. It highlights the importance of libraries as meeting places (e.g., Aab@ et al., 2010; Aab@ and Audunson,
2012; Audunson et al., 2019a; Audunson et al., 2019b; Larson, 2020; Leckie and Buschman, 2007;
Most, 2009; Rothbauer; 2007), positioned as strong civic institutions with histories closely implicated with the notion of participation and democratic responsibility (Robinson, 2014, p. 22). Here democracy may be encouraged and enhanced as people are furnished with places to gather and debate (Audunson et al., 2019b; Buschman, 2018; Buschman, 2019; Webster, 2007; Webster, 2014;
Widdersheim, 2017). This space also provides ready access to learning resources to underpin democratic engagement (Audunson et al., 2019b; Kranich, 2013; Webster, 2014), and thus supports the 'self-education of the citizenry in order that they may become fully participating members in a democratic society (Alsted and Curry, 2003, p. 2) alongside the development of digital citizenship (Jaeger and Burnett, 2014). Less common are studies that provide detailed practical examples of the other two layers noted by Widdersheim (2017). However, prior work has pointed to public librarians as agents of the public sphere (e.g., Batt, 1997; Feather, 2013). A more recent

practical illustration is the use of conversation interventions with newcomers in public libraries to bring immigrant voices into the public sphere and facilitate political integration (Johnston and Audunson, 2019).

Notwithstanding the value of the literature cited above, recent calls have been made to extend research on the role of the public library as public sphere. More theoretically based empirical studies are sought (e.g., Varheim et al., 2019; Widdersheim and Koizumi, 2016). In particular, researchers are urgec 15 ldress the limitations of the more common normative research contributions that offer prescriptive advice that is not always rooted to evidence (Audunson et al, 2019a), as is the case with some of the examples cited above. Similar criticisms might be made of coverage of public libraries in Information Society Studies monographs, where brief references to a role apparently conceived as peripheral are subsumed into broader discussions of the public sphere in general (e.g., Duff, 2000; 2013; Feather, 2013; Webster, 2014).

CHAPTER 3

3.0 CASE STUDY

A case study in architecture is a detailed study of choosing architectural project to understand its design, construction, functionality, and contextual importance.

The specific architectural qualities examined are to serve as inspiration for your architectural project.

Outline of case study

-Harbert Macauley library (you read) Lagos state

-Tolu public library Lagos state

-Raji Oke Esa Memorial Library Iseyin Road Oyo state

-The National Library of Belgium

-New York public library United States.

3.1 CASE STUDY 1

Herbert Macauley library (you read).

Located at number 338 Herbert Macauley Way Yaba Lagos state.

3.1.1 DESCRIPTION

The library was designed by Olayinka Herbert Macauley, the library is originally built in 1966 by UNESCO before the creation of Lagos state in 1967.

The name of the library was known as the Federal ministry of Education school library service.

The library was renovated by GTCO bank in 2017-10t-June.

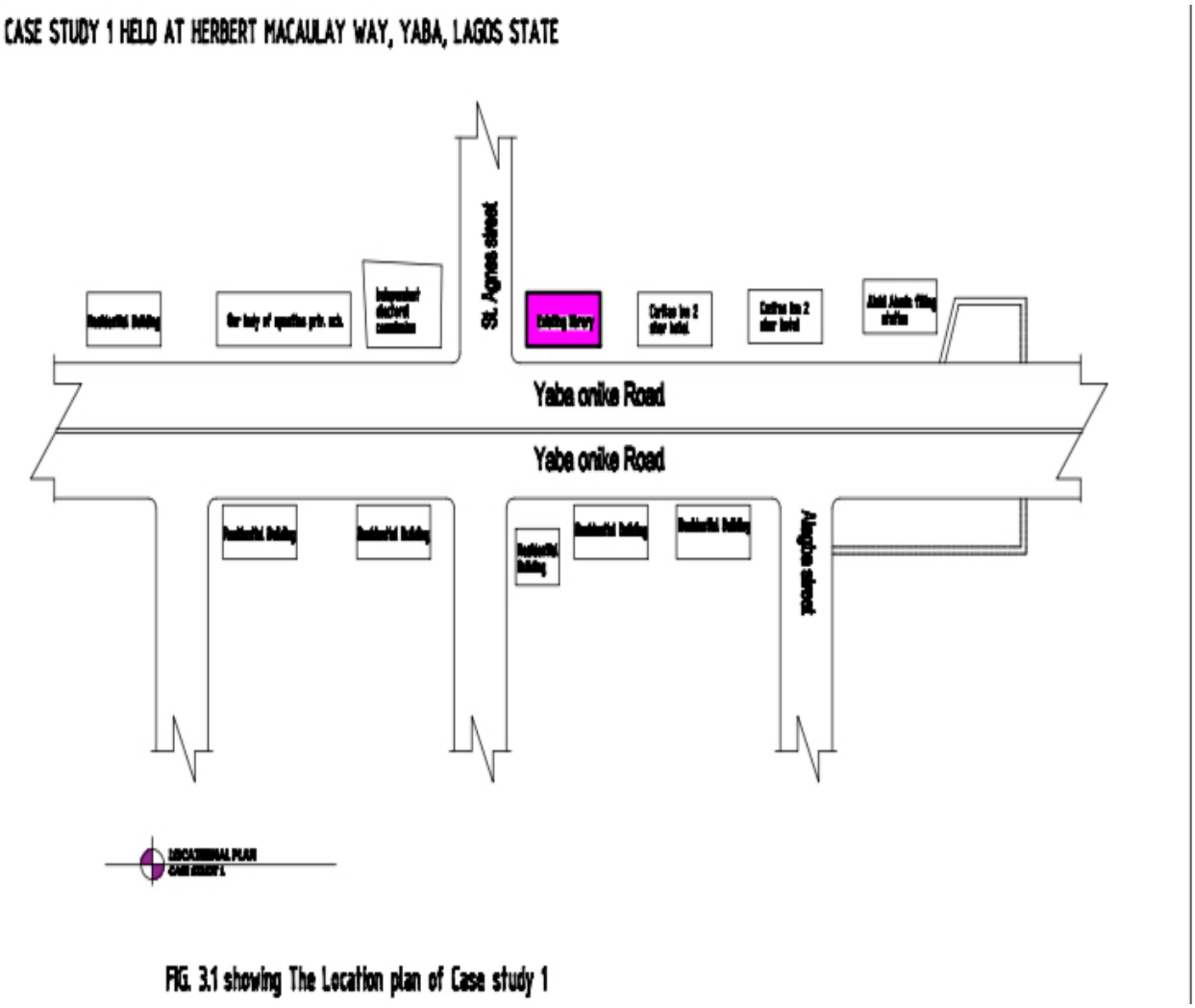

FIG. 3.1 showing The Location plan of Case study 1

Herbert Macauley Library was established primarily to service all the educational institution around the library, such as foremost Yaba College of technology, University of Lagos, Federal College of Education, and other institutions including residents of Yaba and it environment.

The material use is a block wall, emulsion paint for the wall and the floor of the building is finished with tiles, concrete roof gutter and long span aluminum roofing sheet is being use for the roof.

It can house up to 1000000(A million) volumes of book.

CASE STUDY 1 HELD AT HERBERT MACAULAY WAY, YABA, LAGOS STATE

FIG. 3.2 showing The floor plan of Case study 1

Plate3.1:Approach view of Herbert Macauley Library (You read).

Plate3. 2: Interior view of Herber Macauley library (You read).

Plate3.3:interior view of Herbert Macauley library(You read)

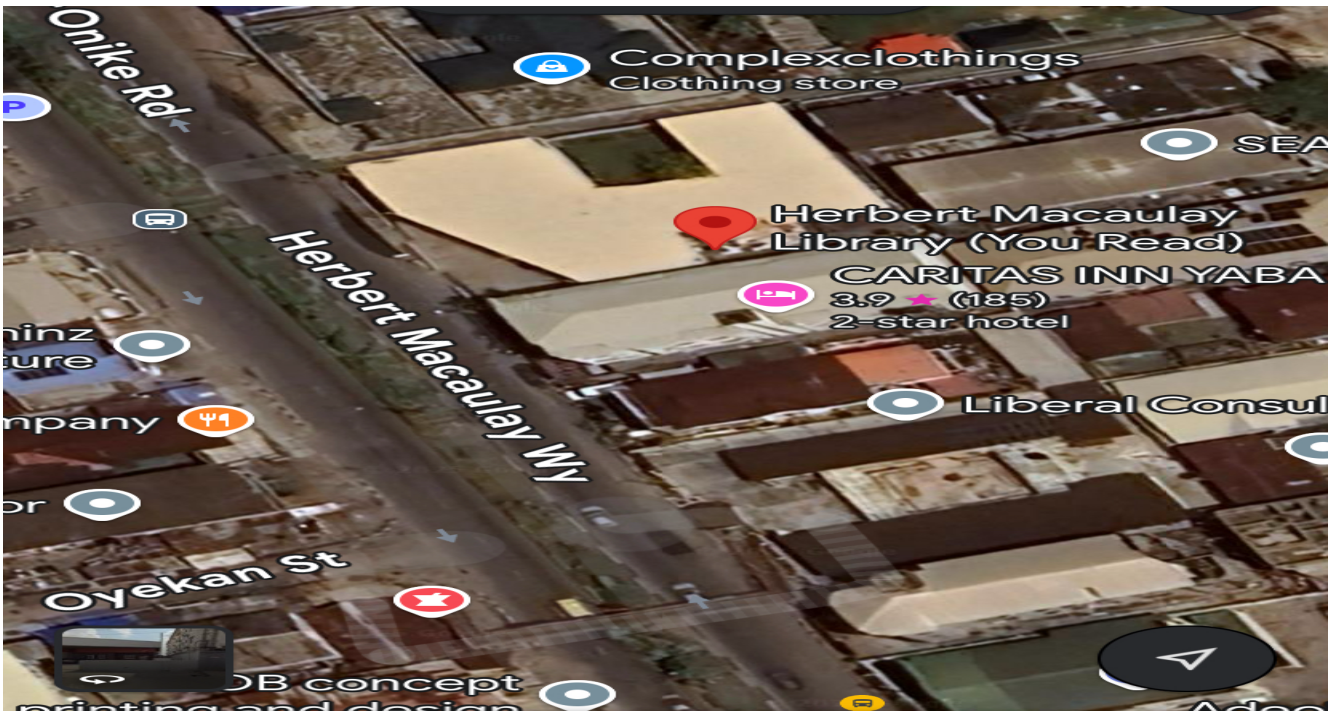

Plate3. 4: Google Map showing the location of Herbert Macauley library(You

Merits

-Provision of a conducive reading space for the people in the community and people visiting the community.

-it has a good interior that makes the library to be a pleasant environment to study.

-Well ventilated building, natural and artificial ventilation are present.

Demerits

-Lack of space for future expansion.

-Inadequate space for car parks.

-No provision for green land scape (poor landscaping).

3.2 CASE STUDY 2

Tolu public library

Located at Temidire st tolu complex,Apapa,Lagos state.

3.2.1 DESCRIPTION

The Tolu Public library offers free library service to the public, with wide range of quality books and learning materials.

Material use for the building is hollow block wall and emulsion paint for the wall, asbestos ceiling for the ceiling, the floor is finished with tiles, and long span aluminum roofing sheet for the roof.

The library can house up to 50000 volume of books.

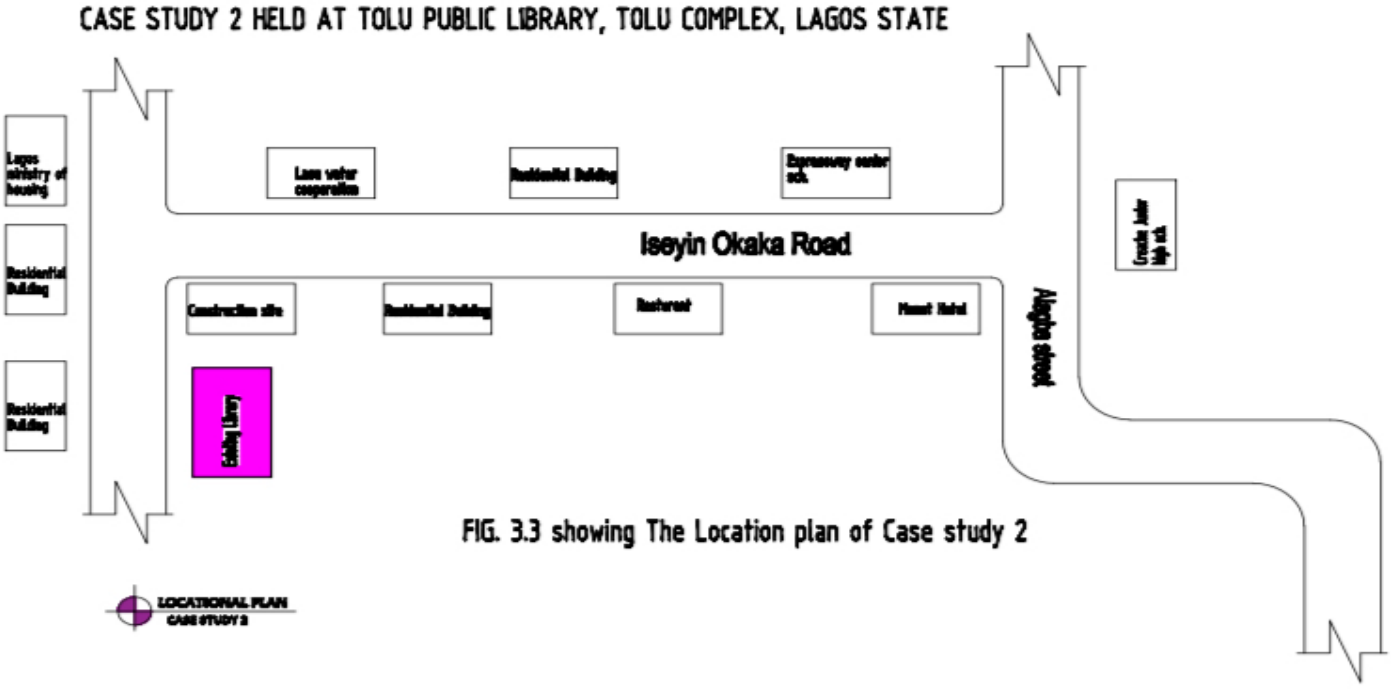

FIG. 3.3 showing The Location plan of Case study 2

CASE STUDY 2 HELD AT TOLU PUBLIC LIBRARY, TOLU COMPLEX, LAGOS STATE

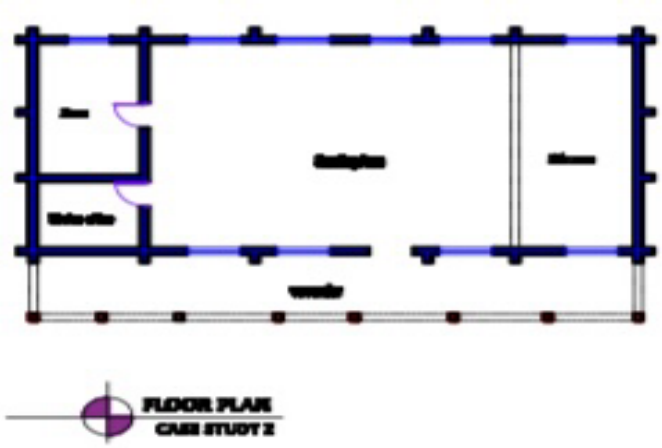

FIG. 3.4 showing The Floor plan of Case study 2

Plate 3.5:exterior view of Tolu complex public library.

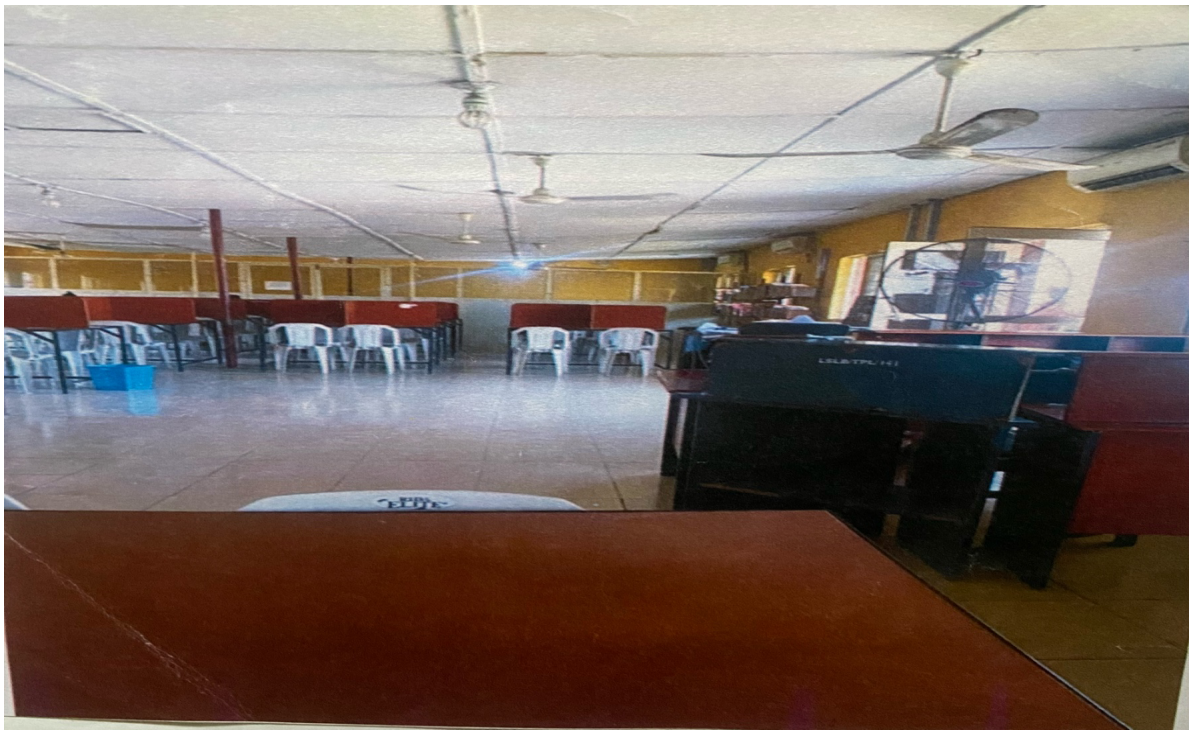

Plate3.6:interior view of Tolu complex public library.

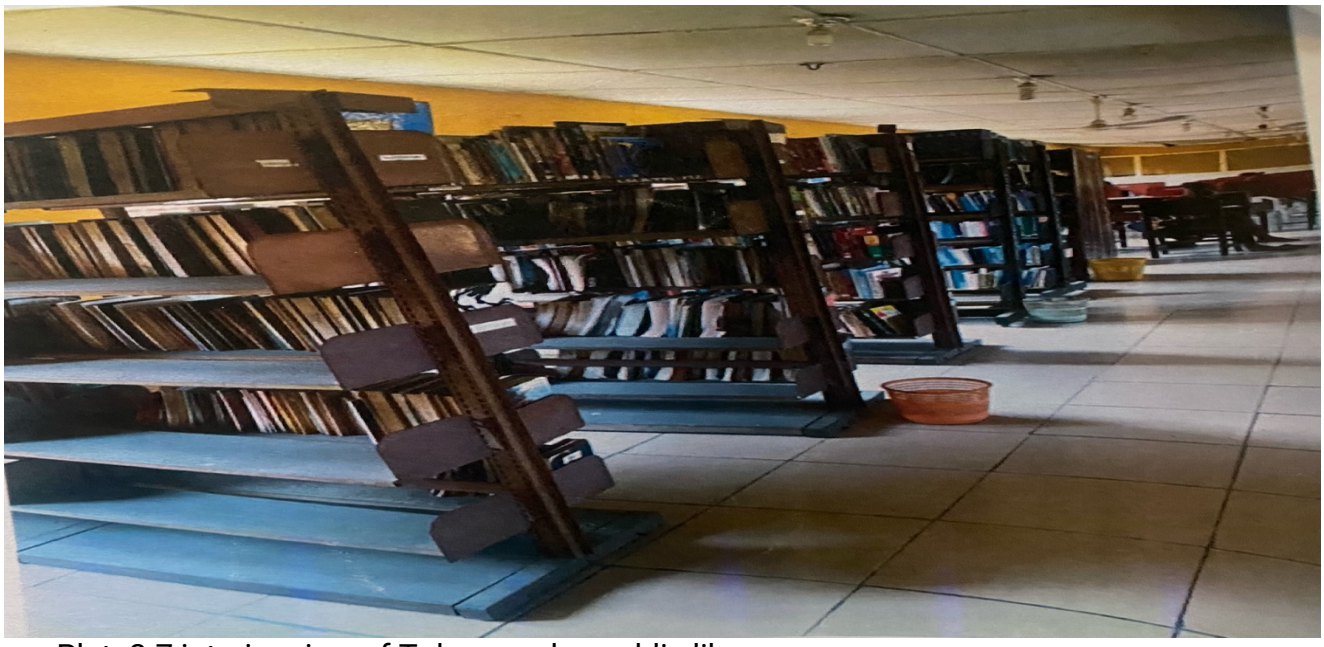

Plate3.7:interior view of Tolu complex public library.

Plate3.8: Google Map showing the location of Tolu complex public library Lagos state.

Merits

-Availability of space for future expansion.

-presence of green areas to make the environment healthier for people to study.

Presence of natural ventilation and lighting.

Demerits

-Poor site layout.

-Double doors was not provided for easy access.

-poor furniture(poor interior design).

-No parking spaces.

3.3 CASE STUDY 3

Raji Esa Memorial Library

Located at Iseyin saki road Oyo state.

3.3.1 DESCRIPTION

The library serve as an invaluable resource, contributing to the intellectual empowerment of the local community.

Raji Oke Esa Memorial Library (ROML), Iseyin, Oyo State was established by Ahmed Raji, Senior Advocate of Nigeria (SAN). This library stands as one of the finest and most well equipped private library in Nigeria.

The material used for the library is a hollow block wall with emulsion paint, the floor of building is finished with tiles, and the building is roofed with long span aluminum roofing sheets.

The building can house upto 150000 volume of books.

CASE STUDY 3 HELD AT LIBRARY ISEYIN OKAKA, STATE

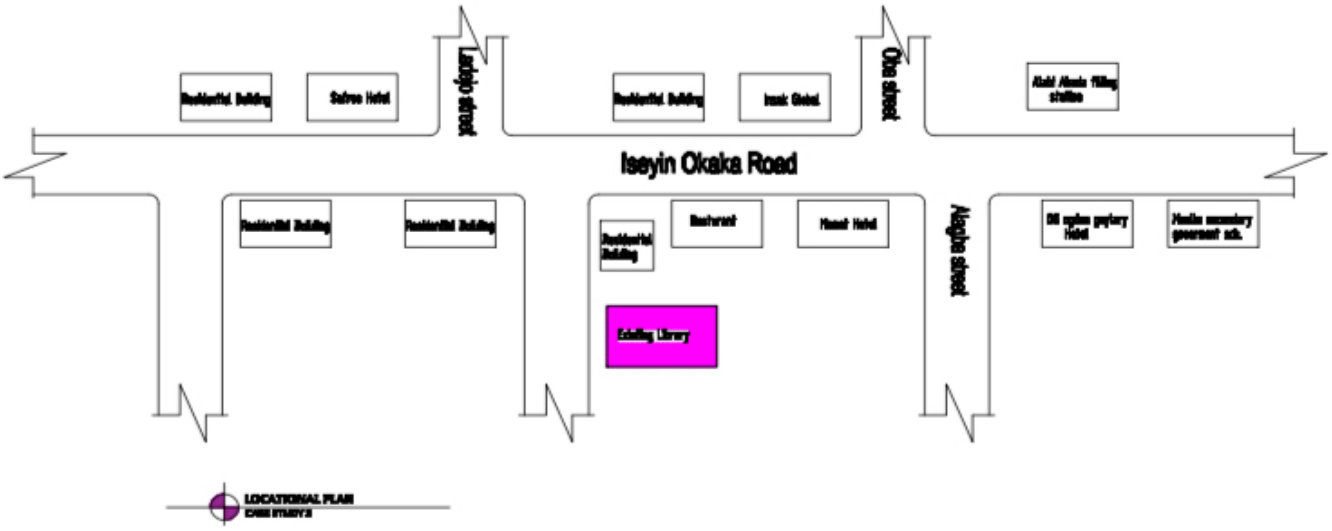

FIG. 3.5 showing The Location plan of Case study 3

CASE STUDY 3 HELD AT LIBRARY ISEYIN OKAKA, STATE

FIG. 3.6 showing The floor plan of Case study 3

Plate3.9:exterior view of Raji Esa memorial library.

Plate3.10: Interior view of Raji Esa memorial library

Plate3.11:exterior view of Raji Esa memorial library.

Plate3.12: Interior view of Raji Esa memorial library.

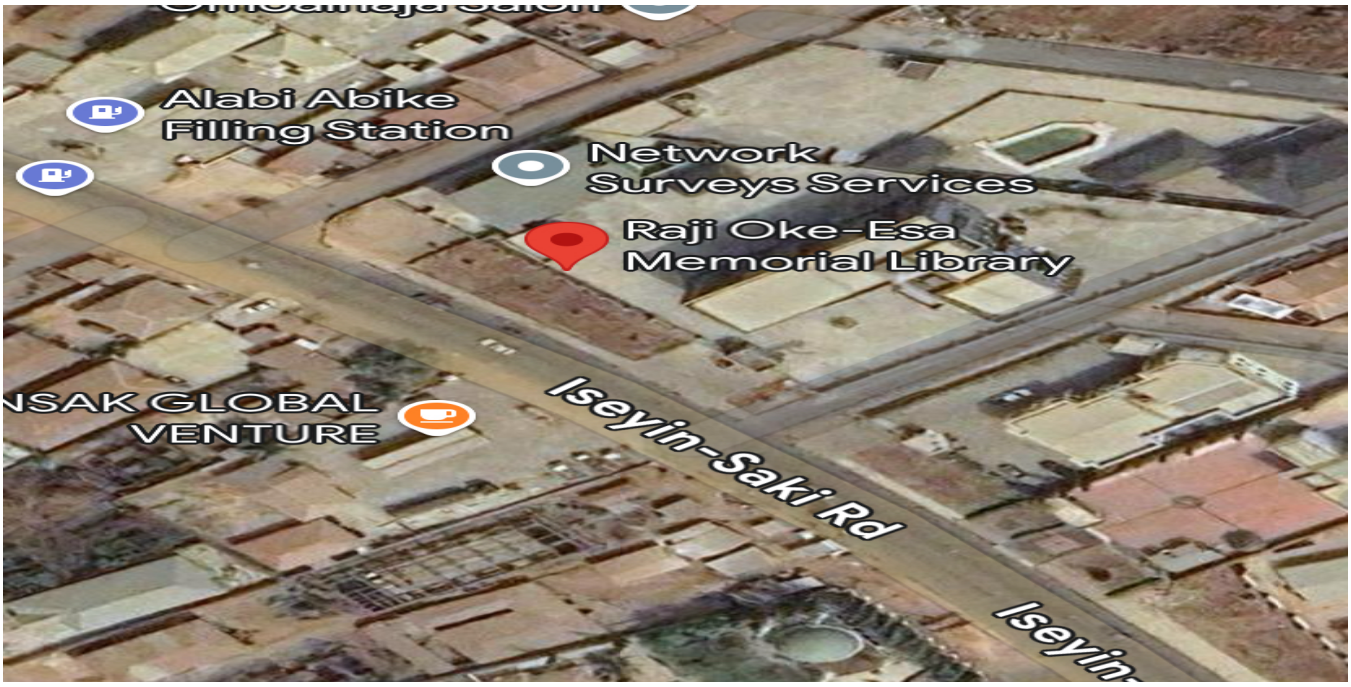

Plate3.13: Google map showing the location of Raji Esa memorial library.

Merits

-Adequate space for parking for the library users.

-Availability of space for future expansion.

-Easily accessible because of the presence of stairs and ramp.

Demerit

-Poor ventilation

-Poor landscaping

-Poor building orientation

3.4 CASE STUDY 4

The **Royal Library of Belgium**

Location	Boulevard de l'Empereur / Keizerslaan 4, 1000 City of Brussels, Brussels-Capital Region, Belgium
Established	19 June 1837; 188 years ago (Royal Library of Belgium).

3.4.1 DESCRIPTION

Abbreviated ***KBR*** and sometimes nicknamed *Albertine* in French or *Albertina* in Dutch) is the national libraryof Belgium. The library has a history that goes back to the age of the Dukes of Burgundy. In the second half of the 20th century, a new building was constructed on the Mont des Arts/Kunstberg in central Brussels, near the Central Station. The library owns several collections of historical importance, like the Library of the Dukes of Burgundy, and is the depository for all books ever published in Belgium or abroad by Belgian authors.

There are four million bound volumes in the Royal Library, including a rare book collection numbering 45,000 works. The library has more than 750,000 prints, drawings and photographs, 150,000 maps and plans, and more than 250,000 objects, from coins to scales to monetary weights. This coin collection holds one of the most valuable coins in the field of numismatics, a fifth-century Sicilian tetradrachm.

Plate3.14: External view of Royal Library Belgium

Plate3.15: Interior view of Royal Library of Belgium

Plate3.16 external view of Royal Library Of Belgium.

Plate 3.17: Interior view of Royal Library Of Belgium.

3.5 CASE STUDY 5

The New York Public Library Main Branch in Manhattan

Location 476 Fifth Avenue, New York City, New York, U.S.

Established May 23, 1895; 130 years ago

3.5.1 DESCRIPTION

The library has branches in the boroughs of the Bronx, Manhattan, and Staten Islandand affiliations with academic and professional libraries in the New York metropolitan area. The city's other two boroughs, Brooklyn and Queens, are not served by the New York Public Library system, but rather by their respective borough library systems: the Brooklyn Public Library and the Queens Public Library. The branch libraries are open to the general public and consist of circulating libraries. The New York Public Library also has four research libraries,

which are also open to the general public.

Plate3.18: Exterior view of New York public library

Plate3:19: Interior view of New York public library.

Plate3.19: Interior view of New York public library.

Plate3.20: Exterior view of New York public library

Plate3.21: Interior view of New York public library

Merit

-The building is well ventilated naturally.

-Availability of enough parking spaces

-Library is easily accessible.

CHAPTER 4

4.0 INTRODUCTION TO STUDY AREA.

4.0.1 HISTORICAL BACKGROUND OF KWARA STATE.

Kwara State was created in May 1967, as one of the first of 12 states to replace the nation's four regions. Formerly the State was known as West Central State, but the name was changed to Kwara, a local name for the Niger River. The size of the State has been reduced over the years, as new states have been created within the federation. The total landmass of Kwara State today is 32 500 square kilometers.

Kwara State is one of the 36 states that make up the Federal Republic of Nigeria, Africa's most populous country. Kwara State shares her boundaries with the Republic of Benin at her West and the Niger River at her North.

The capital city of Kwara State, Ilorin, is situated 306km inland from the coastal town of Lagos and 500km from the federal capital, Abuja. Major towns include Ilorin, Offa, and Jebba, located on the Niger River. Other cities include Patigi, Erin-Ile, Iloffa, Adeleke Igbewere, Ejidongari, Osi, Lafiagi, Gure, Afon, Kaiama, Isanlu-Isin, Omu-Aran, Egbejila, Ilota, Iponrin, and Igbaja. It was incorporate into the protectorate of Nothern Nigeria in 1900, in the amalgamated colony and protectorates of Nigeria in 1914, and in the Northern region in 1954: Kwara Satet was created in 1967, when the federal military government divided Nigeria into 12 new states.

4.0.2HISTORICAL BACKGROUND OF ILORIN.

Ilorin was founded by the Yoruba, one of the three largest ethnic groups in Nigeria, in the late 18th century. It became a provincial military headquarters within the Oyo Empire until 1817, when the local Kakanfo (field marshal) named Afonjarebelled, supported by the Hausa Shehu Alimi, an itiner[37]amic preacher and teacher. Their alliance eventually broke down over the Muslims' increasing power and Afonja's refusal to convert, and he was eventually assassinated. Alimi's son Abd al-Salam pledged allegiance to the Sokoto Caliphate in 1823.

- Throughout the 19th century, Ilorin served as a major trade node between the Hausa and the Yoruba. It strongly resisted British rule, but was occupied by the Royal Niger Company in 1897 and its lands were incorporated into the British Northern Nigeria Protectorate in 1900. With the subdivision of the country's administrative regions in 1967, Ilorin became part of West Central (later Kwara) state.

The city retains a strong Islamic influence, although Christianity is now widely practised in the cosmopolitan part of the city due to the significant immigration of people from other parts of Kwara State and the rest of Nigeria.

4.0.3 PHYSICAL FEATURES OF ILORIN EAST

Ilorin East is a developing area with a mix of residential and commercial activities. The location offers opportunities for growth and development, with potential for facilities that cater to the needs of

students, residents, and businesses.

4.0.4 POPULATION OF KWARA STATE

Kwara State has a growing population, with Ilorin being a major urban center. The population growth rate is significant, and the state is working to provide infrastructure and services to meet the needs of its residents.

4.0.5 SOCIAL SERVICES IN ILORIN EAST.

Ilorin East Local Government provides various social services to its residents, including:

1. Healthcare:Government-owned hospitals, private hospitals, clinics, and maternity homes.

2. Education: Schools and educational institutions.

3. Social Welfare: Programs and services for vulnerable populations.

4. Housing: Residential areas and housing developments.

5. Transportation: Roads and transportation infrastructure.

6. Environmental Services: Waste management and environmental conservation efforts.

4.0.6 INFRASTRUCTURE IN ILORIN EAST.

1. Roads:Tarred roads connect Ilorin East to other parts of the state.

2. Water and Electricity: Access to piped water and electricity supply.

4.1 LOCATION

The site is located at Atiku Abubakar rd,Oko Erin community Ilorin Kwara state.

It is a well located site for proposed public library as the location and good of educational facilities.

The site is conducive and effective for learning,it is a very wide land suitable for the proposed project and giving numerous advantages to the community around the site.

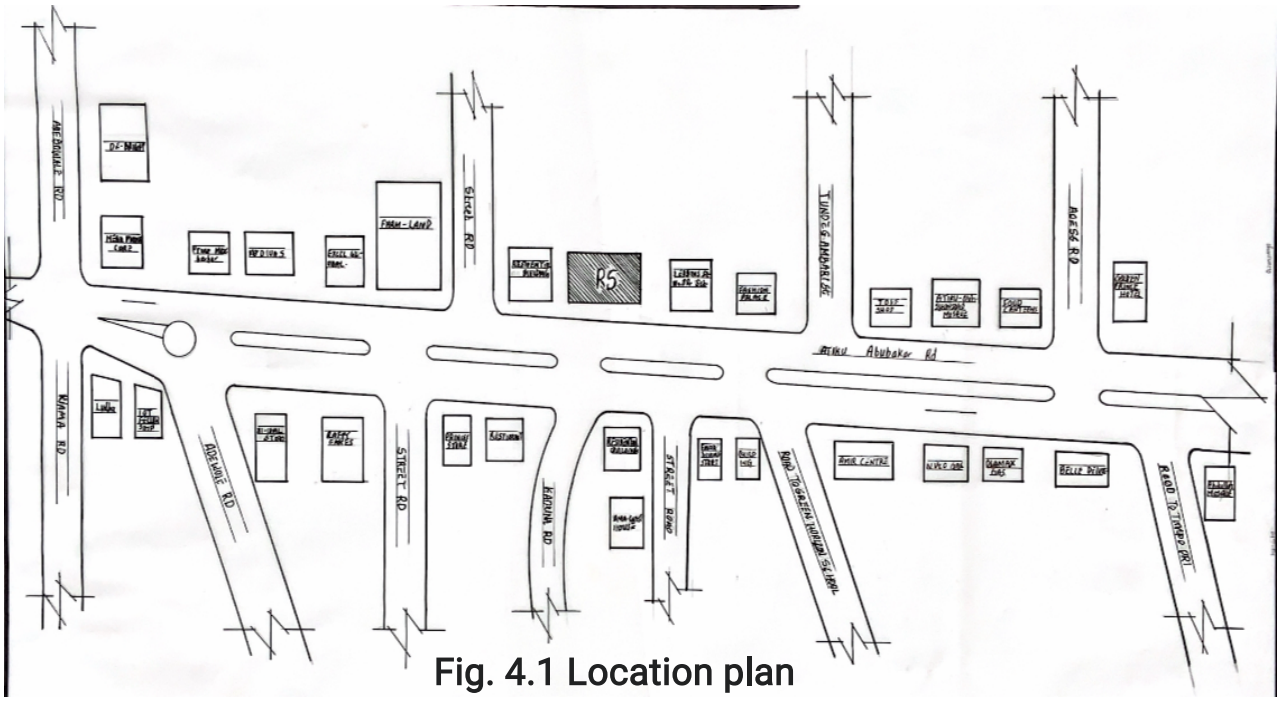

Fig. 4.1 Location plan

4.1.1 INFRASTRUCTURAL FACILITIES

Facilities such as water, electricity, telephone networks and roads network etc. Hence it can be easily found in the community, for the site to benefit from it.

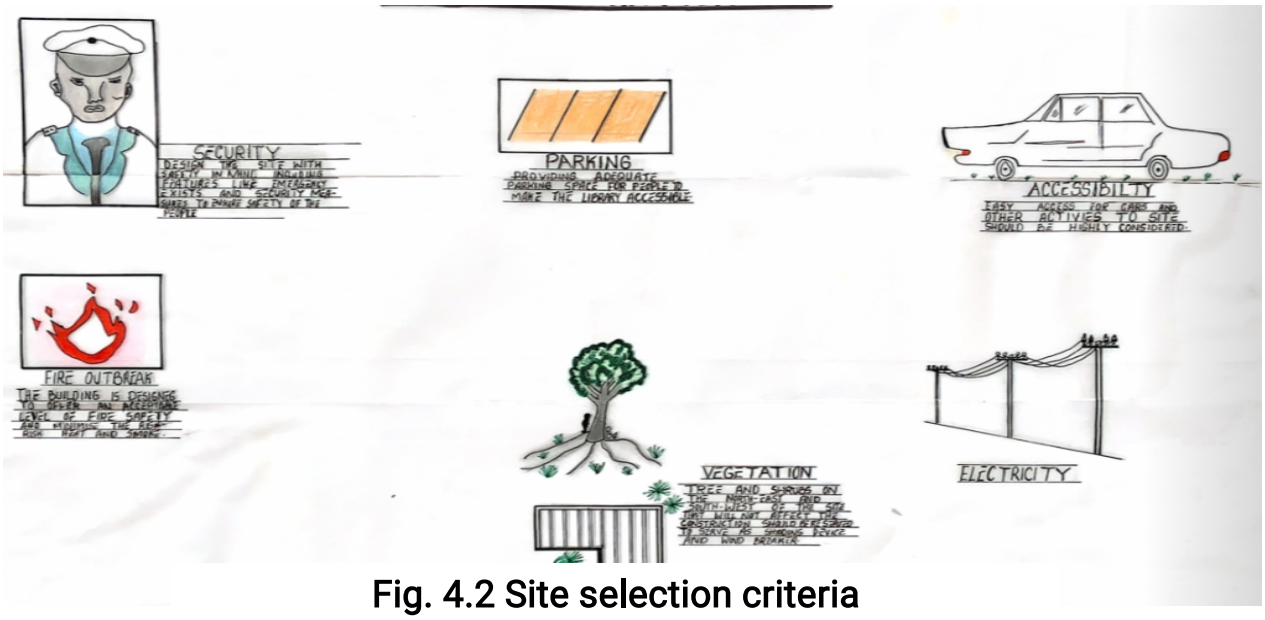

Fig. 4.2 Site selection criteria

4.2 VEGETATION

The area has a mix of grasses, trees, and shrubs, with some areas available for development.

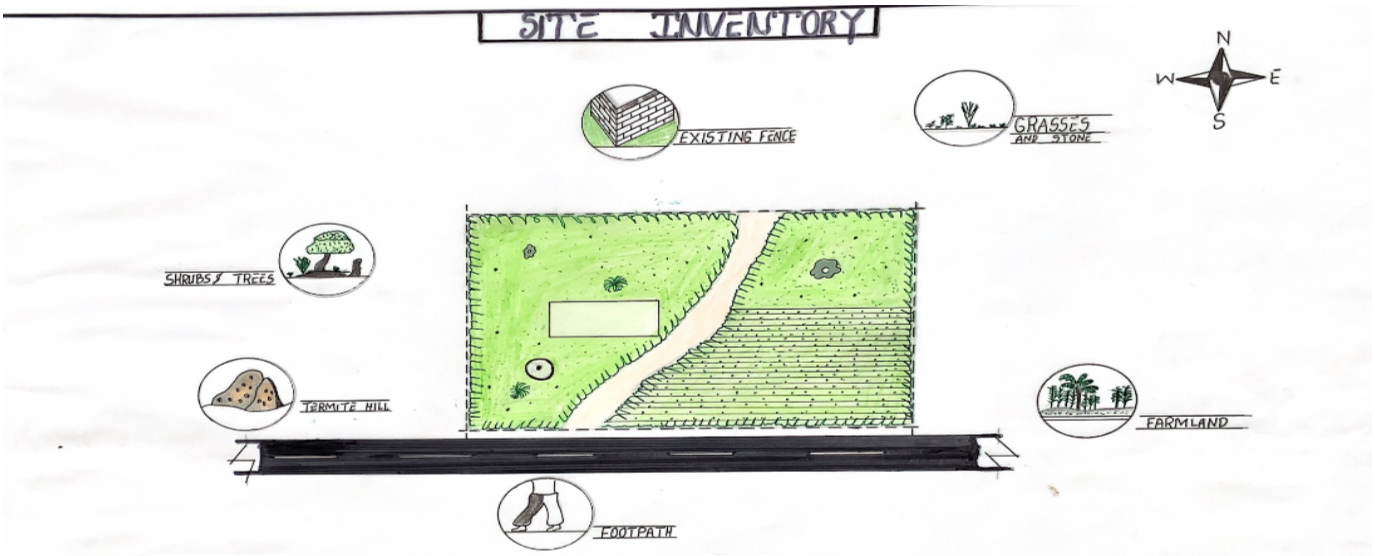

Fig. 4.3 Site inventory

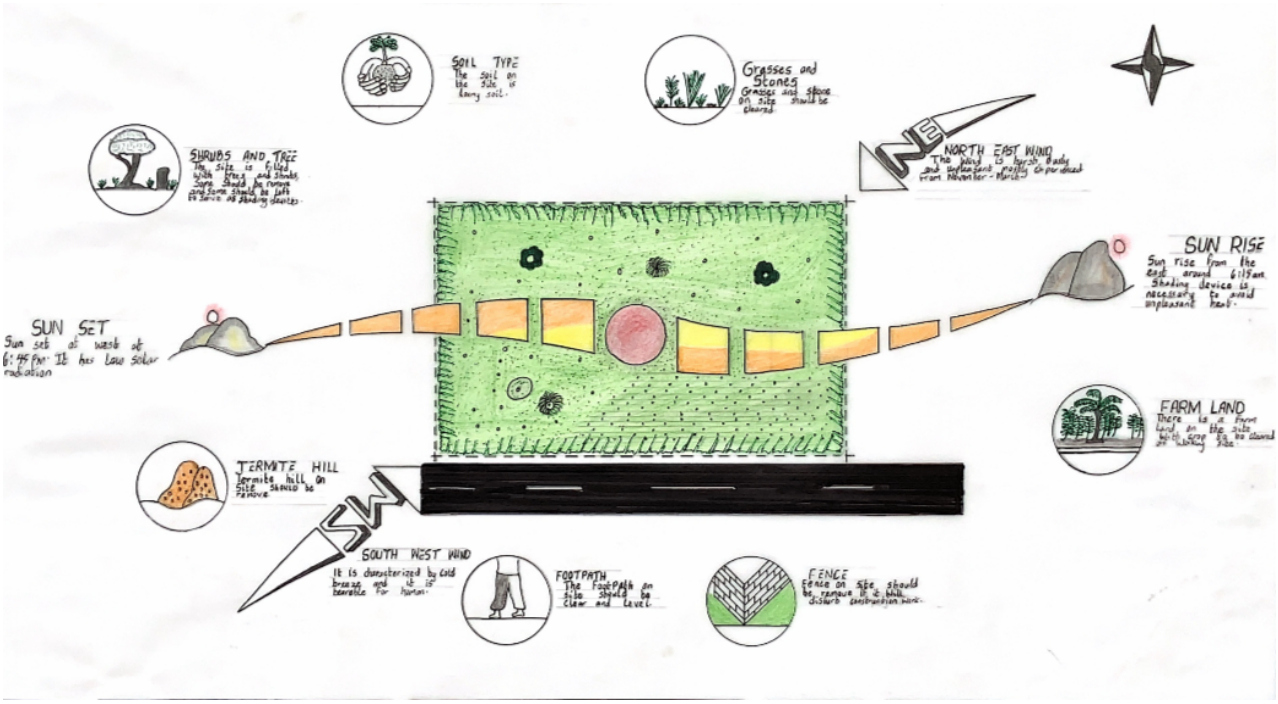

Fig. 4.4 Site analysis

4.3 CLIMATIC CONDITIONS IN ILORIN EAST

Ilorin East experiences a tropical climate with:

1. Wet Season: High temperatures, high humidity, and heavy rainfall.

2. Dry Season: Warm temperatures, low humidity, and low rainfall.

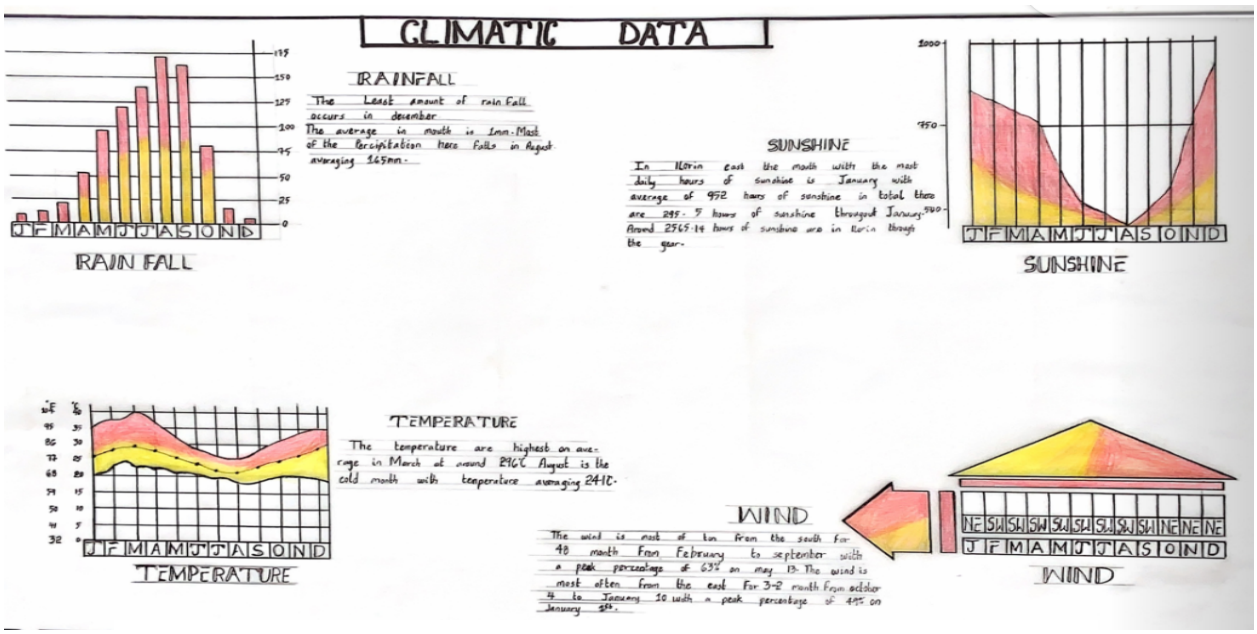

Fig. 4.5 Climatic Data

4.4 SITE SELECTION

In the site selection provision is made for interesting facilities that Worth emulating since the overall success and efficiency of any project depend not only on the functionality of the design but also careful choice of Site. The site of this project has been carefully selected which is located at Atiku Abubakar road,Oko Erin community,ilorin Kwara State.

The factors that affect the site selection include:
Accessibility
Location
Infrastructure
Topography
Soil structure
Population

ACCESSIBILITY

The major road connecting Ilorin to Ogbomosho is the closest highway to the site and the side can be easily accessed through Adebowale road. Two main entrance are been proposed for easy access in to and out of the site.

TOPOGRAPHY

The topography of the site is gentle slope towards east which can assist for the construction of drainage system on site.

SOIL STRUCTURE

The soil has a very high load bearing capacity.

4.5 DESIGN CONCEPT/PLANNING PRINCIPLE

DESIGN PLANNING

Firstly, the process of analysis in the design into the necessary units required for the design is based on the data collected through research methodologies.

Secondly, the grouping of the various unit together according to their relationship with one another also based on the data and information gathered.

The concept of the design was arrived at from the functional relationship and bubble diagrams prepared out of the design brief which is based on the activities performed within the institute/school. The relationship of these various activities with one another within different units that makes up the design and also based on the zoning in accordance with the level of noise produce by each unit.

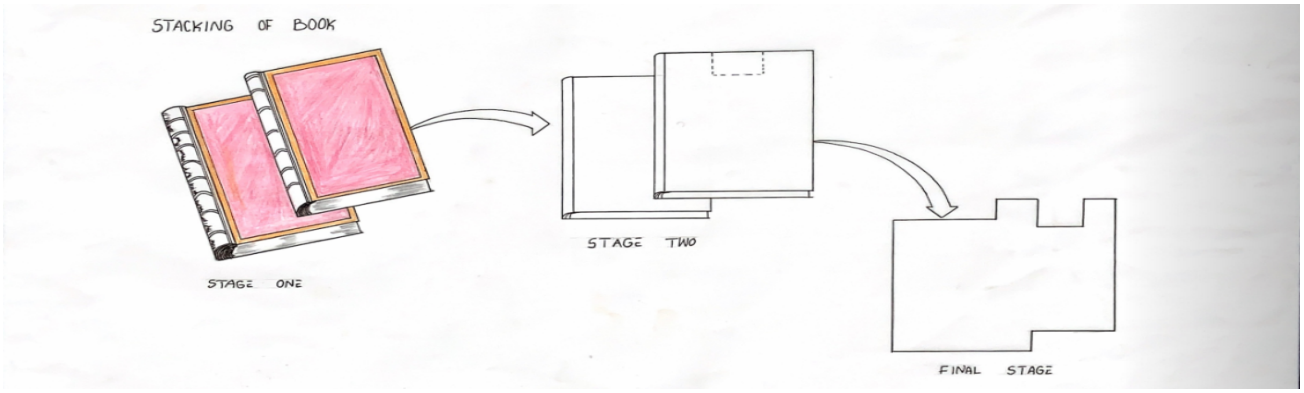

Fig. 4.6 Concept Derivation

PLANNING PRINCIPLE

The planning principle is one of the most important aspect of any design. The planning of various units taking into consideration the activities performed in each unit, how they are related to one another and the users of the various units in the design.

In respect to the sit zoning, the safe zoning is divided into three parts. The first division as quite area, the second are is semi quite area while third division is noisy area.

CHAPTER FIVE

5.0 PROJECT APPRAISAL

DESIGN ANALYSIS

5.1 GENERAL SERVICES

The public library's design incorporates various environmental facilities and services, including:

- Telecommunications: The library is designed to accommodate modern telecommunications infrastructure, ensuring reliable internet and phone connectivity for patrons and staff.
- Electricity Supply: The library's electrical system is designed to meet the needs of a modern library, with a reliable and efficient supply of electricity to support lighting, technology, and other essential services.
- Water Supply: The library's water supply system is connected to the municipal water main, providing a reliable source of clean water for drinking fountains, restrooms, and other facilities.

These services are designed to support the library's operations and provide a comfortable and convenient environment for patrons.

5.2 BUILDING SERVICES FOR PUBLIC LIBRARIES.

Public libraries require a range of building services to ensure a safe, comfortable, and functional environment for patrons and staff. These services include:

5.2.1 ELECTRICAL SERVICES

- Reliable electricity supply to support lighting, technology, and other essential services
- Standby generators or backup power systems to ensure continuity of operations during power outages

Lighting

- Natural lighting through high-level windows and skylights to reduce energy consumption and enhance ambiance
- Artificial lighting systems to provide adequate illumination in all areas of the library

5.2.2 VENTILATION

- Natural ventilation through carefully designed windows and doors to reduce reliance on mechanical systems
- Artificial ventilation systems to maintain a comfortable indoor climate and air quality

5.2.3 ACOUSTIC DESIGN

- Noise reduction measures, such as sound-absorbing materials and strategic placement of noisy areas, to minimize distractions and enhance the user experience

5.2.4 FIRE SAFETY

- Fire detection and alarm systems to quickly identify and respond to potential fires

- Portable fire extinguishers and fire hydrants to provide effective firefighting capabilities

5.2.5 SECURITY SERVICES

- Secure entry and exit points to control access to the library
- Surveillance systems, such as CCTV cameras, to monitor the premises and deter potential threats
- Adequate lighting to enhance visibility and safety, particularly at night

5.2.6 PARKING AND WALKWAYS

- Adequate parking spaces for patrons and staff, with clear signage and accessible pathways
- Well-designed walkways and pedestrian precincts to facilitate easy circulation and minimize congestion.

5.3 CONSTRUCTION METHOD AND MATERIAL

Typical materials used include concrete for the foundation and structural elements, bricks or blocks for walls, and metal or composite roofing materials. Construction methods often involve traditional techniques like masonry for walls, reinforced concrete for structural elements, and standard roofing practices. Additionally, healthcare facilities may require specialized features like infection control measures, durable finishes, and efficient HVAC systems to maintain a hygienic and comfortable environment for Workers and staff

5.3.1 SUBSTRUCTURE

This is the part of the building below the natural ground level. The foundation of the building shall be deep foundation considering the bearing capacity of the soil and trench to be dug to firm strata. A concrete in-situ 1:2:4 should be used. The entire foundation depths shall be determined by competent Structural Engineer.

The substructure of a basic health center typically involves the construction of the foundation and underground elements that support the building's superstructure. It includes tasks such as site preparation, excavation, foundation construction, and utility connections. The substructure plays a crucial role in ensuring the stability and durability of the health center building.

5.3.2 SUPERSTRUCTURE

The superstructure of a public library refers to the part of the building above ground level. It includes the walls, floors, and roof that form the structure where library services are provided. Designing the superstructure of a library involves creating functional spaces such as:

- Reading areas and study spaces
- Shelving for books and media
- Community meeting rooms
- Administrative offices

The design focuses on creating a layout that promotes:

- Patron comfort and productivity
- Staff efficiency and effectiveness
- A safe and welcoming environment for all users

Elements of the superstructure include:

- Floors: Providing a stable surface for various activities and functions within the library.
- Roof: Protecting the interior spaces from weather elements and contributing to energy efficiency.
- Walls: Defining and separating different areas within the library, providing enclosure, privacy, and security.
- Doors: Serving as entry and exit points, ensuring privacy, security, and ease of movement.
- Windows: Allowing natural light to enter, providing views, and contributing to the overall ambiance.
- Ceiling: Concealing structural elements, enhancing acoustics, and improving aesthetics.

5.4 SERVICES

Public libraries require a range of services to ensure a safe, comfortable, and functional environment for patrons and staff. These services include:

Electrical Services

- Installation of electrical devices, lighting devices, and fittings
- Provision of power outlets and data connectivity

Mechanical Services

- Installation of air conditioning and ventilation systems
- Provision of security cameras (CCTV) and other security measures

Plumbing Services

- Installation of sanitary facilities, drains, and drainage systems
- Provision of water supply and disposal systems

Fire Safety Services

- Installation of fire extinguishers 50 re alarm systems
- Provision of fire drills and regular testing of fire safety equipment

Acoustic and Lighting Provisions

- Design of acoustic features to minimize noise pollution
- Provision of natural and artificial lighting to enhance the user experience

5.5 EXTERNAL WORKS

1. Parking Facilities: Designated parking areas for patrons and staff, with clear signage and accessible pathways.
2. Landscaping: Attractive green spaces, gardens, and walkways that enhance the library's aesthetic appeal and create a peaceful environment.
3. Access Roads: Well-designed roads and pathways that ensure smooth traffic flow and easy access to the library.
4. Signage: Clear and visible signs that direct patrons to parking areas, entrances, and important facilities.
5. Lighting: Adequate exterior lighting that ensures safety and security, particularly at night.
6. Waste Management: Proper disposal facilities and recycling programs to manage waste and promote sustainability.
7. Security Features: Installation of security systems and cameras to

ensure the safety and security of patrons and staff.

8. Utility Services: Provision of essential services such as water supply, drainage systems, and electrical connections.

9. Outdoor Seating Areas: Designated spaces for patrons to relax and enjoy the outdoor environment.

10. Barrier-Free Access: Impleme 51 n of accessibility features such as ramps, handrails, and wide doorways to ensure equal access for all patrons.

5.6 FINISHES

The choice of finishes can greatly impact the functionality and aesthetic appeal of a public library. Some popular options include:

- Durable flooring: Such as vinyl or hardwood flooring that can withstand heavy foot traffic.
- Acoustic ceiling tiles: That help to reduce noise levels and create a peaceful atmosphere.
- Natural materials: Such as wood accents or plants that can add warmth and character to the space.
- Color schemes: That are calming and inviting, promoting a sense of relaxation and focus.

5.7 BUILDING REQUIREMENTS FOR PUBLIC LIBRARIES

Public libraries have specific building requirements to ensure a safe, durable, and functional environment. These requirements include:

Construction Standards

- Adherence to relevant building codes and standards, such as those related to structural integrity and safety.

Stability

- A well-designed structural grid that provides stability and support for the building.

Maintenance Culture 52

- Regular maintenance to ensure the building remains in good condition.
- Easy-to-clean finishes, such as PVC, that can withstand regular cleaning with water and detergent.
- Regular servicing of facilities, such as pumping machines and toilets, to prevent breakdowns and ensure optimal performance.

Design for Maintainability

- Design elements that facilitate easy maintenance, such as accessible ducts and common finishes that require no special care or professional skills.

5.8 SUMMARY,RECOMMENDATION,AND CONCLUSION

5.8.1 SUMMARY

Throughout the design process (from inception to the final detailed drawing). Consideration has been given to a simple hut functional design, which take care of all problem in the existing public libraries.

This project aims to design a modern and functional public library that serves as a hub for learning, community engagement, and cultural

enrichment. The library's design prioritizes functionality, aesthetics, and community needs, with a focus on creating a welcoming and inclusive space for users.

Objectives

- To design a public library that provides access to a wide range of resources, including books, digital media, and online databases
- Create a comfortable and quiet study environment for students and researchers
- To design a building that promote literacy and a love of reading among children and adults 53
- To create space that support lifelong learning and personal development

Design Considerations

- Functional layout and flexible spaces
- Adequate lighting, seating, and technology infrastructure
- Accessible and welcoming design for diverse user groups
- Sustainable and energy-efficient design principles.

To Achieve the following:

- A modern and functional public library that meets the needs of the community
- Increased access to information and resources for users
- Enhanced community engagement and social cohesion
- Support for literacy, education, and lifelong learning

5.8.2 RECOMMENDATION

Recommendations for Public Library Design

To improve the architectural design of public libraries, the following recommendations are proposed:

1. Optimize Functional Flow: Design a building with clear and direct paths between different sections, minimizing time lost in transitions and enhancing user experience.

2. Sustainable Design: Design a building with renewable energy sources, energy-efficient systems, and sustainable materials to reduce environmental impact. 54

3. Enhance User Comfort: Provide comfortable seating, access to natural light, and noise control to create a welcoming environment.

4. Future-Proofing: Design flexible and adaptable spaces that can accommodate growing collections, evolving technology, and changing community needs.

5. Technology Integration: Incorporate smart library systems for efficient management, automation, and community engagement.

6. Community Engagement: Create public areas for programs, events, and activities that foster community interaction and outreach.

5.8.3 CONCLUSION

Architect designing public libraries should prioritize user-centered design, balancing functionality with community needs.

Effective library design must have a welcoming environment for learning and community engagement, sustainable and adaptable

design principle. Leverage technology to enhance user experience and operational efficiency, flexible spaces for diverse activities and programs, and hub for community connection, literacy, and education.

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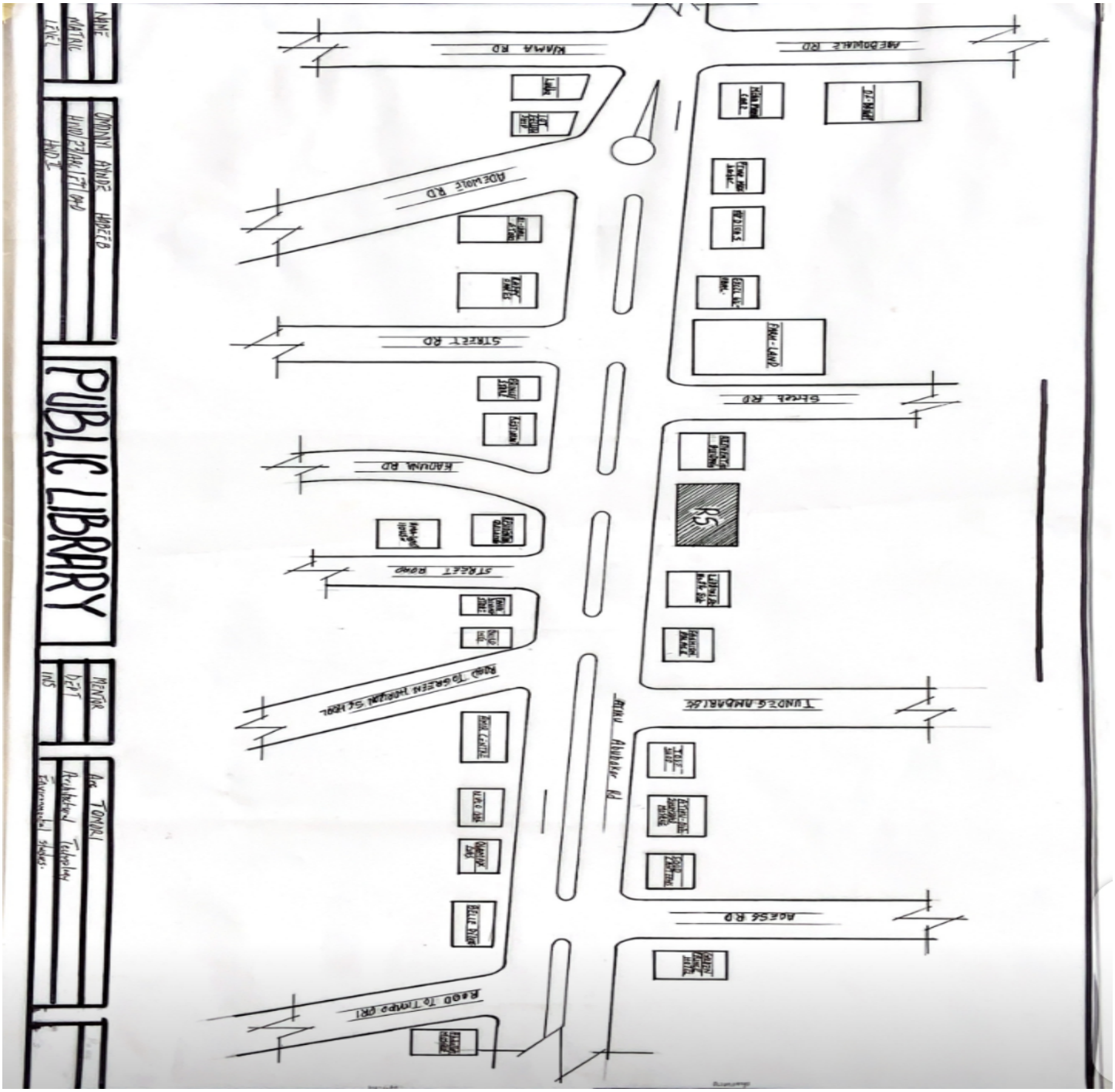
APPENDIXES

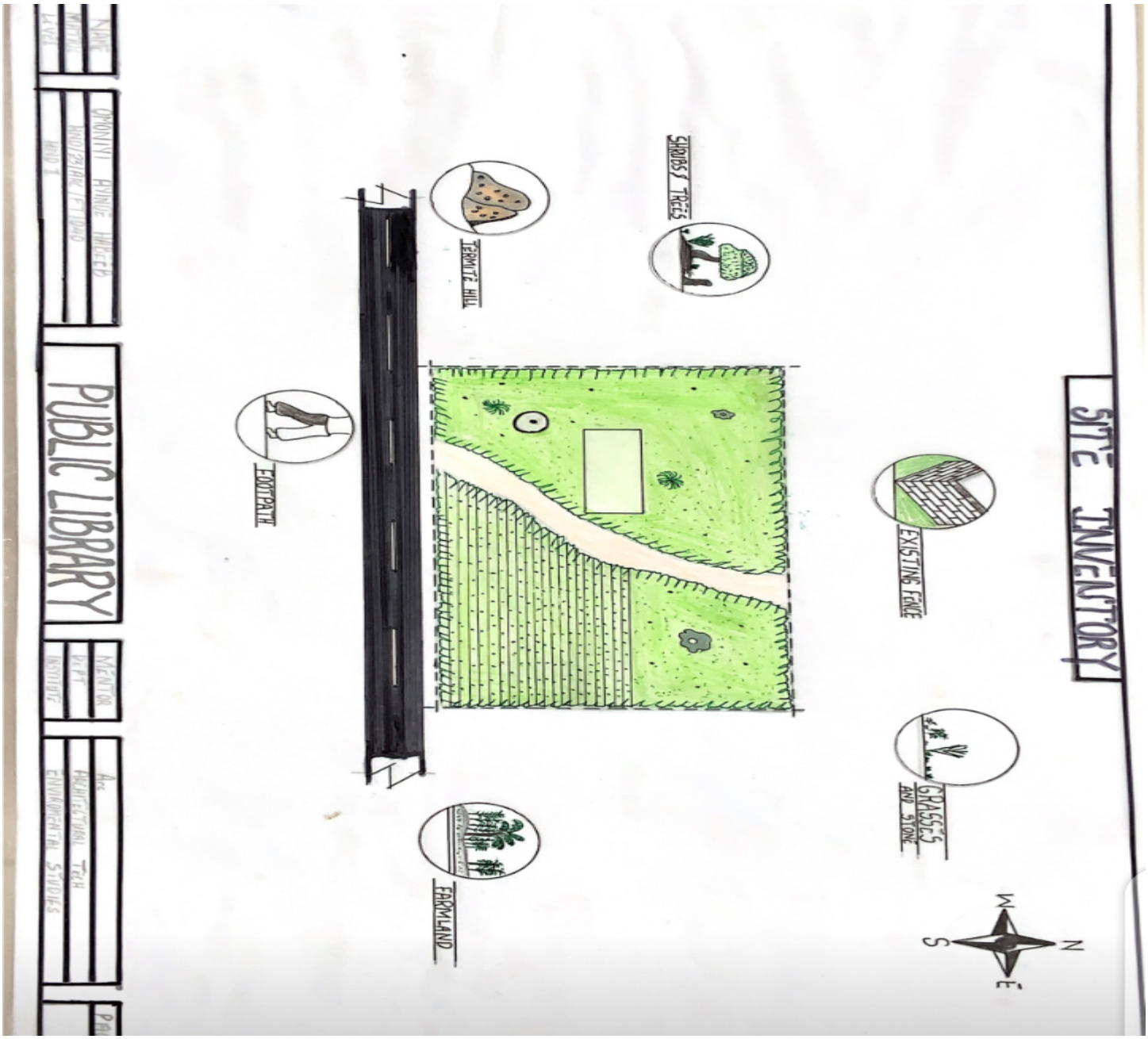
NAME	→ OMONIYI AYINDE HABEEB
MATRIC	→ HND/23/ARC/FT/00040
DEPTH	→ ARCHITECTURAL - TECHNOLOGY
MENTOR	→ ARC. TOMORI J.M.
TITLE	→ PUBLIC - LIBRARY
LEVEL	→ HND I
INSTITUTE	→ ENVIRONMENTAL - STUDIES

APPENDIX 1: PROFILE

APPENDIX 2: LOCATIONAL MAP SHOWING ILORIN EAST LOCAL GOVERNMENT AREA



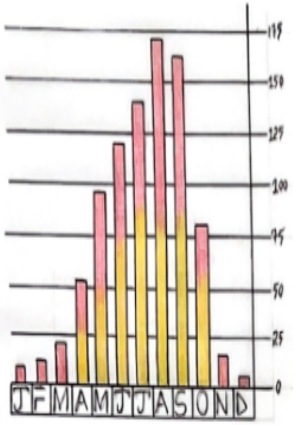
APPENDIX 3: LOCATIONAL PLAN



APPENDIX 4: SITE INVENTORY

APPENDIX 5: SITE ANALYSIS

CLIMATIC DATA



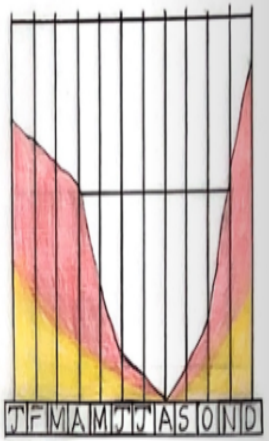
RAIN FALL

RAINFALL

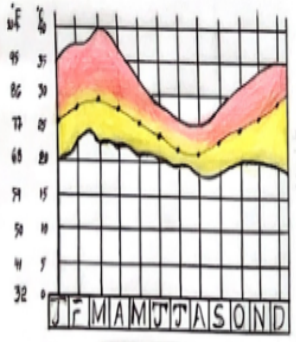
The Least amount of rain Fall occurs in december The average in month is 1mm. Most of the precipitation here falls in August averaging 145mm.

SUNSHINE

In Ilorin east the month with the most daily hours of sunshine is January with average of 9.2 hours of sunshine in total there are 285.7 hours of sunshine throughout January. Around 2565.14 hours of sunshine was in Ilorin through the year.



SUNSHINE



TEMPERATURE

TEMPERATURE

The temperature are highest on average in March at around 27°C August is the cold month with temperature averaging 24°C.

WIND

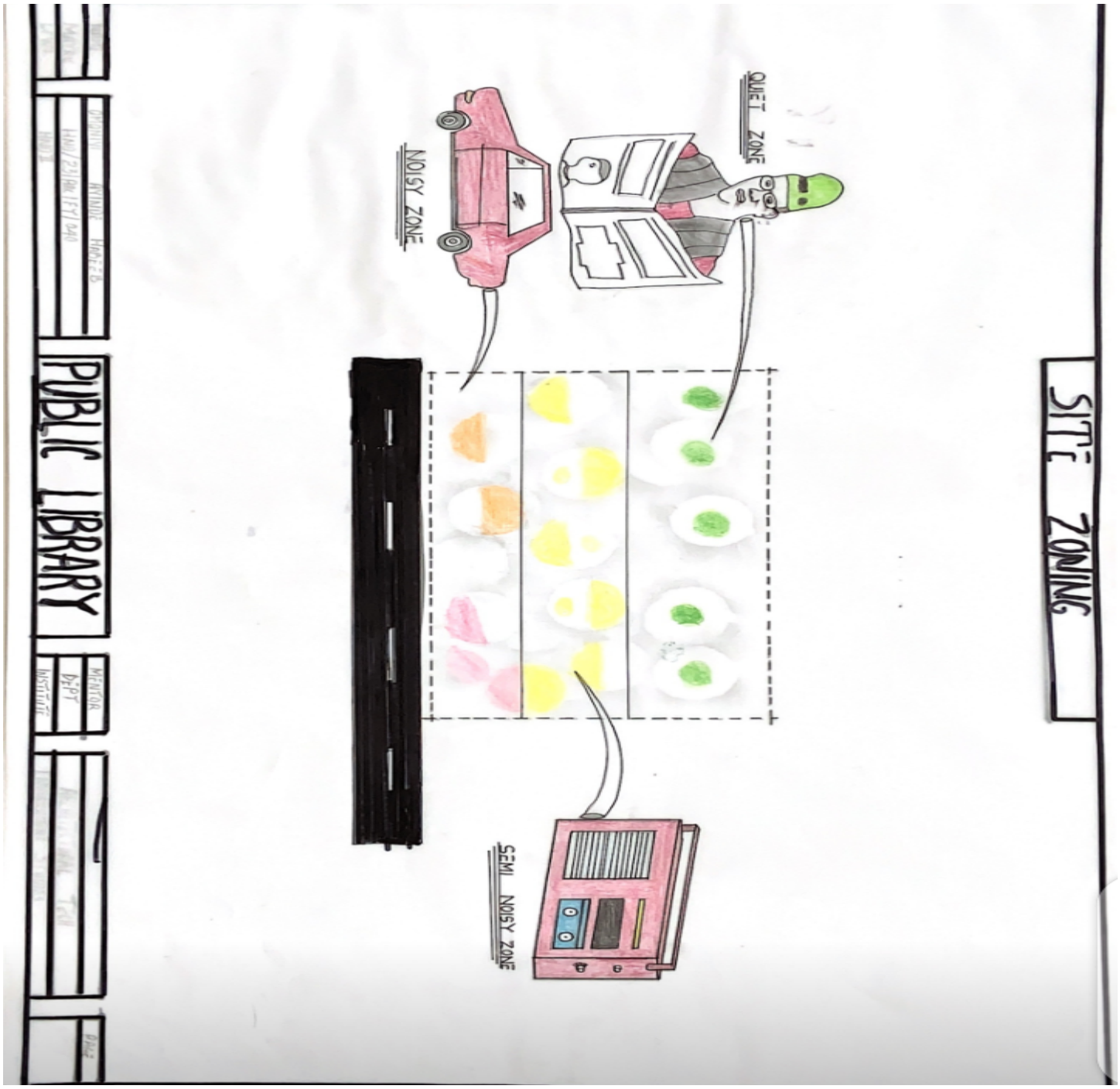
The wind is most of in from the south for 9 month From February to septemter with a peak percentage of 63% on may 13. The wind is most often from the east for 3-2 month from october 4 to January 10 with a peak percentage of 49% on January 9th.

WIND

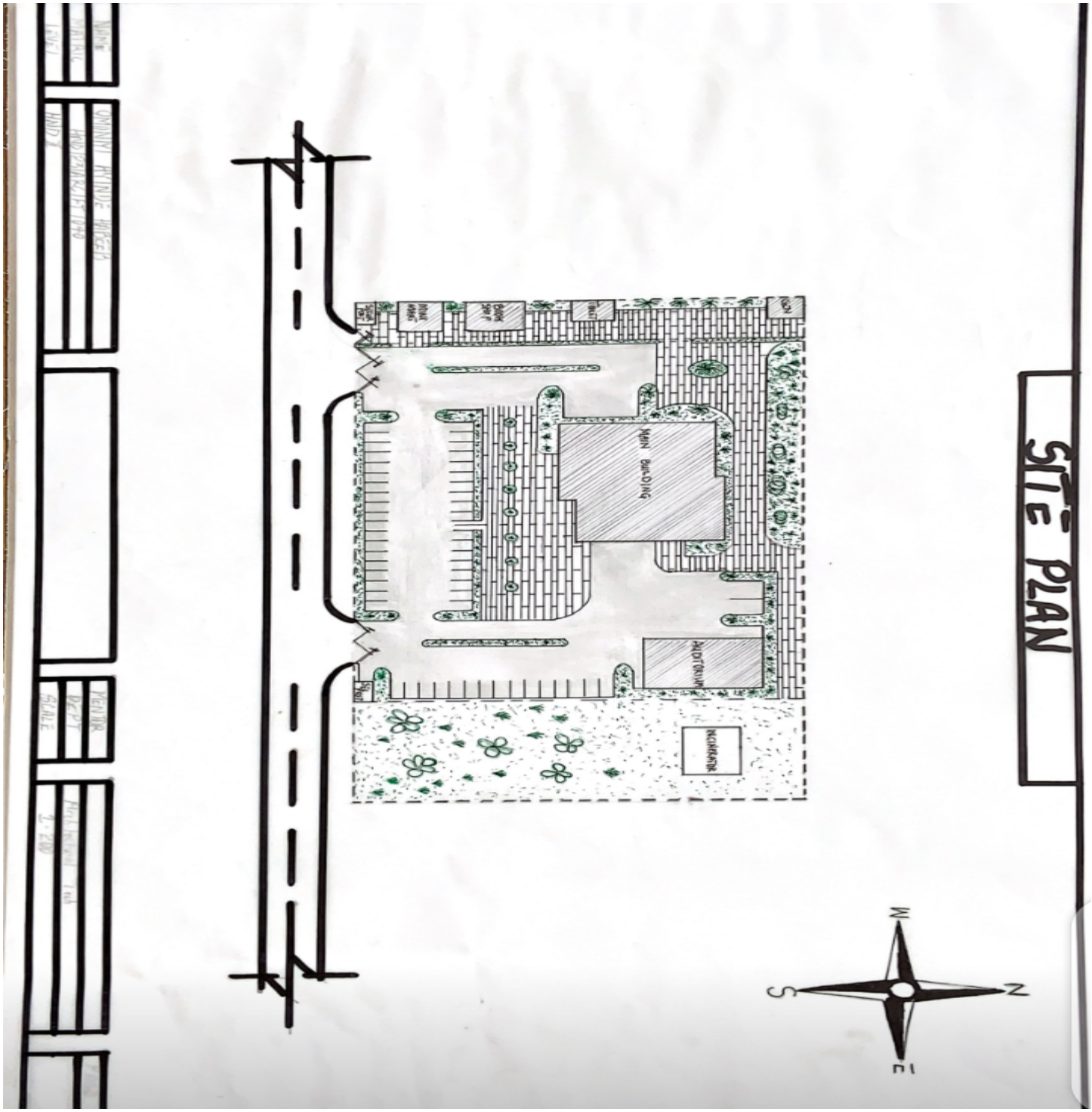
PUBLIC LIBRARY

APPENDIX 6: CLIMATIC DATA

APPENDIX 7: SITE CONSIDERATION

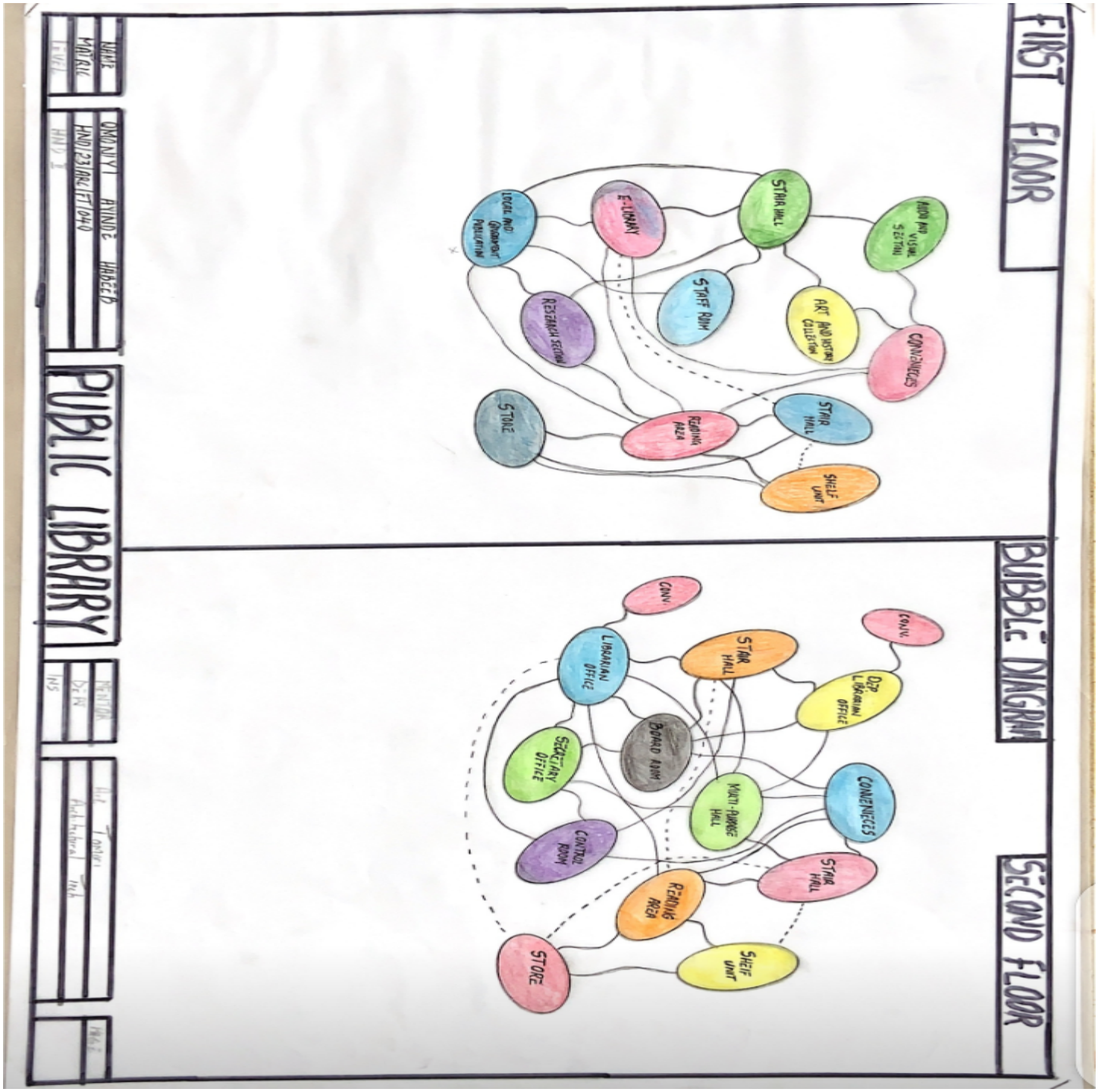


APPENDIX 8: SITE ZONAL

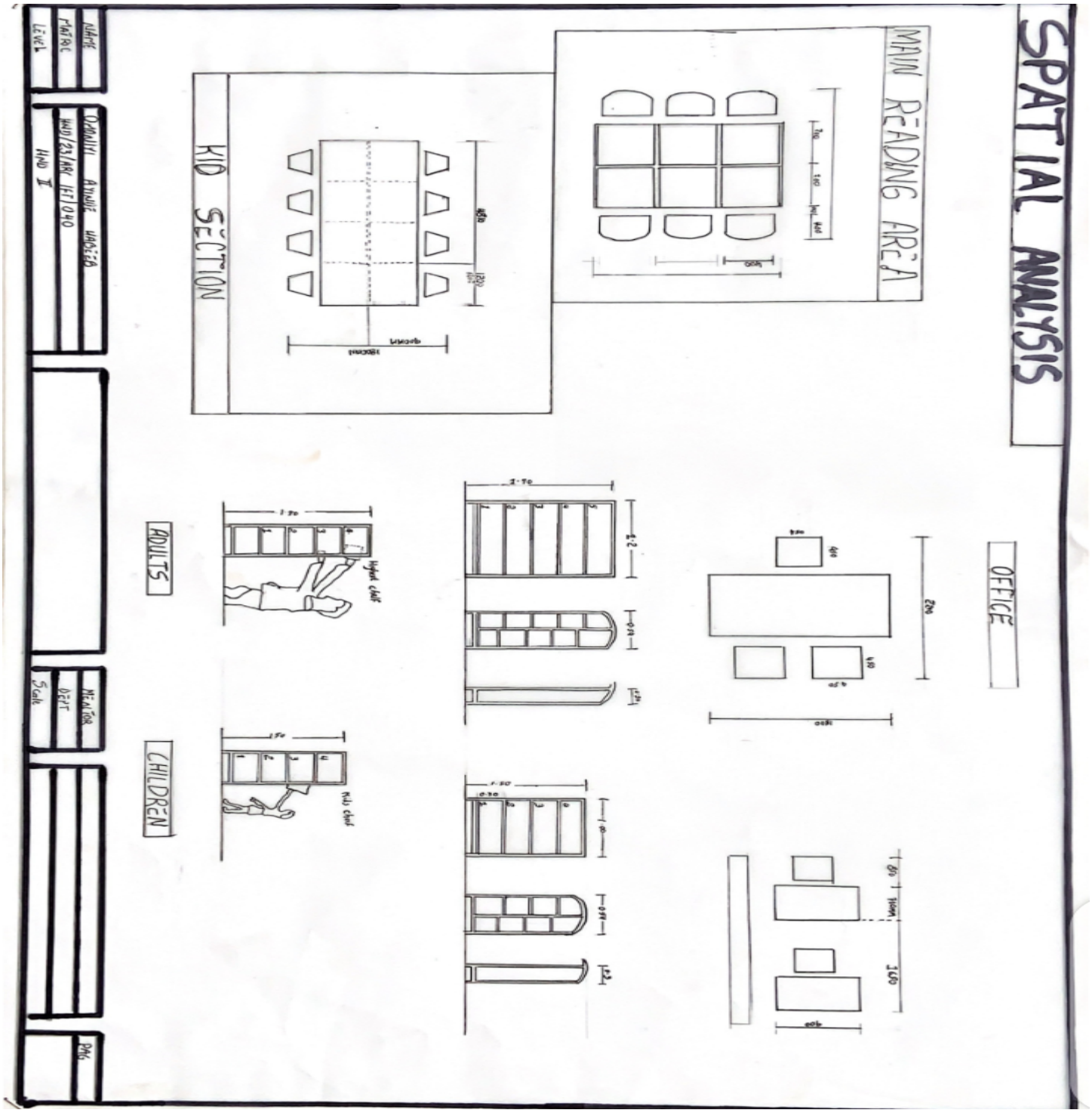


APPENDIX 9: SITE PLAN

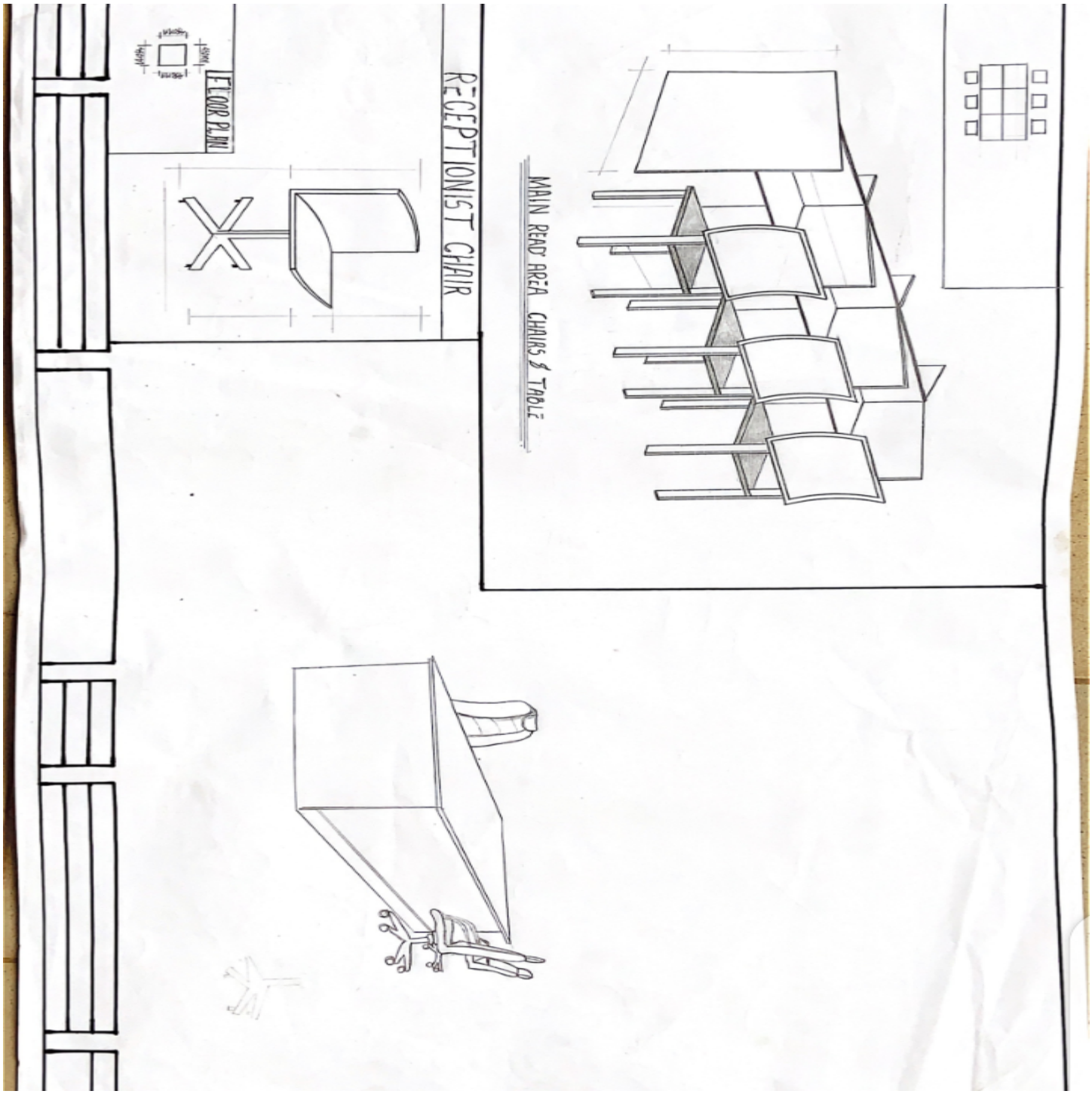
APPENDIX 10: BUBBLE DIAGRAM OF GROUND FLOOR



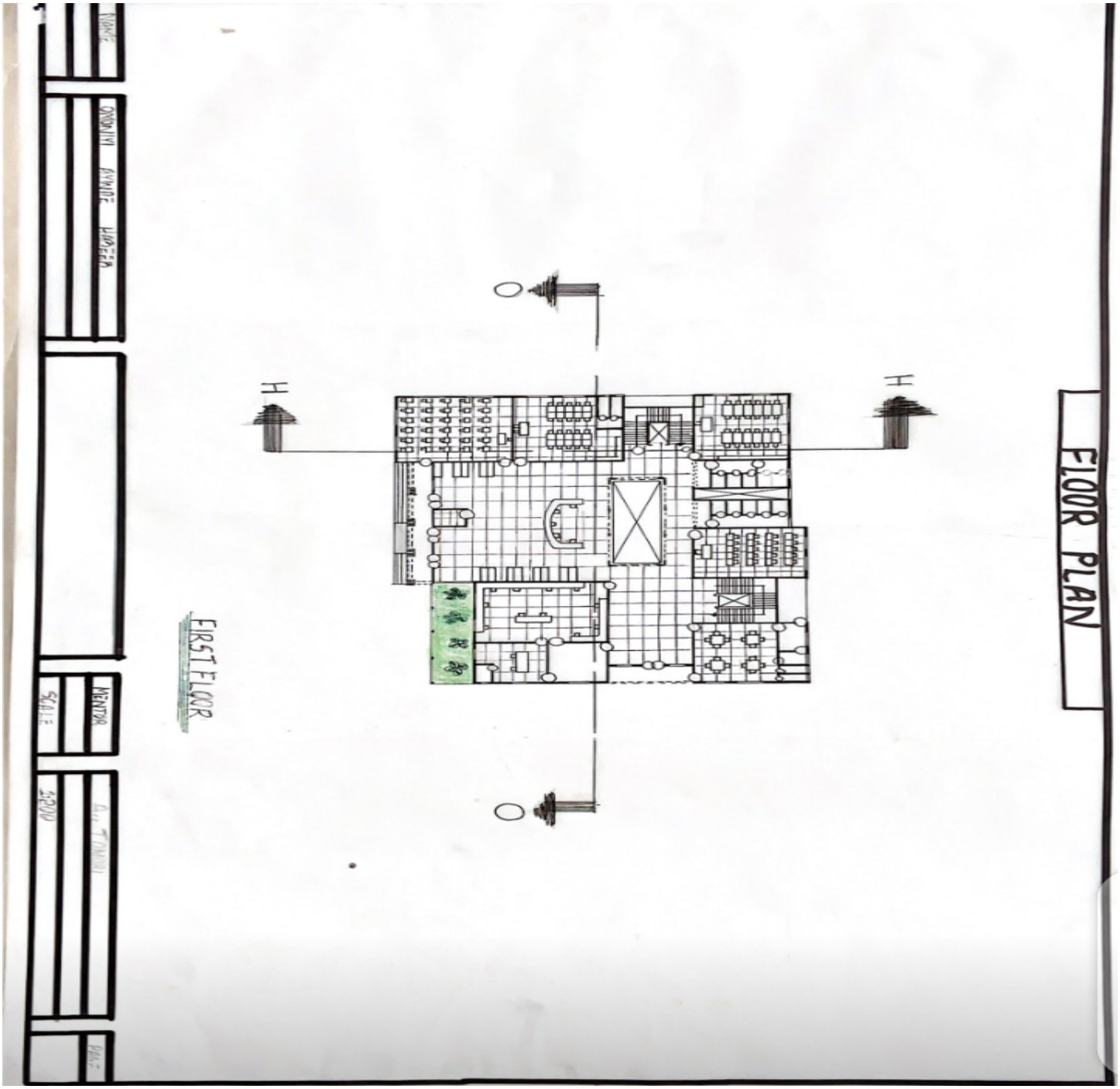
APPENDIX 11: BUBBLE DIAGRAM OF FIRST AND SECOND FLOOR



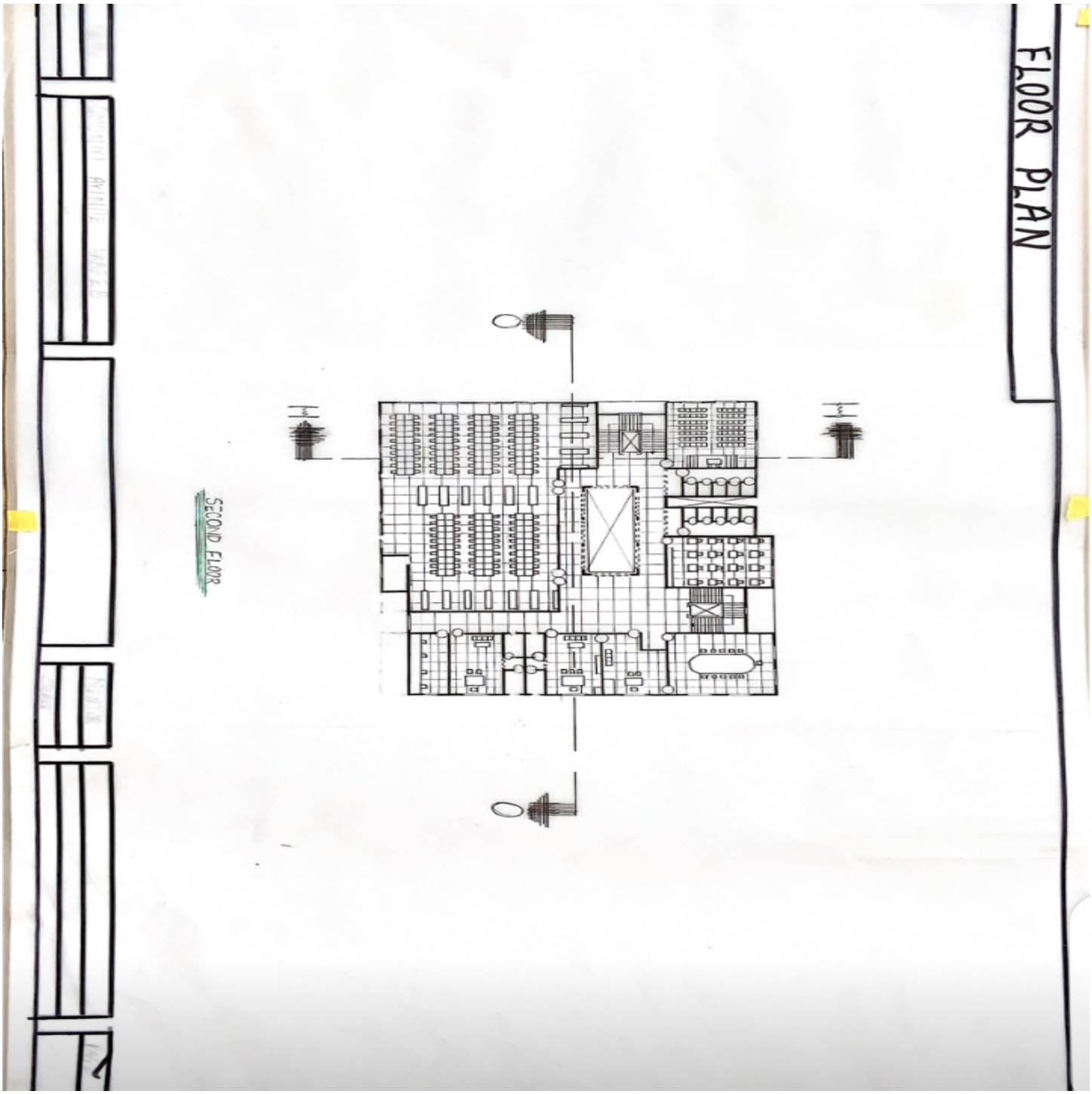
APPENDIX 12: SPATIAL ANALYSIS



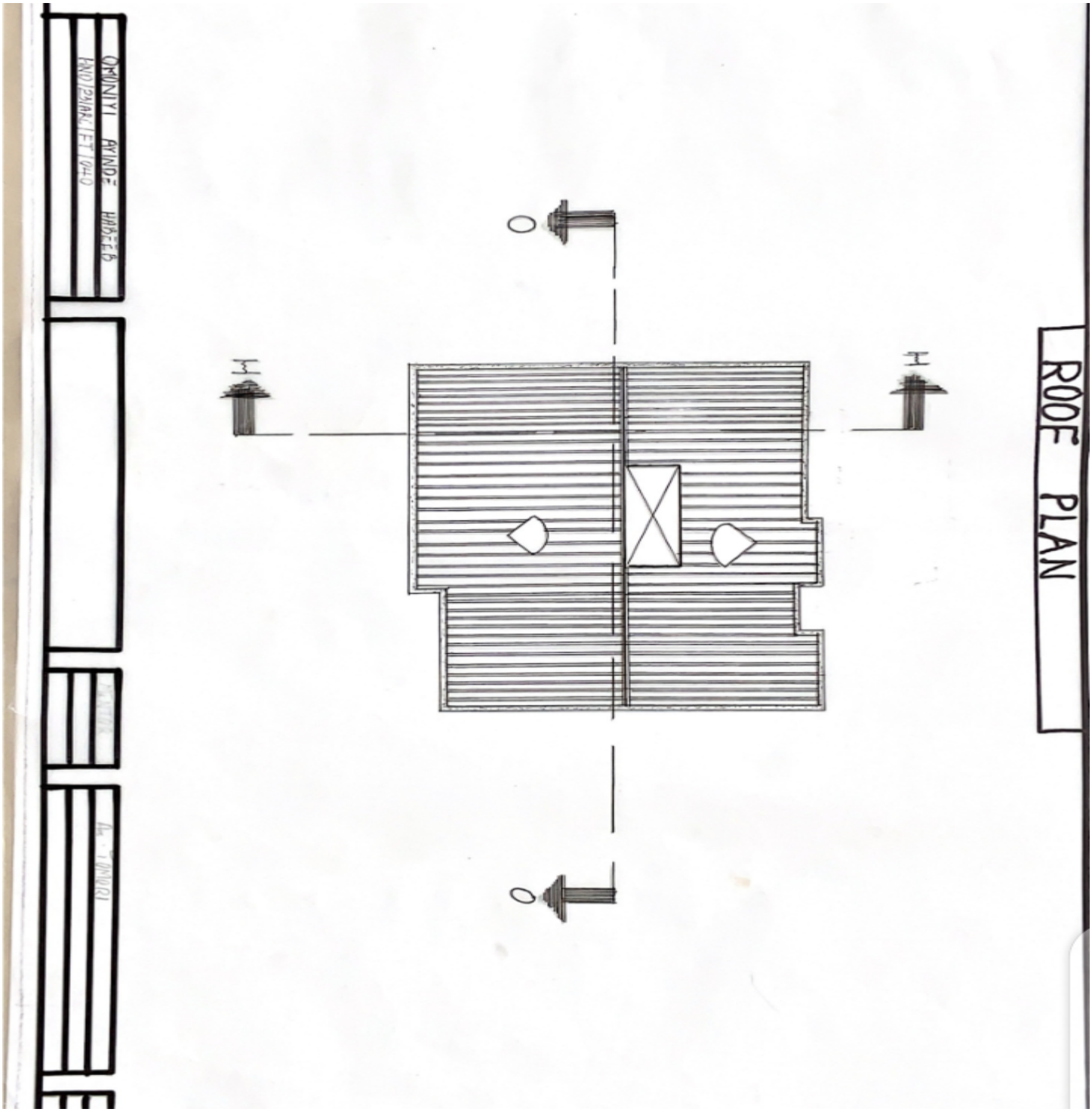
APPENDIX 13: ANTHROPOMETICS



APPENDIX 14: GROUND FLOOR PLAN

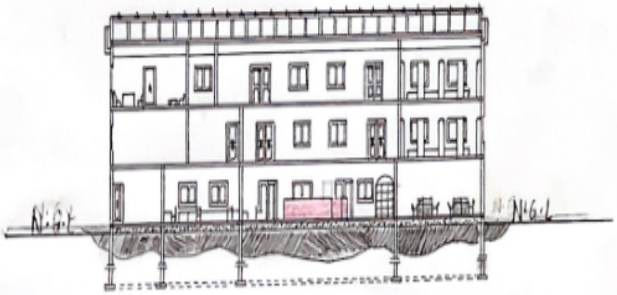


APPENDIX 15: SECOND FLOOR PLAN

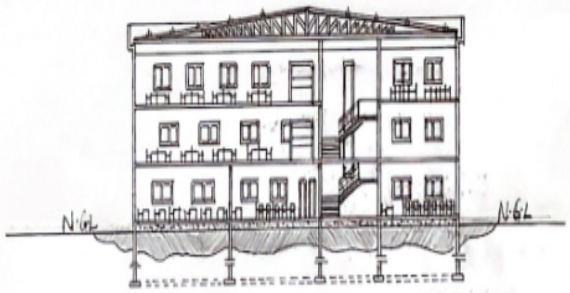


APPENDIX 16: ROOF PLAN

SECTION



SECTION O-O



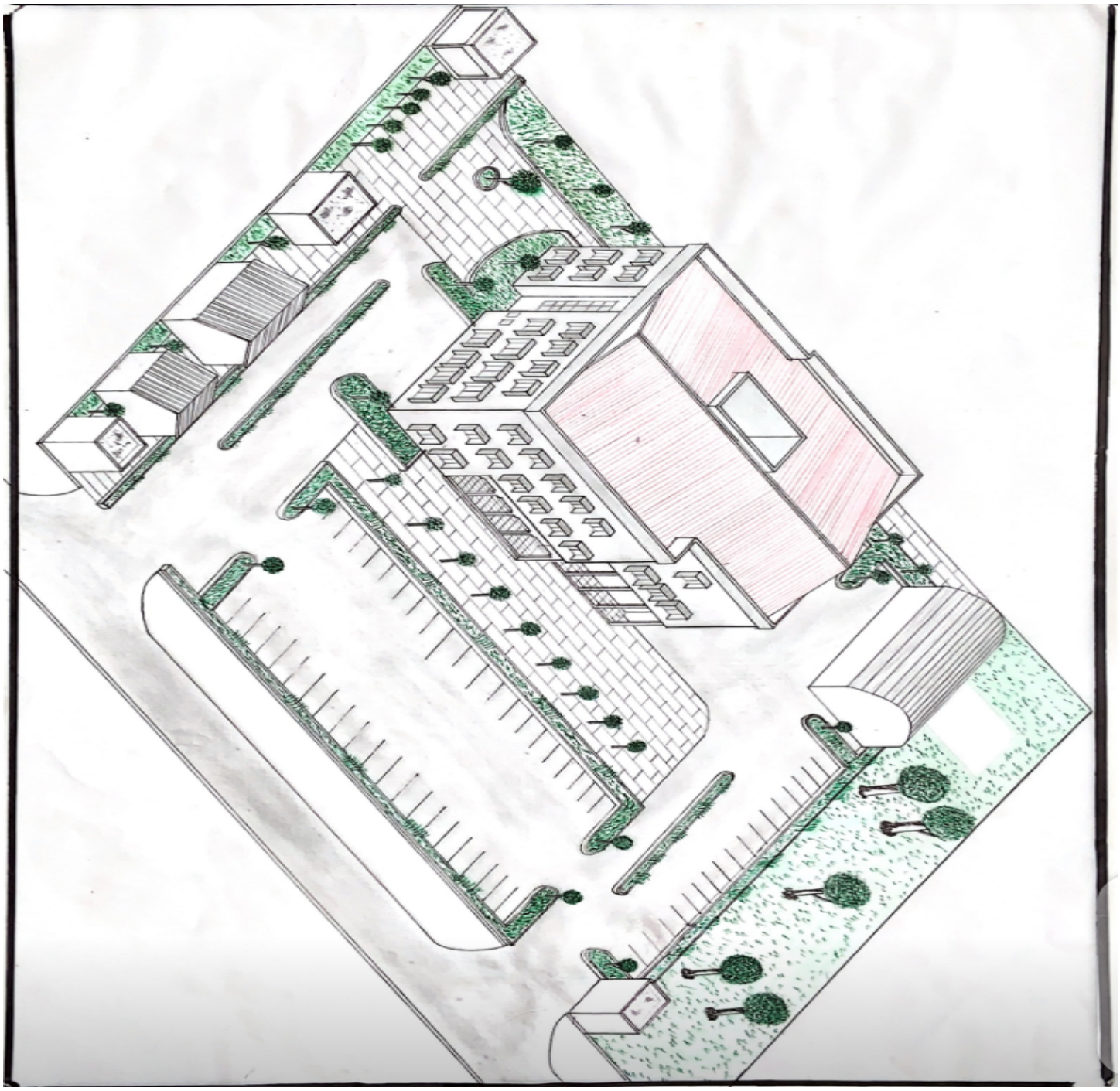
SECTION H-H

NAME ONONIYU AYINDE AMBEEB

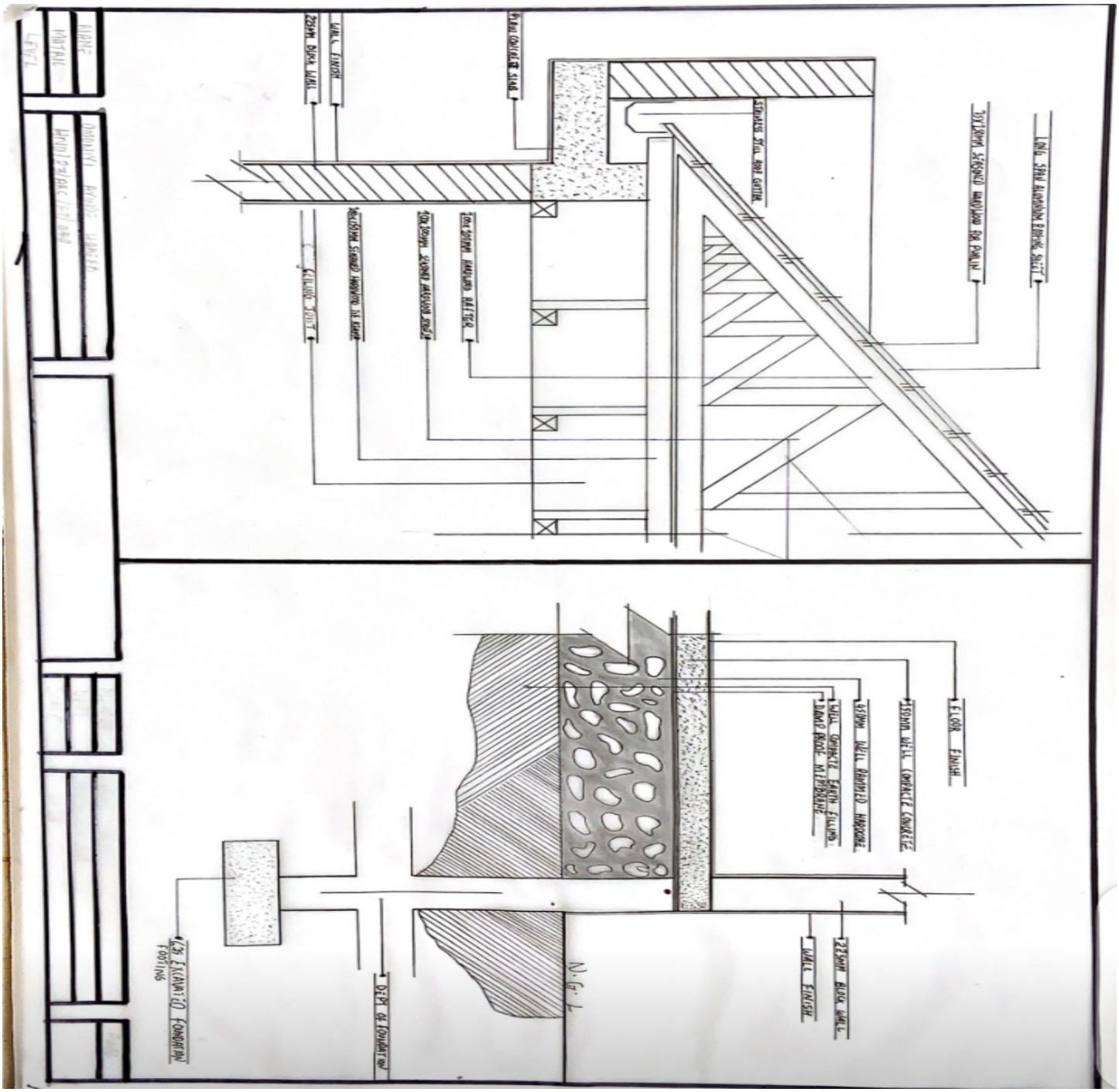
SCALE 1:200

APPENDIX 17: SECTIONS

APPENDIX 18: ELEVATIONS



APPENDIX 19: PERSPECTIVE



APPENDIX 20: DETAILS

APPENDIX 21: DOOR AND WINDOWS SCHEDULES