

PORTFOLIO by

Martin Perez Wanjohi

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MARTIN WANJOHI PEREZ

GRADUATE ARCHITECT



ABOUT

- I am a self motivated and self disciplined architect focused on achieving timely targets. I am interested in the day to day activities of an architectural firm.
- I also have a keen interest in the design process and spatial design, 3 D rendering and acute presentation of coherent drawings.
- I am a good team player, very fast learner, hardworking, easy going and approachable. I look forward to working with you.



CONTACT



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INTERESTS



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Martin Perez



Martin Perez



EDUCATION

UNIVERSITY OF NAIROBI- (2013-2019)

- Bachelor of Architectural studies (Hons)
- Bachelor of Architecture (Hons)

MURANG'A HIGH SCHOOL- (2009-2012)

- Attained Kenya certificate of secondary education

MUTUNGONI ACADEMY - (2006-2008)

- Attained Kenya certificate of primary education



EXPERIENCE

WANDA SYNERGY LTD- 6 MONTHS

- I assisted in the preparation of presentation and working drawings of various projects
- I designed different typologies of residential and commercial projects
- I conducted site visits of construction sites and assisted in data collection
- I prepared 3d renderings of various projects

SUNRISE BRIDGES LTD- 6 MONTHS

- I handled the day to day activities of the business, inventory and purchases of products
- Conducted audits and book keeping activities

BLIXEN STUDIO- 3 MONTHS

- Assisted in preparation of presentation drawings
- Assisted in the model-making processes
- Assisted in the preparation of renders



SKILLS

ADOBE PHOTOSHOP



V-RAY



ADOBE IN-DESIGN



SKETCH UP



ADOBE ILLUSTRATOR



AUTOCAD



AUTODESK REVIT



BLENDER



AUTODESK 3DS MAX



AUTODESK MAYA



LUMION 3D



MICROSOFT SUITE



REFERENCES

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Mr. Maranga Njoroge
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Mr. Peter Nderitu
Director: BLIXEN STUDIO
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SCHOOL PROJECTS

- 5th year project
- 6th year project

PRIVATE COMMISSION

- kitchen redesign, Lavington
- Barbershop design
- Residential Project, Kiambu
- Housing project, Kawangware

INTERNSHIP PROJECTS

- Mixed use development,
Westlands
- Residential project, Muthaiga
North

EDITORIAL

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PROJECT: MIXED USE DEVELOPMENT
LOCATION: NAIROBI, CBD
STATUS: 5TH YEAR SCHOOL PROJECT



PROJECT: KITCHEN REDESIGN
LOCATION: VALLEY ARCADE, LAVINGTON
STATUS: PROPOSAL



PROJECT: MIXED USE DEVELOPMENT
LOCATION: NAIROBI, CBD
STATUS: 6TH YEARSCHOOL PROJECT



PROJECT: MIXED USE DEVELOPMENT
LOCATION: WESTLANDS
STATUS: PROPOSAL (2017)



PROJECT: RESIDENTIAL PROJECT
LOCATION: WESTLANDS
STATUS: PROPOSAL (2017)



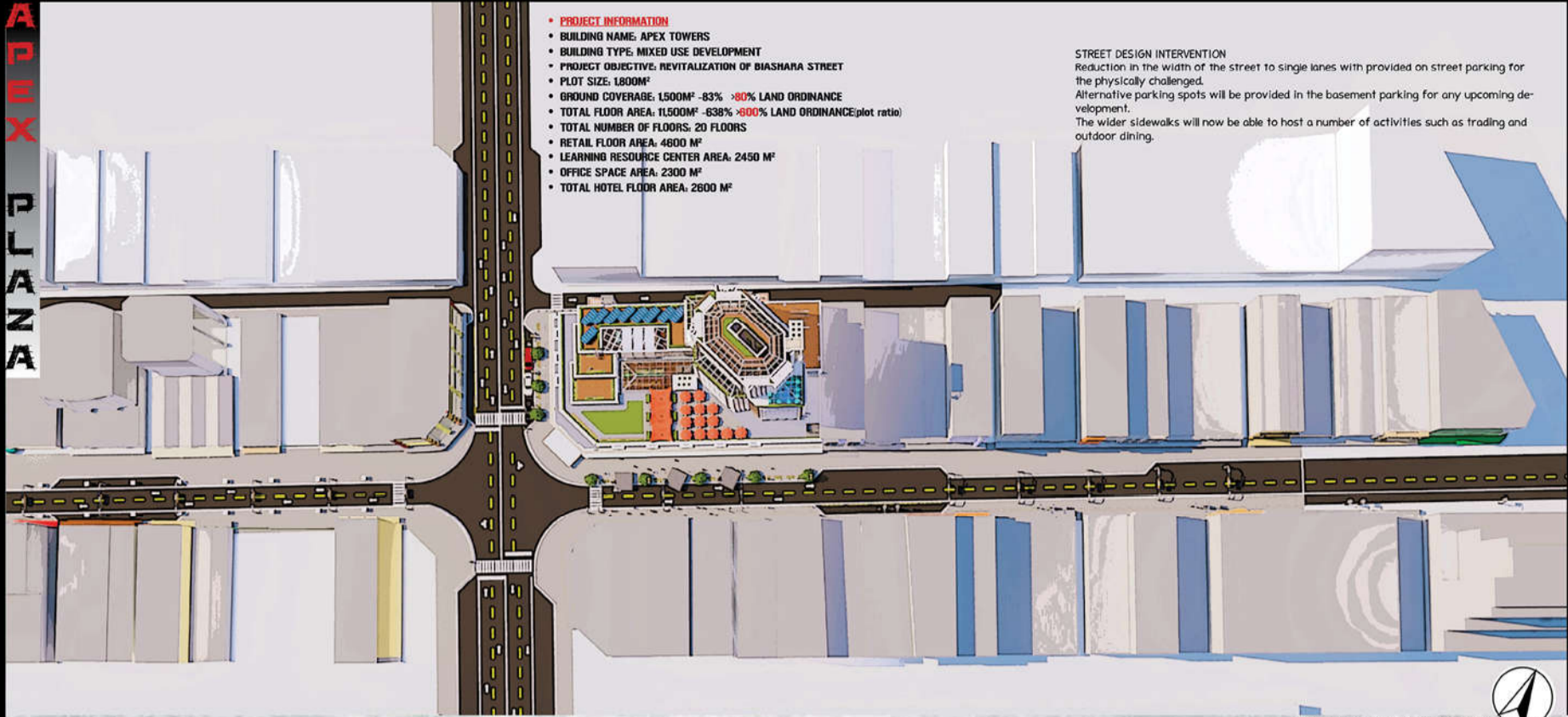
PROJECT BACKGROUND

- The design of the Apex towers was heavily influenced by the physical characteristics of the old buildings being demolished along the street. The 11,000 square meter building creates the central focus of the street as it is strategically located at the junction of two major roads namely, Muindi Mbingu and Biashara street.
- The development will host a variety of functions that will help focus people on to the street.
- The primary focus for the project will be the pedestrians and will aim to blur the edges of what is perceived to be public and private realm.
- The building façade design will incorporate some of the architectural features of the older building while also factoring in the scale of the existing buildings.
- Therefore the design had to celebrate the confluence of traffic (vehicular and pedestrian) and be able to integrate a pedestrian friendly approach to street design treatment as well as building massing.
- The building sits on 4 individual plots that have been amalgamated into one plot for convenience and necessity: as to be able to provide basement parking the single narrow plots were inviable therefore facilitating the amalgamation.
- The building comprises of 3 podium floor, 3 floors that host the learning resource center, 3 office space floors and 10 floors allocated to the hotel.
- The building's form was inspired by the design characteristics or principles that the old historic buildings embodied, i.e. Hierarchy, Symmetry, Rhythm and Repetition.



- **PROJECT INFORMATION**
- **BUILDING NAME:** APEX TOWERS
- **BUILDING TYPE:** MIXED USE DEVELOPMENT
- **PROJECT OBJECTIVE:** REVITALIZATION OF BIASHARA STREET
- **PLOT SIZE:** 1,800M²
- **GROUND COVERAGE:** 1,500M² - 83% >80% LAND ORDINANCE
- **TOTAL FLOOR AREA:** 11,500M² - 638% >600% LAND ORDINANCE(plot ratio)
- **TOTAL NUMBER OF FLOORS:** 20 FLOORS
- **RETAIL FLOOR AREA:** 4600 M²
- **LEARNING RESOURCE CENTER AREA:** 2450 M²
- **OFFICE SPACE AREA:** 2300 M²
- **TOTAL HOTEL FLOOR AREA:** 2600 M²

STREET DESIGN INTERVENTION
Reduction in the width of the street to single lanes with provided on street parking for the physically challenged.
Alternative parking spots will be provided in the basement parking for any upcoming development.
The wider sidewalks will now be able to host a number of activities such as trading and outdoor dining.



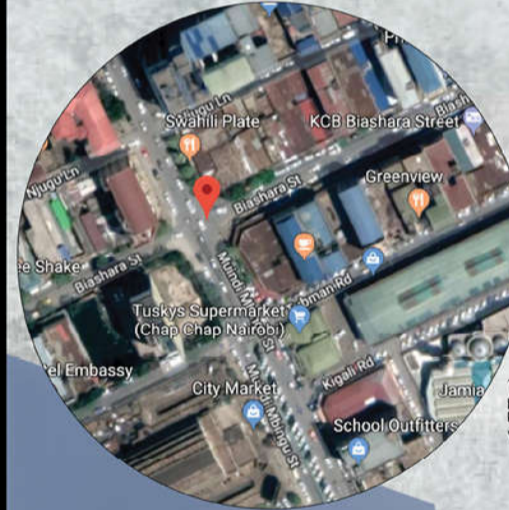
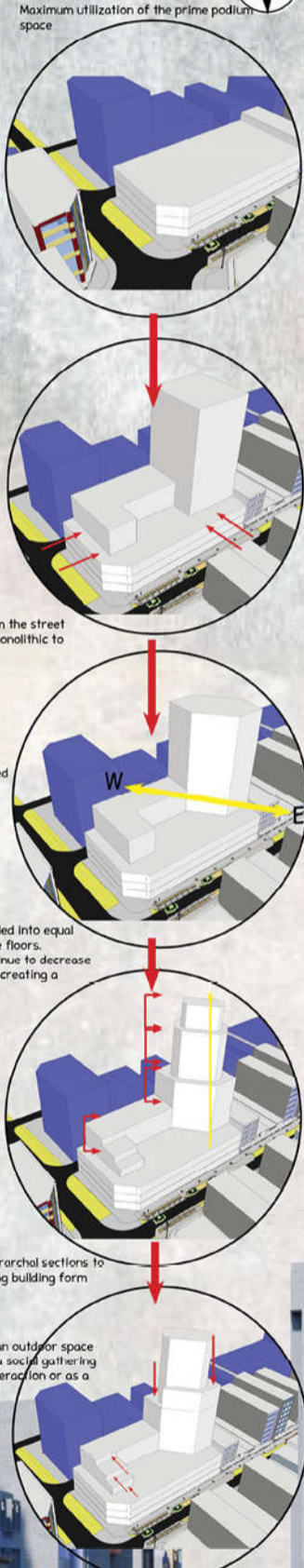
TRANSFORMATION OF BIASHARA STREET
MIXED USE DEVELOPMENT: APEX TOWERS

Etiymology
Node /nɒd/noun
A point in a network or diagram at which lines or pathways intersect or branch.
Synonyms: junction, fork, branching, intersection, interchange, confluence, convergence, meeting point, crossing, criss-crossing, vertex, apex
Apex /Deɒpɪks/
Noun: apex; plural noun: apices; plural noun: apices
The top or highest part of something, especially one forming a point.



- INTRODUCTION**
- The design of the Apex towers was heavily influenced by the physical characteristics of the old buildings being demolished along the street. The 11,000 square meter building creates the central focus of the street as it is strategically located at the junction of two major roads namely, Muindi Mbingu and Biashara street.
 - The development will host a variety of functions that will help focus people on to the street.
 - The primary focus for the project will be the pedestrians and will aim to blur the edges of what is perceived to be public and private realm.
 - The building façade design will incorporate some of the architectural features of the older building while also factoring in the scale of the existing buildings.
 - Therefore the design had to celebrate the confluence of traffic (vehicular and pedestrian) and be able to integrate a pedestrian friendly approach to street design treatment as well as building massing.
 - The building sits on 4 individual plots that have been amalgamated into one plot for convenience and necessity; as to be able to provide basement parking the single narrow plots were inviable therefore facilitating the amalgamation.
 - The building comprises of 3 podium floor, 3 floors that host the learning resource center, 3 office space floors and 10 floors allocated to the hotel.

- The building's form was inspired by the design characteristics or principles that the old historic buildings embodied, i.e. Hierarchy, Symmetry, Rhythm and Repetition.
- SUSTAINABLE DESIGN APPROACH**
- The vertical striations on the building facade are reminiscent of the signature parapet design of old buildings such as the M.Moti building that was built in 1959. This hierarchal strip design of the parapet wall was adapted into the building to accentuate the verticality of the building as well as serving as a ventilation shaft for passive cooling design.
 - The vertical elements have fins on the side that allow air to pass through a filter and into the internal spaces. This design is further aided by the light well which allows the warm air from the interior to rise and leave the building therefore creating a pressure difference.
- DESIGN PRINCIPLES**
1. Open and accessible to everyone
 2. Small scale retail
 3. Artistic and cultural activities
 4. Bold street treatment
 5. Celebrate intersection of major street traffic
 6. Enhance social interaction



- The hotel rooms are oriented to maximize on views to the city
- The diagrid structure serves as an aesthetic element as well as a functional element. The structure's depth provides adequate shading for the spaces
- The shared spaces are located on the periphery of the building which have been designed to maximize on the views to the city

- The building is recessed from the street so that it does not appear monolithic to the pedestrians
- The building tower is oriented along the east-west axis
- The tower is sub divided into equal sections each of three floors. The section then continue to decrease in areas they ascend creating a sense of hierarchy
- Interplay of the hierarchal sections to create an interesting building form
- The podium creates an outdoor space that can be used as a social gathering space to enhance interaction or as a relaxation area



A few parking spots have been provided on the street to cater for the physically challenged users

UNIVERSAL DESIGN
The building has provided ramps for easy access for the physically challenged

MORE REAL ESTATE
The expanded sidewalk is now used as an exhibition space for the traders in the building who don't have shops on the ground floor

The street sidewalk has been expanded by eliminating the on street parking and providing parking spots





BRIEF ANALYSIS

URBAN PLANNING

- The design aims to achieve a compact and efficient land use and resources.
- The site encourages more pedestrian movement without compromising the automobile users therefore street parking has been provided in tandem with wide pavements.
- The design attempts to restore the ecosystem of the Nairobi river by removal of the pollutants to enable clean water use by the residents.
- The river cleaning has been adopted from a case study in India of the river Assi, where they used soil bag weirs to create lagoons and increase retention time.

SITE LOCATION

- The site is located within the starehe constituency flanked by racecourse ngara, quarry road, ring road ngara and pumwani road.
- The site is within the proximity of Nairobi's central business district.

PROJECT VISION

- The key vision is to create a development in a destination of mixed use area that needs a complex comprising of high end hotel facilities, office spaces, a retail center and an entertainment.

SITE JUSTIFICATION

- The region around the site is highly pedestrianised, the higher the density the larger the potential retail market.
- The revitalised river banks provide a wide berth for pedestrians from the proposed BRT system
- The retail center is positioned to create a landmark project within the heart of the area/city.
- The products and services occupied in the project primarily cater to the appropriate customers without neglecting the other segments of the area.

LEGEND

- relocated church and civic center
- extension of gikomba open air market
- central business district: the buildings front the river therefore increasing the aesthetic value of the area.
- medical hub: main hospital
- cultural and resource center
- MIXED USE PROPOSED SITE
- commercial zone: office and business park
- residential apartment blocks
- proposed extension of Muthurwa market
- exhibition center and trade park
- Redesigned vehicle service zone
- administrative government offices & administration police housing quarters
- water purification plant and manual removal of physical debris from the river flow through the use of intermittently placed soil bag weirs to create lagoons and increase retention time
- community center and recreational park
- rapid transportation hub
- repurposed cemetery land as commemorative park provides a serene space for family members to grieve their loved ones
- large shopping center
- light railway station
- relocated Islamic primary school
- commemorative water fountain and stream
- public plaza: green space provided for the city workers to relax
- residential apartment blocks
- multi-story car park: provides alternative parking to the flash parking provided on the street level
- commercial zone: office and business park
- mixed use development sector
- proposed extension of Kariakoo open market

REVITALISED RIVER CHANNEL

RIVER ENGINEERING

- It is the process of planned human intervention in the course, characteristics or flow of a river with the intention of producing some defined benefit.
- hydromodification is the systematic response to alterations to riverine and non-riverine water bodies such as the river.

CORE GARDEN CITY PRINCIPLES

- Create A strong sense of community
- ordered development/redevelopment
- environmental quality

CHARACTERISTICS OF RIVER ENGINEERING

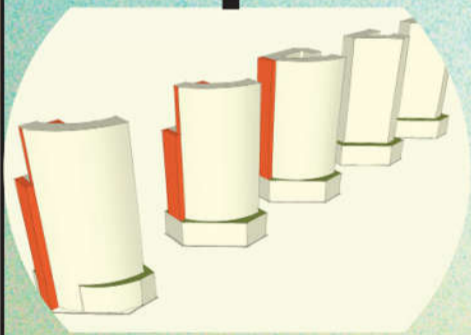
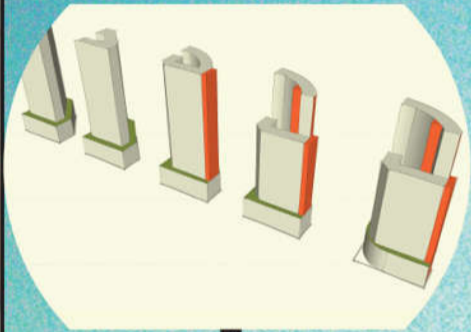
- The size of the rivers above any tidal limit are proportional to the extent of their basins
- The rate of flow depends mainly on the flow/gradient
- Organic material (detritus) that the river bank brings downhill.



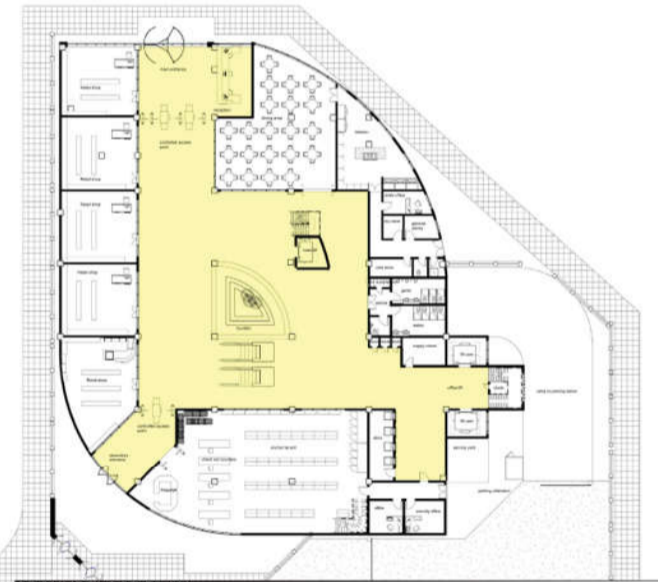
CONCEPT

DESIGN PRINCIPLES

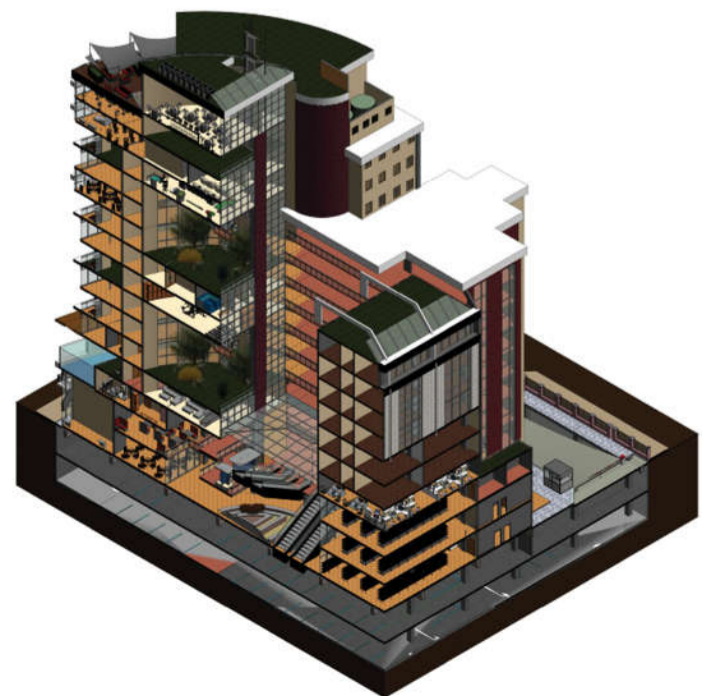
- The aim of the design is to effectively create a compact pedestrian friendly mixed use complex.
- The building site was chosen due to its proximity to the river which provides an opportunity for the revitalisation of Nairobi river.
- The mixed use development location provides a central focal point for the business district.
- The river has been reengineered so that the river banks are wider and the terraced banks also provide a spill way in case of increased water level due to rainfall.
- The building also attempts to create a streetscape with friendly shopping entrances to welcome retail patrons.
- The building podium is designed in order to usher people into the premises and encourages their stay through the provision of seats and a decorative water fountain.
- The complex also creates a regional plaza to serve the community and connect to the system of open spaces and natural corridors



BASEMENT PARKING PLAN



GROUND FLOOR PLAN



RESIDENTIAL PROJECT



PROJECT DESCRIPTION
Residential project
LOCATION: Muthaiga North
STATUS: Proposal
COST ESTIMATE: 30-50 million





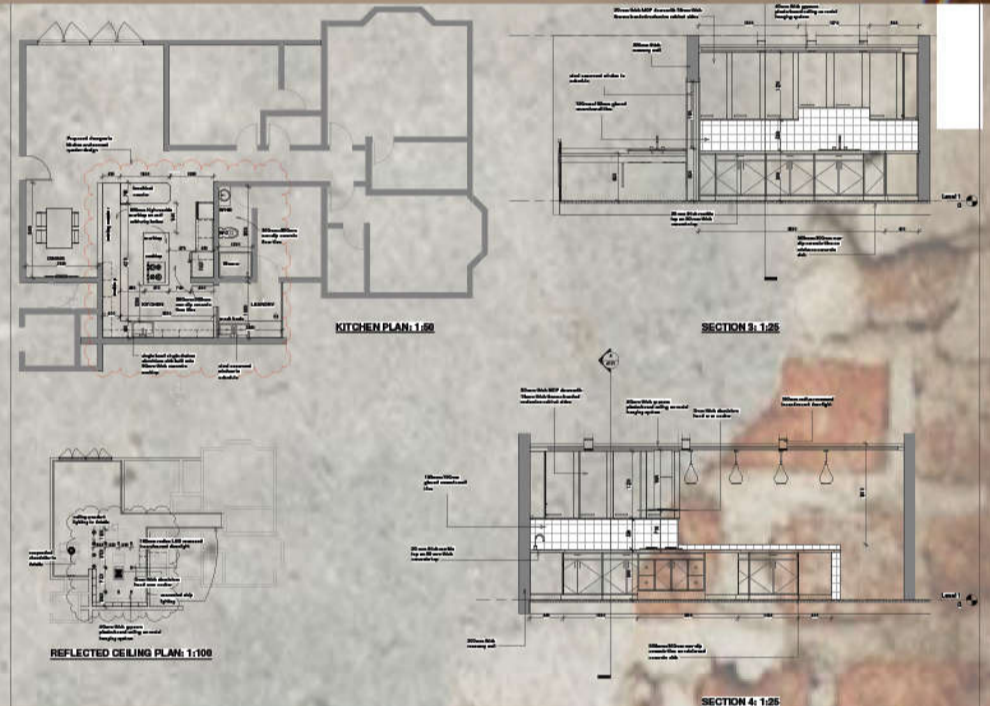
PROJECT DESCRIPTION
4 bedroom Residential Project
LOCATION: Kiambu
STATUS: Proposal
COST ESTIMATE: 10-15 million



INTERIOR DESIGN



PROJECT DESCRIPTION
Kitchen & servant quarters redesign
Location: Valley Arcade, Lavington
Status: Proposal
Year: 2019



INTERIOR DESIGN



PROJECT DESCRIPTION
Barbershop interior visualization
LOCATION: Nairobi
STATUS: Proposal



RESIDENTIAL PROJECT



PROJECT DESCRIPTION

Housing Project: 2 bedroom & 3 bedroom apartments

LOCATION: Kawangware

STATUS: Proposal

COST ESTIMATE: 100-200 million





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