

**rogers kiprono  
portfolio.**

**selected  
works**

**Archicad, Rhino & Grasshopper and Unreal Engine works**

**001**

**2024**

# KOECH ROGERS KIPRONO, GRADUATE ARCHITECT

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00233

**Website** [www.archvizkenya.com](http://www.archvizkenya.com)

**Education** Bachelor of Architectural Studies.

2017/09 - 2021/11:  
Kenyatta University  
School of Engineering and Architecture

2022/09 - 2024/11:  
Bachelor of Architecture.  
Kenyatta University  
School of Engineering and Architecture

**Languages** English and Kiswahili

## Software skills

Building Information  
Modelling:

Archicad

Revit

3d Modelling:  
Rhino and Grasshopper  
Sketchup

Realtime  
Visualisation:  
Unreal Engine  
Blender

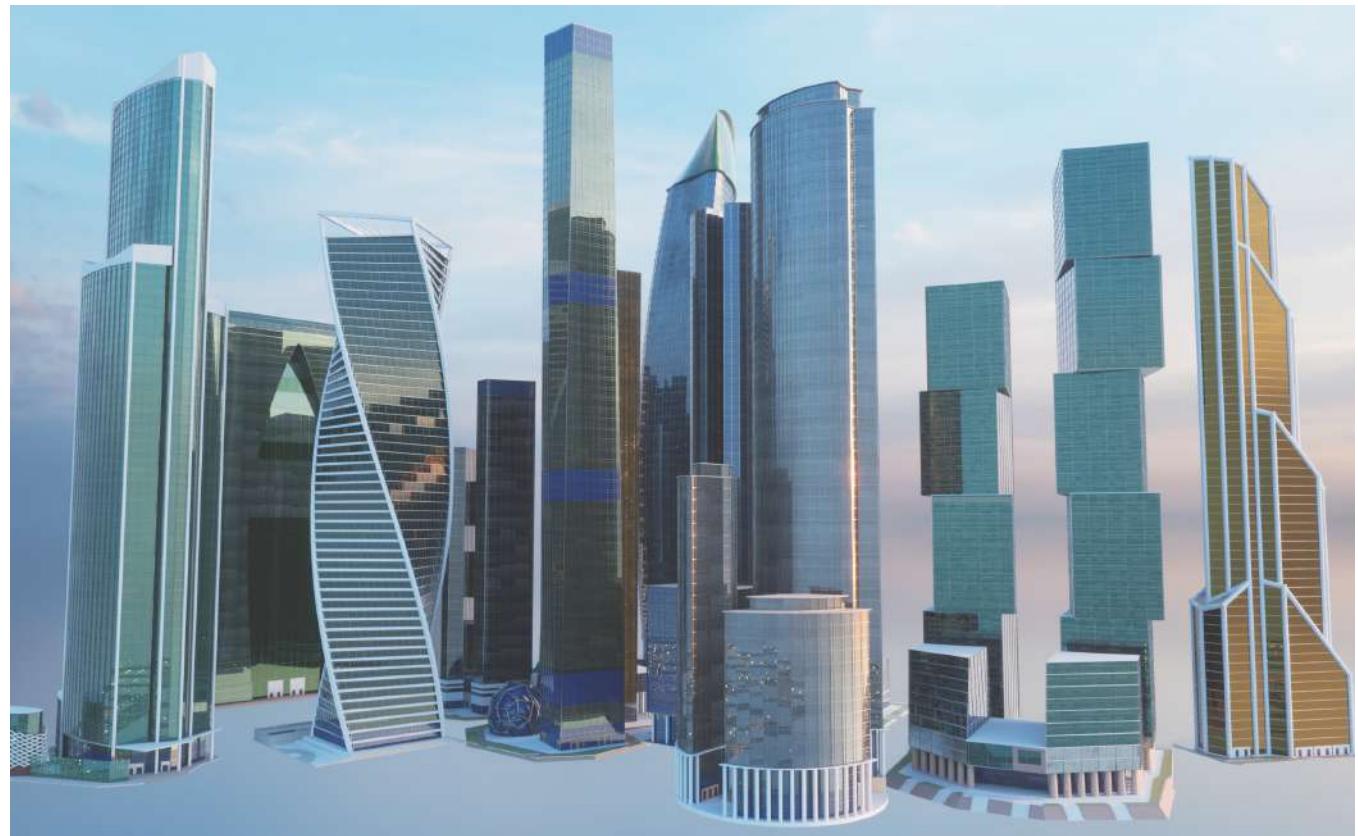
Presentation:  
Photoshop  
Indesign

**Soft skills**  
Sketching and Drafting  
Model making  
Project management  
Virtual reality visualisation  
Design and development

**Experience** May 2024-date  
Intern at MUTISO MENEZES INTERNATIONAL

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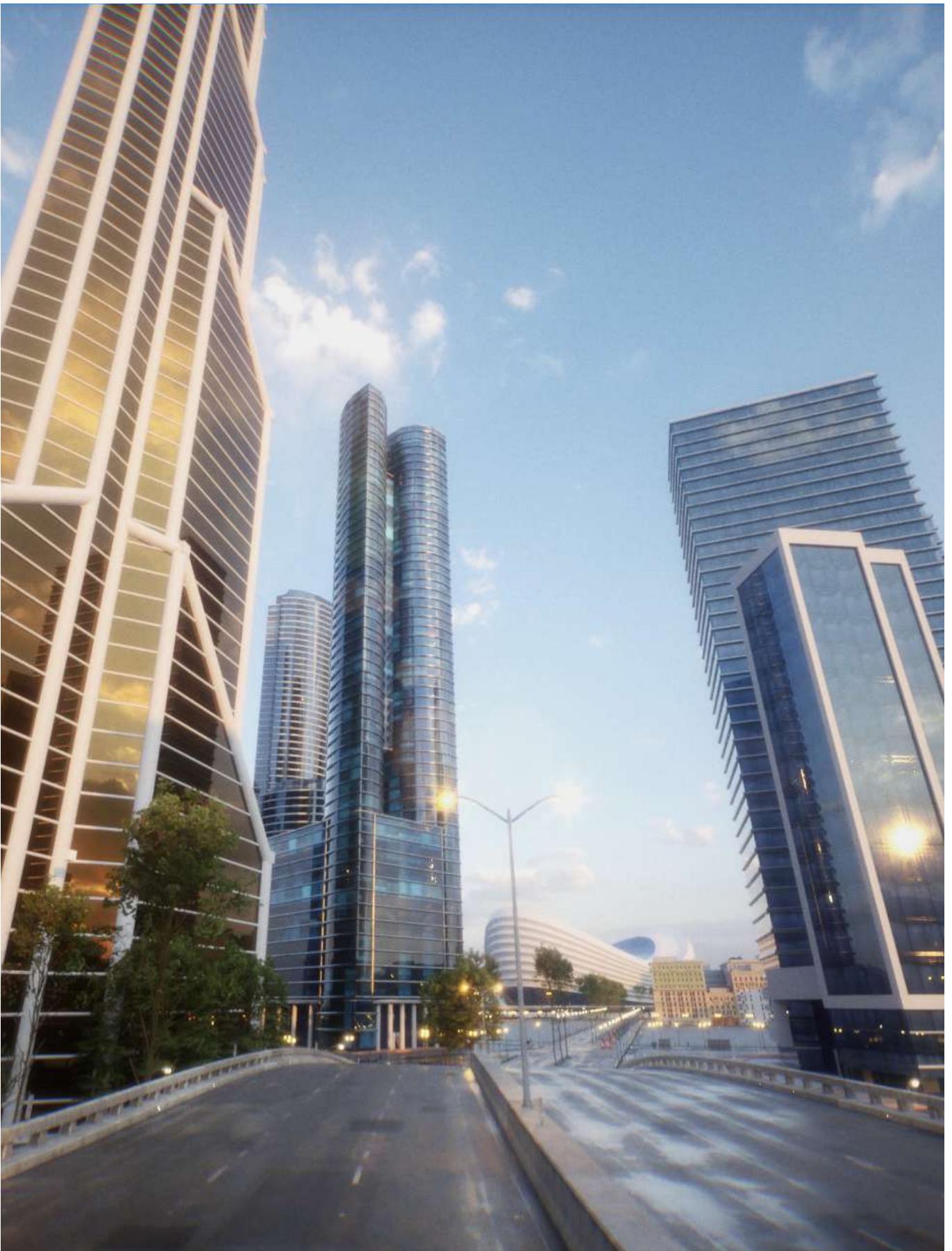
## “Parametric form design”

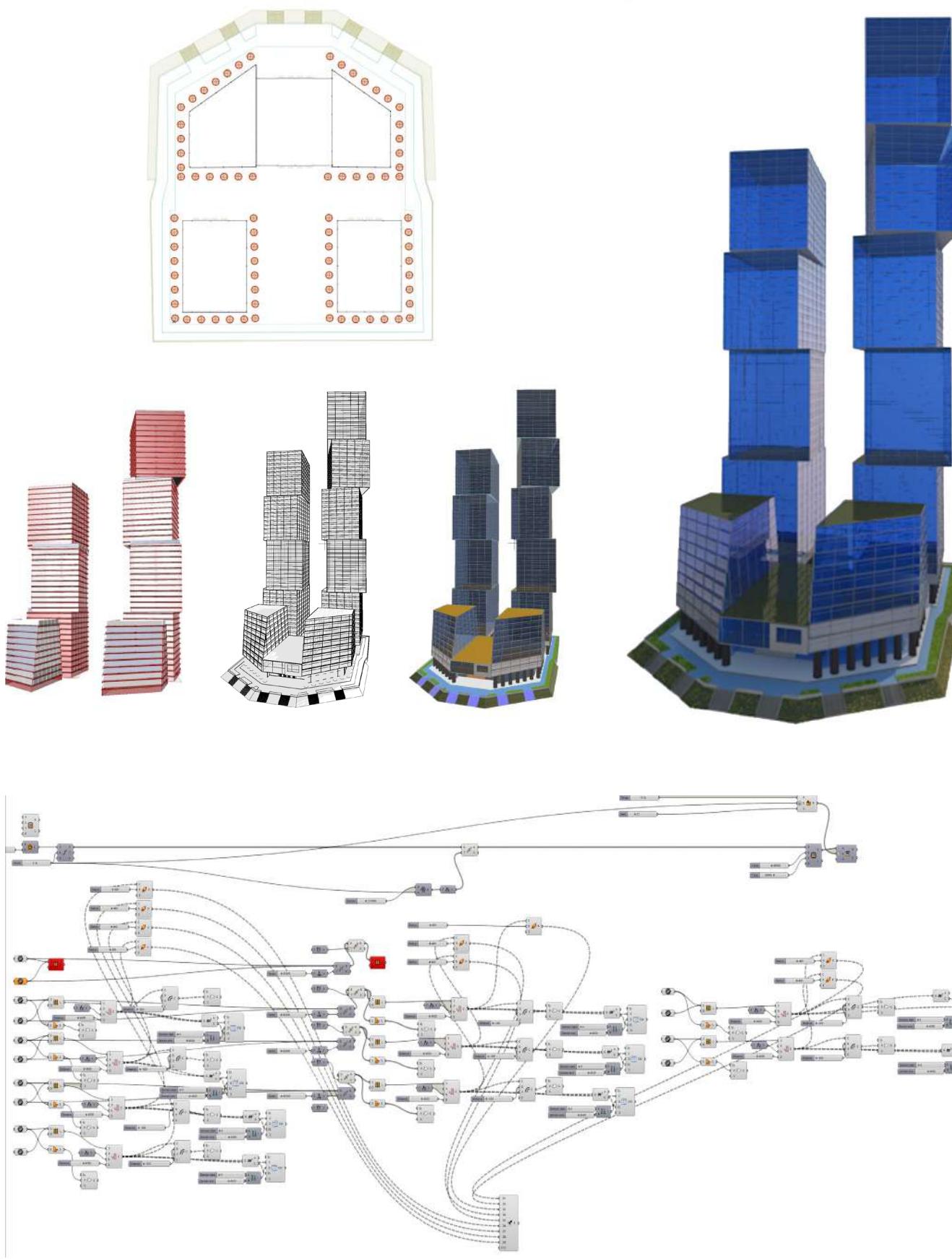
video link <https://www.youtube.com/watch?v=JG28xg5CDQY>

**Typology** Parametric towers

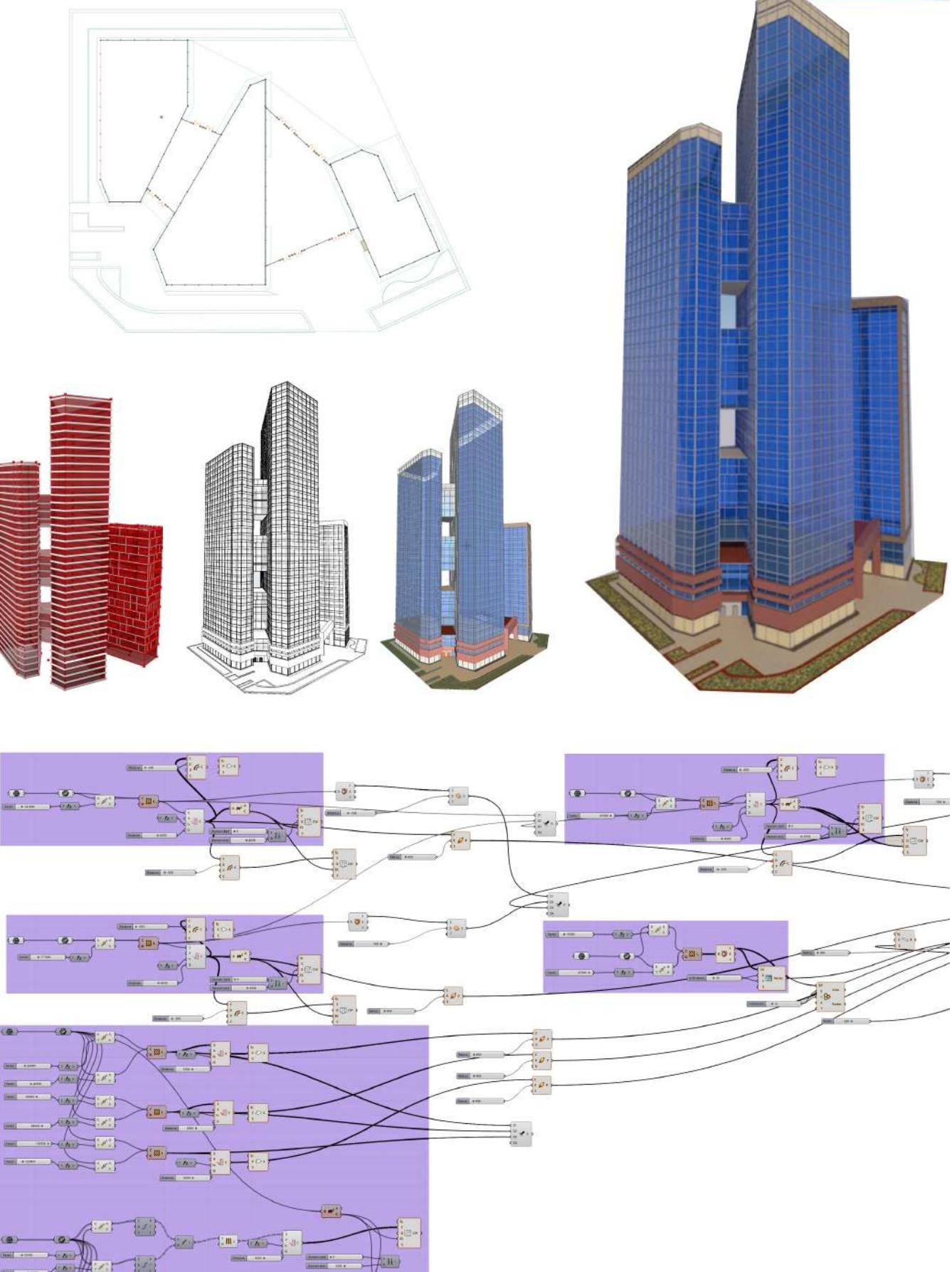
**Objectives** the objective is to showcase proficiency in parametric form development, inspired by the Moscow International Business Center. Leveraging ArchiCAD, Rhino, and Grasshopper plugins, the aim is to explore the center's architectural motifs and generate dynamic forms. Through this, the goal is to demonstrate the capability to translate inspiration into innovative design solutions.

**Learning Outcomes** the anticipated learning outcomes include a deeper understanding of parametric design principles and enhanced skills in ArchiCAD, Rhino, and Grasshopper. To develop expertise in analyzing complex architectural structures and translating them into responsive parametric models. Ultimately, the project aims to showcase the ability to apply advanced design techniques to real-world architectural challenges.

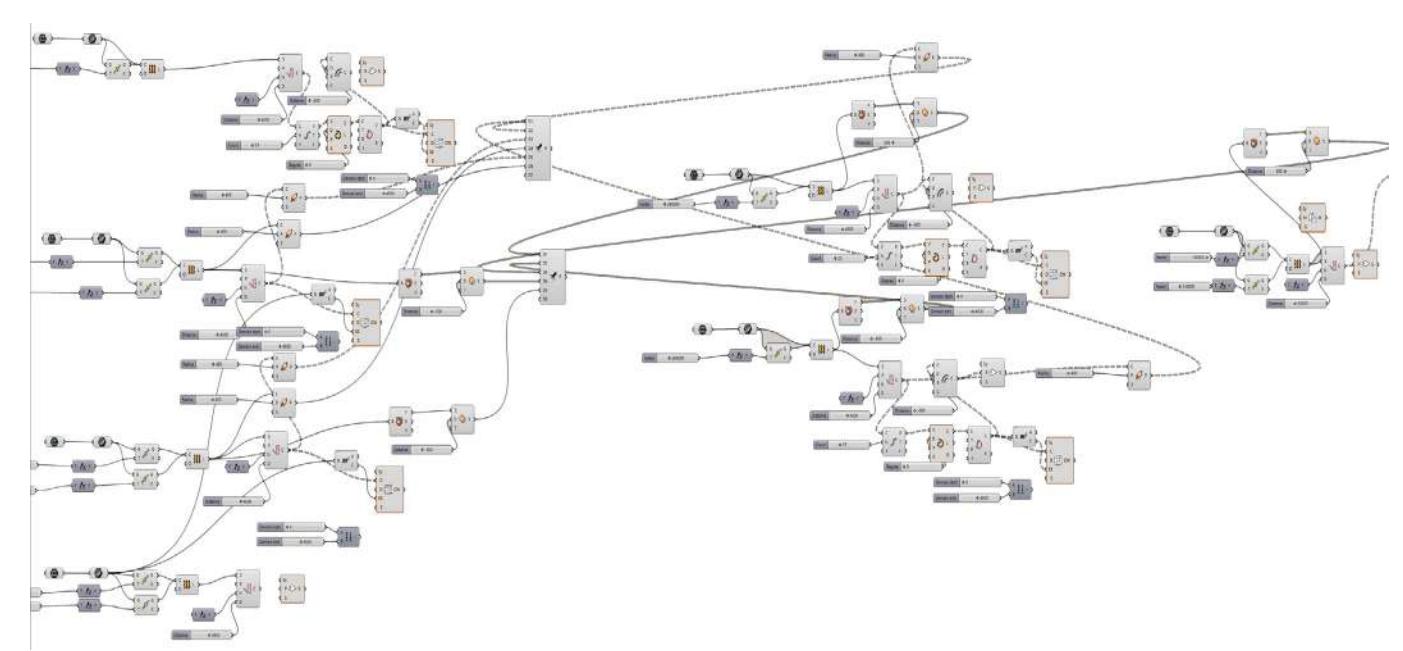
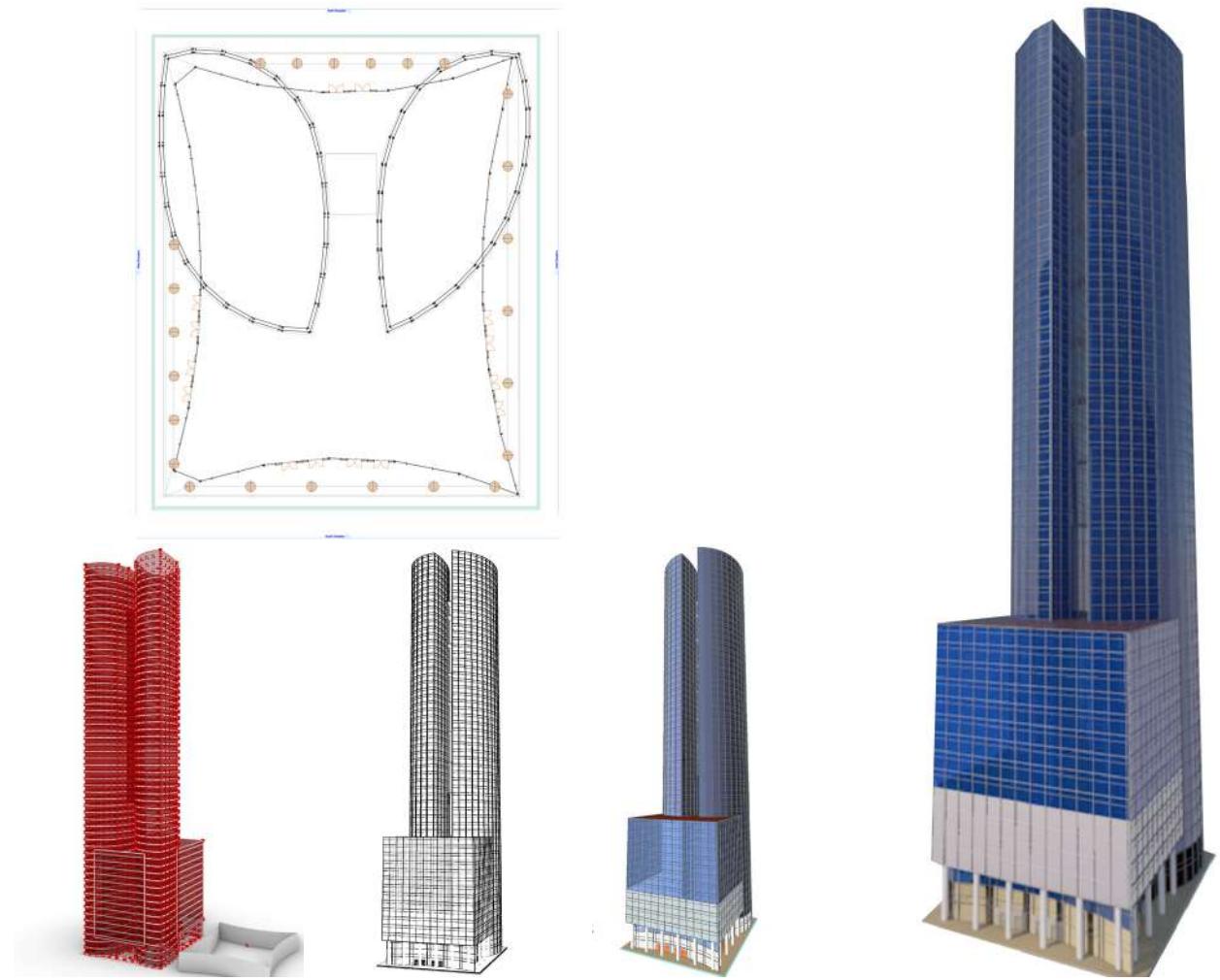
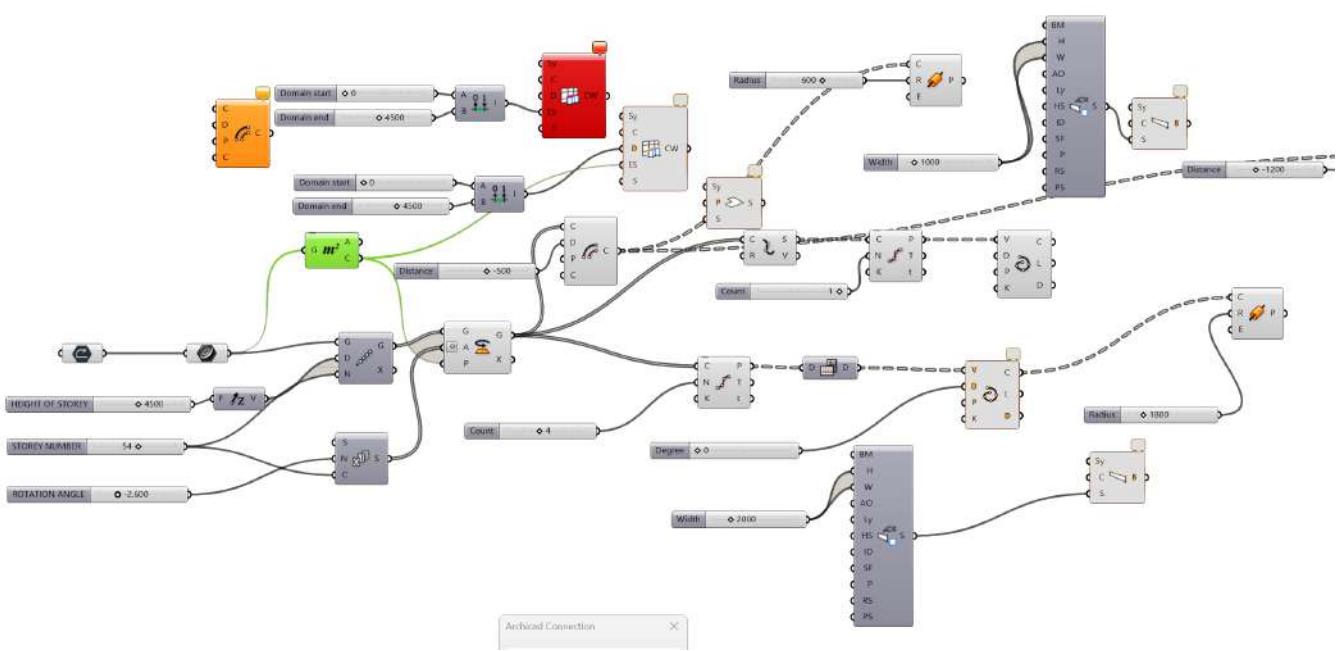
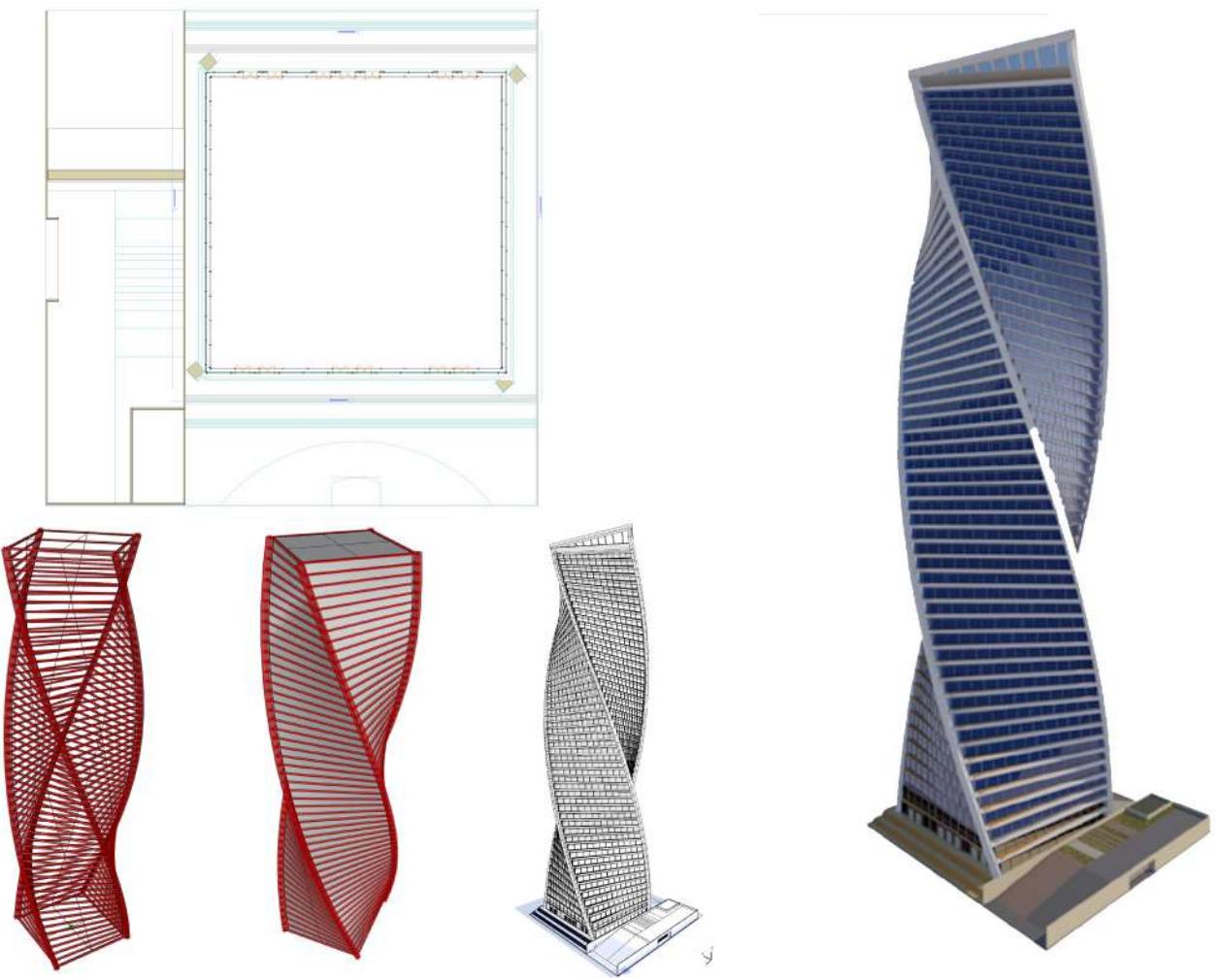




6 Archicad,Rhino and Grasshopper plug in pipeline



7 Archicad,Rhino and Grasshopper plug in pipeline



## 8 Archicad,Rhino and Grasshopper plug in pipeline

## 9 Archicad,Rhino and Grasshopper plug in pipeline



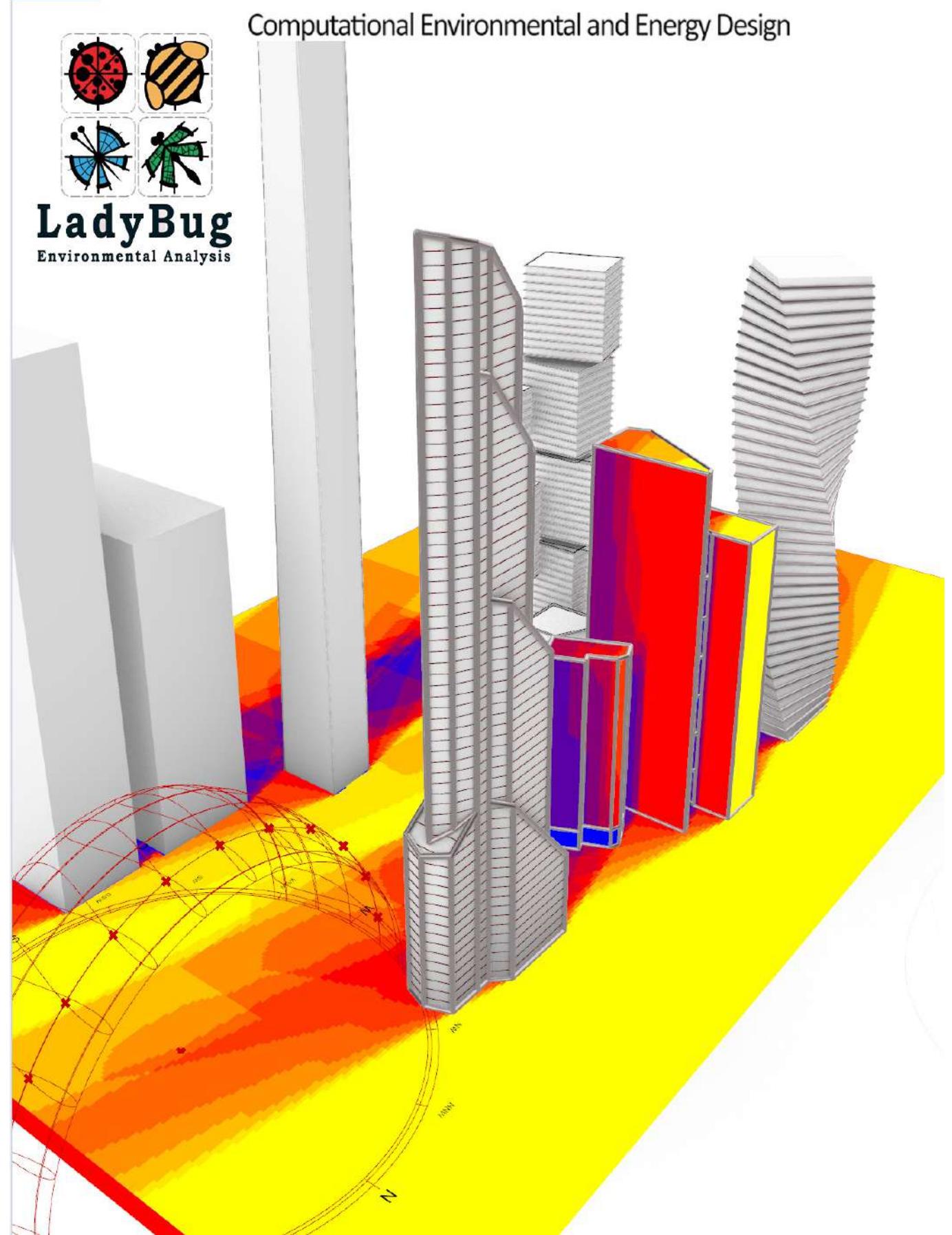
## “computational Environment and Energy Design”

**Typology** Computational Simulations

**Objectives** aims to delve into computational Environment and Energy Design using Rhino and Grasshopper with Ladybug plugins. The objective is to explore solar radiation, conduct direct sunlight analysis, and perform energy simulations. By utilizing these tools and techniques, the goal is to develop a comprehensive understanding of how computational methods can inform sustainable design decisions and optimize building performance.

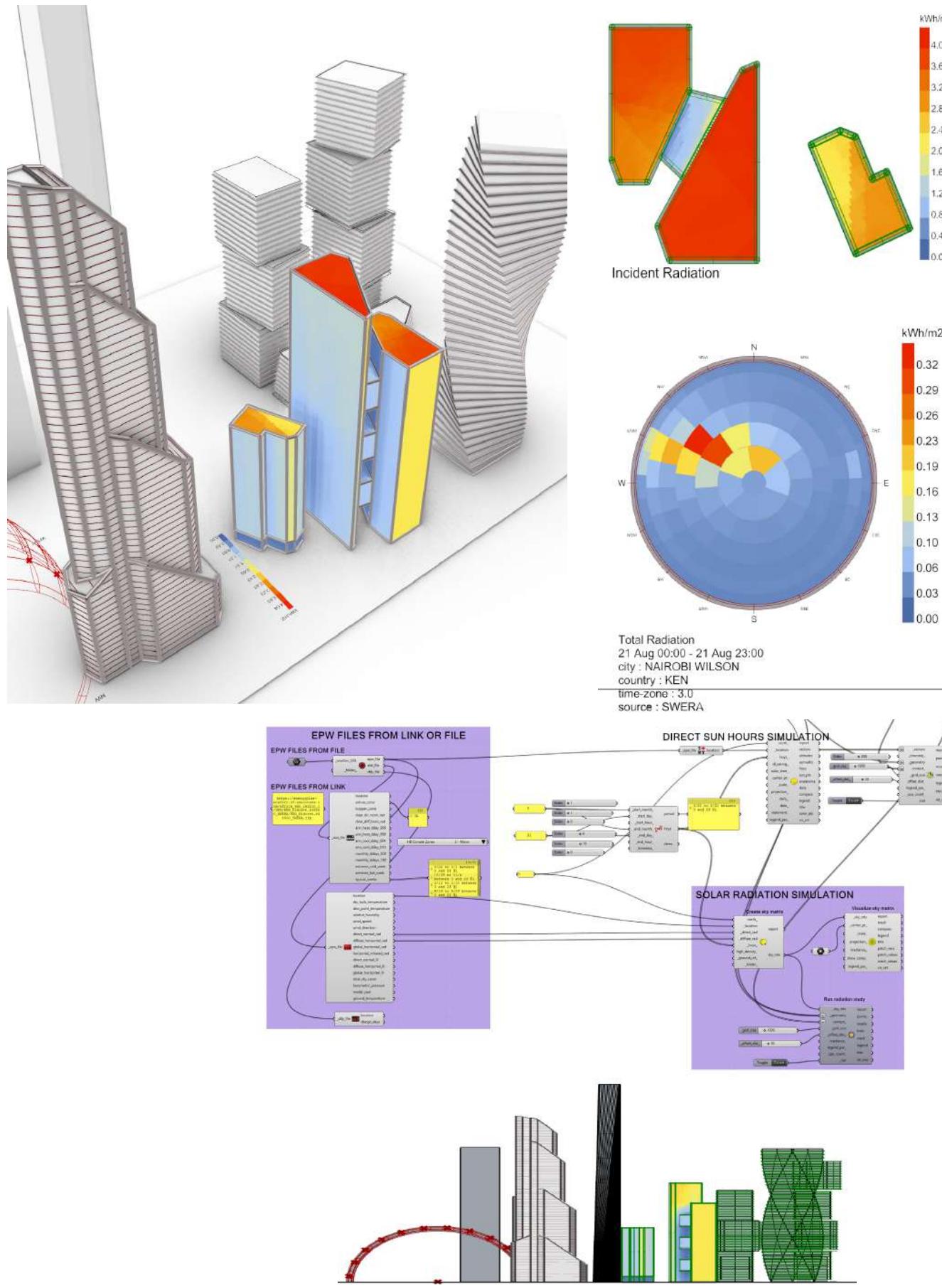
**Learning Outcomes** Proficiency will be acquired in utilizing Rhino and Grasshopper with Ladybug plugins for environmental and energy analysis. Insights will be gained into conducting solar radiation studies and direct sunlight analysis to inform daylighting strategies. Furthermore, skills will be developed in performing energy simulations to assess building performance and optimize energy efficiency. Overall, this project aims to demonstrate the application of computational methods in achieving sustainable architectural design solutions.

10 Radiance Visualisation  
Simulation using ladybug plugins and energy plus

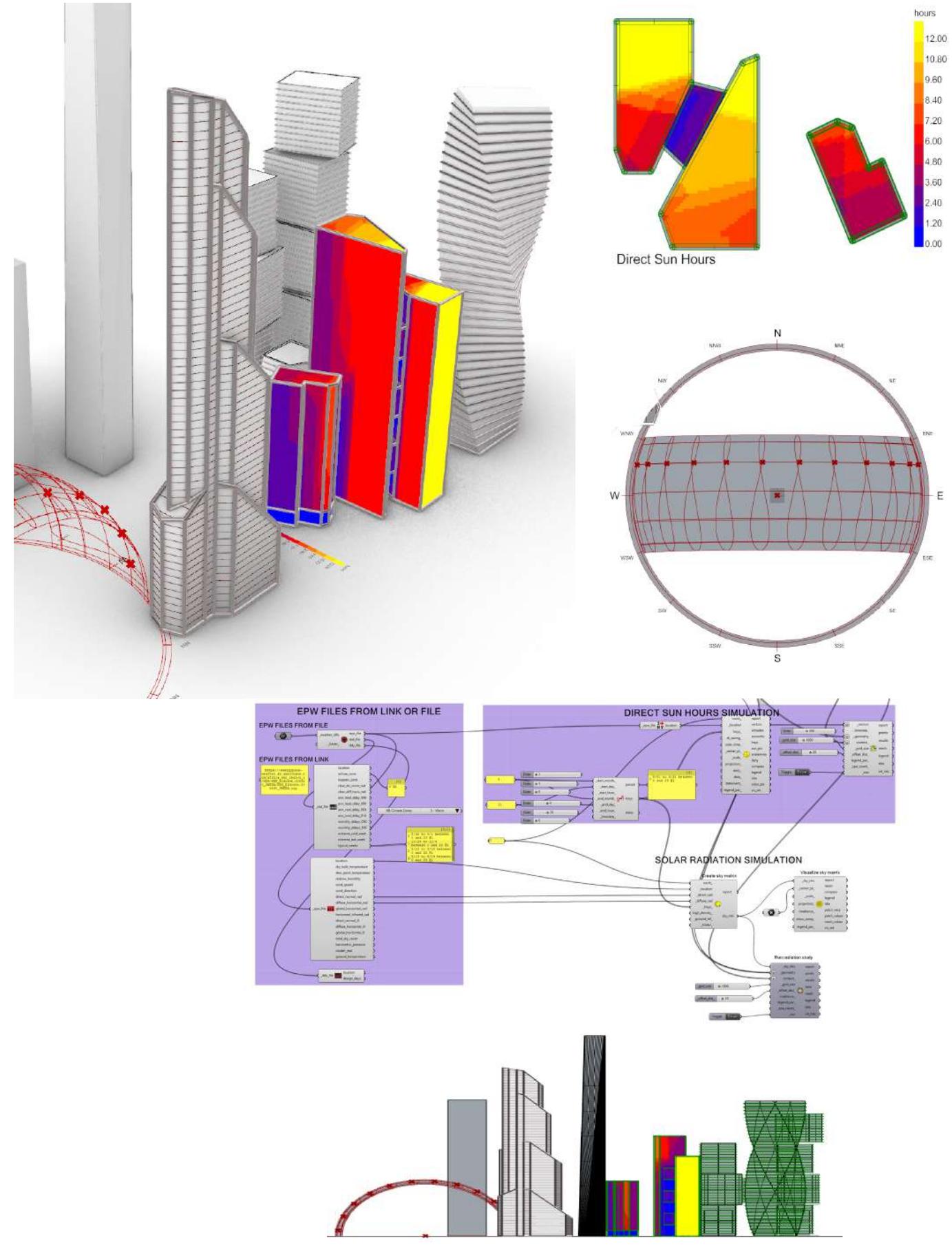


11 Radiance Visualisation  
Simulation using ladybug plugins and energy plus

## “Radiance Simulation”

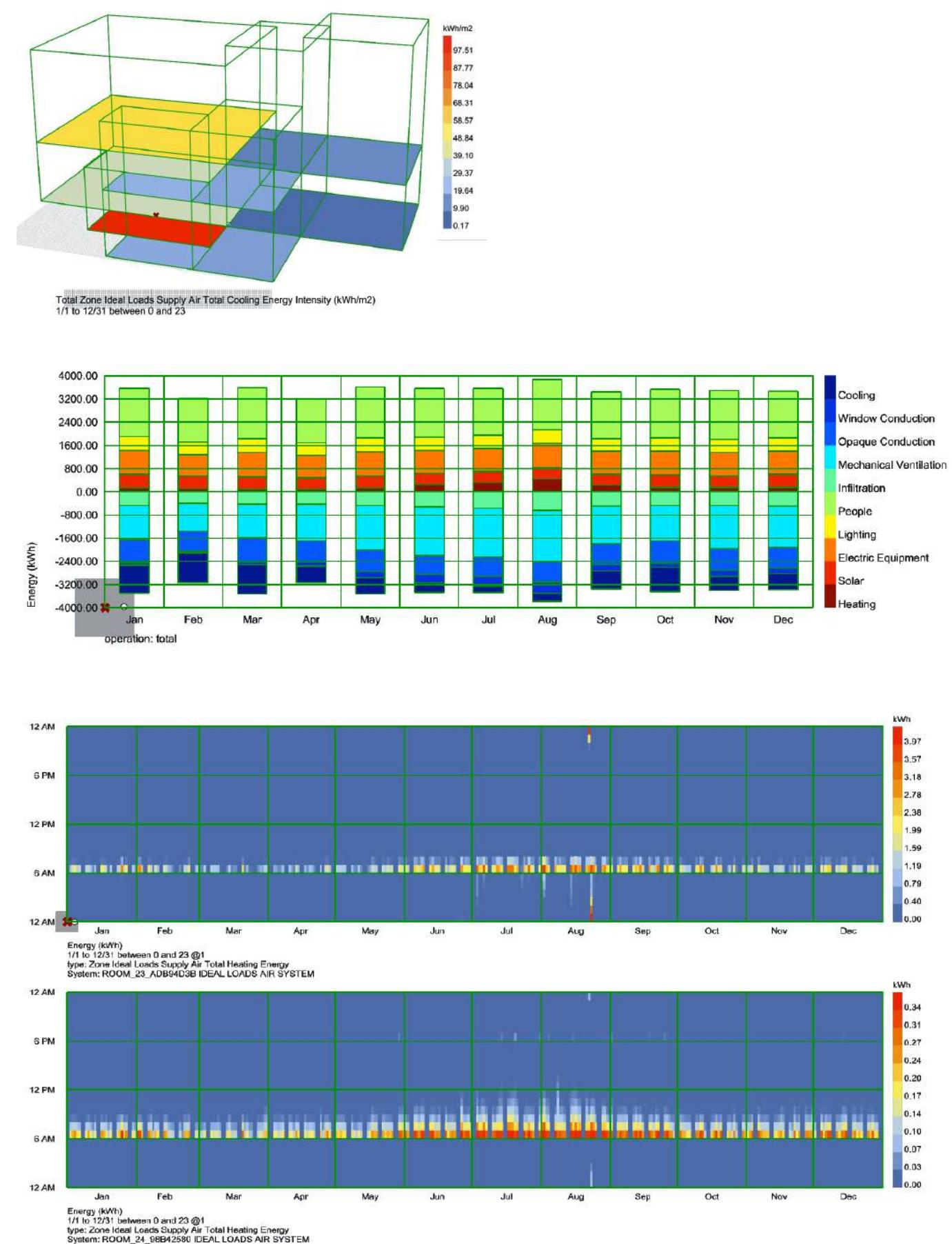
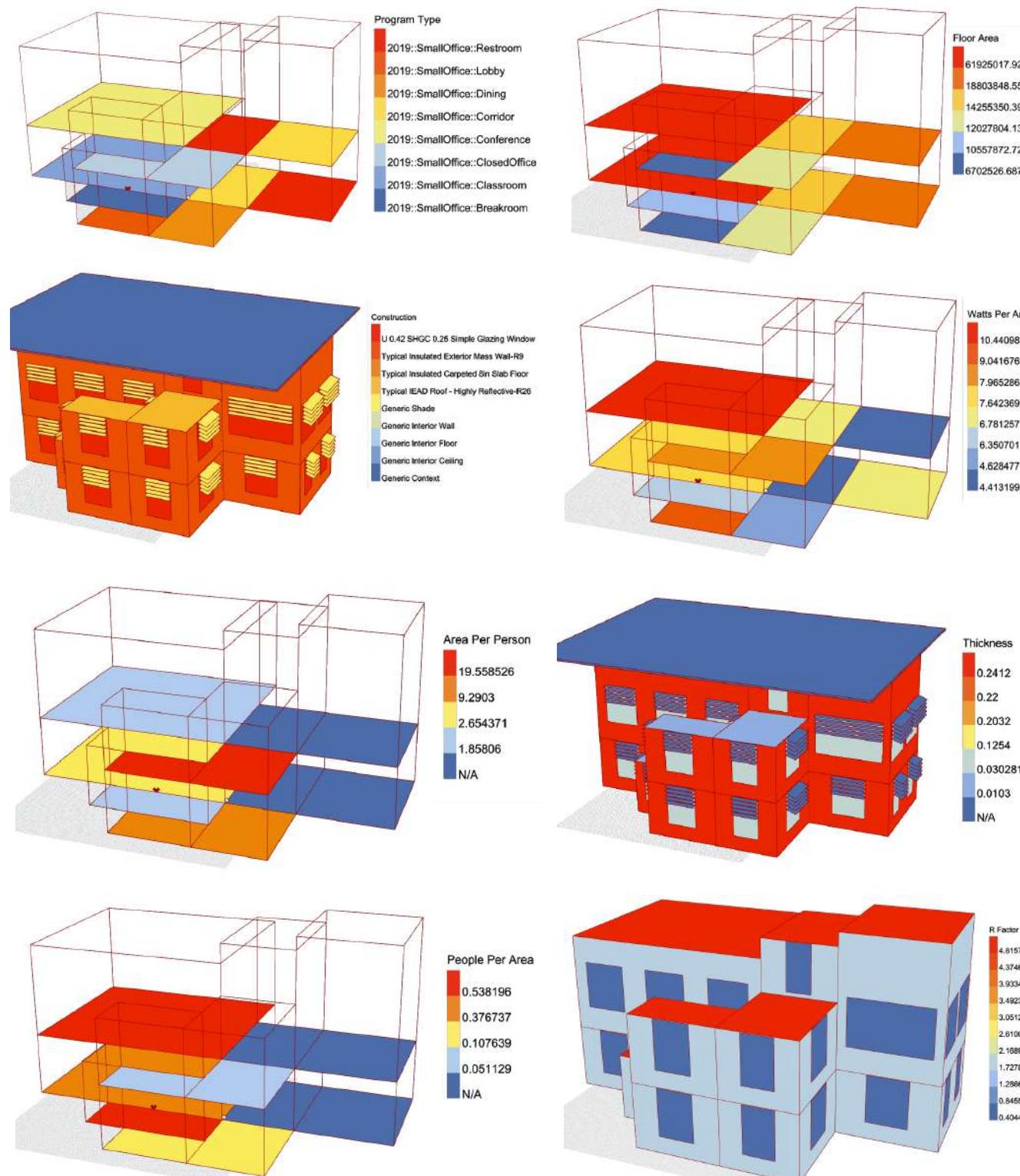


12 Solar Radiation Visualisation  
Simulation using ladybug plugins and energy plus



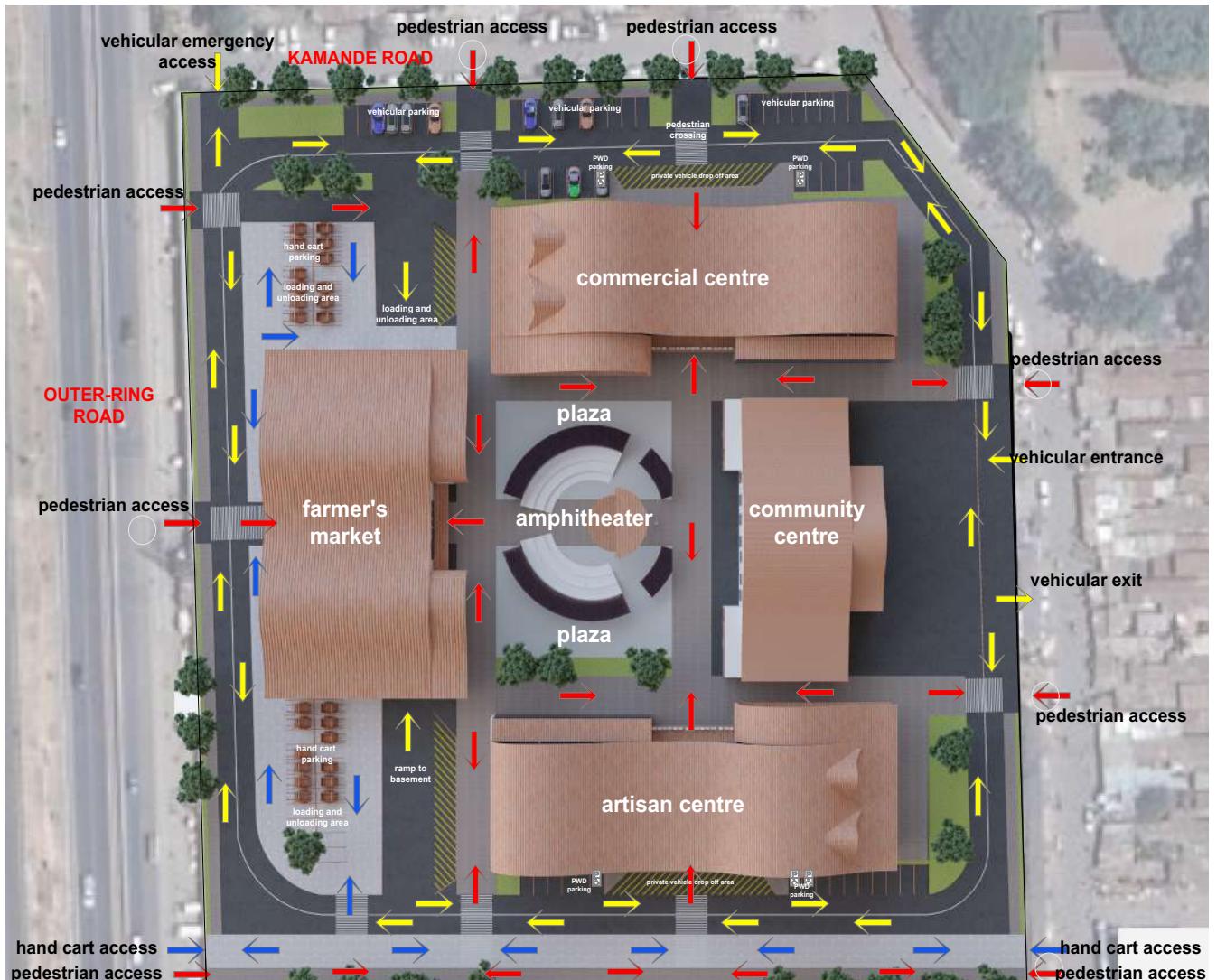
13 Direct Sunlight Visualisation  
Simulation using ladybug plugins and energy plus

## “Energy Simulation”



14 Energy Simulation inputs  
Simulation using ladybug plugins and energy plus

15 Energy Simulation Results  
Simulation using ladybug plugins and energy plus



## “public market design”

**Typology** Commercial Buildings

**Concept:** Commerce Street Fusion.

public markets in kenya display conflict between space allocated for circulation and the ones for trading. To remedy this a design approach that aims to fuse the spaces for commerce and street, while both maintaining their autonomy and proper function is suitable.

**Design Elements** To achieve proper fusion between the street and commercial spaces while both maintaining their integrity the elements below are applicable.

Use of grid to provide clear and organized layouts of streets for easier navigation by establishing regular intervals and intersections.

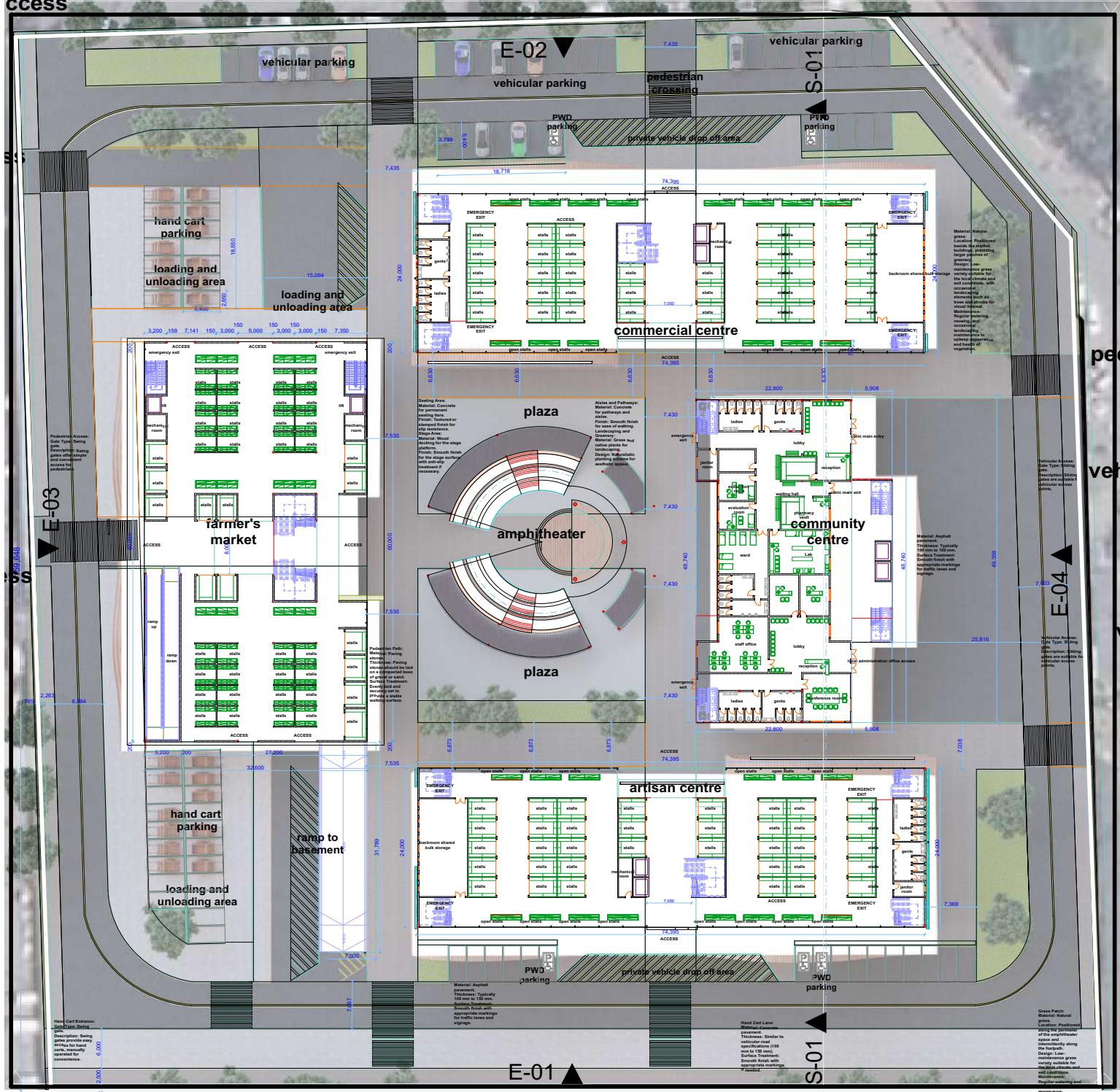
Use of low-rise structures organised in a spread our sprawl. Spread out sprawl allow for larger frontages.

Lower buildings create more open and accessible streetscape, making it easier for pedestrians to visually connect with commercial establishment from the street level.

Use of courtyard layout would form the backbone of the circulation merging all the elements together.



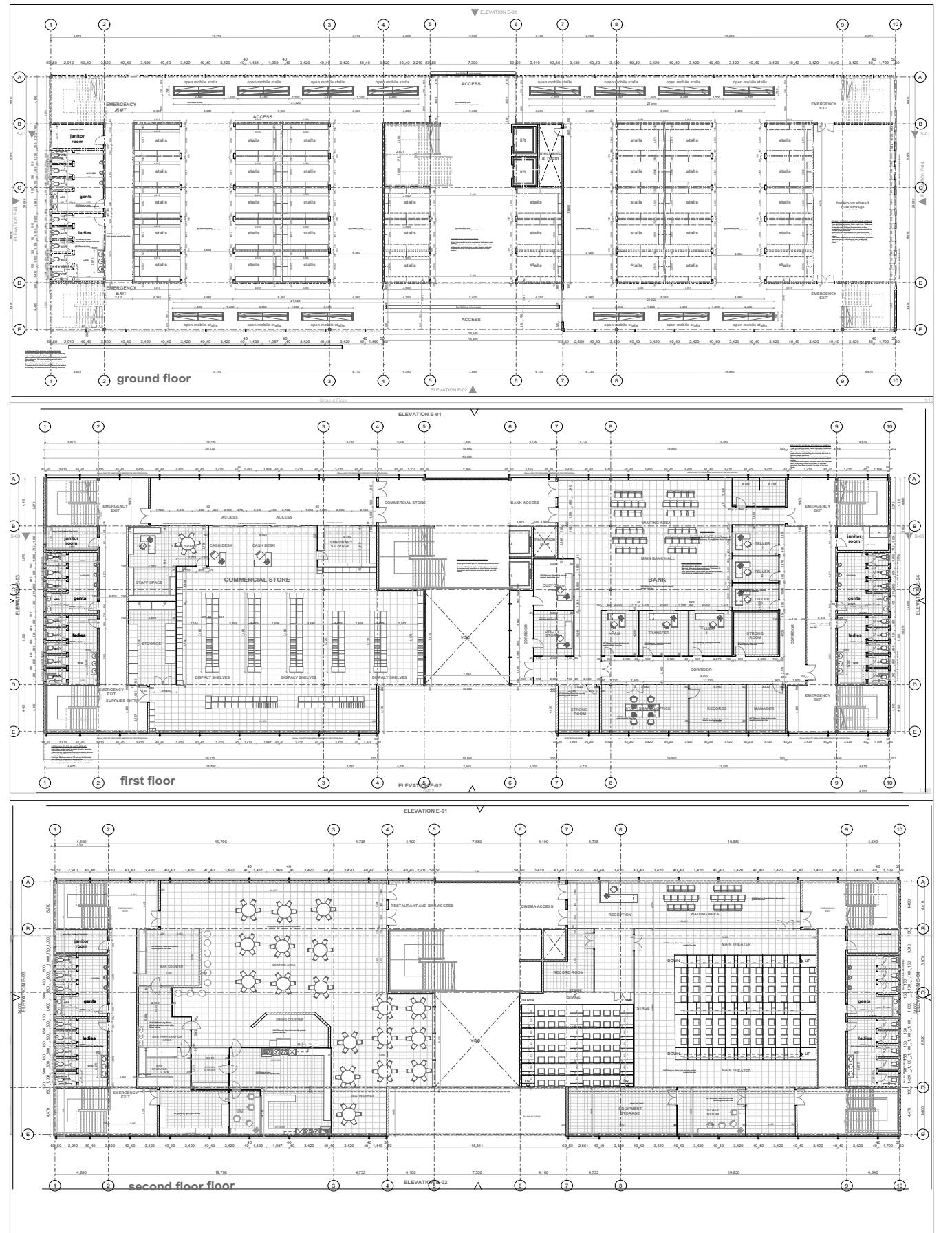
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18 Portfolio project Site Plan

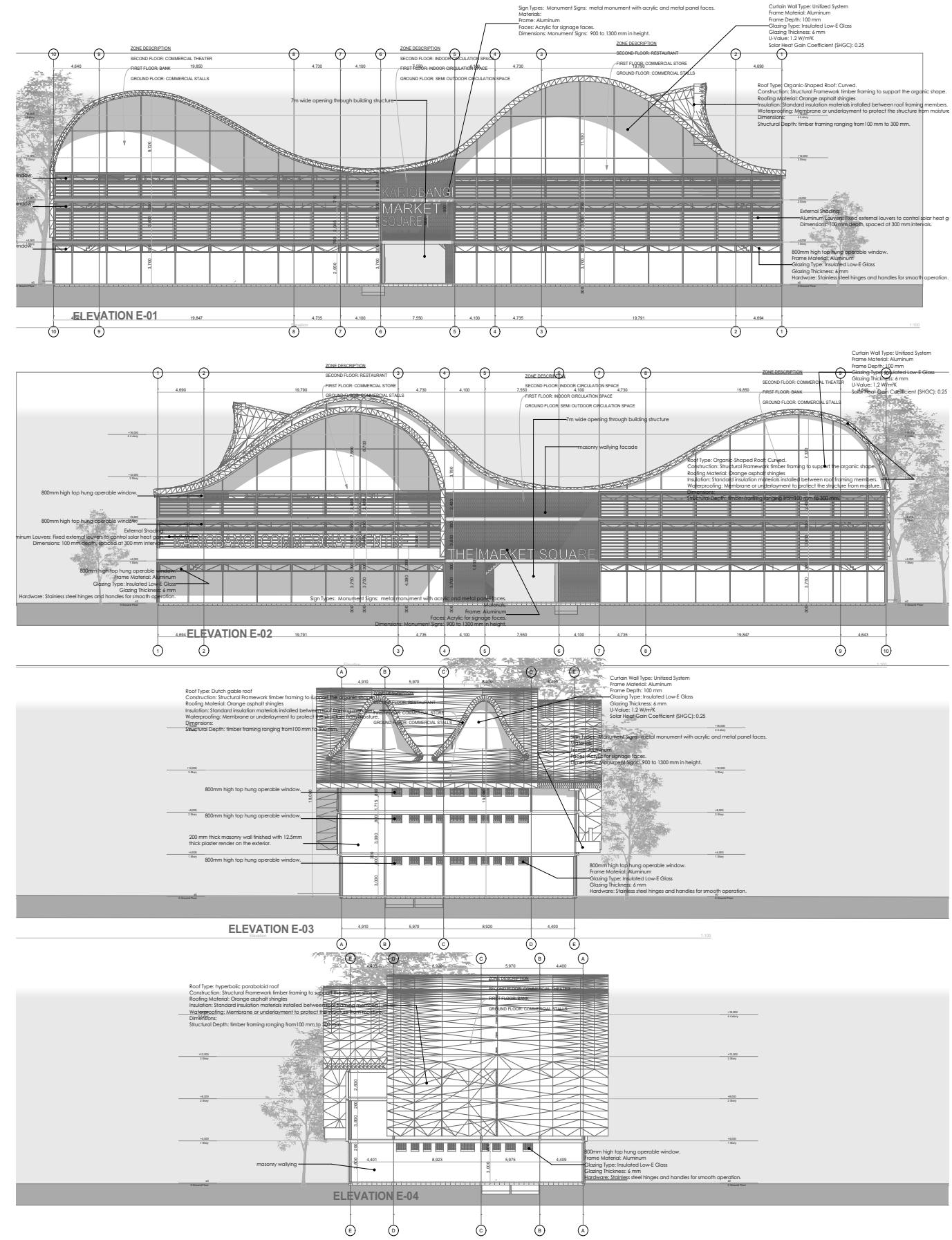


19 Portfolio project Site Elevation



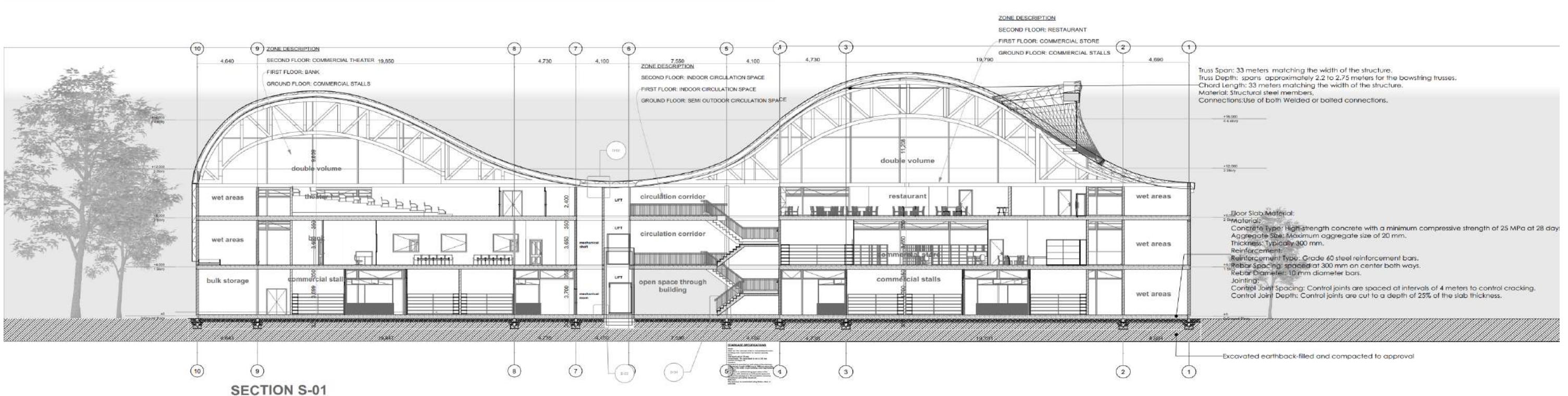
20 Portfolio project

Commercial Centre Floor Plans



21 Portfolio project

Commercial Centre Elevations





## “community library design”

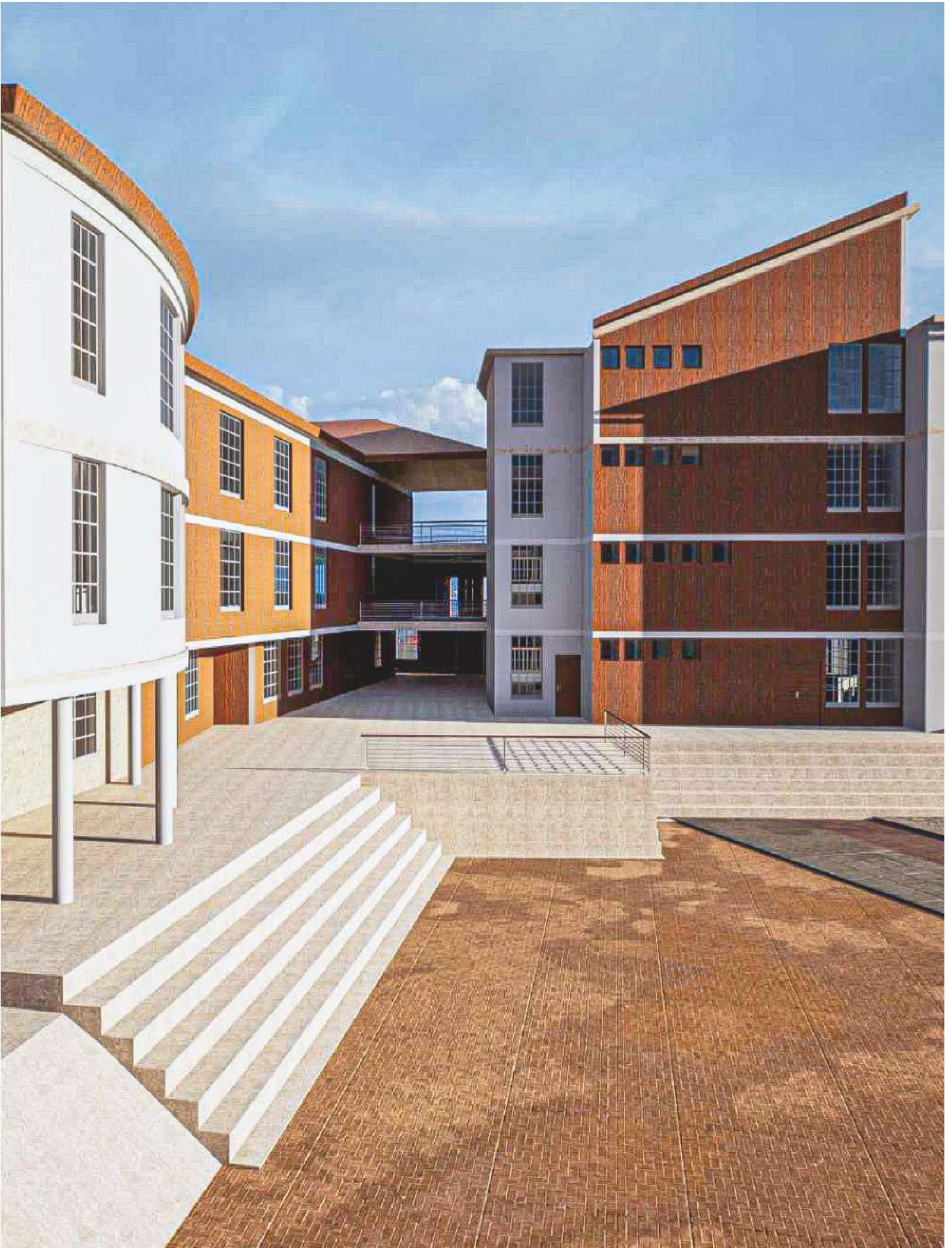
**Typology** Institutional Building

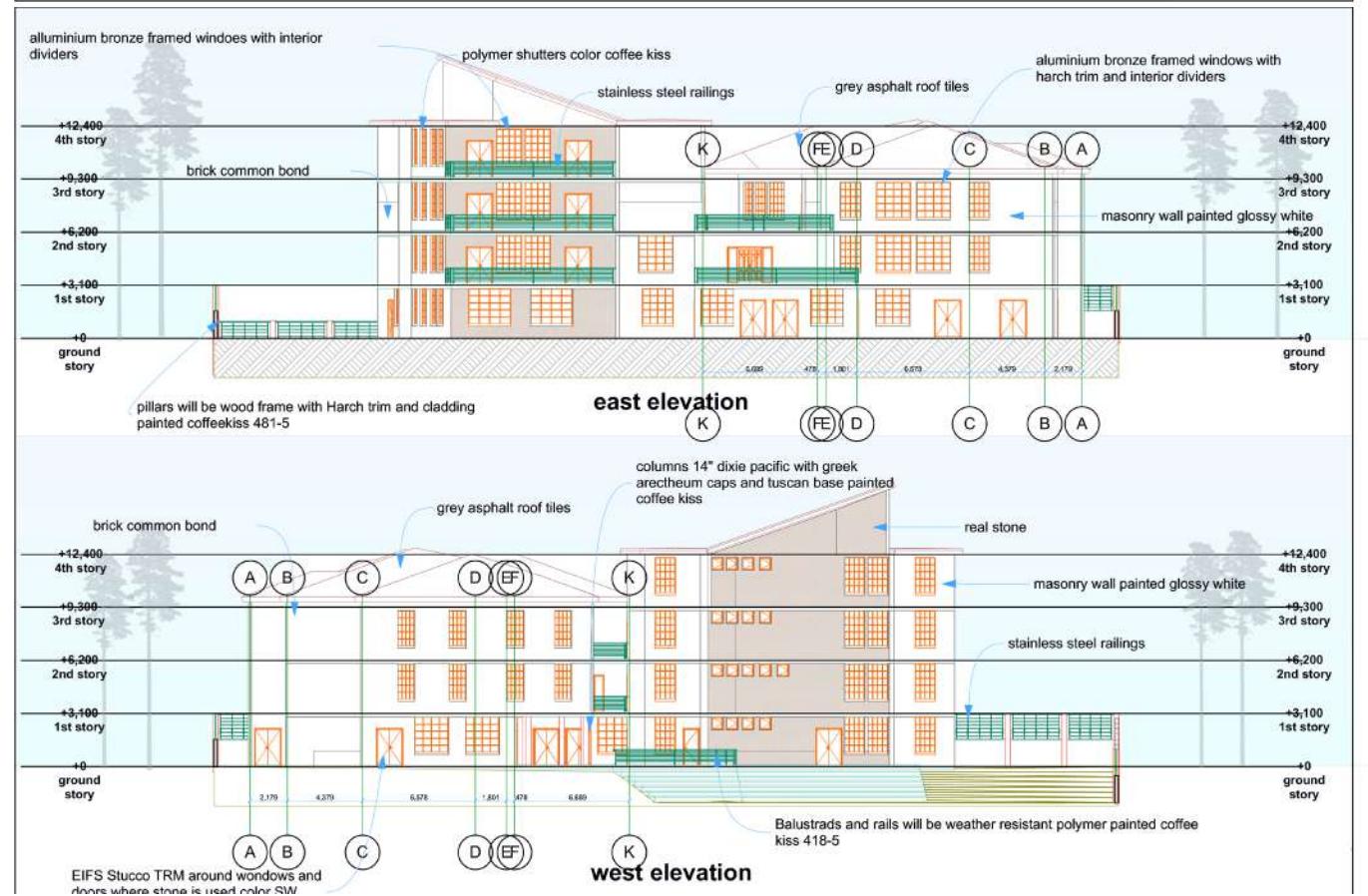
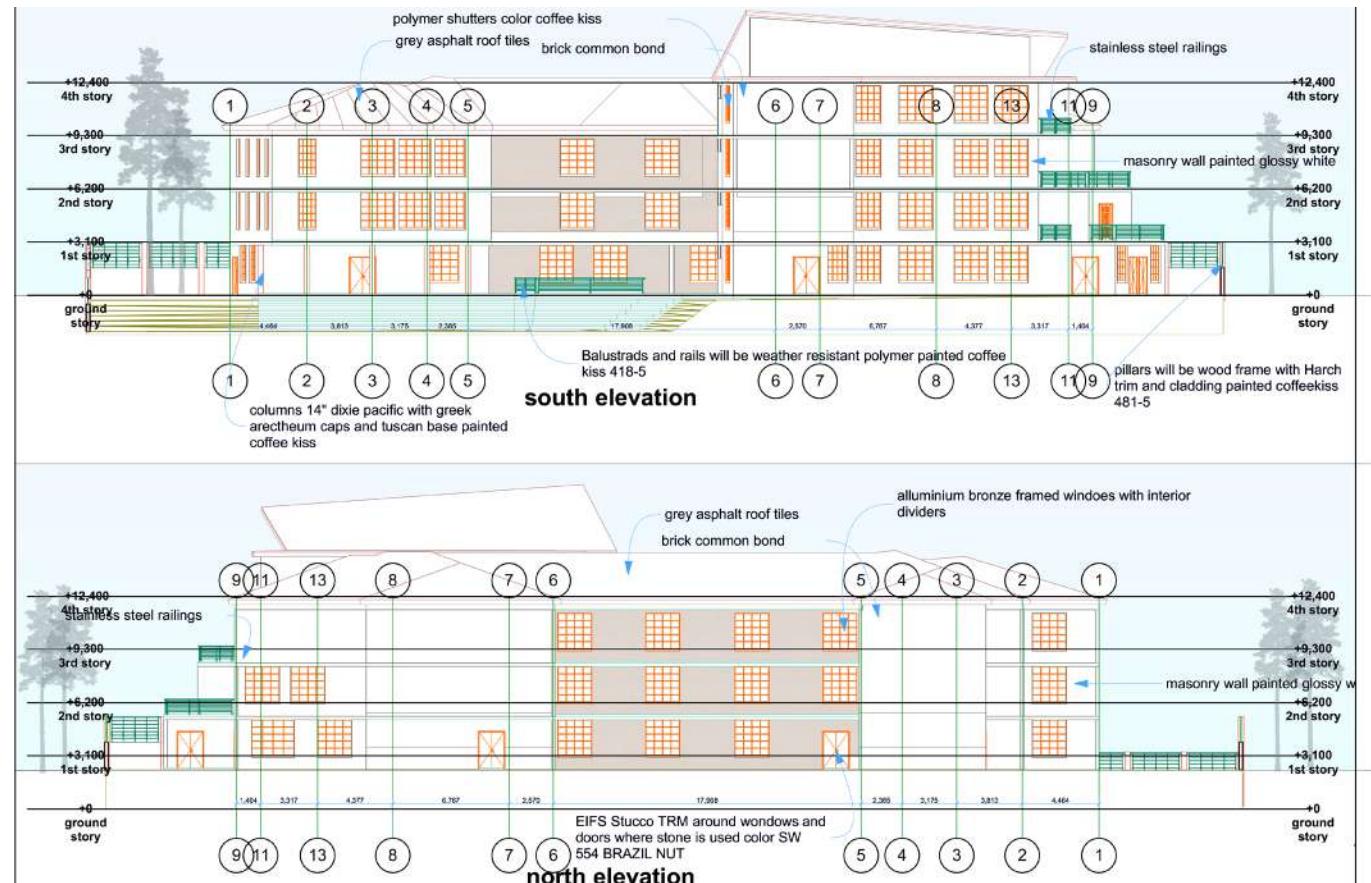
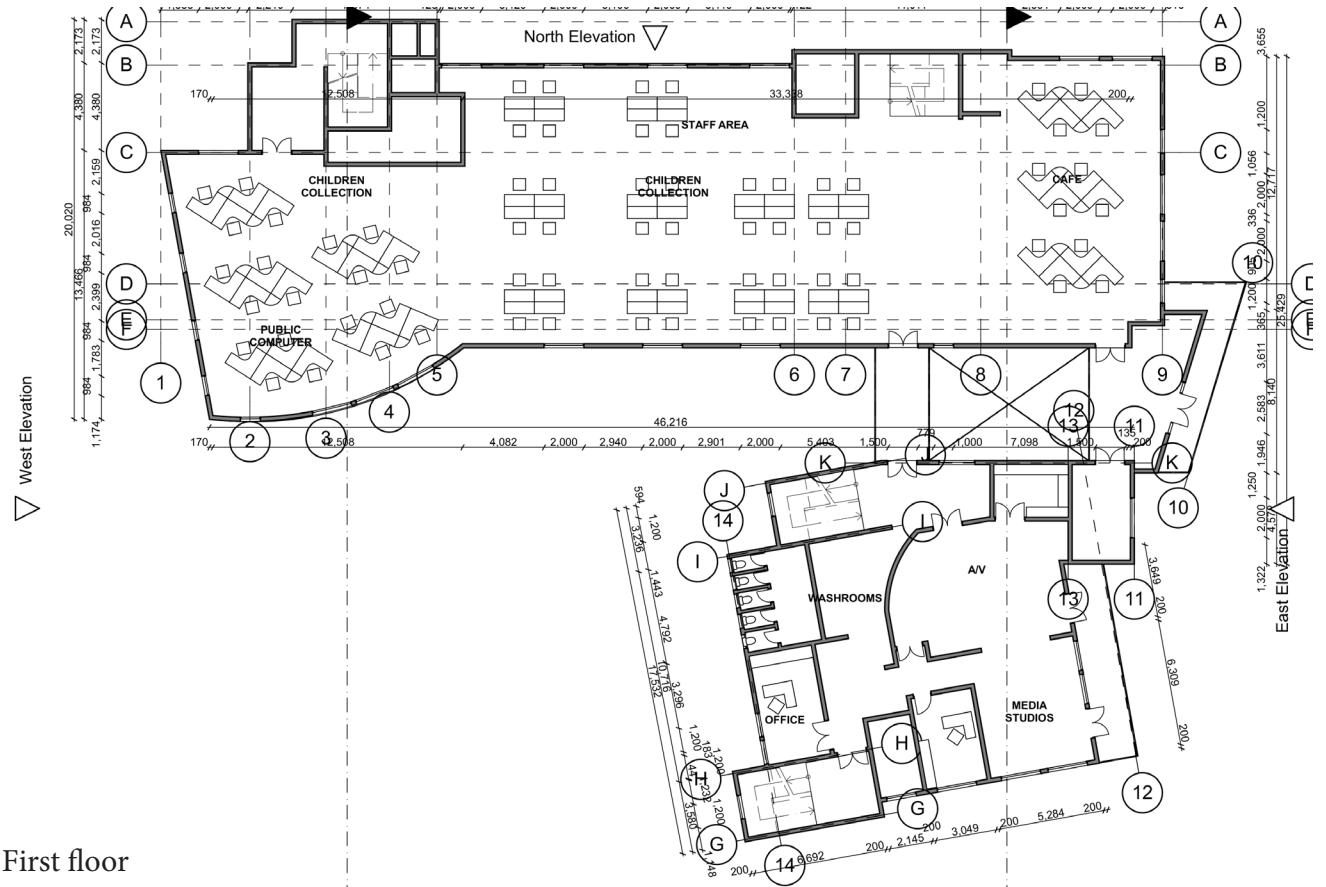
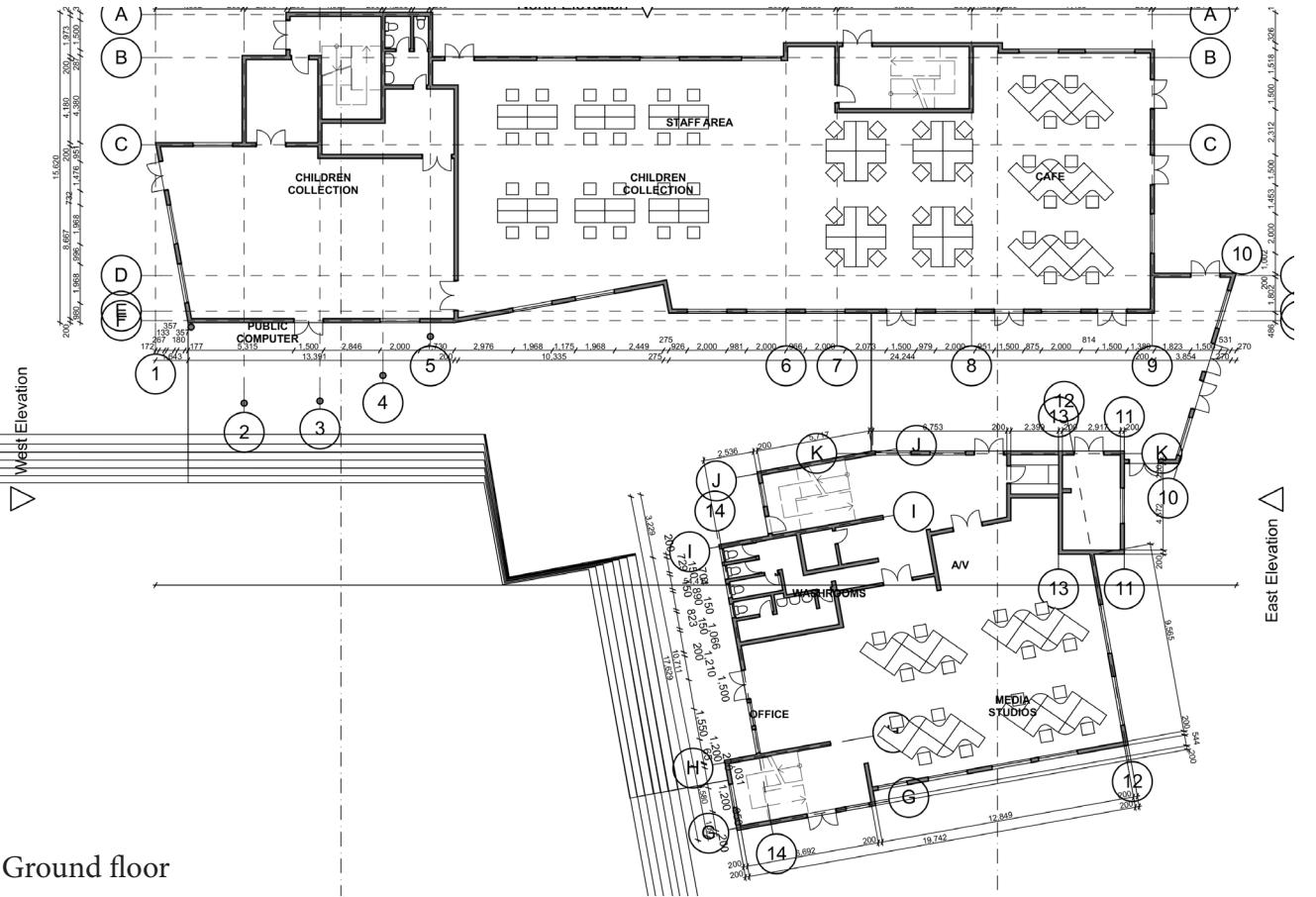
**Objectives** Preview through the basics principles of architectural design and composition, dimensioning, measuremnets and proportions.

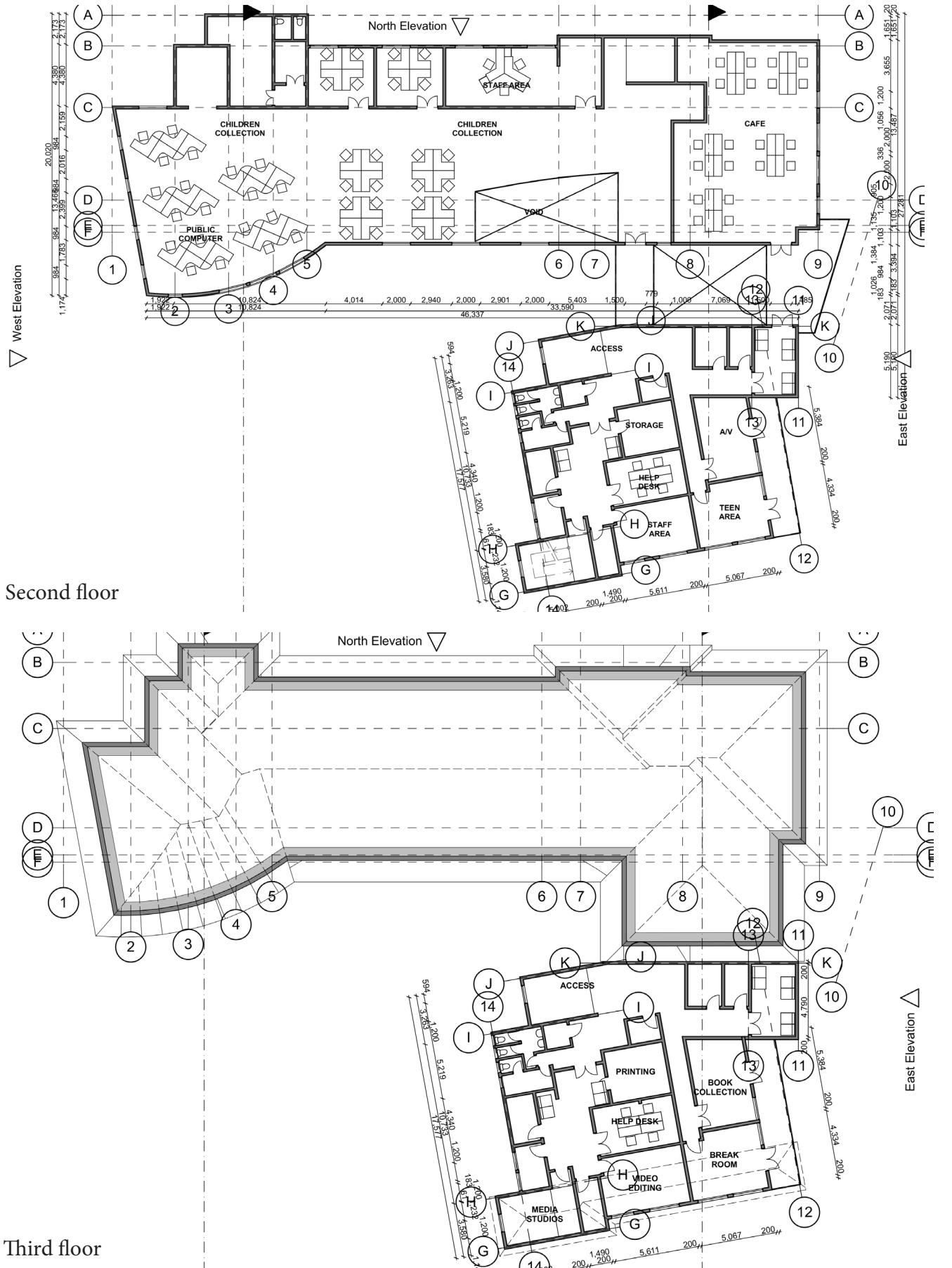
Architectural analysis , the logic of spatial organisation, elements of the architectural programme and space shaping for real functional use

**Learning Outcomes** Through simple design tasks and exercises, the ability to self reflect,analytical observation and application of graphical and visual skills improves.

With the aim of eventually creating readable and presentable represantations of reality from a design brief, sketch, concept to the architectural conceptual design







28 Floor plans  
Created in Archicad



29 3D Renders  
Created using Unreal Engine