



ALEJANDRA LOAIZA
ARCHITECTURAL GRADUATE
PORTFOLIO

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PROFESSIONAL PROJECTS

Model Making
Diagrams for Publication
Two-Phase Residence
Kitchen Design
Mixed-Use Tower
Countryside Residence
Vasquez Residence

MODEL MAKING

TEC Taller Architecture Studio

Projects:
Brevo and Passagio Plaza
2019

Using the projects' plans and drawings in AutoCAD, pieces were designed in order to create the models of two residential projects; Passagio Plaza and Brevo. Two scales were used for each project, 1:100 and 1:200 for a total of four models. These were used for sales presentations.

A variety of materials and techniques were used in order to ensure the highest quality models for presentation. Suppliers and tasks were coordinated with the team in such a way that the models were completed well before the deadline.

Software and Materials Used:

- Autocad
- Lasercutting
- Acrylic
- Acetate
- Cardboard
- Balsa wood



DIAGRAMS FOR PUBLICATION

Natura Building

Project by:
Diez + Muller Arquitectos
2020

Using existing floor plans and sections, diagrams expressing the characteristic elements of the Natura project were created. The project is a mixed use building located in the Tumbaco valley in Quito, Ecuador designed by the architects Diez+Muller.

The resulting diagrams were used as graphic elements for the publication of the project in Archdaily and Gooood.

Links of the Publications

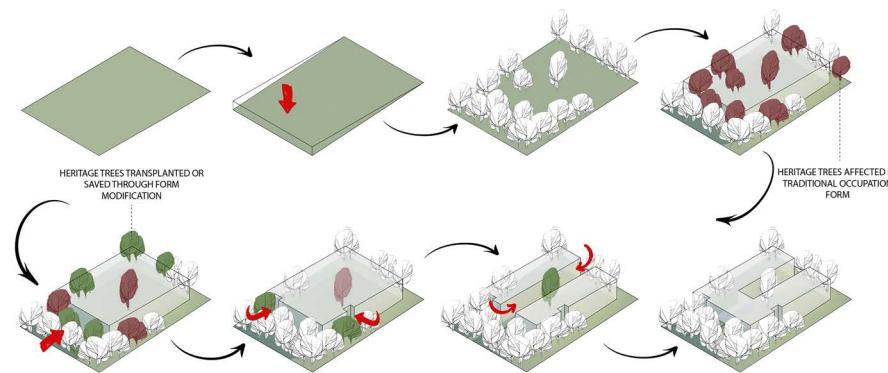
<https://www.gooood.cn/natura-building-by-diez-muller-arquitectos.htm>

<https://www.archdaily.com/937102/naturabuilding-diez-plus-muller-arquitectos>

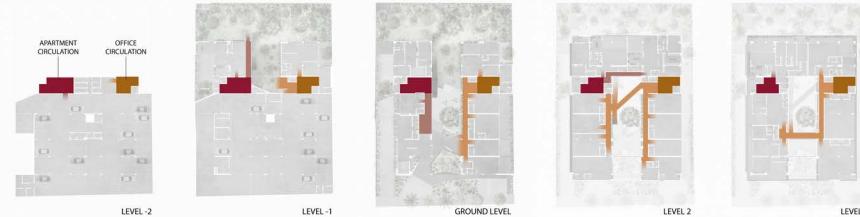
Software Used

- Photoshop
- Sketchup
- Illustrador

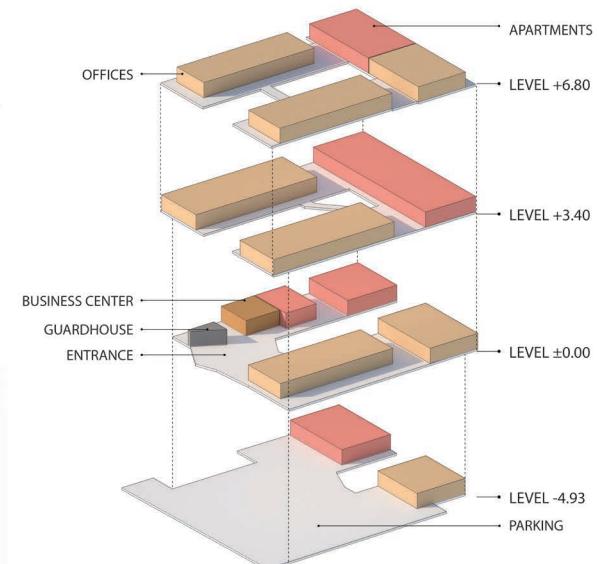
DESIGN PROCESS



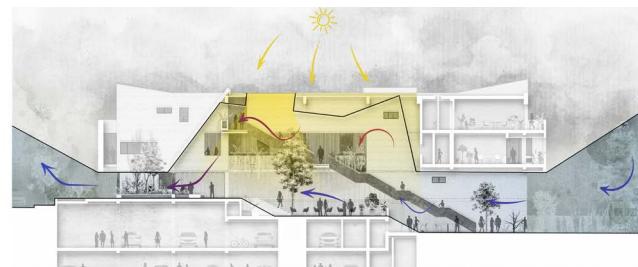
CIRCULATION



OFFICE AND APARTMENT DISTRIBUTION



PASSIVE CLIMATE CONTROL



COMPRESSION AND EXPANSION



TWO-PHASE RESIDENCE

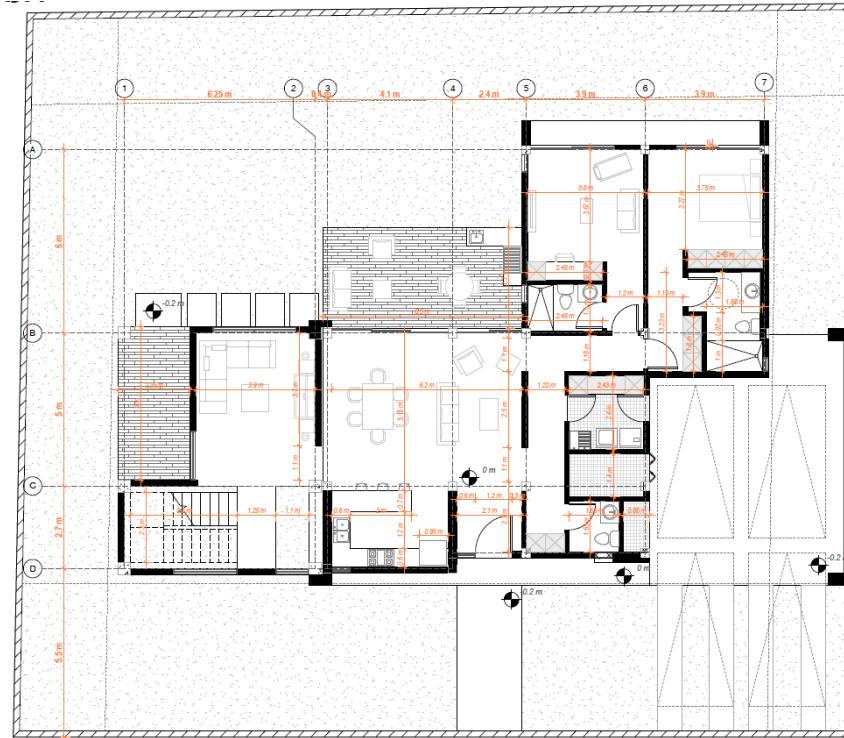
Tuqueres-Ubidia Residence

Client: Tuqueres-Ubidia Family

2021

The main purpose of this residence was for it to be able to be built in phases. The client wished to be able to build half of the house first without compromising its function or aesthetic. After a few years, the rest of the house would be added, adding more communal spaces and an extra room.

In order for this to work, the plan proposed two sides which worked structurally independent from one another, but which would be able to be combined perfectly when the final part was built.



Software Used

- AutoCAD
- Revit
- InDesign

KITCHEN DESIGN

Independent

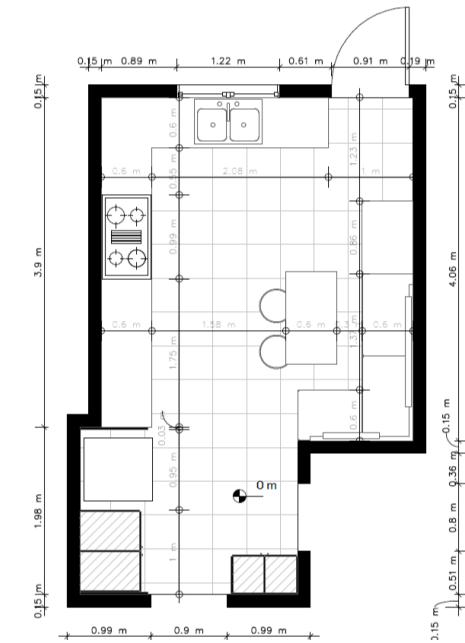
Client:
Macarena Vargas
August 2019

This project proposed the interior design of a kitchen in an existing building. Measurements were taken in order to create the model of the existing space, and the furniture was designed considering materials and the client's wishes.

The deliverables included perspectives, floor, section, elevation and ceiling plans. The initial design was created in Autocad, and the model was created in Revit.

Software and Materials Used:

- Autocad
- Revit
- Indesign



MIXED-USE TOWER

University of Israel Proposal

Project with Perpetuo Studio

2020

This 13 story mixed-use tower of the University of Israel Project in the city of Quito is a building that houses multiple stories of classrooms and offices. Its main purpose being a University, the client also wanted the tower to house a library, study rooms, a fitness center, and a cafeteria.

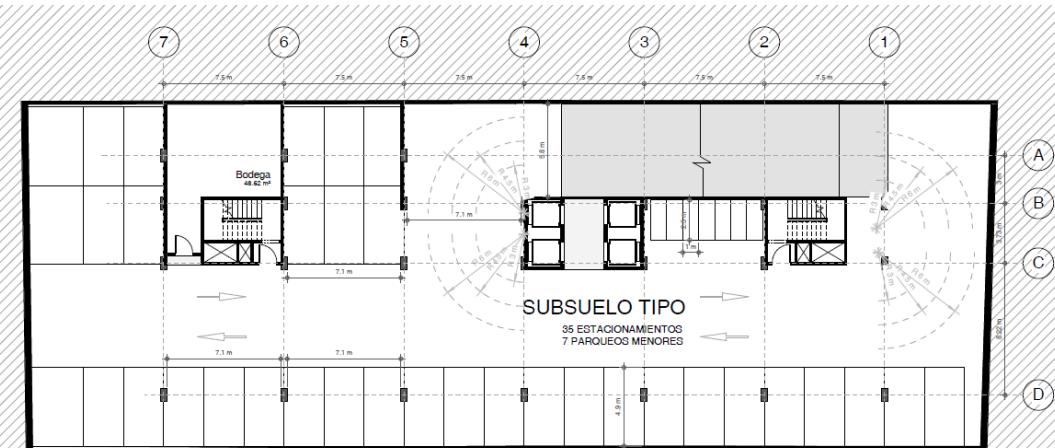


The open plan at ground level invites pedestrians to use these living spaces along with the students, and provides comfortable shelter from Quito's ever-changing weather. Closing the east and west facades by creating thin horizontal windows while keeping the north and south open encourage minimal disruption to the classrooms and avoid excessive warmth due to solar exposure.



Software Used

- Autocad
- Photoshop
- Revit
- Indesign



COUNTRYSIDE RESIDENCE

Correa Quevedo Estate

Project with Perpetuo Studio

2020

The project consisted of a 18 hectare farm on the outskirts of the city of Quito. Topography was approximated using google earth tools, polished in AutoCAD and inserted into Revit, in order to propose the location and orientation of the residence.

The residence was designed with exterior living in mind, as this is allowed by the climate of the location. Following the client's wishes, the spaces were designed as small as comfortably so for this type of house,



Software Used

- Autocad
- Photoshop
- Revit
- Indesign

VASQUEZ RESIDENCE

GV Complex, V2 House

Project with Perpetuo Studio

2020

Designed as a house within a residential complex, Vasquez Residence maintains a similar aesthetic to the others while making the most out of the irregularly shaped terrain it is in. Providing ample social area on ground floor, both interior and exterior, it establishes itself as a residence for accommodating large social events, as were the wishes of its client.

The top floor houses a more private section of the house, with three bedrooms and a smaller living area.



Software Used

- Photoshop
- Sketchup
- Illustrador

ACADEMIC PROJECTS

Architectural Thesis
Urban Collective Residence

ARCHITECTURAL THESIS

Rehabiting Agriculture: Sitopia at the Edge of Chiche River

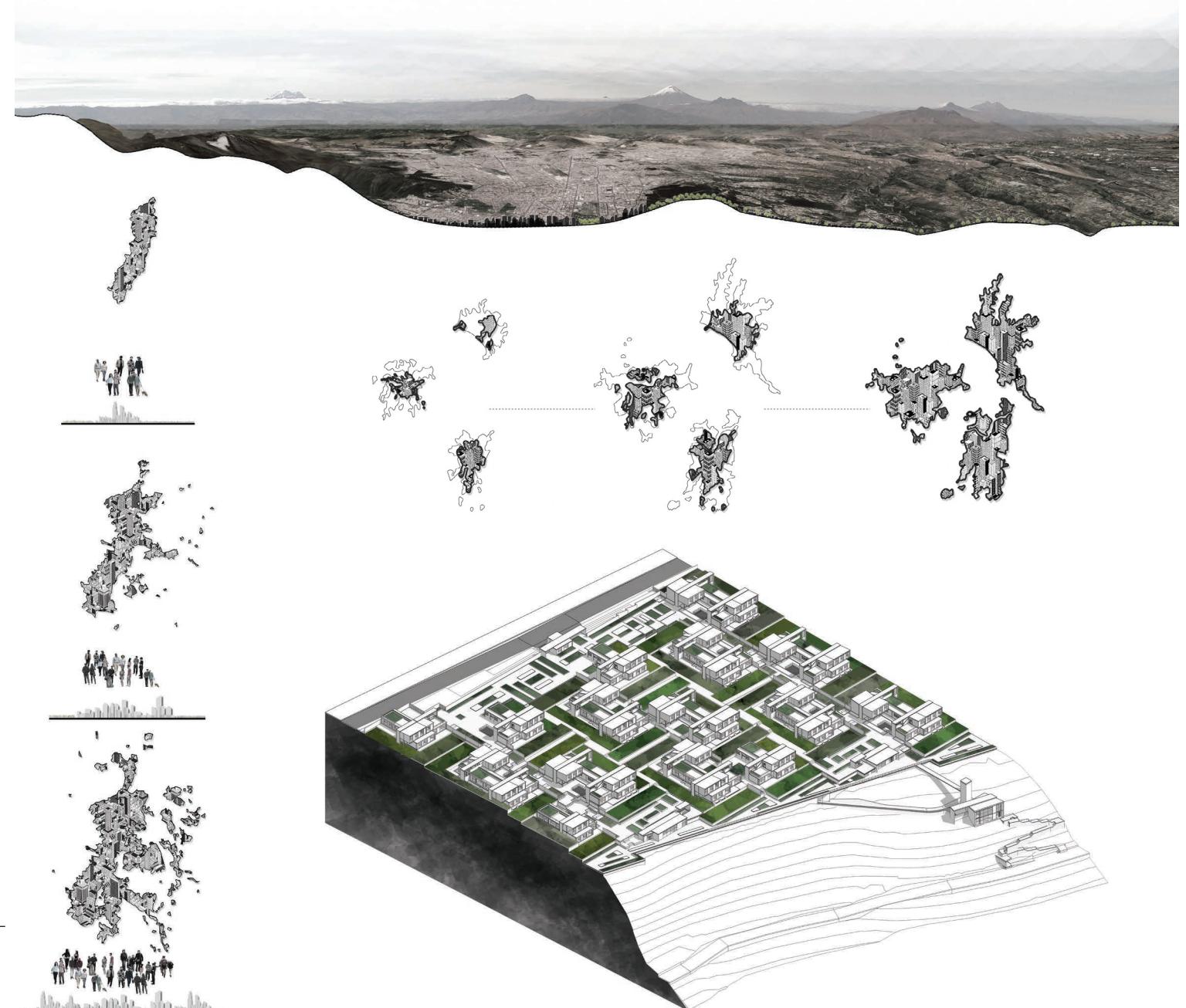
Tutor:
Karina Cazar Recalde, Arch. MSc.
2018

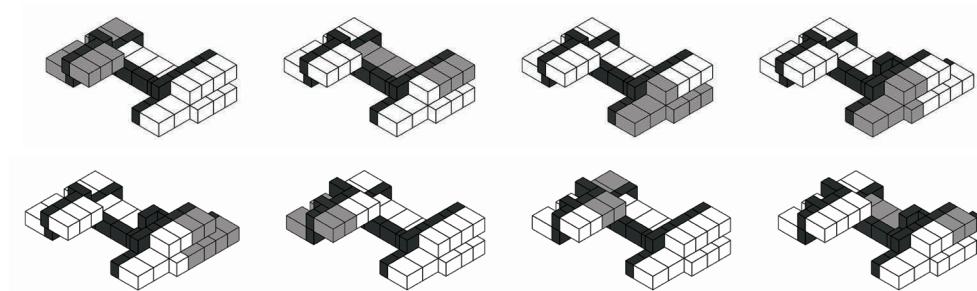
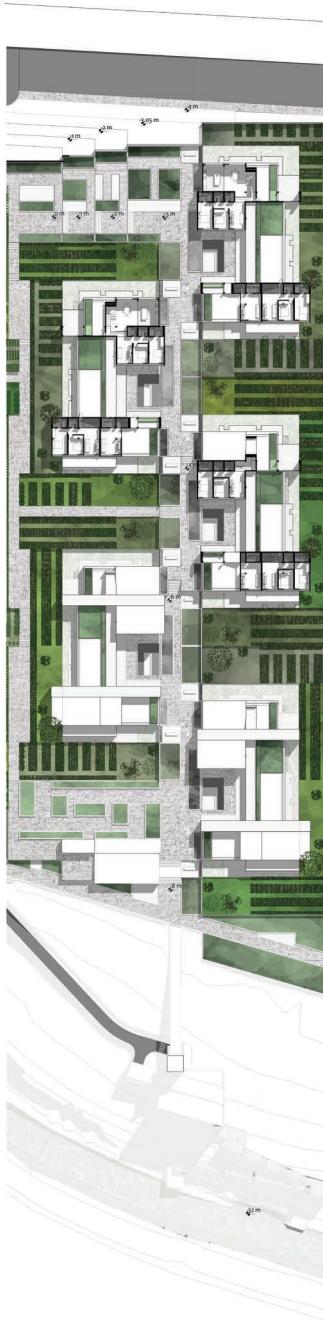
The Sitopia project proposes a combination between urban living and agriculture, with the objective of consolidating itself as a way for the city to grow sustainably. There exists a need for the city to expand without completely taking the place of agricultural parcels at its border, reason for which the project offers a highly replicable and adaptable net that combines housing with farmable plots.

The project proposes a large-scale alternative to the problem and demonstrates its viability by planimetric implementation in 3 hectares of land.

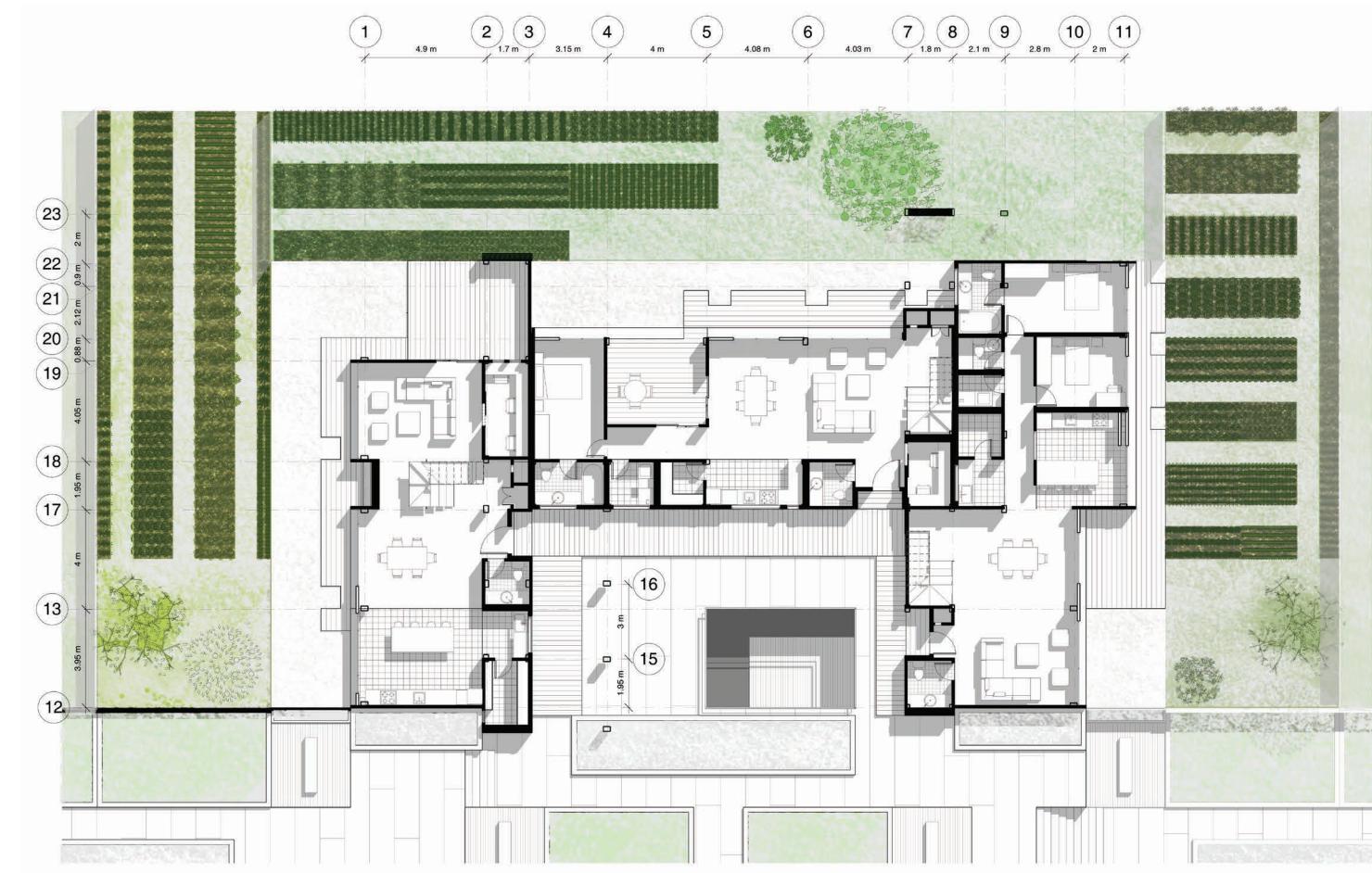
Software Used:

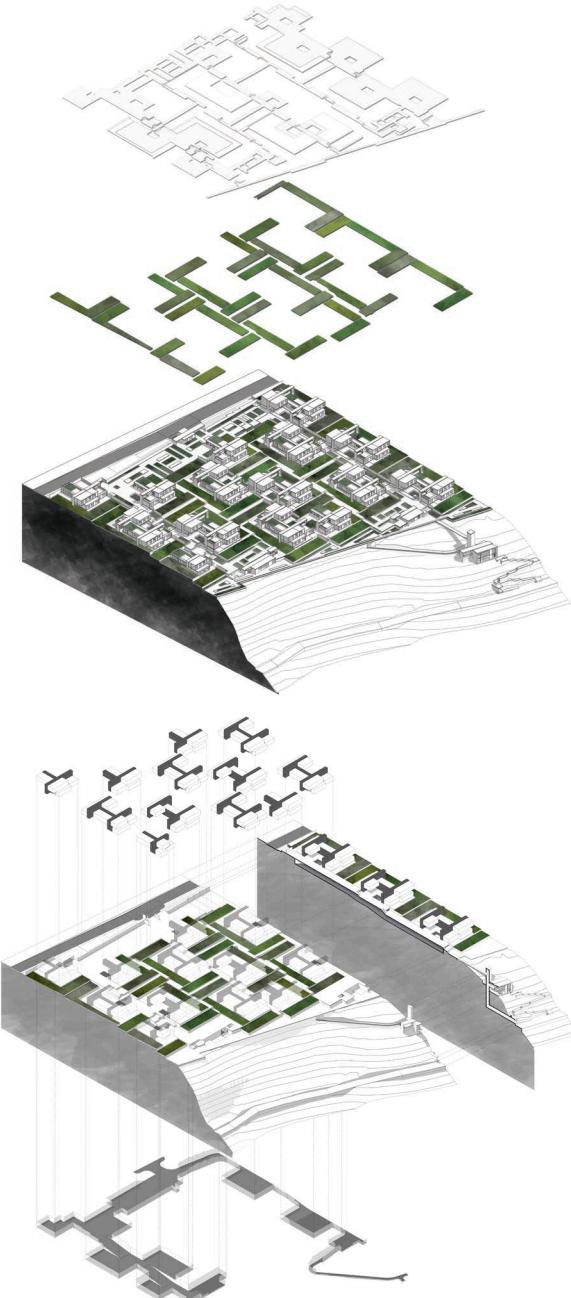
- Revit
- Photoshop
- Autocad
- Illustrador
- Sketchup
- Indesign





Its structure combines variable residences, differentiated circulations, and plans the layout and production of the crops within the land parcels. In differentiation with the isolated, single family type of houses at the city's edge, the living units in Sitopia propose a denser occupation with gardens and predominating farmable parcels.







Traditional houses tend to be consumist, while Sitopia houses are productive. In traditional residential complexes vehicles are given hierarchy, while in Sitopia houses pedestrians are prime.

URBAN COLLECTIVE RESIDENCE

"Four Nuclei of living"

Alejandra Loaiza
Alejandro Viteri
2018

"Four Nuclei of Society" is a project based on the development of four different stages of society through time; birth, growth, consolidation, and uncertain future. This idea is represented and supported in the four parts of the project.

JOINT

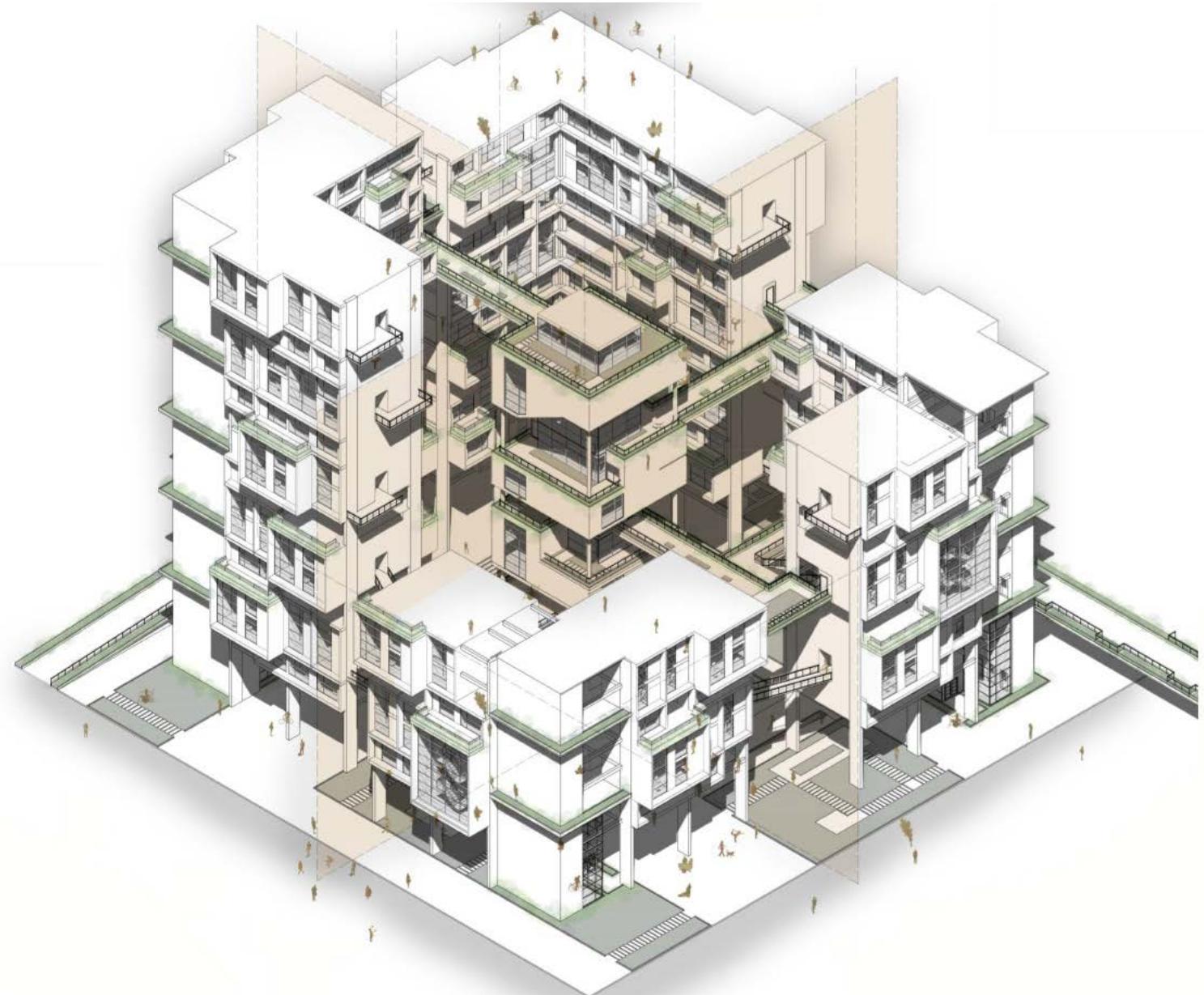
Defined as the union of knowledge, society and housing through the eutopia, this nucleus is characterized by its condition of interconnectivity, being the joining force between all other elements. Its principal function is to create intersection points for dialogue and critique.

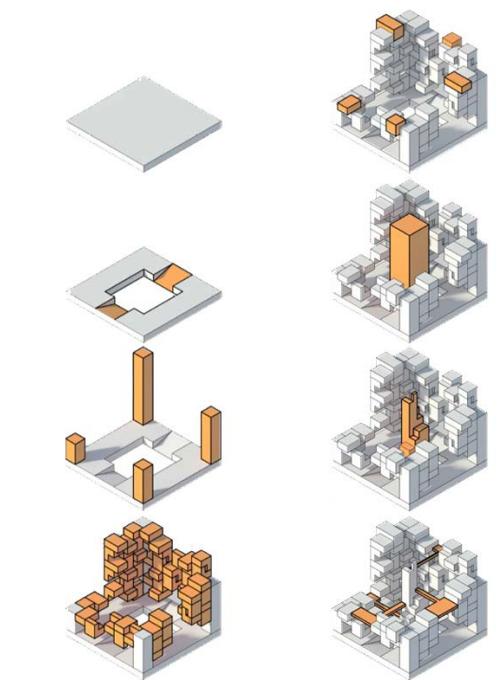
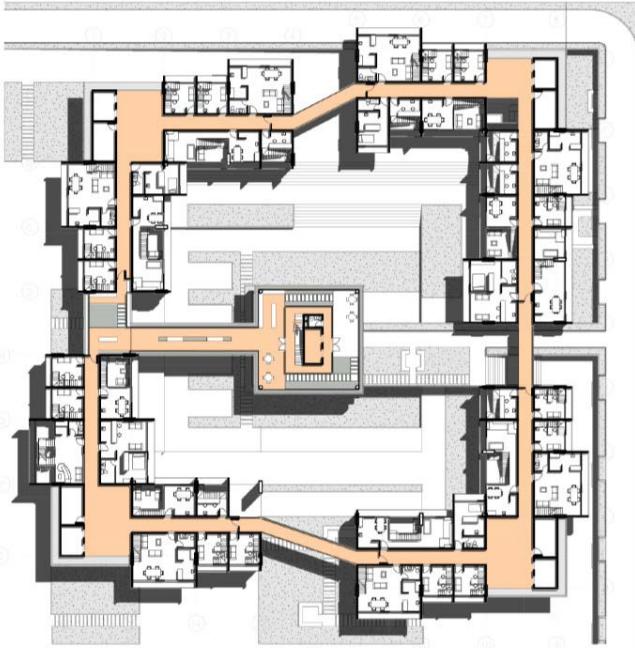
INCLUSION

Characteristic of connecting different spaces in order to produce bonds between individuals in the project, achieving connections between levels.

Software Used

- Revit
- Photoshop
- Autocad
- Illustrador
- Sketchup
- Indesign



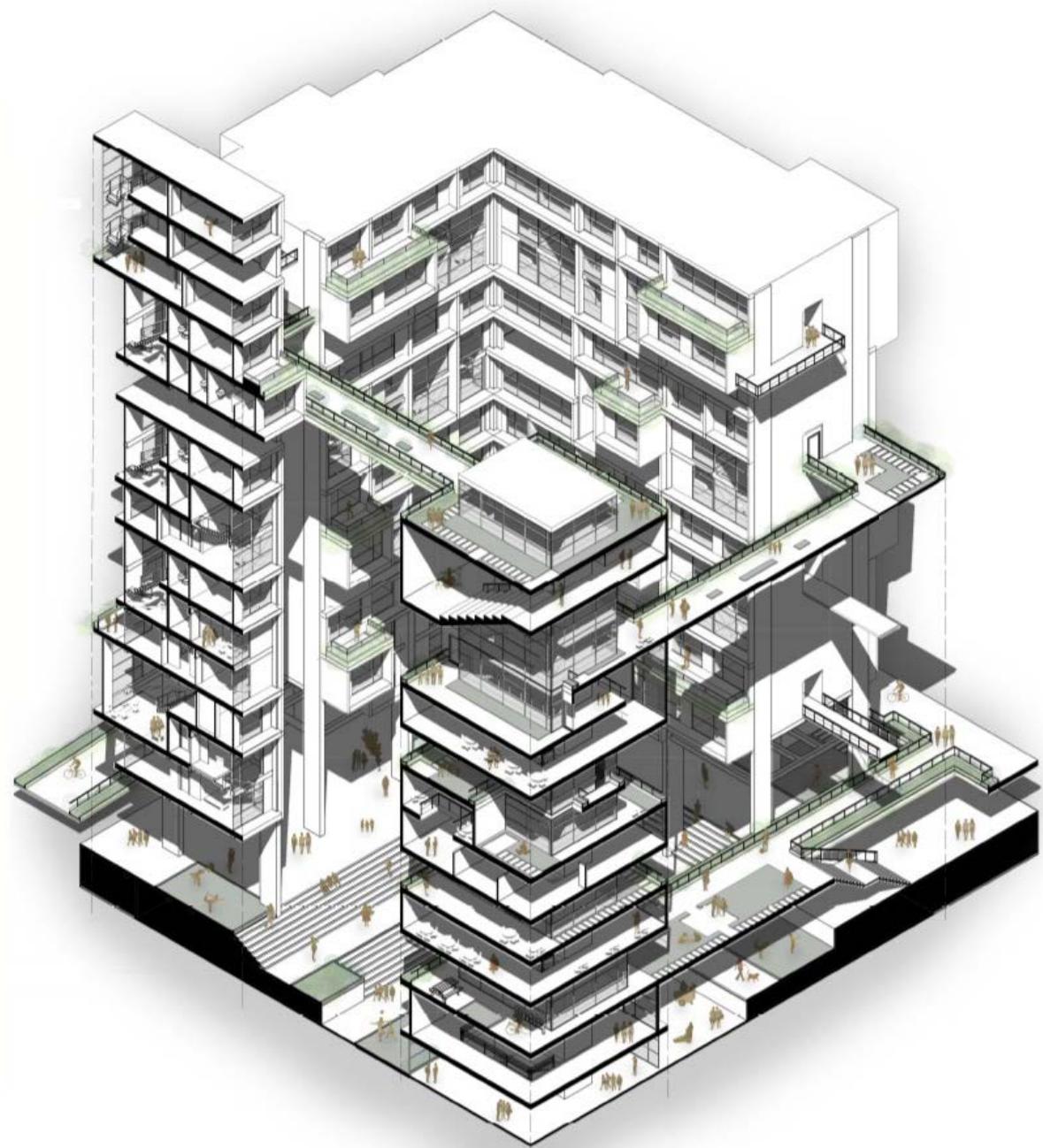
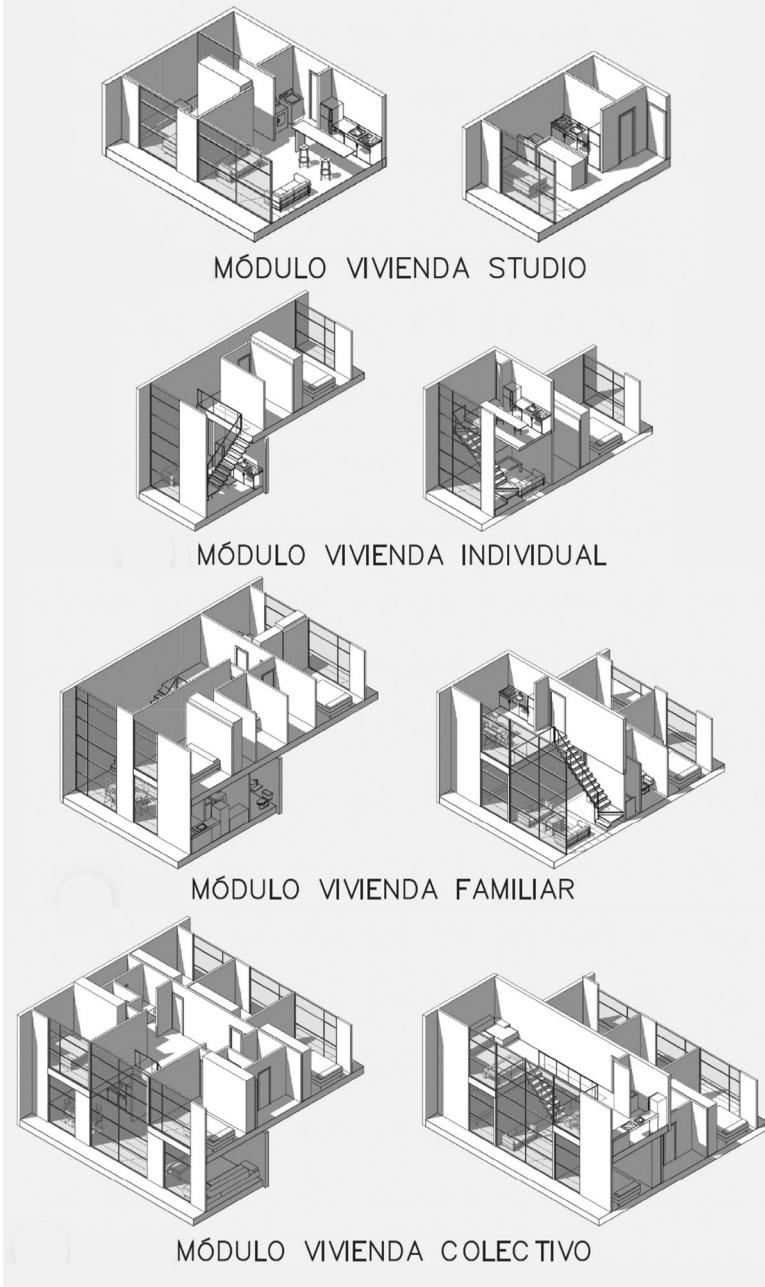


CONFLUENCE

Present as semi public spaces that serve all residences in the project. These are meeting areas for its inhabitants.

INTROSPECTION

Spaces that respond to the necessities of the individuals. These exist throughout the perimeter with inward focus.



PROJECT COLLABORATIONS

Image Post-production
Architectural Modeling
3D Modelling and Views
Post-production of Views
Constructive Details in Section Perspective

IMAGE POST PRODUCTION

Main view for Academic Project

Project by:
Natalia Bautista
2019

Using shadow and shape renders created in sketchup, texture, location-specific vegetation and ambient were added using photoshop. The project is implanted in the Galapagos Islands, reason for which research was conducted to use vegetation texture endemic to the area.

Software Used

- Photoshop

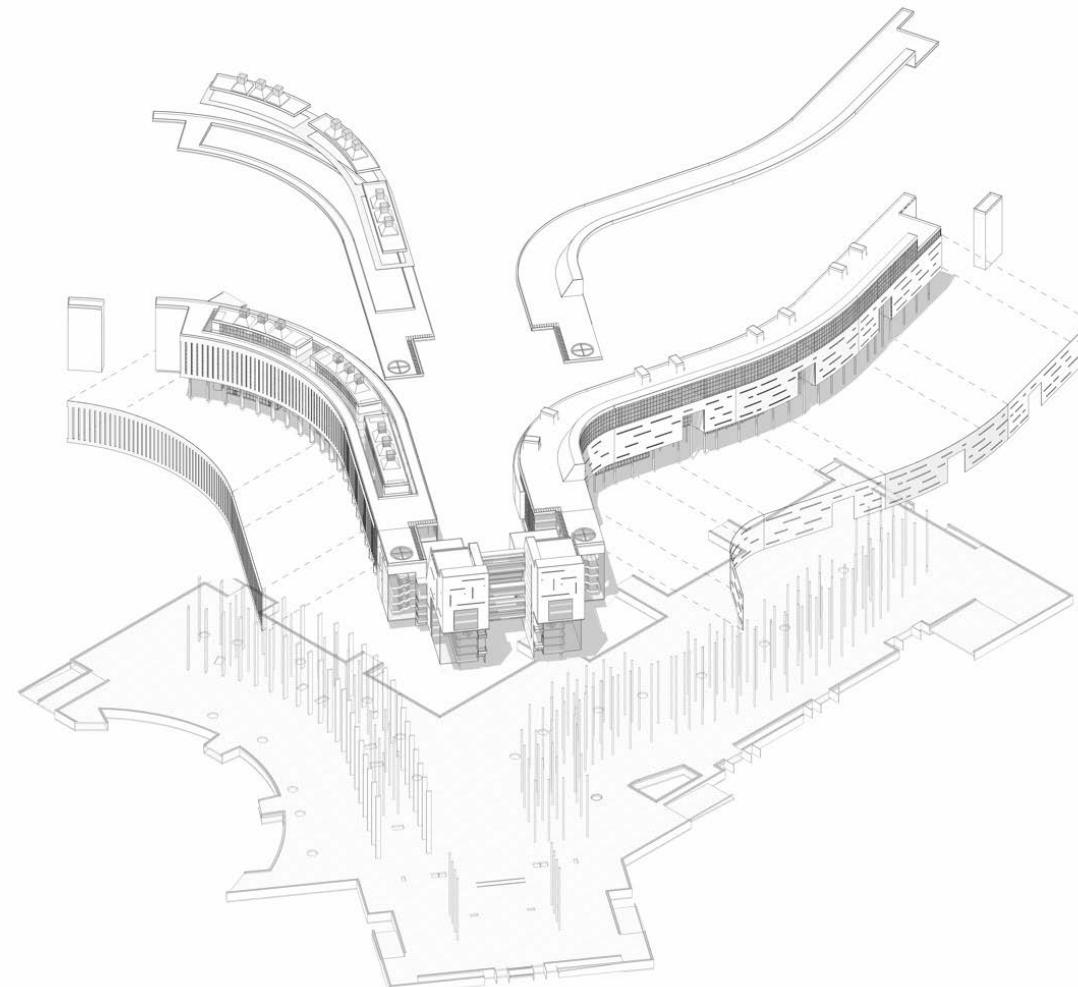


ARCHITECTURAL MODELING

Large Scale Building Modeling

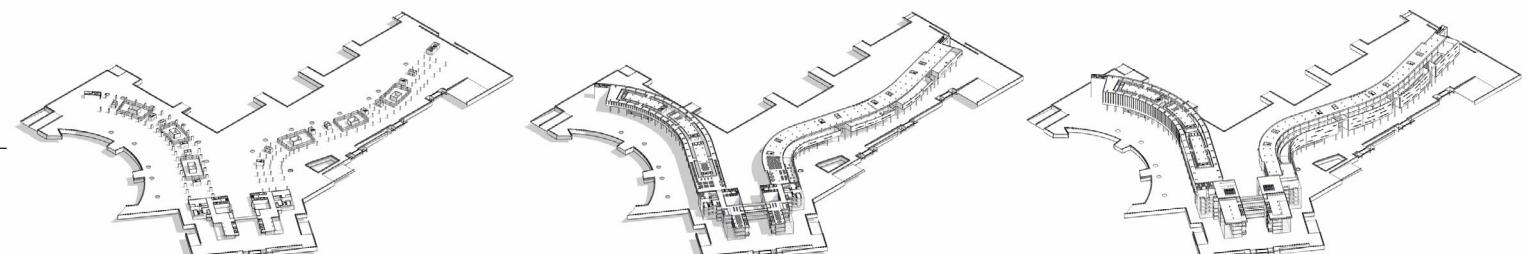
Project by:
Santiago Martinez
2019

Using rough draft CAD drawings and schematic sketches and sections, the building model was created and polished throughout several meetings. The final result was a detailed set of floor plans, elevations, sections, and axonometric views, as well as the exploded axonometric which allows a clearer comprehension of the whole project and its parts.



Software Used:

- Revit
- Autocad



3D MODELING AND VIEWS

Academic Architectural Project

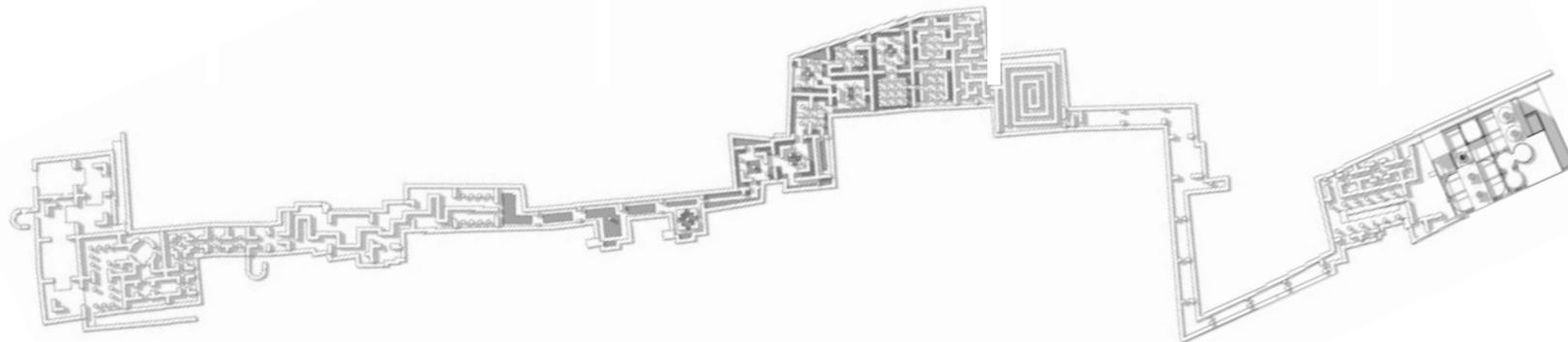
Project by:
Carolina Cevallos
2019

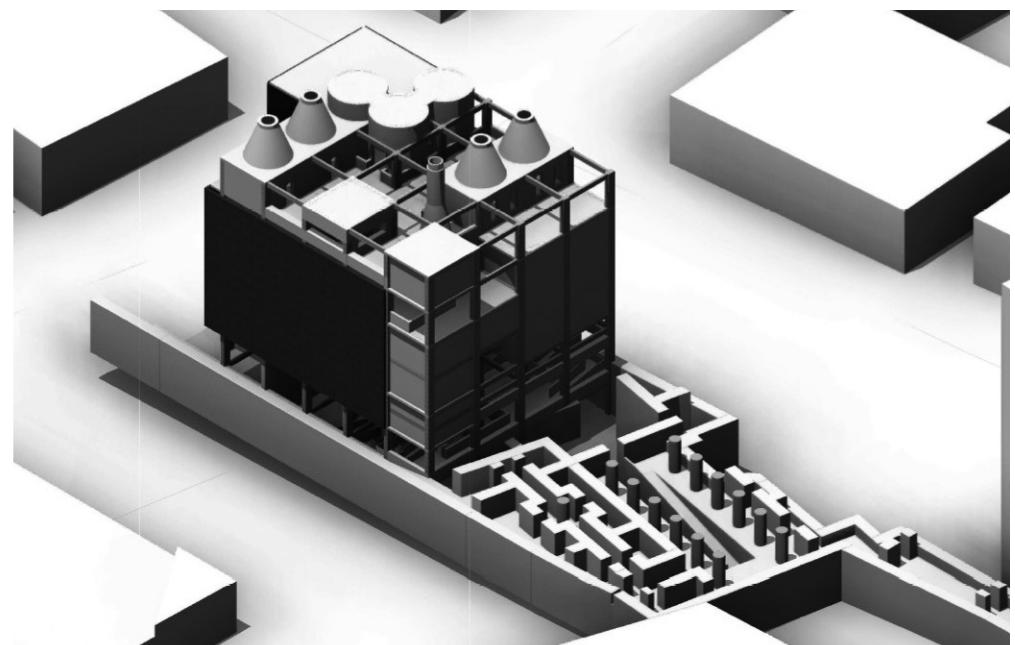
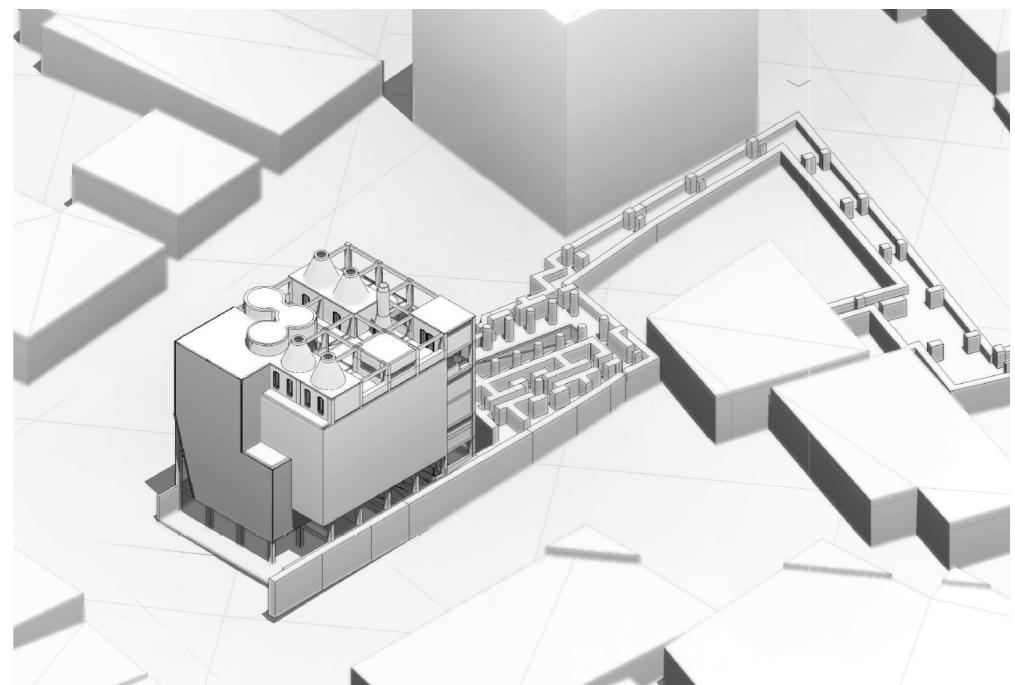
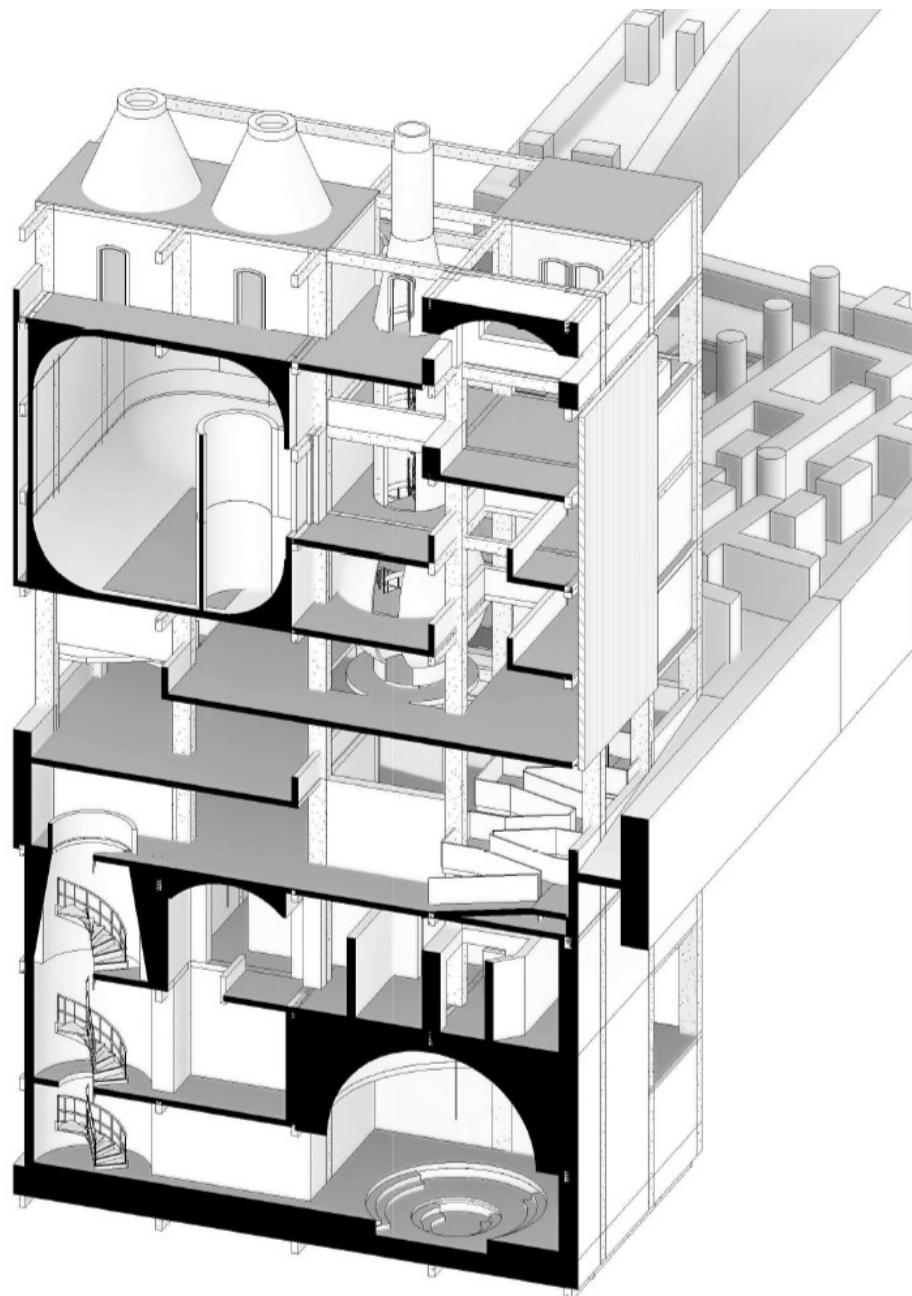
The project was modeled in Revit using existing floor plans. It was implanted in a context created through Rhino in order to create various architectural perspectives (section perspective, floor plans with shadows, axonometric views, among others). View angles were chosen for the perspectives, after which different layers of each view were exported (lines, shadows, materials) in order to compose the final image in photoshop and add a charcoal drawing texture.

Software Used

- Revit
- Autocad
- Rhino
- Photoshop







ARCHITECTURAL VIEWS POSTPRODUCTION

Views for an Academic Project

Project by:
Romina Correa
2019

Using shadow and shape renders created in sketchup, texture, vegetation and ambient were added using photoshop. As it was seeked for the view to have an artistic effect, a watercolor brush texture technique was added and a defined color scheme was used to make sure all the views used the same representation.

Software Used

- Photoshop





ARCHITECTURAL VIEW POSTPRODUCTION

Academic Architectural Project

Project by:
Luigi Valentino Sierra
2019

Views were chosen on an existing model in Sketchup and exported using different view settings (lines, colors, shadows), after which they were joined and composed using Photoshop. Textures and ambience were added.

Software Used

- Photoshop
- Sketchup





CONSTRUCTIVE DETAIL IN SECTION PERSPECTIVE

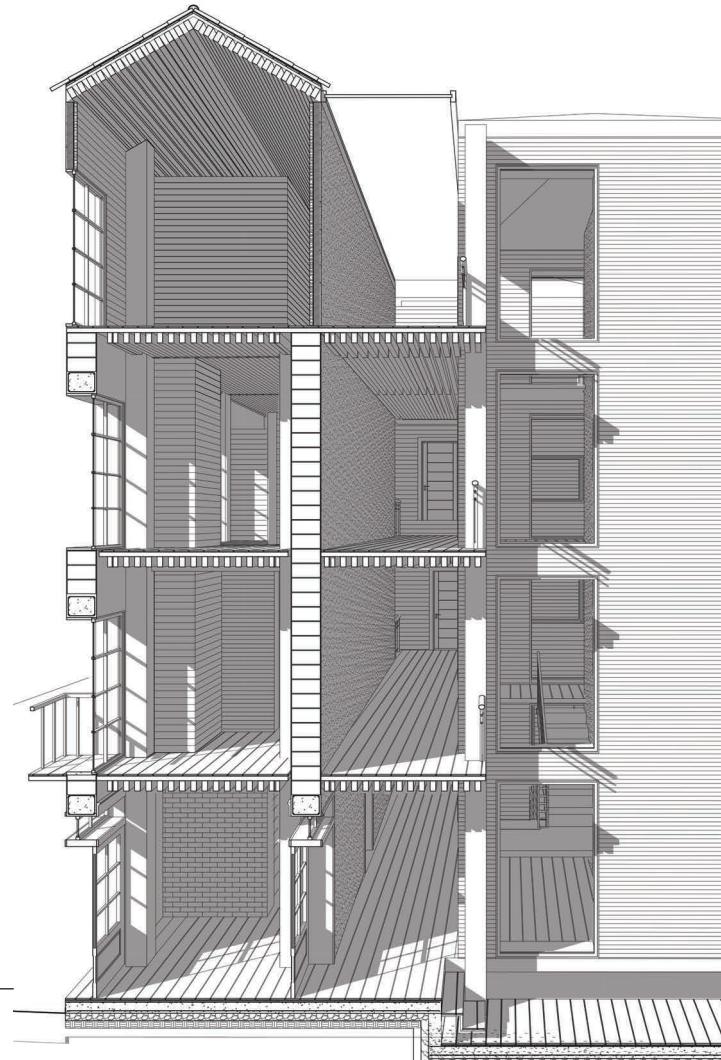
Detail for Academic
Architectural Project

Project by:
Cristina Garces
2019

Using the project model in revit, a view was exported to AutoCAD in order to complete the 2d details in the construction section. Different versions of the view were exported from Revit (colors, lines, shadows) and unified with the Autocad Drawing using photoshop. Textures were added and the contrast and saturation were adjusted.

Software Used

- Revit
- Autocad
- Photoshop



DIVERSE PROJECTS

Sketches for International Study Tour
Digital Fabrication and Rapid Prototyping

INTERNATIONAL STUDY TOUR

Sketches in Site

Cities:

- Venice
- Bologna
- Florence
- Rome
- Milan

2018

In the International Architectural Study Tour by Universidad San Francisco de Quito, many cities in Italy were visited to see their architectural icons. Sketches were made of the buildings in order to decompose their parts and understand the shapes and composition.

Materials Used

- Rapidograph
- Mechanical Pencil 0.75mm 2B



DIGITAL FABRICATION AND RAPID PROTOTYPING

FabAcademy

| 2019

FabAcademy is a fast prototyping course through digital fabrication, based on the MIT class "How to Make Almost Anything". It is taught in a distributive manner by Neil Gershenfeld (director of Bits and Atoms Lab in MIT) and Local Lab Instructors.

Each week a different skill is reviewed (project management, input and output devices, laser cutting, 3D printing, parametric modelling, etc.) for a total of 20 weeks, and at the end of the course all skills must be combined to create a project. My final project was the creation of a Geodesic Dome using: recycled bottles; 3D printed, molded and casted, and laser cut joints; sensors; led lights and a bluetooth connection. The vertices of the dome were designed so as to contain a solar panel connected to an electronic plaque programmed to connect through a bluetooth module to an app on an android smartphone, through which the led lights inside the bottles could be controlled.

The documentation of the course was done through the creation and continuous update of a webpage created by each student in HTML code and uploaded to a FabAcademy's Server. The documentation for my webpage can be found at the following address:

[http://fab.academany.org/2019/labs/zoi/students/
alejandra-granda](http://fab.academany.org/2019/labs/zoi/students/alejandra-granda)

