FINAL PROJECT – RA.141581

ADDITIVE: A HIGH-RISE ARCHITECTURE IN A METROPOLITAN AREA

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DEPARTMENT OF ARCHITECURE
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ADDITIVE: LESS (NATURE) IS MORE
A HIGH RISE ARCHITECTURE IN A METROPOLITAN AREA

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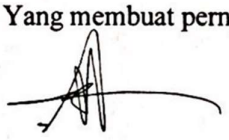

Adiyasa Gunadi

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PREFACE

First of all, a gratitude to Allah the Almighty and the Merciful because if not from His blessings the writer would not be able to finish this design proposal.

First, a token of appreciation for the support that the writer's family gave to him in his final year so that he has motivation and perseverance to work and finish this proposal.

Second, an expression of gratitude by appreciating the colleagues' support through several discussions related to his proposal's issue.

And a final sign of gratitude towards the writer's advisor, Ir. I Gusti Ngurah Antaryama, Ph.D, for his encouraging critics and suggestions that have been helping him shaped his design proposal. Without his support and encouragement this proposal would not meet any conclusion.

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ADDITIVE: LESS (NATURE) IS MORE
A HIGH RISE ARCHITECTURE
IN A METROPOLITAN AREA

Student Name : Adiyasa Gunadi
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ABSTRACT

In the 21st century, many problems related to architecture began to rise. From aesthetic to the environment that house the architecture itself. In the current moment, the concept of sustainability emerged and began to influence any aspect of an architectural designer. The one that popular at the moment is the biophilic approach upon architecture world. As more and more buildings designers added some nature elements upon their design, some issue upon the nature itself emerge and caught some attention from several researchers. From the data that was gathered from a couple of scientist and environmentalist, Tim De Chant and Mark Hovenden, the conclusion from both of the data are the nature element that lived in the middle of a dense urban habitat *have shorter and weak life quality* compared to their counterpart which lived in the friendlier environment and the tree which lived on the unnatural heights of a tall buildings would lessen their strength over time. The defined hypothesis of the architectural issue here is that the current biophilic architecture could be concluded as a not very *loving* in term of *philia* to the nature itself as the data suggested that the nature itself which brought from their real habitat receive harsh environmental treatment from the dense urban habitat.

The design method that will be used in this design proposal is the *narrative* method as there is a *meaning* that the designer would like to incept into the design and the design method itself is derived from the approach which is meaning related to architecture approach. Biophilic architecture approach was also used *only as a tools to where the issue is originated from.*

The result was an architecture that could be classified as a biophilic as the design does not bring nature into the dangerous environment for themselves. By using a holographic device to generate a fake tree as a symbol of protecting the real genuine nature using artificial natural features so that the real nature would live undisturbed by human activity.

Keywords: Biophilic, Incept, Meaning, Narrative

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CHAPTER I
INTRODUCTION

1.1 Architectural Issue

1.1.1 Issue Background

This final project's proposal starts from defining and refining an issue related or unrelated with architectural syntax. Issue-based designs tried to solve current problems & site issues through design interventions.

The main issue that became the starting point of this architectural design proposal is related to a method of green building design and numerous critics towards the current practices.

1.1.2 Background

In the 21st century, many problems related to architecture began to rise. From aesthetic to the environment that house the architecture itself. In one of this moment, the concept of sustainability emerged and began to influence any aspect of an architectural designer. And in effect, many designers began to employ several sustainability tactics to develop their architecture. So worldwide architects from the different region's race for which who will develop the most sustainable architecture in the competition.

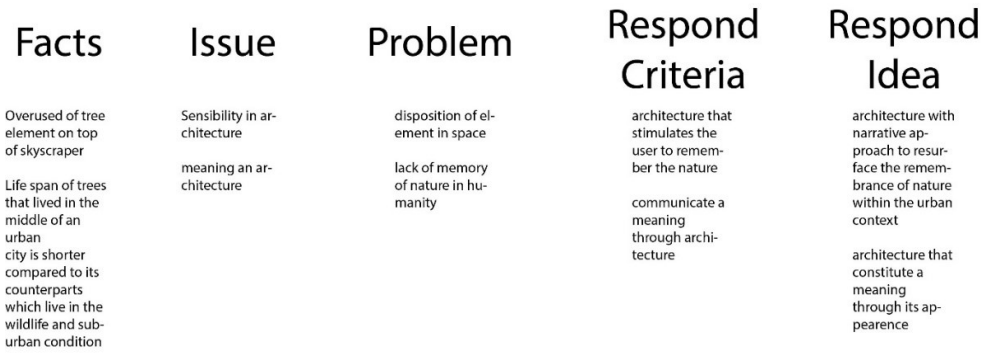
Graphic 1.1. A skyscraper with trees added to its element
Source: www.popsci.com (2017)

Sustainable is comprehensive therefore a complex subject. It is of vital importance to all because it deals with the survival of human species and almost every living creature on the planet. Sustainable and eco-friendly architecture is one of the main aims that humans for creating a better life have made as the ultimate model for all their activities. For this reason, moving towards a greener architecture is well-thought-out the main goal of the present architecture of our time (Mahdavinejad, 2014)

1.1.3. Design Issue

Based on the issue and context brief the design problem is why architects put trees on top of their skyscrapers and based on the issue the dug critical issue was found that the urgency of humanity to meet with the nature itself is the problem.

The goals of the design proposal are to bring the experience of nature itself through sensory and meaning approach without using any natural element in a literal way and the experience became a reminder about the nature for the user so they are encouraged visit the nature with their own body and mental perception without harming any more nature by bringing them forcefully into the mankind artificial habitat.



Graphic 1.2. General Workflow

1.1.4. Regarding Trees

As from Associate Professor Mark Hovenden, deputy head of the School of Plant Science at the University of Tasmania, said that trees don't necessarily live on high altitude simply because of the development of their leaves. The higher the altitude, the more extreme the resulting climate conditions that could affect the physiology of trees. Uncovered trees that exposed to an extreme heat or cold could result in damaging their growing tender growing buds. “Trees could grow at higher altitudes if they didn't shade themselves”.

Graphic 1.3. The very beautiful Eucalyptus coccifera dominates Tasmania's tree line. It grows up to an altitude of 1200 meters (Source: Pete Walsh Photography) (2017)

Mark Hovenden statement concludes that trees grow their branch and leaves to execute their functions such as shading, photosynthesis, and reproduce. From his research on altitude aspect towards vegetation claims that it appears that plants-no matter where they were placed across the world-can’t effectively build cells once the temperature drops below 7°C.

1.2 Design Context

1.2.1 General View

Typical city overview is largely populated, dense building formation, and frequent movement caused by its occupants. In Surabaya (mainly in its middle region, Tunjungan) the dominant aspect of the city includes offices quarter, hospitality, eatery, and recreation.

Graphic 1.4. Layout of Tunjungan, Surabaya
Source: maps.google.com (2017)

With very few skyscraper placements unlike its several counterparts (Jakarta), Surabaya still have potential and prone to a fast development of urban congestion, especially in its dense area.

Graphics 1.5. Aerial view of a city
(Surabaya)
Source: images.google.com (2017)

1.2.3 City

A city is a large human settlement. Cities generally have extensive systems for housing, transportation, sanitation, utilities, land use, and communication. Their density facilitates interaction between people and businesses, sometimes benefiting both parties in the process.

Cities could be referred as a large human settlement by its relatively great size and also have some symbolism value which could be inferred with a centralized authority. Human population that live within a city usually lives side by side with other occupants caused by the high density of urban spaces.

Several key aspects that define some regions as a city includes type of population, population density level, number of dwellings, economic, infrastructures, and a national censuses report. Cities serve as administrative, commercial, religious, and cultural hubs for their larger surrounding areas.

Graphic 1.6. Aerial view of a city (Jakarta)
Source: image.google.com (2017)

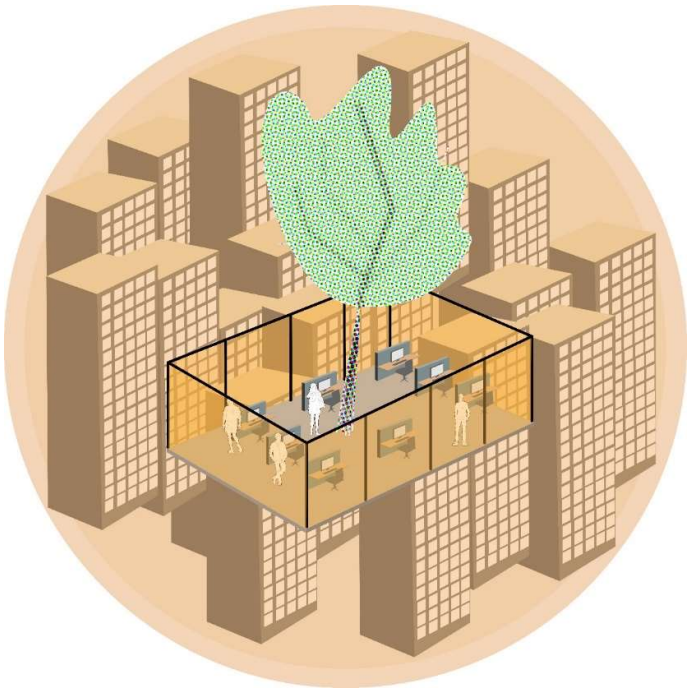
The presence of a *literate elite* is sometimes included in the definition. A typical city has professional *administrators*, *regulations*, and some form of *taxation* (food and other necessities or means to trade for them) to feed the government workers. (This arrangement contrasts with the more typically horizontal relationships in a tribe or village accomplishing common goals through informal agreements between neighbors, or through leadership of a chief.) The governments may be based on heredity, religion, military power, work projects such as canal building, food distribution, land ownership, agriculture, commerce,

manufacturing, finance, or a combination of these. Societies that live in cities are often called civilization.

1.3. Design Criteria

1.3.1. Goals

The main mission statement of the projects is to create a high-rise architecture that act as a trigger for its user about nature and provides spaces for office activity, mixed-use, and any related activity with the main programs.



Graphic 1.7. Abstract Illustration

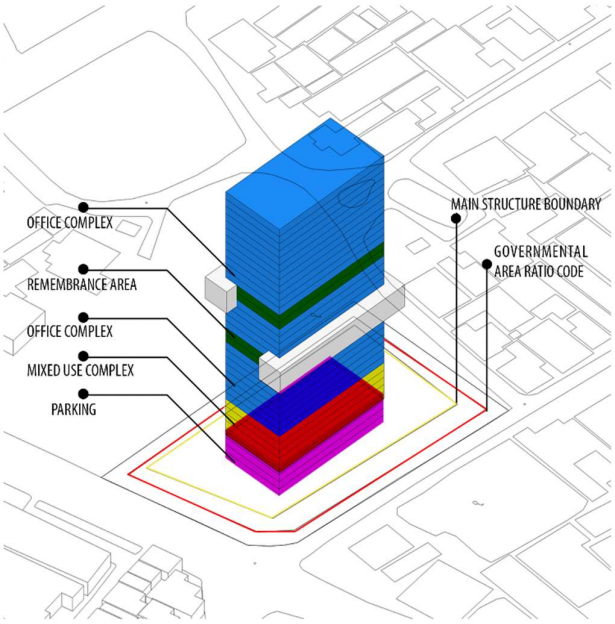
1.3.2. Substantial Criteria

1. The design should show the contrast relation between natural and artificial
2. The architecture should / could represent natural feature in artificial way

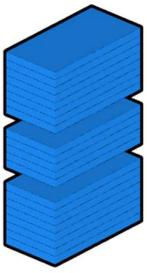
CHAPTER II

DESIGN PROGRAMS

2.1. Space Requirements and Dimensions

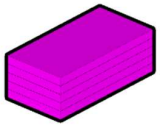


Graphic 2.1. Whole Mass

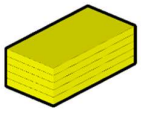


Graphic 2.2. Office Complex

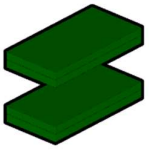
Graphic 2.6. Utility



Graphic 2.5. Parking



Graphic 2.4. Mixed-Use



Graphic 2.3. Remembrance Area

2.1.1. Offices

For office usage (Graphic 2.2.) the amount of space needed is divided by sub-activity that constitutes the whole office activity. From the book *Time Saver Standards: Building Types* written by Joseph De Chiara the office complex main function divided into 6 types. Each of respective function constitutes the whole of offices typology.

1. Management
2. Finance
3. Sales
4. General services
5. Technical services
6. Production

Since the office complex will be divided into three main complex with each of them will be available for different corporations or tenants, each of the complex will have these listed rooms below:

Top Executive
Junior Executive
Supervisors
Operator 150cm desk
Operator 137cm desk
Operator 125cm desk
archives and important documents
Computing
File Management
Communication
Vaults
Stockrooms
Transfer files
Janitor supply and equipment
Worker utility room
Reception Room
Waiting Room
Interviewing Room
Examination Room
Conference Room
Exhibit Room
Medical Room
Lunchroom
Employee Lounge

Rest Room
Mail Room

With the total floor area of each complex combined will be approximately reached 36,897 sq. meters and total height up to 84 meters above the mixed-use complex.

2.1.2. Mixed Use

The allocated space for mixed-use (Graphic 2.4) area is defined into 2 storeys for the program and approximately 3500 sq. meters of space allocated to the program.

Each of program that will fill the mixed-use complex is listed below such as:

Recreation Space
Retail
Restaurant

Each of the activity will be combined into the 2 storeys complex with total height of 8 meters and act as the base mass of the building.

2.1.3. Parking

The parking mass (Graphic 2.5) will be placed under the ground (basement) as the sub-structure of my building project. Each of the parking spot will have 3 meters in width and 4,4 meters in length.

According to the *High-Rise Building System* the parking requirement coefficient for office activity should be 1 per 1000 sq. foot or 92 sq. meters (rounded to 100sq. meters). Since the rough area of one designated parking spots is around 13 sq. meters the ratio for calculating my parking requirements is 13 sq. meters per 100 sq. meters.

In conclusion, the sum area required for my parking space is 6852 sq. meters and it will be composed into roughly a 3 storeys basement facility

2.1.4. Utility

Utility requirements (Graphic 2.6) will be consisted of services, engine room, HVAC, building transportations, and mechanical electrical room. The utility program is crucial for making the whole building to work as it is being planned. Since high-rise structure stack each of its space the requirement for the building rises and becomes more demanding. The enormous height makes the user to need a special device in order to be able to travel faster, safer, and more efficient between large number of floors than using conventional method of using stairs and ladders (although standard issue specification of fire-resistant stairs is still needed in every high rise structures).

The more demanding structure also demands more features to maintain its room quality within the enclosure. The HVAC equipment is needed and becomes a crucial features of high-rise structure. Since the office activity needs privacy and comfortability to ensure job satisfaction usually high-rise structure that provides office complex are enclosed tightly to deter unfriendly exterior influences (noise, air pollution, etc.). This condition makes the role of HVAC features crucial to comfort its occupants and keeping unwanted distraction at bay.

Because of the enormous requirement of a high-rise structure the maintenance ability of all of those mechanical equipment is needed in order to ensure all of those features will keep on working continuously without interruptions. Therefore, each of electrical cable, HVAC ducts, and fire-preventing features are housed inside a shaft that positioned carefully and will lead into a maintenance room.

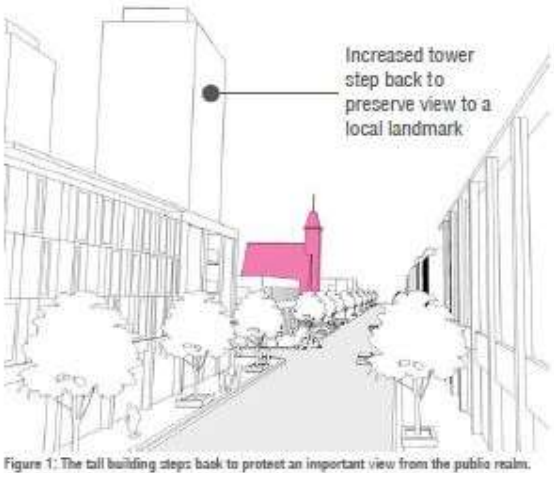
The current estimation need for the core is approximately reached 2800 sq.m for the proposed project.

Table 2.1. General Area Allocation

Base Floor Area	6000 sqm
Total Ground Area	10000 sqm
Total Gross Floor Area	37600 sqm
Office Complex	21250 sqm
Mixed Use Complex	2600 sqm
Core-related Requirements	3600 sqm
Parking	6852 sqm
Dimension Info	24 floors(tower block) approx. 1300sqm area for each floor plate
	3 storeys base

2.2. Codes Related to Activity and Programs

2.2.1 High-Rise Setbacks



Graphic 2.7. High Rise Setbacks
Source: Tall Building Guidelines (2017)

According to the *tall building guidelines* issued by the government of Toronto high rise building should have a setback. The setback plays a number of roles in a building design such as preserving the locale contexts view and providing sunlight to the adjacent ground spaces.

According to the guidelines, the bigger the floor plate of the tower the bigger the setbacks required in order to maintain the existing view undisturbed and to maintain the daylight quality within the project's area.

2.2.2 Offices

The offices activity heavily depends on concentration and room comfort according to the *Time Saver Standard: Building Types* written by Joseph De Chiara. The main concern of office is the organization and connectivity of each worker.

The room quality also consisted of lighting quality, acoustical quality, and thermal comfort. The more of the requirement meet the need the easier for the occupants to achieve satisfaction related to the spatial comfort.

2.2.3. Mixed-Use

The mixed-use area related codes mainly discussed the relationship with the high-rise parking ability. The higher the number of users using the facility the more parking area will be needed in order to maintain the order within the complex. Since the mixed-use complex will be open to the public the more space will be needed to accommodate the vehicle that will be stored within the whole complex. Failed to achieve the needed requirements will result in a chaos-related state and will impact in the overall building performances.

2.3. Site Data

Urban, Tunjungan, Surabaya

Graphic 2.3. Near Pasar Turi Station
Source: maps.google.com (2017)

For site candidates the first general criteria are from where the issue of my design proposal's occurred; the urban, downtown area. After that, 3 feasible sites were generated. The second general criteria for the design location is an area where the concentration of green space is relatively small and then the third general criteria are where there is a lot of human activity mainly in the middle of a downtown.

2.3.1. Environment Study

For the general condition in the Surabaya itself, the essential force that will be the main force of the design framework but "not" a dominant factor for the design framework are humidity, temperature, wind speed, vehicle corridor, green space mapping, and sun trajectory.

Temperature

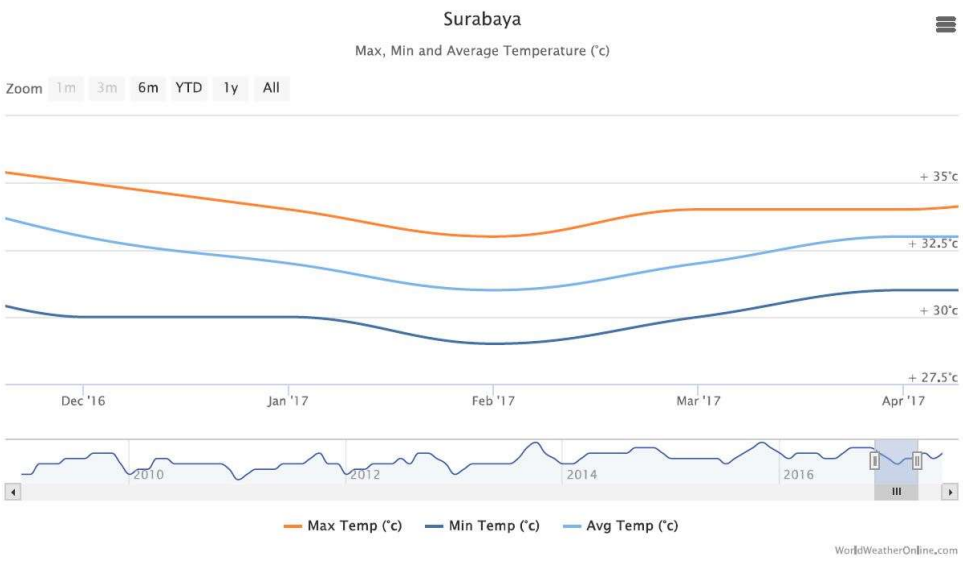


Chart 2.3.1.1. Temperature Level of Surabaya
Source: world-weatheronline.com (2017)

The temperature state in Surabaya is relatively high as the average temperature reached 32.5°C. The impact of the condition will force my design to have an output of comforting the inhabitant or have a satisfying result in the atmosphere conditioning for the inhabitants.

Cloud & Humid

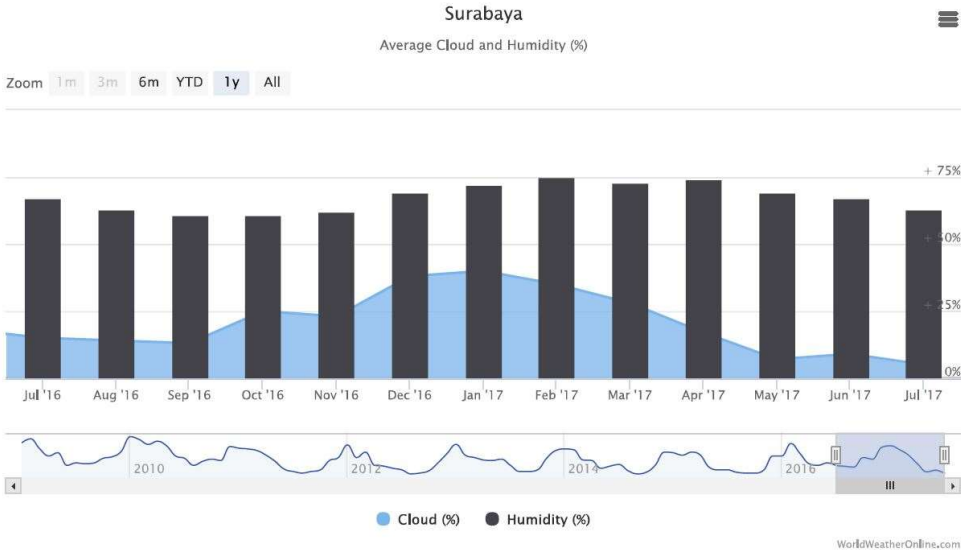


Chart 2.2. Cloud & Humidity Intensity of Surabaya
Source: world-weatheronline.com (2017)

The relative humidity data upon the site reach quite a high rate which reached 75% humidity which means that there is a quite huge amount of water particle in the air that the more humid the condition the harder the human skin to evaporate sweats and could cause discomfort upon the inhabitant.

Wind Speed

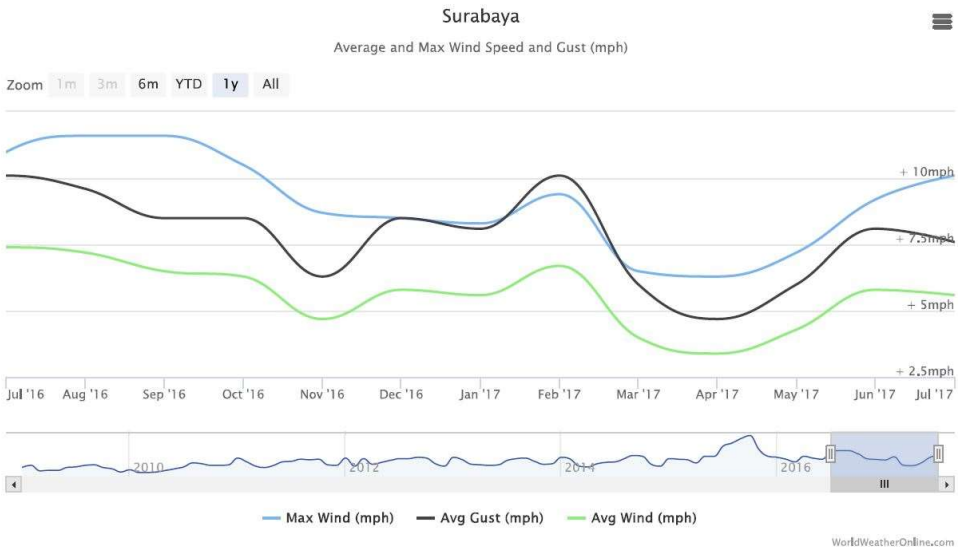


Chart 2.3.1.3. Wind Speed of Surabaya
Source: world-weatheronline.com (2017)

The wind data based on the online weather database stated that the current average wind speed on the site reach 7mph which is categorized in the “beaufort wind scale” as a “light breeze” level. Therefore, the wind level would not be a significant disturbing factor upon my project.

In conclusion, the general climate condition generates constraints but would not play a dominant role in the design framework are those three aspects. Each of these aspects plays important but not very dominant role but still needed inside the framework.

2.3.2. Site A
Jl. Koblen Kidul, Surabaya

Graphic 2.9. Site A

The first site candidate is located near the Pasar Turi Train Station. The site is located near a mall complex. Local human settlements also occupying a nearby area. For the site selection, each site were listed and tested based on the *SWOT* technique using the preliminary site parameters.

Site Area: 14.770 sqm

Table 2.2. SWOT Site A

Point	Strengths	Weaknesses	Opportunity	Threats
Site A Near Pasar Turi Train Station	largest symmetrical space available	near a large informal settlement	easy to organize site layout	remote feel from downtown
	surrounding buildings with low height	only has one large main road	good for focal point	small number of street render view
		Only has one eligible pedestrian path on one side		detering future visitor who will visit by foot
		Small main road access		prone to traffic and congestion
		has large human settlements		unbalanced hierarchy

2.3.3. Site B

Jl. Tunjungan, Surabaya

Graphic 2.10. Site B

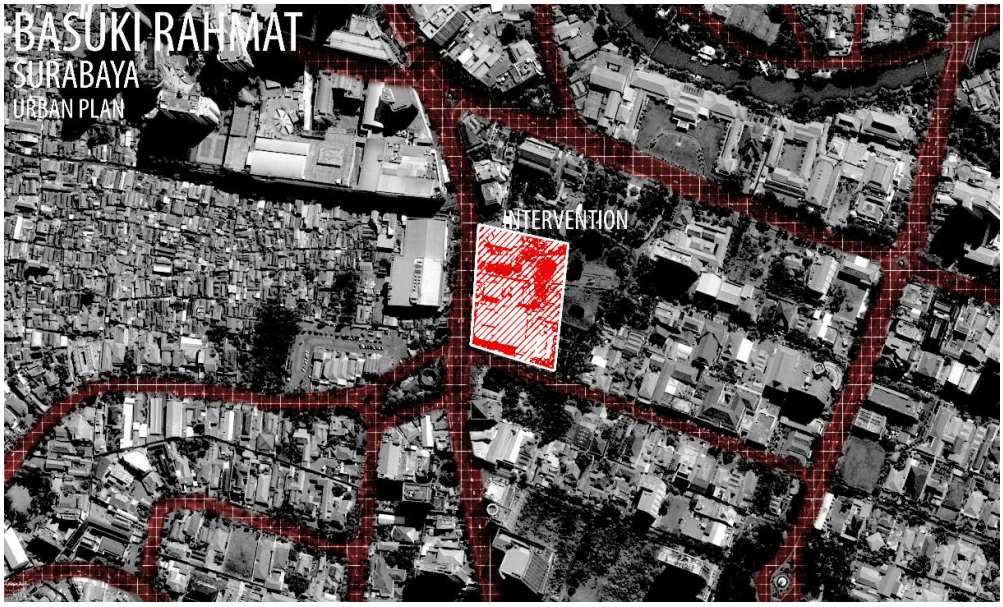
Site Area: 10,354 sq. meters

Table 2.3. SWOT Site B

Point	Strengths	Weaknesses	Opportunity	Threats
Site B Jl. Tunjungan	Largest in main road location and	conservation land	attracting future user in a large	must maintain its relationship with
	focal point of nearby location	no access for pedestrian across the road	angle taking at ease	populating concept is hard
	Good pedestrian facility		good main road feasibility	
	rich in service and commercial complex		logical scenario, easy to comprehend	

2.3.4. Site C

Jl. Basuki Rahma



Graphic 2.11. Site C

Site Area: 10.000 Sq. meters

Table 2.4. SWOT Site C

Point	Strengths	Weaknesses	Opportunity	Threats
Site C Jl. Basuki Rahmat	Has the largest main road and a secondary road more than half of the main road	densely surrounding building formation	close with other tall buildings	hard to achieve good view from passerby
	good pedestrian pathway	no access for pedestrian across the main road	close relationship with the architectural issue	populating concept is hard
	has the most largest concentration in service and commercial future planning		easy to populate within concept	
	low height of surrounding buildings			

2.4. Strength, Weakness, Opportunity, and Threats

For site selection, the use of the *Strength, Weakness, Opportunity, and Threats* method was carefully used to select one eligible site from all of the site candidates. The parameter that was generated from one of the design criteria (high rise building) was used to achieve an objective result.

Table 2.5. Preliminary Site Parameter

Preliminary Site Parameter
Road access
Pedestrian Access
Road dimension and type
Pedestrian access to object view
Site rules and guidelines

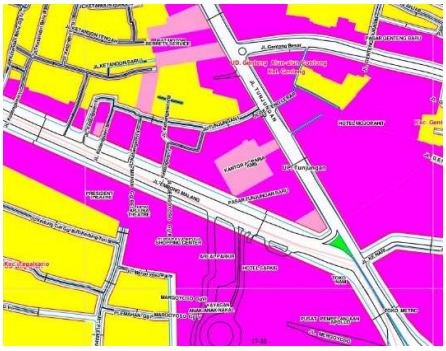
Table 2.4. Whole SWOT Table

Point	Strengths	Weaknesses	Opportunity	Threats
Site A Near Pasar Turi Train Station	largest symmetrical space available	near a large informal settlement	easy to organize site layout	remote feel from downtown
	surrounding buildings with low height	only has one large main road	good for focal point	small number of street render view
		Only has one eligible pedestrian path on one side		detering future visitor who will visit by foot
		Small main road access		prone to traffic and congestion
		has large human settlements		unbalanced hierarchy
Site B Jl. Tunjungan	Largest in main road location and dimension	conservation land	attracting future user in a large number	must maintain its relationship with other buildings
	focal point of nearby location	no access for pedestrian across the road	angle taking at ease	populating concept is hard
	Good pedestrian facility		good main road feasibility	
	rich in service and commercial complex		logical scenario, easy to comprehend	
Site C Jl. Basuki Rahmat	Has the largest main road and a secondary road more than half of the	densely surrounding building formation	close with other tall buildings	hard to achieve good view from passerby
	good pedestrian pathway	no access for pedestrian across the main road	close relationship with the architectural issue	populating concept is hard
	has the most largest concentration in service and commercial future planning		easy to populate within concept	
	low height of surrounding buildings			

From all the three candidates, the Site C was opted because it has less weakness than the option A and not a conservation Land compared to option B with more than 3 preliminary site parameter has been achieved.

2.5. Rules and Supporting Data

Graphic 2.12. A Near Pasar Turi Station
Source: http://petaperuntukan.surabaya.go.id

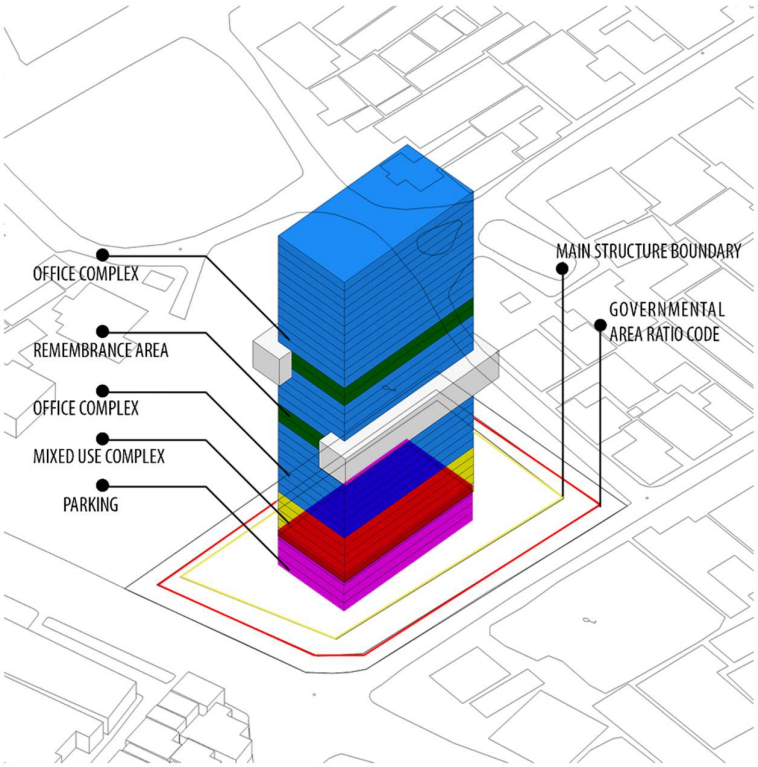


Graphic 2.13. B Jl. Tunjungan
Source:http://petaperuntukan.surabaya.go.id (2017)

Graphic 2.14. C Jl. Basuki Rahmat
Source: http://petaperuntukan.surabaya.go.id (2017)

For each site, the current and future planning objective are for services and commercials. The strategically placed site in the middle of an urban city itself in return made the three candidates eligible for the design proposals.

The proposed function of the project is an office complex consisted of mass that its main function is to provide space for trade, services, and commercial and could be mixed with other subsidiary function such as public facility. The office program does not need fixed permission for each program but it's already a whole of its main function.



Graphic 2.15. Rules' Illustrations

KDB: 60%

GSB: - +3 meter (road's width more than 2 meters)

- Minimum 3 meters of perimeter boundary.
- For high rise building minimum of 3 meters (ground base coefficient <60%)

Open green space coefficient: 10%

Building's area coefficient: 4.2

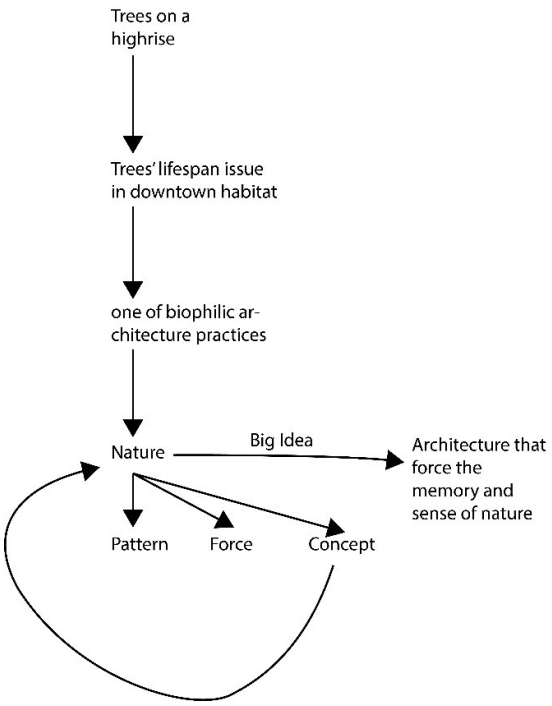
Basement: 4 storeys maximum

CHAPTER III
DESIGN METHOD AND APPROACH

3.1. Method and Framework

3.1.2. Design Framework

Before going deeper through this design proposal the reader should be informed first about the whereabouts of my project within the currently available frameworks based on the *Revealing Architecture Design* written by Philip D. Plowright. According to the book *Revealing Architecture Design* written by Philip D. Plowright there are 3 general distinguishable design frameworks used by many architects within their profession. The three of them are *pattern, force,* and *concept* framework. The pattern-based framework used by architects to use some architectural pattern as their starting point within their design phase. Mainly identifying issue inside the architectural syntax. Even though their starting point starts inside the architectural syntax, they still incorporate knowledge outside the domain of architecture but not as the dominant key roles in their design framework. The force-based framework used by architects that placed external and internal forces as the major key factor in their designs. Usually, their design concept formed from a fragment of concept to constitute a whole in the end of their design phase. The third and the last framework explained by Plowright is the concept-based framework. The concept- based framework has different system compared to the pattern-based and force-based framework. It starts its design with a *large idea* and then the smaller fragment of concept that lies within its frameworks has unifying elements that constitute the whole idea as a one. On this final project's proposal, the concept-based framework was used for the project because even though the starting architectural issue came from the field of biophilic architecture, the method and approach are largely focused on meaning approach and diagrammatic and narrative methods.



Graphic 3.1. Framework

3.1.3. Design Approach

The approach that was used in defining the design problem were several theories within the field of *Biophilic Architecture*. From the deep issue exploration, a conclusion was concluded that there is another way to achieve the definition of biophilic architecture without using the current approach and method within the biophilic architecture itself. Instead, the *use meaning approach to create my architectural design to achieve the biophilic terminology in a different way*. The big idea of the design is to create an architecture that could stimulate user through its sensory and meaning approach to incept the memory and experience of nature through analogical method. Consequently, the user memory about nature forces them to go to the real natural space instead of taking bit-by-bit of nature into their own artificial habitat.

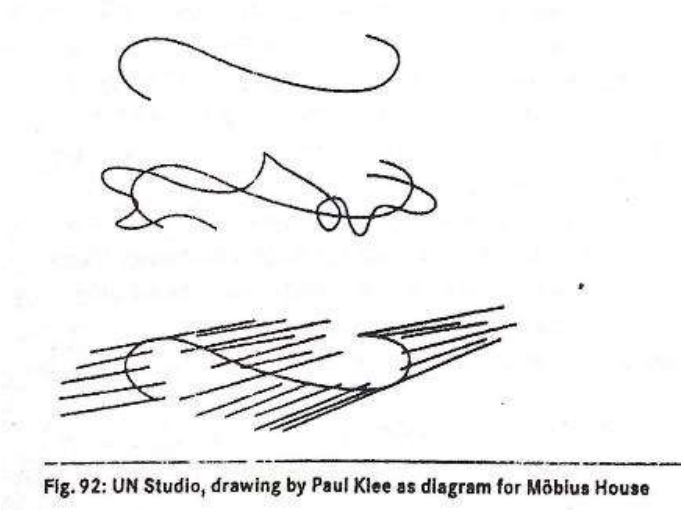
3.1.4. Design Method

3.1.4.1. Narrative

Narrative as a design method in architecture use the comparison between a keyword that could be related with the "modes of relationship" of sign proposed by Charles Sanders Peirce (symbol, index, and icon). The keywords itself is obtained from a narrative that the architect wanted to invest inside their architecture. The construction of the narrative still related to the elements of architecture inside the scenario.

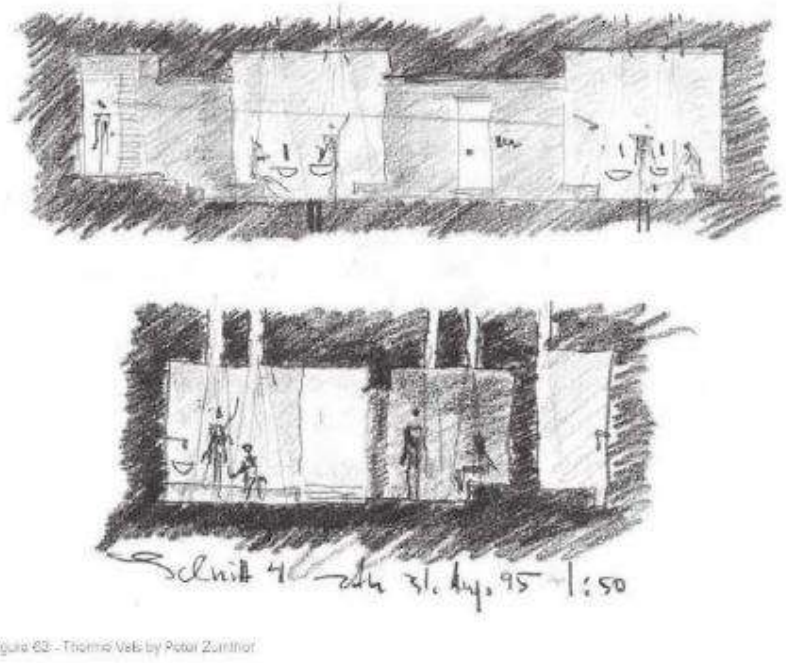
3.1.4.2. Diagrams

The method that will be used for the architectural design framework mainly was a method with generative capabilities. The method that will incorporated into the design framework is the *Diagram* tools. From the book "Basics Design Method" by Kari Jormakka it has been explained by Ben van Berkel and Caroline Bos, The Founder of the UNStudio, that "diagram is an abstract means of thinking about organization, relationships, and possible worlds. It is not representational. It does not represent an existing object or situation, but it is instrumental in the production of new ones".



Graphic 3.2. Generative Diagram Used by Ben van Berkel
Source: Kari Jormaka, Basic Design Method (2008)

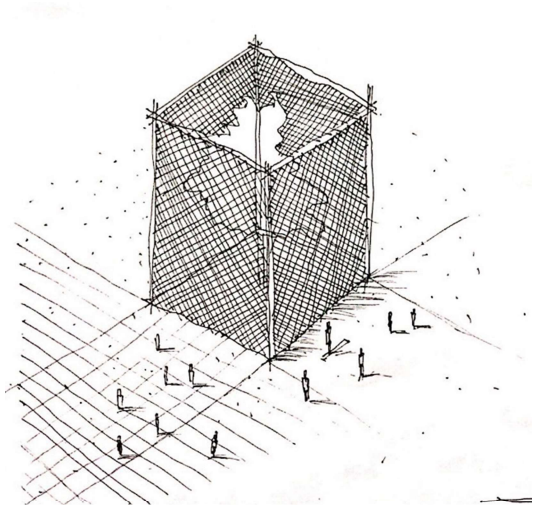
Another comprehensive explanation of diagrams from the book of *Architecture of Diagrams* stated that “diagrams are the 'dot points' compared to the prose of detailed drawings and renders. The description and comparison of diagrams can be aided by the use of secondary descriptors or categories. This taxonomy aims to exhibit a framework of different types of diagrams categorized using descriptors, many of which overlap”.



Graphic 3.3. Another Example of Diagram Used by Peter Zumthor
Source: Kari Jormakka, Basic Design Method (2008)

CHAPTER IV
DESIGN CONCEPT

4.1. Main Design Concept



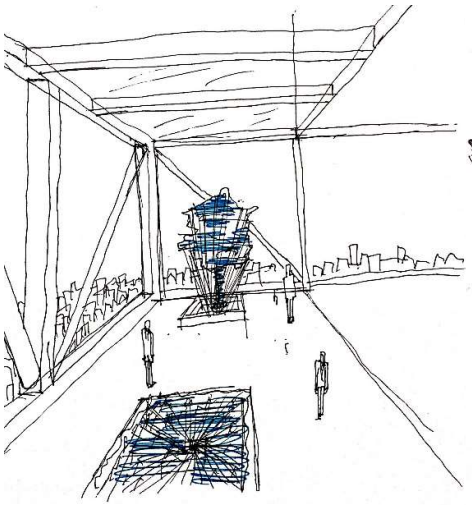
Graphic 4.1. Mission Illustraion

Since the approach of defining the architectural issue was biophilic the issue was related with the biophilic approach and method. But the narrative approach and method was used to response the issue as there is a meaning that the designer would like to incept into the architectural project and design the architecture through the narrative method.

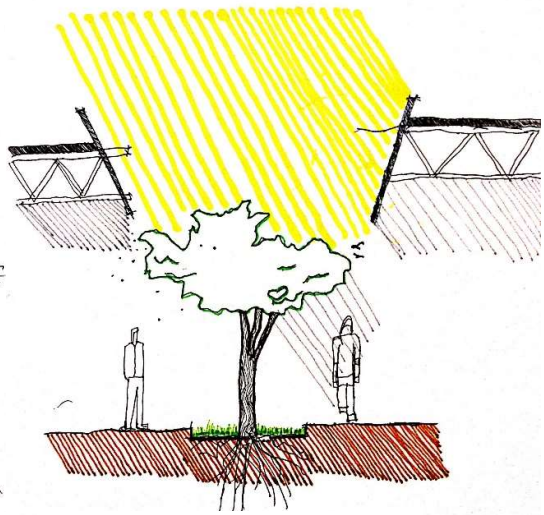
The main mission statement of the project is to create a high-rise architecture that act as a trigger for its user about nature and provides spaces for office activity, mixed-use, and any related activity with the main programs.

The main mission emerged because of the gathered data were related to the special issue. The data suggested that nature elements that lived in downtown area are generally have shorter lifespans compared to their counterparts which lives on the nature. The factors that plays a major role in making their lifespan shorter in downtown area consisted of poor soil and atmospheric conditions, natural disturbances, and direct human actions.

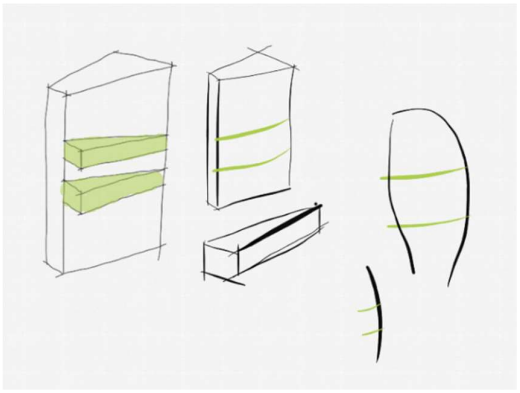
As from the storyboard that was made an idea was formed from different perspective where the less an architecture uses a nature element the more protective it is to the nature as the nature becomes free and possesses more lifespan and life quality than being in the downtown harassed by most of the occupants.



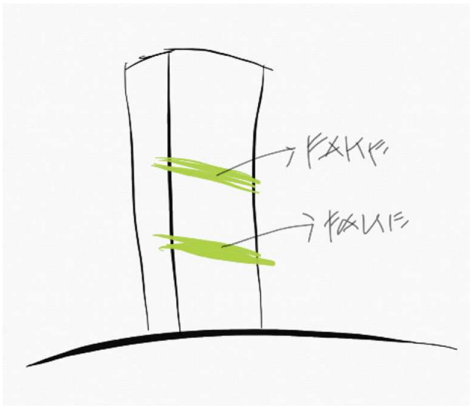
Graphic 4.2. Illustration 1



Graphic 4.3. Illustration 2

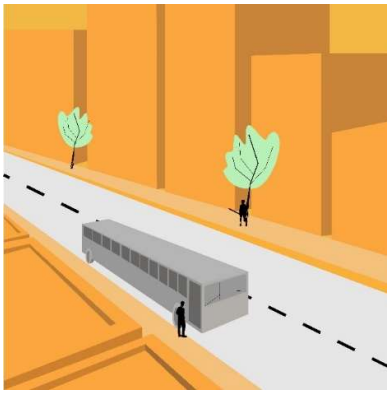


Graphic 4.4. Illustration 3

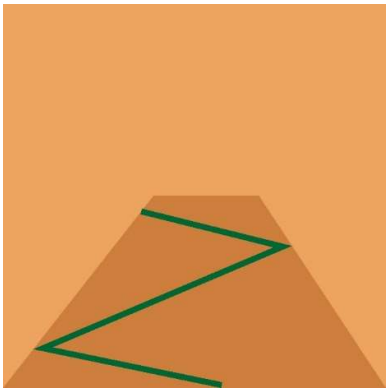


Graphic 4.5. Illustration 4

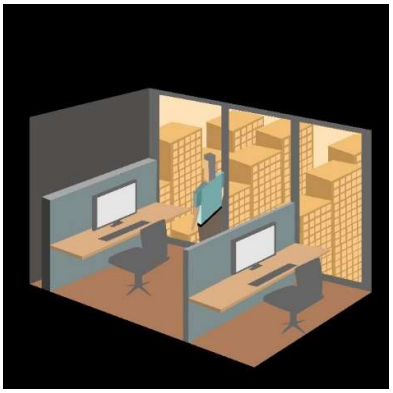
4.2. The Scenario



Graphic 4.6. The First Chapter



Graphic 4.7. The Second Chapter



Graphic 4.8. The Third Chapter

Graphic 4.9. The Last Chapter

1st Chapter

"Monday…. another day to start my daily routine in this city. Usually this morning a chubby kid starts beating his baseball club towards that poor tree across the road. What were his intentions? Why is he so mad? I know as the city grew over time there is no space left for children to play. Not to mention their parents who work for long hours 9 to 5 does not always stand right beside their kids. All the stressful state within the city made them lash out their condensed rage towards another beings and properties. Quite different with my childhood when I still lived in a countryside where we communicate

without any hidden intentions, living side by side with nature where neither one of us harms each other."

"I understand what this kid has been through. Unsupportive environment, little to no space to play, remote time with their parents. Not to mention the nature that lives here also suffered from the city itself. The harmful attitude and constant stress provided by the artificial habitat impacted on their whole average quality. It is like they grew from a healthy young breed to a stressful grown-up in a tight span. That nature on top of that building looks suffered too. I wonder what it feels like to be cast away from its habitat where plentiful of resources and organisms range from microscopic to an enormous level. It's like nature is chained and depressed by its forceful warden."

2nd Chapter

"Every time I walk into this building, it is like the building resonates an aura between calmness and emptiness. The glowing elements of its façade remind me of something from nature but represented with a fake representative. Although it is fake, it does not harm the property it represents. The unusual composition of its form reminds me of something so little in physical properties but the enormous impact from its effects. It is an essence of something derived from out of the realm of artificial. The building emanates an expression towards me like forcing me to go to somewhere stated implicitly by its expressions."

"The inside of the building evokes my memory of nature every time I took steps forward. The smell of the wet soil lingers on my tongue. The taste of fresh air fills my nose. Again, without any presence of natural elements literally. Different from the outside space where the scent of machinery lingers in every corner. Where this powerful scent is coming from? The expression of my co-worker also changed from when they were still on the outside of the building. There is also an element that reminisces a waterfall in my mind. All this kind of experience is like the building forces me to go to nature by myself."

3rd Chapter

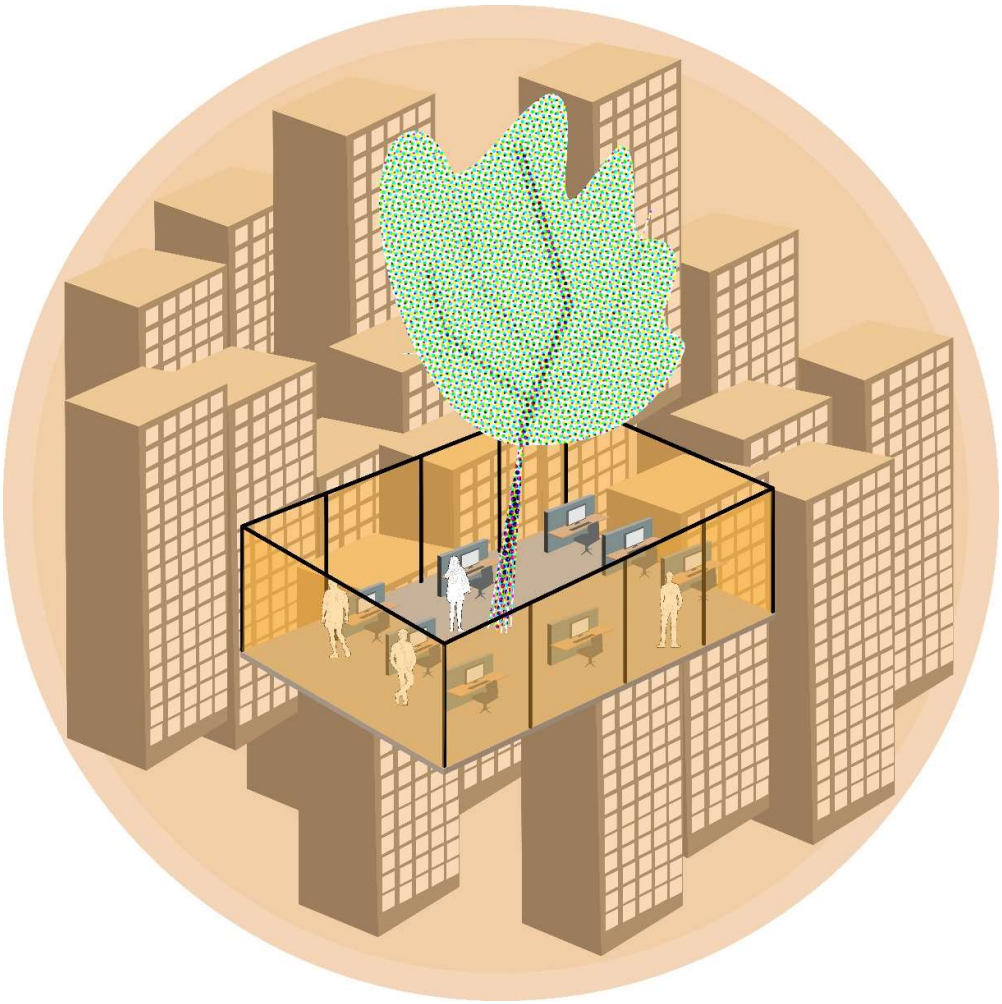
"for decades I've been sitting doing chores in this place. Job's well paid but it looks like something is missing. Suddenly I lost the excitement from the inside of me. The structures outside my workplace like staring at me with their multiple-eyes. What is this thing with their weird colors? What is this

texture and shape that reminds me of something? My whole body experiencing this feeling while I'm at work. Is this some kind of signs? Maybe I need to look for a place that reminisces this kind of experience.

It reminds me when I was a child living near a forest. The wind, smell of the ground and trees…. especially after a rain when the scent of the nearby fields strengthens the presence of the soil into my nose. This kind of experience cannot be felt within the city. I need to look for it outside the domain of humankind. Where the presence of humanity still not dominant."

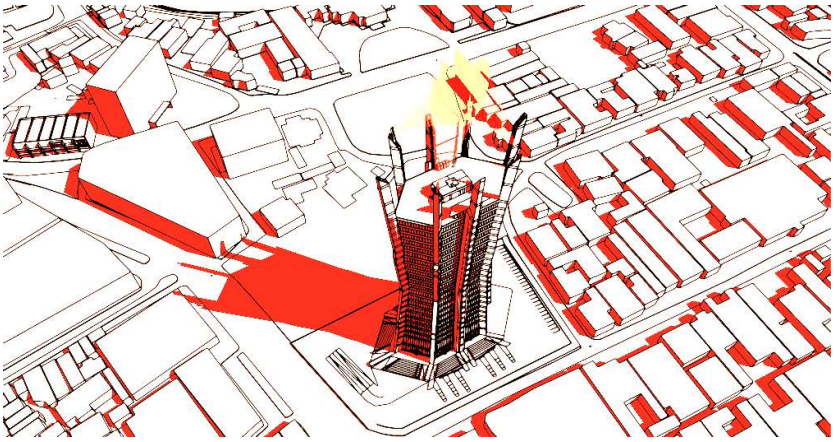
4th Chapter

"If I look back in my past when I was a child life looks friendlier than the current time. Wherever my eyes gazed upon nature it looked very peaceful. The stream behind my parents' house in the morning filled with the orchestra of the surrounding birds dancing circling the ponds. If I am not mistaken I had never had a sore throat when I was at that time. The air so fresh that I barely ran out of the fresh air every day. When I live so close to nature in my childhood I could spend my time gazing and learning from nature directly. Seeing how organisms work in a mutual relationship state is what makes the differences between the current times and the past pre-modern times. We disturb nature to create our own peaceful territory. All the beneficial and mutual relationship of nature are degrading each time nature spends times in our artificial habitat. If these state keeps growing it will eventually disturb the nature more broadly in the future.



Graphic 4.10. “Fake” Nature Illustrated

CHAPTER V
FINAL DESIGN PROPOSITION



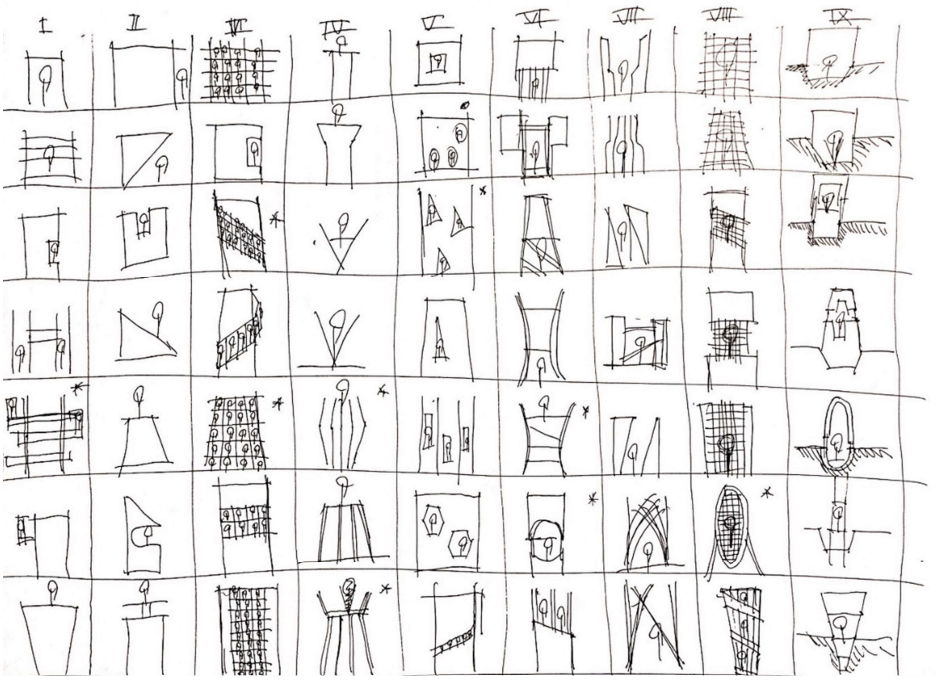
Graphic 5.1. “Fake” Nature Illustrated

5.1. Design Phases

The design phase was started with some general form composition chart that will be shown on the next page. The exercise’s goal was to develop as many outcomes as possible but still adhering to the design missions and goals.

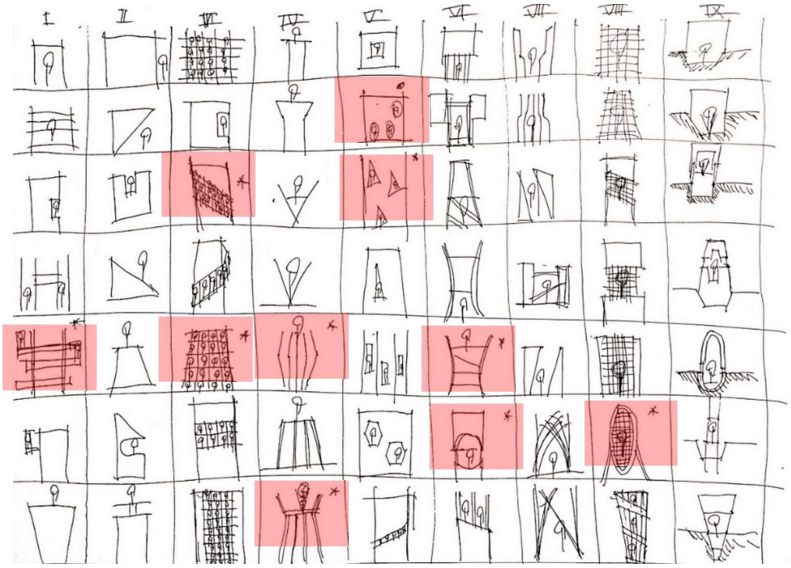
As the design strategy is to preserve nature elements in unorthodox way therefore the chosen option was to incorporate a fake trees that was generated by holographic imaging devices.

The next step for the design phase is to explore as many forms as possible that fit the criteria the most (as seen in the exploration table). This exploration is a way to generate as many combinations between the form of the building and the addition of the holographic imaging device.

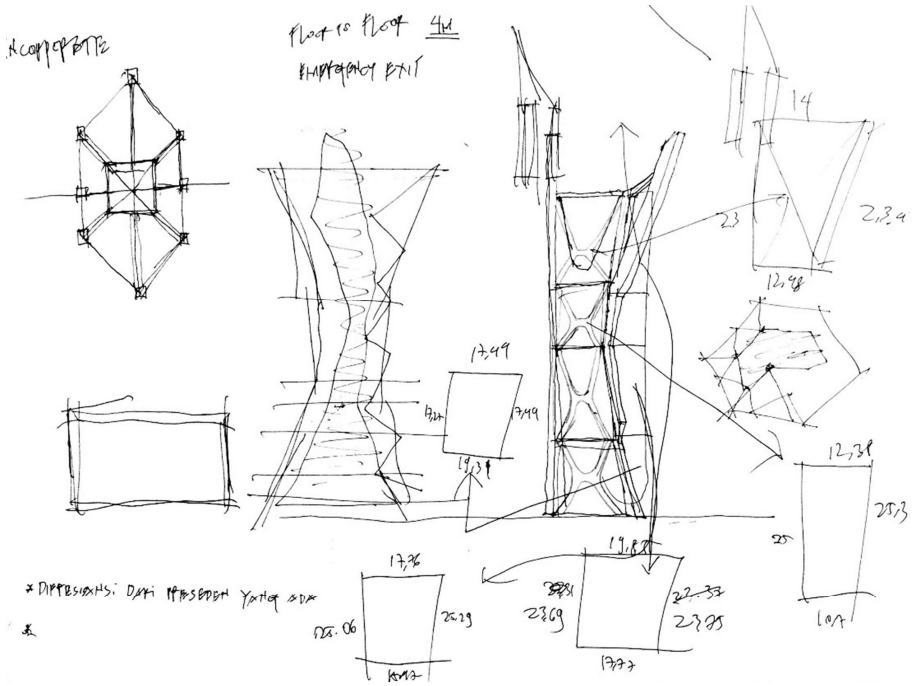


Graphic 5.2. Exploration Table

When exploring all possibilities all that must be kept is the main goals and criteria of the design. Here are all the variations of combination between the form of the building and the placement of the holographic trees.

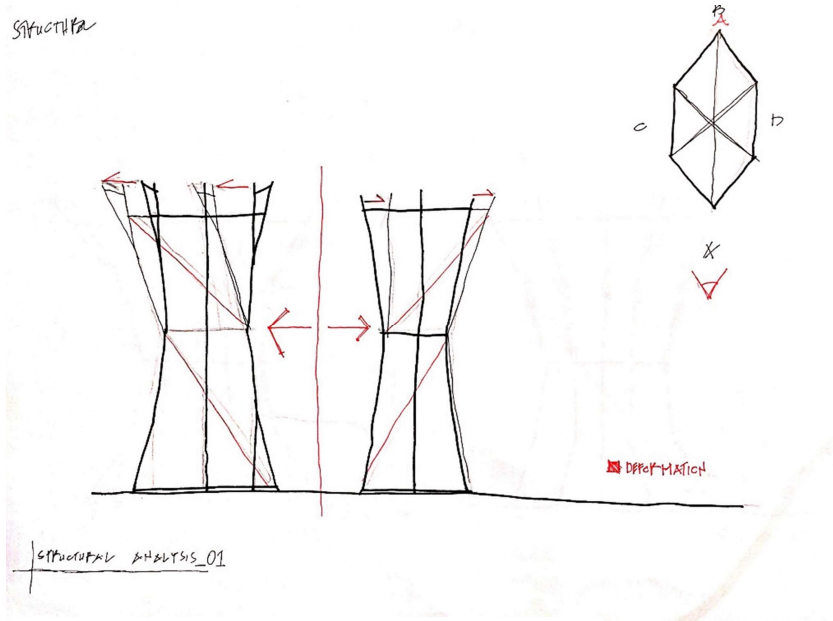


Graphic 5.3. Selection Table

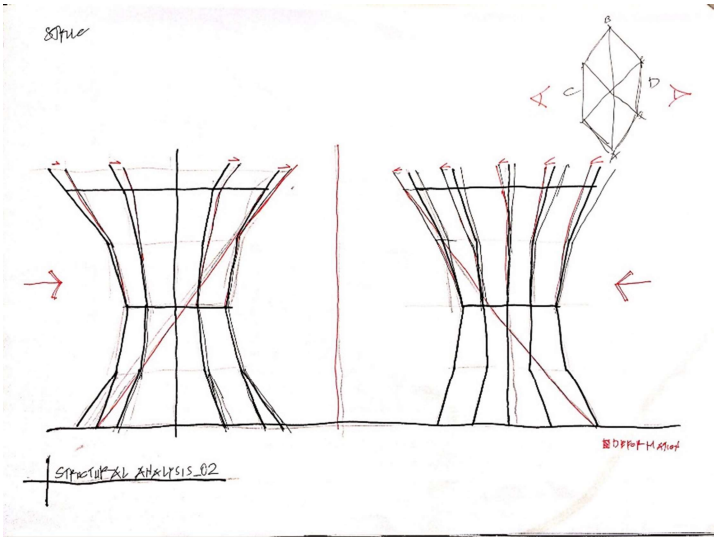


Graphic 5.4. Structure Exploration Sketch

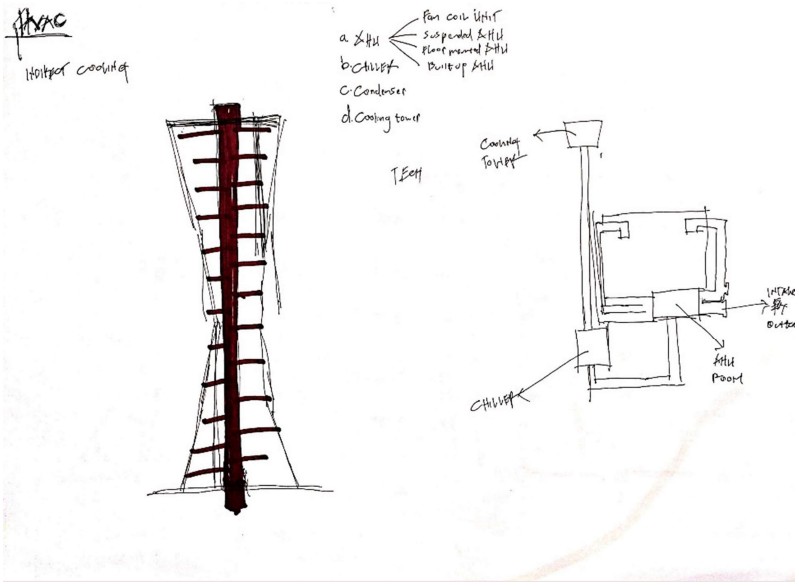
The rest of the graphics shows the progress after the final general composition was selected and continued to be developed to the final product.



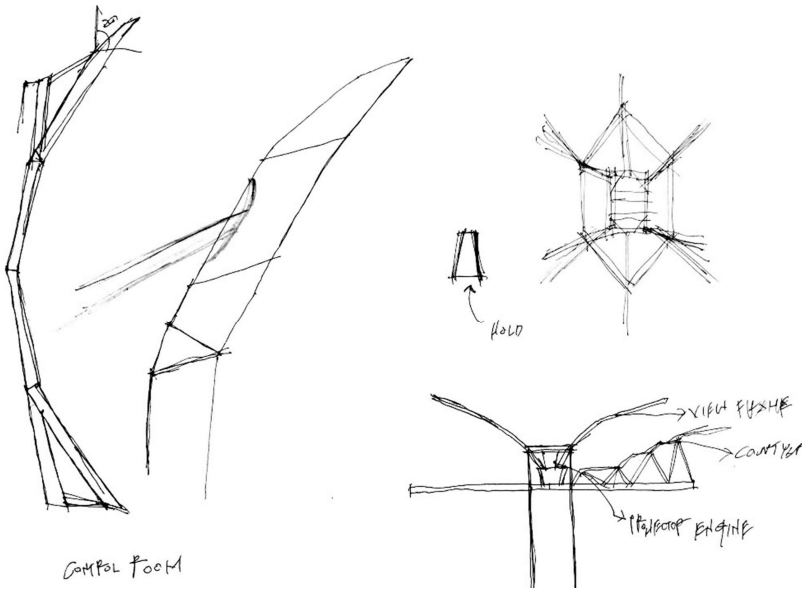
Graphic 5.5. Structure Deformation Test



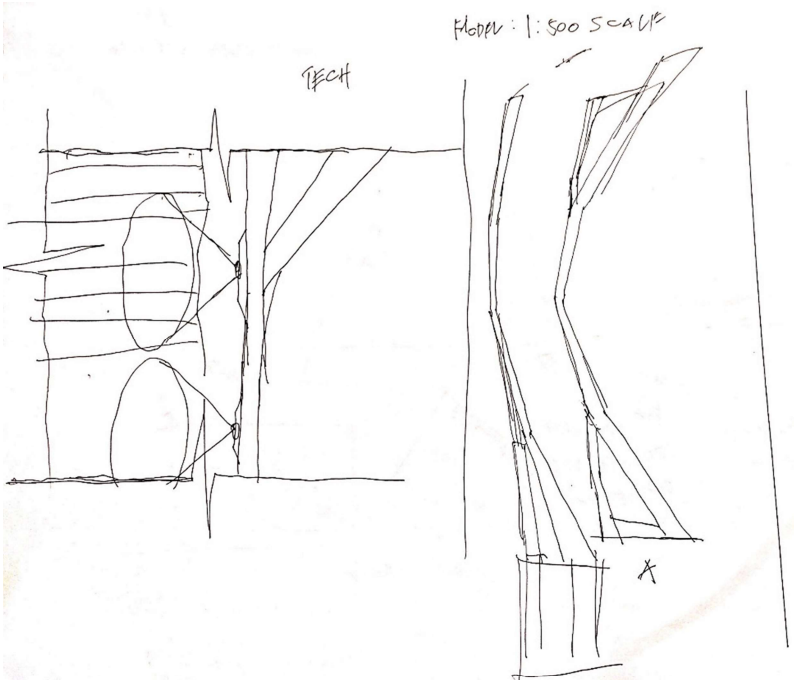
Graphic 5.6. Structure Deformation Test



Graphic 5.7. HVAC Technical Exploration



Graphic 5.8. Detailed Structure Exploration



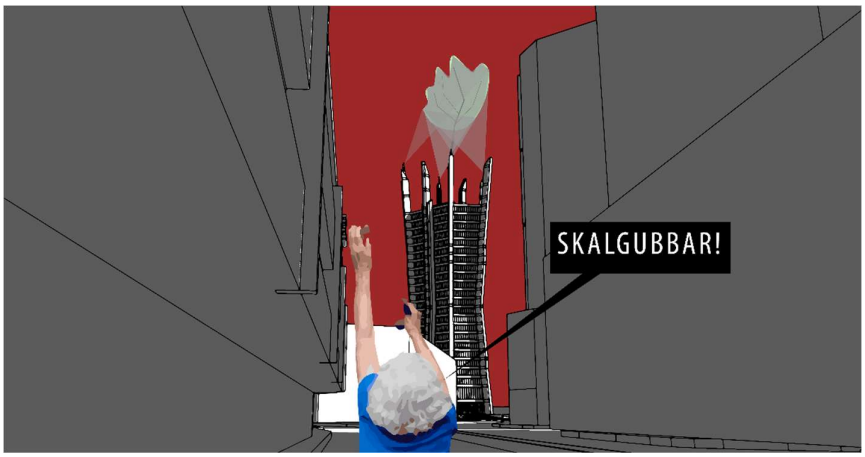
Graphic 5.9. Exo Fin Sketch Development

5.2. End Results

Graphic 5.10. Aerial Illustration with Holographic Trees

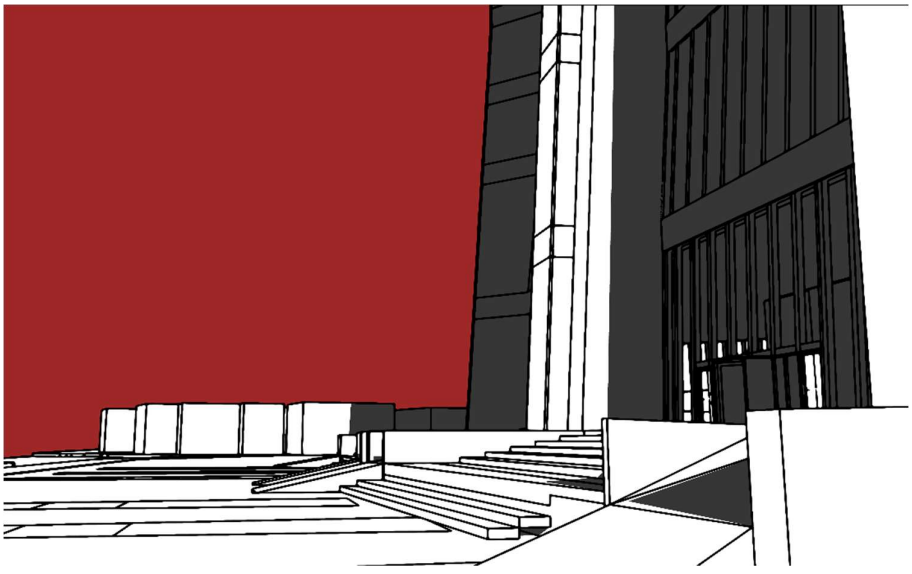
Graphic 5.11. Ground to Top Perspective

Graphic 5.12. Perspective Illustration 1

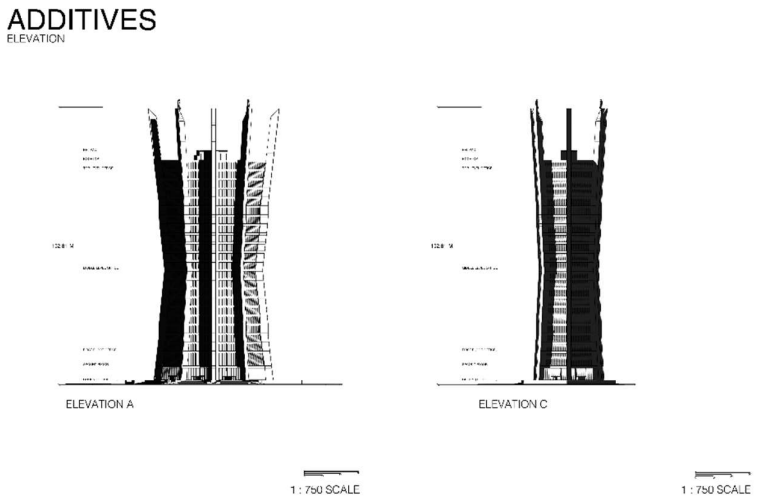


Graphic 5.13. Perspective Illustration 2

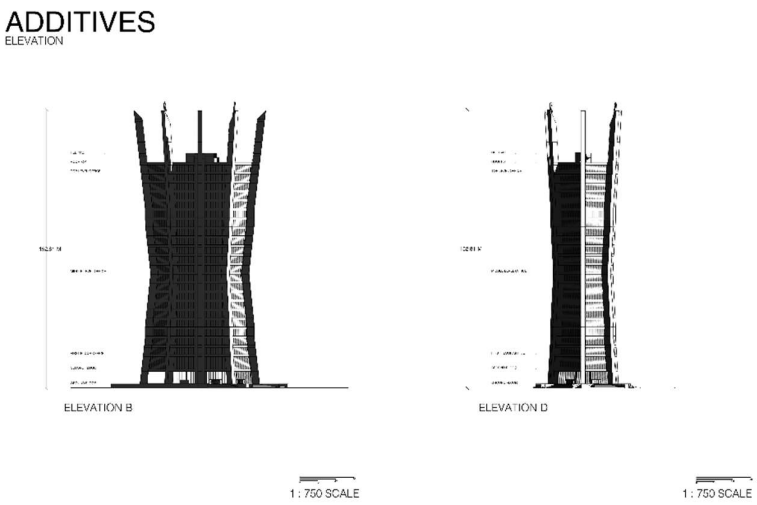
Graphic 5.14. Axonometric Illustration



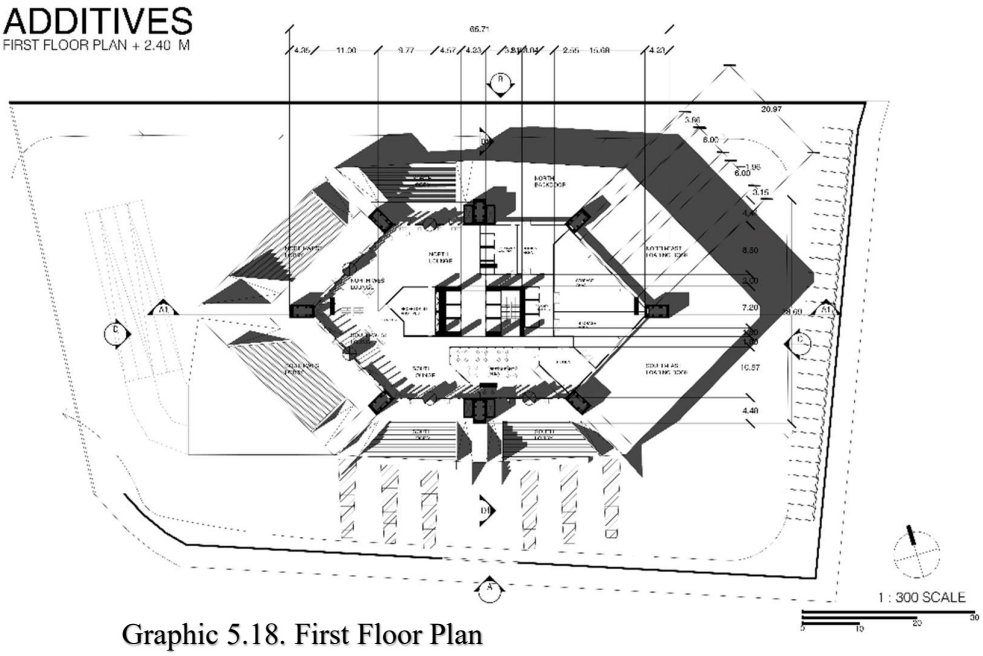
Graphic 5.15. Ground Perspective



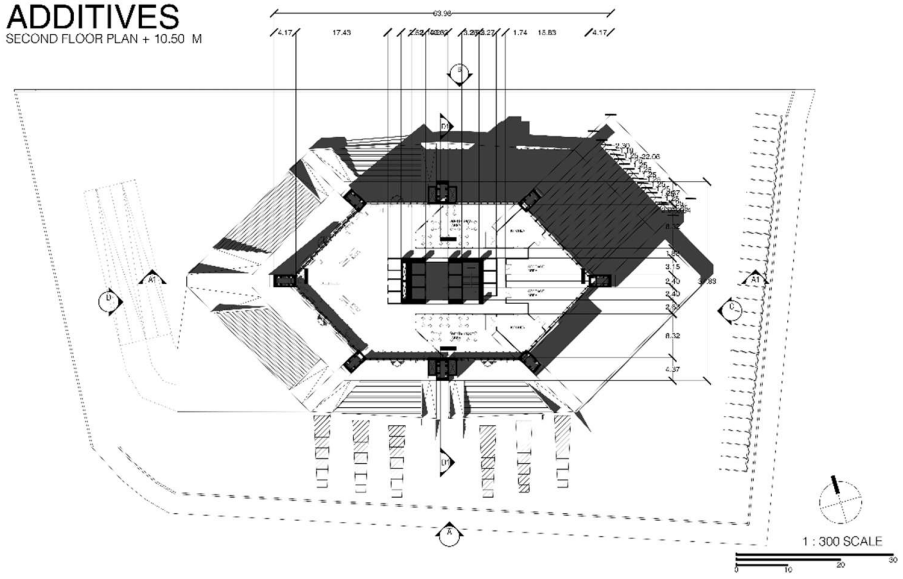
Graphic 5.16. Elevation A&C



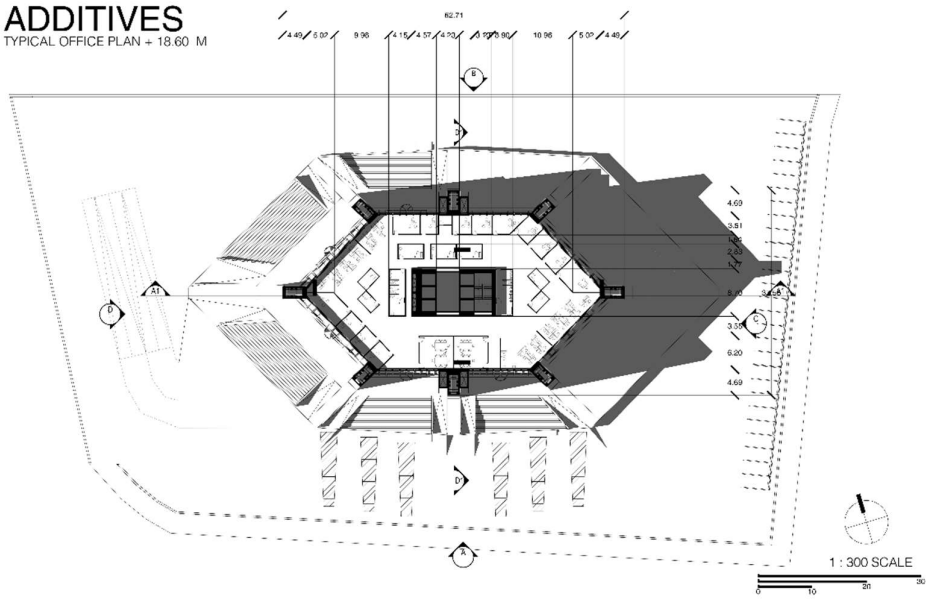
Graphic 5.17. Elevation B&D



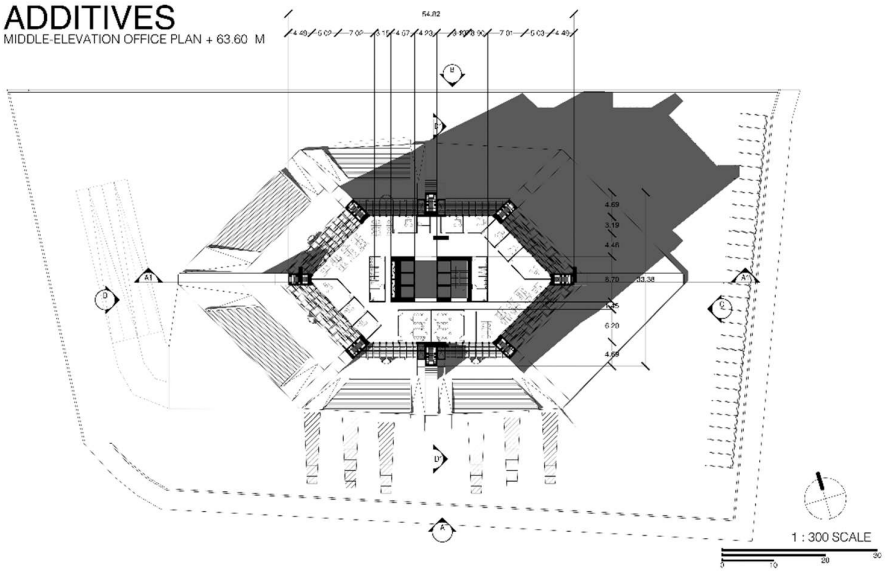
Graphic 5.18. First Floor Plan



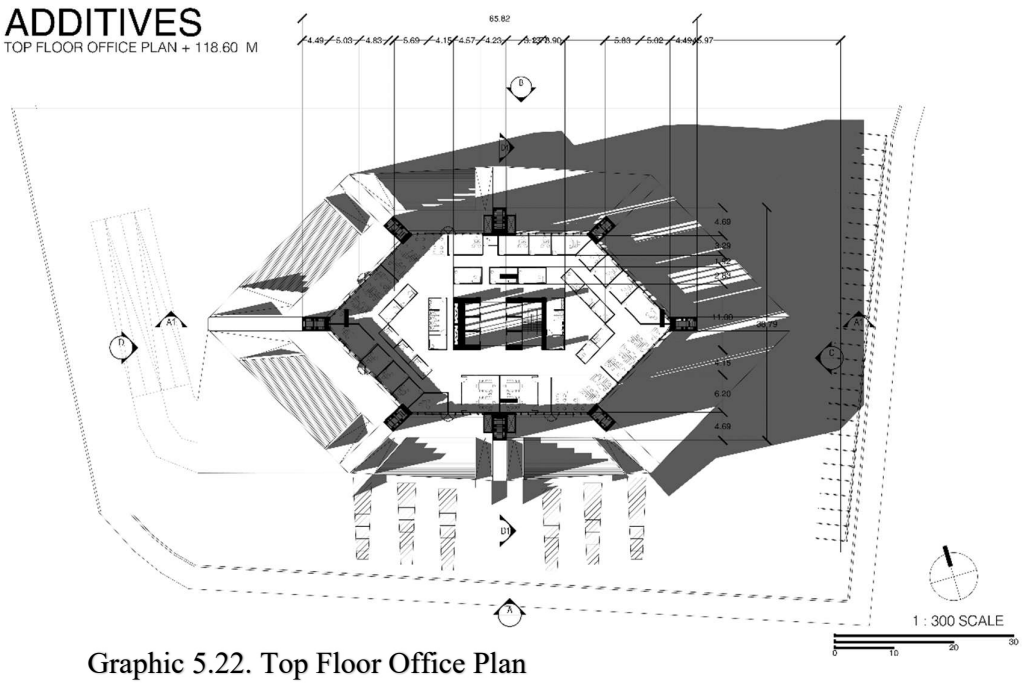
Graphic 5.19. Second Floor Plan



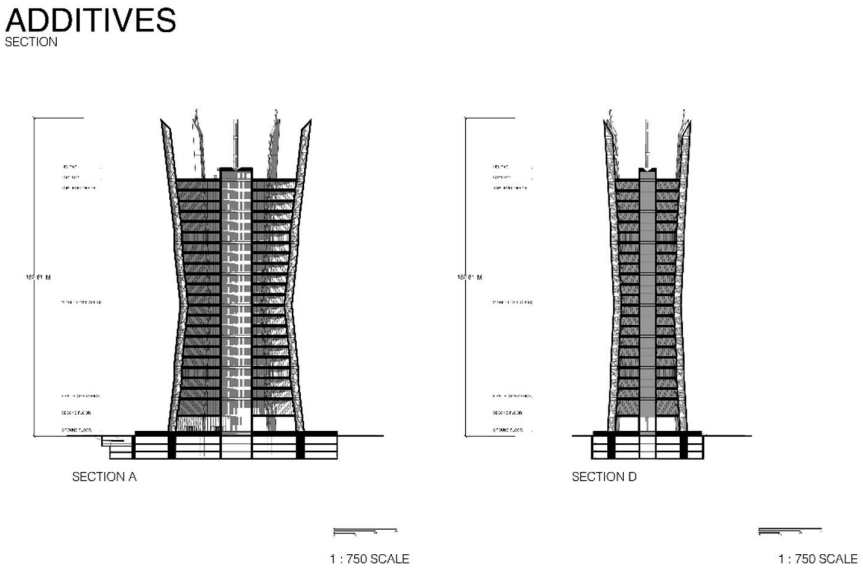
Graphic 5.20. Typical Office Floor Plan



Graphic 5.21. Middle Office Plan

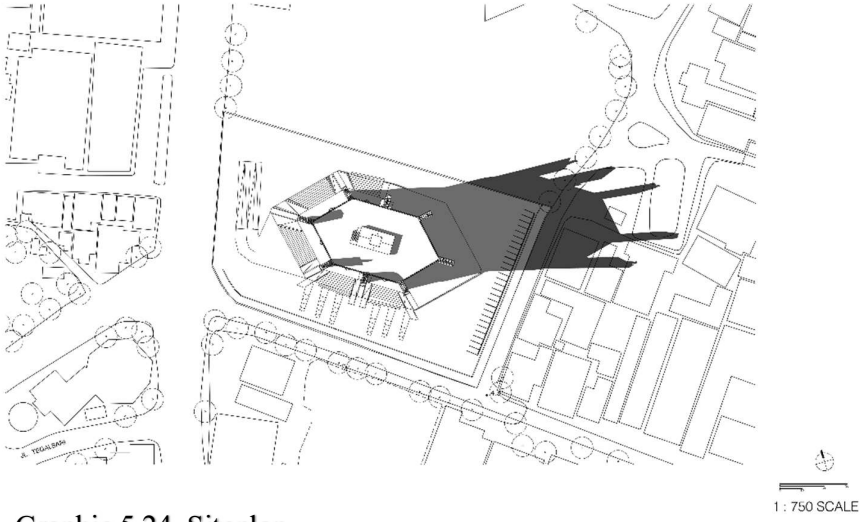


Graphic 5.22. Top Floor Office Plan



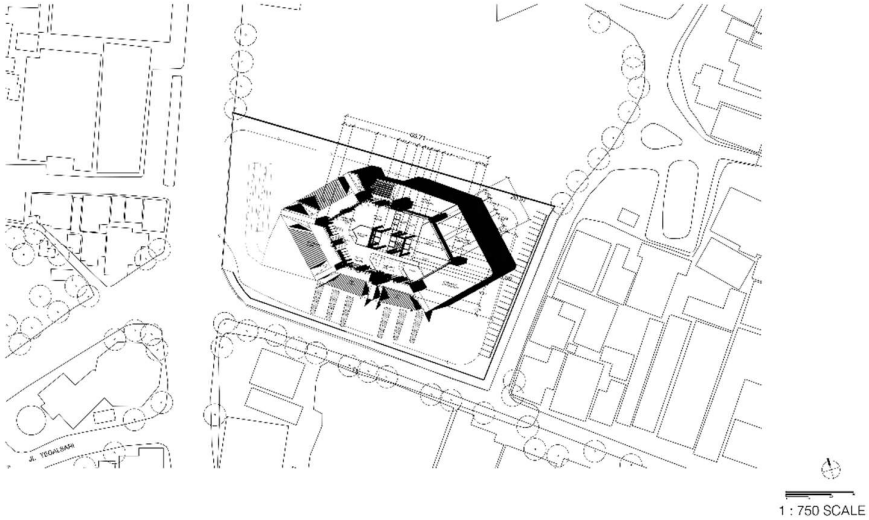
Graphic 5.23. Section

ADDITIVES
SITEPLAN

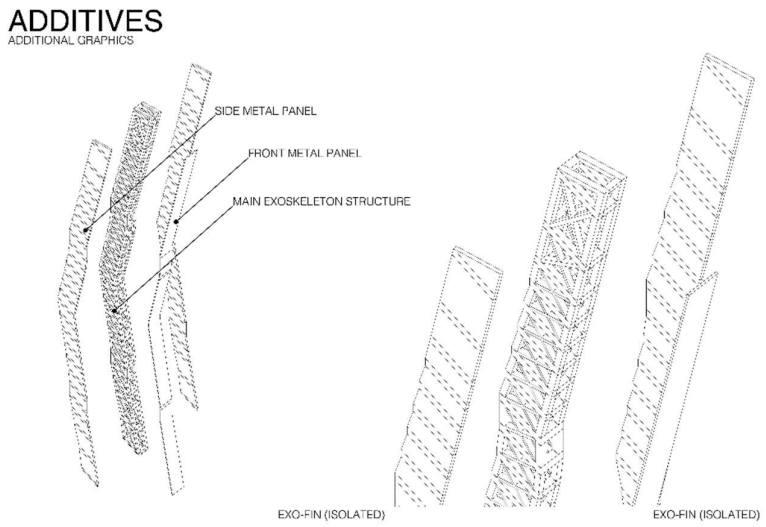


Graphic 5.24. Siteplan

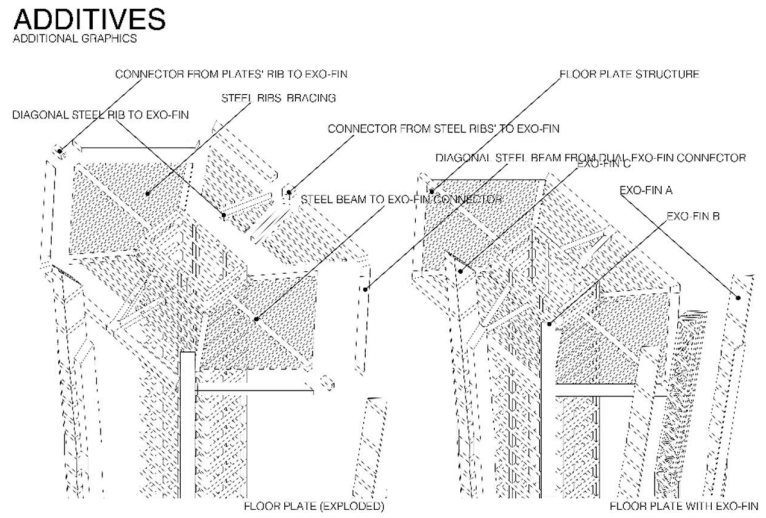
ADDITIVES
LAYOUT



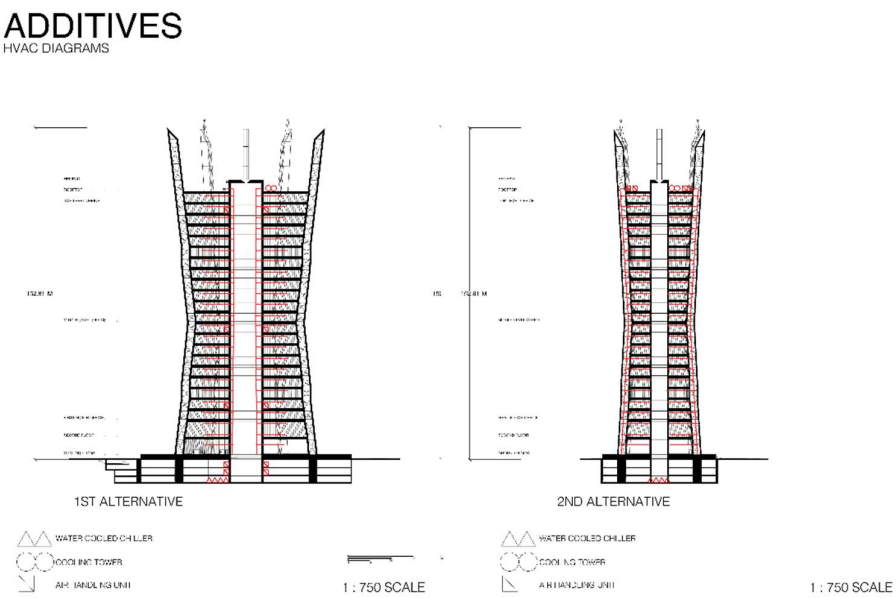
Graphic 5.25. Layout



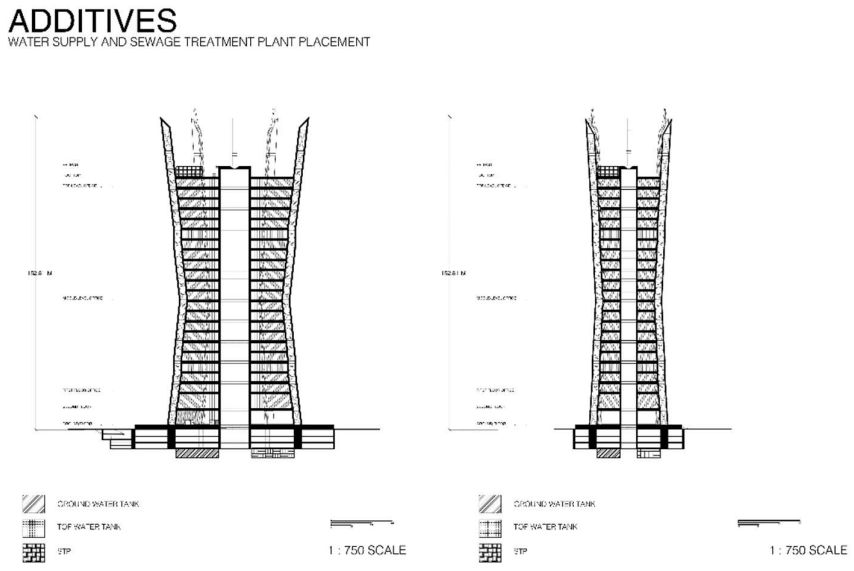
Graphic 5.26. Exo Fin Details



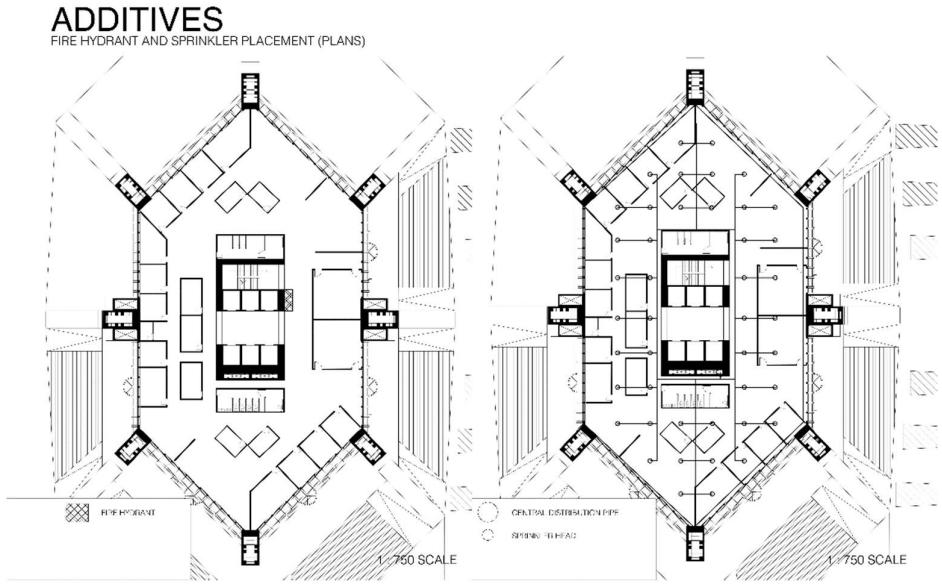
Graphic 5.27. Floor Plates' Details



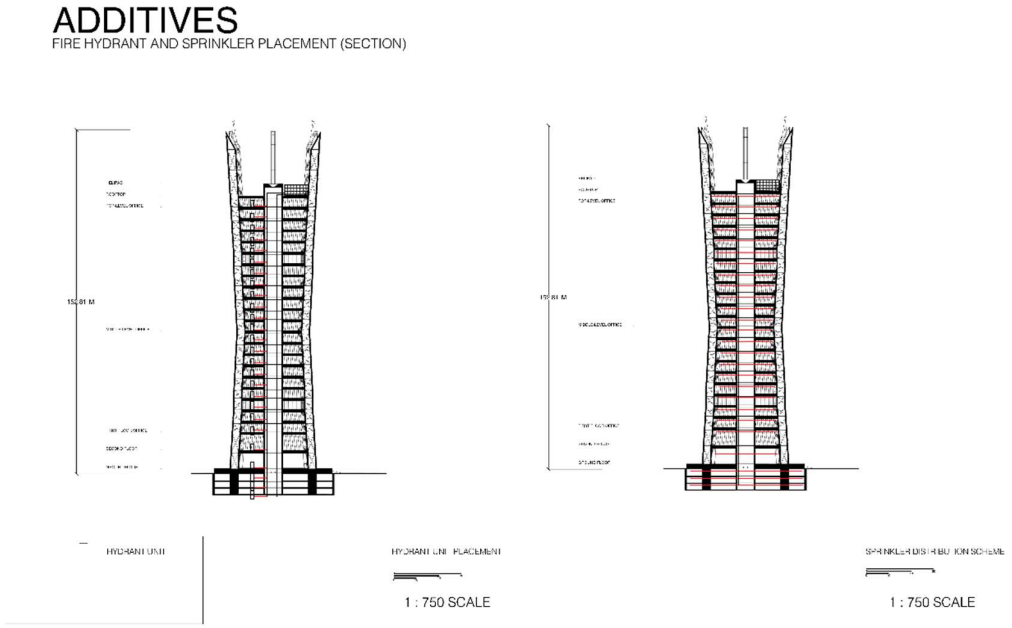
Graphic 5.28. HVAC Diagrams



Graphic 5.29. Water Supply and STP Placement Diagrams



Graphic 5.30. Fire Resisting Elements' Diagrams



Graphic 5.31. Fire Resisting Elements' Diagrams

CHAPTER VI

FINAL SUMMARY

Graphic 6.1. Aerial Perspective with Holographic Trees Included

From the data that were gathered from a couple of scientist and environmentalist, Tim De Chant and Mark Hovenden, the conclusion from both of the data are the nature element that lived in the middle of a dense urban habitat have shorter and weak life quality compared to their counterpart which lived in the friendlier environment and the tree which lived on the unnatural heights of a tall buildings would lessen their strength over time.

The defined hypothesis of the architectural issue here is that the current biophilic architecture could be concluded as a not very loving in term of philia to the nature itself as the data suggested that the nature itself which brought from their real habitat receive harsh environmental treatment from the dense urban habitat.

The main mission statement of the project is to create an architecture that act as a trigger for its user about nature and provides spaces for office activity, mixed-use, and any related activity with the main programs.

The next act that would be needed is how to create an architecture that instead just taking the nature into its environment, but also could act as a barrier for the real nature from any harsh treatment from civilization.

The approach that was used in defining the design problem were several theories within the field of Biophilic Architecture.

From the deep issue exploration, a conclusion came that there is another way to achieve the definition of biophilic architecture without using the current approach and method within the biophilic architecture itself. Instead, Narrative approach was used to create the architectural design to achieve the biophilic terminology in a different way.

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