

An Urban Cemetery for the People:
Rethinking Rituals in Beijing

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Program Authorized to Offer Degree:
Architecture

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Abstract

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This thesis proposes an urban cemetery in Beijing, China. Today Beijing faces many challenges in relation to current funerary practices. With the increasing population of death and rising costs and environmental impact of burials, current cemeteries have been pushed to the margins of the city. These issues have caused public expressions of mourning to be removed from the daily life of city residents. In response this project proposes a new form of urban cemetery that can bring death rituals back to everyday life as well as be environmentally sustainable and socially focused. The proposal offers a new type of death ritual so that the memory of the deceased can engage with the living.

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I

INTRODUCTION

Every culture has their own unique way of mourning the dead that reflects their own beliefs and practices. Death can be a taboo that is associated with regret, sorrow, guilt, and grief. With the growth of cities, old burial grounds have been pushed away from city centers. Current architecture gives little attention to the contemporary methods of mourning. The idea of processing death in an urban place with public expression has become increasingly removed. Traditional ways of disposing of the dead usually consume a large amount of space and is located far from the urban context. The cemetery in the city has played an important role in the past in helping communities to mourn their ancestors in a respectful way that is strongly connected to the past.

With the rapid growth of Beijing, old burial grounds have been pushed to the margins of the urban center. The demand for space, environmental issue and lack of maintenance has caused public expressions of mourning to be removed from the daily life of urban dwellers.

This thesis argues for a new form of urban cemetery that can be both environmentally sustainable

and socially focused. The proposed design project seeks to be a site that is more than a place for the dead to be laid to rest but rather to be a place for the living that represents the culture of the people. The vertical cemetery for Beijing, China will express the narration of public memory in a more sustainable way.

II

LITERATURE REVIEW

THE IMPERIAL WAY OF DEATH

“Imperial death ritual confirmed the preeminent and unique position of the emperor in the Chinese world view; at the same time it permitted the ruler to serve as a role model reinforcing the basic familial values that underlay the Ming and Ch’ing state.”¹ During the late Imperial era, marriage and death rituals were the cultural binder that united the complex society. Commoners replicated elements of imperial death rituals in many parts of China. The sequence of the death rituals from the moment of death to the interment of the coffin in a grave was a recognizable variant and also a simplified process of the commoner ritual sequence. The death of the emperor was announced and dispatched to the officials in Beijing and other provinces. After the notification of death, issuance of the mourning regulations quickly followed. Sacrificial offerings of fruit and food were supplied; ceremonies and mourning took place in the city.

THE RITES OF CHINESE FUNERAL - RITUAL SEQUENCE

The standardization of rituals that was inherited from the Imperial ceremonies also plays a central role in maintaining unity. Chinese people participate in the process of creating community by following and accepting certain ritual routines. Weddings and funerals are among the most important events of a person's life with specific rules for the participants to follow in order to perform these rites. Anthropologists have long debated the meaning and definition of ritual throughout history. According to James L. Watson, ritual is about transformation. He argues that "in particular it relates to the transformation of one being or state into another, changed being or state."² This transformation aspect sets ritual apart from other social actions. Accordingly, rituals are repeated because they are expected to have transformative powers.³ At a Chinese funeral, rituals are routinized and conventionalized, closely associated with performance and audience. In the book, *Death Ritual in Late Imperial and Modern China*, Watson describes the main steps of the funeral rituals which will be elaborated in chapter 3. The rituals for commoner in Beijing are similar to the royal emperor's, but the operation is simplified and reduced. Generally, the process of death ritual is categorized into three phases: notification, settling and commemoration.



Fig. 1 Qingming Festival

Fig. 2 Zhongyuan Festival

QINGMING FESTIVAL —TOMB-SWEEPING DAY & ZHONGYUAN FESTIVAL — GHOST FESTIVAL

The Qingming Festival is one of the 24 seasonal division days in China, falling between April 4-6 each year. This festival is a celebration filled with both sadness and happiness. All cemeteries in Beijing are crowded with people who came to sweep tombs and offer sacrifices. After slightly sweeping the tombs, people offer food, flowers, and favorites of the dead, then burn incense and paper money and bow in front of the tombstone. The festival also involves spring activities like flying kites, planting trees, making and eating a special sweet green rice ball. (Fig.1)

Every year the 15th lunar day of July is the Zhongyuan Festival. At night, incense is burnt in front of the door of each household. (Fig. 2) The more incense, the better, for the amount of incense stands for the degree of prosperity. In some places, people float water lanterns. Such lanterns are made by setting a lotus flower-shaped lantern on a piece of board. According to the Chinese tradition, the lanterns are used to direct the ghosts. Ghosts find their way back when the lanterns are out. But now in the cities, people usually burn paper money at crosswalk since it is difficult to find a place for water lanterns and the government does not allow it. ⁴



Fig. 3 Babaoshan Revolutionary Cemetery



Fig.4 Babaoshan People's Cemetery

BURIAL IN BEIJING—GRAVEYARD CRISIS

The rising price of graveyard land in Beijing is surpassing the cost of local housing and makes the cost of burial a huge liability for the families of the dead. In certain areas, the price of graveyard has doubled or even tripled in recent years. According to the *South China Morning Post*, this inflation is caused by the outdated regulations on the funeral industry. Some scholars have called for the rules to be “relaxed” to allow private investment. The government has discussed reforming the regulations on funeral and interment control since 2005, but has made no progress so far.

The growth of the graveyard space can not keep up the pace of the growth of populations in Beijing. The imbalance in supply and demand has accelerated the increasing price of urban burials, turning them into an “expensive privilege”.⁵ According to a report of annual funeral development of China, Beijing citizens spent an average 70,000 yuan (\$11,046) on burial services in 2014. (Beijing residents’ average annual income that year was 78,000 yuan.) The cost per square meter of the land in a graveyard is even more expensive than an apartment in the city. Traditional Chinese belief says that the soul only rest in peace if their body are covered by soil. To demonstrate this filial piety, many Chinese invest heavily in their parents’ tombs. “In 2013, the Babaoshan Revolutionary Cemetery in Beijing Shijingshan District, home to Chinese Communist Party luminaries, installed a 620-meter-long corridor, large enough for 10,020 additional cremation niches, to create room for future interments. The cemetery is also digging new plots. The same cannot be said of the adjacent Babaoshan People’s Cemetery, a resting site for non-Party members, which ran out of space in 2012 and stopped selling new graves.”⁶ (Fig. 3, 4)

The limited space and the increasing cost constraints have pushed many Beijing residents to look outside the city. The cost of a plot less than one square meter is 68,000 yuan (\$10,000) at Badaling



Fig. 5 Cremation technicians put a coffin into a cremator.



Fig. 6 A technician practices cremation skills.

People's Cemetery. The site is near a popular Great Wall site meaning an hour and a half hour drive. Many cemeteries in Hebei Province, which surrounds Beijing, have positioned themselves for the citizens of Beijing.

EXISTING BURIAL METHOD—CREMATION

In 1956, Mao announced his “proposal for cremation after death” and ever since, cremation have been basically the first choice for most families when their beloved passed away. According to the National Bureau of Statistics, 9.6 million people died in mainland China during 2011. Considering that the average cremation rate was 50% during 2000 to 2009, about 5 million people were cremated in 2011. (Fig. 5, 6) As China enters the aging society, more people die, and more and more CO₂ will be discharged into the air. ⁷ In 2015, nearly 5.65 million corpses were cremated in 2015, which is 890,000 more than the number in 2011, discharging an additional 143,066 tons of CO₂. Apart from CO₂, the cremation process also emits other pollutants into the atmosphere, such as “sulfur dioxide, nitrogen oxides, monoxide, hydrocarbons, hydrogen sulfide, ammonia, hydrogen chloride, hydrogen fluoride, mercury, and persistent organic pollutants.” ⁸ “The original idea of promoting cremation by the government in 1950s was to save farmland from former burials under the ground.” However, although comparatively less, cremation still uses a huge amount of land.” ⁹ The land has typically been used for crematoria, funeral parlours and cemeteries for placing the cremated ashes.



Fig. 7 Natural Burial Process

NATURAL BURIALS

This thesis proposes the design of a cemetery that makes use of a variant of the natural burial, that combines land use, conventional Chinese rituals, and a progressive program to green the city. “Today’s natural burial campaign attempts to present a more palatable version of cremation.”¹⁰ When people rest in peace, the traditional urn and coffin continue to litter the earth. These materials can not break down and thus cause the plot of land to be unusable for other functions. Reducing cremation of the dead can bring a significant amount of energy savings and pollution reduction. Therefore this thesis argues that natural burials should be promoted. In the attempt to make cemeteries, funerals and burials more sustainable, designers have come up with ideas over the last decades, including one in which the deceased is turned into a tree. The corpse is buried in a simple and biodegradable bag or container under a small tree. (Fig. 7) These methods of sustainable burial will be discussed in more detail in Chap. 4.

CASE STUDIES

a. Tokyo Vertical Cemetery Competition

This project called Inner Landscape is a winner of the Tokyo Vertical Competition in 2016. (Fig.8) Inner Landscape is described by the architect as a “boundary between the frantic rhythm of the city and the timeless interior space”.¹¹ The vertical path is also the hybrid interpretation of the multi-storied pagoda and Japanese shrine. It symbolizes the Buddhist tripartition into three lands: a land of roots, a land of the middle and a plain of high heaven. Inner Landscape symbolizes both death and life: a cryptic place to feel close with the lived and the departed and a spiritual route between “artificial” pieces of Japanese landscape that reflects Shinto’s reverence for natural artifacts.”¹²

This design proposal explores a new way of dealing with the spatial constraints in Japan while expressing a unique approach to life and death. By having the interior path gradually move closer to the top of the tower, the experience resonates with the temporality of life.¹³ Unlike the traditional depressing silence in traditional cemetery design, Inner Landscape is a new space of tranquility created by a tower with a linear path. This design is an excellent example of proposing a new vertical cemetery in the future to memorialize the deceased.



Fig. 9 Berlin Holocaust Memorial
Fig. 10 Berlin Holocaust Memorial

b. Berlin Memorial to the Murdered Jews of Europe

This project resembles a vast field of nameless tombstones that symbolically captures the horror of the Nazi death camp. (Fig. 9, 10) It is constructed of 2711 massive blocks arranged on a 204,440 sq ft site. The architect Peter Eisenman creates a powerful memory for the public with the undulating stone. Arranged in a grid system, some blocks are higher than other. The height varies from around one foot to fifteen feet. People easily lose their sense of orientation when walking deep inside. The project is a cold, hard, extremely unnatural environment reminding and narrating the history to the visitors.

CONCLUSION

Chinese society has a very unique tradition of death rituals that should be reflected in the architecture. However, current funerary practices in major cities like Beijing are environmentally harmful, in the way that they consume the land and pollute the soil. With the development of the city, cemeteries have been pushed to the city margins, causing public expressions of mourning to be removed from the daily life.

This thesis proposes a new form of urban cemetery that can be both environmentally sustainable and socially focused. The design tries to provide an alternative solution for bringing death back to the city and daily life. The architecture also indicates a new ritual that the memory of the deceased can be engaged with the living.

III

METHODOLOGY AND SITE ANALYSIS

LOCATIONS OF CURRENT PUBLIC CEMETERIES

The map of current graveyard locations in Beijing clearly shows the problem of how they have been pushed out of the city center. (Fig. 11) With the rapid growth of city development and expansion, cemeteries have to relocate in the suburban area. The demand for space, environmental issues and lack of maintenance has caused public expressions of mourning to be removed from the daily life of urban dwellers. Therefore, in order to bring the rituals back to the city, a site located in the city is necessary.

SITE ANALYSIS

Tiananmen Square is the most famous city plaza in Beijing. (Fig. 12) It has been both a tourist attraction and the site of a number of political events and protests. (Fig. 13) Bringing a cemetery to this site is a solution to the high demand for burial land and a gesture to memorize the deceased of

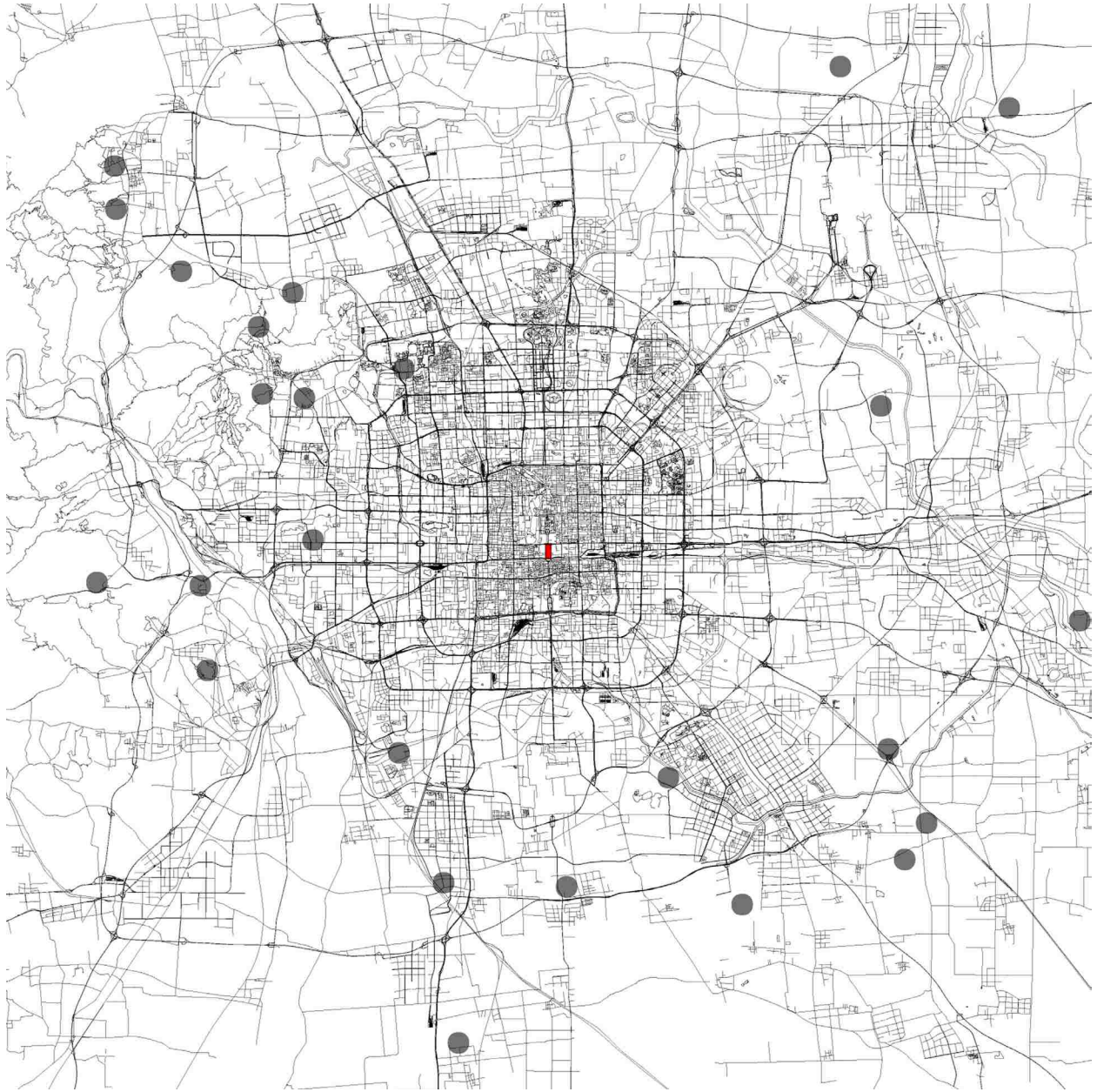


Fig. 11 Existing Cemeteries Location



Fig. 12 Site Location

Fig. 13 Site Location



Fig. 14 Site Location

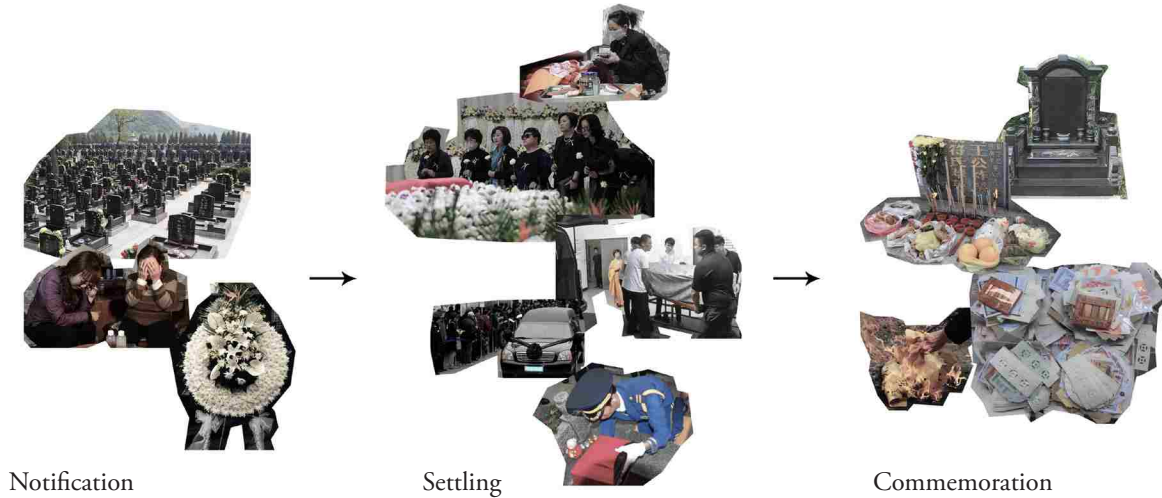
the political protests. It can activate the memory of dead for the living. This burial does not require cremation and management of the tombs, and can greatly reduce the human and costs of death. Thereby the proposed project can lead to further energy saving and emission reduction. The site is aligned with the city axis so it is located in front of the Monument to the People's Hero and Mao Mausoleum. (Fig.14)

PROGRAM

The program of the design is to create a vertical path that represents the death rituals in Chinese society. Using the sustainable eco-burial as a model, this project provides another way to memorize the deceased. People experience and perform the rituals along as they move along the vertical path. From the bottom to the top, the path tells the story of Chinese society's rituals. As introduced in chapter 2, the process of death ritual is categorized into three phases: notification, settling and commemoration. James Watson also elaborates the main steps of the funeral rituals as the following nine stages:

- (1) Public notification of death by wailing and other expressions of grief.
- (2) Donning of white clothing, shoes, hoods and flowers by mourners.
- (3) Ritualized bathing of the corpse.
- (4) The transfer of food, money, and goods from the living to the dead.
- (5) The preparation and installation of a soul tablet for the dead.
- (6) The ritualized use of money and the employment of professionals.
- (7) Music to accompany the corpse and settle the spirit.
- (8) Sealing the corpse in an airtight coffin.
- (9) Expulsion of the coffin from the community.¹⁴

The first three steps are the traditional way of notification. Nowadays, the notification is more towards to the family members instead of the public. White flowers have replaced the rigorous donning of white clothing, shoes and hoods. The next three steps are for family members and friends to offer and commemorate, especially during the Qingming and Zhongyuan festival. The last three steps are the process of settling the deceased in peace. (Fig. 15)



Even though these nine acts are the typical features of Chinese funerary ritual, there are many variations that relate to local traditions performance. No standardized guidelines that apply to all of China regarding burials and cremations are known to exist. For instance, the third action of bathing the corpse and the eighth one sealing the coffin, are performed differently in almost every community.

The ground floor will be the public entry space for friends and family members and a secondary entrance is for the deceased. The following spaces will be the lobby, reception, flower counter and event space where the notification process takes place. The route going up to the tower will be the settling process. The top of the tower is designed for commemorative process as in the gathering space and prayer room.

In this new design, the burial of the dead no longer needs the traditional large amount of land. After performing these rituals, family members can take the container and the tree away and plant it where

Fig. 15 Rituals Sequence

they can remember the deceased every day. They can also choose to leave the biodegradable container in the site where they can visit every year during Qingming and Zhongyuan festival.

In general, the design proposes an alternative method for the death practice in China. The idea is to separate the burial process and the ritual practice. With natural burial outside of the urban cemetery and ritual practice inside the cemetery, this thesis offers a public space that can be one of the solutions to the burial crisis in Beijing, and a catalyst to activate the memory of the dead for the living.

IV

DESIGN RESPONSE

PROGRAM DEVELOPMENT

This thesis proposes the design of an urban cemetery that responds to the social aspects and sustainable issues of death. To meet the requirement of the death rituals practice, several program spaces are needed.

After a person dies in the hospital or at home, the family members of the deceased will get an official death confirmation notice from either the hospital or local community office. They can then go to the local police station and cancel the citizenship of the deceased, also get an approval for a funeral and interment. The next step is go to a funeral home and pick a date for the funeral, so the employee of the funeral home can pick up the body from either hospital or home. The body will be transported to the morgue of funeral home. After the family sends out the notifications to all the friends, relatives and colleagues, they usually start the preparation of the funeral, which includes buying clothes, an urn, flowers and decorations for the memorial room. Before the funeral, the funeral home will

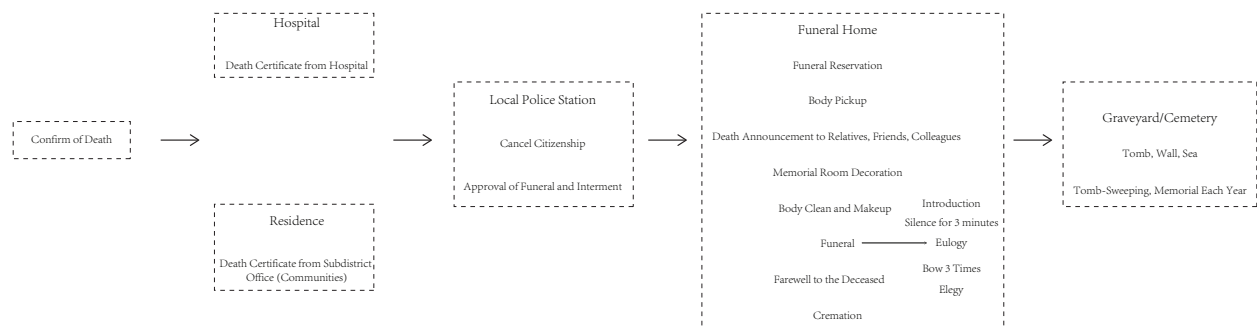


Fig. 16 Rituals Process Diagram

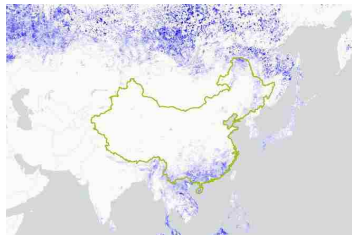
clean the body and put on makeup to get it ready. On the actual funeral day, the ceremony usually will take up about several hours. Beginning with a brief introduction and followed by a 3-minute of silence, the family and friends will give their own speeches to memorize the deceased. After everyone bows 3 times to the body as a farewell to the deceased, the body goes to the cremation room for cremation. About one hour later after the cremation process is done, the family can collect the ashes and take it to a graveyard or cemetery they have chosen. The ashes will be settled in a tomb or a cube space on a shelf and rest in peace. On certain festivals the family can come to the graveyard and visit their loved ones. (Fig. 16)

As mentioned earlier, these process can be categorized into three parts: notification, settlement and commemoration.



TOTAL AREA
938,225,139 ha

TREE COVER (2000)with >30%
canopy density
162,748,596 ha



GAIN 2001-2017
5,532,822 Acres / 2,239,054 ha



LOSS 2001-2017with >30% can-
opy density
21,868,680 Acres / 8,849,941 ha

Fig. 17 Tree Cover in China

THE EXPERIENCE

According to the data from Global Forest Watch, 337 million hectares (mha) of global tree cover disappeared from 2001 to 2017. As shown in the maps, the total area of China is 938mha and the total tree cover with canopy density more than 30% is 163mha since 2000. China gained 2.24mha and lost 8.85mha of tree cover which is equal to a 5.4% decrease from 2000 to present. Even though the government started an tree-planting campaign in 1987, China is still losing the overall tree coverage. (Fig. 17) So engaging the tree-planting activity with the funeral rituals has the potential benefit the environment in the future.

The project is inspired by Katrina Spade's Urban Death Project.¹⁵ Spade started the experiment about death around seven years ago in collaboration with architects, engineers, soil biologists, funeral-law specialists and forensic anthropologist. She formed a nonprofit organization to develop a new burial which is environmentally sustainable. She began with the question of what if human body could just become compost? According to the project team, a 150 to 200 pound person will produce six pounds of phosphorus and one pound of potassium, same as the ratio of cottonseed meal fertilizer. By 2023, bodies could be laid to rest in a mix of other organic matter, for instance, wood chips, straw and alfalfa for around six months, and naturally decompose to nutrient-rich soil.

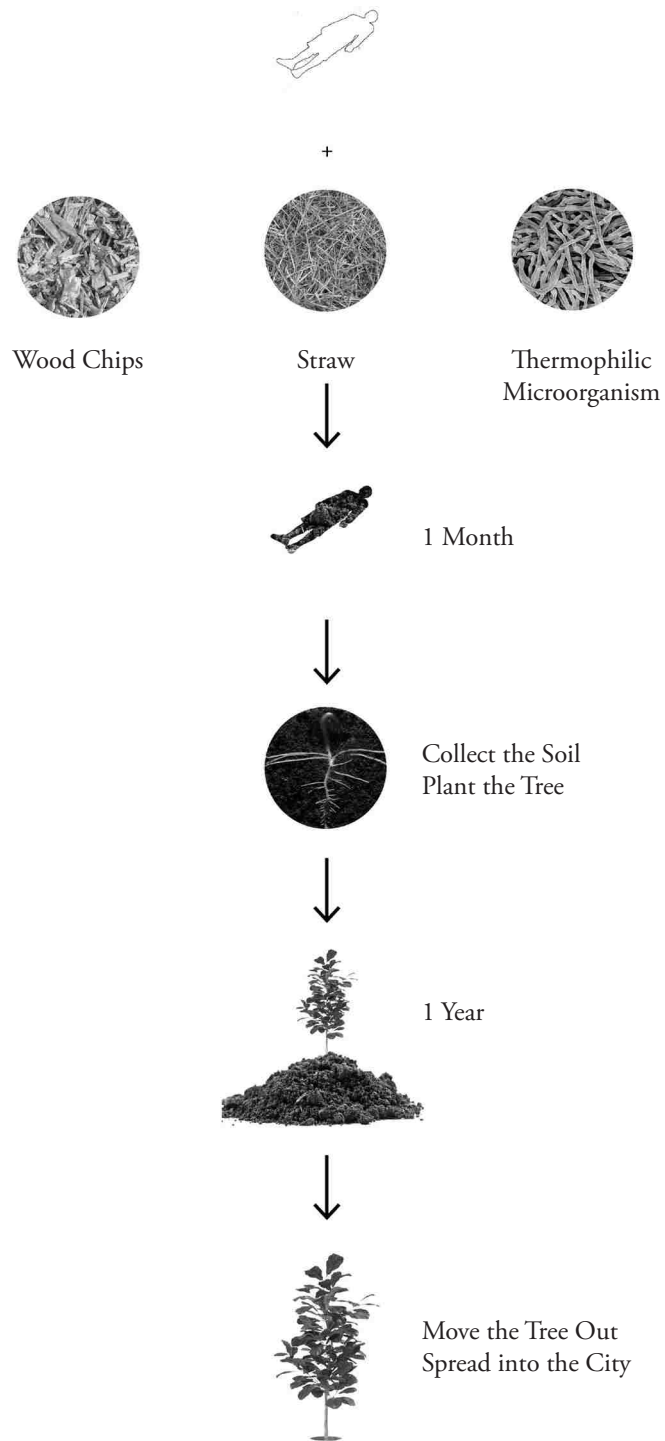
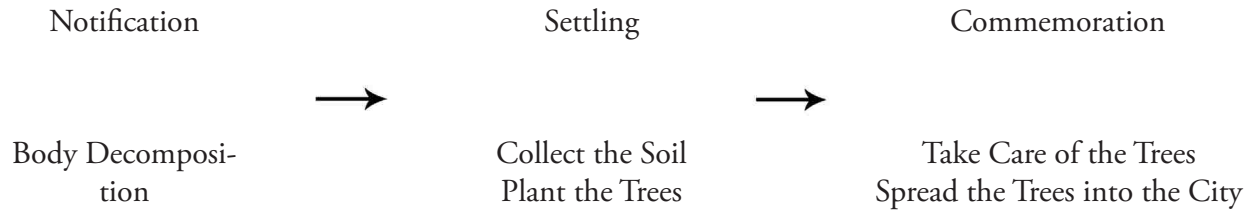


Fig. 18 Program Diagram



This technology is a design guideline for this thesis project. The body could be placed in a mixture of wood chips, straw, alfalfa and thermophilic microorganism and exposed to high temperatures for one month. After the decomposition process is finished, the family member could collect the soil and plant a new life. The volume of the soil would be less than one cubic meter due to the high temperature of decomposition. In order to restore the lost tree cover across the city, each family use the soil to plant a new tree and leave it in the cemetery for one year. After one year, the small seedling tree will be moved out and planted in the city. (Fig. 18)

This new idea of burial provides a new death ritual for the people in Beijing. The previous notification step now could become the body decomposition. The settling step now is soil collection and tree planting. The commemoration step is taking care of the trees on certain festivals throughout each year and spreading the trees into the city. (Fig. 19) The diagram shows the current green spaces in Beijing which could be the potential sites for planting. (Fig. 20, 21)

Fig. 19 New Rituals

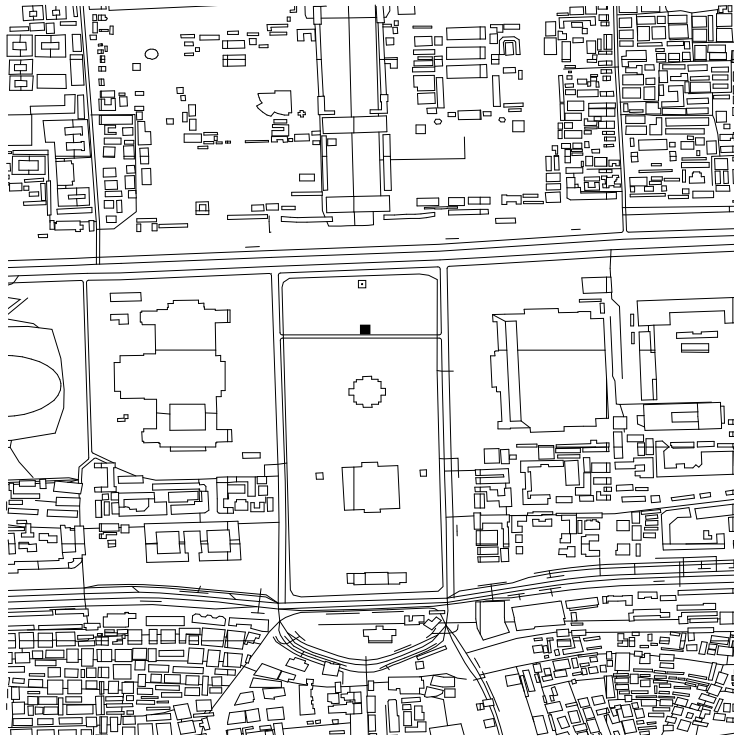
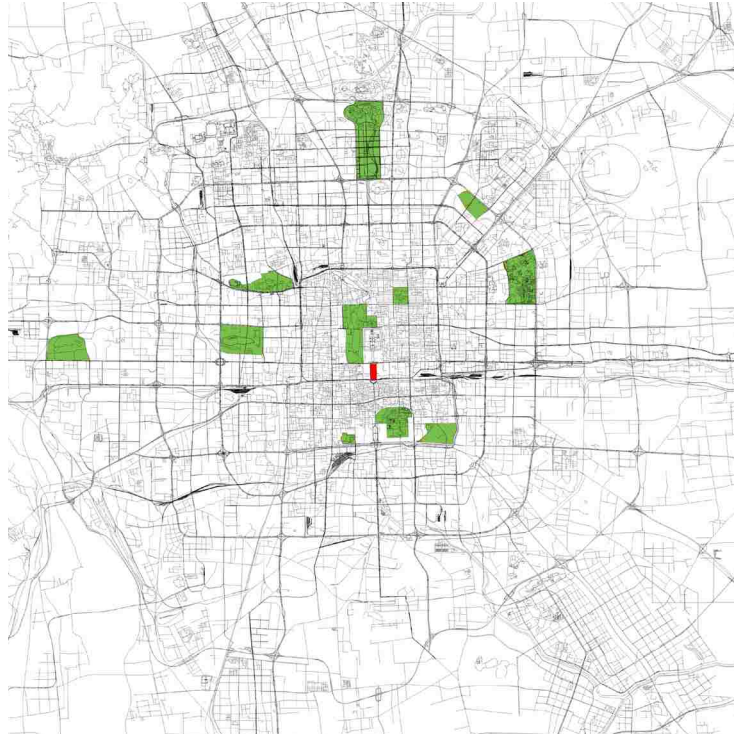


Fig. 20 Green Spaces in Beijing

Fig. 21 Site Plan

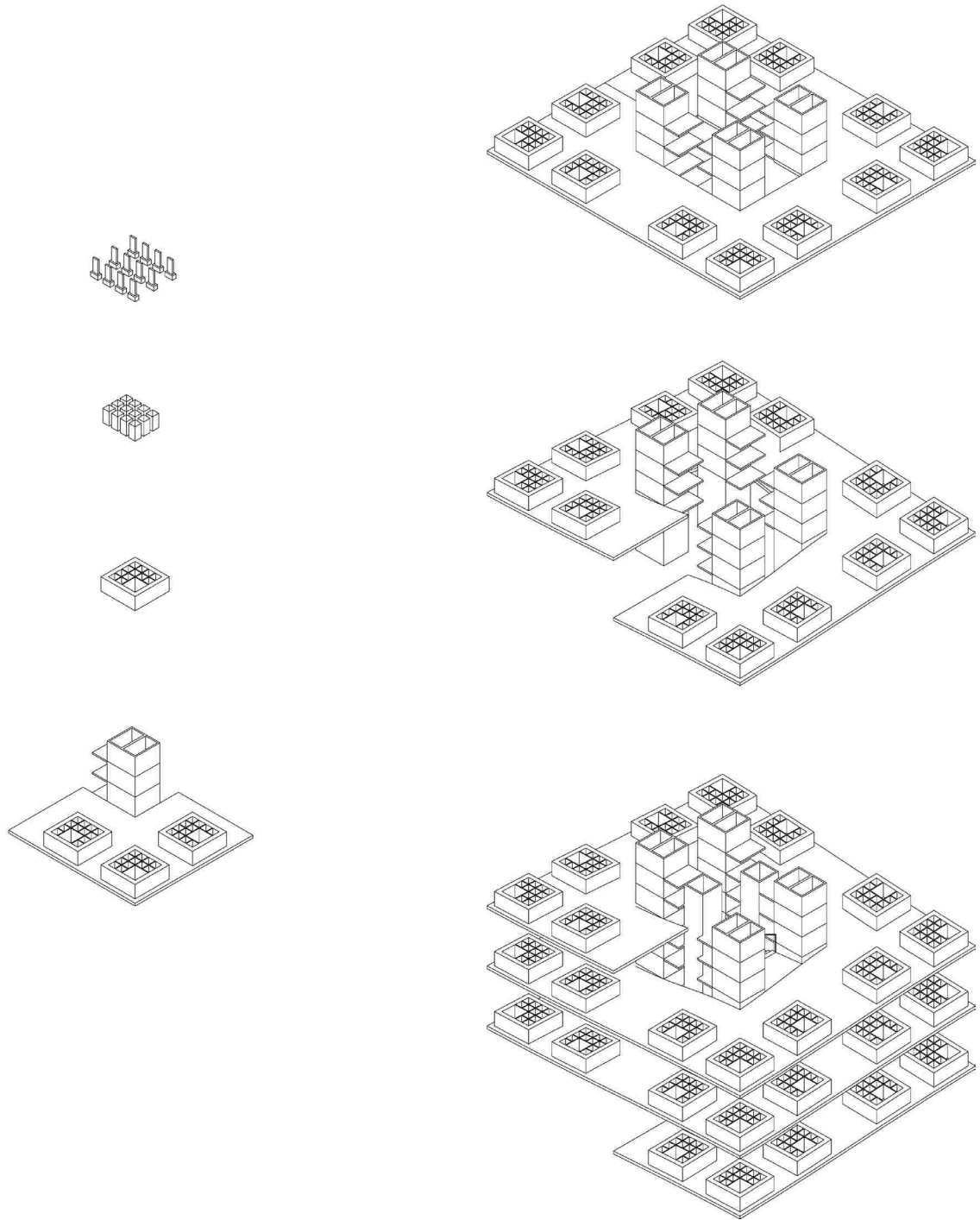


Fig. 22 Design Process Diagram

THE FORM

The new form of burial no longer needs the traditional tombstone but now becomes a space for soil instead. Each decomposition process takes one month so twelve bodies could be completed every year. Twelve spaces therefore form one unit. Each unit will have a sample tree which stays in the cemetery as an indicator. When containing three spaces for bodies, three units will become a corner module. The decomposition space is constructed of concrete so it can also be the structural core of the building. In order to create a continuous experience not only for people whose loved one passes away, but also for people just visiting the building, each floor slab is a ramp. (Fig. 22) The basement space contains the morgue, cleaning room, changing room, shower room and bathroom.

When the body is transported to the cemetery from the basement driveway, the staff will carry it to the morgue located on the basement floor 3. Before the funeral, the staff will start cleaning the body and put on makeup for the ceremony. On the funeral day, the body will go to the top floor where the memorial space is located. The family, friends and colleagues can surround the concrete space and perform the rituals. After the ceremony is finished, the body will go down to the decomposition space and mix with the organic materials. Around one month later, the family can come to cemetery again and pick up the soil mixture. They can place it into a tree pit and plant a seed or a small branch. When the tree has been growing for a year, the family can move it to somewhere else in the city. (Fig. 23)

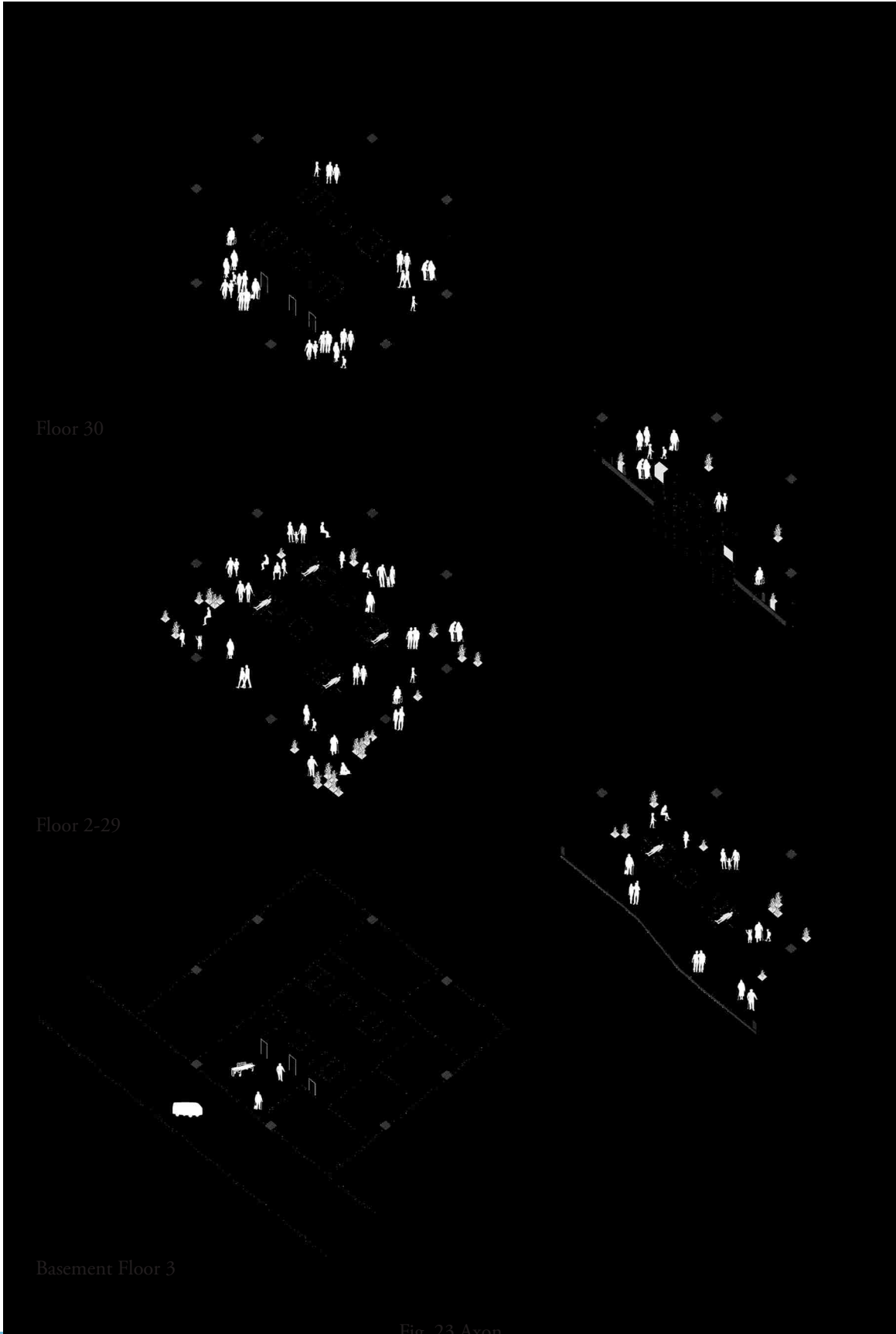


Fig. 23 Axon

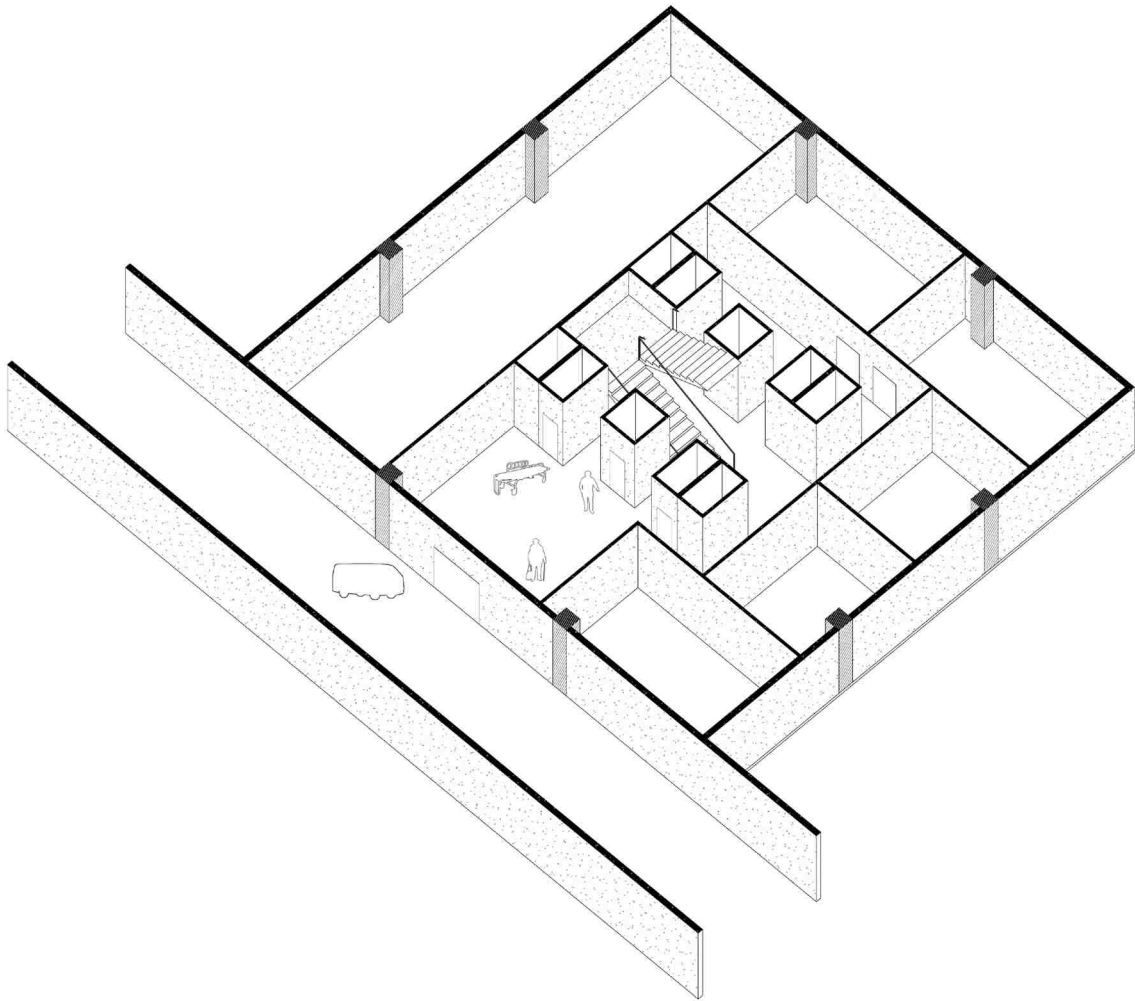


Fig. 24 Basement Floor 3 Axon

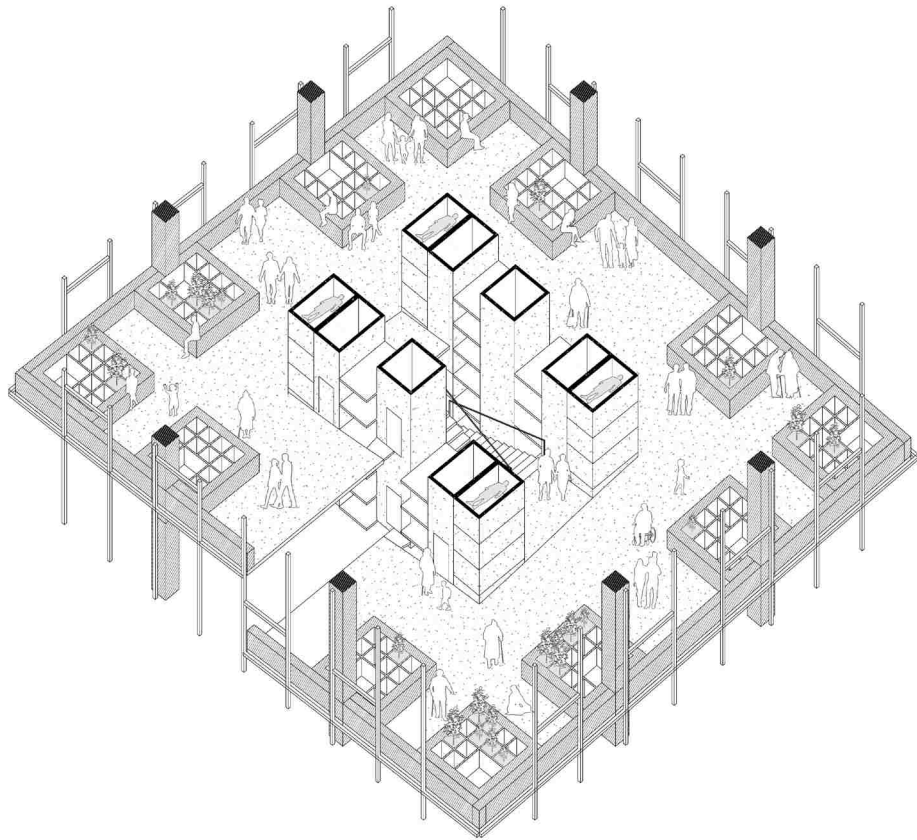


Fig. 25 Floor 2-29 Axon

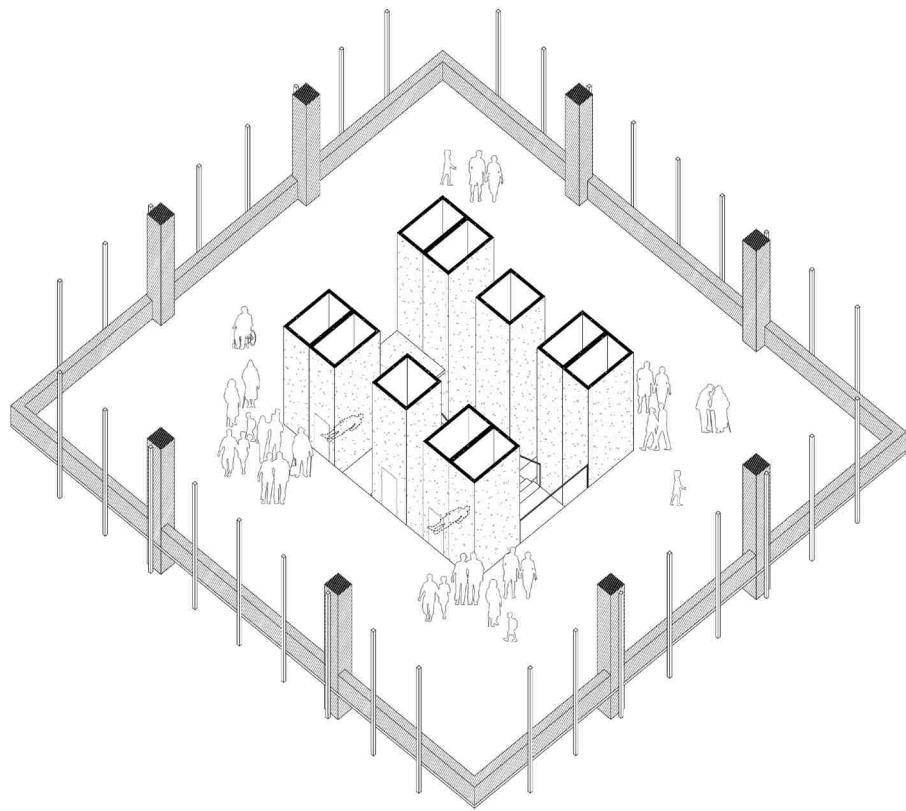


Fig. 26 Floor 30 Axon

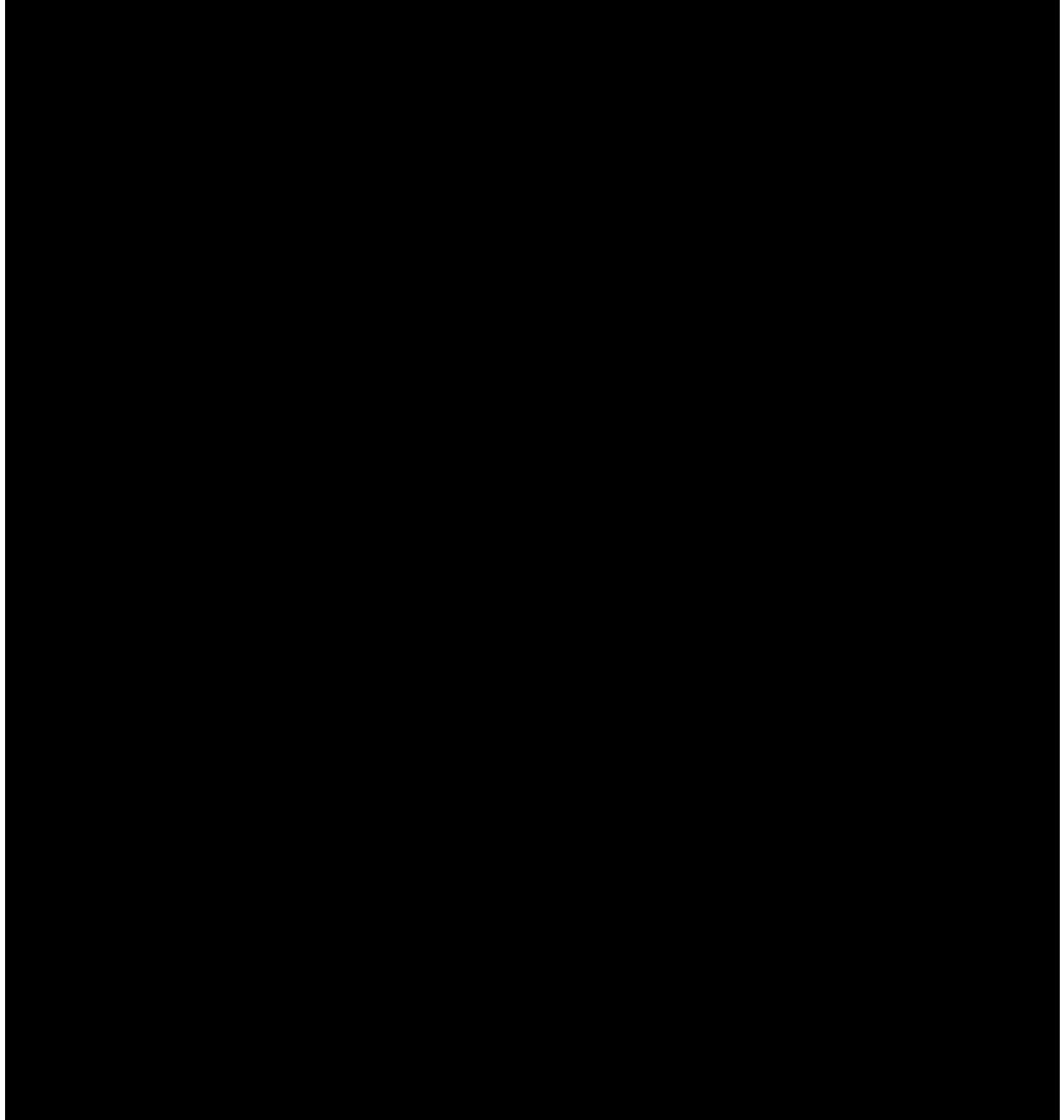


Fig. 27 Floor 1 Plans

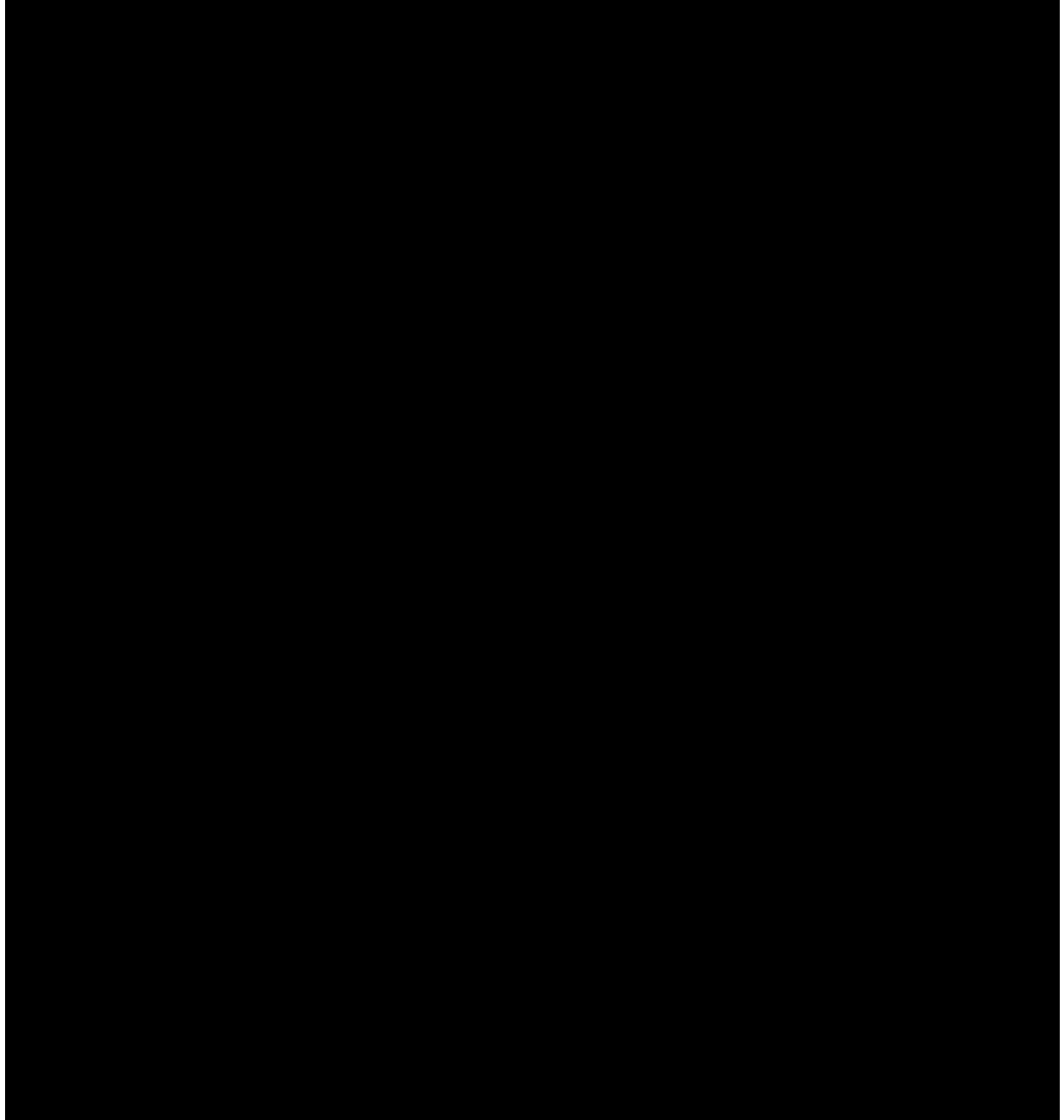


Fig. 28 Floor 2-29 Plans

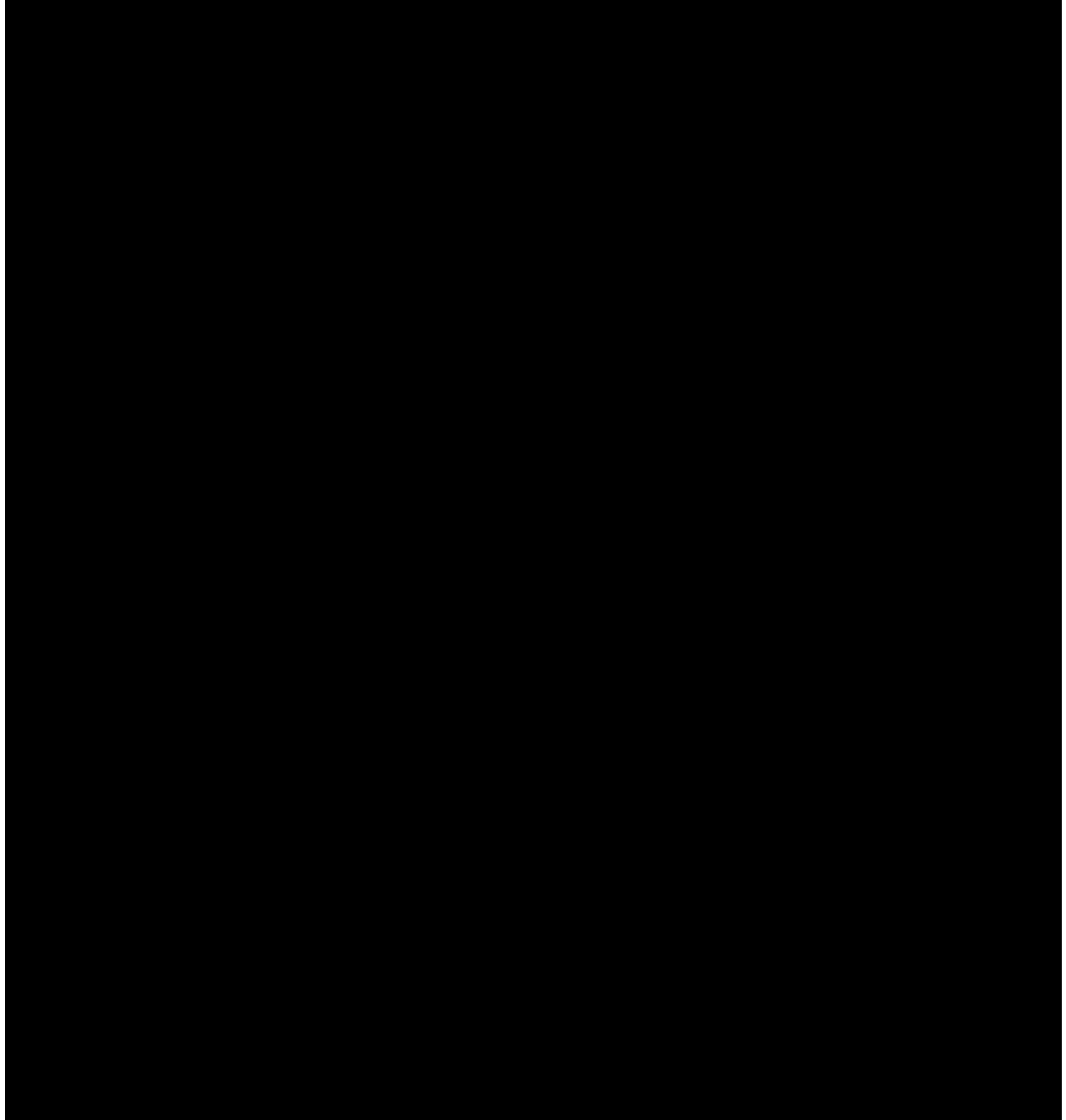


Fig. 29 Floor 30 Plans

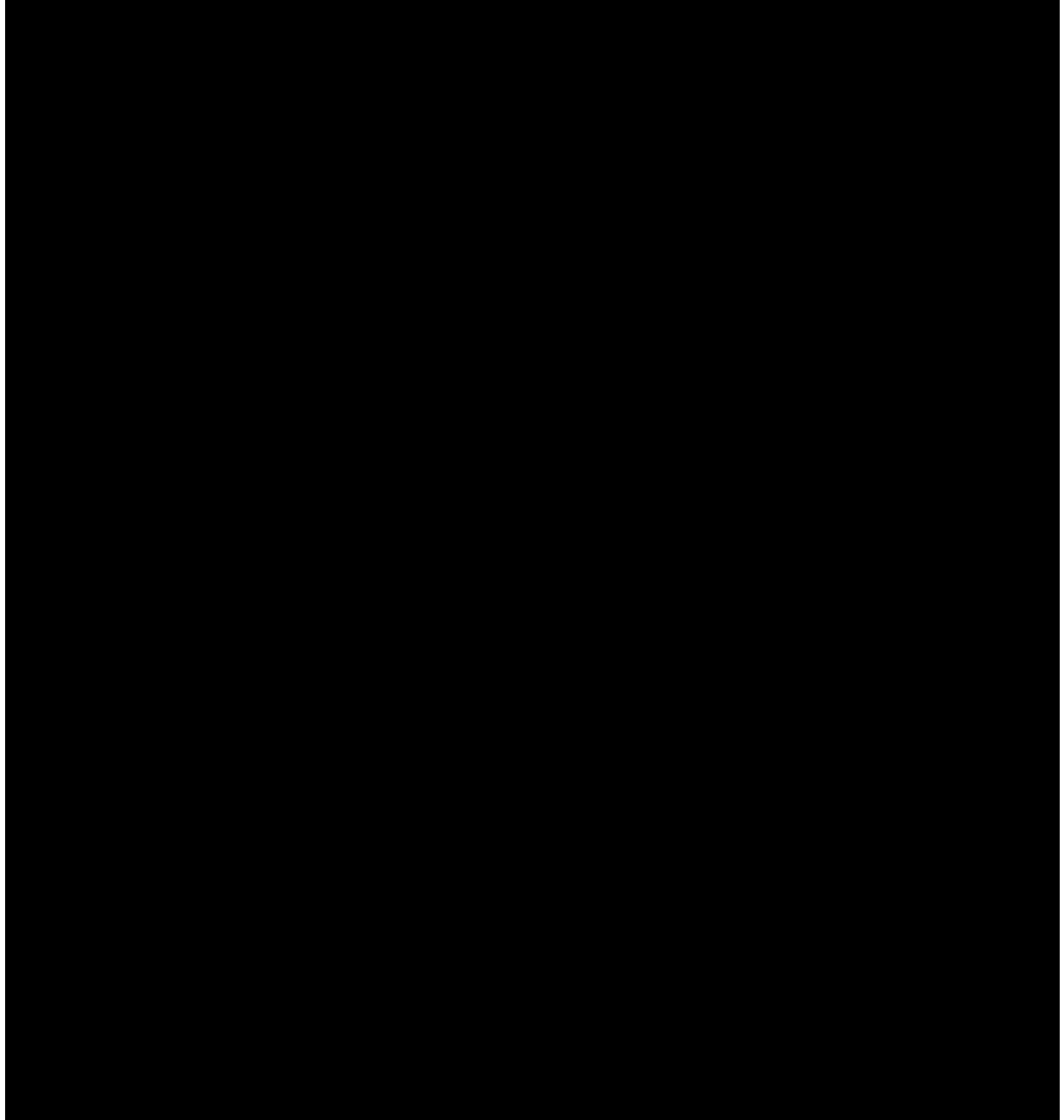


Fig. 30 Basement Floor 1 Plans

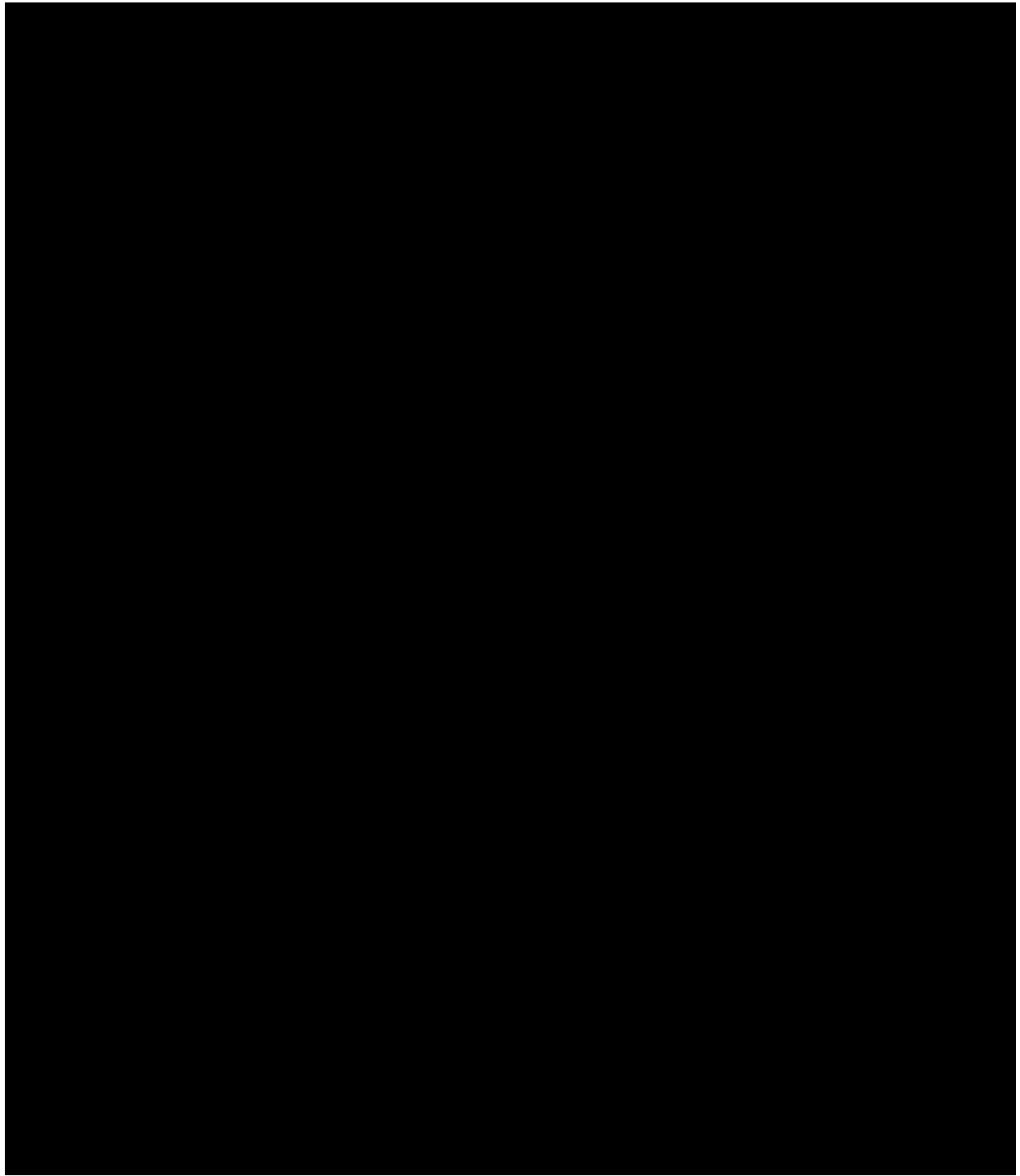
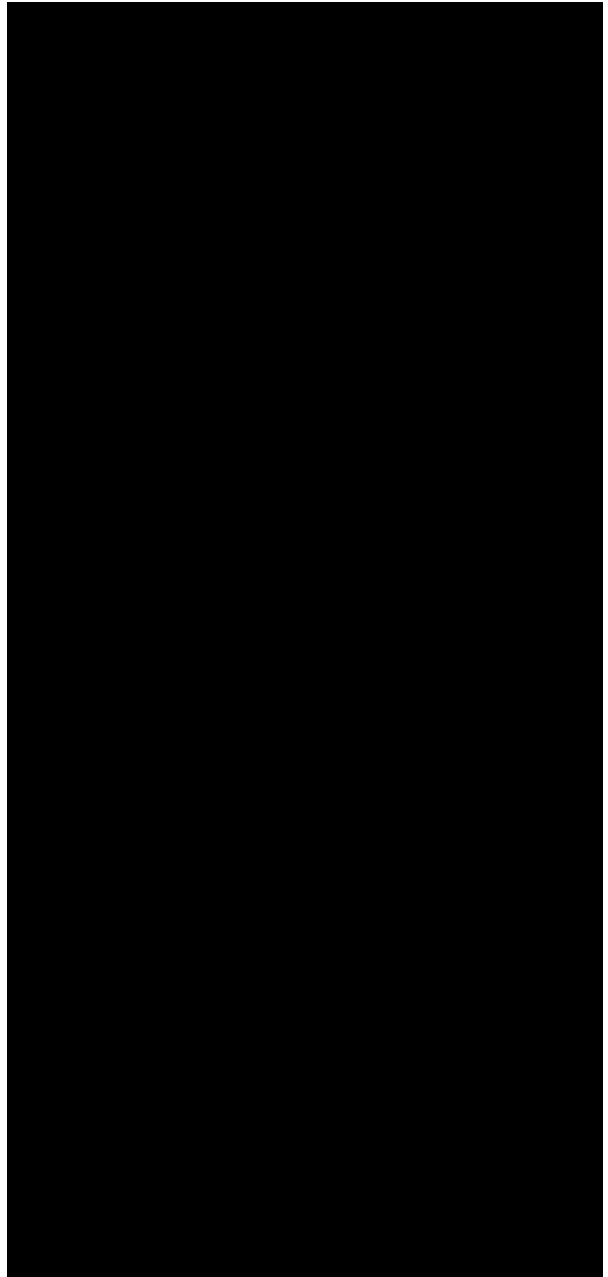


Fig. 31 Basement Floor 3 Plans

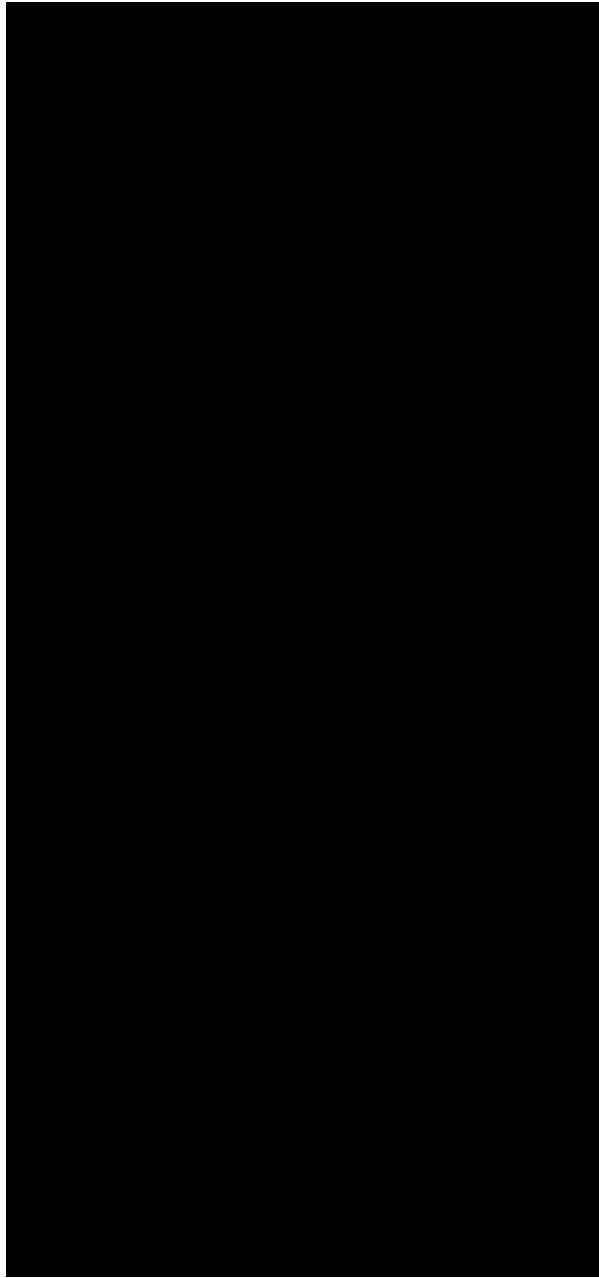


A. RAMP

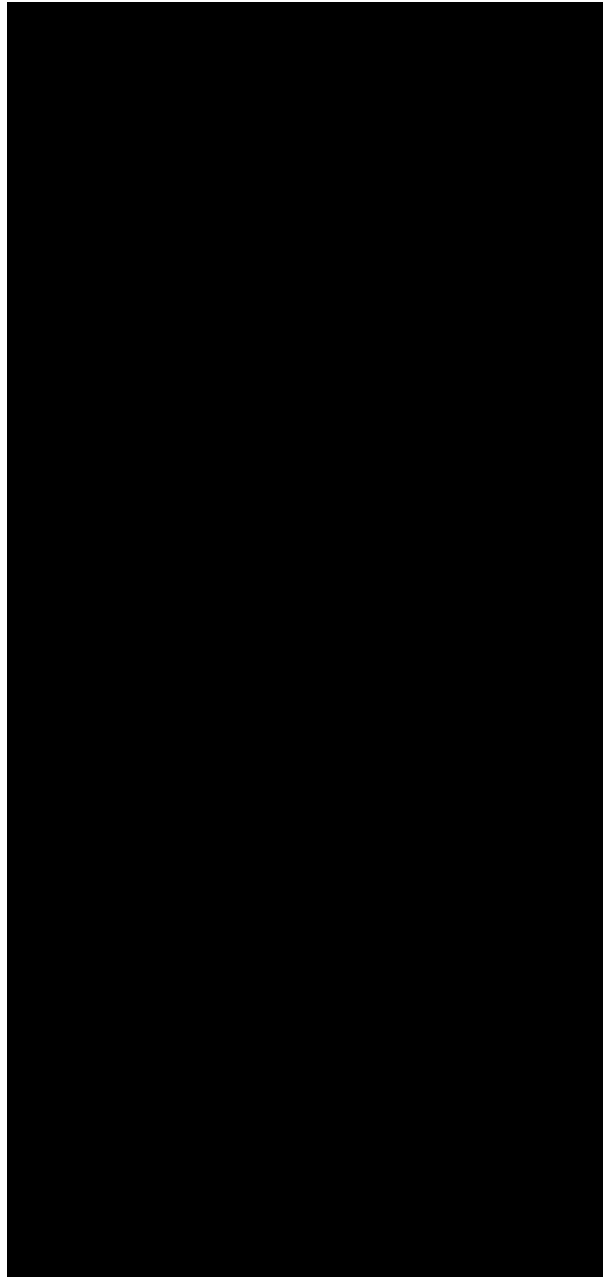


B. CONCRETE CORE

Fig. 32 Structure Diagram

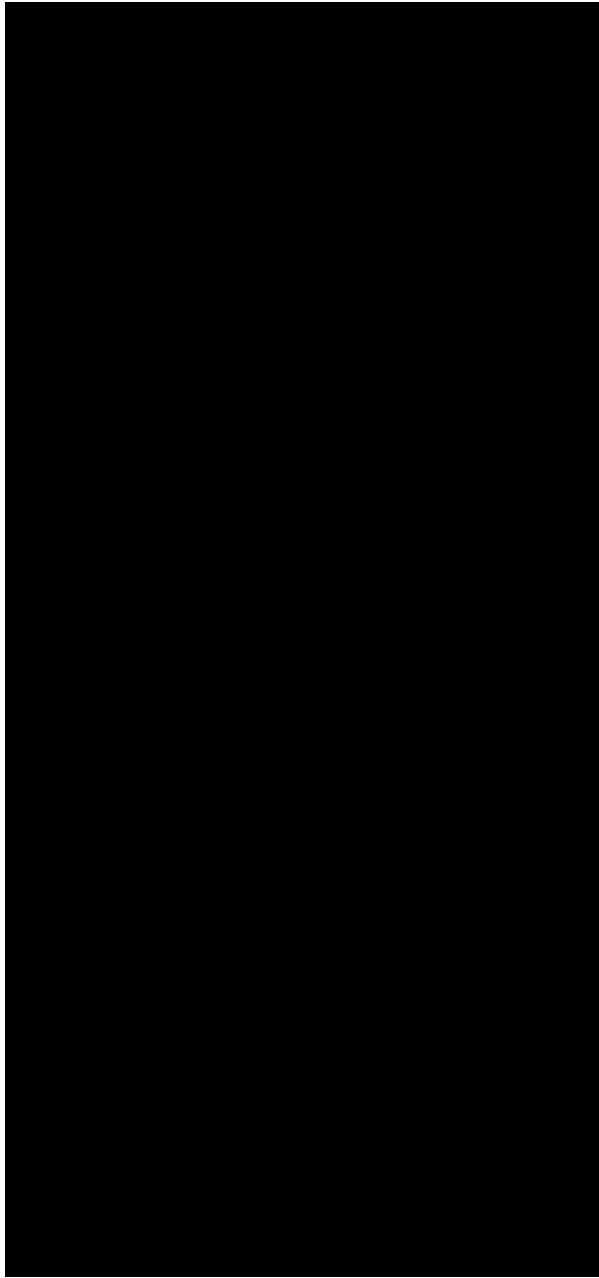


C. CLT

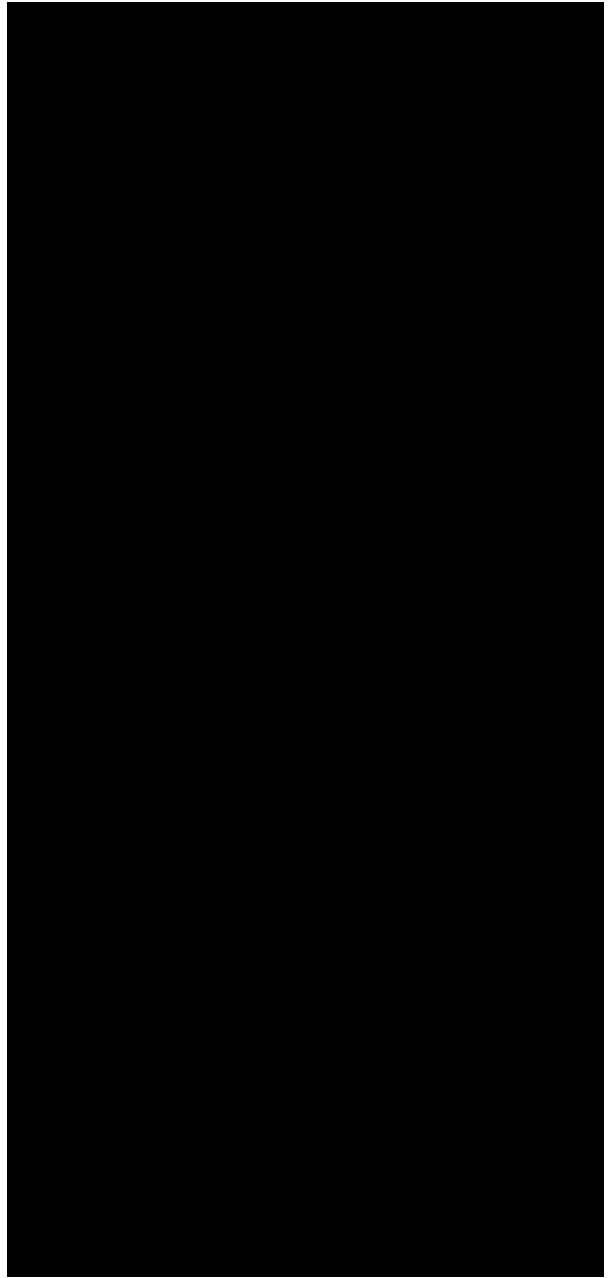


D. STAIRS

Fig. 32 Structure Diagram



E. TREE PITS



F. BUILDING

Fig. 32 Structure Diagram



Fig. 33 Aerial View



Fig. 34 Perspective View



Fig. 35 Aerial View



Fig. 36 Memorial Space



Fig. 37 Burial Space



Fig. 38 Burial Space

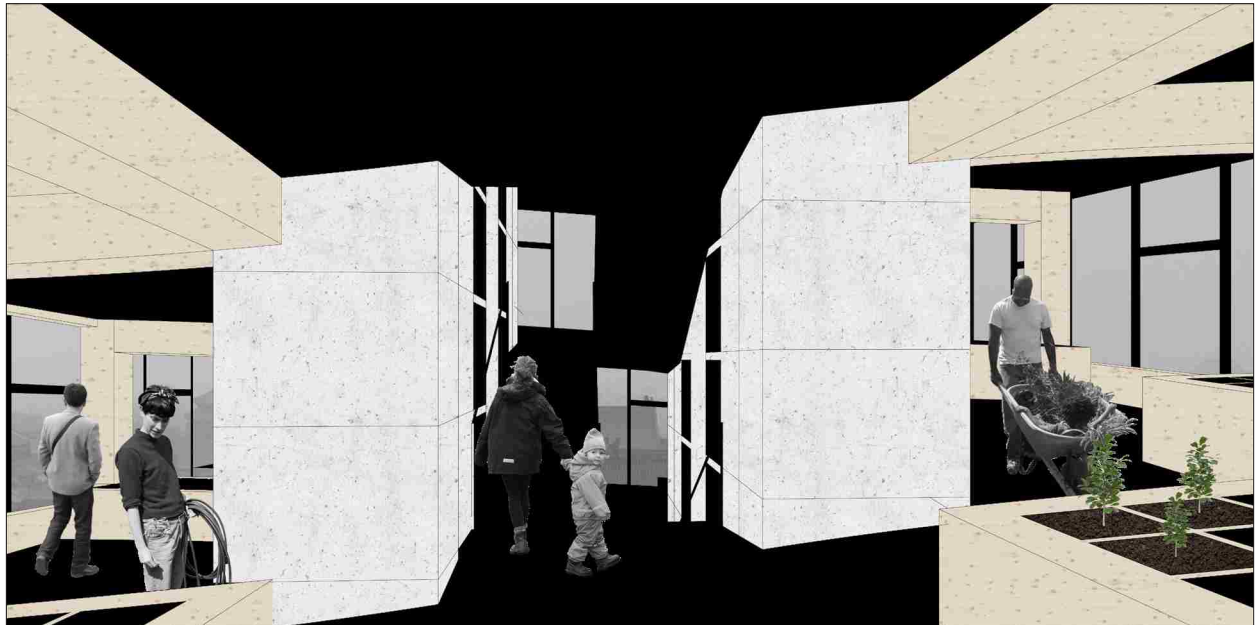


Fig. 39 Burial Space



Fig. 40 View from the Gate to The Forbidden City

What is the nature of the death rituals in China? The answer is found in researching the history of the Chinese traditional funeral. This thesis proposes an alternate solution of solving the problem of the increasing population of death within ten years and the rising cost of burial land. Due to unsustainable cremation processes, current cemeteries have been pushed to the margins of the city. The project attempts to bring rituals back to daily life by adding new rituals to the existing ones. In the new urban cemetery for Beijing, the tree represent a kind of rebirth of a person. By building a new spiritual relationship with the tree, the death of a person is no longer a sad memory. The memory of the deceased can be engaged with the living.

APPENDIX

END NOTES

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FIGURE LIST

All Images are created by author unless otherwise noted

Figure 1 Qingming Festival

Source: <http://www.luanlishi.com/a/201603/2112.html>

Figure 2 Zhongyuan Festival

Source: <http://www.jd.com/phb/zhishi/654477e5e179f509.html>

Figure 3 Babaoshan Revolutionary Cemetery

Source: <https://supchina.com/2017/03/30/too-many-corpses-bury-china/>

Figure 4 Babaoshan People's Cemetery

Source: <https://supchina.com/2017/03/30/too-many-corpses-bury-china/>

Figure 5 Cremation technicians put a coffin into a cremator.

Source: http://avax.news/fact/A_Look_at_Life_in_China_29-12-2015.html

Figure 6 A technician practices cremation skills.

Source: http://avax.news/fact/A_Look_at_Life_in_China_29-12-2015.html

Figure 7 Natural Burial Process

Source: <https://www.treehugger.com/culture/egg-shaped-burial-pods-fertilize-forest.html>

Figure 8 Inner Landscape

Source: <https://www.archoutloud.com/tok-results.html>

Figure 9 Berlin Holocaust Memorial

Source: https://www.archdaily.com/785334/interview-with-peter-eisenman-i-am-not-convinced-that-i-have-a-style?ad_medium=gallery

Figure 10 Berlin Holocaust Memorial

Source: <http://www.landezine.com/wp-content/uploads/2010/03/holocaust-mahnmal-01.jpg>

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Figure 13 Site Location

Figure 14 Site Location

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Source: <https://www.globalforestwatch.org/map>

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