



Diplomarbeit

The Red Hook Grain Terminal as a public space
New York City and public space

ausgeführt zum Zwecke der Erlangung des
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Abstract

New York City, as the epitome of a metropolis, has been fascinating me ever since I can imagine. In my Bachelor thesis that looks at the depiction of New York in movies, I have increasingly become interested in the importance of public space in this city, in which private space is among the most expensive in the world. Not only does public space represent cities to visitors and is responsible for the city's image, it is also where inhabitants come to experience their own city.

In this project I am attempting to combine two topics, which at first do not seem to make a good pair – an industrial complex with a public space. While a public space is essentially, as the name already suggests, a place open to the public, industrial complexes are usually off limits to anyone not working there. On top, the spatial identity of the two contradict one another as well. Openness and permeability dominate in public spaces, however, the industrial complex I have chosen, an abandoned grain silo, consists of a rigid grid of unconnected cylinders with no openings to the outside.

By looking at successful examples and the development of public space in New York City, I will try to redesign the Red Hook Grain Terminal into a public space accommodating a library and a performance space.

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Preface

In this thesis I have decided to only work on topics that fascinate me. That is industrial architecture, public space, and libraries. Performance space and urban farming have then seemed to be a logical addition to the project. What started as a random search for abandoned buildings in New York turned into a seven-month endeavour.

With this thesis I am suggesting to redesign an abandoned building, the Red Hook Grain Terminal, in order to turn it into a place that enriches the neighbourhood of Red Hook. It would be a shame to just demolish the building completely and build something new. The grain terminal emits an atmosphere that has become typical for the area. It is one of the last large-scale structures that still tell the story of the time when Red Hook was a bustling harbour and residents were largely making a living by working on the docks.

I chose to design a place that is accessible to the public and profoundly serves it. While other industrial relicts in Brooklyn have proven a great investment for developers to build luxury condominiums, the Red Hook Grain Terminal has until now has been spared that fate. With my design I would like to design a beacon in the rather desolate Gowanus Bay. A place where people can come to, to educate themselves, read a book in an extraordinary environment, enjoy performances, participate in workshops, use the space as their office, start their own urban farming patch, shop at the farmer's market or just enjoy a gin and tonic at the roof top bar.

My intention was to leave the exterior of the iconic structure largely untouched, as not to interfere with the peculiar look of the building, while accommodating a completely new and radical programme inside and in between the grain silos.

Due to its peripheral location, away from major public transport routes, it seemed necessary to conceive a place that has no counterpart in the city so far. A place that immediately would become unique and iconic to the neighbourhood. A place that serves the people who come a long way to visit and experience the building.

With the cost of living becoming higher and higher in New York and thus making it harder for people working in the creative industry and others without a Wall street salary, I wanted to create a place where people could come to express and educate themselves for free, to exchange thoughts and ideas or to collaborate without having to pay for an office.

All in all, my idea is to design a refuge for people to pursue meaningful and creative activities in a city that is undeniable over worked and exhausted by the modern rat race.

While I am aware that the politics of money and profit govern New York, which makes the conversion of the Red Hook Grain Terminal into a public institution highly unlikely, I would like to add my ideas to the discourse on how architecture can impact and benefit people's lives.

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A very brief history of New York City

Henry Hudson could not have dreamt that on the piece of land he had just set foot on in 1609, the island of "Mana-hata", the epitome of a modern metropolis would develop throughout the next centuries. The odds were not bad, considering that his ship, Halve Maen, had anchored in a perfect harbour: a natural double harbour basin offering shelter from the stormy Atlantic Ocean and the Hudson River opening up a channel upcountry for trade and transport. The Native Americans were soon dispersed by the arriving European settlers.

Due to its geographical position on the east coast of America the settlement quickly grew into a city, only overshadowed by the bigger city of Boston, further up north the coast. The construction of the Erie Canal in 1808 opened up a connection from the great lakes to the port of New York, paving the way for New York to become the most important trade centre of the new world.

The population increased rapidly, reaching 120.000 in 1811. As a result the Commissioner's Plan was developed to organise the city's land. From 14th street in the south up to Washington Heights in the north of Manhattan Island, the area was

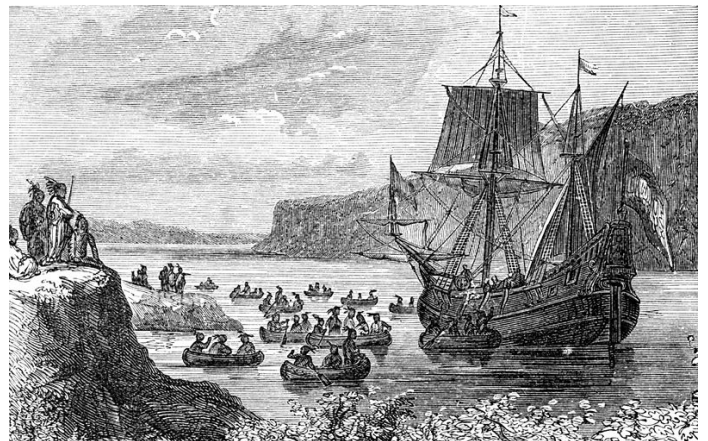


Image 1: Columbus on the Hudson River

divided by 155 east-west running streets and twelve north-south running avenues into five-acre (4047 square metres) blocks. The plan did not include the Central Park, whose construction was determined in 1857.

In 1898 the towns of Manhattan, Staten Island, Queens, Brooklyn and The Bronx joined to form the city of New York. The city's street grid allowed the coastal winds to blow unhindered through the city and hence providing a constant supply of fresh air. This made it possible for manufacturing grounds to develop in direct proximity to residential areas, creating numerous jobs in the city that were essential for new immigrants to settle down.

Failed harvests, suppression, wars and poverty caused masses of Europeans to seek a better life across the Atlantic, mostly in its biggest city – New York. In 1886 the city was given the Statue of Liberty, embodying New York's status as a beacon of hope and opportunity. Promising a discrimination free society, a number of ethnicities settled down right next to one another in the perfectly geometrical grid.



Image 2: The Commissioner's Plan

Thanks to a thriving economy and more immigrants fleeing wars and prosecution around the world the city is now home to 8.4 million people.

New York City, known to many as The Big Apple, is often times considered to be the world's capital and continues to set standards on how to create a habitat for a modern society.



Image 3: Manhattan

Public space

Public space is the lifeblood of any city. In fact the face of any urban dwelling is made up of streets, squares, plazas, parks and other spaces that are accessible to anyone.

It is those places we seek when traveling to another city. It is those places where change happens and people express themselves. Revolutions, protests and rallies exclusively take place here.

Public space has always been vital to dense habitats, as it functions as the extension of private space, which is particularly expensive in cities. People come to public spaces to meet new people, catch up with old friends or just people-watch and examine city life. To feel connected with the city you live in, there is no easier way than to spend time in public space. Here there is no selection of what ethnicity, social background, income level and age is allowed to access.

Numerous studies have shown the social and economic benefits of well-designed and maintained public space. Places like the Acropolis in Athens, the Forum Romanum in Rome, the Plaza Mayor in Madrid, the Alexanderplatz in Berlin, the Trafalgar Square in London

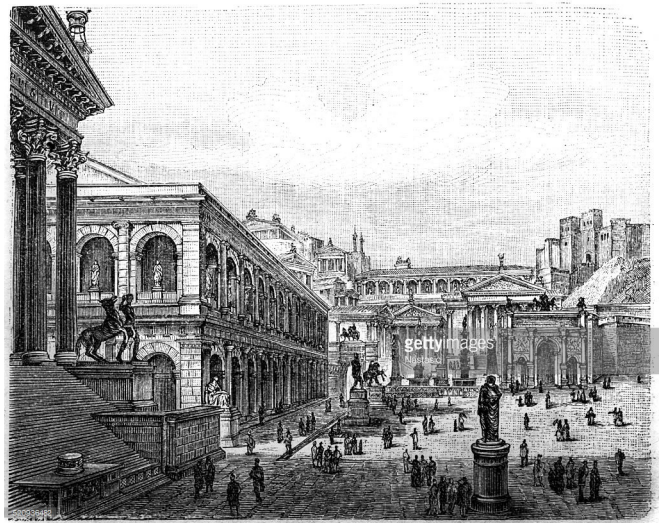


Image 4: A drawing of Forum Romanum



Image 5: Bernie Sanders in Central Park

and the Central Park in New York come to mind when thinking of iconic places of public gatherings. Those spaces have been the setting for speeches, public expression and informal commerce for centuries.

What all those examples have in common, despite their obvious physical differences, is the outdoor setting. While in areas with warm, steady climate this does not limit usability to certain seasons of the year, the usability of public space in areas with varying seasons is highly restricted in colder periods.

In New York City, the average temperature is below 18 degrees Celsius (below room temperature) for half of the year, making public space unsuitable for using it as a temporary work space or longer gatherings.

Indoor public space provides steady conditions, independent of weather and season, and hence the possibility of continuous usage throughout the year.

New York City is particularly interesting as real estate, both living and office space, is among the least affordable in the world. As a consequence public space is essential to New Yorkers as it provides people with free use of space for most non-residential purposes.

While more affordable co-working spaces open up quickly across the city, only indoor public space is able to provide New Yorkers with the possibility of a free work space throughout the whole year.

Hence I regard public space as an important tool to help limit living costs in one of the most expensive cities and thus maintain a vital mix of people with varying income levels. The grandeur of New York has always been its function as a melting pot of people, stimulating innovation, growth and openness. With increasing gentrification, the city risks to push out lower-income groups working in essential fields like arts.

In a nutshell, I consider public space, particularly indoor public space, that provides people with a free workplace and space to meet up, educate themselves and spend time outside their home regardless of the outdoor conditions, a vital instrument to maintain the essence of New York City.

Privately Owned Public Space

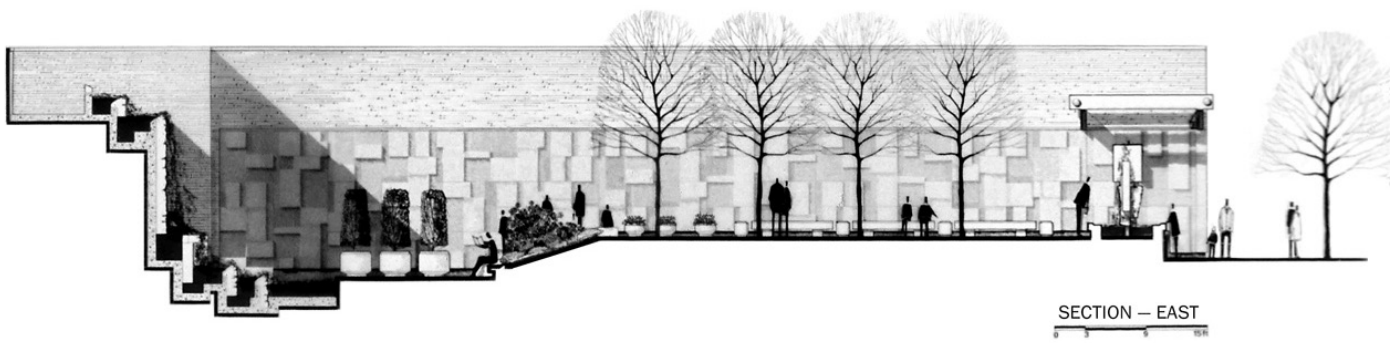


Image 6: A section of Green Acre Park

There are a variety of ways how cities provide their citizens with public space. They own and maintain parks, community centres, libraries and other facilities that are open to everyone. Also facilities intended for transit, like the very basic sidewalks, streets, train stations, terminals and subway stations are essentially public space. Another type of public space are privately owned ones, such as hotel and office lobbies, retail spaces, theatres, museums and restaurants.

However, through the right of private property, the owner of the space sets the rules and conditions for the use of space and can limit accessibility and use of the space.

In New York the prevailing type of public space, that is set indoors, is privately owned, with the exemption of libraries, theatres, community centres and transport facilities. Those so called "privately owned public spaces" (POPS) are typical for New York.

The municipality's original idea was to create public space through private investment. In 1961 the city of New York adopted a new zoning resolution, which replaced the country's first zoning resolution from 1916.

A legal novelty, now known as incentive zoning, the city offered extra floor area to real estate developers in exchange for creation and maintenance of atriums, arcades and other both indoor and outdoor spaces accessible to, and usable by the public for the duration of the buildings existence. The ownership would stay with the developer while the public would have the right to access and use the space, hence the term "privately owned public space".

Currently there are over 500 POPS, mostly in downtown, midtown, upper east side and upper west side districts of Manhattan, as those are the areas where big office and residential projects have predominantly been built.

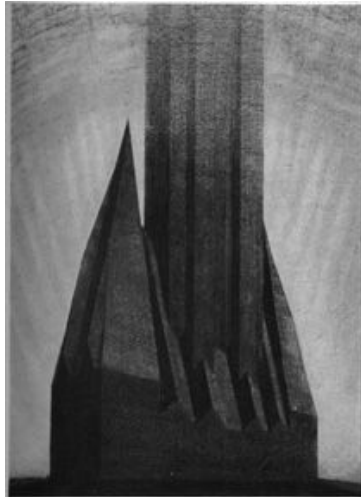
The 1916 Zoning Resolution

The main instrument for the municipal government of New York City has been the zoning regulations to create "light and air" - a sense of openness - on the streetscape. The motivation to pass the country's first comprehensive zoning resolution was obvious. In the late 1800s and early 1900s New York was the backdrop for a dramatic rise in skyscraper construction. Due to the improvements in passenger elevators and the industrial mass production of steel, developers would build skyscrapers spanning over their entire property to maximize profit.

Companies were competing for the title of "New York's highest office building", which came with an immense advertising value. As a result bulky towers sprang up in Manhattan, especially in the southern Financial District, where the title of highest building changed four times, from the Park Row Building reaching a height of 386 feet (117,6m) to the Woolworth Building reaching a height of 792 feet (241,4m) in 1913. The public's concern grew along with the heights and volumes of the buildings.



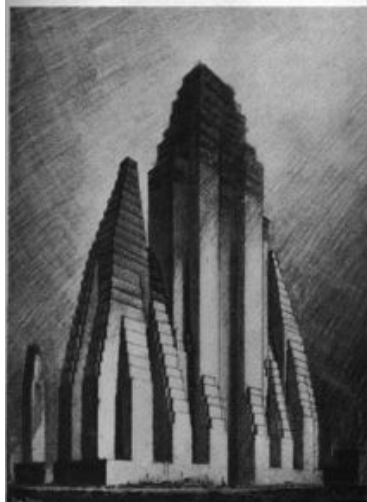
Image 7: Woolworth Building



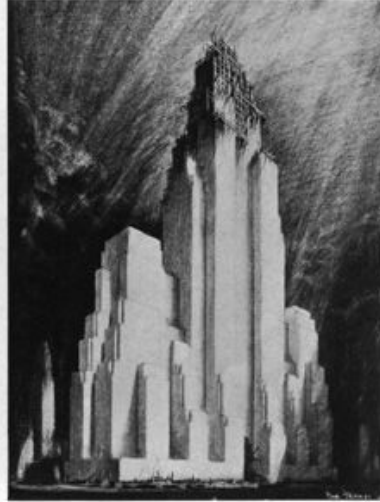
I. THE ENVELOPE AS DEFINED BY LAW.
 Assumed a city block 200 x 800 feet. The number and position (but not the volume) of the Dormers, likewise the shape and position (but not the area) of the tower, are optional with the designer. Otherwise this perspective is simply a pictorial representation of the maximum mass allowed by the present laws.



II. THE ENVELOPE MODIFIED BY A PLAN.
 Its appearance after having assumed a plan, and having passed this downward through the original envelope.



III. THE MODIFIED ENVELOPE FILLED WITH RECTILINEAR FORMS.
 Its appearance after having substituted for the sloping planes, set-backs occurring at every second floor; tentative limitation being placed upon the tower.



IV. THE MASS MODIFIED BY THE STEEL CONSTRUCTION.
 Its appearance after conforming the set-backs to the steel grillage and truncating the pinnacles to the highest floor level, which contains a practicable area. The mass is now ready for architectural articulation.

Image 8: Maximum building mass according to the 1916 Zoning Resolution

Light and air would be blocked from the street level, while an increasing density would also allow fire to spread faster. In 1913 Manhattan Borough President George McAneny described " a growing sentiment in the community that the time has come when an effort should be made to regulate the height, size and arrangement of buildings...in order to arrest the seriously increasing evil of the shutting off of the light and air...to prevent unwholesome and dangerous congestion...and to reduce the hazards of fire and peril to life."¹

In 1916 the city's government board met the growing demands for a building regulation law with the "1916 Zoning Resolution". Through regulations on use, height and area the city zoned its districts. In districts defined by use buildings would have to be either of residential, commercial or manufacturing use. Height districts determined the shape of buildings that would be erected of acquired property. Area districts regulated the open space at street level such as courts, yards and plazas. The height regulations shaped the face of the city most significantly. A building would be permitted to reach a greater height, if it allowed more light to reach the street by setting back upper volumes. The highest part of the building

would have to be placed deep into the lot, while the lowest part would be closest to the street. Those regulations resulted in the characteristic New York "Setback-" or "Wedding Cake Style". Notable buildings are the Empire State Building, the Waldorf Astoria Building and the Rockefeller Center.

By passing and enforcing the zoning resolution the city was successful in ensuring for light to reach the streetscape. However, maintaining open space at the ground level was not effective. Developers would build their "setback" towers on bases that would cover almost the entire zoning lot to increase profit. Only few examples, such as the iconic Lever and Seagram building, managed to create a high floor-area-ratio (FAR) while keeping the majority of the lot open and accessible to the public.

The 1961 Zoning Resolution

By 1955 the original zoning resolution had accumulated 2500 amendments. It also authorized the construction of housing for 55 million residents within the city limits and hence needed revision. Apart from new ways of regulating building volumes and uses, it inaugurated the so-called "incentive zoning". The city introduced a new kind of public space: the privately owned public space. This marks the start of the creation of most of public indoor spaces in New York City until today, apart from government run libraries and community centres. The following twelve legal types of POPS were described in the 1961 Zoning Resolution:

Plaza

An open area for public use on a zoning lot.

Arcade

A continuous covered space fronting on and open to a street, residential plaza or urban plaza.

Urban Plaza

Similar to the ordinary plaza but with higher design standards.

Residential Plaza

A plaza with high design standards ensuring good usability for users in residential areas.

Sidewalk widening

A continuous open area on a zoning lot at the same elevation as the adjoining sidewalk.

Open air concourse

An open area for public use on a zoning lot that provides for access of light and air and direct pedestrian access from an adjoining street or sidewalk widening to an adjacent subway platform, mezzanine or concourse.

Covered pedestrian space

An enclosed space for public use.

Through block arcade

A continuous area within a building connecting one street with another street, residential plaza, urban plaza or arcade adjacent to the street.

Through block connection

Similar to the "through block arcade", but the "through block connection" is mandatory to build and does not grant the developer extra floor space.

Through block gallery

A continuous covered public space on a zoning lot, which connects two parallel or nearly parallel east-west streets and provides for through block pedestrian circulation as well as other pedestrian amenities appropriate to the Theater Subdistrict.

Elevated Plaza

A plaza that may be elevated more than five feet, as long as easy access from the street is provided.

Sunken plaza

A plaza of which 50 per cent may be ten feet below curb level. Never built.

The 1961 Resolution determined a 20 per cent cap on bonus FAR. For developers the creation of POPS proved irresistible.

A study shows that out of the 95 office buildings constructed between 1966 and 1975, 67 buildings (70 per cent) built POPSs. The reason for that was not charity but much rather simple profit. The financial profits of extra FAR were disproportionately higher than the cost of providing and maintaining a public space.

"For each square foot of plaza, builders could add 10 square feet of commercial floor space over and above the amount normally permitted by zoning...We discovered that some plazas, especially at lunchtime, attracted a lot of people.

One, the plaza of the Seagram Building, was the place that helped give the city the idea for the plaza bonus. Built in 1958, this austere elegant area had not been planned as a people's plaza, but that is what it became. On a good day, there would be 150 people sitting, sunbathing, picnicking, and shmoozing – idly gossiping, talking 'nothing talk'.

People also liked 77 Water Street, known as 'swingers' plaza' because of the young people that populated it." ² A study suggests that the ratio of the value of the bonus floor area to the cost of the public space was 48 to 1. Hence POPSs sprung up quickly across Manhattan.



Image 9: Seagram Building

Reforms of 1975

13 years into the reform, in 1974, 231 POPSs have been produced thanks to the new zoning laws. However, their quality and appearance soon ushered discontent among New Yorkers. While most new public spaces were serving the first goal of letting light and air come down to the streets, they did not provide usable space for the public to use. Desolate and depressing slabs of concrete made up most of the new plazas and left over stretches at the edge of the lot were pretending to be public space. Without amenities and furniture, sometimes even spikes to keep people from sitting down on elevated parts, they served no purpose of the public life. Effectively no extra space for people to meet up, have lunch, or observe the city life has been created by the new resolution and hence only had superficial success. As the case of the three, almost identical skyscrapers between 47th and 50th Street on Sixth Avenue shows, some have even been harmful to public space. The massive plazas fronting those buildings created a dead hole in the streetscape, where prior to the open space, street vendors would enrich the street. Furthermore, developers were blindly trying to produce more floor area, which

led architects to design according to possible maximum space and not orientation, geographical and historical context.

In 1975 the city added an amendment to the 1961 Zoning Resolution demanding higher design and usability standards of POPSs. Functional amenities and a design review process for all newly built plazas became mandatory. The orientation of outdoor space would also play a role; urban plazas would have to be open southwards. Obstructions such as driveways, parking spots and trash containers were no longer permitted on POPS. The last phrase of the amendment “for the use and enjoyment of large numbers of people”³ became the guideline for the design of privately owned public spaces.

After further amendments made in 1977, particularly concerning residential plazas, the municipal department has used fine-tuning of the regulations rather than new reforms until today to continuously improve the quality of new POPS.

Results

Incentive zoning has provided New Yorkers with 525 POPSs in and around 320 buildings covering an area of 3,5 million square feet (325 000 square metres) - a tenth of the Central Park's total area - in return for 20 million square feet (1,85 million square metres) of additional floor area for developers. 316 out of the 320 buildings with public space are located in Manhattan, three in Brooklyn and one in Queens. Staten Island and The Bronx are home to no POPSs. Most of the POPSs in Manhattan are located in four areas: downtown, midtown, the upper east and west side. The distribution is a result of the real-estate market. The idea behind incentive zoning is to encourage developers to create public space in exchange for valuable extra floor area in dense areas. Developers would have to be willing to go over the allowed height in order to consider providing public space, which is almost exclusively the case in Manhattan.

According to a field study by the New York City Planning Department there are 13 layout typologies of POPS. Eight of which are outdoors and five that are indoors or covered. I will focus on the indoor ones.

Arcade space is a covered space under the building's curtain wall, usually linear, fully open on its street side.

Covered outdoor space is covered and open on its street side, but is not linear shaped and does not commonly extend for the full front of the building.

Through-block covered space is covered and partially or fully enclosed corridor, usually linear, connecting two parallel side streets or two streets at a 45-degree angle and running next to or traversing the ground floor of the building.

Atrium space is a space inside the building rising several stories in height to a skylight.

Non-atrium indoor space refers to a space on the ground floor of a host building without an atrium core and not shaped like a linear corridor. ⁴

Use of privately owned public space

An analysis of the City of New York has found out that while POPS often serve many purposes, they usually, due to their design, location and orientation, tend to have one overall identity. They are split up into the following types:

Destination space “is a high-quality space that attracts employees, residents, and visitors from outside, as well as from, the space’s immediate neighbourhood. Users socialize, eat, shop, view art, or attend a programmed event, although they may also visit the space for sedentary, individual activities or reading and relaxing. The design supports a broad audience: spaces are usually sizable, well proportioned, brightly lit if indoors, aesthetically interesting, and constructed with first-class materials. Amenities are varied and frequently include some combination of food service, artwork, programmatic activities restrooms, retail frontage, and water features, as well as seating, tables, trees, and other plantings. From time to time, a single amenity like a museum will be so compelling that it alone transforms the space into a destination space.”⁵



Image 10: Lincoln Center

Neighbourhood space “is a high-quality public space that draws residents and employees from the immediate neighbourhood, including the host building and surrounding buildings within a three block radius. Users go to neighbourhood space for such activities as group socializing, taking care of children, and individual reading and relaxing. Neighbourhood spaces are generally smaller than destination spaces, are strongly linked with the adjacent street and hosting buildings, are orientated toward sunlight, are made with good construction materials, and are carefully maintained. Amenities typically include seating, tables, drinking fountains, water features, planting, and trees, but not food services and programmatic uses sometimes found at destination spaces.”⁶



Image 11: Plaza at 77 Water Street

Hiatus space “is public space that accommodates the passing user for a brief stop, but never attracts neighbourhood or destination space use. Usually next to the public sidewalk and small in size, such spaces are characterized by design attributes geared to their modest function, and include such basic functional amenities as seating. Hiatus spaces range from high to low quality in terms of design, amenities, and/or aesthetic appeal.” ⁷

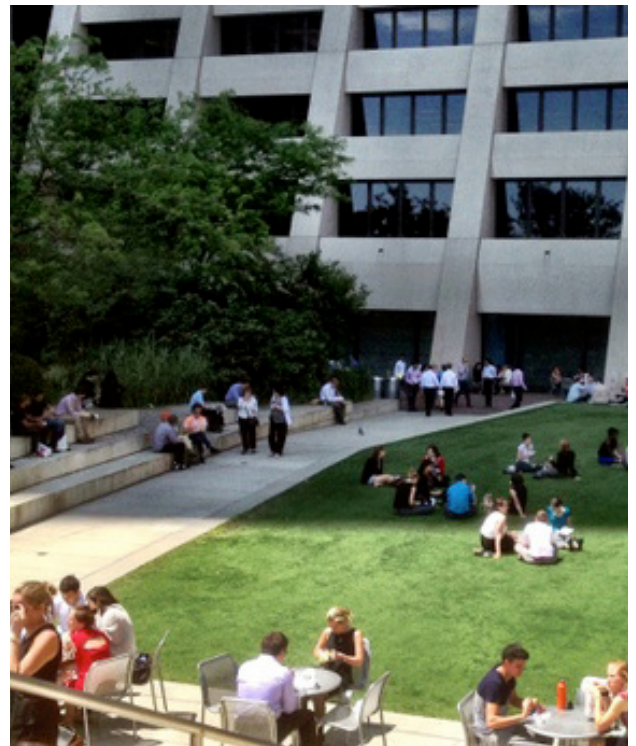


Image 12: Plaza at 55 Water Street

Circulation space “is public space that materially improves the pedestrian’s experience of moving through the city. Its principal purpose is to enable pedestrians to move faster from point A to point B, and/or to make the journey more comfortable by providing weather protection for a significant stretch. Circulation space is sometimes uncovered, sometimes covered, and sometimes fully enclosed. It is often one link in a multiblock chain of spaces. Size, location, and proportion all support its principal mission. Functional amenities that provide a reason to linger are taken into account when classifying a space as circulation space.”⁸



Image 13: HSBC Plaza

Marginal space “is a public space that, lacking satisfactory levels of design, amenities, or aesthetic appeal deters members of the public from using the space for any purpose. Such spaces usually have one or more of the following characteristics: barren expanses or strips of concrete or terrazzo, elevations above or below the public sidewalk, inhospitable microclimates characterized by shade or wind, no functional amenities, spiked railings on otherwise sitable surfaces, dead or dying landscaping, poor maintenance, drop-off driveways, and no measurable public use.”⁹

Unfortunately however, only 15 out of the 503 POPSs act as destination space (a mere 3 per cent) and 66 as a neighbourhood space (13 per cent). That leaves 402, or 80 per cent, as hiatus, circulation and marginal space, and thus as a wasted opportunity.

I will now have a closer look at two of the destination spaces that seem to work exceptionally well. I came across the two following POPS during my research in New York. Both places were recommended to me multiple times by people I have approached during lunch break.



Image 14: Barclay street 101

While they were not the only ones that have been pointed out, they seem to have accumulated a reputation as a quick refuge from the busy streets. One, the IBM Plaza, is located in midtown and the indoor plaza at 180 Maiden Lane is situated in the Financial District, both areas with a high density of white collar workers.

IBM PLAZA

590 Madison Avenue

This privately-owned public space has opened to the public in 1983 and has since garnered universal approval of New Yorkers. It functions both as a tree-filled refuge and a public living room. It even has even generated anecdotes about itself. In the late 1980's, two entrepreneurial New Yorkers were trying out indoor public spaces across Manhattan as a rent free office space. After testing a few, they settled for the IBM Plaza as their new work place. For years to come a woman in a red sweater would occupy the same spot in the atrium to sedulously type away on her manual typewriter. Along with others, who to this day enjoy to eat, meet up, date, write, people watch or simply sit down, these woman have highlighted how inclusive, non-commercial and lively a privately-owned public space can be.

When the new owner, Odyssey, intended to remove most of the emblematic, tall bamboo trees in order to replace them with modern art sculptures, the public proclaimed its disapproval. The City Planning Commission demanded that the number of tables remain unchanged and eight out of the original eleven bamboo

trees have to remain. Only minor planters were allowed to be exchanged for modern art sculptures by Henry Moore and others. Apart from the location, it is certainly atmosphere that attracts people. The triangular glass roof, supported by a three-dimensional steel framework, spanning across the atrium in a height of 65 feet (20metres), creates a year through steady microclimate. Unlike most indoor spaces in New York, that are heavily air conditioned, the sheer volume of the space and the trees mediate the temperature even on hot summer days.

The public space, officially called 590 Atrium, yet continued to be known as IBM Plaza is adjacent to the POPS in the Sony building at 550 Madison Avenue, and directly linked to the POPS in Trump Tower at 725 Fifth Avenue.



Image 15: IBM Plaza

Building Architect: Edward L. Barnes

Public Space Designer: Edward L. Barnes

Completed in: 1982

Total public space area: 20102 square feet
(1867 square meters)

Amenities: 11 movable chairs, 32 tables

Opening times: 8am – 10pm

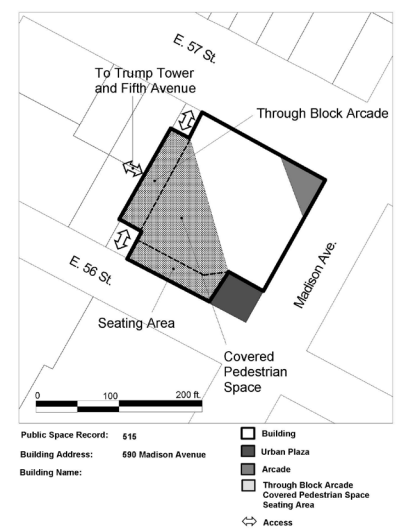


Image 16: Map of IBM Plaza

180 Maiden Lane

The creation of this space was incentivised by the 1973 Special Manhattan Landing Development District initiative, in one of a few special purpose zoning districts. The idea was to provide pedestrian amenities in areas where they are missing. In this case as part of a planned, but never fully built network of pedestrian space spanning from the southern tip of Manhattan to the Manhattan Bridge.

With its glass ceiling supported by a three dimensional frame work and indoor trees, it resembles the IBM Plaza. With plenty of movable seats and tables, functionality in this space is high. In the warmer months the space is complemented by the adjacent outside area with benches, fountains and trees.

In 2015 MHP Real Estate Services acquired 180 Maiden Lane and announced a redesign of the building, especially its public space. 28 million dollars were to be invested into the renovation with two thirds being spent on the makeover of the atrium led by the design firm Perkins Eastman. 5 000 of the 26 000 square feet of public space are now covered by turf lawn, where people are having pick

nicks and even short naps. The number of seats has been increased and the space has additionally been equipped with a new art gallery and a public screening area.

The investment into public space does not stem from an altruistic point of view. According to Tara Stacom from Cushman and Wakefield Inc., a major tenant in the building, the plan is to attract millennial employees.

"Today, the millennium generation care much about the quality of life, about green spaces and break areas in which to engage their co-workers," she says.¹⁰

Other nearby buildings, such as 55 Water Street creating a park with river-view seating and lunch time performances, have also invested in the upgrade of public space. "It's not just the office square footage upstairs," said Ms. Hsu-Chen, the city planning official. "Public space is tremendous asset."¹¹



Image 17: POPS at 180 Maiden Lane

Building Architect: Swanke Hayden Connell

Public Space Designer: Swanke Hayden Connell, renovation by Perkins Eastman

Completed in: 1982, renovation in 2015

Total public space area: 26000 square feet (2415 square meters)

Amenities: public bathrooms, seating, screening area

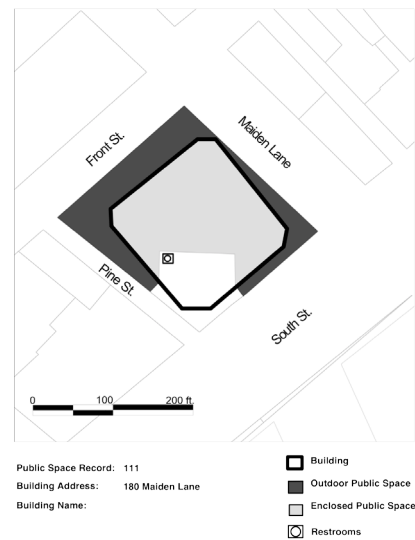


Image 18: Map of 180 Maiden Lane

Fascination Industrial Landscape



Image 19: *Classic Landscape* by Charles Sheeler

I do not seem to be alone with my fascination for industrial complexes and landscapes. The depiction of such settings has been present in the arts ever since its occurrence. Impressionism for example, known for its dreamy portrayals of romantic, melancholic landscapes such as the famous “Water Lilies” by Claude Monet, has in fact gotten its name from a painting of an industrial landscape.

“Many viewers do not realize that Claude Monet’s famous *Impression: Sunrise* represents the industrial port of Le Havre. Its sketchy, unfinished look was what made this painting notorious in its own time and led to the naming of the movement Impressionism. Over time Impressionism became known for its depiction of leisure in the countryside, so it may be surprising to learn that more than half of the paintings Monet exhibited in the first Impressionism exhibition represent economic activity in urban settings. Most studies of Impressionism have concentrated on the former – on bourgeois pleasures – whereas many of the paintings by Monet gay an image to the conditions that made them possible.”¹²

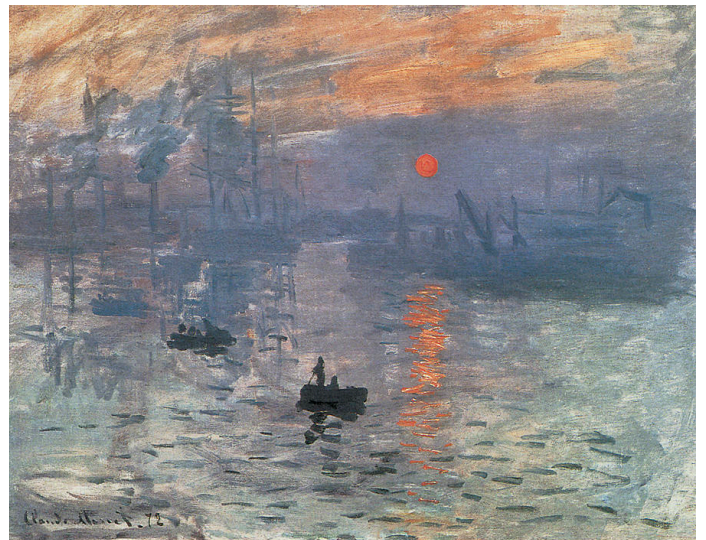


Image 20: *Impression, Sunrise* by Claude Monet

There is a saying that claims there are three things one can watch forever: fire burning, water falling, and other people working. Perhaps it is that, what makes industrial buildings so fascinating. They are the epitome of productivity. Goods are produced by workers engaging in hard work, fire feeding the engines and water propelling the mills. Industrialisation has brought great wealth upon the so called industrialised nations. It has changed belief systems and changed the way we live forever irreversibly. Industry embodies power, progress and action.

Charles Sheeler's *Classic Landscape* shows the Ford Motor Company's new River Rouge Plant near Detroit, back then the world's largest industrial complex, in bright, cheerful colours.

"Classic Landscape depicts an area of the plant where cement was made from by-products of the car manufacturing process. The silos in the middle distance stored the cement until it could be shipped for sale. Sheeler's choice of this relatively anonymous scene, rather than one connected with the production of automobiles, suggests that his interest lay in making a generalized portrait of the landscape of industry. That, in part,

may explain his use in the painting's title of the word ,classic', with its connotations of typical or standard. But ,classic' also evokes the culture of ancient Greece and Rome, and Sheeler certainly implies that this modern American scene can be compared to the high achievements of the classical past. One might well be reminded of classical architecture by the temple-like form of the silos and the pediment-like roofs of the nearby buildings, but the matter clearly went beyond superficial resemblance. Like others of his day, Sheeler admired architecture that was functional and straightforward, with shape and plan determined by specifics of use rather than by conventions of style and decoration. For the great French architect Le Corbusier, whose influential *Towards a New Architecture* Sheeler probably read around the same time he was photographing the Rouge plant, the timeless principles of good design embodied by ancient architecture were indeed still at work in „the American grain elevators and factories, the magnificent first-fruits of the new age.“¹³

To me it is exactly this aspect, the uncompromising functionality that these complexes represent, that draws me so strongly towards them. I remember driving past the "OMV Raffinerie Schwechat", an oil refinery close to Vienna, and marveling at those strictly calculation-based volumes that each had their specific purpose they were serving perfectly. No single piece of steel or concrete was used without a purpose. Good architecture had made it possible for the refining process to run so smoothly and provide the world with power.

However, with power comes great responsibility and industrial achievements have often times been misused for the wrong purposes in the past, even for straight out destruction. Roy Lichtenstein chose to depict the most abhorrent of all industrial achievements – the nuclear bomb – in an almost benign way. "Atom Burst" simply shows the result of technical advancement without judging or further explaining it. Nowadays, industry is often linked to negative side effects such as environmental damage, arguably the biggest threat of this century.

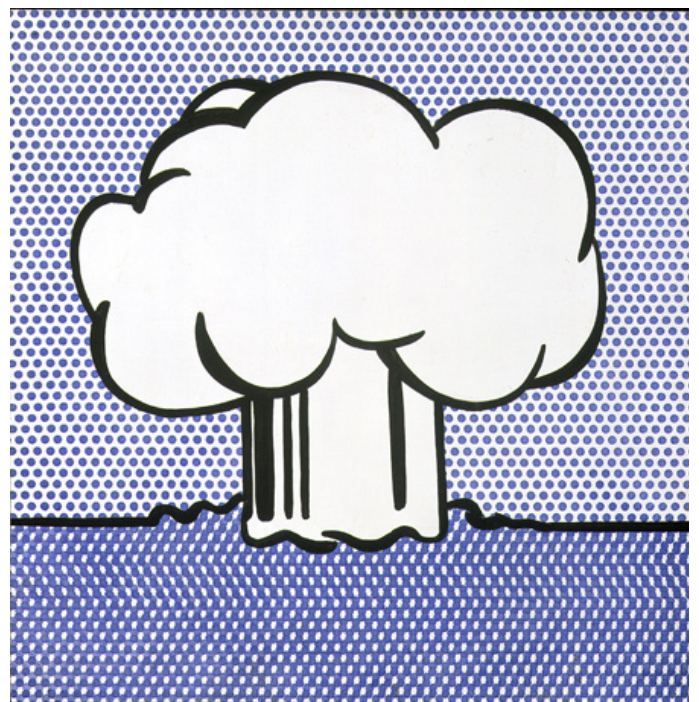


Image 21: *Atomic Burst* by Roy Lichtenstein

Donald Sultan, an American painter and sculptor born in 1951, dedicated a whole series of large-scale paintings to the industrial landscape and its damaging effects. In "Disaster Paintings" Sultan portrays numerous kinds of factories, ports and railway stations using tar and enamel to discuss industry's dark side. His "Plant May 2 1985" and "Veracruz Nov 18 1986" not only show the beautiful, abstract patterns industrial complexes paint into the environment, but also the horrendous effects they have on it.

In the USA entire areas are marked by former industrial glory. The infamous rust belt, stretching from the great lakes to the upper mid-west, now suffers from the loss of jobs and decline of population due to an outsourcing of industrial jobs. What is left are the extensive, ubiquitous industrial complexes in the area that are now abandoned and vacant. However, they do still cast a peculiar charm over the landscape, again a very melancholic one. James Jeffrey Higgins manages to catch that rustic appeal that those desolate silos, power stations and manufacturing grounds still emit today in his photo series "Images of the Rust Belt".



Image 22: *Veracruz Nov 18 1986* by Donald Sultan

Red Hook



Image 23: Drawing of Red Hook at 1875



Red Hook's location

Red Hook is a neighbourhood in the New York City borough of Brooklyn. It borders the neighbourhoods of Gowanus, Carroll Gardens and Sunset Park. It first hosted European settlers in the first half of the 17th century.

“Located in the southwestern corner of Brooklyn, the neighborhood of Red Hook boasts a long and tumultuous history. It was for one, the place where Al Capone started his mobster career. The neighborhood is surrounded by water on three sides and by the Gowanus Parkway as well as the Battery Tunnel on the fourth. Originally called Red Hook because of its rusted colored soil and the shape of land that protrudes from the coast of Brooklyn.

The earliest notable property owners in Red Hook were brothers Nicholas and Matthias Van Dye. These two were farmers that constructed two mills on their property, which were powered by the creeks. One was a ginger mill, while the other was a flourmill. Large-scale projects began to take place in Red Hook in the 1830s because of its close location to the busy docks of Manhattan and the opening of the Erie Canal in 1825. The Red Hook Building Company which was led by local Brooklyn developer Colonel Daniel Richards, acquired a large piece of land

from the Van Dyke brothers and in 1838 proposed building hundreds of residences that would be serviced by a ferry connecting Red Hook to Manhattan but the project fell apart. In 1840, Richards obtained approval from the New York State Legislature to build a large shipping terminal on Buttermilk Channel opposite Governor’s Island. It was completed in 1848 and provided large ships the ability to sail through the Port of New York.

In 1843, Irish immigrant William Beard purchased a large amount of waterfront in Red Hook, just south of the Atlantic Basin and began filling it with farmland. By the end of the 1850s, he had acquired over one million square feet of land and began constructing the Erie Basin at the southwest tip of Red Hook. Here, in 1864, the Erie Basin became popular for ship repair and grain storage. After completion, Beard sold a portion of land to the Anglo-American Dock Company, which proceeded to constructing the area’s first graving dock, facilitating large-scale ship repair. During the Civil War, the Erie Basin was the center for ship repair in New York. After the Civil War, thousands of immigrant workers poured into the neighborhood looking for work in the industrial port. The 1860s through the 1890s were

the busiest years of Red Hook's industrial development. Before becoming a part of New York City in 1898, Brooklyn was the fourth largest city in the country providing thousands of jobs in waterfront factories and storehouses. Red Hook itself had transformed from a farmland to an industrial port center. Immigrants from Ireland, Germany and Italy filled South Brooklyn near the docks and piers.

The twentieth century proved to be a difficult one for Red Hook. The major wave of industrial building had receded noticeably and the loss of grain terminals was devastating for Red Hook. As time moved on, the population of Red Hook started to decline. Even the New York Dock Company had pulled out of Red Hook, abandoning the traditional storehouses and piers along its waterfront for the Port of Newark. The land was then left unoccupied and undesirable until the city took control of the abandoned properties."¹⁴

Today when walking though Red Hook, apart from the industry-shaped waterfront, the Red Hook Houses clearly dominate the perception of the area. „The Red Hook Houses, built in 1938, were originally built for families of dockworkers and are one of the first and largest

Federal Housing projects in the country. The 1990 Census estimated the population at just fewer than 11,000 with more than a third under age 18. That same year the average income per household was under \$10,000. Unemployment in Red Hook was estimated at 30 percent among men and 25 percent among women."¹⁵

„In the year 2000, most of Red Hook's 10,000 residents lived in the Red Hook Houses, one of the city's first public housing projects. The development was a notorious hotbed for crack cocaine in the 80s and early 90s, but conditions have gradually improved over the years. A near complete lack of major subways and buses stalled gentrification in the neighborhood, but signs are becoming more common. Today, Van Brunt Street is scattered with specialty wine bars, cupcake shops, and craft breweries, and a big box Ikea store opened in 2007 on the site of a former graving dock. "¹⁶



Image 24: Red Hook



Image 25: The Red Hook Houses

Red Hook Grain Terminal



Image 26: The Red Hook Grain Terminal



The Grain Terminal's location in Red Hook
1: 10.000

The Red Hook Grain Terminal, formerly known as the New York State Barge Canal Grain Elevator, is a grain storage facility in Red Hook, Brooklyn built in 1922. It sits at the southern end of the New York State Barge Canal, which was meant to replace the narrow Erie Canal. 524 miles (843 kilometres) of streams, rivers and lakes connected Lake Erie to the Hudson River and ultimately New York to form an alternative to the railroad system. In 1920 the idea was born to erect a huge grain terminal to preserve the investment into the Barge Canal. "By 1918, New York City was lagging behind in the nation's grain trade, and the canal was failing, operating at only 10% of its capacity. A new facility was built in the Port of New York to invigorate the underused waterway—a state-run grain elevator in the bustling industrial waterfront of Red Hook, Brooklyn."¹⁷

As a result the 429 feet (130metre) by 70 feet (21metre) and twelve storey high New York State Barge Canal Grain Elevator was conceived. Within 16 months, the building was constructed, with the pouring of the concrete for the cylindrical silos only taking 13 days.¹⁸ Right after its festive opening it was already called "the Magnificent Mistake". New

York State Governor Nathan Miller, not wanting to ignore the facts, gave away the grain terminal's superfluity already on the opening day: "Even if the barge canal were never used in normal times, it is a good thing to have it in case of emergencies."¹⁹

After all, it was built when grain terminals were already becoming obsolete. Already seven years prior to the construction of the Red Hook Grain Terminal the last grain terminal in Brooklyn was converted into a storage warehouse.

Its construction certainly contributed a big part to the fact, that despite its uselessness, it still stands today. As the silos were required to hold combustible grain, eight inch (20cm) thick, explosion-proof concrete was used for the cylinder's walls. They separate the ground floor from the top gallery, where the grain was filled into the silos. The grain was shipped down from the Great Lakes through the Erie Canal to Gowanus Bay. On arrival the grain was washed, dried and cooled in adjacent brick buildings before it was carried up to the top gallery by industrial grain elevators. In total it had the capacity to hold two million bushels (70.400.000 litres). Upon a new purchase, a 1.200 feet long conveyer belt carried the grain from

the elevator building to the end of the building's own pier to be loaded onto freight ships, who then distributed the cargo to mills, breweries and distilleries.

Despite its well functioning design, the investment into the building proofed a loss due to a competitive market.

„In 1944, after 22 years of profitless operation, the state deeded the elevator to the Port Authority, which rehabilitated the structure and continued operation. But by 1964 it was clear the building was in financial havoc, with grain costing exponentially more (78 cents a ton) in New York than in the south (only 15 cents a ton in New Orleans). So in 1965, after 40 years of under-use, the grain terminal was officially deactivated. In 1987, state officials remembered the structure long enough to demolish its conveyors and loading pier.“²⁰

Evers since it has been looming over Red Hook like a ghost. Time has left its traces on the concrete, and so hast he sea on the lower parts of the structure. Exposed steel has rusted away with smaller parts oft he adjacent buildings even collapsing into the harbour. Nevertheless, the structure, already visible from the closest subway

station - Smith 9th Street - has managed to obtain an iconic status among the residents of Red Hook.

„In the early 90s, locals used the roof as a kind of asphalt beach in the summer. One neighbour, who preferred to remain anonymous, recalls, „Whole families of people from the local projects would be barbecuing, picnicking, sunbathing up there. It was really easy to get into back then, I don't even remember if there was a fence or not.“²¹

It is now in possession of John Quadrozzi, president of the Gowanus Industrial Park, who purchased the property on 1997 from the Port Authority. He came forth with plans to restore the building into either a cements storage facility or a film studio. Occasionally the property is rented out to for events. Zacho Dance Theatre put up an aerial dance performance in 2002, with dancers moving along the façade of the silos while attached to ropes coming down form the top gallery. The pop singer Lorde has shot her music video to 'Team' in the building and in September 2016 the Elements Music and Arts Festival took place on the grounds of the Red Hook Grain Terminal.

Other plans have included turning the building into a recycling facility.

Its thick, windowless walls have spared the structure from being converted into luxury condominiums, a fate that has caught up with most of the bigger industrial structures in Brooklyn like the Domino's Sugar Factory.

Until today, the building is still vacant while the owner uses the property as a shipping container yard and a bus parking area. The Red Hook Grain Terminal is immensely popular with so called Urban Explorers, who even offer advice on how to break into the building. Currently the owners have employed security guards to detect trespassers and report them to the police. A security guard told me that he is being paid a 100 Dollar reward by the owner for each trespasser he catches. Hence he was upset to find that I was not going to trespass, but to properly ask for admittance. Unfortunately, Gowanus Industrial Park neither allow anyone to enter the property, unless for a paid video shooting, nor do they release any plans of the building.



Image 27: The Red Hook Grain Terminal from the water



Image 28: The roof of the Red Hook Grain Terminal



Plans

At the heart of any redesign of a building are always the plans of the original design. Hence I made it my priority to find plans of the Red Hook Grain Terminal. The quest for the plans started in Vienna, before my research trip to New York, by contacting the Brooklyn Borough Office of the New York City Department of Buildings. Files could only be requested personally in New York, hence I concentrated on online research. With no satisfactory findings I continued my search on site, in New York. Upon receiving an empty folder at the Department of Buildings I approached the Brooklyn Historical Society, the New York Public Library, the Brooklyn Public Library, Municipal Archives, the Port Authority of New York and New Jersey and the School of Architecture at the Pratt Institute in Brooklyn. None had any architectural plans or drawings, merely text and photos. The only one in possession of plans seemed to be the owner of Red Hook Grain Terminal, Gowanus Industrial Park, who proved not willing to collaborate. Both access to the property and plans were denied.

In order to evaluate the architecture, the structure in particular, of the building I

researched plans of grain elevators that were built in the same time. Multiple sections proved my assumption, that, as these are industrial buildings, they follow the same principle and thus are more or less identical in design.

Grain was carried to a container in a tower on top of the building, from which it then was distributed through a pipe system in the top gallery into the individual silos accounting for the main volume of the building. The ground floor is host to a grid of massive concrete columns supporting the silos, in between which trolleys are loaded with grain - coming out of funnels at the bottom of the silos - which is then transported out of the building onto further transportation devices. In the case of the Red Hook Grain Terminal, a conveyer belt carries the grain to the end of an adjacent pier, where freight ships awaited the grain.

To evaluate the current state of the structure, I analysed photos and videos as well as aerial footage of the complex. Advanced decay of the side buildings as well as the "marine towers" has led me to decide to demolish those secondary structures and expose the heart of the elevator building.

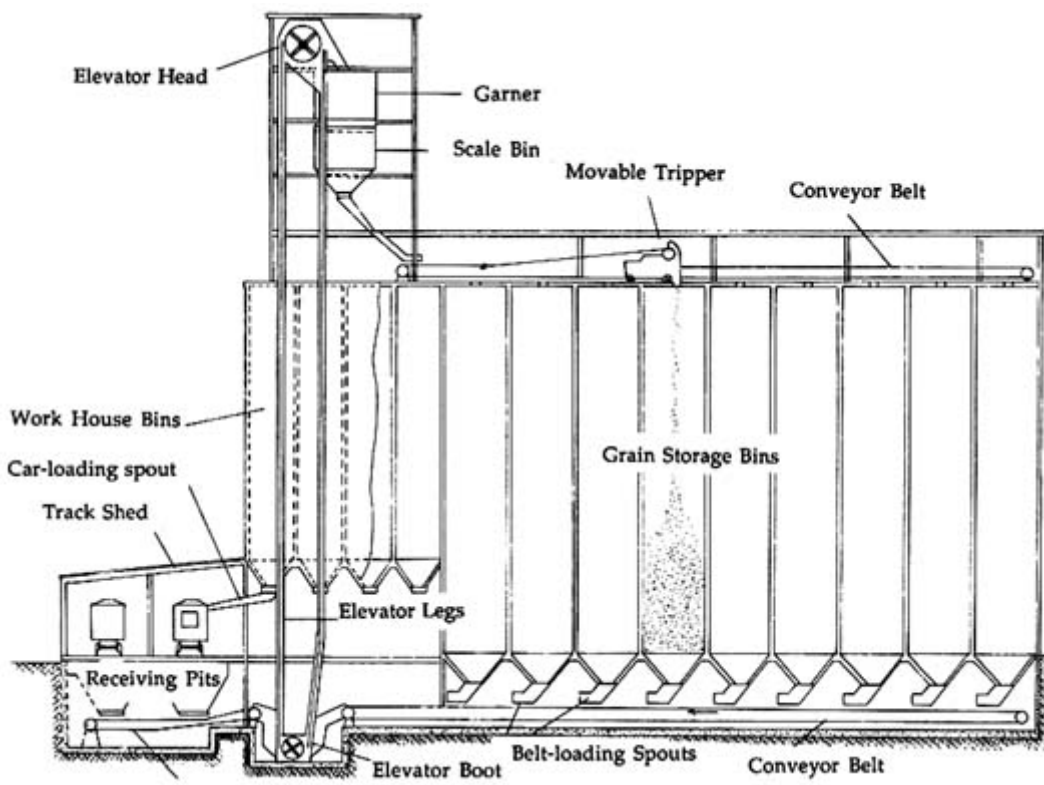


Image 29: Section trough a typical grain elevator at 1900



Image 30: Groundfloor of the Red Hook Grain Terminal



Image 31: The interior of a silo at Red Hook Grain Terminal



Image 32: The top gallery at Red Hook Grain Terminal

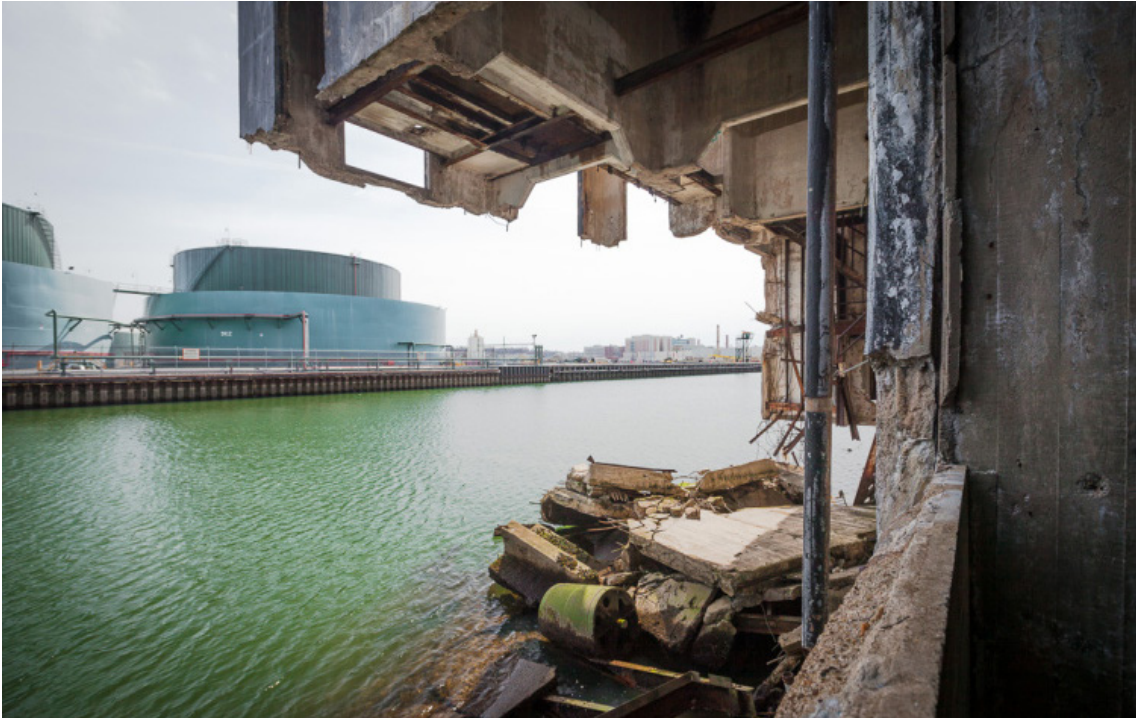


Image 33: Decay at Red Hook Grain Terminal



Image 34: The facade of the Red Hook Grain Terminal

The Design

Programme

The goal is to create a hotspot in Red Hook. A destination for people to go to in order to experience events, get lost in books, people-watch or just marvel at the view.

During my research it became clear to me that a mixed-used space would be the key. Contradicting activities would enrich the diversity of people.

I tried to do so by conceiving a space that accommodates a library, a theatre, a farmer's market with adjacent greenhouses and art studios. In order to celebrate the view, that the tall structure provides, I placed a bar at the very top for people to marvel at the view while sipping a gin and tonic.

The Library.

The idea of having a library at the centre of a vivid public space is not new. In fact, libraries have been the type of institutions that cities have invested in, as it provides people with access to knowledge, which benefits not only the individual but society as a whole. Libraries have also spatially been extraordinary examples of architecture. Most recently OMA has gained widespread critical approval for their Seattle Library. Gordon Bunshaft got the second Pritzker Price for his Beinecke Library.

Pritzker Price for his Beinecke Library. Louis Kahn has created a national monument with his Exeter Library and the Library of Alexandria is synonymous with a cradle of knowledge. Some might say libraries have lost importance and relevance with the rise of the internet. I say their relevance will increase as they adapt to new requirements and start exploring multi-purpose programs.

The Theatre.

Theatres are places of communication, expressions and spectacle. Contemporary plays mirror societal developments and trends and act as cultural seismographs. The intention is to have the thriving Ghetto Film School in "The Bronx" set up a theatre branch in Red Hook. That way the local community benefits greatly from the new institution.

Art Studios.

Studios for artists will be provided as well. In exchange for providing free studio space for artists, they will exhibit their art for free and offer workshops on their field of art once a month to visitors. That way an extra draw is created while permanent occupancy is guaranteed.

Farmers Market with Greenhouses.

The lot will furthermore be equipped with green houses for farming. Not only do they complement the industrial architecture with their purely functional aesthetic, but also be contextual in a programmatic sense. The silos stored grains after all, seeds basically and hence the base for plants. The long, thin green houses will extend horizontally out of the vertical silos on the ground floor, as if the grains that once were stored in the silos are now seeded and grow food right outside. The ground floor will accommodate a market hall, that can host a farmer's market or a flea market.

The combination of library/theatre/art studios and a market place with urban farming is meant to attract people of different ages, educational backgrounds and interests.

Reference Projects

Beinecke Rare Book and Manuscript Library

Gordon Bunshaft's Beinecke Rare Book and Manuscript Library has fascinated me ever since I first stumbled upon a picture of its interior. To me, it embodies a near-perfect space, the notion that architecture is the art of space. The building hosts rare manuscripts, a content of invaluable worth which needs to be well preserved and protected from any damage. The building does exactly that while also evoking images of a treasure box. The outside, a white marble and concrete box without any openings, manages to be both completely functional and very symbolic at the same time. No direct sunlight is let into the interior to prevent the books from damage through sunlight.

However, natural light does penetrate into the interior by filtering through the thinly cut, concave marble plates. The shielding off of sunlight does not block out any outside light, but rather casts a mystical light onto and worthy of its content. You are being made aware of the value of the books by the spatial atmosphere.

While the outside does not give away anything about the inside, the inside itself celebrates its content and function. Once you have entered from underneath the box, almost hovering above ground, you emerge into a space with a multi-story tower not only containing, but showcasing the rare manuscripts and books. This is the main feature of the inside space. A reading area surrounds the tower, spanning across the whole building on only one floor, giving the tower enough space around it to unfold its impression.

What I would like to incorporate in my project is the way books are showcased and instrumentalised as a spatial element. In Bunshaft's masterpiece, the interior seems to be held up and supported by books themselves, thus managing to turn bookshelves into metaphorical structural elements. Like the world's knowledge is maintained and supported by books, here the space, particularly the structure, seems to rely on the support of the books.



Image 35: The exterior of the Beinecke Library



Image 36: The interior of the Beinecke Library

Zeitz MOCAA

Heatherwick Studio has transformed this former grain silo in Cape Town's harbour into a cultural highlight at the V&A Waterfront. With the conversion of the "Waterkant", the shoreline in downtown Cape Town, from an industrial to a commercial area, this silo was no longer of use. However, since it has long shaped the Cape Town skyline, the city wanted to maintain this structure. With plenty of retail and culinary facilities this city highlight was missing a place dedicated to local contemporary art and culture. The silo was chosen to house a new art gallery.

Heatherwick Studio has found an interesting way of maintaining the emblematic cylindrical silo tanks and housing exhibition space in them. To create an open space to grasp the sheer scale and number of tanks, the architects chose to cut a large grain-shaped sphere into the grid of tanks. It would function as both a circulation and an exhibition space.

The exterior remains largely untouched, with layers of old paint being removed to emphasize its raw appearance. The most obvious alteration are the new, bulging out windows of the tower. This is meant to transform the tower into a glowing lantern, a beacon in the harbour.

Inspiring to me in this project is the way the tanks are opened up and extraordinary space is created. While the grid of cylindrical spaces is fascinating as an idea, it is hardly visible as they are in their function of storage. Additionally, I strongly approve of the limited changes to the exterior.

I, too, am convinced that leaving the outside as brutal and original as they are is crucial to creating a new, honest space in an old structure.



Image 37: Section through Zeitz Mocaa

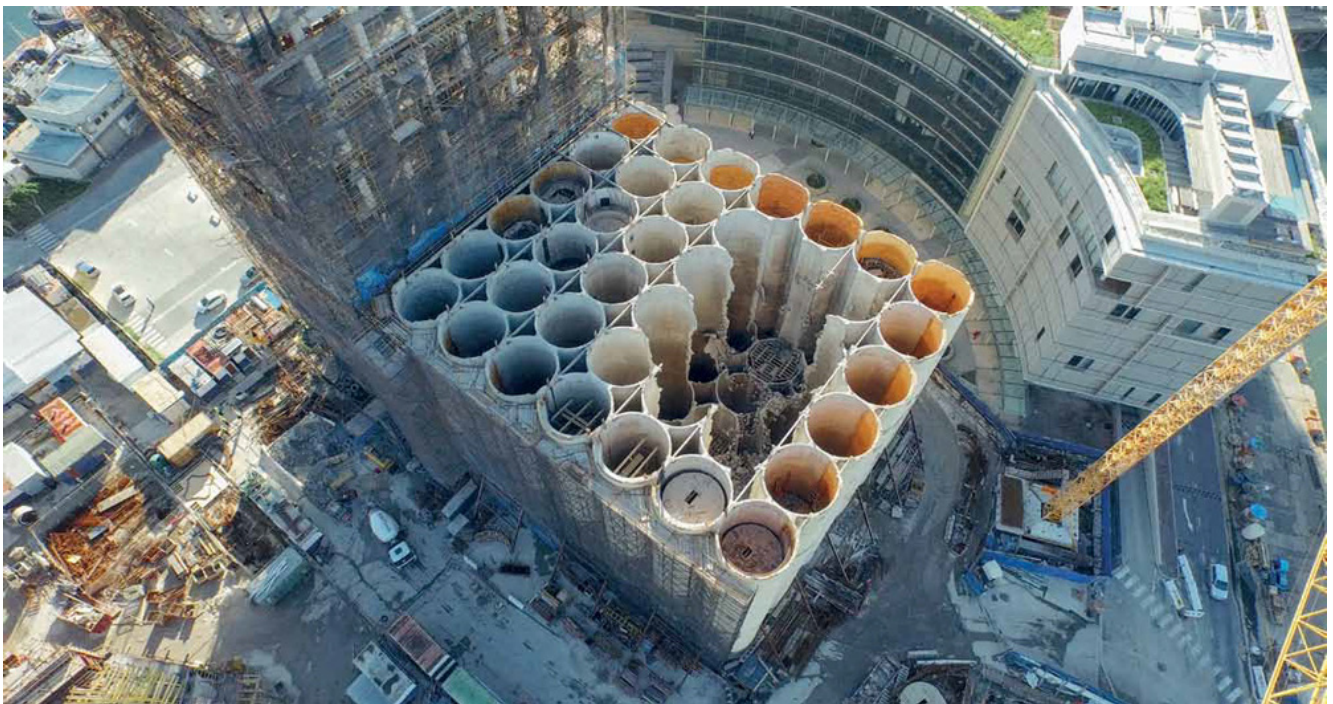
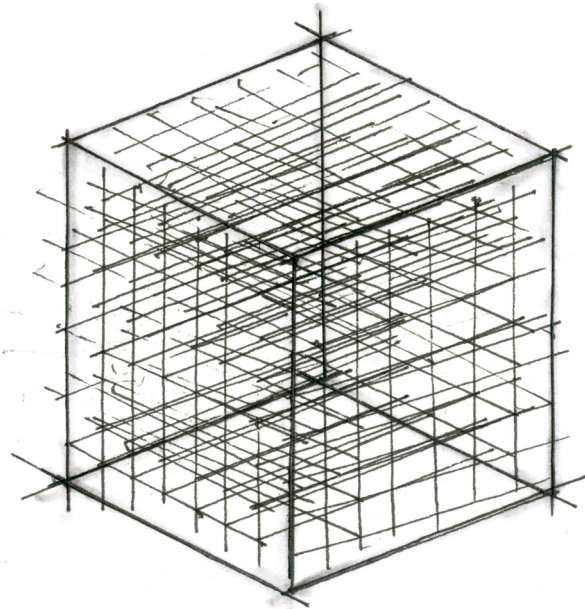


Image 38: Concrete carving at Zeitz Mocaa

Concept

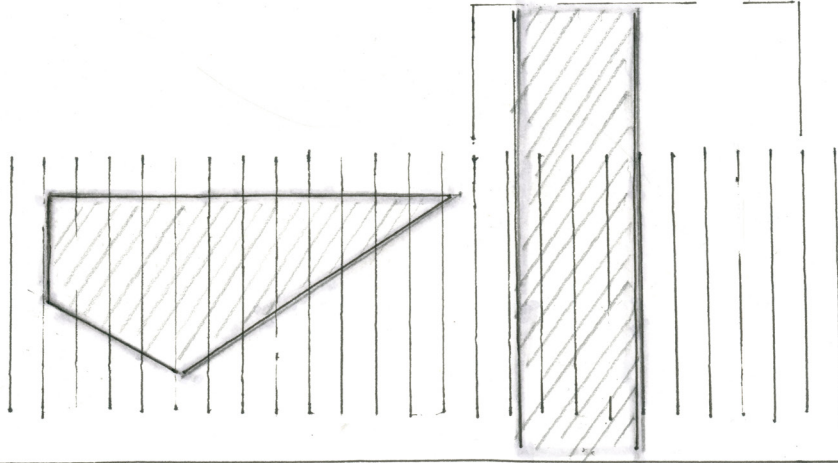
To keep the spirit of the industrial area alive, the idea is to have a strongly function-based redesign that allows for the majority of the appearance to stay intact. The outside walls of the silos will stay completely untouched for the most part, only slender cut outs in few areas are necessary for daylight to come inside certain rooms. The majority of the interior space will be illuminated from above. Two big cut outs in the ceiling, one rectangular one over the terraced reading area/auditorium and a circular one over the wide spiral stair case, will lead daylight all the way to the ground floor.

The ground and top floor of the main building will remain largely untouched. The focus will be put on the existing column grid by removing any remainders of walls in between the individual columns and glassed with floor to ceiling windows. The ground floor will see most of the interior columns removed, as the silos resting on them will be demolished.



Library

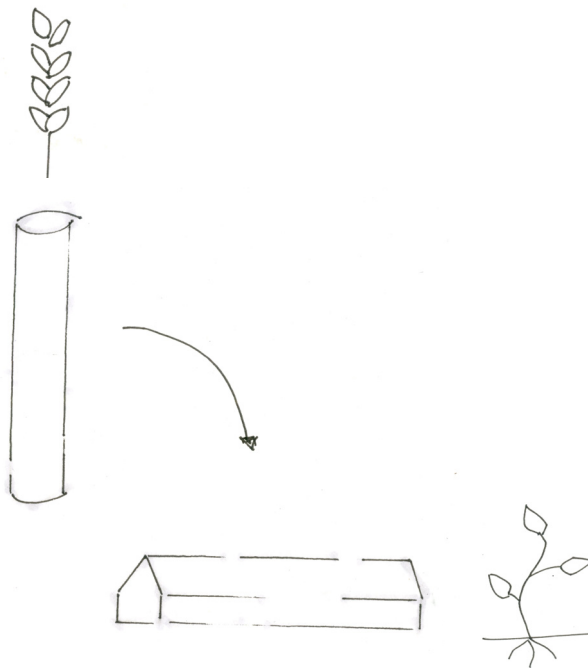
The library archive is left largely untouched. Thin grid platforms are installed every 2,6metres inside the silo cylinders. passages are carved into the silos tanks to create a horizontal connection. The walls of the silos are lined with panels to turn the entire interior into one coherent, big book shelve. The notion is to create a bee hive of knowledge with people roaming the platforms and moving up and down the narrow spiral stairs in search of knowledge. The outside of the archive part is left completely untouched, which prevents any damage to the books by sunlight. Inly the most southern row of silos has thin, vertical openings to bring daylight into the chamber-like studies.



Auditorium and Atrium

In order to create coherent spaces and enable visitors to grasp the spatial configuration of the silo I intend to carve extensive spaces out of the silo grid. One circular cut out will open up individual silo tanks to form a vast vertical cylinder that connects the ground with top level.

A spiral stair case will function as a connection of both different heights as well as a bridge between the library archive and the theatre/auditorium. While walking along the spiral path, visitors get a first glimpse of the silos. The light coming from above is meant to function as draw upwards. The cut out extends to the top studio space and bar opening up the walls of the addition. Another cut out creates the space for the terraced auditorium. Three rows of silos will be cut out to open the theatre space.



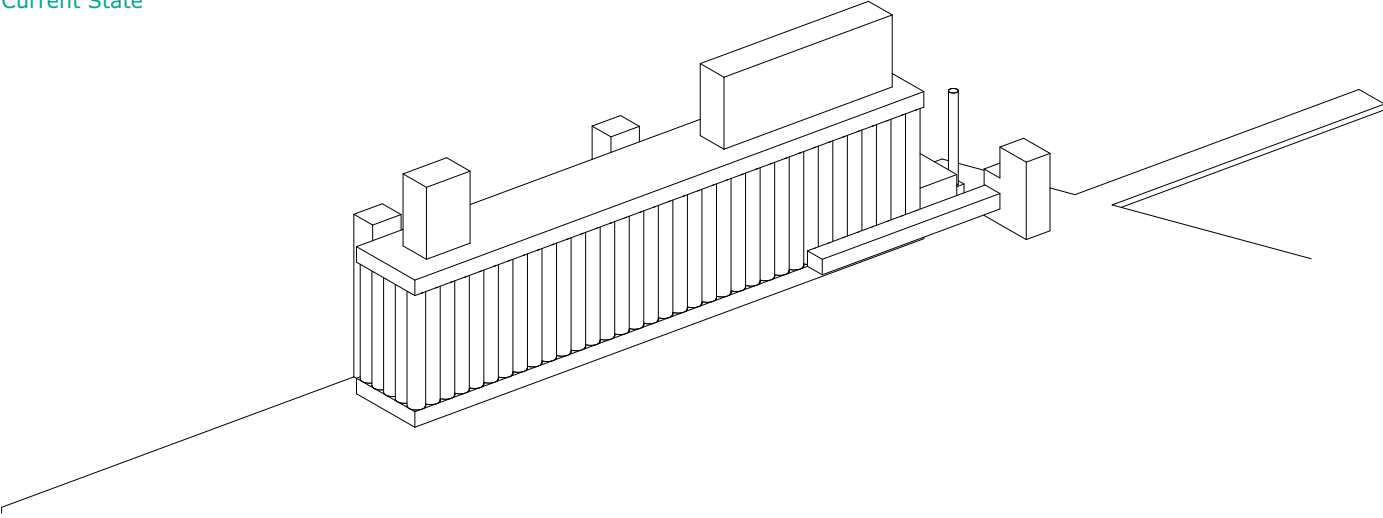
Green Houses

The green houses will be the only new addition to the building. They perfectly complement the industrial architecture as they are purely designed in the spirit of functionality. Simple glass boxes that allow maximum light and warmth into the inside with gable roofs for drainage. Proportion-wise the green houses will imitate the silos in order to emphasize the vertical rhythm of the silos also in the horizontal dimension.

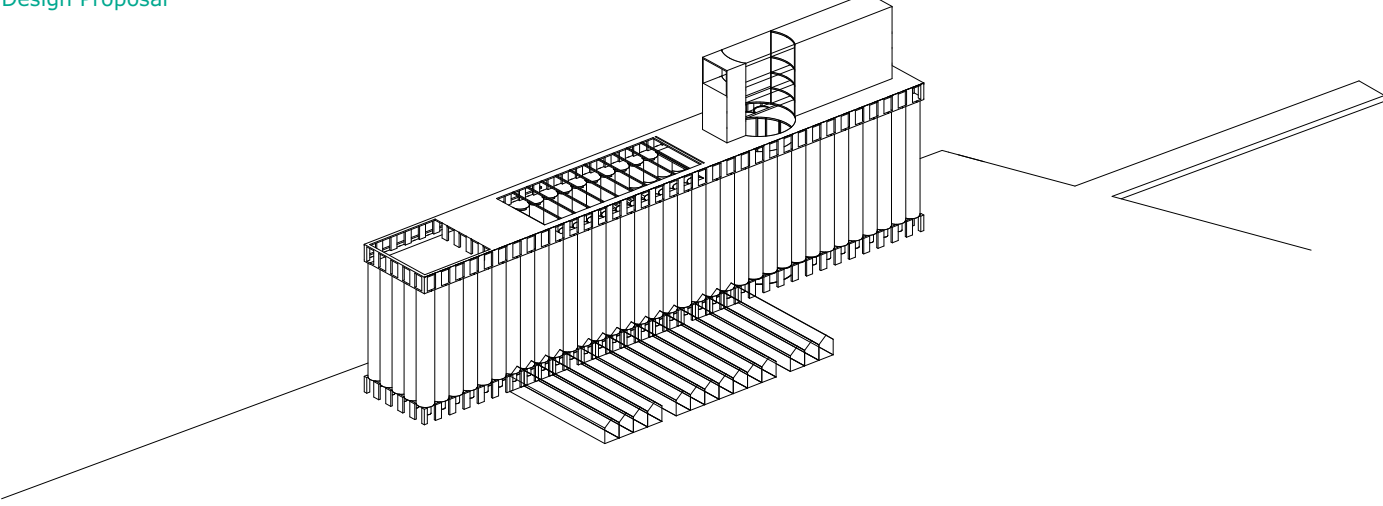
On top of that, they will also serve as a gateway into the building. With voids in-between them, the transition from outdoor into indoor space is blurred, while the interior of the green houses is a semi indoor space as well.

The Transformation

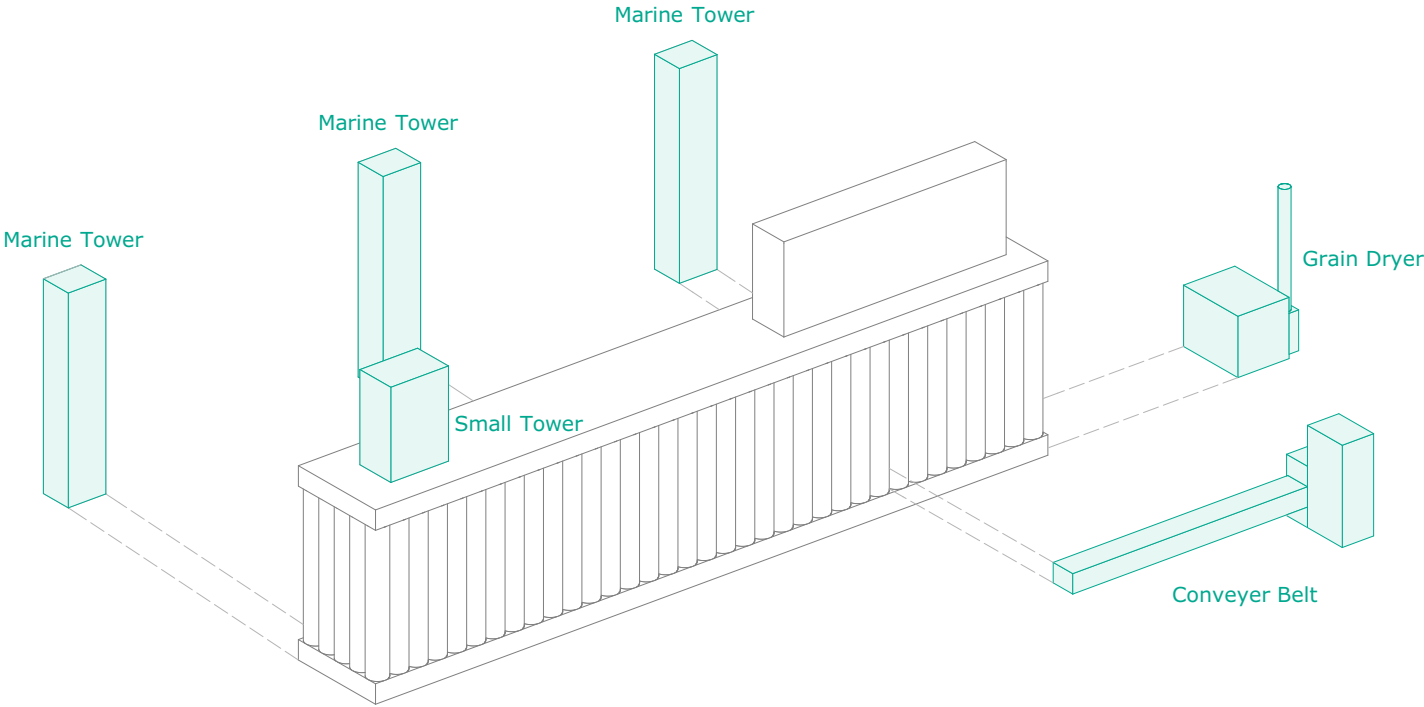
Current State



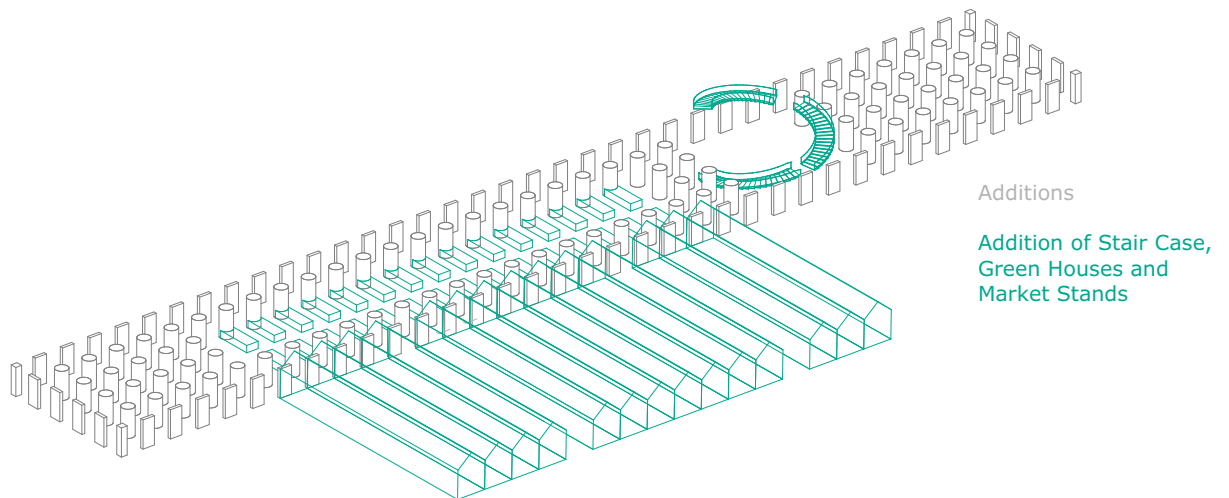
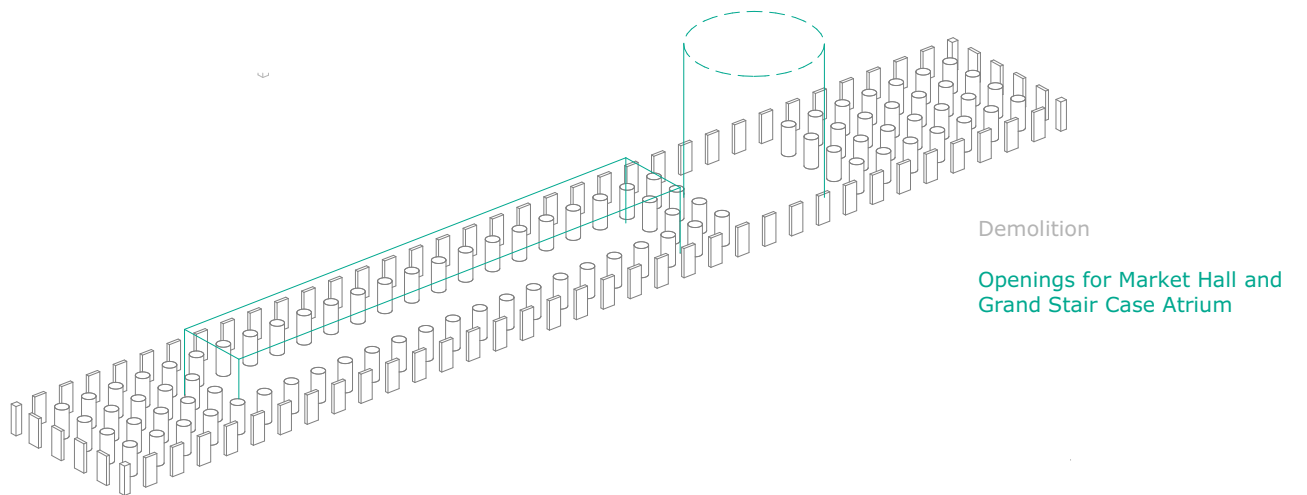
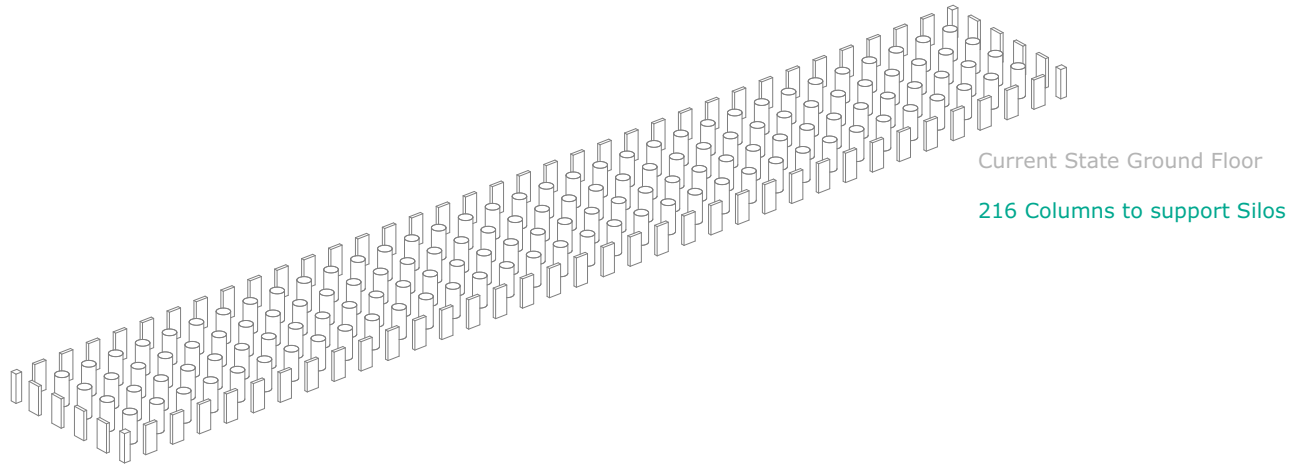
Design Proposal



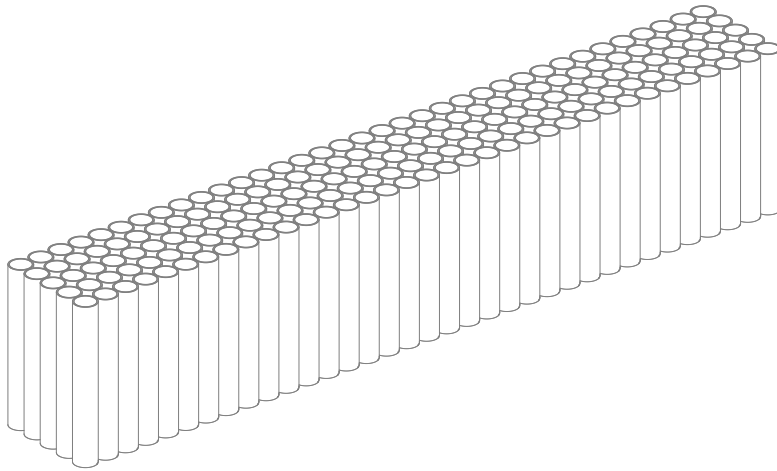
Demolition of unwanted
Volumes



Groundfloor Transformation

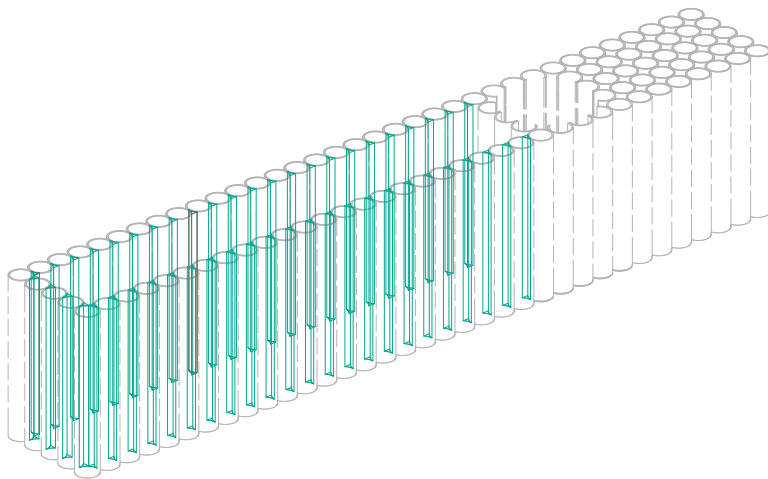


Silo Block Transformation



Step 1

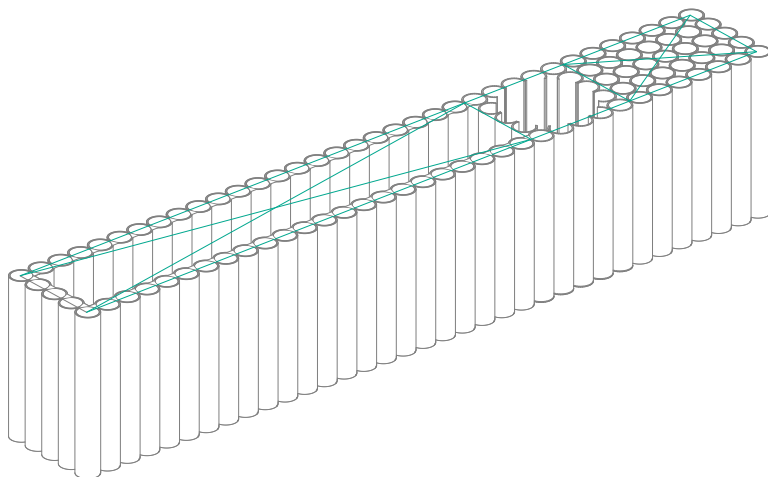
Assumed Current State



Step 2

Demolition of Silos
for Auditorium and
Grand Stair Case

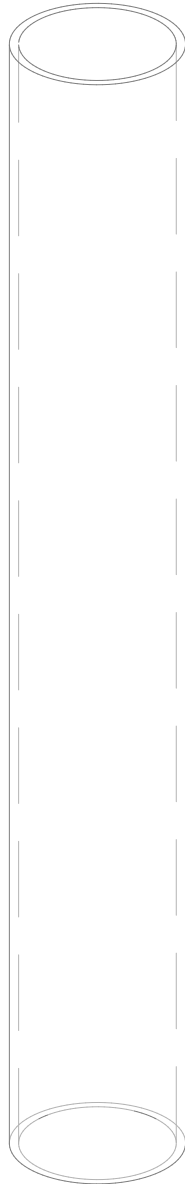
Reinforcement of
Auditorium's Inner Walls



Step 3

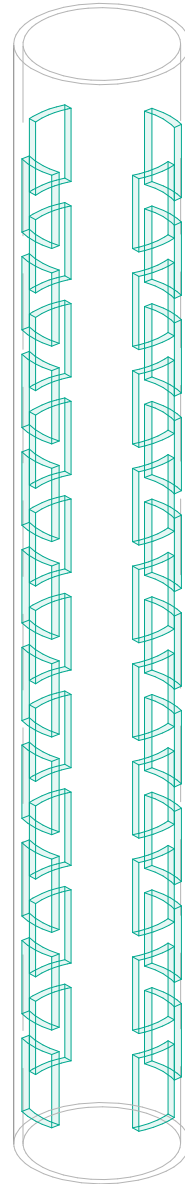
The Auditorium and the
Library form two stable cores
to support the delicate
Atrium with Grand Stair Case

Silo Carvings



Current State

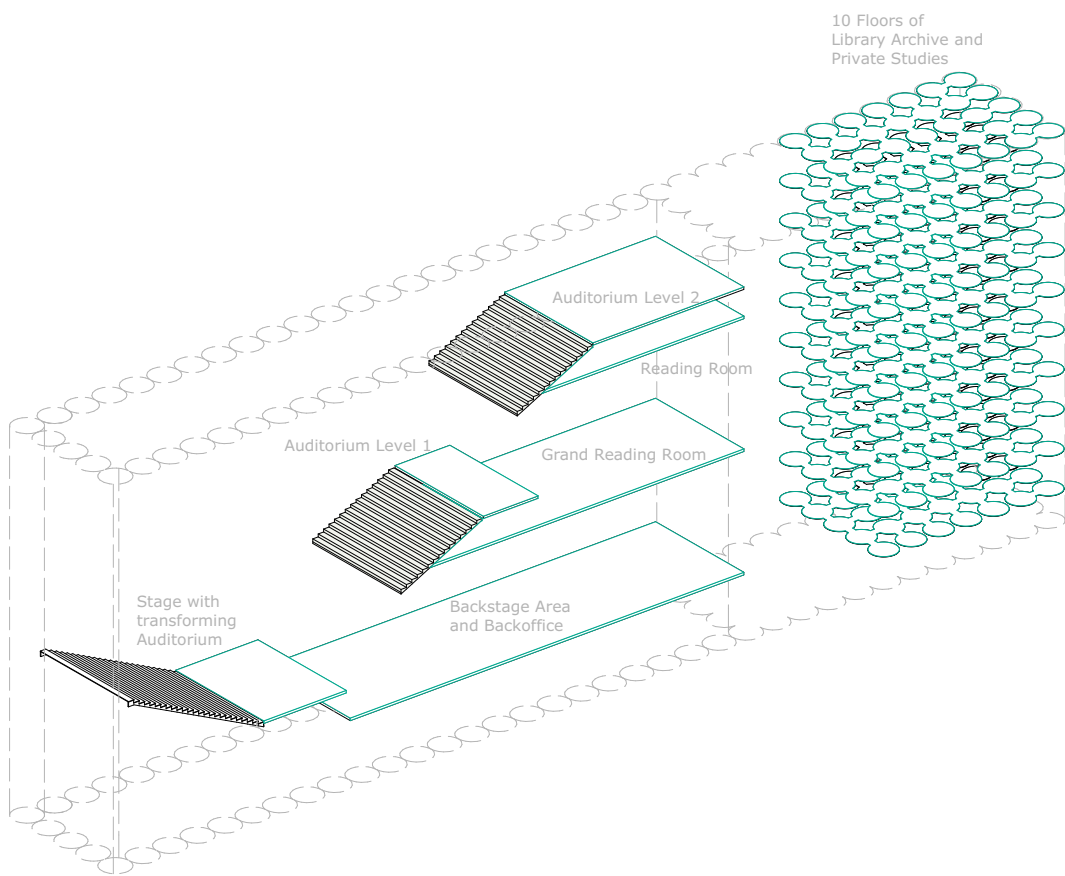
No Openings



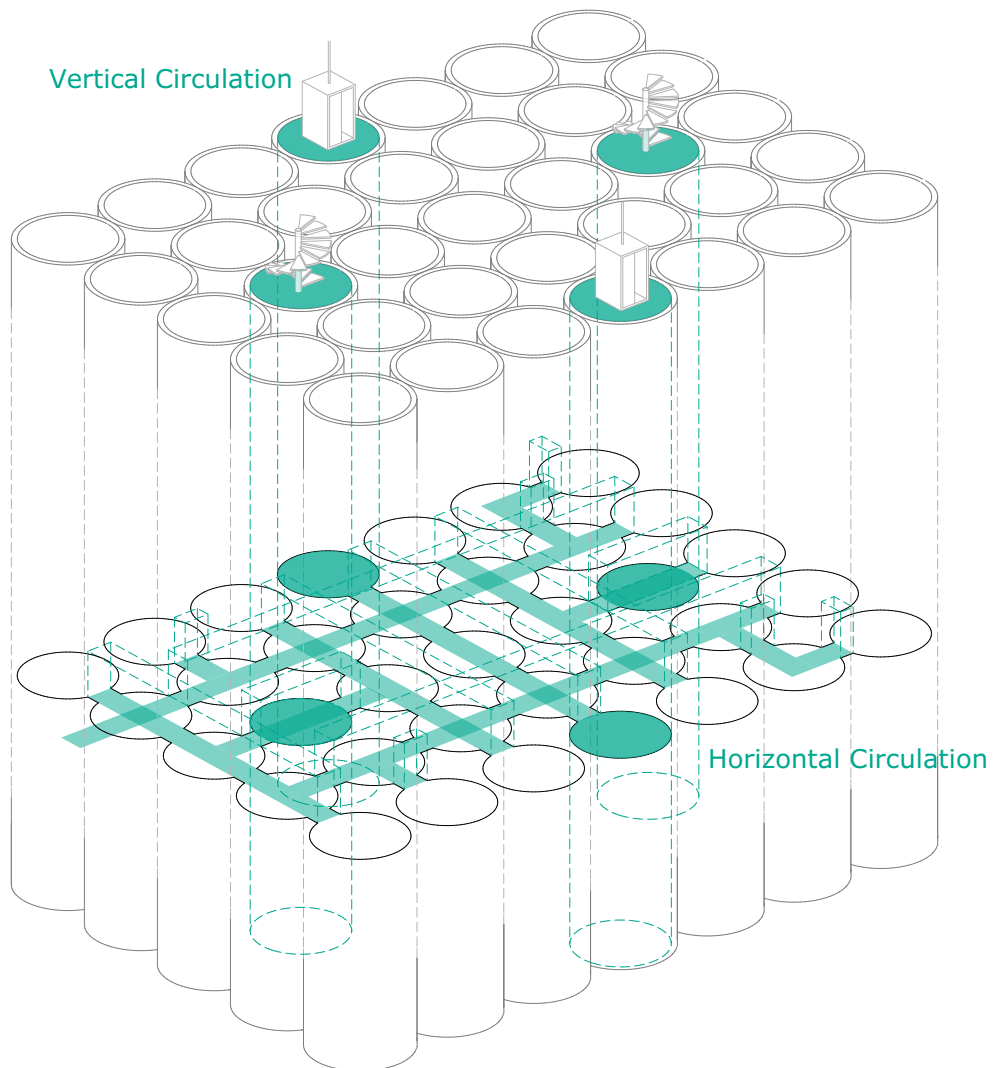
Cuts into Silos

Openings are reinforced
for Structural Support of
Silo Walls

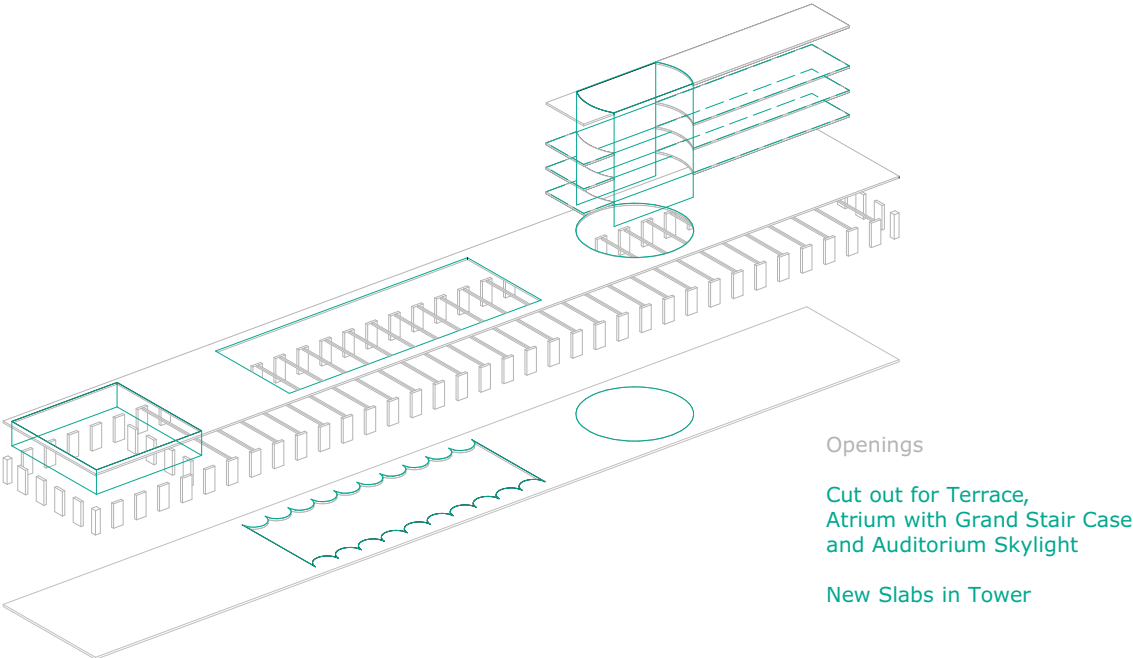
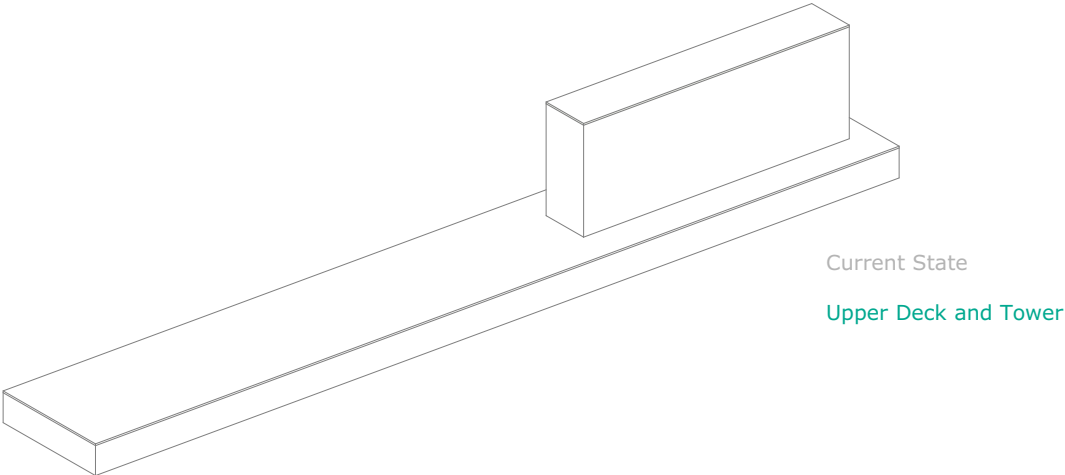
Silo Block Slab Insertion



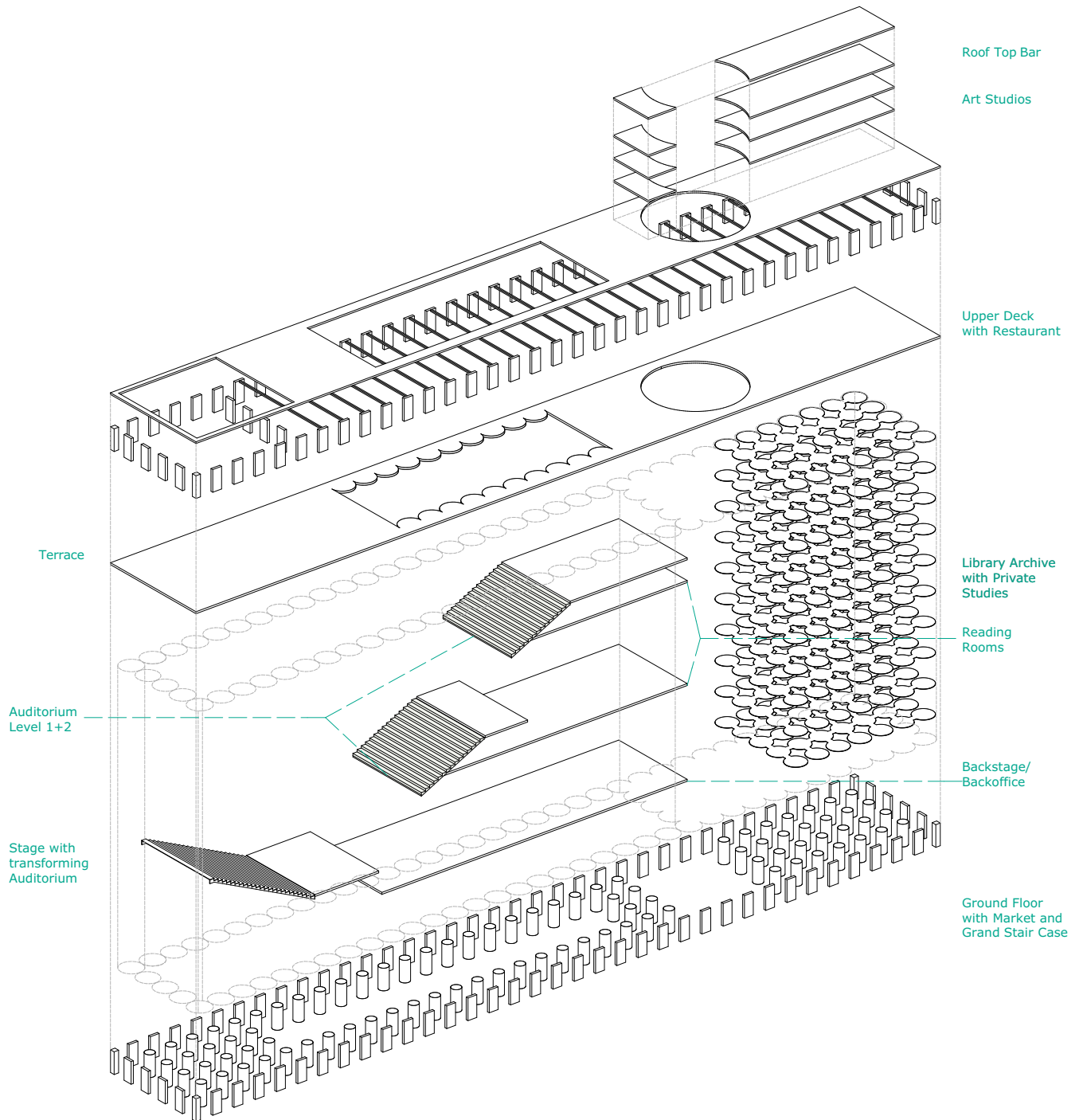
Library Archive Circulation



Upper Deck and Tower Transformation



New Interior



Lot Conversion

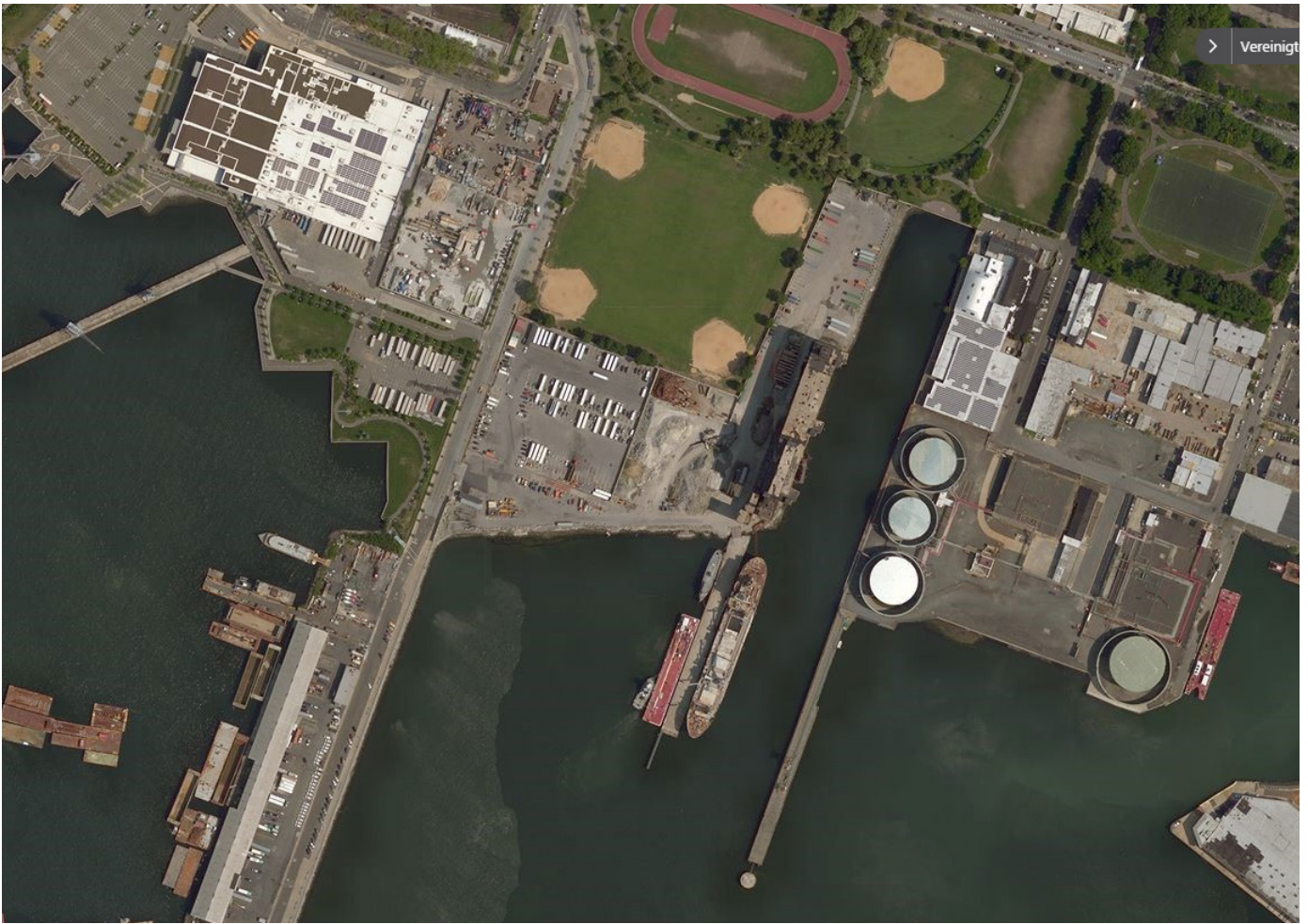
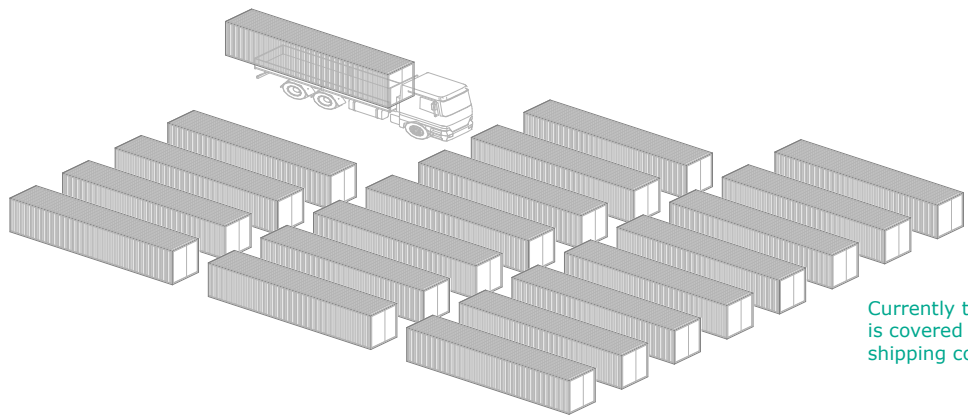
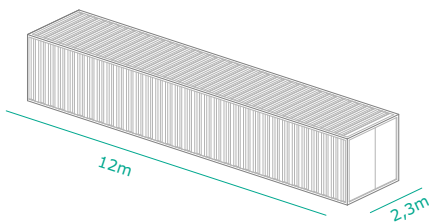


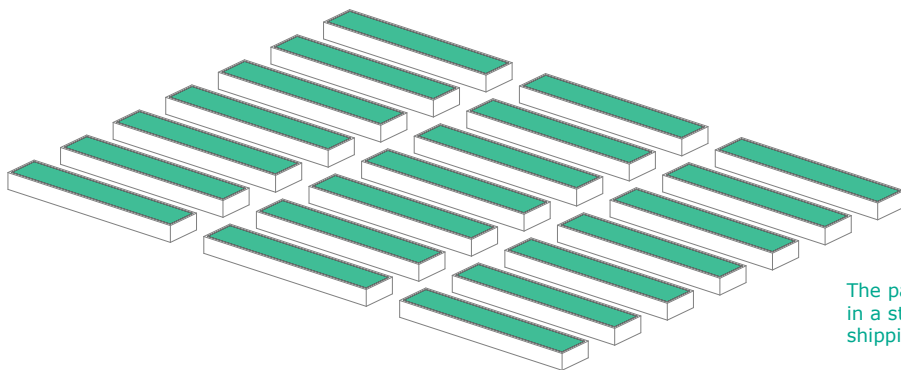
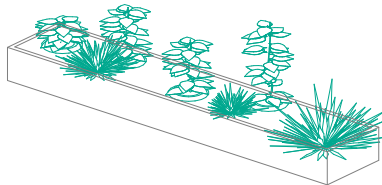
Image 39: Aerial view of the Red Hook grain Terminal



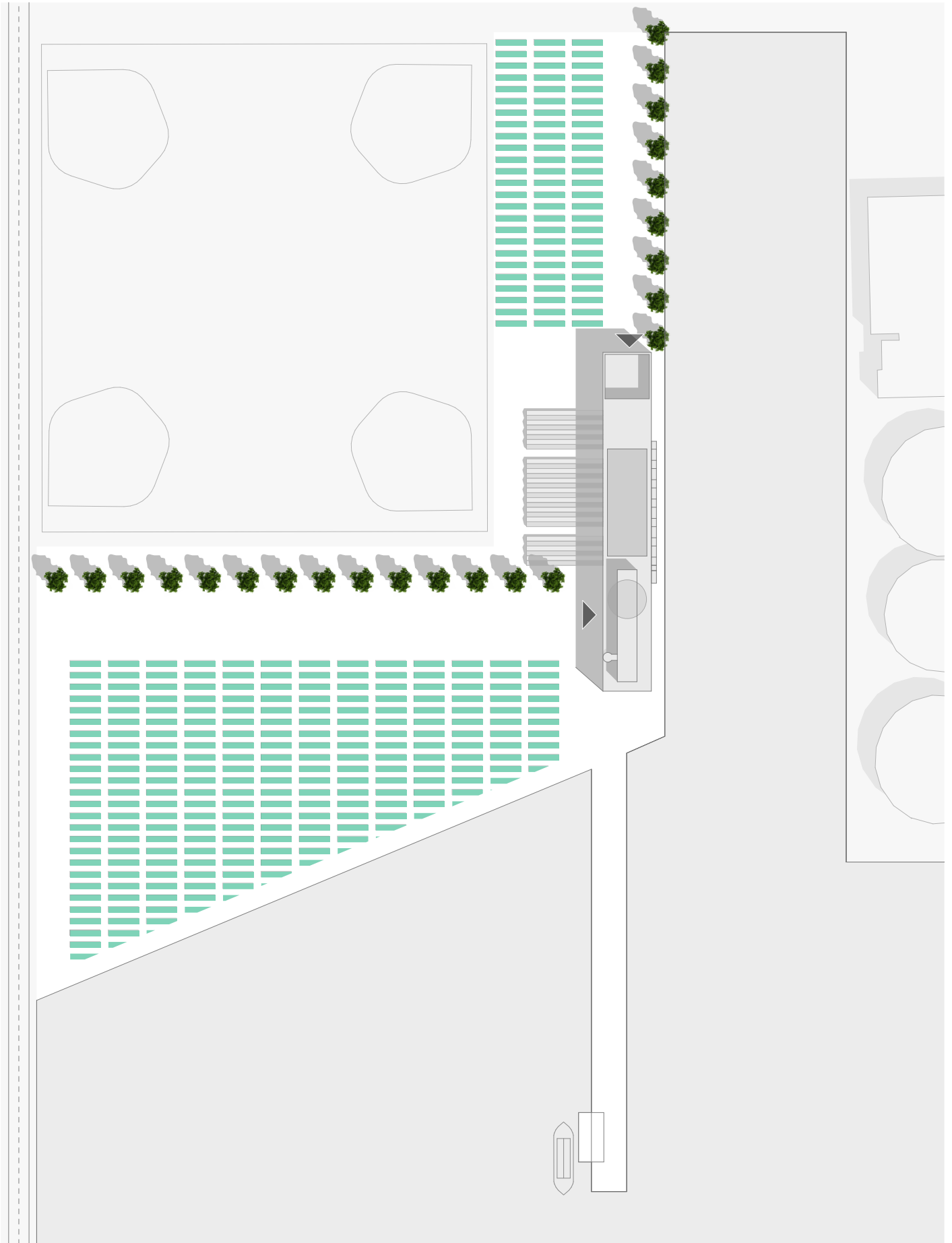
Currently the property is covered with shipping containers

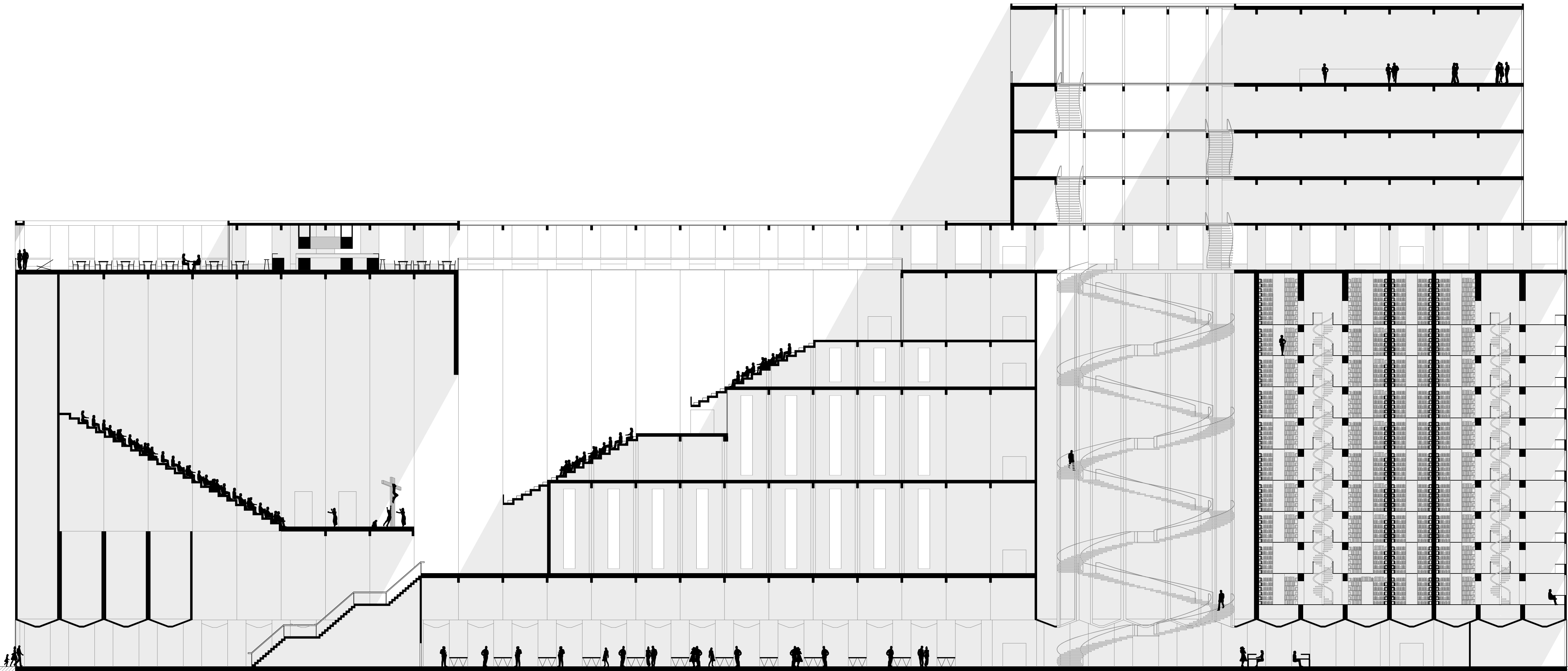


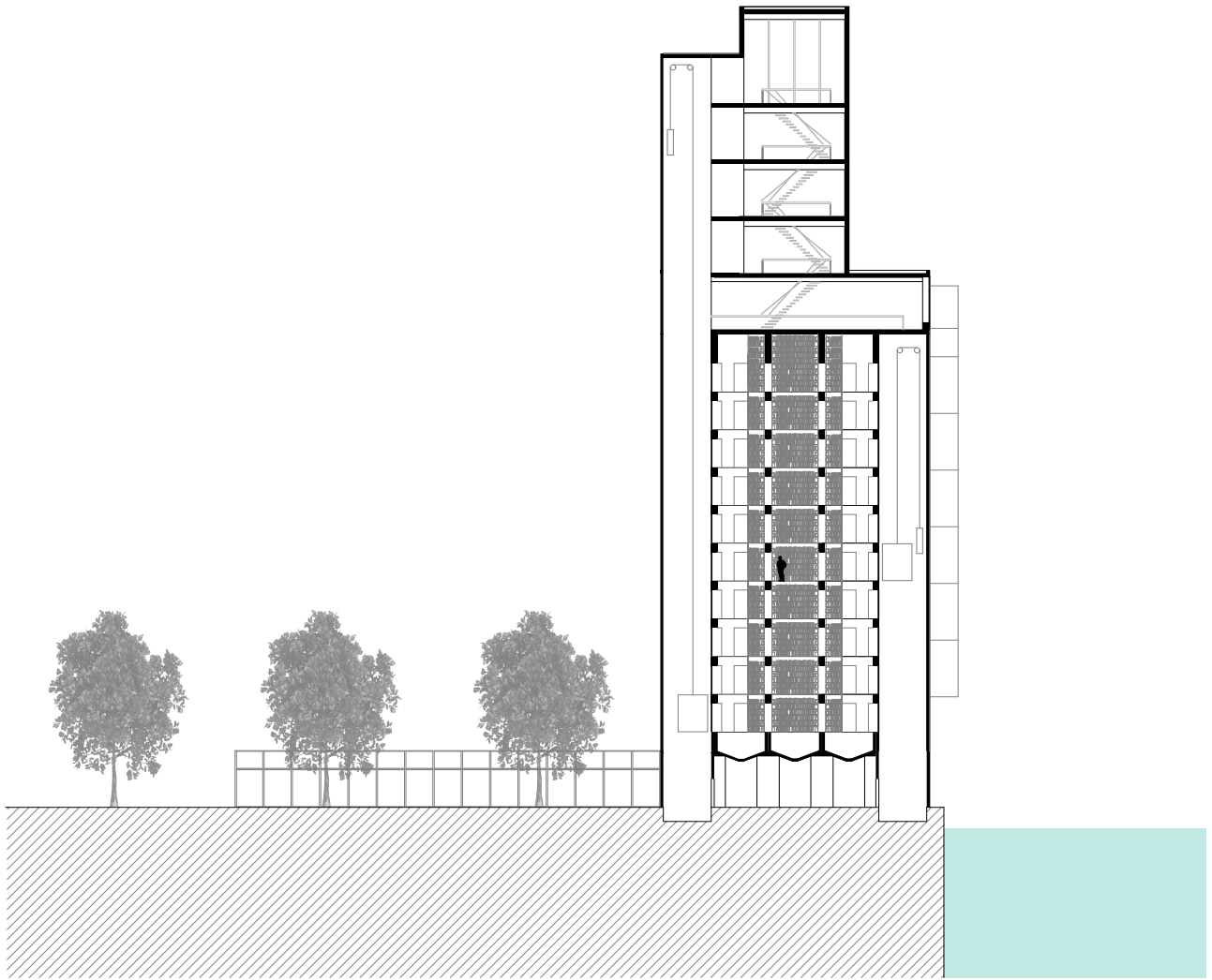
The idea is to keep the feeling of an industrial port alive, by replacing the containers with farming patches of the same dimensions



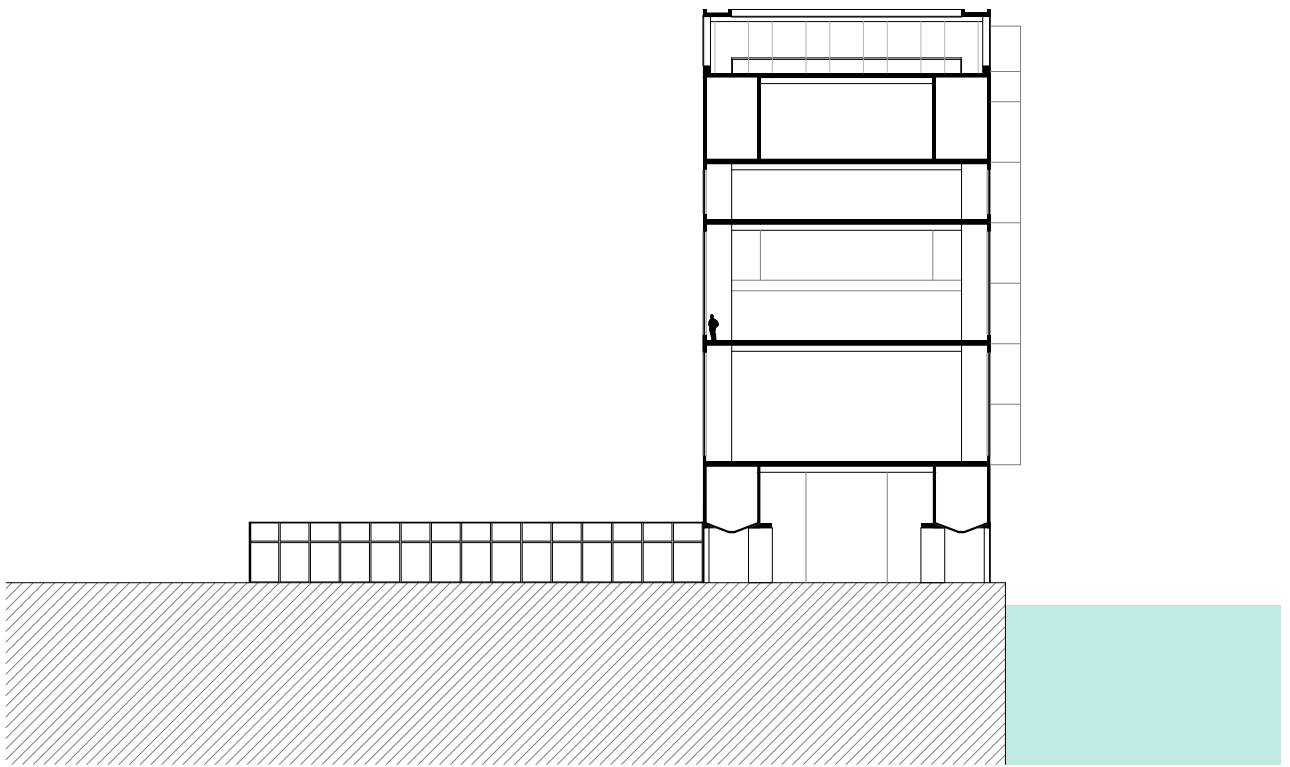
The patches are arranged in a strict grid, just like the shipping containers



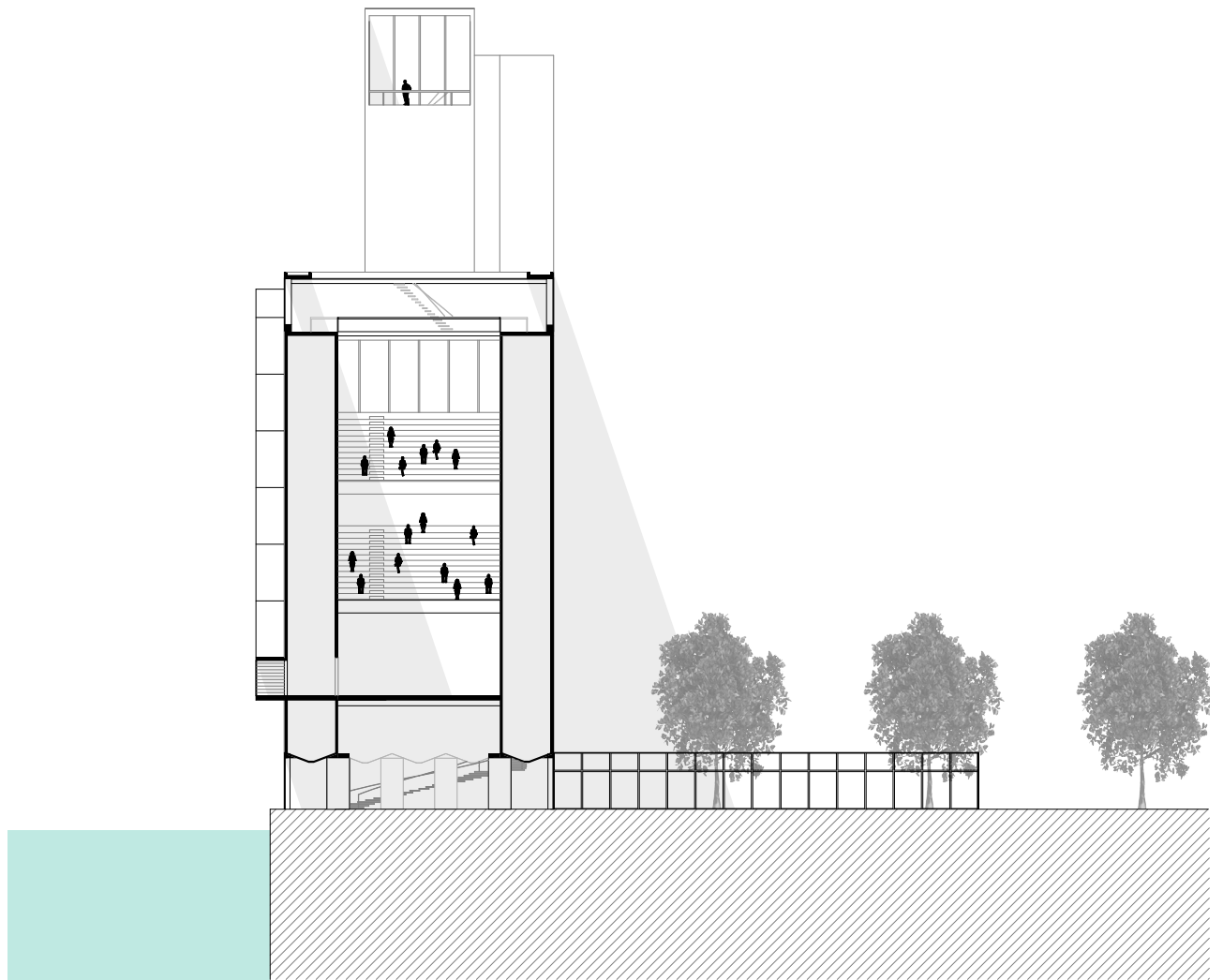




Section 1:500



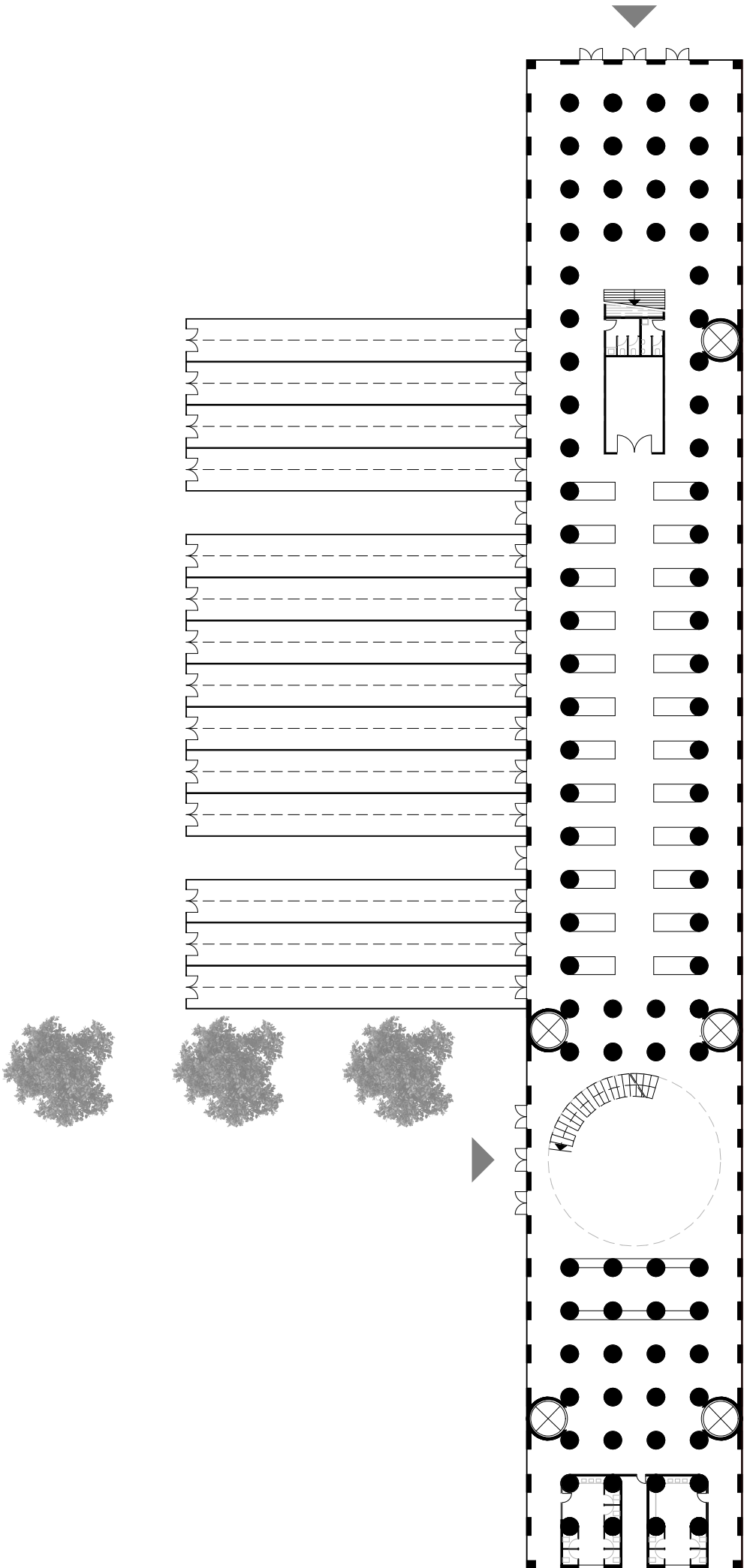
Section 1:500



Section 1:500

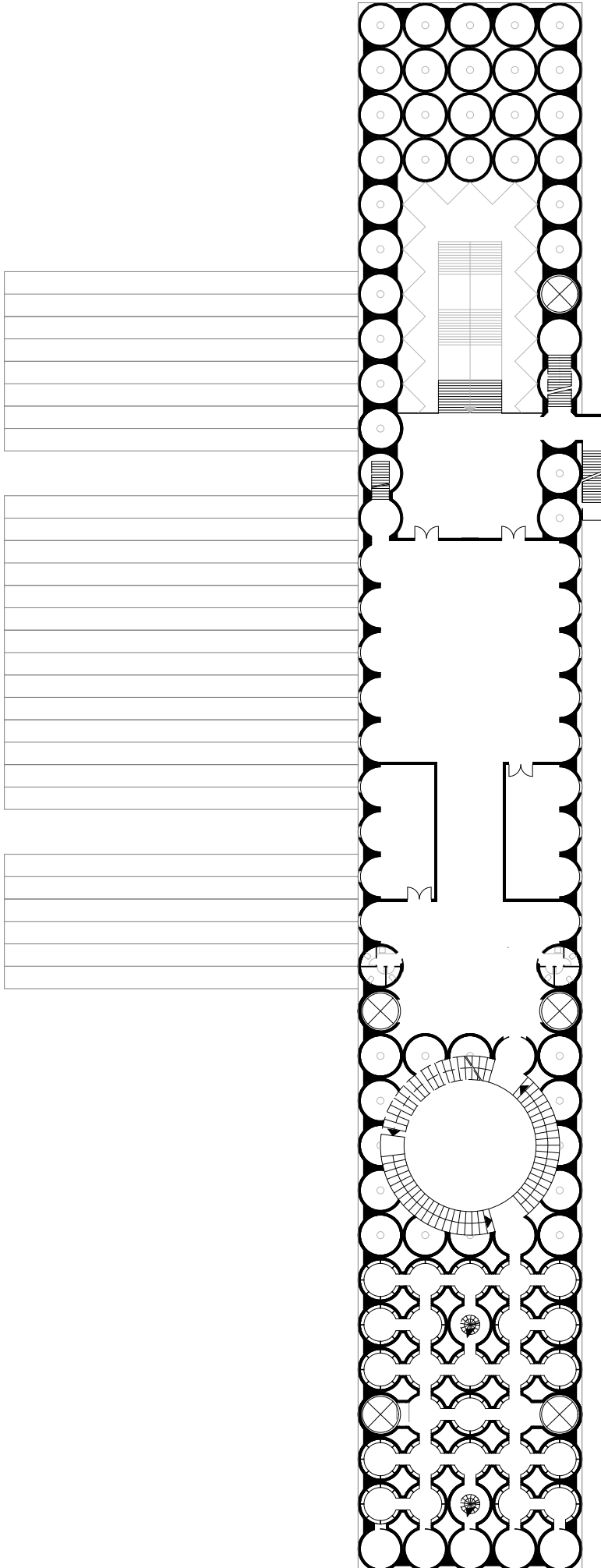
Groundfloor 1:500

- Green Houses
- Market
- Storage
- Library Archive



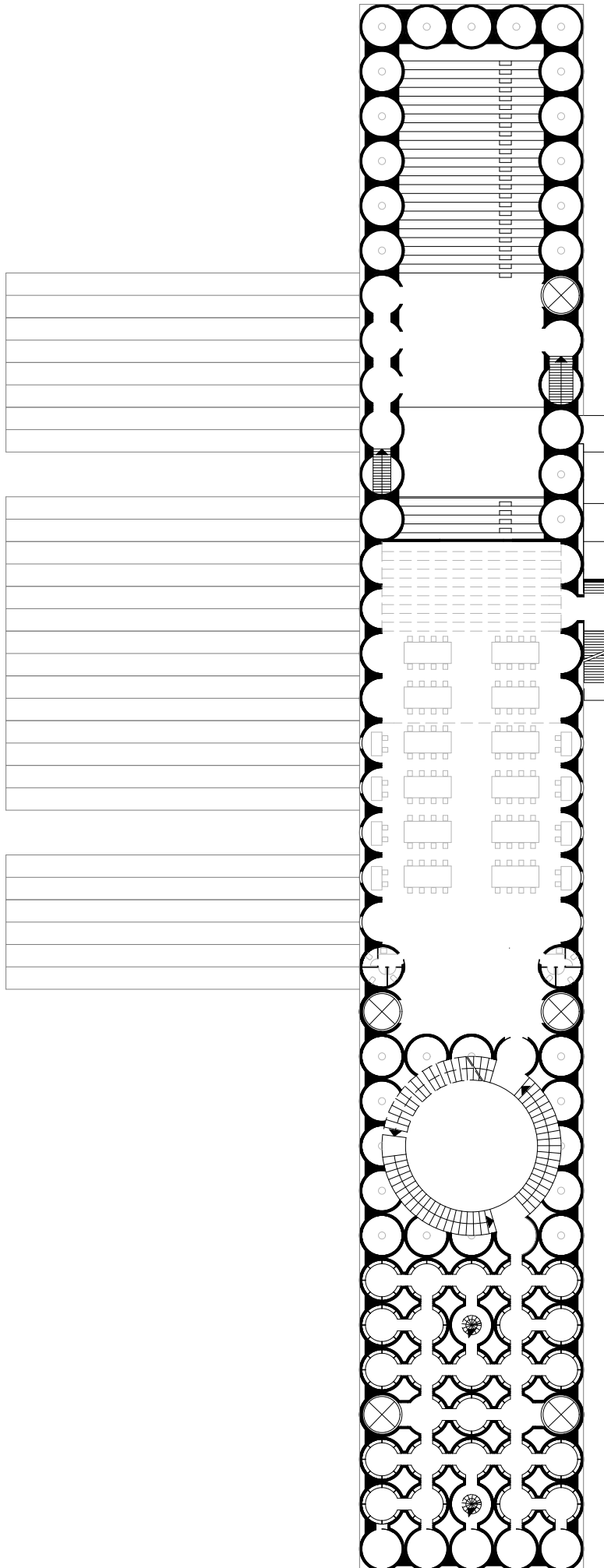
1st Floor 1:500

Upper Foyer
Backstage Area
Backoffice
Library
Private Studies



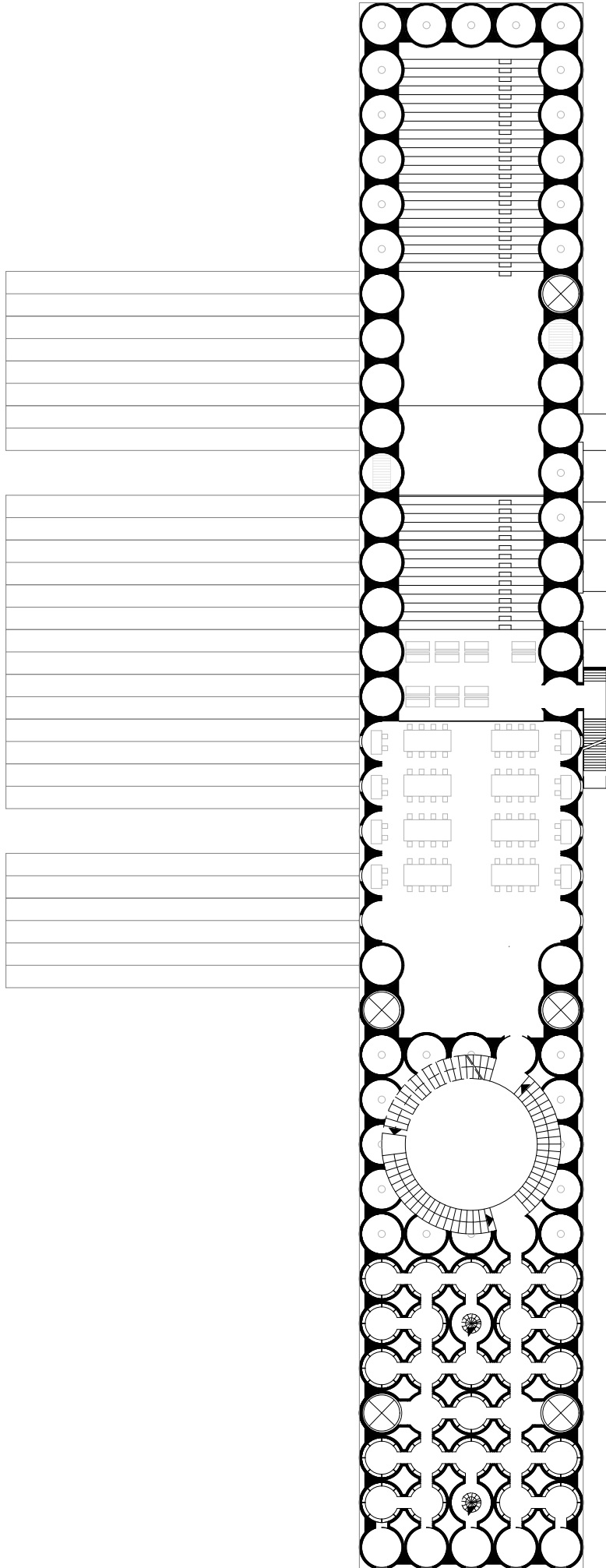
2nd Floor 1:500

Stage
Tranformabel Auditorium
Auditorium Level 1
Grand Reading Room
Library
Private Stuides



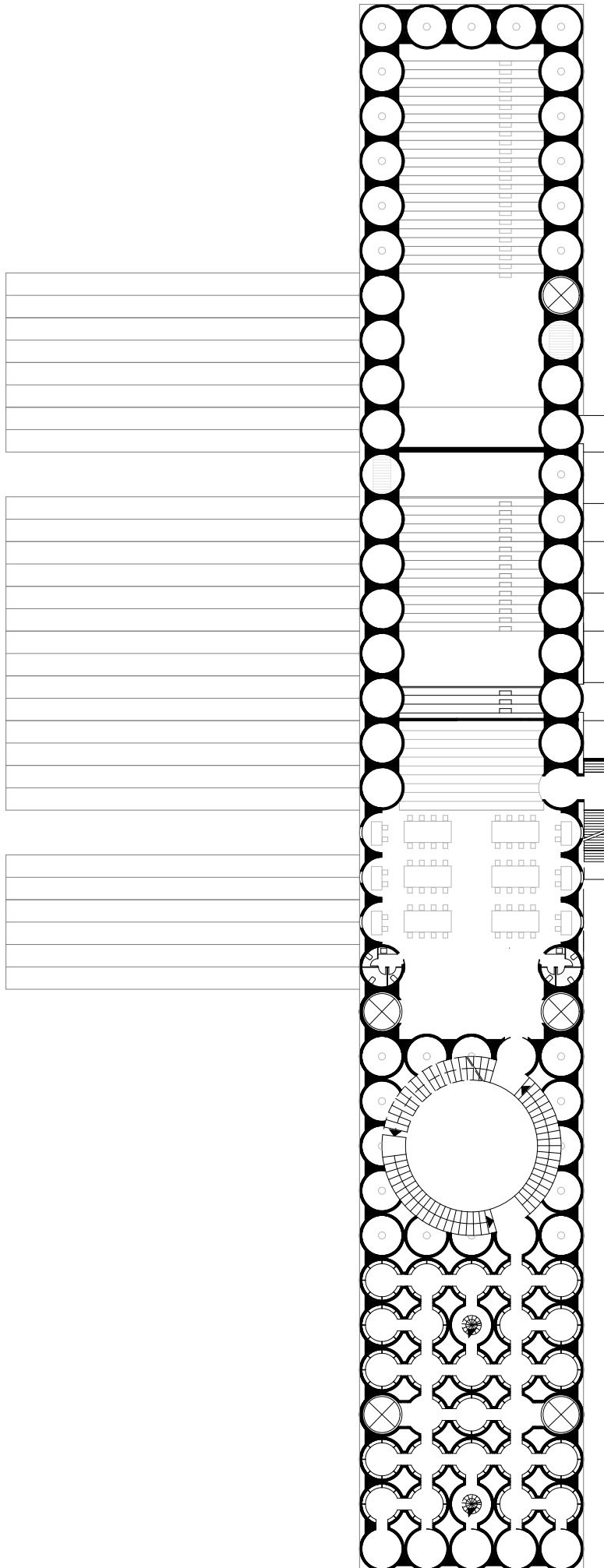
3rd Floor 1:500

Tranformabel Auditorium
Auditorium Level 1
Grand Reading Room
Library
Private Stuides



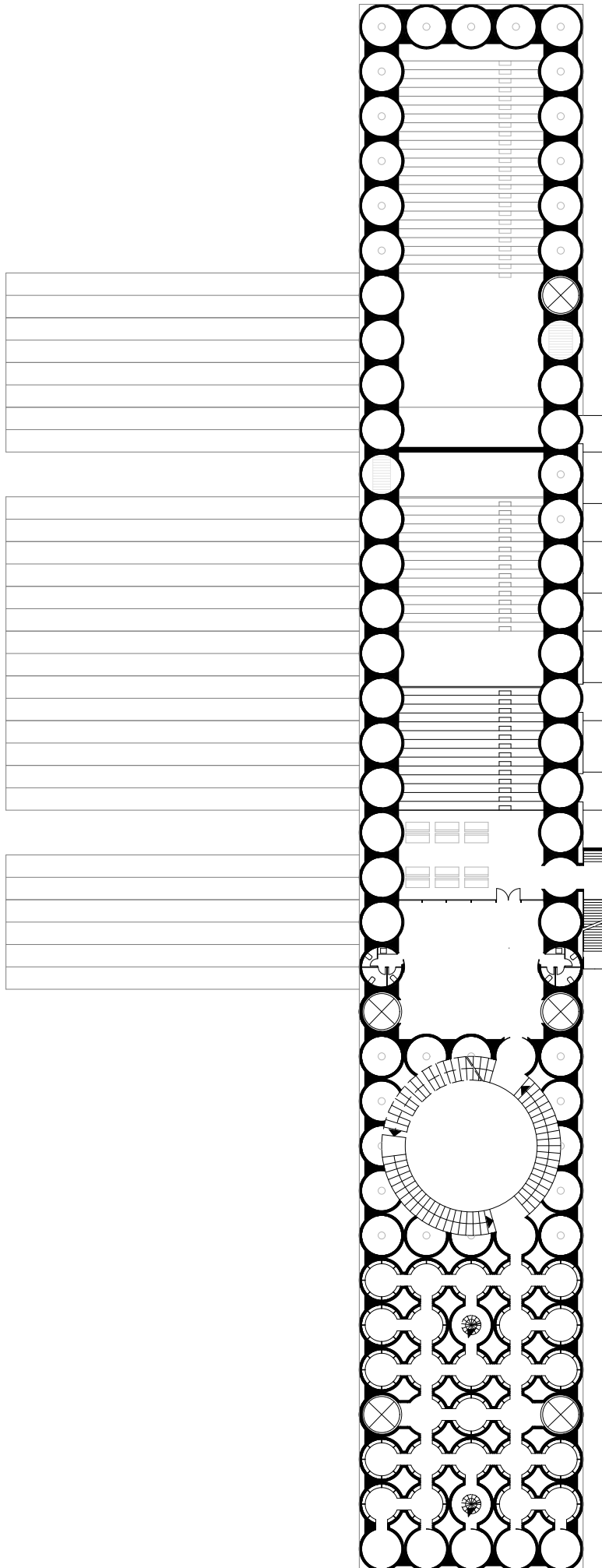
4th Floor 1:500

Auditorium Level 2
Small Reading Room
Library
Private Stuides



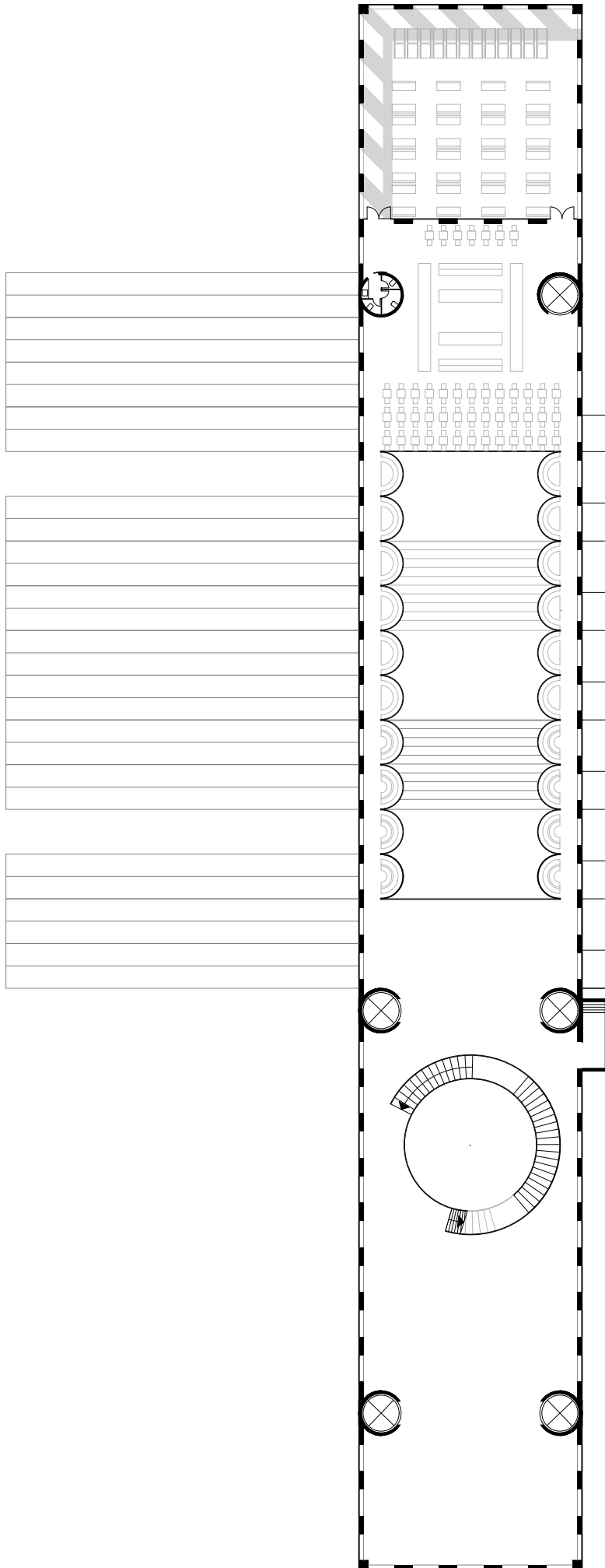
5th Floor 1:500

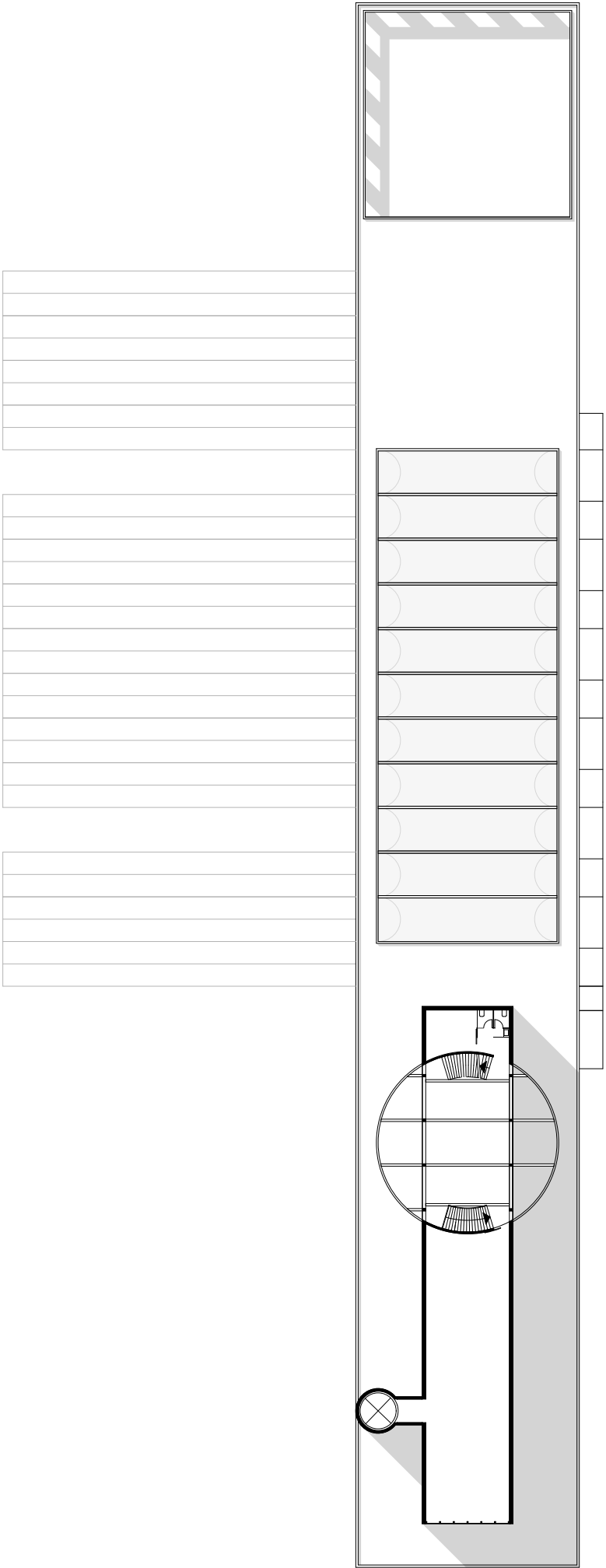
Auditorium Level 2
Auditorium Back Room
Library
Private Stuides

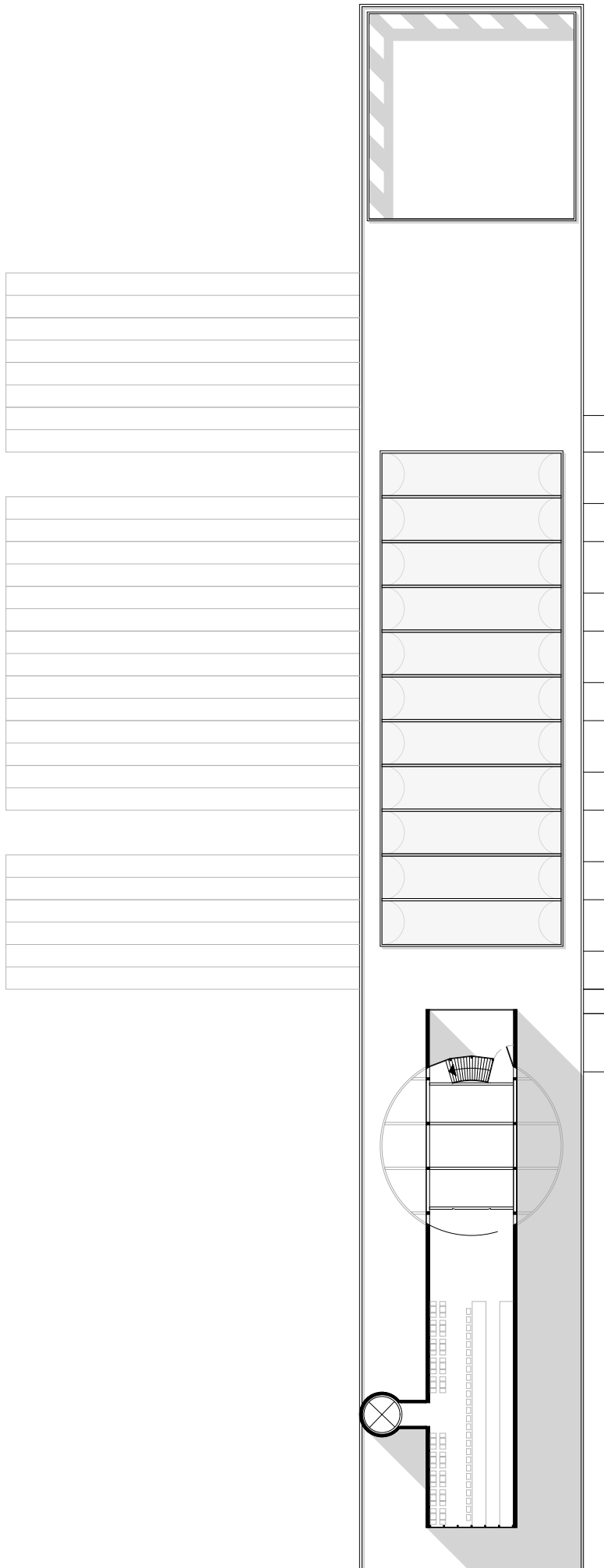


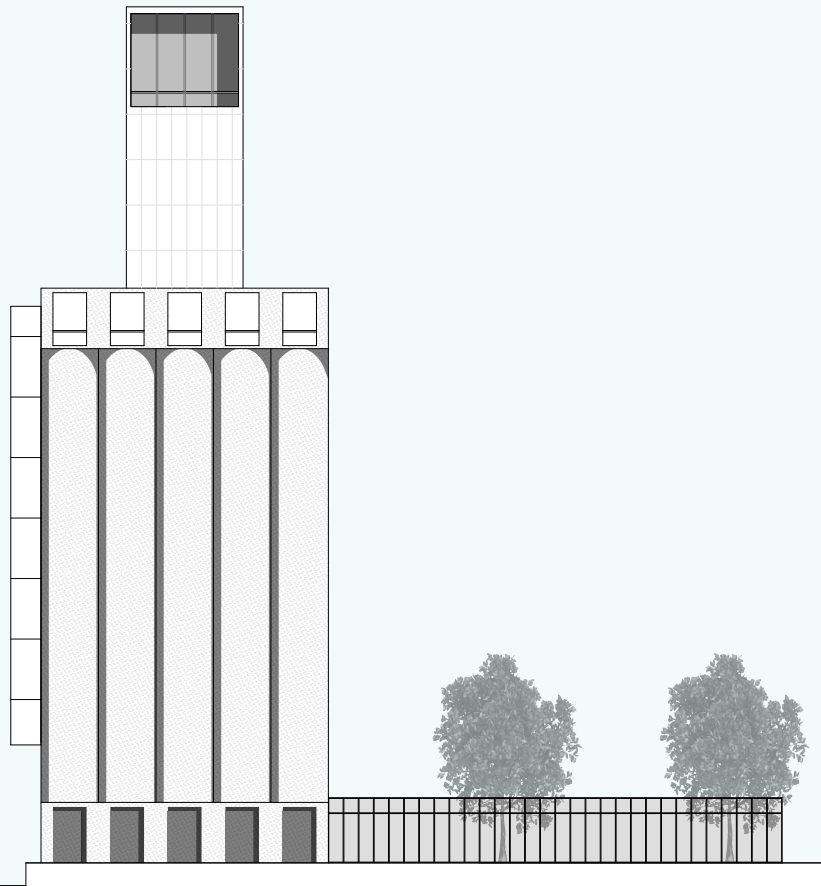
6th Floor 1:500

Upper Deck
Gallery
Restaurant
Terrace

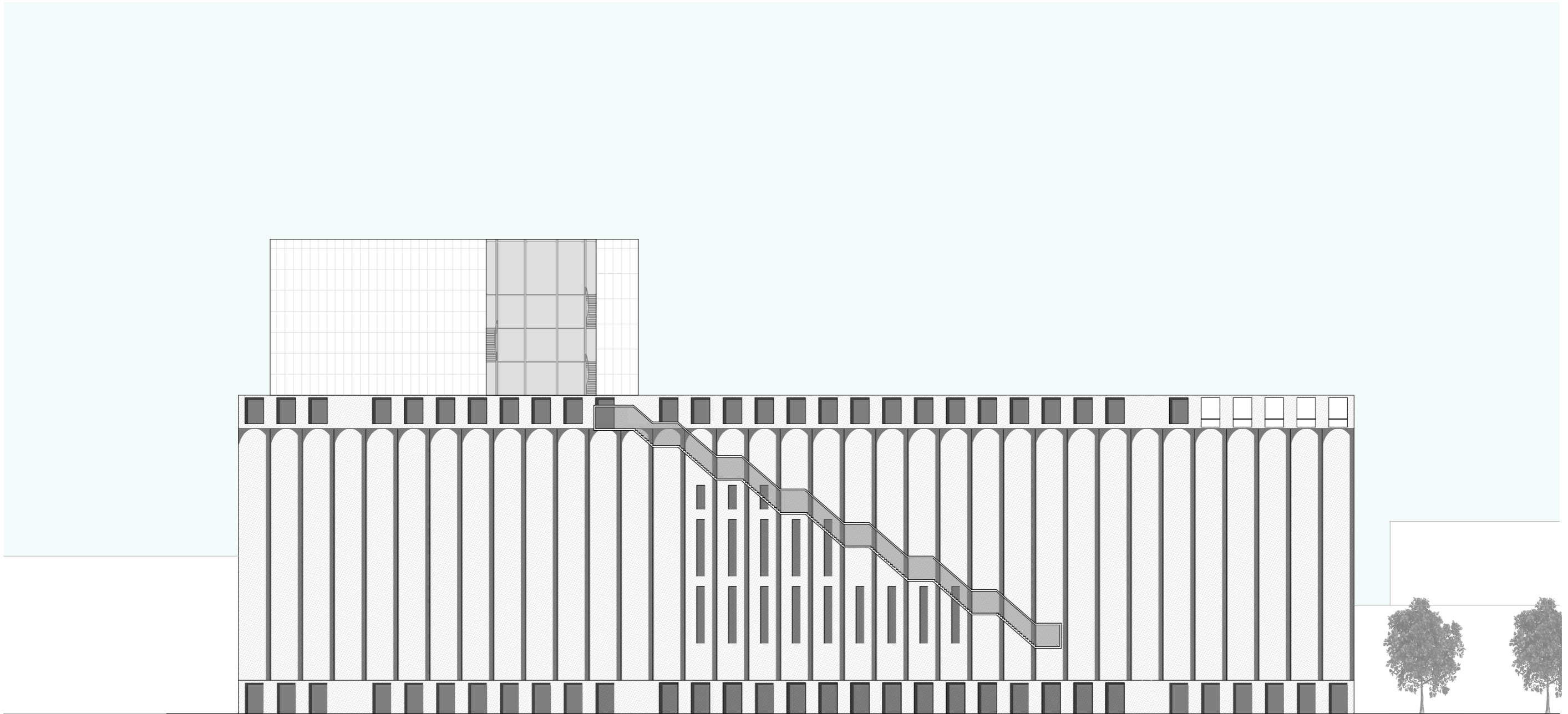








Elevation 1:500
looking south



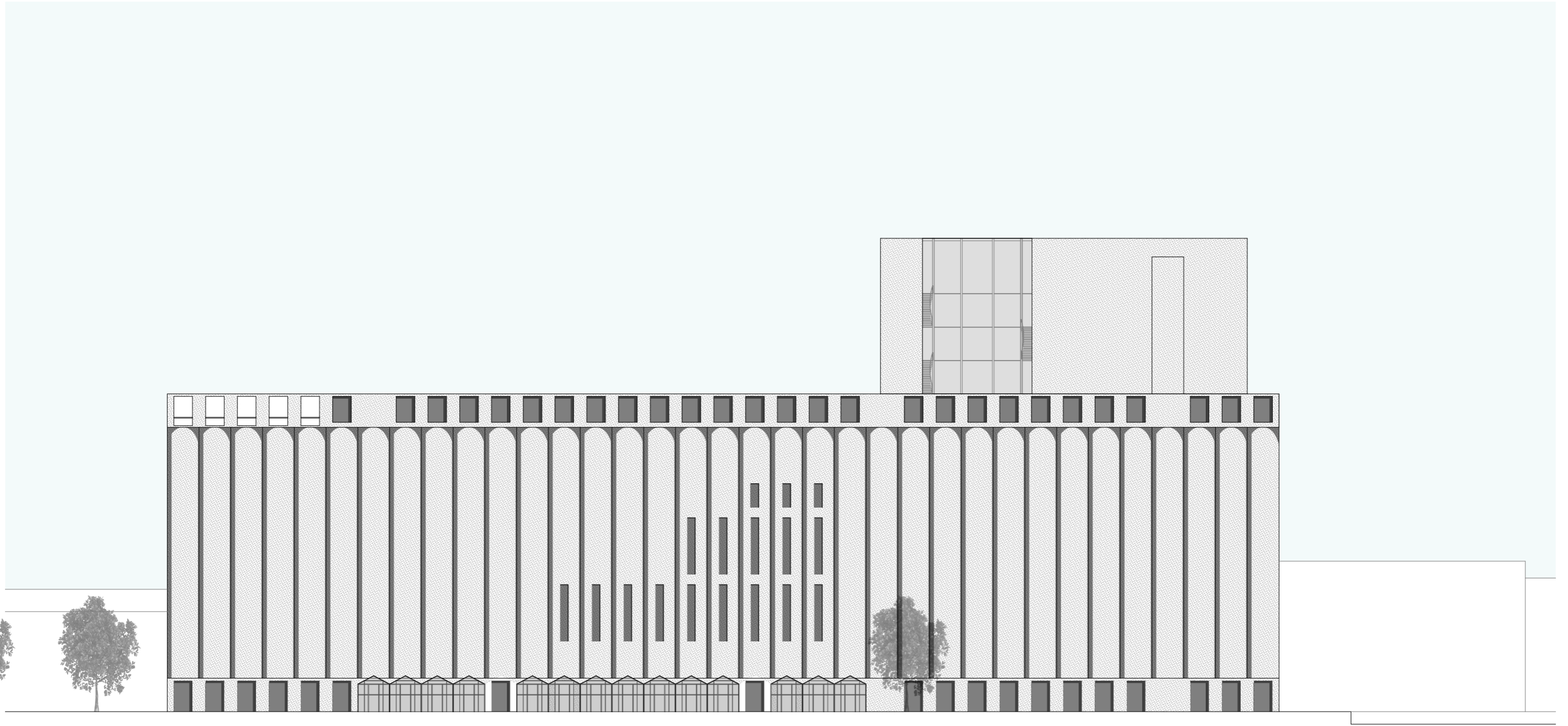
Elevation 1:500

looking west



Elevation 1:500

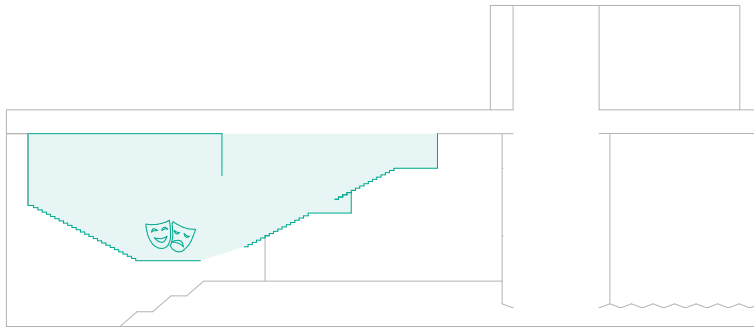
looking north



Elevation 1:500

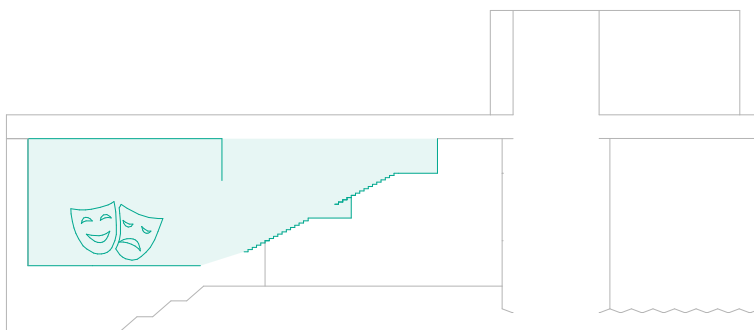
looking east

Three Configurations



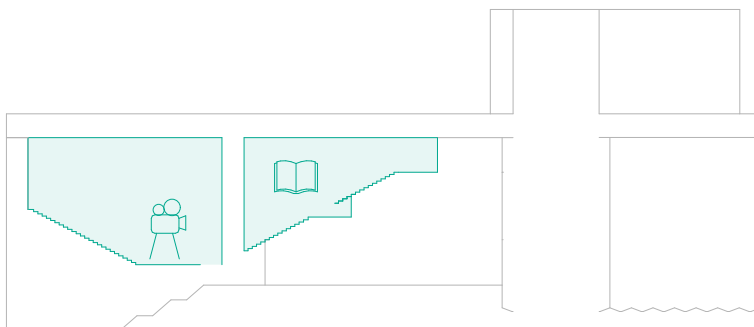
Configuration Amphitheatre

maximum capacity: 756 people
stage area: 140m²
suitable for: performances with
all-round exposure (e.g.dance)



Configuration Grand Stage

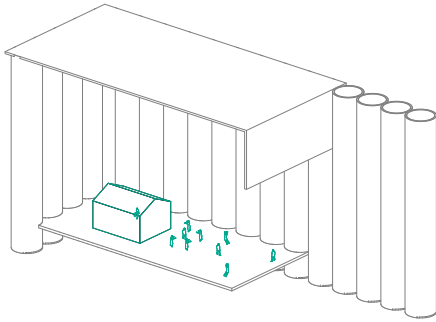
maximum capacity: 406 people
stage area: 380m²
suitable for performances with
extensive stage design



Configuration Cinema/Reading Atrium

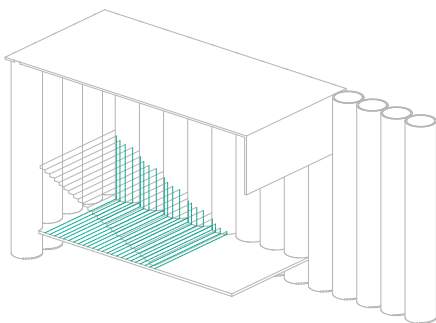
maximum capacity: 350 / 406 people
stage area: 140m²
suitable for screenings

The Transforming Auditorium



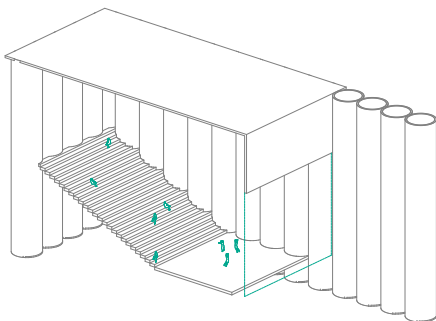
Configuration Grand Stage

This configuration offers 380m² of stage space for performance that either require a great spatial depth or have extensive stage design.



Transformation

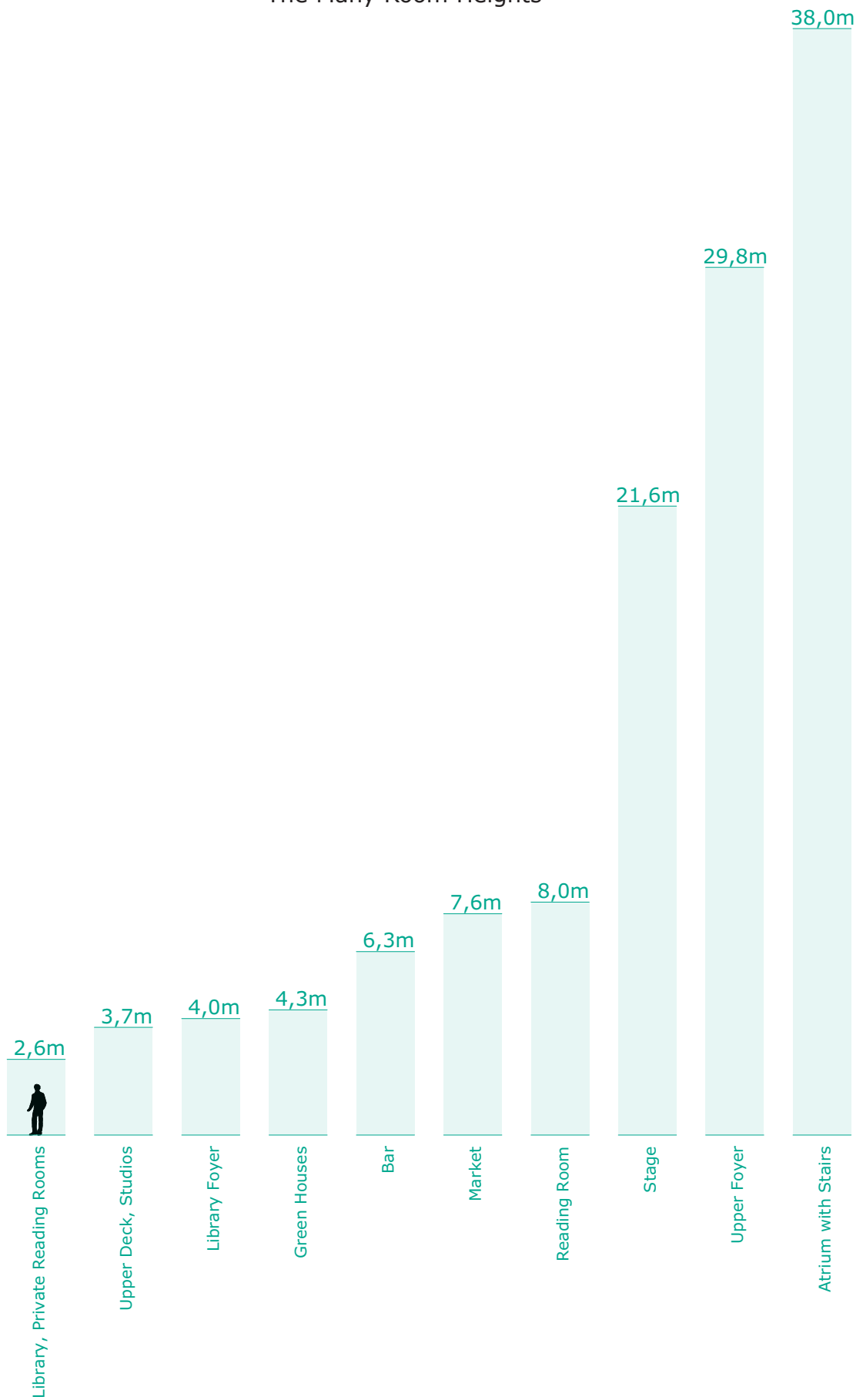
The back part of the stage floor is made of individual beams, that are fixed to rails in the silos' walls. In order to create additional seating, the beams are pulled up by engines in the roof of the stage.



Configuration Amphitheatre/Cinema

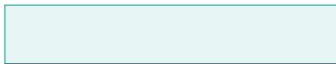
Once the beams are pulled up completely, additional 350 seats are created in the back of the stage. The tribune might also be used as part of the stage design.

The Many Room Heights

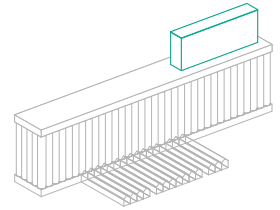
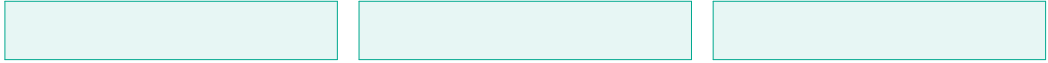


The Many Rooms

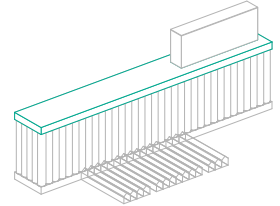
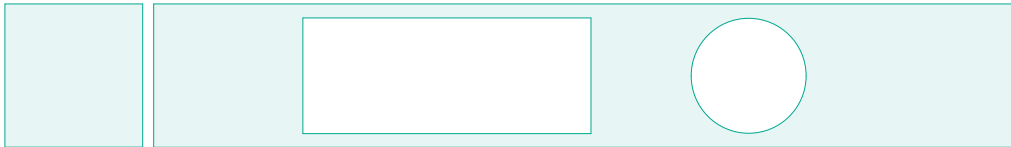
Total Floor Area: 12600m²



Studios/Bar: 4 x 340m²



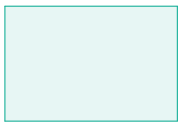
Terrace: 345m², Upper Deck: 1425m²



Upper Auditorium: 220m², Back Room: 140m²



Small Reading Room: 350m²



Auditorium: 230m², Reading Room: 580m²



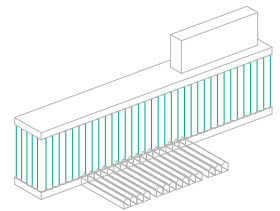
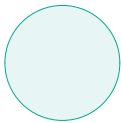
Stage: 380m²
Upper Foyer: 140m²
Backstage Area: 640m²



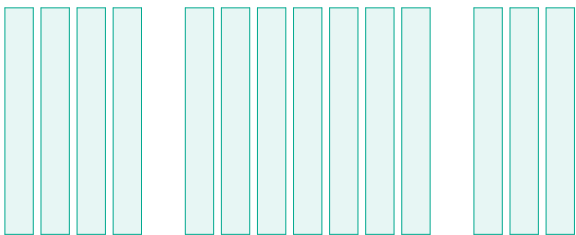
Silo Interior Area: 8,7m²
50 for Private Reading Rooms, 300 for Library



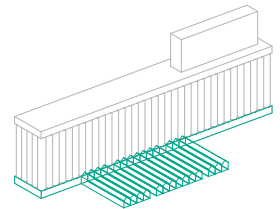
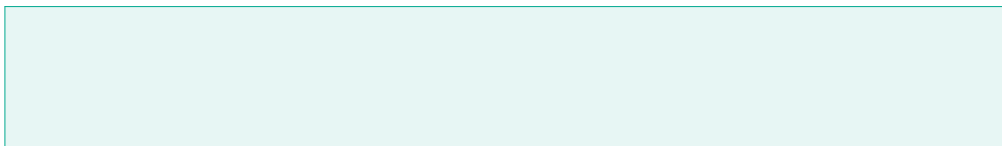
Atrium with Stairs: 170m²



Green Houses: 14 x 88m²



Ground Floor with Market: 2500m²





View from the Upper Deck into the Auditorium



View down a Library Archive Corridor



View down the Atrium with the Gand Stair Case

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Footnotes

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- 3: Kayden, Jerold S. (2000): Privately owned public spaces. The New York experience. New York: John Wiley& Sons, page 17
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- 10: https://www.wsj.com/articles/public-spaces-that-arent-just-an-afterthought-1428532741?mod=rss_newyork_real_estate
- 11: https://www.wsj.com/articles/public-spaces-that-arent-just-an-afterthought-1428532741?mod=rss_newyork_real_estate
- 12: Rubin, James H. (2008): Impressionism and the modern landscape. Productivity, technology, and urbanization from Manet to Van Gogh. Berkeley: University of Berkeley Press, page 14
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- 14: <https://macaulay.cuny.edu/eportfolios/redhookbrooklyn/2013/04/07/history-2/>
- 15: <http://waterfrontmuseum.org/history>
- 16: <https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>
- 17: <https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>
- 18: <http://www.nytimes.com/1990/05/13/realestate/streetscapes-columbia-street-grain-elevator-recycling-red-hook-s-1922.html>
- 19: <http://www.nytimes.com/1990/05/13/realestate/streetscapes-columbia-street-grain-elevator-recycling-red-hook-s-1922.html>
- 20: <http://www.atlasobscura.com/articles/red-hook-grain-elevator>
- 21: http://gothamist.com/2014/02/17/photos_inside_red_hooks_lonely_gian.php#photo-9

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Images

Image 1: Columbus on the Hudson River

<https://s-media-cache-ak0.pinimg.com/originals/a9/2c/9a/a92c9a0fc66d-d12a72a54d260ad27654.jpg>

Image 2: The Commissioner's Plan

https://de.wikipedia.org/wiki/Commissioners%E2%80%99_Plan_von_1811

Image 3: Manhattan

<http://www.pixopolitan.net/photos/7699/photo-new-york-manhattan-by-jacquot-thierry-por-trait3.jpg>

Image 4: A drawing of Forum Romanum

http://www.gettyimages.at/detail/illustration/roman-forum-visual-reconstruction-lizen-freie-illustration/520936482?esource=SEO_GIS_CDN_Redirect

Image 5: Bernie Sanders in Central Park

http://mediad.publicbroadcasting.net/p/vpr/files/styles/x_large/public/201505/Bernie-Kickoff-OliverParini-2-lo.jpg

Image 6: A section of Green Acre Park

<http://www.sasaki.com/project/111/greenacre-park/>

Image 7: Woolworth Building

https://www.google.at/search?q=woolworth+building+new+york&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiIpc7anYnUAhUKPxQKHTdqANQQ_AUICigB&biw=1920&bih=901#im-grc=OB6abpK73ivv4M:

Image 8: Maximum building mass according to the 1916 Zoning Resolution
<https://www.pinterest.com/mapzen/hugh-ferriss/>

Image 9: Seagram Building
<http://www.nytimes.com/2013/04/07/arts/design/building-seagram-phyllis-lamberts-new-architecture-book.html>

Image 10: Lincoln Center
<https://blogs.baruch.cuny.edu/art3254lupsa/2009/11/03/robert-moses-the-corrupted-czar-or-the-father-of-modern-ny/lincoln-center/>

Image 11: Plaza at 77 Water Street
https://c1.staticflickr.com/8/7345/9862765616_bf9292803d_z.jpg

Image 12: Plaza at 55 Water Street
<https://untappedcities-wpengine.netdna-ssl.com/wp-content/uploads/2013/06/Photo1-10.jpg>

Image 13: HSBC Plaza
http://farm3.static.flickr.com/2833/9951209976_1bca881182.jpg

Image 14: Barclay street 101
http://farm8.static.flickr.com/7387/9734413631_40d000300f.jpg

Image 15: IBM Plaza
<http://ny.saltious.net/IBM/IBM.html>

Image 16: Map of IBM Plaza
<https://apops.mas.org/pops/515/>

Image 17: POPS at 180 Maiden Lane
<https://www.quietcitymap.com/?cat=21>

Image 18: Map of 180 Maiden Lane
<https://apops.mas.org/pops/111/>

Image 19: *Classic Landscape* by Charles Sheeler
<https://www.nga.gov/content/ngaweb/Collection/art-object-page.105596.html>

Image 20: *Impression, Sunrise* by Claude Monet
<https://images.fineartamerica.com/images-medium-large-5/1-impresion-sunrise-claude-monet.jpg>

Image 21: *Atomic Burst* by Roy Lichtenstein
<http://goblinko.com/post/118370966140/roy-lichtenstein-atom-burst-1965-acrylic-on>

Image 22: *Veracruz Nov 18 1986* by Donald Sultan
<https://www.forbes.com/sites/adamlehrer/2016/08/31/iconic-painter-donald-sultan-shows-seminal-1980s-works-the-disaster-paintings-on-national-tour/#11f966a211f9>

Image 23: Drawing of Red Hook at 1875
https://upload.wikimedia.org/wikipedia/commons/f/f7/Red_hook_circa_1875.gif

Image 24: Red Hook

<http://cdn.brownstoner.com/wp-content/uploads/2016/02/red-hook-3.jpg>

Image 25: Red Hook Houses

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Image 26: The Red Hook Grain Terminal

<https://www.flickr.com/photos/rt48state/6785768993>

Image 27: The Red Hook Grain Terminal from the water

<https://rhamlett.files.wordpress.com/2015/05/red-hook-with-name.jpg>

Image 28: The roof of the Red Hook Grain Terminal

<http://www.brooklyneagle.com/articles/2014/2/28/finding-forgotten-urban-exploration-red-hook%E2%80%99s-grain-terminal>

Image 29: Section through a typical grain elevator at 1900

<http://publishing.cdlib.org/ucpressebooks/view?docId=ft8f59p27j;chunk.id=0;doc.view=print>

Image 30: Groundfloor of the Red Hook Grain Terminal

<https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>

Image 31: The interior of a silo at Red Hook Grain Terminal

<https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>

Image 32: The top gallery at Red Hook Grain Terminal

<https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>

Image 33: Decay at Red Hook Grain Terminal

<https://abandonednyc.com/2013/08/12/the-red-hook-grain-terminal/>

Image 34: The facade of the Red Hook Grain Terminal

http://gothamist.com/2014/02/17/photos_inside_red_hooks_lonely_gian.php#photo-12

Image 35: The exterior of the Beinecke Library

<http://beinecke.library.yale.edu/visit>

Image 36: The interior of the Beinecke Library

http://www.som.com/projects/yale_university__beinecke_rare_book_and_manuscript_library

Image 37: Section through Zeitz Mocaa

<http://www.culturebrand.org/?p=1432cut%20out>

Image 38: Concrete carving at Zeitz Mocaa

<http://www.elle.co.za/all-you-need-to-know-about-the-2016-zeitz-mocaa-gala/>

Image 39: Aerial view of the Red Hook grain Terminal

<https://www.bing.com/maps>