Cruquius Cape Center
mixed-use building
2024
ČESKÉ VYSOKÉ ÚČENÍ TECHNICKÉ V PRAZE
FAKULTA ARCHITEKTURY

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Informace: AK 2023/2024, 29

NÁZEV DIPLOMOPROJEKTU:
(Cíl) PF/UV/CRUQUISIUS CENTRUM
(A) CRUQUISIUS CAPE CENTER

Jazyk práce: anglický

Vedoucí práce: prof. Dr. Henri Hubertus Achten
Oponent práce: Ing. arch. Jakub Obůrka

Ústav: 15116 Ústav modelování a projektování

Klíčová slova (Česky):
Polyfunkční budova, hybridní budova, kultura, residence, amsterdam.

Anotace (Česky):
Každý člověk má potřebu priestoru na bývání, práci a rekreaci. Verím, že skutečné polyfunkční budovy by měly tato aspekty organizovat vertikálně. Účelem tohoto projektu je kombinovat všechny 3 aspekty a vytvořit hybridní stavbu která bude služit široké oblasti východního Amsterdamu. Projekt sa nachází na poloprostoru „Cruquius“, na okraji vojenského oblasti obnovu Amsterdaru, který se v posledních rokoch protáhla z primárního oblasti na novou polyfunkční budovu mzdstská úřed. Lokalita je lépe dostupná z centra až k trochu od ní dále od úvěru. Je teda ideální pro projektování zároveň. Cílem projektu je navrhnout energeticky úspornou stavbu pomáhající prostředí v kterém se střetají různí lidé, a okamžik práce a bývání se může sbalizovat a rekreativí.

Anotace (anglická):
Every person has the need for space for living, work, and recreation. I believe that truly multifunctional buildings should organize these aspects vertically. The task of this project is to combine all three aspects and create a hybrid structure that will serve the wider community of East Amsterdam. The project is located on the “peninsula” of Cruquius, on the edge of the inner highway ring of Amsterdam, which in recent years has been transforming from an industrial area into a new multifunctional urban quarter. The location is easily accessible from the center but somewhat secluded from continuous settlement. It is therefore ideal for the project’s intention. The goal of the project is to design an energy-efficient building offering an environment where various people can meet, and besides working and living, they can self-realize and recreate.

Prohlášení autora
Prohlášuji, že jsem předloženou diplomovou práci vypracoval samostatně a že jsem uvedl veškeré použité informační zdroje v souladu s „Metodickým pokynem o etické přípravě vysokoškolských závěrečných prací.”

V Praze dne 11.01.2024

podpis autora-diplomanta

Tento dokument je nedílnou a povinnou součástí diplomové práce / portfolio a CD
I would like to thank my professors and supervisors prof. Dr. Henri Hubertus Achten & Ing. arch. Jiří Pavlíček, Ph.D. for giving me the freedom to work remotely and for guiding me throughout this difficult semester.

I would like to thank doc. Ing. Daniela Bešová, Ph.D. for promptly responding to my fire safety consultation request and for treating me with kindness, despite my embarrassing lack of knowledge.

Lastly I would like to thank my support group "4T" namely, ing. arch Tereza Fiklíková, ing. arch Tomas Kloza and Bc. Tomáš Martíš without whom I would have missed absolutely every deadline.
INTRODUCTION

The project site is located in Cruquius, Amsterdam. Cruquius is an urban district in east Amsterdam, undergoing transformation from an industrial port island, into a mixed-use city district. This project aims to design a mixed-use building on a plot located at the cape of the island. The building should not only work as a singular unit but respond to the needs of its surroundings and contribute to a socially sustainable neighborhood.

My mission is to design a building that will respond to high housing demand, but also introduce a work and leisure program in a flexible fashion characteristic to hybrid buildings.
AMSTERDAM

Amsterdam is the capital and the most populated city in the Netherlands.

The origins of the city date back to the 12th century and was founded by fishermen living in the area along the Amstel River. During the 14th and 15th centuries, Amsterdam underwent rapid development, which ultimately led to the Golden Age. During this era, most of the historical city center developed along with some of the most important historical buildings such as Dam Square, the Westerkerk, and Zuiderkerk.

Throughout the 17th century, Amsterdam kept its trade dominance and prosperity, which shows in much of the historical architecture in the city center. At the beginning of the 19th century, however, Amsterdam fell into a recession that led to many houses collapsing from lack of repair. Since then, Amsterdam has recovered and in the 20th century, a population boom caused rapid development. Modern, utilitarian architectural style took the stage and has continued evolving until nowadays.

The Netherlands have always been know for pushing the boundaries of architecture and urban planning. Few countries can boast of having so many era-defining architects as the Netherlands. Amsterdam embraces innovation and sustainability in architecture like few other cities. The Dutch architectural landscape features avant-garde designs that prioritize functionality, energy efficiency, and community integration. In Amsterdam, the juxtaposition of historical structures with modernist marvels creates a captivating urban panorama. Amsterdam is rich with modern and contemporary architectural marvels such as Sluishuis and NEMO Science Museum among others.

The recent housing crisis in the Netherlands presents another generation-defying challenge. The pressure on the housing market is high and architects are forced to adapt their design to changing needs.
Cruquius, is an entirely man-made island in east Amsterdam. Before being shaped into what it is now, it used to be a swampy wetland area. What shaped the district happened to be the Amsterdam-Rhine Canal, or Rijnkanaal. Conceived in the late 19th century, the canal aimed to enhance navigation and trade between Amsterdam and the Rhine River. Its construction transformed the waterways, fostering economic growth and industrial expansion.

Cruquius island, nestled along the canal’s route, became a strategic point in this aquatic network. Initially an industrial heartland, it leveraged the canal for transporting goods and materials, contributing significantly to the city’s economic prosperity. Over the years, the canal and Cruquius evolved together, witnessing industrial shifts and urban development.

Today, the Amsterdam-Rhine Canal stands as a testament to Amsterdam’s ingenuity in water management and trade, while Cruquius island reflects the enduring connection between infrastructure and urban growth along its historic waterways.
Cruquius Cape Center

Since the district's transformation commenced in 2008, Cruquius has witnessed the integration of numerous newly constructed projects. Predominantly, these developments manifest as mixed-use structures, with a primary focus on residential projects.

The ongoing housing crisis in the Netherlands has necessitated a more intensified architectural approach compared to traditional Dutch designs. Notably, structures in the district typically range between 6 to 15 stories in height, aligning with the contemporary need for increased density.

Given the industrial history of Cruquius island, characterized by a lack of historical architecture, the district presents a clean slate for architects and designers. This absence of historical constraints allows for creative freedom. In recent years, Cruquius has become a canvas for a diverse array of projects, including several award-winning designs, showcasing the district's adaptability and innovation in contemporary architecture.

The municipality of Amsterdam, a majority stakeholder in Cruquius's real estate, lays out the plans for the development of the district as follows:

- **2008**
  - Decision to change the Cruquius area from an industrial area to a new part of the city, where Amsterdam residents can live, work, and spend their free time.

- **2011**
  - Start construction of homes by developers.

- **2021**
  - October: planting 29 trees on the DKC De Kleine Kapitein schoolyard.
  - November: fell 9 Canadian poplars Cruquiusweg.

- **2023**
  - 1st quarter: Delivery Pearl of Amsterdam.
  - 3rd or 4th quarter: Delivery of Berkhout location.
  - 3rd or 4th quarter: Delivery of lot 16.
  - 4th quarter: Start of construction Kop van Cruquius.

- **2024**
  - 1st quarter: Opening of supermarket.
  - 1st quarter: Start of demolition of Drenthhal.
  - Start construction of the bridge for slow traffic towards Flevoparkweg.

- **2025**
  - Final layout of Cruquiusweg.
  - Completion of the bridge for slow traffic towards Flevoparkweg.

- **2028**
  - Delivery of new Drenthhal and mid-priced homes.

- **2030**
  - The transformation of the Cruquius area is complete.

Contrasts between the old and the new are visible across the Cruquius island. The industrial history of the district is a markable feature of recent architectural design in the area. While some architects decide to sway away from architectural history, others try to embrace it by introducing modern designs with a historical twist.
ANALYSIS

Urban zoning, a strategy born in the 20th-century modernist movement, has brought order into rapidly growing cities but came at the cost of spatial segregation. Modern zoning compartmentalized living, commerce, and recreation, resulting in isolated city zones. The absence of mixed zones resulted in dependence on cars and a disconnect between the people and their surroundings. The urbanism in 21st century strives to correct the zoning mistakes we have committed in the past. Concepts such as “15-minute city” attempt to address such issues on an urban planning and design level. I think, however, that greater emphasis should be placed not only on the urban but also on individual buildings.

We can divide aspects of urban life into three categories: housing, work, and leisure. In an ideal world, every building would house all three of these aspects. That way we could reach an optimal balance of these functions while keeping them as close to their users as possible. Mixed-use development addresses this problem to a certain degree, but often leaves out leisure, creating a disbalance in our cities.

Embracing the flexibility of building programming is crucial for creating dynamic urban spaces. Unlike rigid zoning, a versatile approach allows structures to serve diverse functions, increasing their utility and community impact. Incorporating mixed-use elements, such as combining residential, commercial, and recreational spaces within a single building, fosters a richer and more interactive urban environment. Flexible programming accommodates evolving needs, encouraging adaptive reuse and reducing the risk of obsolete structures. This approach not only enhances the efficiency of land use but also promotes a sense of place and community engagement. By embracing diverse programming, buildings become adaptable assets, capable of evolving with the dynamic demands of a modern, interconnected society. Buildings characterized by diverse and integrated building programs are often referred to as Hybrid buildings.

Hybrid buildings seamlessly blend the flexibility of diverse programming with the efficiency of mixed-use zoning. They embrace the idea that urban spaces should be fluid and adaptable to changing community needs. This holistic approach optimizes land use and fosters vibrant, interconnected neighborhoods. The diversity brought by such buildings results in the mixing of various social groups and fosters a sense of cohesion and identity. The flexibility offered by hybrid buildings not only manifests itself in the programming but also in the operative times of such buildings. We can divide the operative time of a building into three segments: morning, afternoon, and evening. Ideally, buildings should operate throughout the day, decreasing the load on the building and the infrastructure. Such dynamic fusion would ensure continual activity, optimizing operational hours and fostering vibrant city life around the clock.
CASE STUDY
VALLEY - MVRDV

Valley from the architectural firm MVRDV is a prime example of a truly mixed-use building. MVRDV is taking Valley is a vertical city, with a mixed-use program including offices, residential spaces, retail establishments, and cultural amenities. The public functions are located on the lower portion of the building and feature “The Grotto” a publicly accessible walkway surrounded by commercial functions and amazing views of the towers. The floors above are dedicated to offices and above, residential towers with stunning views of the surroundings.

The building’s distinct form, resembling three interconnected, asymmetrical towers, facilitates the incorporation of various functions. The staggered heights and terraced façade create dynamic outdoor spaces, contributing to a sense of community and interaction.

The most remarkable feature about the Valley, however, is the public staircase leading up the building, curving around and then coming back down. This feature reaches towards the public space and extends up and into the building’s embrace. To me it is elements such as this, which offer an experience to a visitor free of cost, are the ones that can transcend traditional urbanism with hard borders between the private and the public and create an interconnected urban experience.

CASE STUDY
LINKED HYBRID - STEVEN HOLL ARCHITECTS

Linked Hybrid by Steven Holl Architects is an impressive example of architectural innovation and programmatic diversity. The complex is located in Beijing, China, and stands as a hybrid structure that challenges traditional urban norms. The project consists of eight linked towers, forming a complex of residential, commercial, and public functions. The project could be described as a city within a city, offering a rich and diverse program.

The ground floor features publicly accessible open passages, leading to a microcosm of small-scale urban spaces. Small retail complements this and brings liveliness into the neighborhood. The building program features a hotel, cinema, kindergarten, school, underground car park, commercial zones, and public garden space. All of the public spaces on the ground level are connected to a central green area.

Connecting the eight residential towers and the hotel tower, a set of sky bridges on the 12th to the 18th floors includes a wide range of amenities, including a swimming pool, fitness room, café, gallery, and auditorium, and offers unparalleled views of the surrounding landscape.

In conclusion, Linked Hybrid is a remarkable example of a hybrid building, offering a complex program scattered across the entire complex. Such arrangement increases social mixing and creates cohesion and a sense of identity in those living there, as well as those who are just visiting the site.
The Municipality of Amsterdam has unveiled an Environmental Vision Atlas outlining the city’s future plans and infrastructure. Cruquius island is prominently marked in orange, denoting it as a “highly urban neighborhood.” The vision entails the development of residential areas with dense urban structures, incorporating ample space for non-residential zones. Greenery is strategically integrated into the streets, pocket parks, and expansive city parks.

A neighboring district sharing this urban characterization is Sluisbuurt, an emerging area to the east of Cruquius. The map signals a prospective ferry line connecting Sluisbuurt to Eastern Docklands, with potential extension to Cruquius. This strategic initiative aligns with the broader environmental vision, emphasizing interconnectedness and accessibility between evolving urban districts in the Amsterdam landscape.
HOUSING PLANS / DEVELOPMENT

Cruquius stands as a distinctive enclave within East Amsterdam, representing one of the few expansive development districts in the region. The emphasis lies on high-density mixed-use transformations, giving rise to multifunctional city districts that seamlessly integrate residential, commercial, and public spaces.

Commencing its journey in 2008, Cruquius is undergoing a comprehensive evolution that encompasses the strategic amalgamation of public infrastructure, essential amenities, housing, and office spaces. Notably, the focal point of this metamorphosis is the creation of a thriving residential community, with plans outlining the development of 1700 homes. Additionally, the blueprint allocates a substantial 18,000 square meters of office space, reflecting a balanced approach to urban functionality.

This development is slated for completion by 2030.

Another development nearby called Sluisbuurt, will house approximately 12,000 inhabitants. This presents an opportunity for the connection of these neighborhoods and create a larger patch of interconnected urban form.

ACCESSIBILITY

To assess the project site’s viability, an examination of its accessibility was undertaken. Presently, Cruquius lacks comprehensive public transport infrastructure, with a tram line situated approximately 15 minutes on foot from the project site. Despite this relative remoteness, the site enjoys good accessibility by bicycle, constituting a significant proportion of Amsterdam’s traffic.

Remarkably, Amsterdam Centraal and historic core are a mere 15-minute bike ride from the project site, emphasizing its strategic location for intentional visits rather than serendipitous encounters. This unique characteristic positions Cruquius as an ideal locale for activities that draw intentional engagement, as opposed to those reliant on chance discovery within a specific area. The nuanced accessibility profile, balancing proximity to key transportation nodes and reliance on popular modes of transportation, augurs well for the site’s potential for purposeful and planned urban activities.
Following my earlier observations, I found it pertinent to delve into potential connections with neighboring districts and assess their proximity.

In the eventuality of the municipal proposal for a pedestrian/bike bridge gaining approval, linking the Cruquius cape to Eastern Docklands could substantially reduce the distance from the project site to the center of Sluisbuurt by one-third. While extending the bridge eastwards, traversing the Rijnkanaal, could further diminish the distance to Sluisbuurt, it wouldn’t establish a direct connection with Eastern Docklands.

The city of Amsterdam has long deliberated the connectivity of Sluisbuurt to adjacent districts, contemplating the construction of either a bridge or a ferry. Opting not to actively pursue this initiative, I’ve integrated my design with potential future connections in mind, ensuring adaptability to the evolving urban infrastructure.

To assess the significance of creating connections and identify potential linkages, I undertook a mapping exercise to measure distances along unconnected shorelines. Positioned at the cape of the island, the project site lies at the midpoint of a 2km-long unconnected waterfront — the lengthiest such stretch on the island. Consequently, it becomes imperative to consider the feasibility of establishing connections, be it through a bridge or ferry, between the cape and neighboring landmasses. This strategic decision holds implications for enhancing accessibility and fostering integration within the broader urban context.

The project’s geographical context is characterized by close proximity to neighboring areas, yet it is geographically separated by water bodies. Notable among these regions are Eastern Docklands, hosting approximately 3500 residents, and more significantly, Sluisbuurt, a burgeoning development slated for around 12,000 inhabitants. Establishing proper access to these neighborhoods has the potential to positively impact land value in the area.

BARRIERS AND CONNECTIONS

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LEISURE AND CULTURE

Analyzing the current sports, cultural, and recreational infrastructure was imperative to identify voids within the project neighborhood. The northern peninsula of Cruquius notably lacks these amenities, with a notable abundance of outdoor sports fields like football and basketball evenly dispersed. Conversely, fitness centers are conspicuously scarce, with a singular cross-fit facility located in the southern region of the island.

Cultural spaces are also limited, primarily comprising diminutive art and craft studios. The prospect arises to amalgamate these absent functions, giving rise to a centralized sports and cultural hub within the cape of Cruquius.

Such a convergence would fulfill a discernible need, addressing the current scarcity of facilities in the area.

HIEGHT ANALYSIS

In light of the absence of a municipal regulatory plan for the studied area in Amsterdam, determining acceptable building heights required a thorough investigation.

Given the substantial distance from Schiphol airport, the area does not have a general building height restriction. While most structures on Cruquius island adhere to a modest 7-story limit, this precedent isn’t binding. Analysis of the surrounding East Amsterdam context reveals a penchant for taller structures, exceeding the local norm and contributing to a more dynamic skyline. Although these buildings commonly reach around 60m, they seldom breach the 70m threshold.

Notably, the burgeoning Sluisbuurt district to the east anticipates the construction of several buildings reaching up to 70m, setting a precedent for increased verticality in the evolving urban fabric. This nuanced exploration of contextual building heights informs a strategic approach to the project’s architectural articulation.

Consequently, the strategic conclusion is to design the project with a taller building height, aligning with the evolving urban fabric and contributing to a distinctive and forward-looking skyline.
• Low traffic noise levels in the area due to the separation of the rest of the city by water.

• Unique 270-degree access to water increases the desirability of the area.

• Lower initial property price because of its location further from the city center.

• A wide variety of architectural works in the area gives the designer a lot of freedom - the area does not bear much historical significance in terms of architecture and is therefore free for experimentation.

• Cruquius is a fairly remote area. Although it is easily accessible from the city center, it is somewhat disconnected from the wider city fabric.

• There are multiple public amenities missing in the area, such as a fitness center, grocery store, schools, etc.

• The proximity to water presents an opportunity for a ferry service or other services and activities connected to water.

• Sluisbuurt, a newly developing district nearby, will house roughly 2000 inhabitants. Connecting Cruquius to Sluisbuurt could be beneficial in various ways.

• The location has a potential for high-end living and the development of luxurious apartments because of its desirable location.

• The lack of public amenities can be solved by including them in the programming of this project.

• The lack of public transport and traffic infrastructure presents a challenge, especially once the district gains in population.

• Rising sea levels might threaten the district in the next century.

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CONCEPT

Building line defining the maximum usable area and height of the building.

Establishing gridlines on 2 dominant axes of the site. Determining the depth of the building.

Creating an atrium in the middle of the volume and trimming the sharp side of the volume to optimize for daylight.

Establishing a tower in the front of the volume - north, to prevent shading and maximize the views to the sea and the city.

Adding a rooftop program and creating a access for the public via a staircase. Completing the volume by connecting the design feature with a curve.

Extending the rooftop program, increasing access to the seaside. Connecting the street to the sea by penetrating the building volume with a stylized arch.
The paramount objective of this design was to curate a comprehensive building program, encompassing residential, administrative, cultural, dining, fitness, retail, and grocery spaces.

At the base, the plinth accommodates public functions like retail and a grocery store, with the main entrance leading to a publicly accessible atrium that seamlessly interconnects all areas. The southern volume, though physically linked, operates as an autonomous unit. The first two floors host a cultural center with creative studios and educational facilities, followed by a fitness center with an outdoor workout platform towards the east and a westward-facing restaurant linked to an elevated public terrace and the distinctive staircase feature.

Conversely, the northern volume caters to a more private program. The initial five floors above the plinth house office spaces, taking advantage of the northern exposure and sea views to meet high demand. Above the offices, a 15-story residential tower offers panoramic 360-degree views, culminating in a harmonious and multifunctional architectural composition.

Nestled at the extremity of the island’s cape, the site presents an ideal canvas for an urban nexus. By curating a diverse program and extending an invitation to the public, this initiative democratizes the sweeping 270-degree vistas of the sea and the city.

The cape, currently dominated by mixed-use structures with a predominant residential focus, affords ample space for this project to cater to the communal requisites of the neighborhood. I conceptualized a waterside promenade, seamlessly blending spaces for repose, verdant landscapes, and abundant recreational opportunities.

A pivotal consideration in the design was the connection between the existing road and the waterside. The introduction of an arch in this linear link not only enhances the visual dynamism but also accommodates the potential future assembly of a ferry station. This strategic design element ensures unimpeded traversal for travelers, allowing them to seamlessly navigate the area without obstruction from the architectural volume.
The primary entrance to the building is positioned beneath the graceful arch of the staircase, providing a seamless entry point into the central atrium.

Occupying the north-western facades is a restaurant spanning 328 m², offering the flexibility to extend its seating area outdoors. Multiple retail spaces are available, providing prospective owners the opportunity to purchase and customize these areas according to their preferences.

In the south-western corner, a neighborhood grocery store takes its place, serving as a convenient and integral amenity within the building. This strategic allocation of functional spaces enhances the building's accessibility and commercial vitality, contributing to a dynamic and user-centric architectural experience.

GROCERY STORE

Introducing a vital amenity to the neighborhood, the grocery store addresses a notable absence in proximity to the project site. Designed for efficiency, the store is compact and swift. The main entrance aligns seamlessly with the atrium entrance, positioned directly adjacent to the staircase arch. Conveniently, bike parking is situated in the arch's niche, optimizing space beneath the structure with a lower clearance height. This thoughtful integration enhances accessibility while maintaining architectural coherence.

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<th>Description</th>
<th>Area</th>
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<tbody>
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<td>office</td>
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<td>3.</td>
<td>staff room</td>
<td>23 m²</td>
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<td>4.</td>
<td>bathroom</td>
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<td>5.</td>
<td>toilet</td>
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<td>6.</td>
<td>hall</td>
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<td>7.</td>
<td>storage</td>
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<td>8.</td>
<td>cold storage</td>
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<td>9.</td>
<td>freezer</td>
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<td>10.</td>
<td>bike parking</td>
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<table>
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<tbody>
<tr>
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<td>3.</td>
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<td>6.</td>
<td>retail / cafe</td>
<td>56 m²</td>
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<tr>
<td>7.</td>
<td>grocery store</td>
<td>396 m²</td>
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<td>8.</td>
<td>bike parking</td>
<td>126 m²</td>
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<td>10.</td>
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<tr>
<td>12.</td>
<td>atrium + entrance</td>
<td>480 m²</td>
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2ND - 3RD FLOORS  scale: 1:500

2nd and 3rd floors feature a similar layout, central atrium is extended with balconies serving both as access point and work/relax zone.

There are 2 offices of 950m² and 650m² respectively, both of which enjoy sea-side views and one with an access to the waterfront via the staircase feature.

The southern volume consists of spaces for culture and recreation.

The entire floor plan is designed with a flexibility in mind, all spaces are connected with a corridor which allows for their modification based on the current needs.
THE STAIRCASE

In a deliberate pursuit of vertical spatial integration, I orchestrated the conception of a prominent public staircase feature to augment the communal expanse within the architectural framework. Departing from the conventional abrupt interface between the public domain and the built structure, the staircase endeavors to organically extend the public realm onto the rooftop. Dual staircases ascend to the building, affording visitors a circumferential trajectory for a comprehensive spatial experience.

4TH FLOOR - ROOFTOP  scale: 1500

The fourth floor introduces a diverse range of features, encompassing a compact office space and two restaurants equipped with industrial kitchens. Oriented towards the south-west, these dining establishments seamlessly expand onto the public terrace, fostering a harmonious connection with the outdoor space. Both restaurants share access to a central core, housing a cargo elevator dedicated to the efficient transport of goods.

Each restaurant enjoys the added dimension of a second floor, accompanied by private terraces that provide elevated views to the west. This architectural arrangement not only maximizes functional efficiency but also capitalizes on the surrounding vistas, creating a layered and engaging spatial experience on the fourth floor.

1. straight stair 25 m²
2. resting platform 4 m²
3. crooked stair 4 m²
4. office terrace 46 m²
5. public terrace 58 m²
6. bar area 58 m²
7. dining area 112 m²
8. kitchen 40 m²
9. staff 22 m²
10. office 8 m²
11. dining area 118 m²

1. office 804 m²
2. fitness platform 505 m²
3. atrium 50 m²
4. fitness centre 275 m²
5. hall 50 m²
6. restaurant 304 m²
7. public terrace 427 m²
8. restaurant 327 m²
This architectural intervention incorporates expansive seating and relaxation zones, thereby fulfilling not only the recreational needs of the wider public but also catering to the inhabitants of the edifice. Oriented to the west and the central axis of Amsterdam, the staircase offers unparalleled panoramic vistas of the sunset. Ascending further, the rooftop unfolds into a commodious terrace, featuring refined gastronomic establishments and al fresco seating arrangements.

Beneath the staircase feature, a substantial stylized arch punctures the architectural volume, serving as a commanding element that accentuates the primary entrance to the building, discreetly positioned beneath the graceful ascent. This intricately designed feature not only aligns with the architectural ethos but also contributes significantly to the building's distinctive visual language.
The 5th floor encompasses a compact office space complemented by a spacious roof terrace suitable for company events, lunches, or relaxation. The remaining floor plan mirrors the functions below, with restaurants and the gym extending across two floors. The intentional orientation of the gym towards the east ensures that morning users can benefit from the sunrise, aligning with natural circadian rhythms. The gym also connects to a private roof terrace, offering a dedicated space for activities like yoga, pilates, or stretching.

On the western side, dining establishments feature private terraces providing picturesque views of the west and the city center, enhancing the overall spatial experience and engagement with the surrounding urban context.
6TH & 7TH FLOOR

The 6th floor serves as the foundation of the residential tower, uniquely distinguished by its outward offset in comparison to the floors above. This intentional design choice facilitates the implementation of a terraced housing typology. Southern apartments on this level, as well as the one above, feature expansive private terraces facing south. These terraces provide residents with the opportunity to cultivate crops or ornamental plants within dedicated planters. The underlying concept of this typology is to craft apartments with individual private gardens, effectively organizing them vertically within the confines of an urban tower. This approach aims to merge the principles of terraced housing with the verticality inherent to a tower structure.

Additionally, this floor accommodates a technical room housing service equipment pertinent to the administrative and public functions beneath, serving as a technological partition between the residential tower and the administrative base. This strategic allocation ensures the efficient separation and operation of the distinct functionalities within the overall architectural composition.

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<tr>
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<th>3 bedroom apt.</th>
<th>2 bedroom apt.</th>
<th>1 bedroom apt.</th>
<th>3 bedroom apt.</th>
<th>2 bedroom apt.</th>
<th>1 bedroom apt.</th>
<th>3 bedroom apt.</th>
<th>technical room</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>104 m²</td>
<td>84 m²</td>
<td>65 m²</td>
<td>114 m²</td>
<td>120 m²</td>
<td>94 m²</td>
<td>133 m²</td>
<td>30 m²</td>
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Spanning from the 8th to the 20th floor, the residential tower houses residential units. Each floor encompasses six apartments linked to a centralized lobby. Virtually all apartments boast expansive loggias, providing ample space for a dining set and connecting inhabitants to the outdoors. The floorplan encompasses one, two, and three-bedroom apartments, along with a studio. This versatile arrangement caters to a diverse range of users, accommodating individuals and families alike. The design prioritizes flexibility to suit varying lifestyles within the residential tower.

APARTMENT 1
87 m²
1. entrance hall 5 m²
2. technical 2 m²
3. toilet 2 m²
4. bathroom 5 m²
5. living space 37 m²
6. bedroom 11 m²
7. bedroom 11 m²
8. loggia 9 m²

APARTMENT 6
102 m²
1. entrance hall 4 m²
2. hall 6 m²
3. toilet 2 m²
4. technical 2 m²
5. bathroom 5 m²
6. bedroom 12 m²
7. bedroom 12 m²
8. living space 39 m²
9. bedroom 11 m²
10. office 5 m²
11. loggia 9 m²
The pinnacle of the building comprises three luxurious penthouse apartments, each distinguished by an expansive terrace offering panoramic views of the surroundings. The apartments boast configurations of 1, 2, and 3 (or 4) bedrooms, each intricately connected to a private bathroom. This design not only emphasizes the opulence of the living spaces but also ensures a seamless integration of private and outdoor elements, providing an elevated and refined residential experience on the top floor.

In adherence to the Municipality of Amsterdam’s development plan, the Cruquius cape area is designated as car-free. Consequently, the building I have designed, along with two others, shares a unified underground garage. The entrance to this garage is situated within the southernmost building.

As the building plans for the other structures were not made available, my design process did not draw upon or these undisclosed plans.

The underground garage accommodates a total of 52 parking spaces, which include provisions for 5 spots designated for disabled access. The upper segment of the building houses various technical amenities such as the HVAC room, technical rooms, and facilities for trash collection.
ONE SPACE, TO CONNECT THEM ALL

The atrium serves as a multifunctional centerpiece, fulfilling diverse roles within the structure. Functioning as an expansive source of natural light, its openness bathes the building's interior in daylight throughout the day. Unlike traditional atriums, this design not only capitalizes on energy efficiency but also cleverly harnesses solar heat while facilitating ample natural ventilation.

At the ground level, the atrium serves as a nexus, seamlessly connecting three main entrances to the building. The flexible central space becomes a dynamic hub for exhibitions and gatherings, adapting to the evolving needs of the occupants. A grand staircase takes center stage, providing access to the upper floors and their respective spaces. Balconies within the Atrium interconnect the entire building, fostering a sense of unity while allowing for a programmatically flexible environment that can evolve over time.
FACADES

The design narrative of the building’s facade is a poetic exploration of nature’s curvature, reminiscent of a falling veil delicately obscuring its subject while retaining transparency. The ground floor, features expansive arches that not only reference the past but also introduce a softer aesthetic to the building.

Moving upward, vertical lamellas, spaced at regular intervals of 900mm, become the focal point, accentuating the verticality of the structure. These lamellas are more than architectural elements; they emulate falling strands of fabric, gracefully descending before encountering the arches that delicately bend them.

Beyond its aesthetic allure, the facade serves a dual purpose — allowing ample natural light while shielding the interior spaces from sharp southern sunlight.
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