

City Within The City

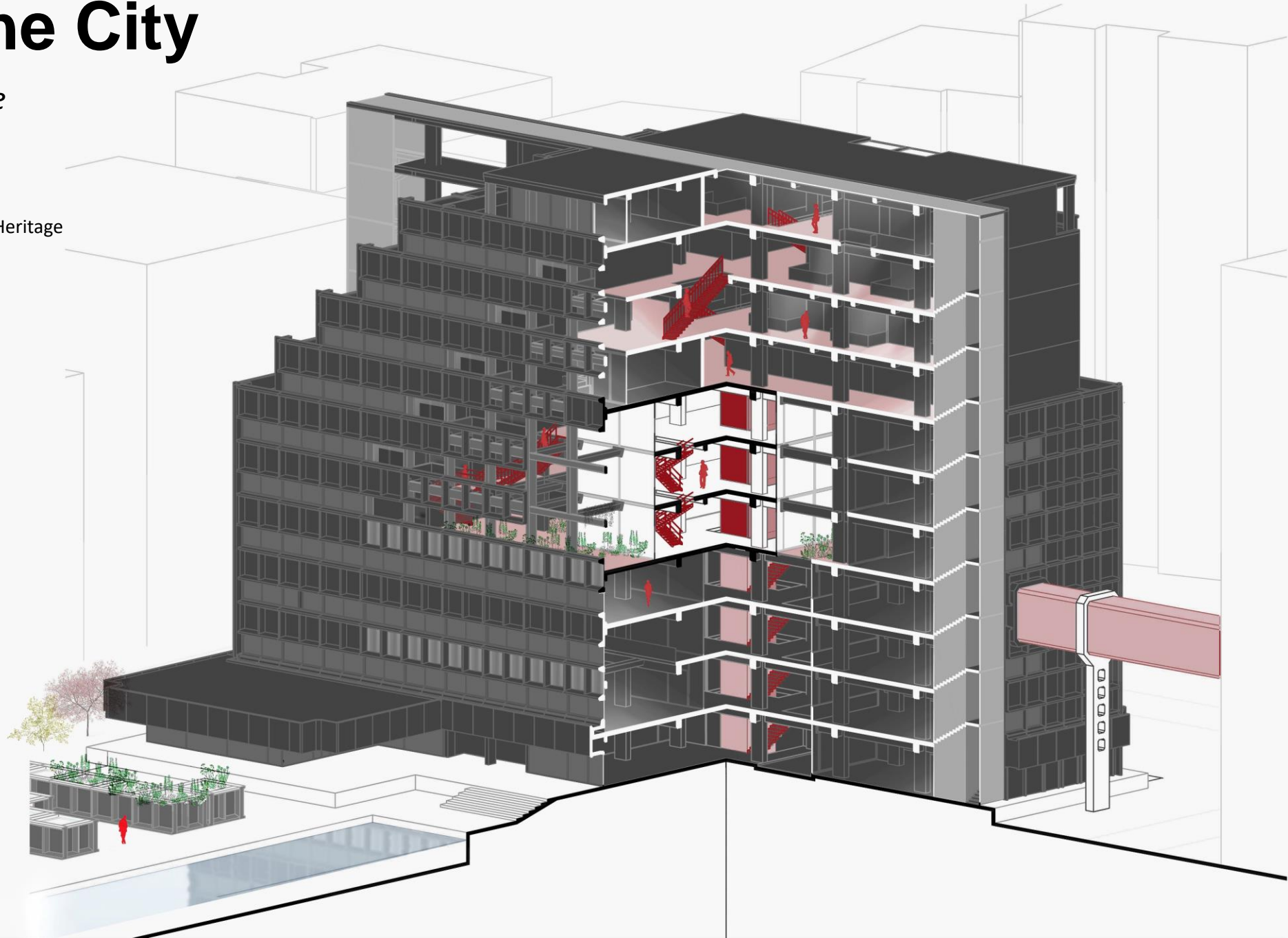
*Hybrid Reuse Strategies for the
SFF Bosch Gebouw, Eindhoven*

Heritage Graduation Studio - Resourceful Reuse of Heritage

Evanthia - Maria Vassi, 6273211

Supervisors: Christopher de Vries

Dr. Barbara Lubelli



INTRODUCTION

Strijp-S Analysis

AREA CAPACITIES – CONNECTIVITY | STRATEGIC POSITION | REDEVELOPMENT PHASE 4

AREA LIMITATIONS – FRAGMENTATION

Building Analysis

BUILDING CAPACITIES – STRUCTURE | MATERIAL CONDITION

BUILDING LIMITATIONS – SPATIAL CONDITION (CIRCULATION, DAYLIGHT)

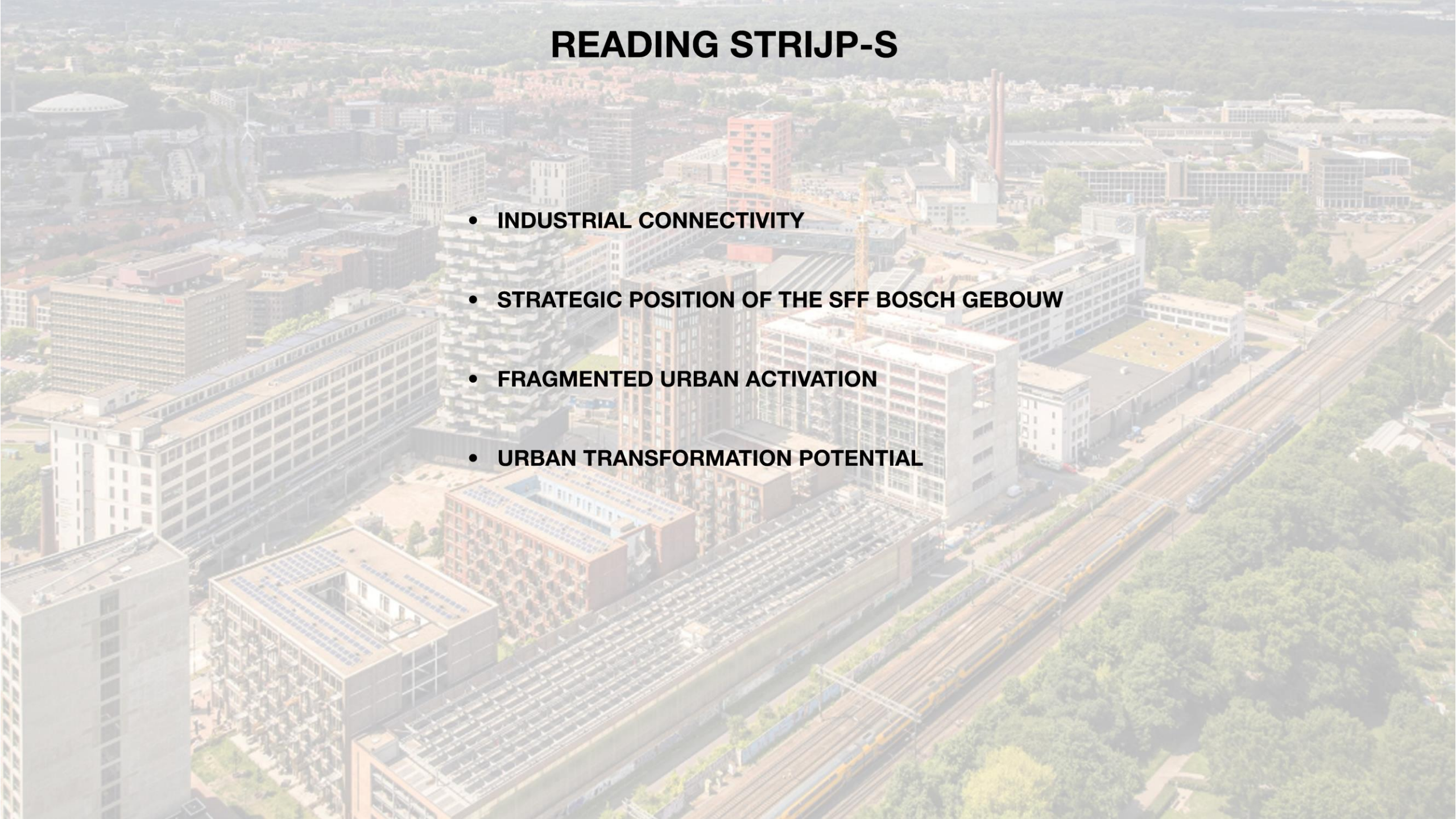
Transformation Strategy

REPROGRAMMING (INTRODUCTION OF HYBRIDITY)

DAYLIGHT AND SPATIAL POROSITY

LANDSCAPE ACTIVATION

READING STRIJP-S

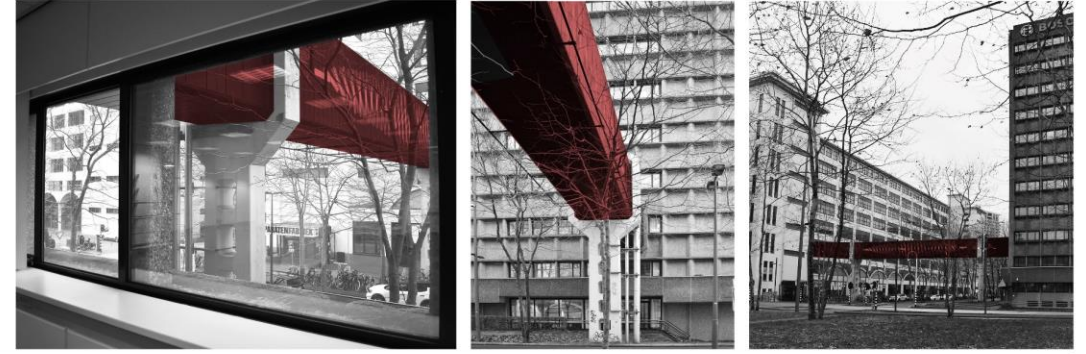


- **INDUSTRIAL CONNECTIVITY**
- **STRATEGIC POSITION OF THE SFF BOSCH GEBOUW**
- **FRAGMENTED URBAN ACTIVATION**
- **URBAN TRANSFORMATION POTENTIAL**

INDUSTRIAL CONNECTIVITY

A Network of Relationships shaping the identity of Strijp-S

AREA CAPACITIES



STRATEGIC POSITION WITHIN STRIJP-S

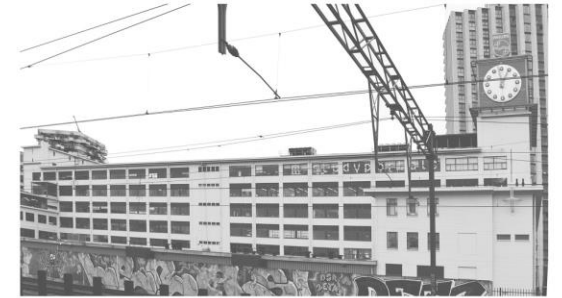
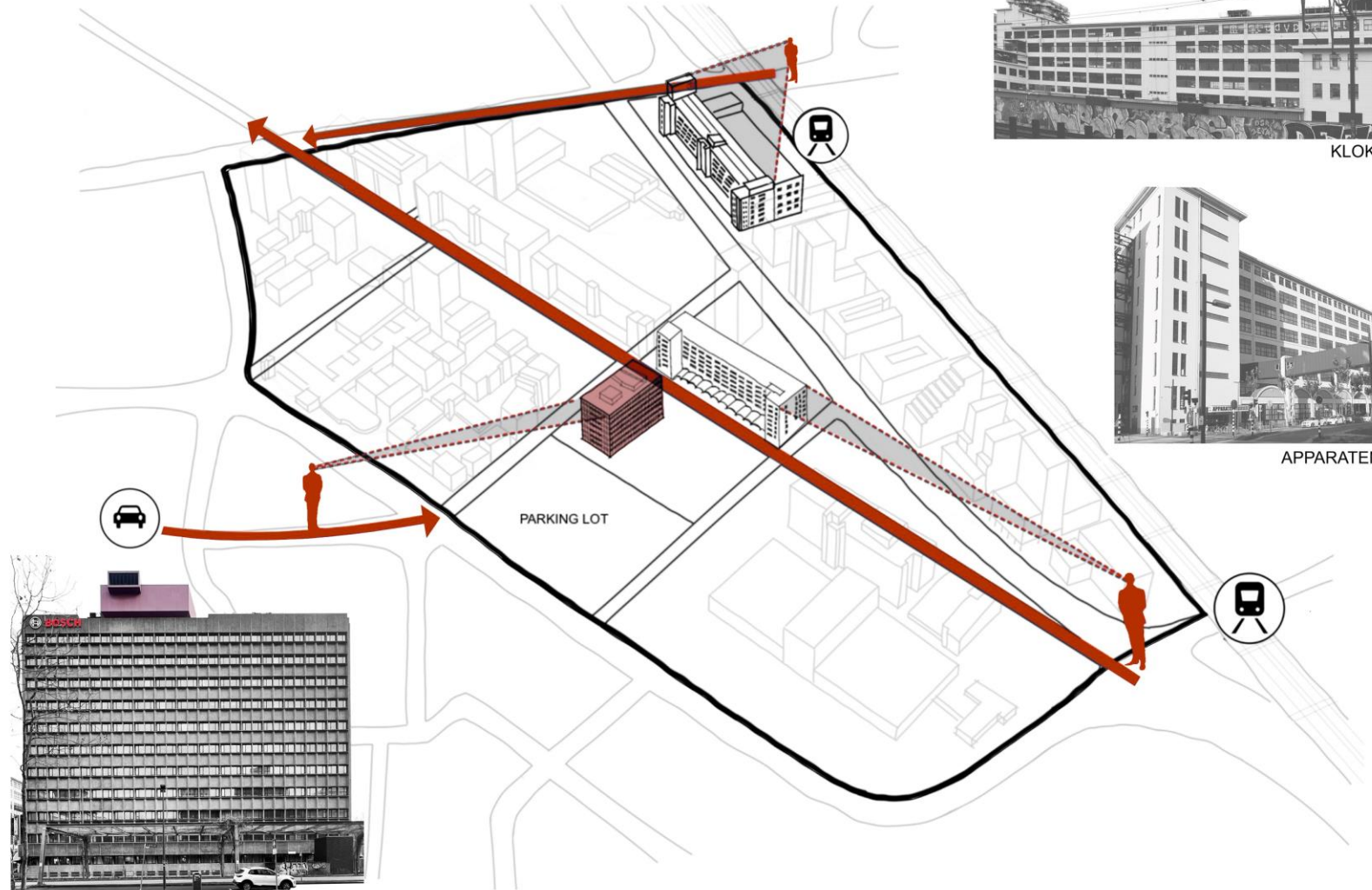
AREA CAPACITIES

A Prominent Landmark at the Intersection of Historical and Future Developments

BUILDING HEIGHT



BUILDING AGE



KLOKGEBOUW



APPARATENFABRIEK



SFF BOSCH GEBOUW

URBAN TRANSFORMATION POTENTIAL

AREA CAPACITIES

An Underutilized Interface and Future Opportunity



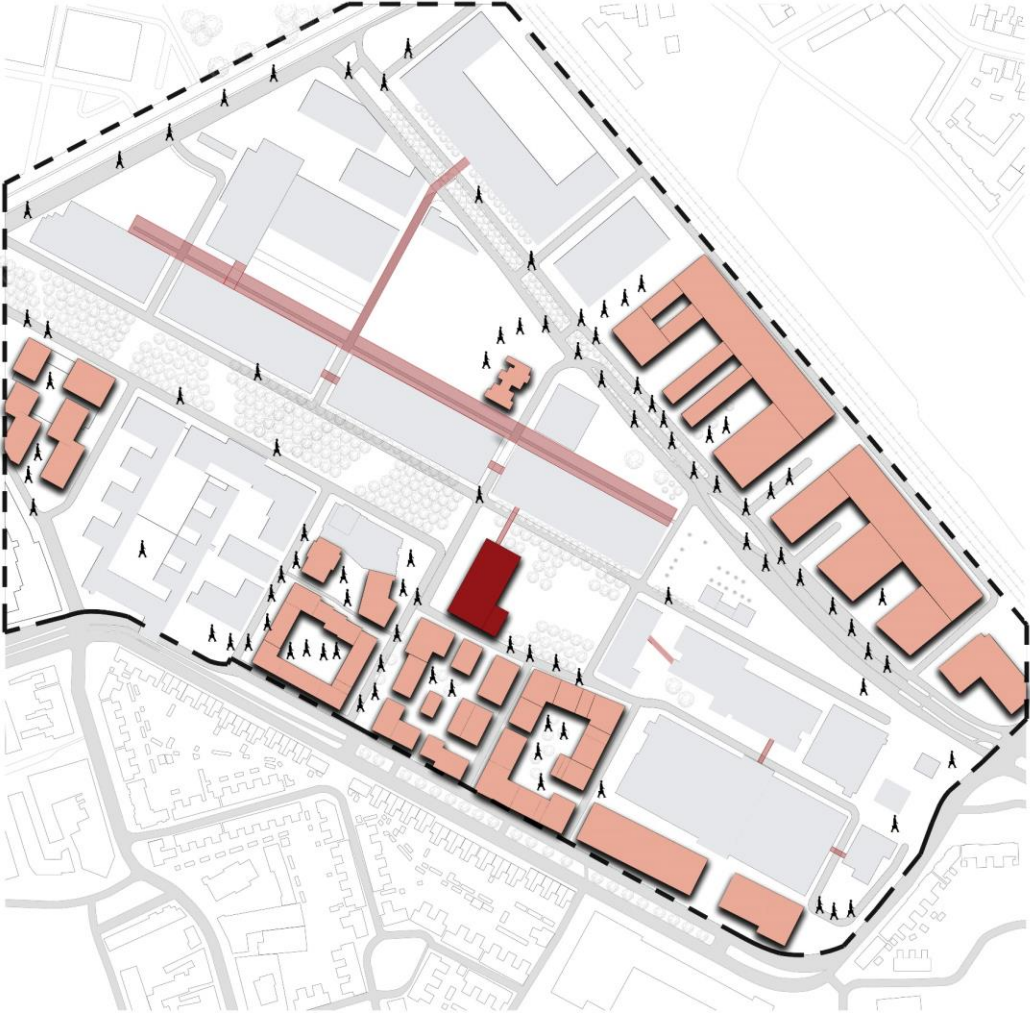
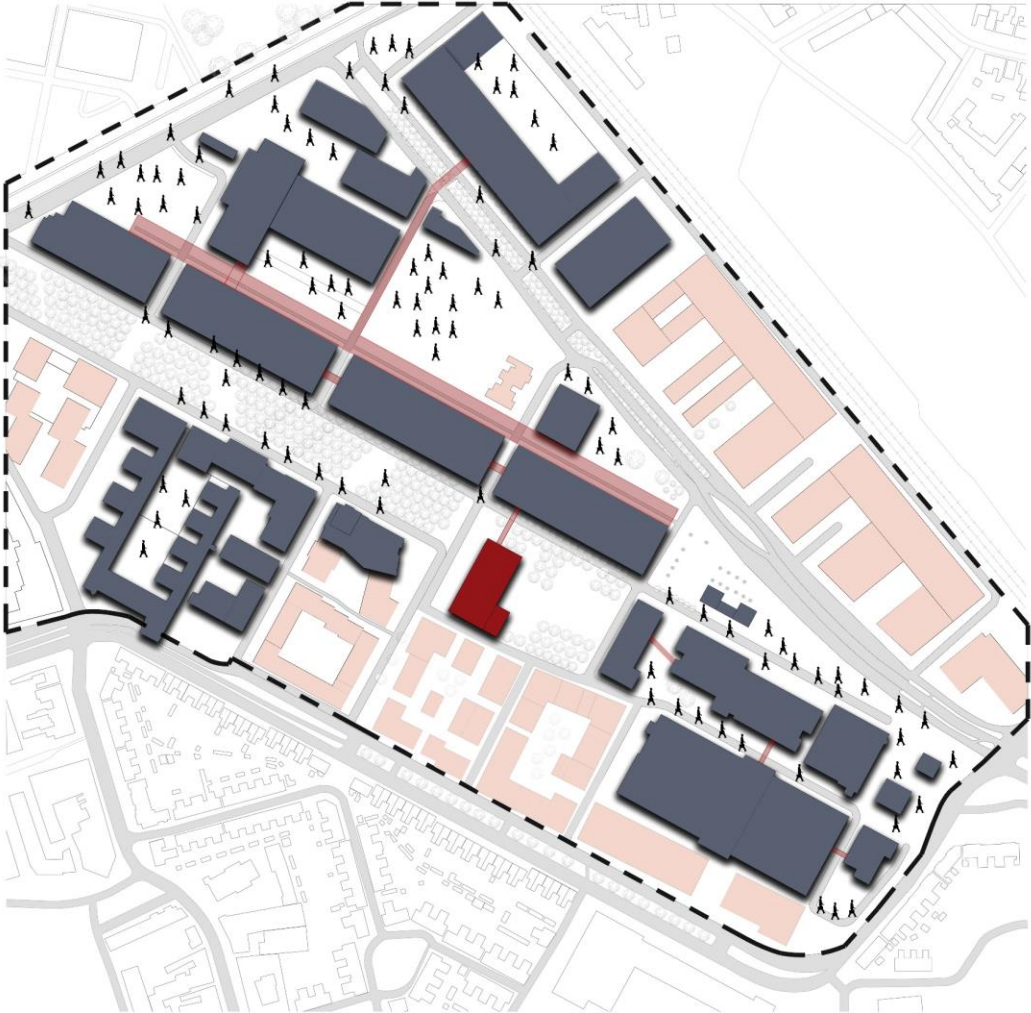
FRAGMENTED URBAN ACTIVATION

AREA LIMITATIONS

Limited Interaction between Residential and Office Clusters

DAYTIME ACTIVATION | OFFICE CLUSTERS ☀️

NIGHTTIME ACTIVATION | RESIDENTIAL CLUSTERS 🌙



● Non-Residential

● Existing Elevated Connections

● Residential

READING THE EXISTING BUILDING

Identifying Constraints and Capacities for Transformation

- **BUILDING CAPACITIES**

STRUCTURE

MATERIAL CONDITION

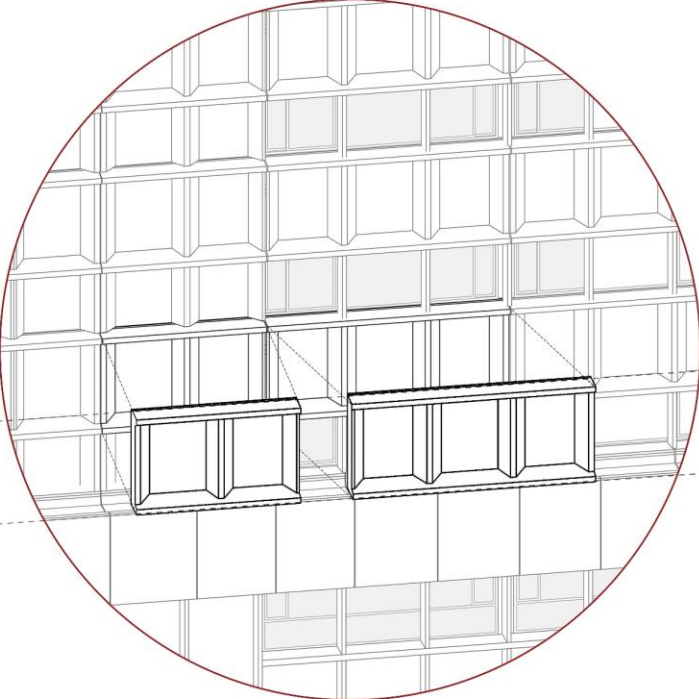
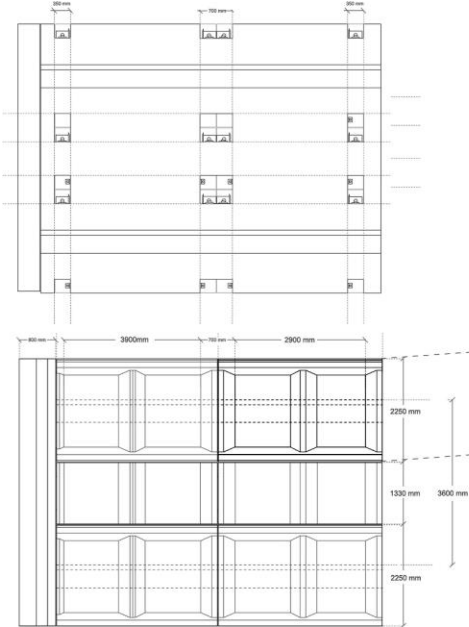
- **BUILDING LIMITATIONS**



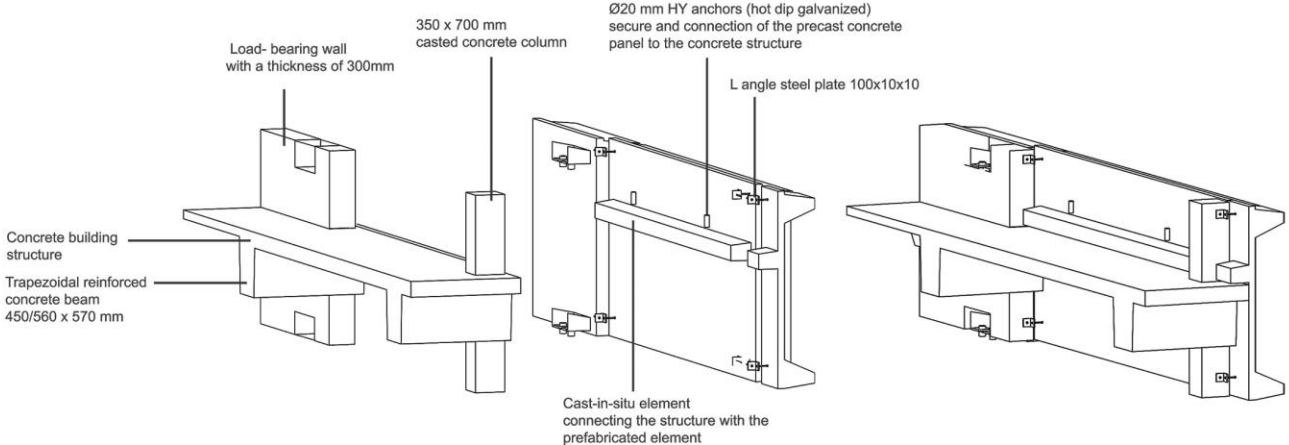
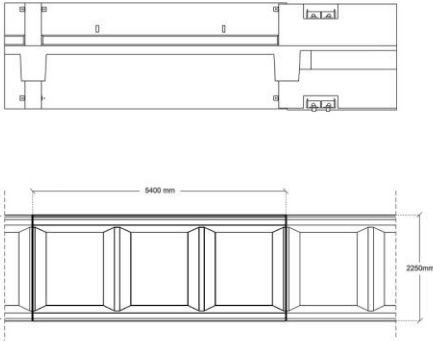
REVERSIBLE FACADE SYSTEM

A Modular Envelope, Enabling Selective Transformation

Facade Panel Type A (length: 3.6m)

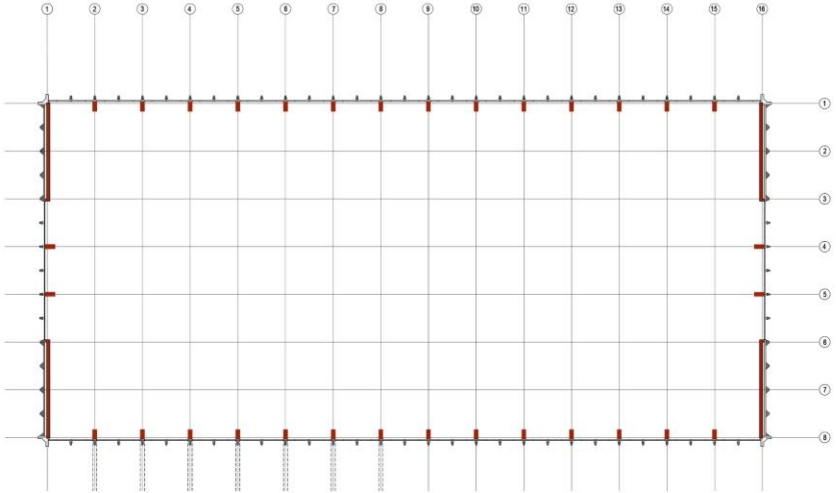
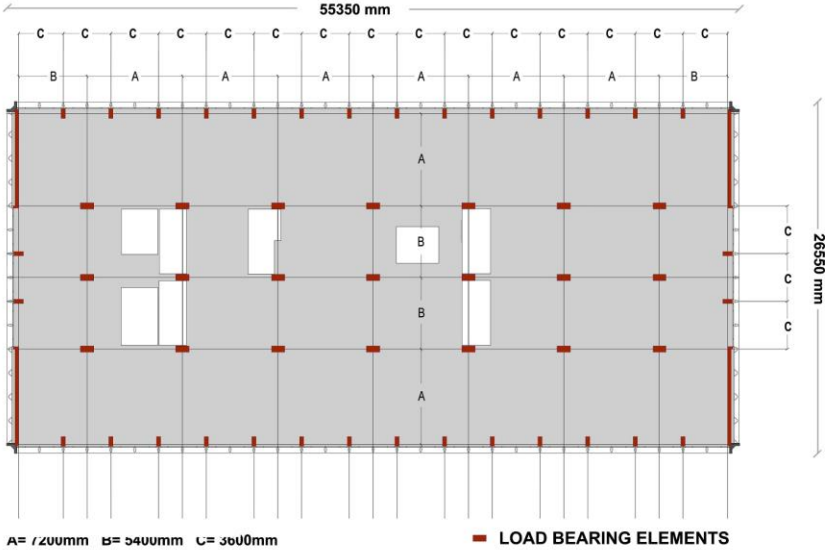
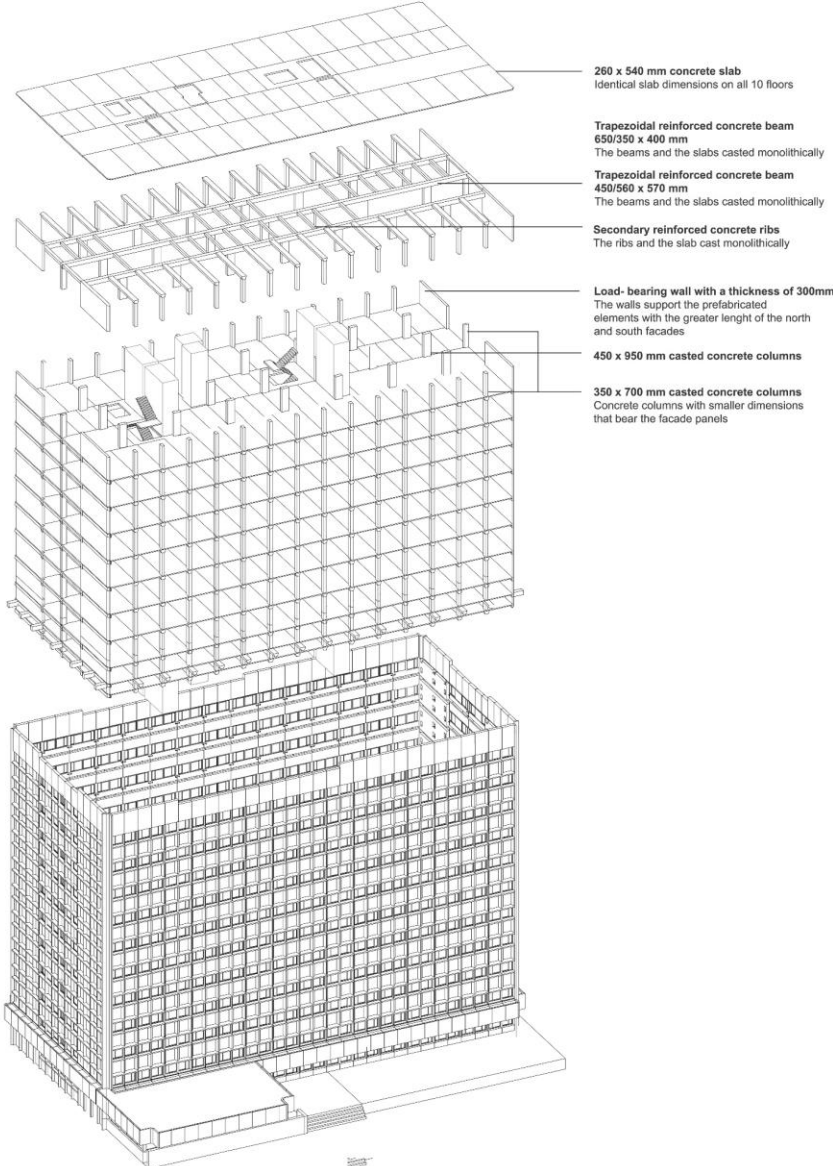


Facade Panel Type B (length: 5.4 m)



FLEXIBLE STRUCTURAL FRAMEWORK

Large Structural Spans, Supporting Programmatic Adaptation



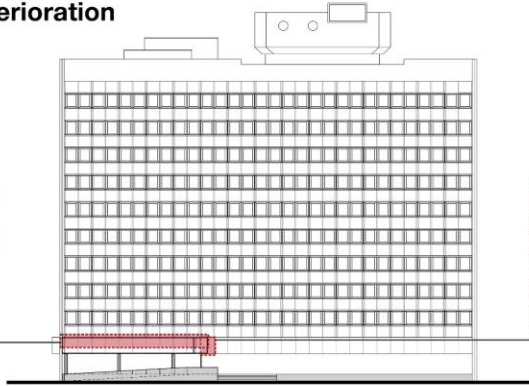
EXISTING MATERIAL CONDITION

BUILDING CAPACITIES

A Preserved Fabric with Localized Deterioration



CATEGORY: SURFACE CHANGES AND BLEMISHES
SUBCATEGORY : DEPOSIT(SOILING)
 Description:
 Local surface deposits on exposed aggregate concrete facade, caused by moisture-related runoff and accumulation of dirt, affecting appearance without evident material loss.



EASTERN ELEVATION



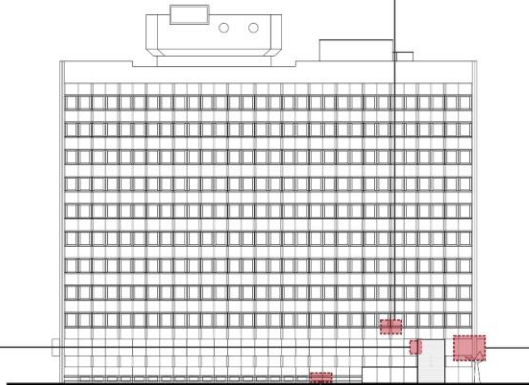
CATEGORY: FIXED CRACKING ALONG CONSTRUCTION JOINT
 Description:
 Previously present non-connected vertical crack along a construction joint in exposed aggregate concrete, inferred from the current filled joint. The crack itself is no longer visible due to repair.



CATEGORY: REPAIRED MECHANICAL DAMAGE
 Description:
 Local repaired area in exposed aggregate concrete facade, indicating previous mechanical damage that has been patched with repair mortar, visible through texture and color difference.



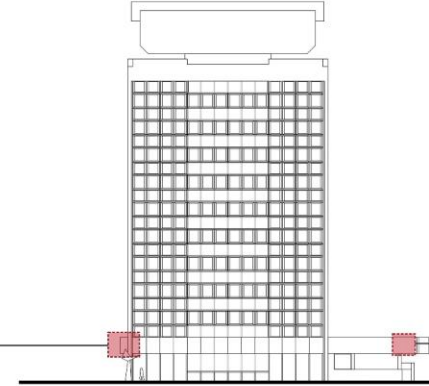
CATEGORY: CRACKING
SUBCATEGORY: NON-CONNECTED CRACK
 Description:
 Local non-connected vertical crack in reinforced concrete along a construction joint, likely partially mechanically induced, with potential durability implications due to moisture ingress.



WESTERN ELEVATION



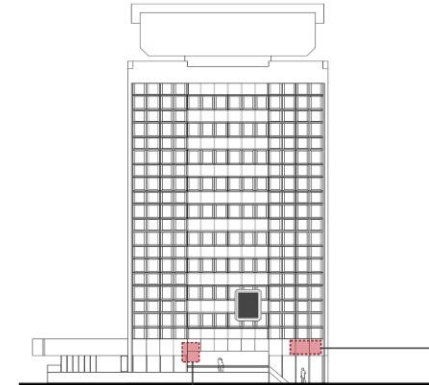
CATEGORY: SURFACE CHANGES AND BLEMISHES
SUBCATEGORY : DEPOSIT(SOILING)
 Description:
 Local surface deposits on exposed aggregate concrete façade below a ventilation opening, caused by repeated moisture discharge and runoff, affecting appearance without visible material degradation.



SOUTH ELEVATION



CATEGORY: REPAIRED MECHANICAL DAMAGE
 Description:
 Local repaired area in exposed aggregate concrete facade, indicating previous mechanical damage that has been patched with repair mortar, visible through texture and color difference.



NORTH ELEVATION



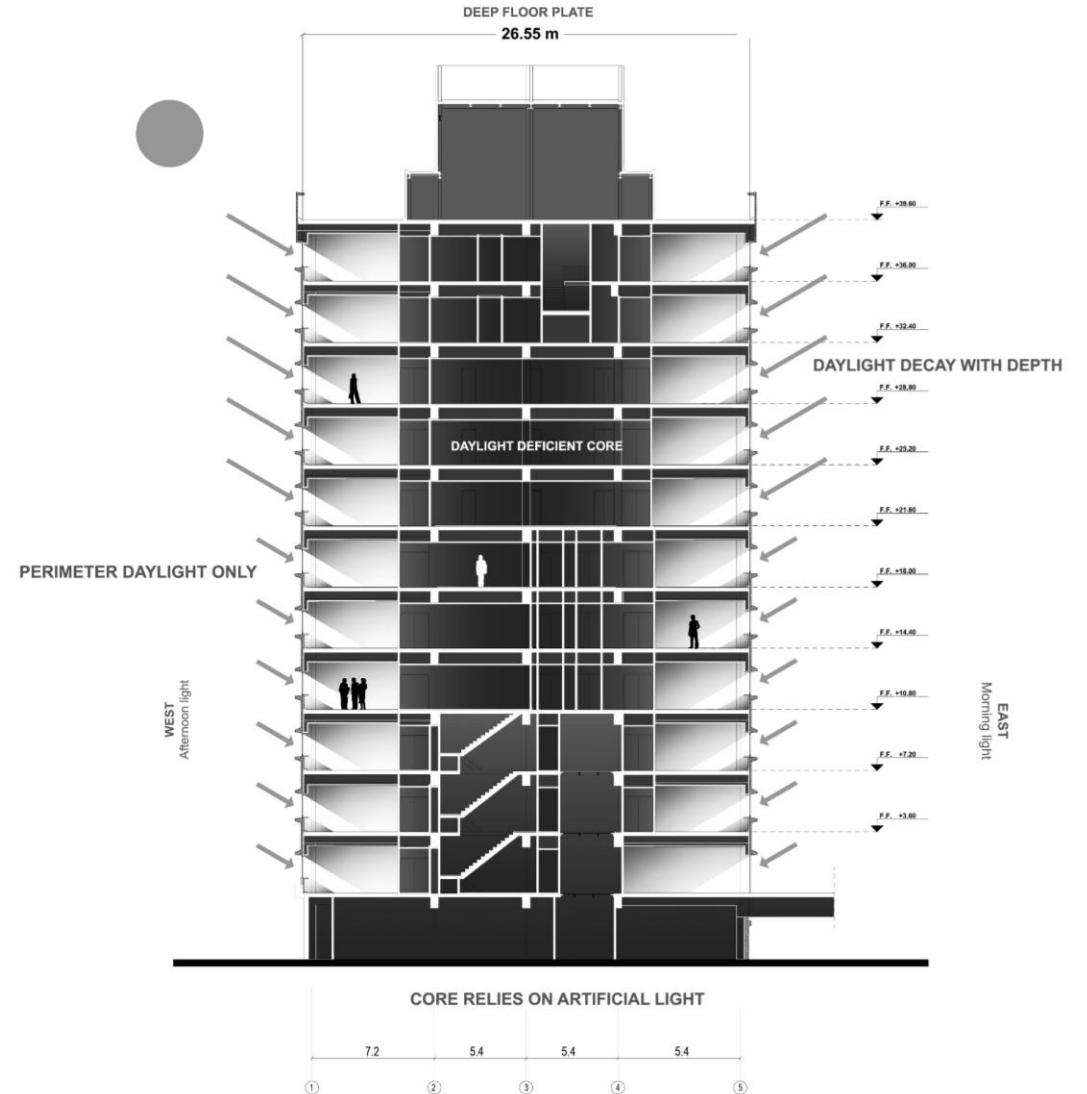
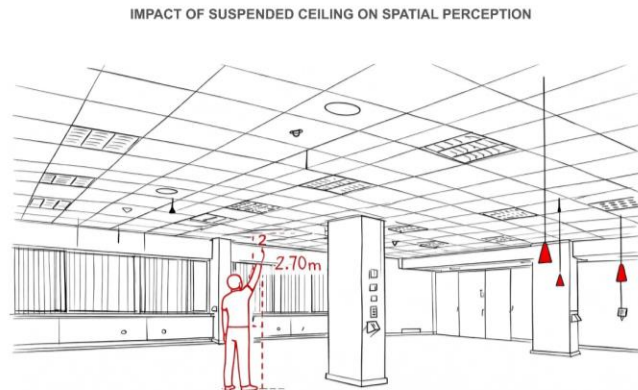
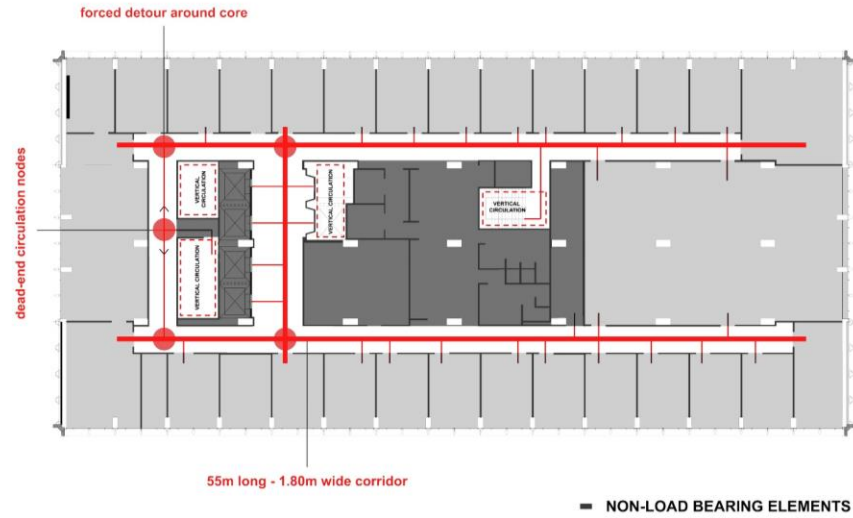
CATEGORY: MISSING PART
SUBCATEGORY : LACUNA
 Description:
 Local lacuna at the edge of an exposed aggregate concrete element, indicating isolated loss of material at the corner detail.



CATEGORY: SURFACE CHANGES AND BLEMISHES
SUBCATEGORY : DEPOSIT(SOILING)
 Description:
 Local surface deposits on exposed aggregate concrete facade beneath a mounted fixture, indicating limited dirt accumulation on the surface without visible material loss or cracking.

FRAGMENTED CIRCULATION & DAYLIGHT DEFICIENT CORE

Spatial Constraints of the Existing Office Typology



TRANSFORMATION STRATEGY

- REPROGRAMMING
- SPATIAL POROSITY
- LANDSCAPE ACTIVATION

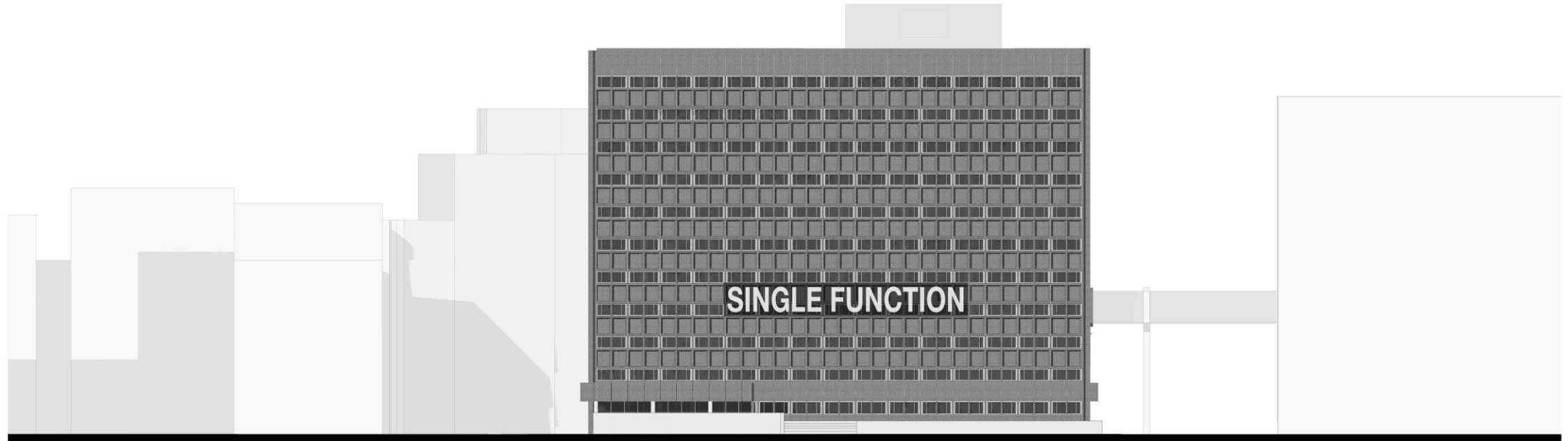


REPROGRAMMING

Translating the Surrounding Urban Ecosystem into a Hybrid Community

FROM A MONOFUNCTIONAL BLOCK

A deep and Inward-Oriented Office Typology



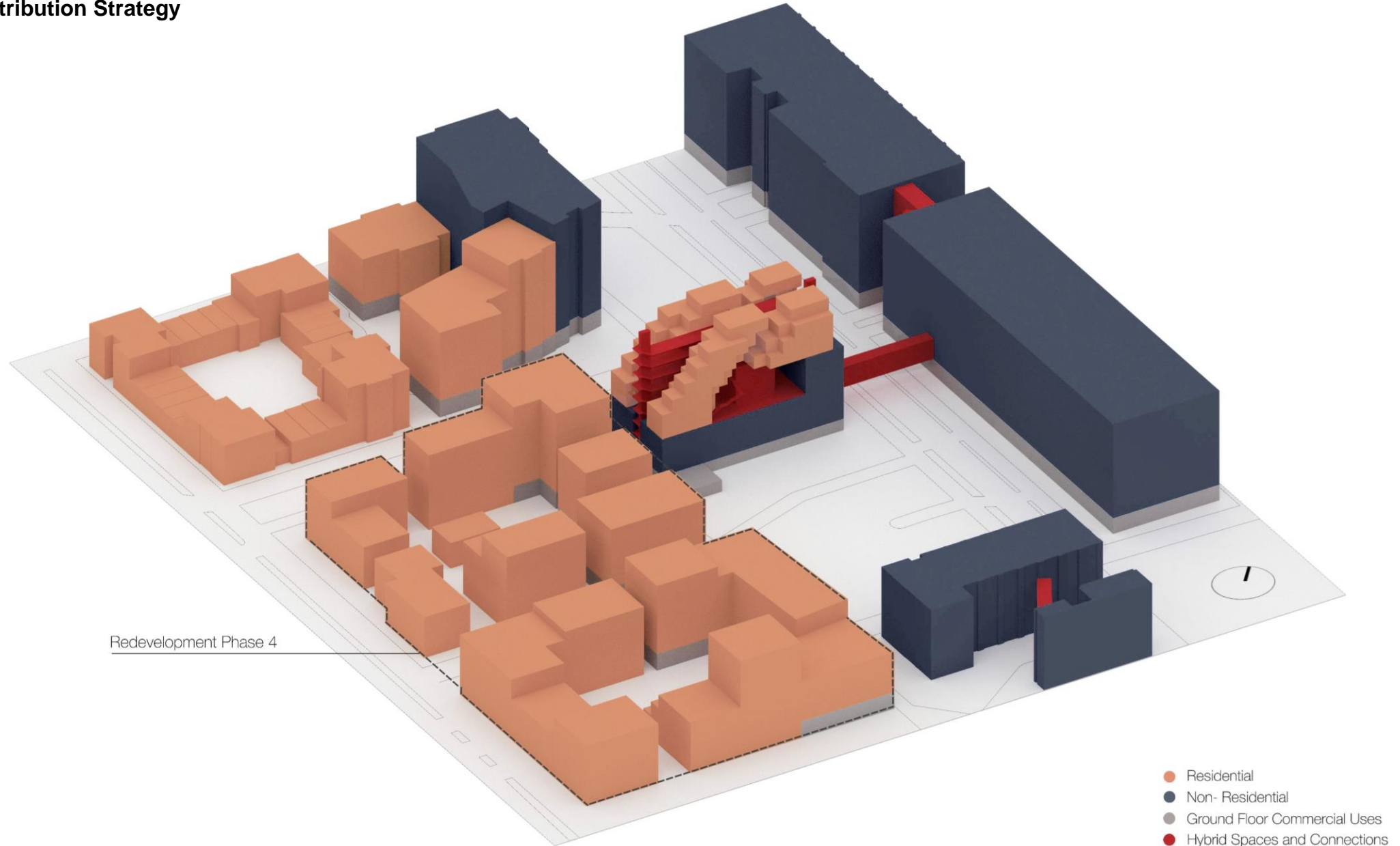
TO A “CITY WITHIN THE CITY”

Creating New Relationships Between Living, Working and Collective Space



A "CITY WITHIN THE CITY"

Program Distribution Strategy



CIRCULATION STRATEGY

Access and Connectivity Through the Hybrid Core

Non- Residential

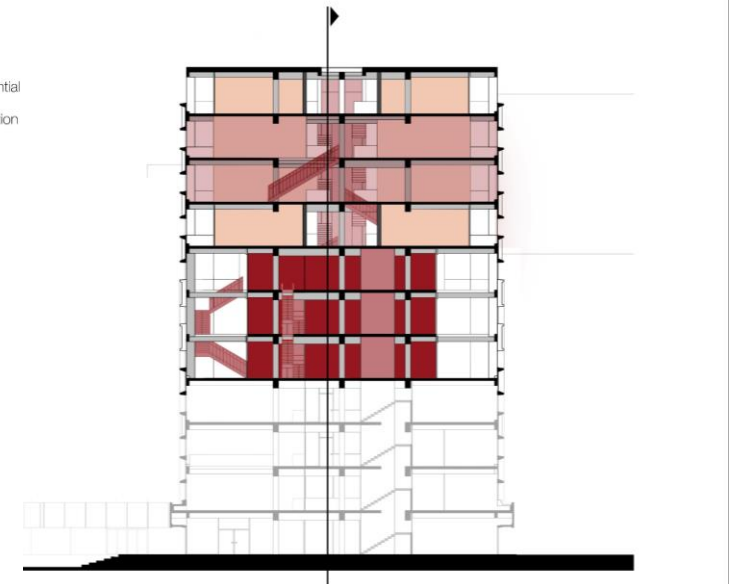


- Hybrid
- Office
- Public
- Circulation

Residential

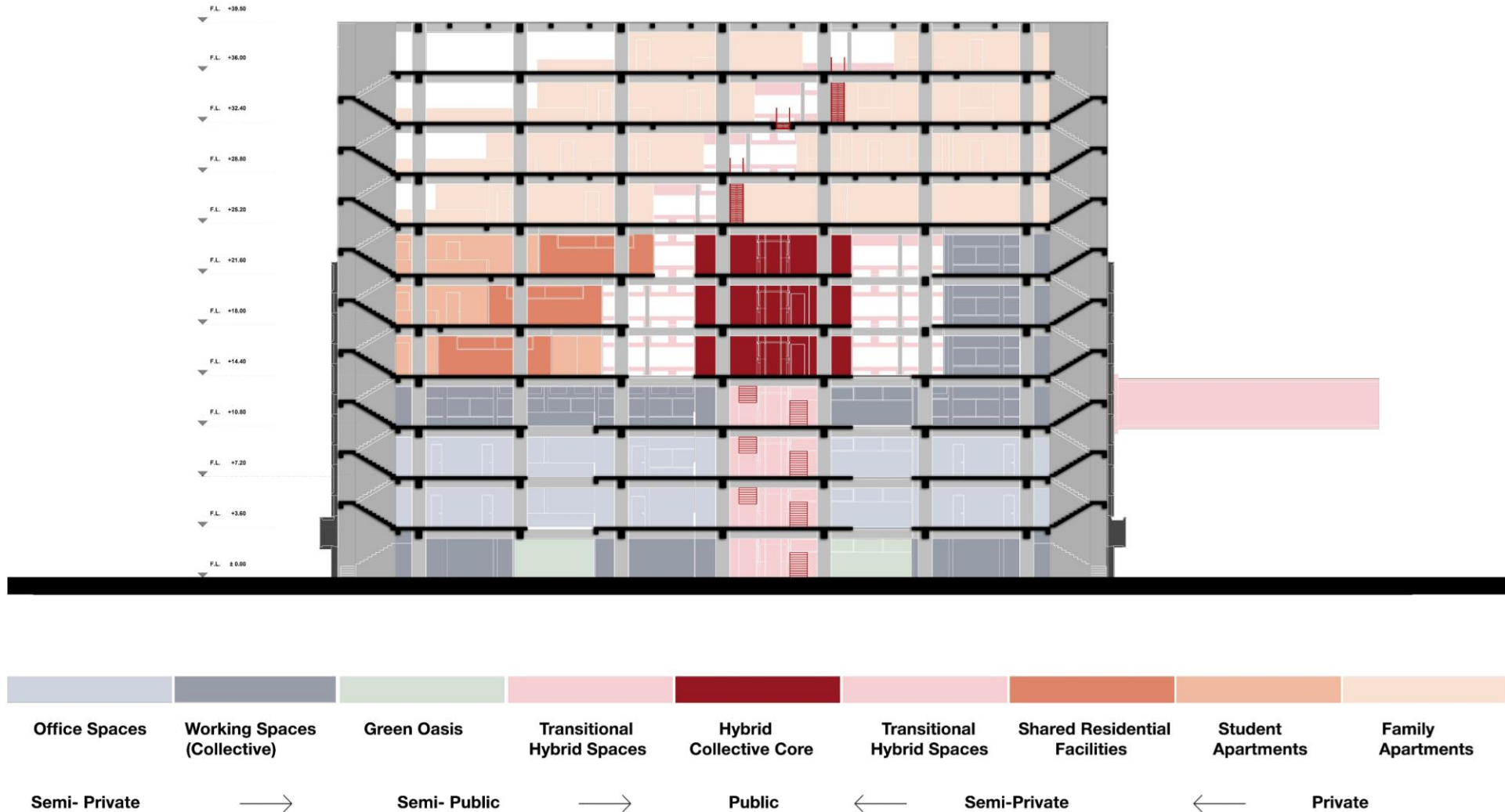


- Hybrid
- Residential
- Circulation



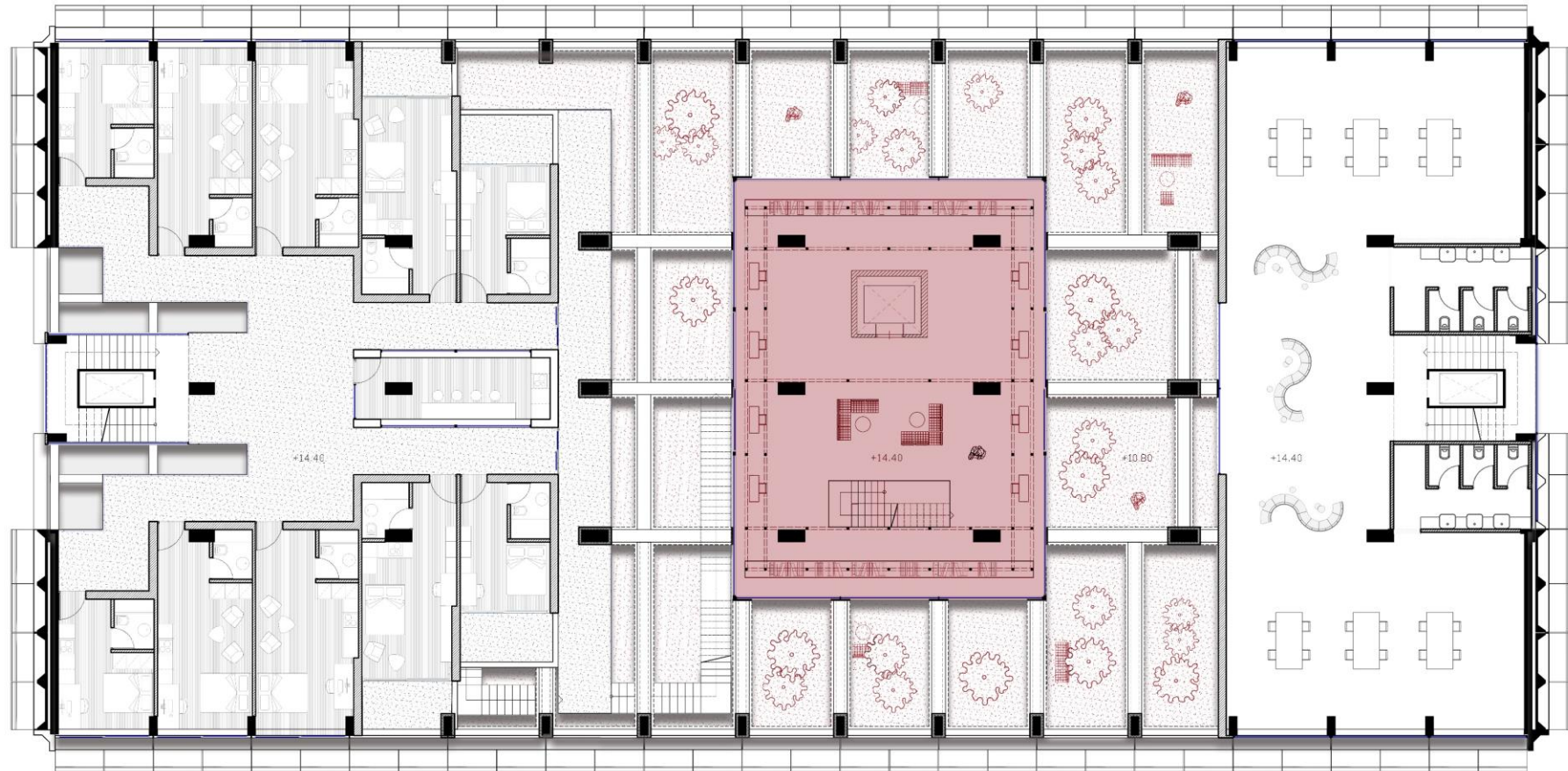
GRADIENT OF COLLECTIVITY

Organizing relationships around the Hybrid Collective Core



THE HYBRID FLOOR

Spatial Organization around the Collective Core



5th FLOOR PLAN (hybrid floor)



THE HYBRID CORE IN USE

Where Landscape, Work and Collective Life Intersect



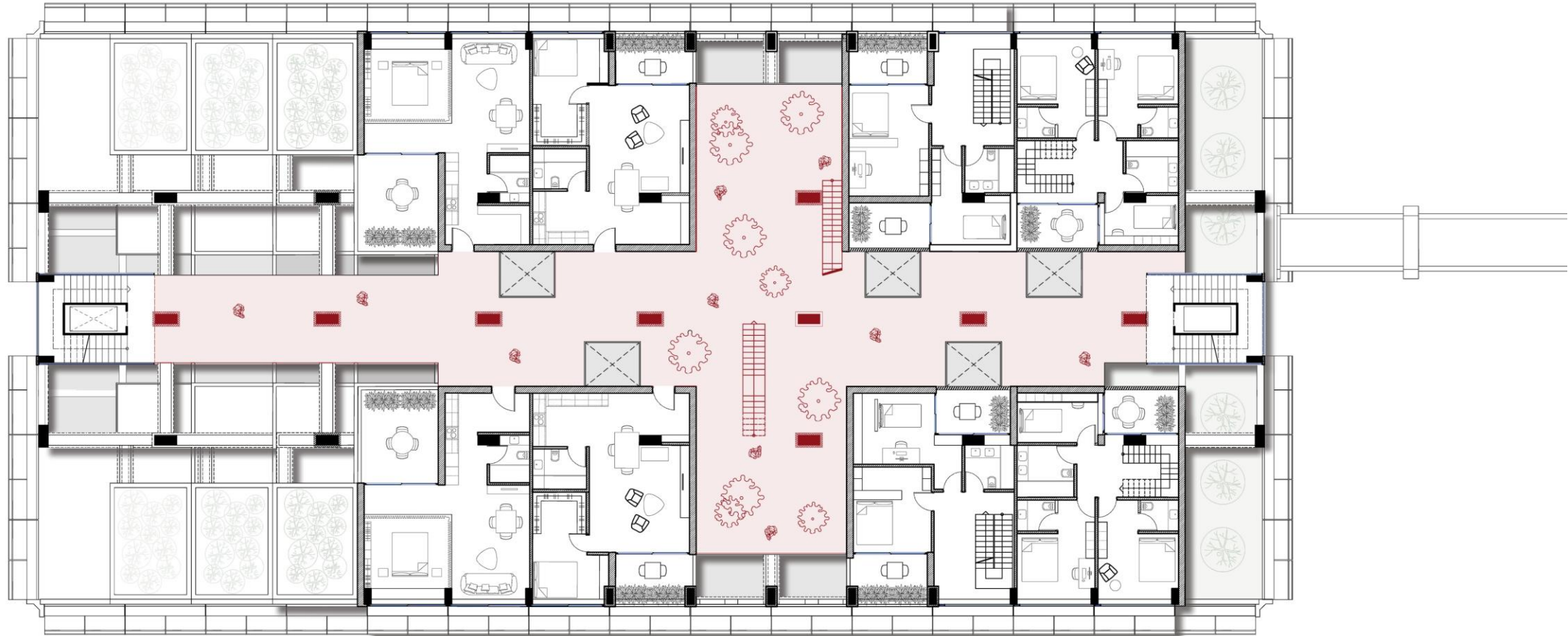
Hybrid Semi-Open Space (4th Floor)



View from the Working Collective Space to the Hybrid Core (5th Floor)

THE RESIDENTIAL FLOOR

Expanding the Hybrid Condition into Residential Life

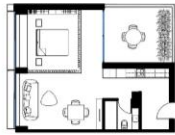


9th FLOOR PLAN (residential floor)

A DIVERSE RESIDENTIAL COMMUNITY

Type A 50 m²

SOUTH ORIENTED LIVING UNIT



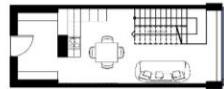
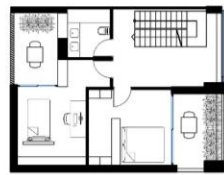
Type B 50 m²

EAST-PARK ORIENTED LIVING UNIT / WEST



Type C 85 m²

DUAL ORIENTED LIVING UNIT
(EAST-PARK + INTERNAL "STREET")
/ WEST



Type D 100 m²

INTERNAL "STREET" ORIENTED LIVING UNIT



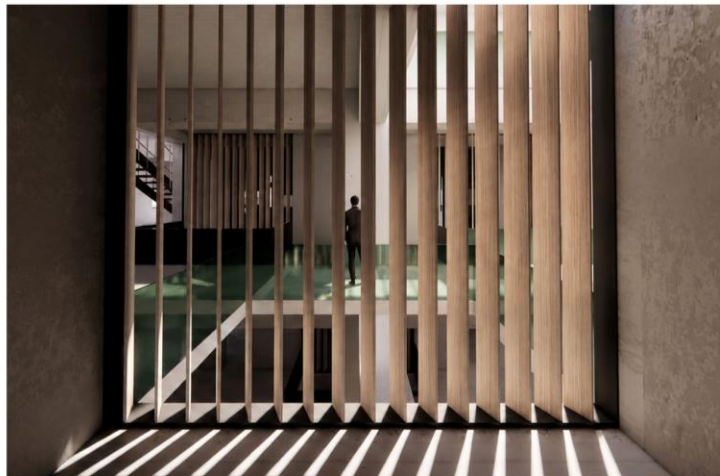
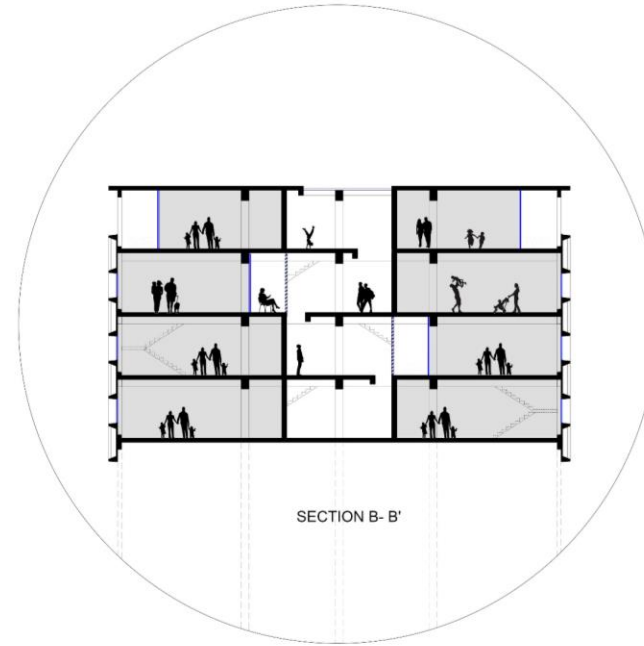
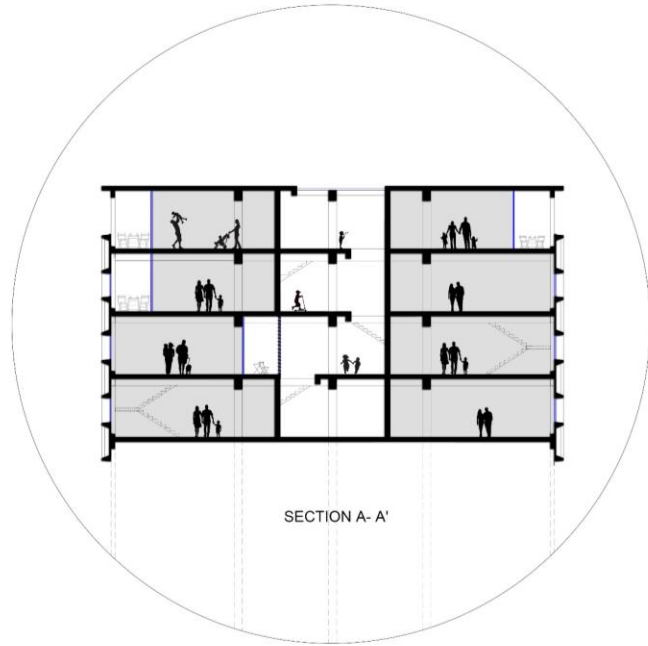
Type E 75 m²

DUAL ORIENTED LIVING UNIT
(EAST-PARK + SOUTH)
/ WEST



DESIGNING FOR EVERYDAY ENCOUNTERS

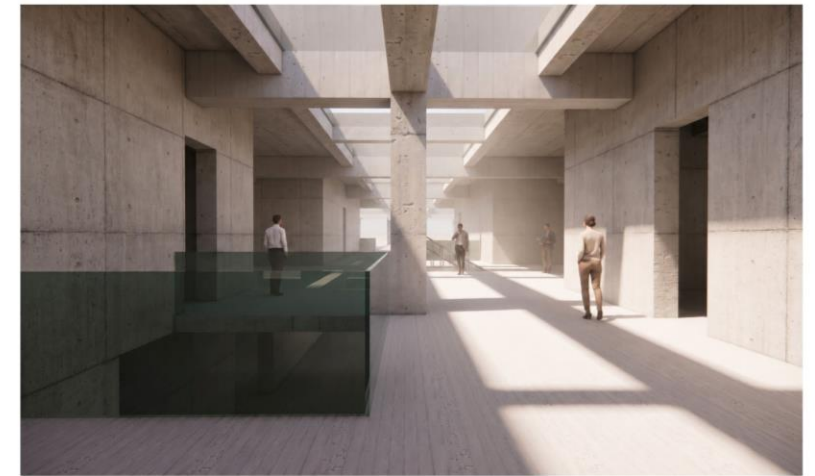
Visual Openness and Shared Spaces Strengthen Social Interaction among Residents



Visual connection between residents across the internal "street"



View from the transitional hybrid space on the residential levels



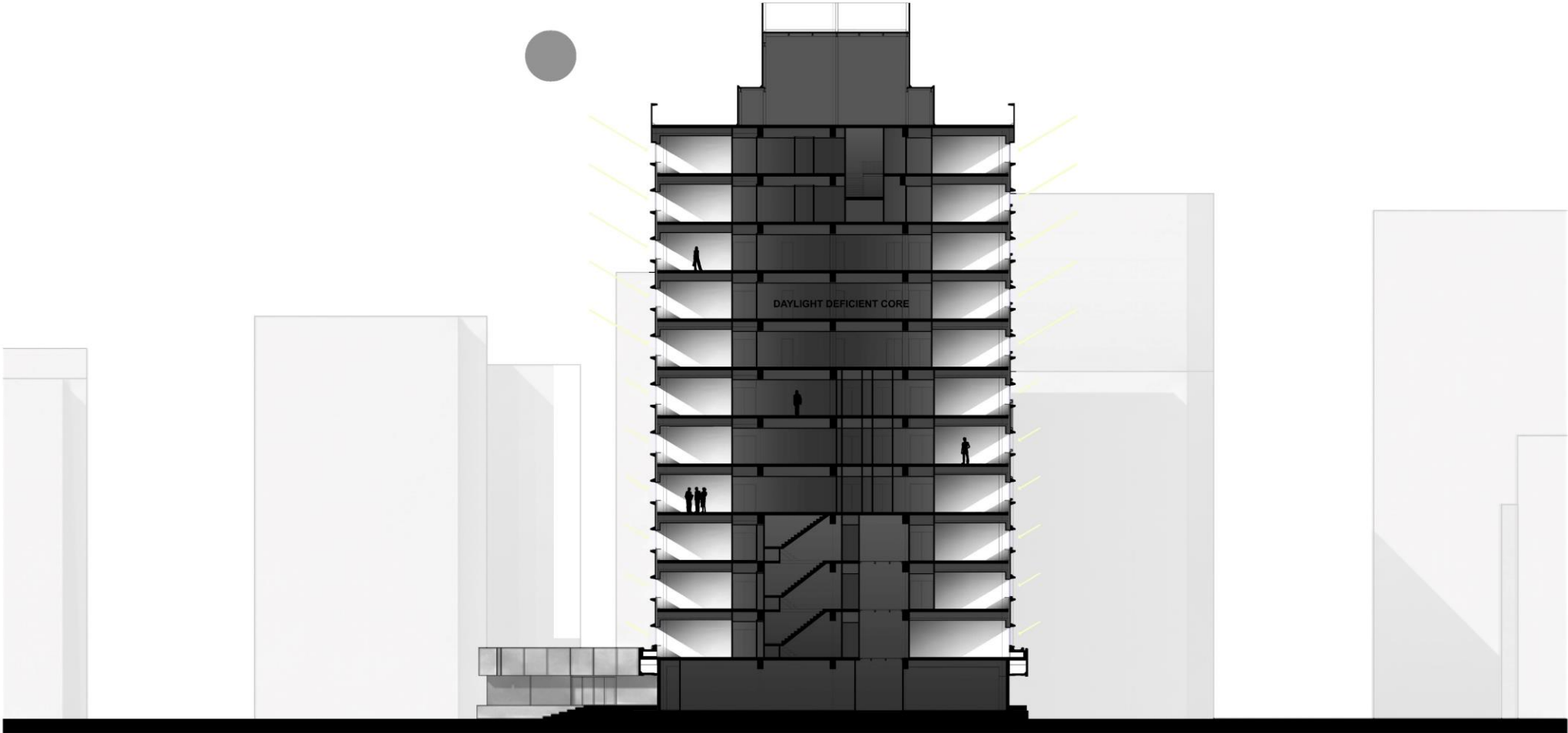
View from the circulation space on the top residential levels

DAYLIGHT AND SPATIAL POROSITY

Transforming a deep office block into an Open and Porous Environment

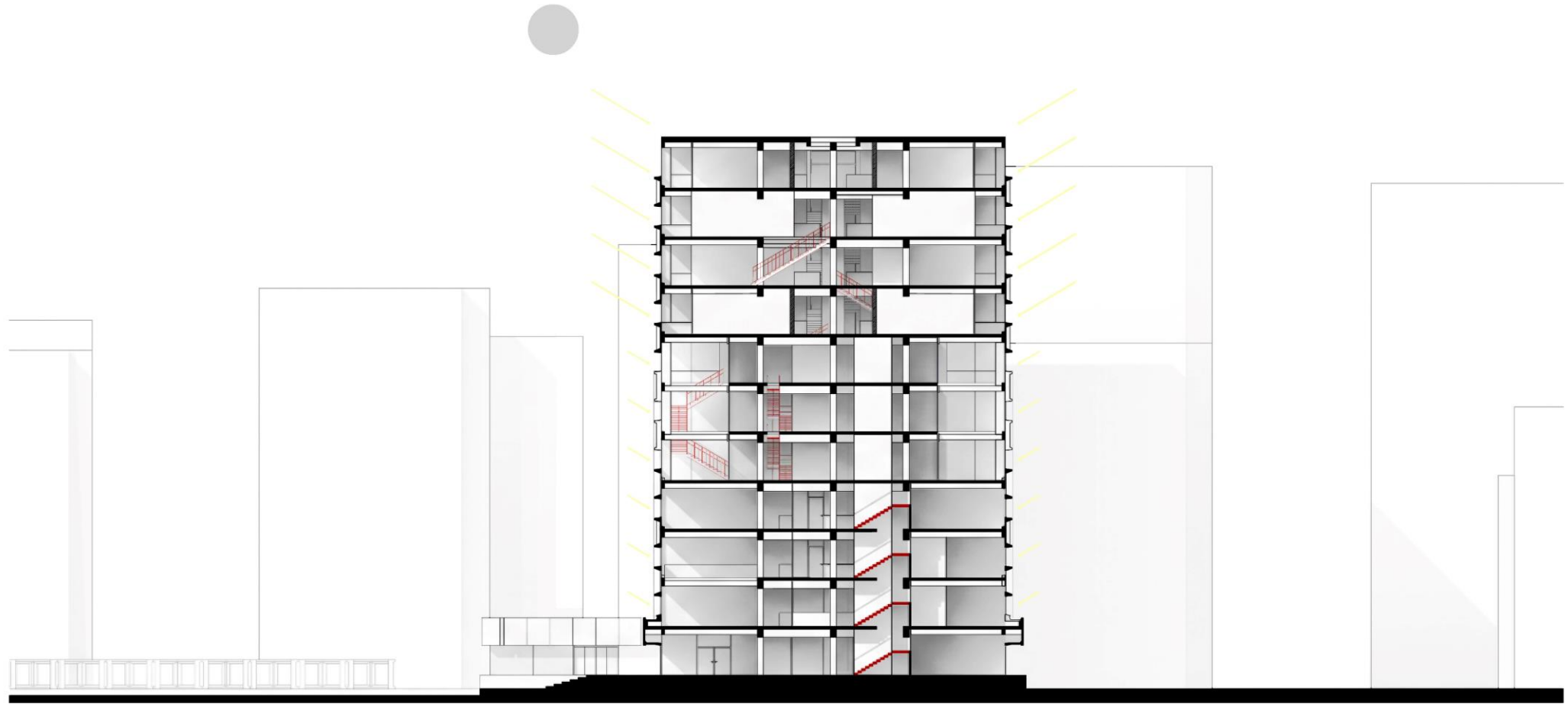
FROM A DARK MASS

Daylight Limited to the Building Perimeter



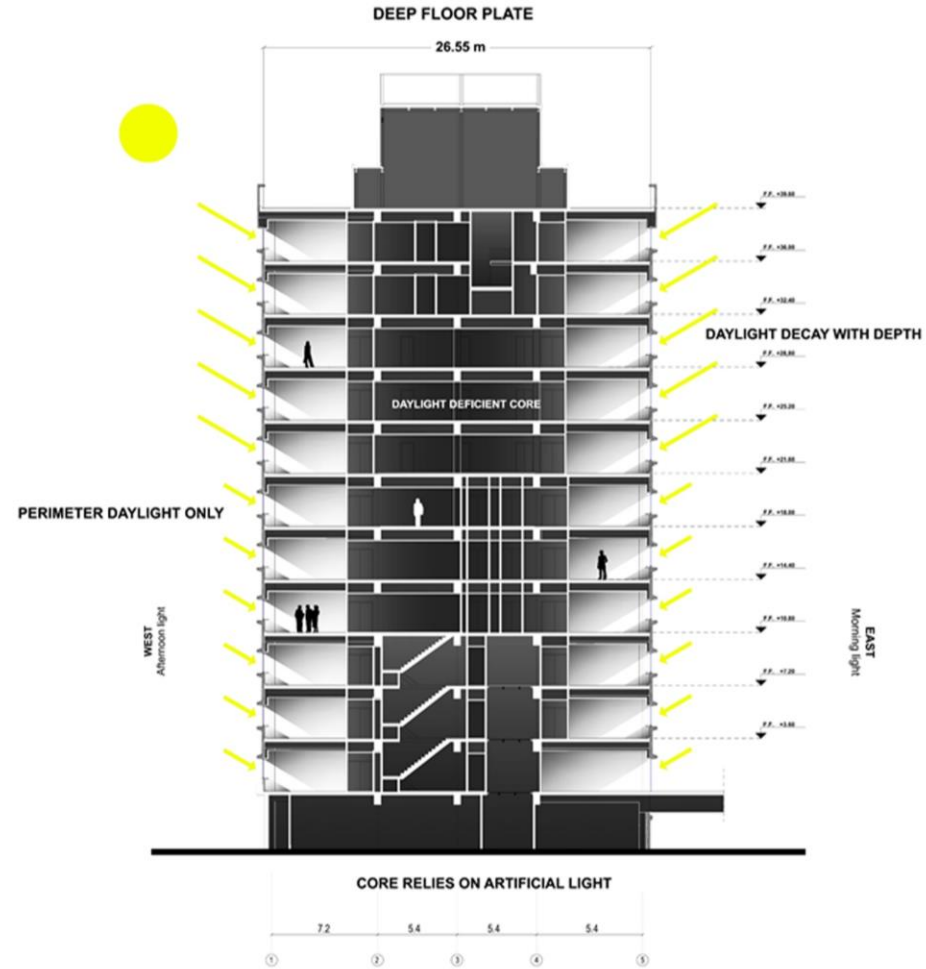
TO A POROUS ENVIRONMENT

Introducing Light, Voids and Visual Connection



DAYLIGHT LIMITATIONS OF THE EXISTING BUILDING

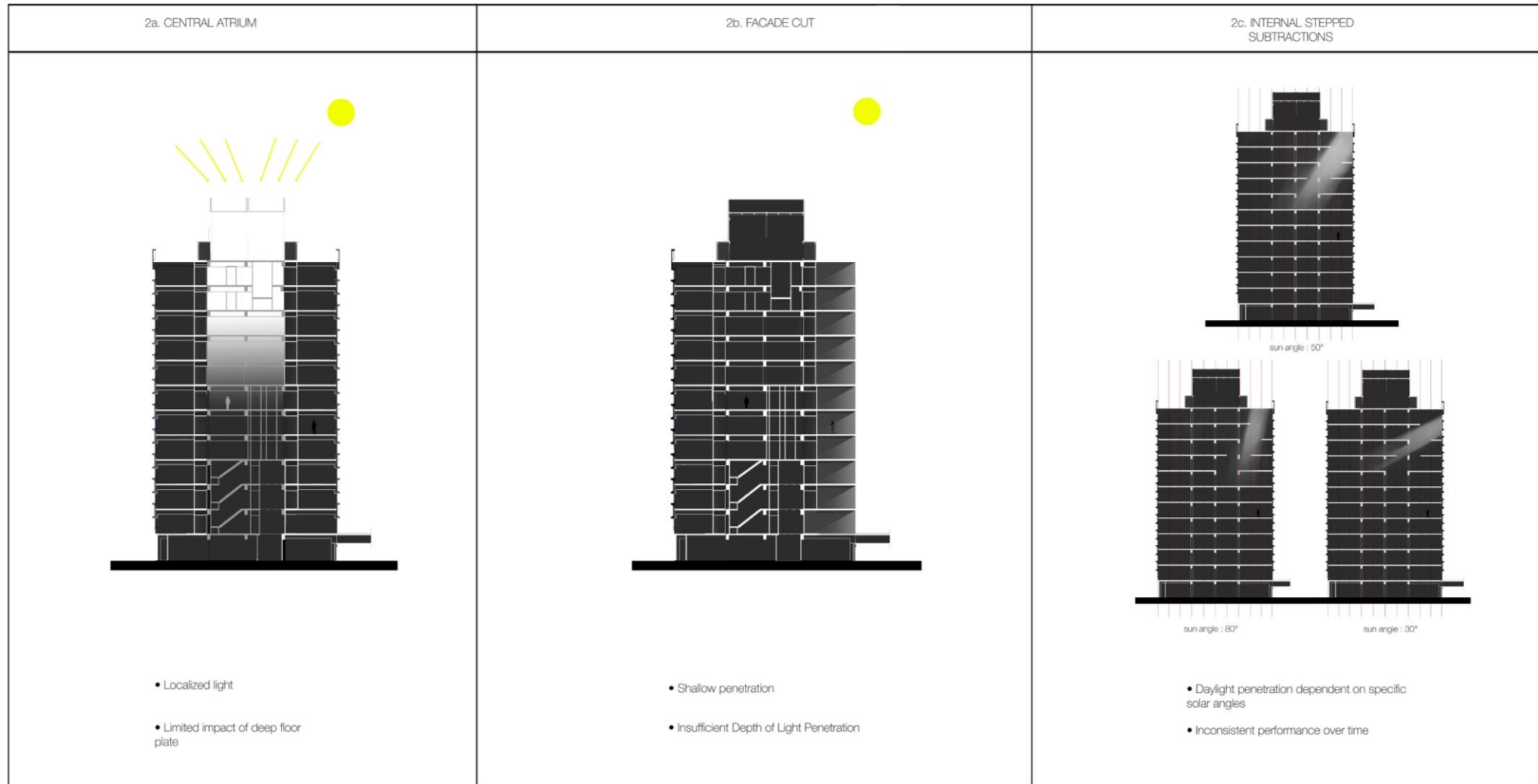
The deep floor plate restricts natural light penetration, resulting in a daylight-deficient core



Need for internal light introduction

TESTING DAYLIGHT STRATEGIES

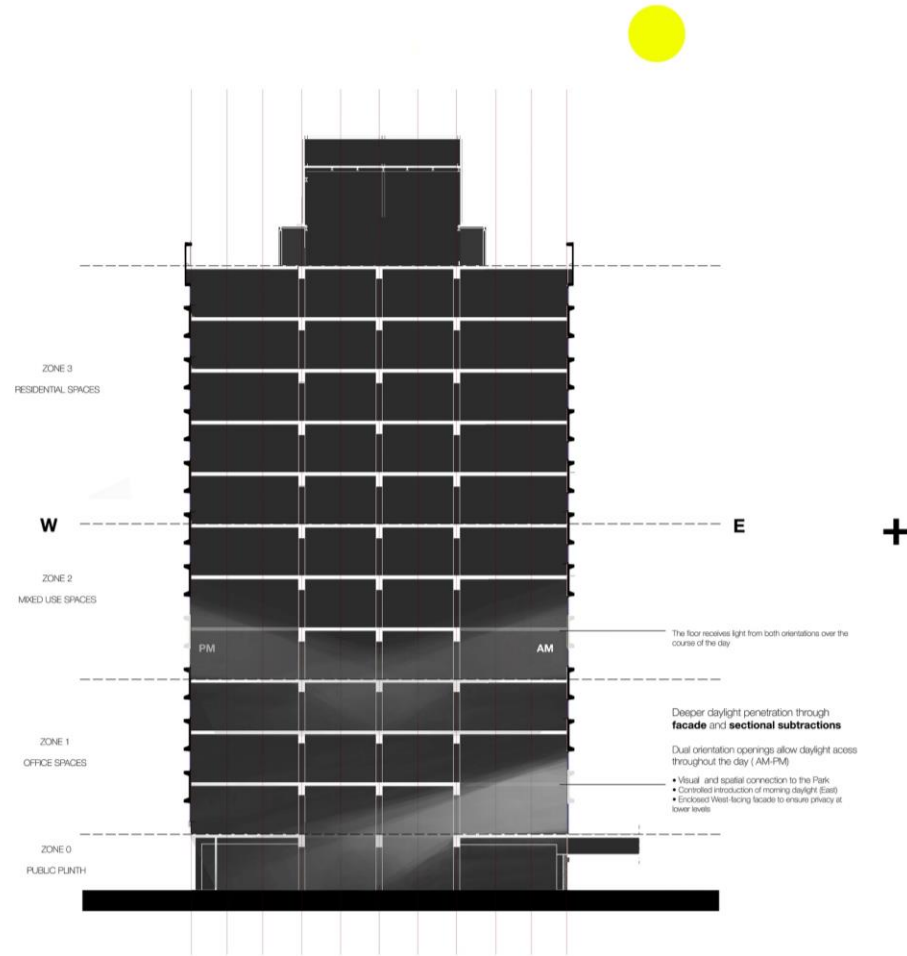
Evaluating alternative interventions for bringing natural light into the building core.



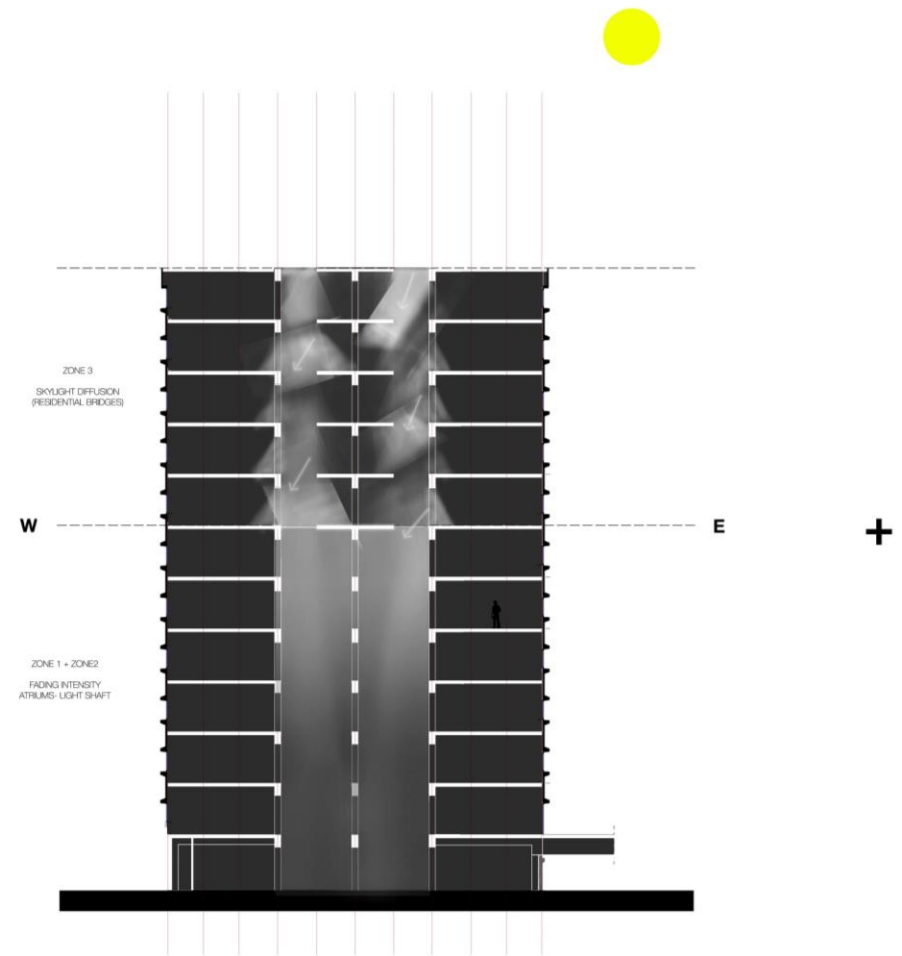
Internal Subtraction alone proved insufficient, requiring facade penetration to achieve consistent daylight conditions

COMBINED DAYLIGHT STRATEGY

Combining Atria, Skylights and Sectional Subtractions



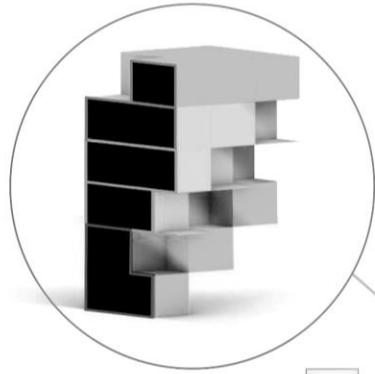
Facade and Sectional Subtractions



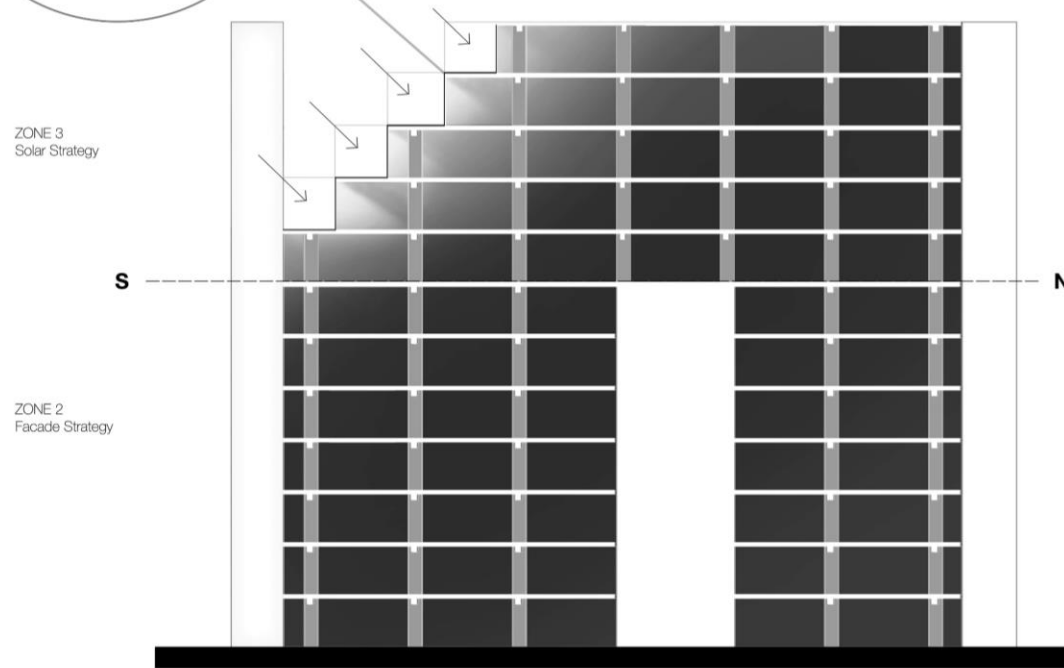
Atrium- Skylights

COMBINED DAYLIGHT STRATEGY

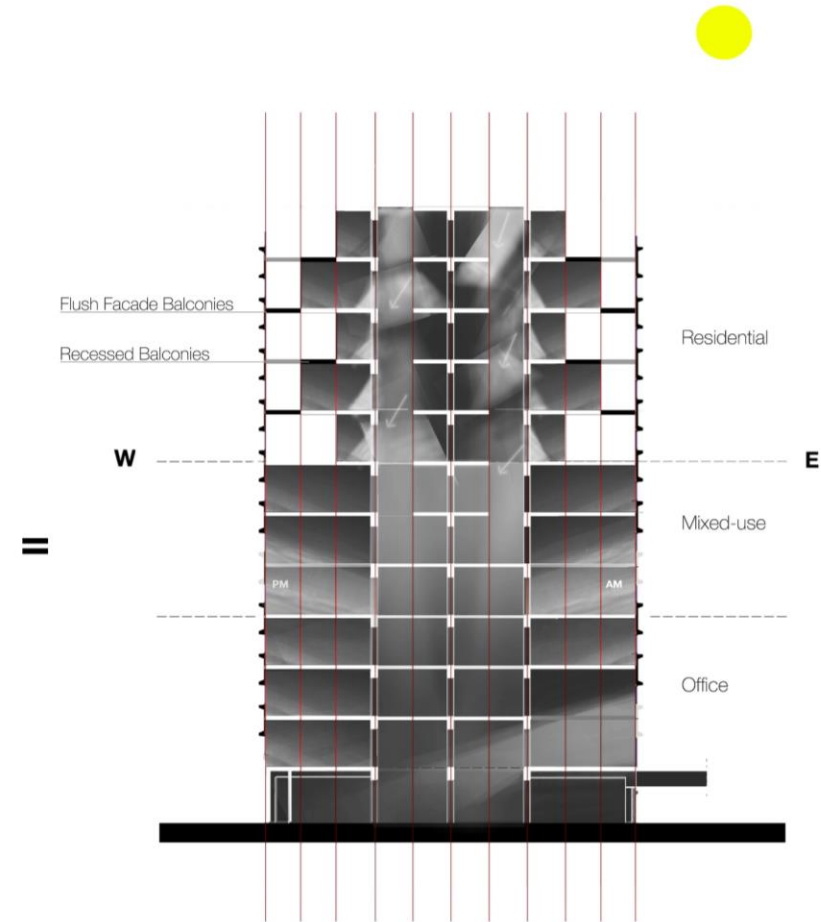
Stepped massing combined with atria, skylights and façade interventions



Stepped massing integrates modular apartments variations, enabling differentiated balcony depths and improved daylight penetration



Stepped Massing

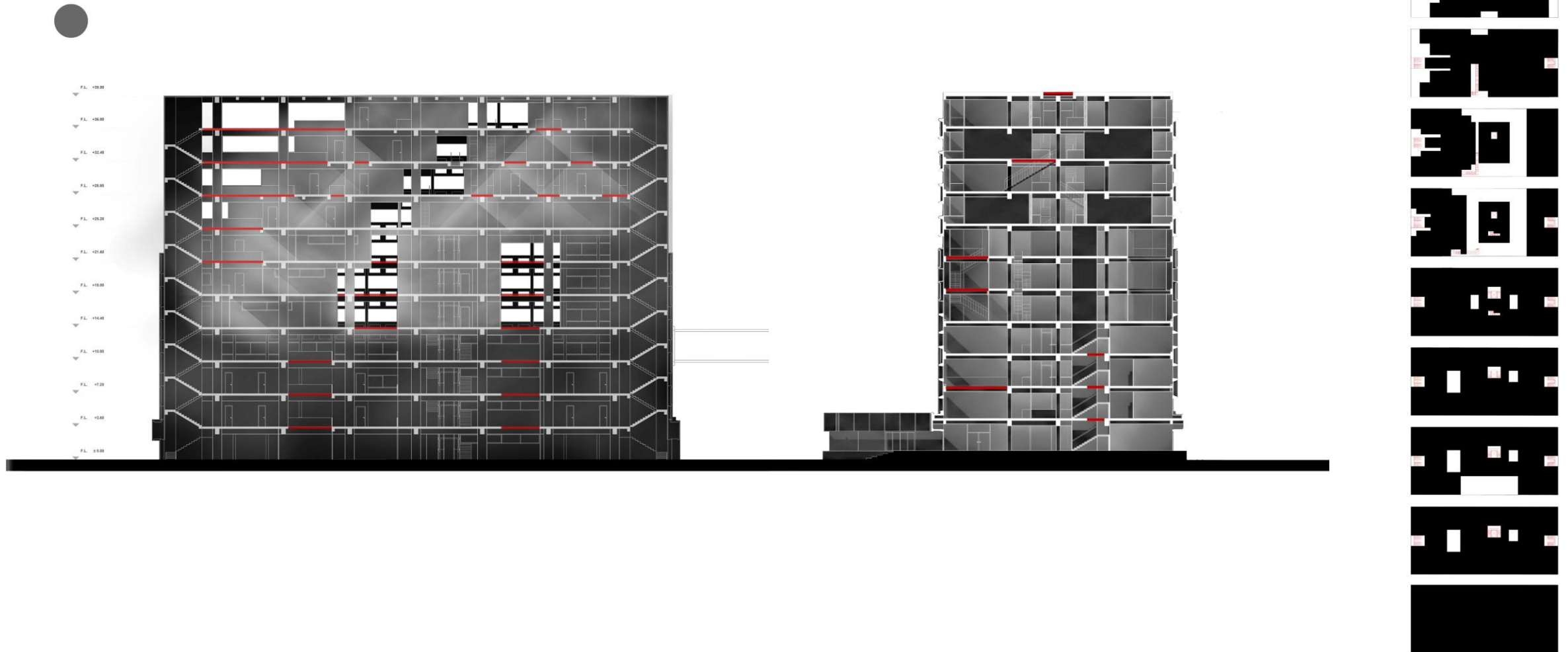




Daylight Exploration Model

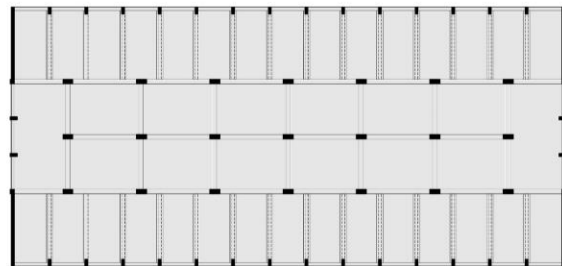
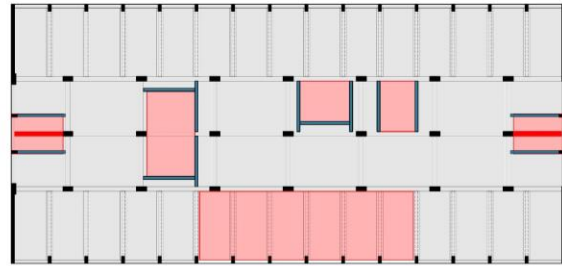
DAYLIGHT PERFORMANCE OF THE COMBINED STRATEGY

Visualizing the impact of slab subtractions and internal voids on light penetration

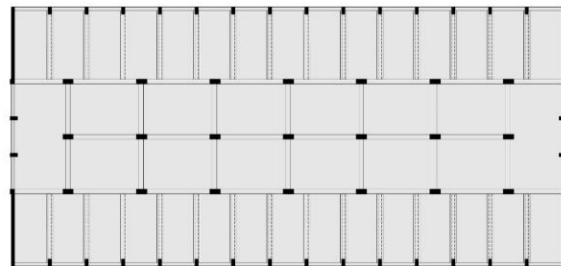
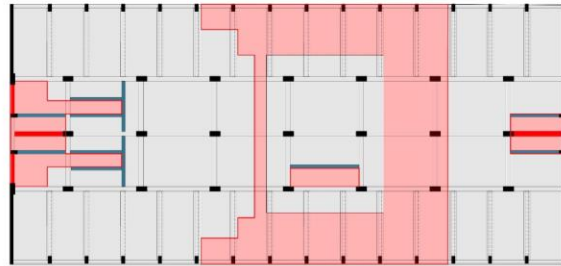
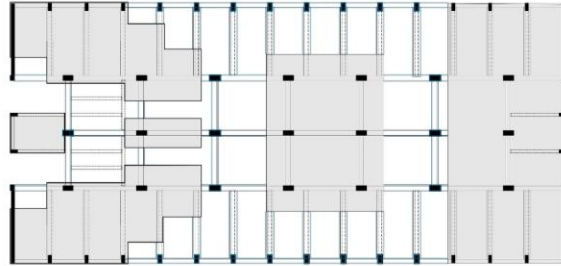


STRUCTURAL RESPONSE TO FLOOR SUBTRACTIONS

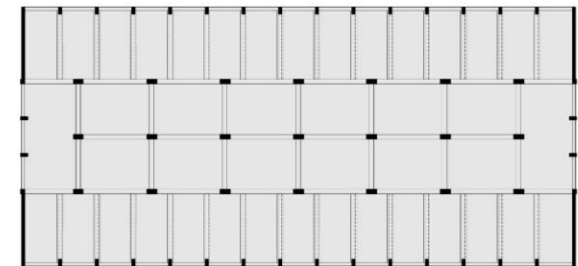
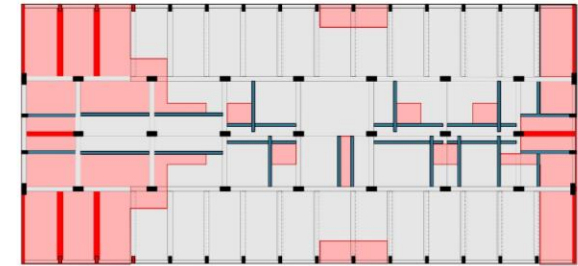
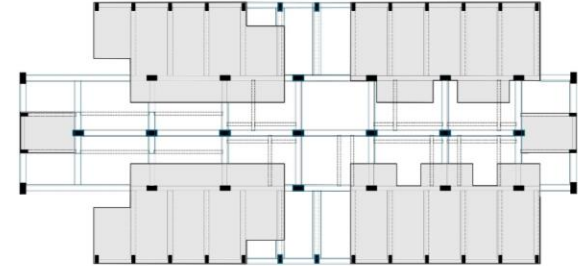
Different floor subtractions across the office, hybrid and residential floors



OFFICE FLOOR

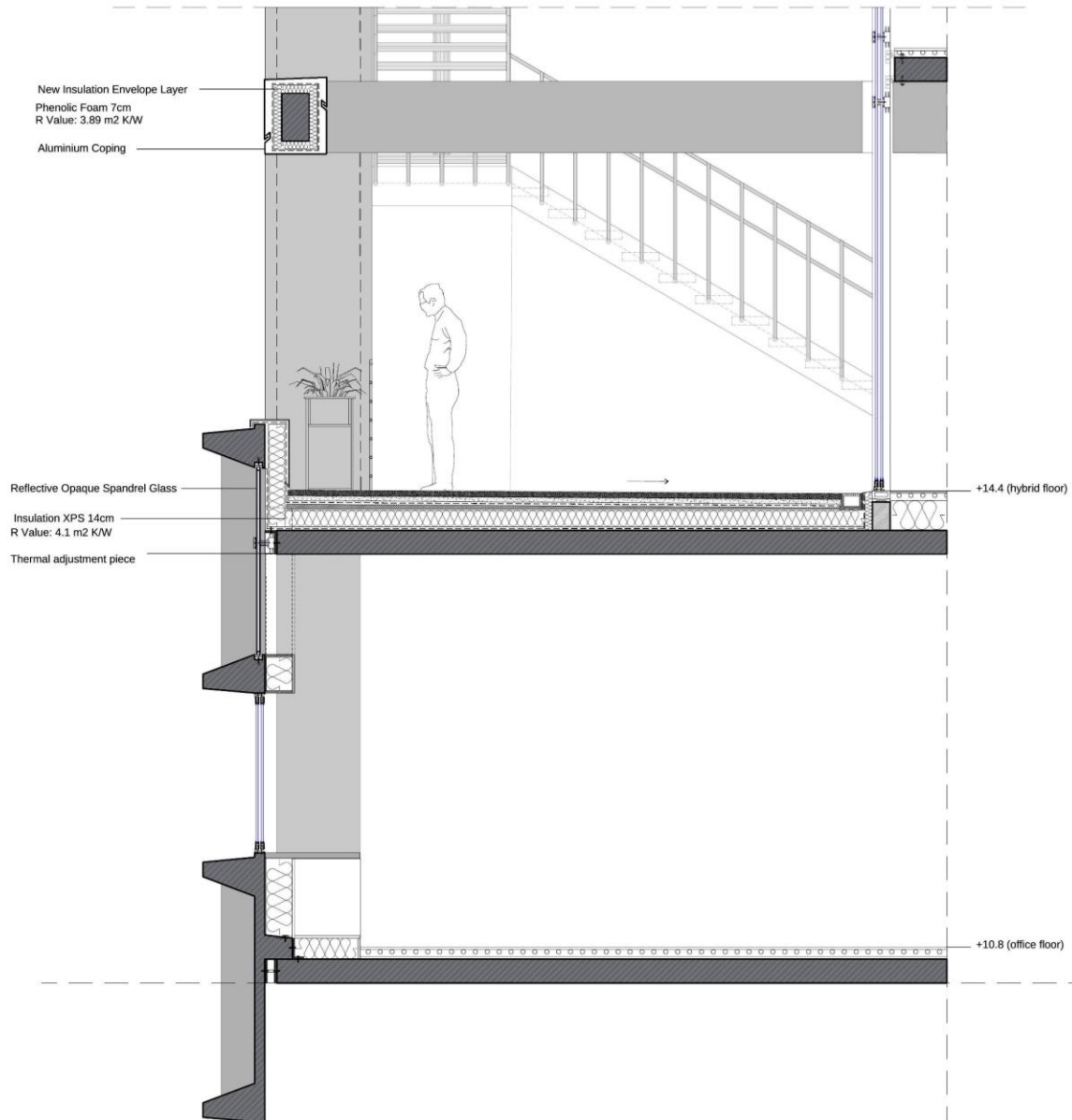


HYBRID FLOOR



RESIDENTIAL FLOOR

HYBRID FLOOR CONSTRUCTION DETAIL



FACADE TRANSFORMATION STRATEGY

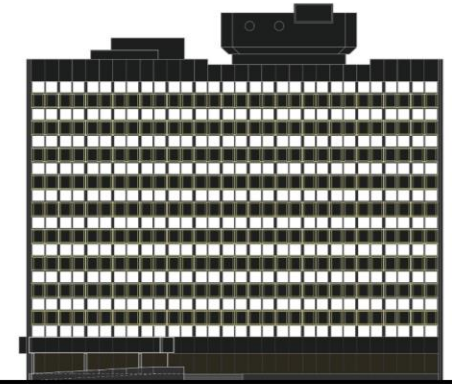
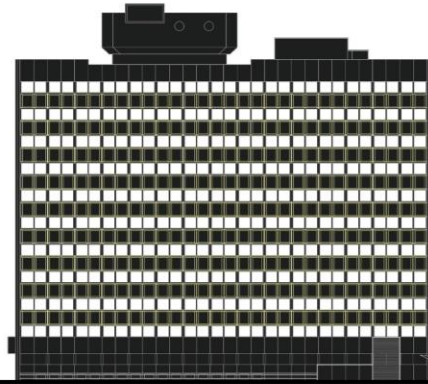
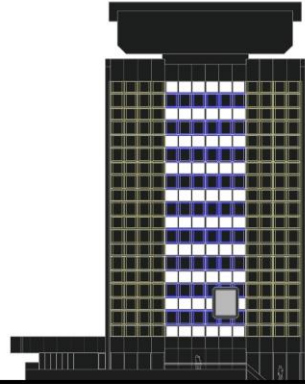
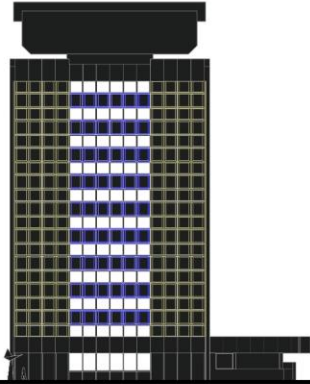
SOUTH ELEVATION

NORTH ELEVATION

WEST ELEVATION

EAST ELEVATION

EXISTING CONDITION



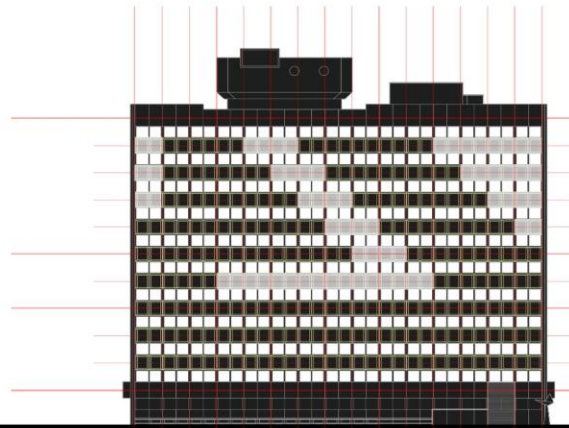
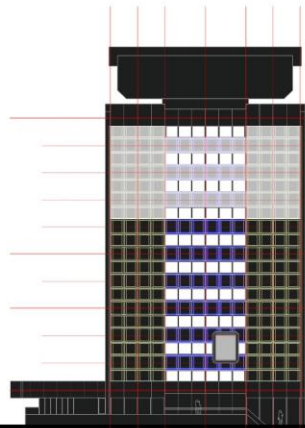
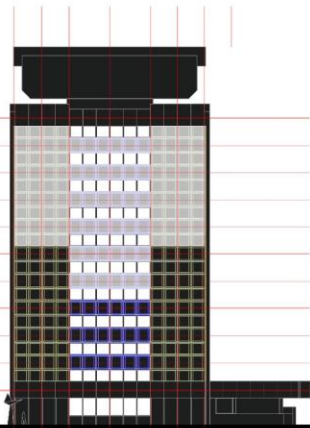
94 PREFABRICATED CONCRETE ELEMENTS

94 PREFABRICATED CONCRETE ELEMENTS

135 PREFABRICATED CONCRETE ELEMENTS

135 PREFABRICATED CONCRETE ELEMENTS

PROPOSAL



47 PREFABRICATED CONCRETE ELEMENTS

60 PREFABRICATED CONCRETE ELEMENTS

104 PREFABRICATED CONCRETE ELEMENTS

96 PREFABRICATED CONCRETE ELEMENTS

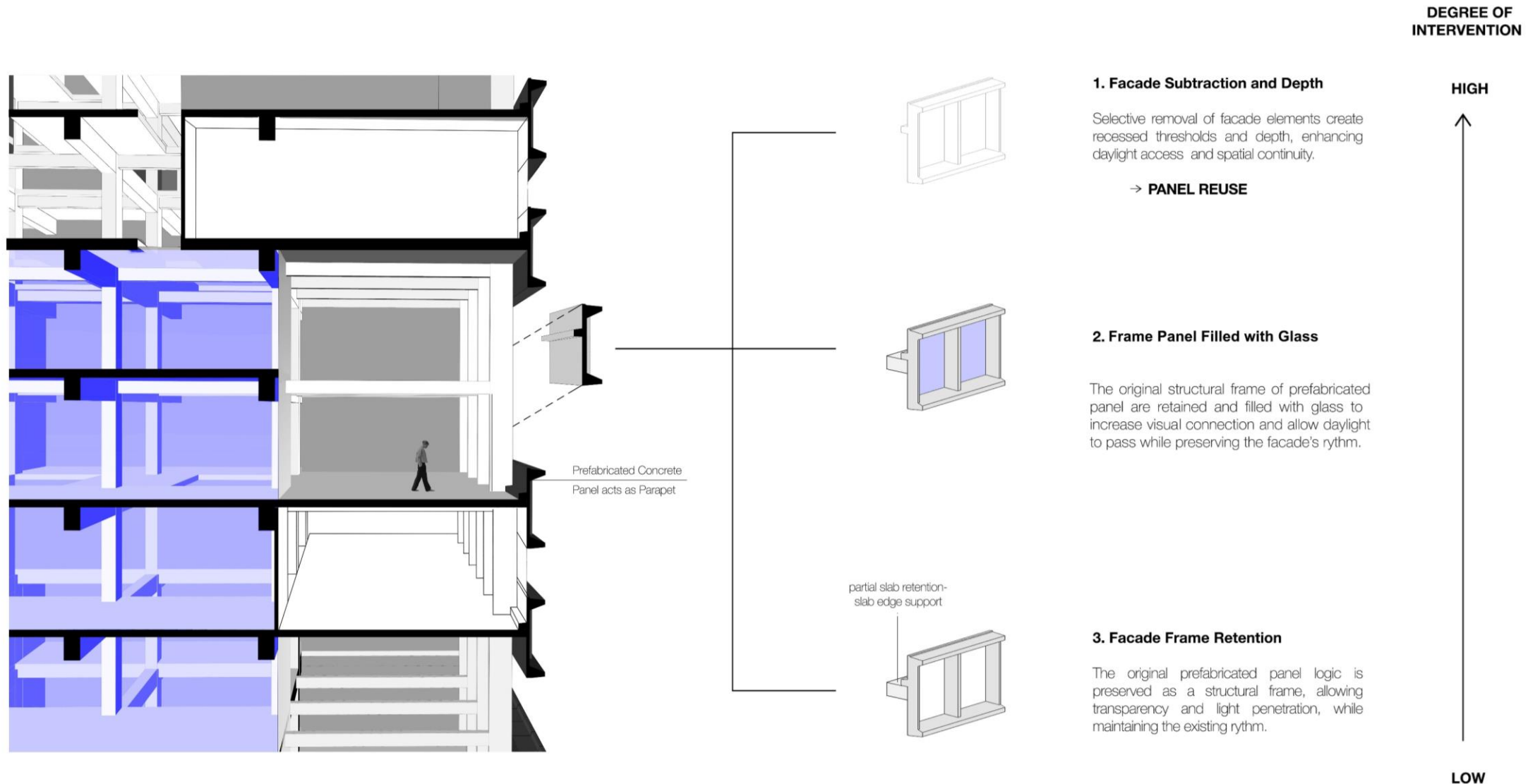
48 PANELS REMOVED

34 PANELS REMOVED

31 PANELS REMOVED

39 PANELS REMOVED

DEGREES OF FACADE TRANSFORMATION

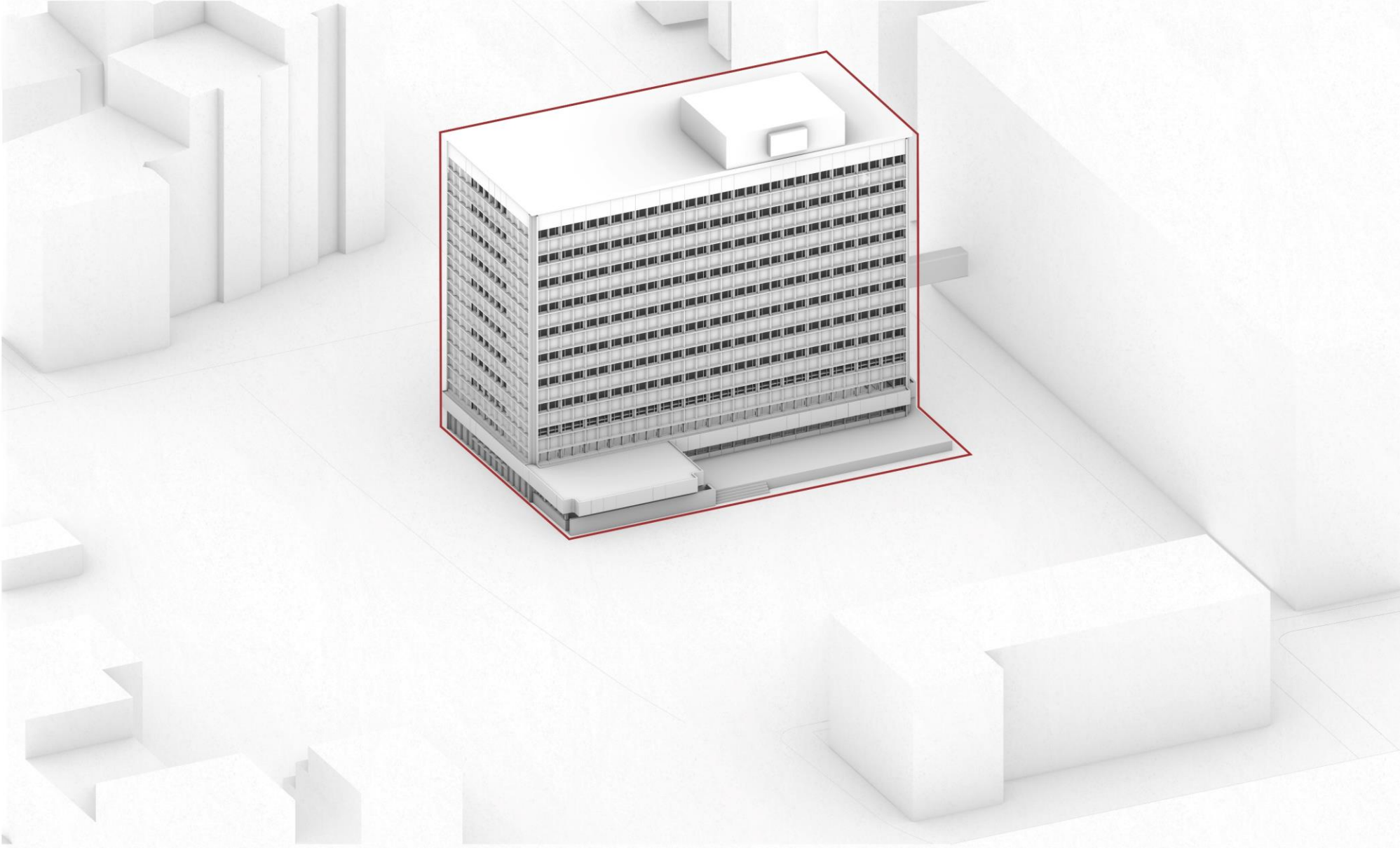


Landscape Activation

Extending the Transformation Beyond the Building Envelope

FROM AN ISOLATED BUILDING

A Monofunctional Office Tower with Limited Urban Interaction



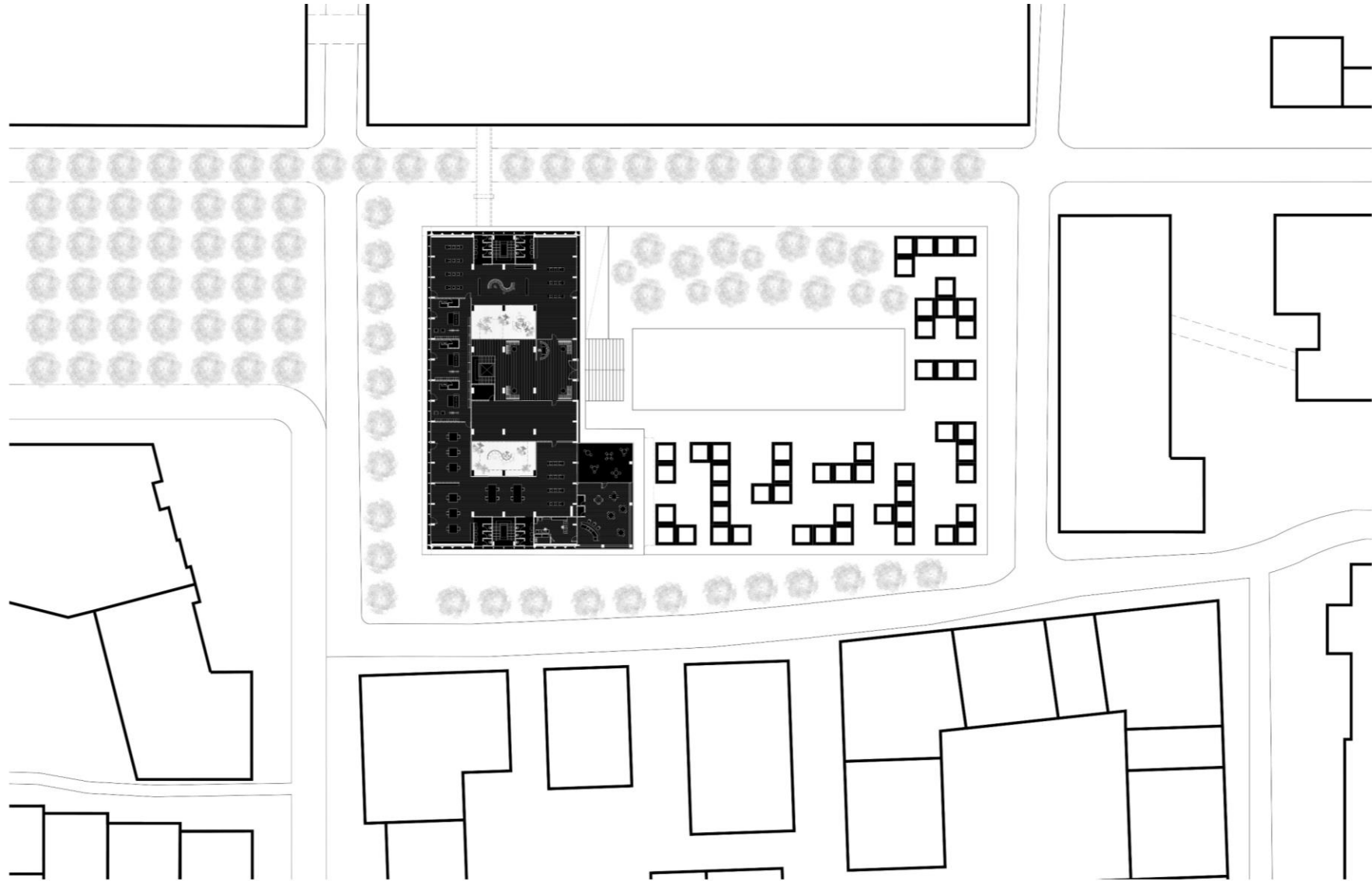
TO A LANDSCAPE ACTIVATOR

Reactivating the Adjacent Park through Program, Access and Reused Facade Panels



THE GROUND FLOOR

Connecting the Building with the Surrounding Urban Ecosystem



GROUND FLOOR PLAN





- Supporting an **Evolving Urban Context** through **Hybrid Functions**

- Transforming **Separation** into **Interaction**

- Stimulating **Interaction** between **Diverse Communities** through **Collective Spaces**

- Unlocking the **Spatial Potential** of a Brutalist Structure

- **Reconnecting** the Building with **Landscape** and **Public Life**

Thank you for your attention ☺