Studies in Climate and Culture

ARCHITECTURE PORTFOLIO NO.2

CULTURAL CENTER	AHMA
COASTAL RETROFITTING	NE
URBAN RENEWAL	SEOUL
REFLECTION SPACE	
SEAGRAM FACADE	NE

PERSONAL PROJECTS

ADABAD, INDIA	ARID
W YORK,USA	CONTINENTAL
., SOUTH KOREA	TEMPERATE
UNSITED	SUB TROPICAL
W YORK, USA	CONTINENTAL

This collection of ideas and projects showcases culturally resilient architectural models as long-term responses to ongoing environmental crises. It emphasizes learnings from regionally specific architectural practices. AHMADABAD, INDIA

ARID

Site Context

The site is located near the Sabarmati river & Tagore Hall, a performance center. Originally developed as a cultural hub, the area has now become inactive due to a lack of public engagement.

Cultural Center

A proposal that re-imagines the scope of conservation efforts and the design of a landmark cultural center.





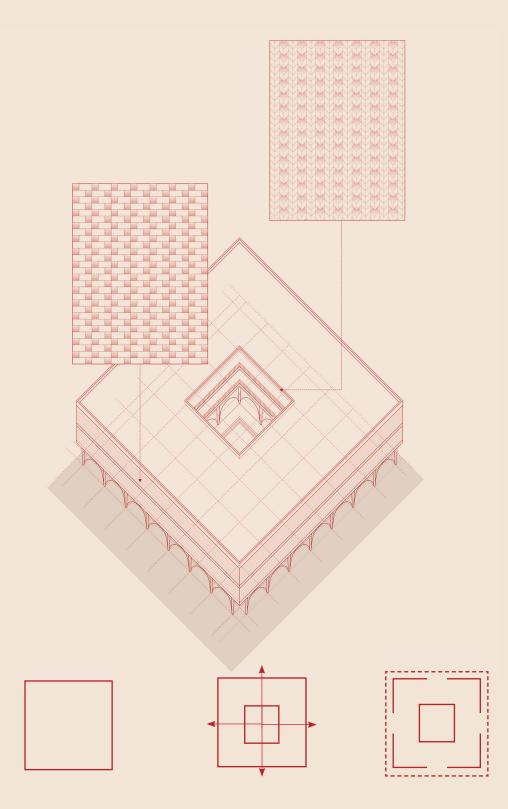
Background

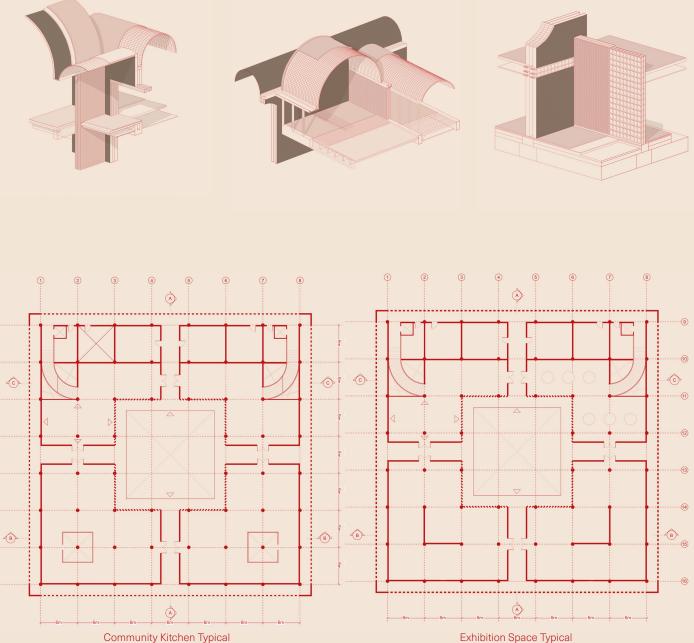
The Sanskaar Kendra, a significant work by Le Corbusier's, embodies the "museum of unlimited growth" concept. and is designated as Ahmadabad's Cultural Center. This idea, introduced in 1931, uses the nautilus design principle, radiating outward from the center to convey a sense of limitless expansion. However, Ahmadabad's harsh climate has led to the deterioration of the exterior and interior walls, endangering this Grade-1 heritage site.



Design Intent

The new design acknowledges existing architecture while also making necessary revisions. These revisions are made in accordance with the needs of a tropical climate. A courtyard is introduced for cross ventilation within the structure. Some walls are retained to allude to the history of the building; however, new walls are introduced to create adequate exhibition spaces, a community kitchen, and banquet spaces. These spaces and their design comply with existing structural elements such as load-bearing walls and columns.





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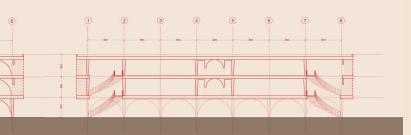
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Floor Plan

Task: The scope i snot only to conserve the building as is but to adapt its envelope to better suit the climate and introduce programs that encourage more interaction with contemporary audiences.





Climate Response:

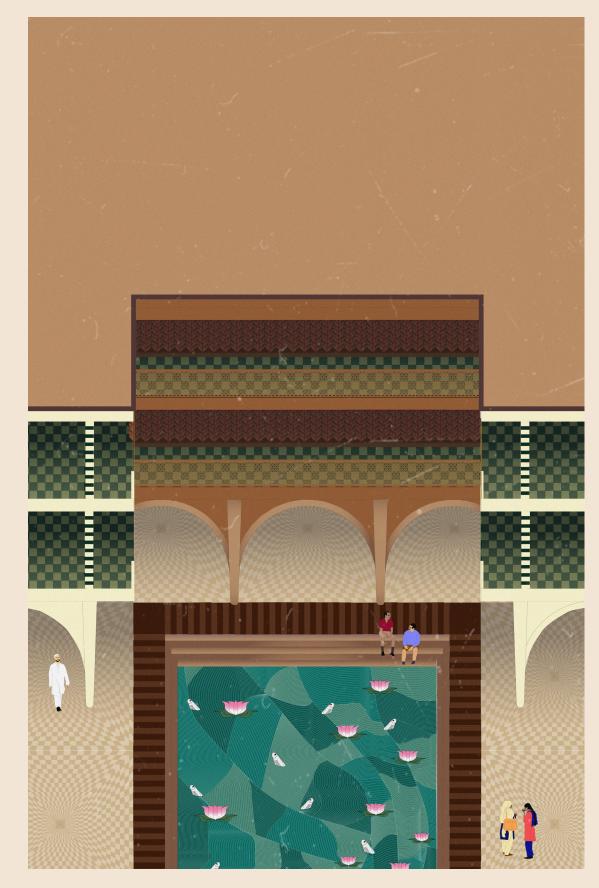
Introducing varied brick-laying patterns to the building's envelope creates a secondary structure that allows air to flow through small apertures, reducing the temperature inside without additional cooling units.

Cultural Integration:

The brick-laying patterns reference classical regional architecture, visually connecting the building to its majestic precedents.







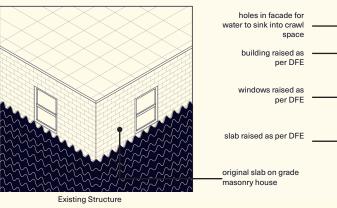
Drawing Style:

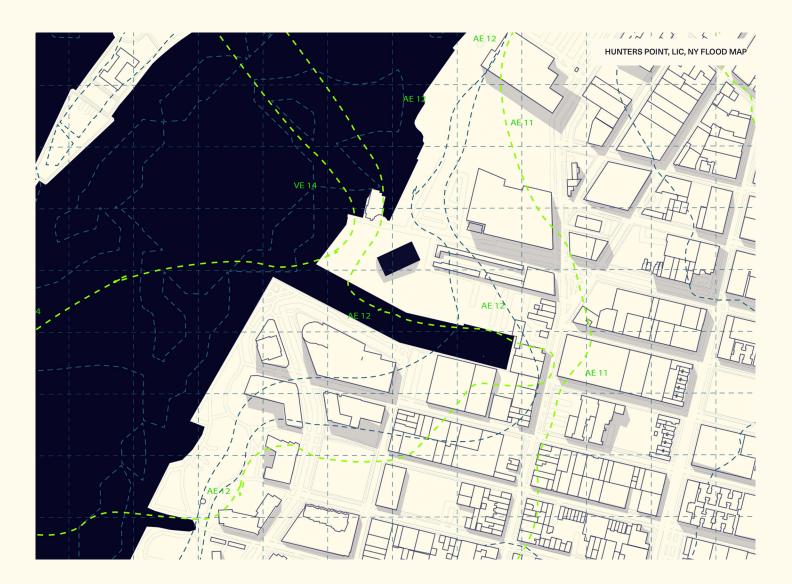
These axonometric drawings pay great attention to detail and capture multiple culturally relevant elements, including food, craftsmanship in tile work, and, most importantly, people. They allude to all five senses, immersing their viewers. This level of detail and projection of elements takes inspiration from Indian miniature paintings.

Drawings were displayed at AIR Galleries in Brooklyn, New York & RISD Museum in Provide, Rhode Island.

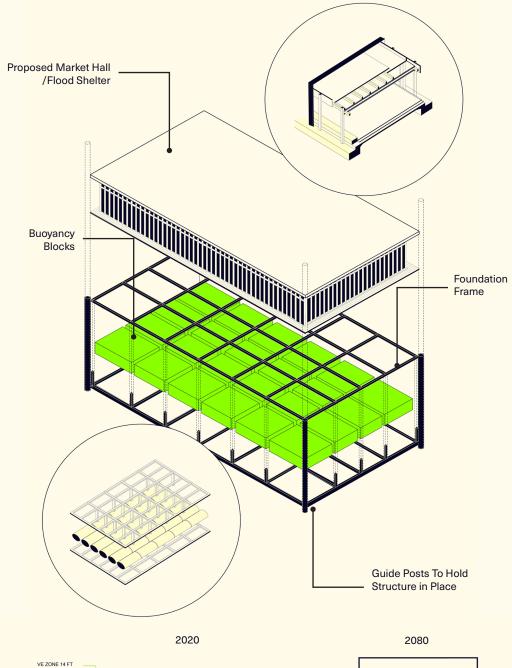
Coastal Retrofitting

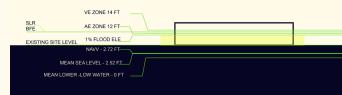
A proposal that retrofits coastline structures to adapt to flood conditions in New York for the year 2100.

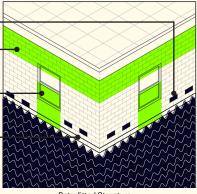




Context: FEMA estimates that 13 million Americans currently live within a 100-year flood zone, but a new study in Environmental Research Letters argues the real number is about 41 million — more than three times FEMA's estimate.







Retrofitted Structure

Buoyant Foundation

A buoyant foundation balances the building's weight with the buoyant force from displacing water or soil, effectively "floating" the structure and ensuring stability on soft or flood-prone ground, enhancing the building's resilience and longevity.

Flood Levels

Current FEMA regulations require raising buildings by 14 feet to cope with flooding until 2045. However, by 2080, these regulations will be insufficient for 2100 flood levels, rendering AE 12 flood zone proposals obsolete within 56 years. A longer-term solution is needed to adapt to unpredictable flood levels. This can be achieved through the use of buoyant foundations

Buoyant Foundation

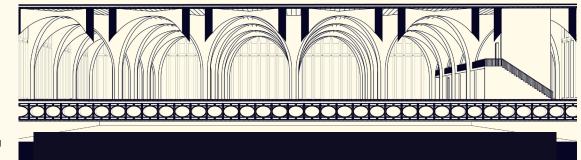
A buoyant foundation, or floating foundation, supports buildings on soft or unstable ground by balancing the structure's weight with buoyant forces, similar to how a boat floats.

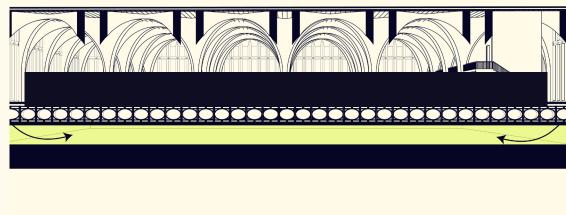
It consists of a large, watertight concrete or steel box placed in an excavated pit or directly on the ground. This foundation displaces water or soil, creating an upward buoyant force that counteracts the building's weight, effectively distributing the load evenly.

To maintain stability, the foundation is anchored to prevent lateral movement and excessive rise during floods.

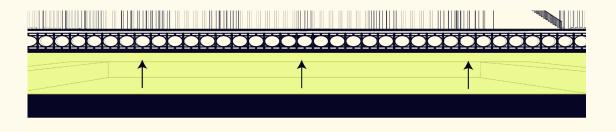
This design allows the foundation to adapt to changing water levels, making it ideal for flood-prone areas and ensuring the building's resilience and longevity.

T

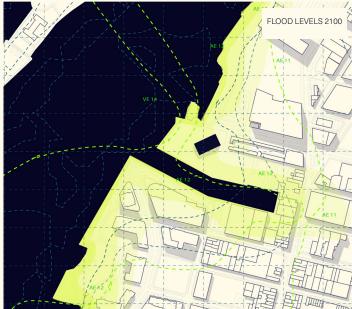








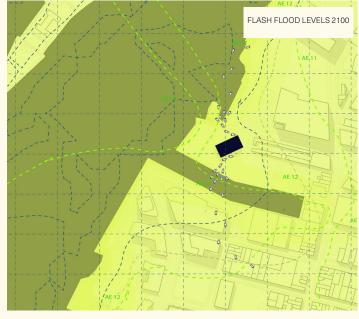




Outcome:

Pictured above: buoyant foundation retrofitted site in comparison to unrevised site context. The area and density of buildings covered shows the need for structures to be able to adapt to incoming conditions as flooding is said to increase 45% in Queens.





17 IN

28 IN

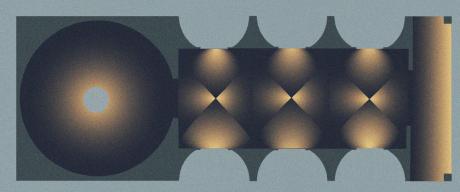
92 IN +

Temperate

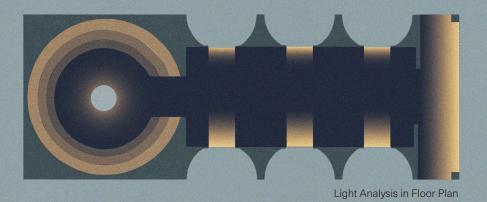
00.0000° N, 00.0000° E

Reflection Space

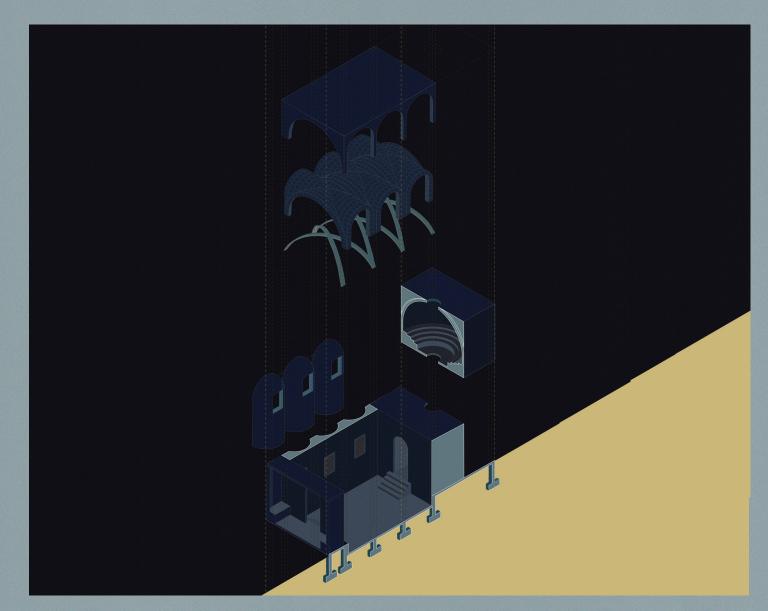
A reflection space designed to respond to the theater of light, sound, and, movement of water. The project utilizes contours of the site to direct flow of water and create reflecting pools in the varied gathering spaces.



Light Analysis in RCP



Eight Analysis in Section

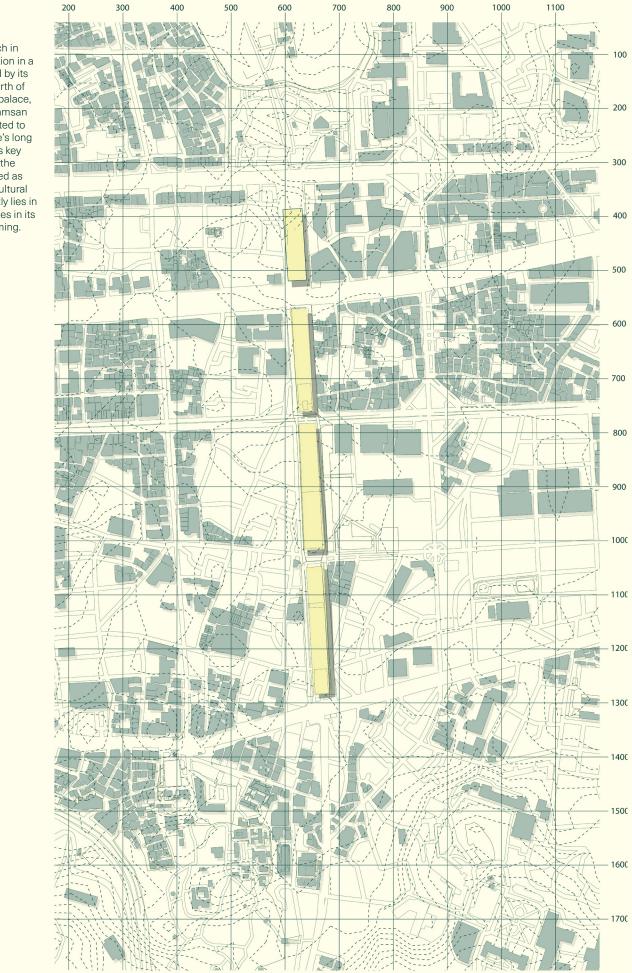




Drawings for project displayed at the RISD Museum

Site Context:

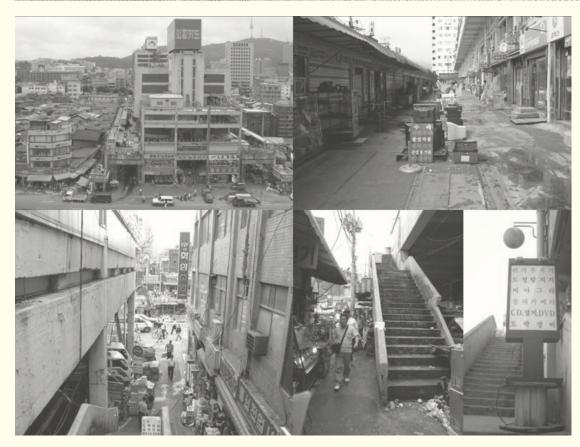
The neighborhood is rich in history and awaits curation in a manner that is activated by its surroundings. To the north of the site lies the Korean palace, while the auspicious Namsan mountain range is situated to the south. Given the site's long lineage of history and its key role during WWII, it has the potential to be envisioned as a major historical and cultural hub. However, it currently lies in ruins due to critical issues in its envelope and programming.



Urban Renewal

A proposal that revises and 'scales down' the iconic mega structure building, Sewoon Saanga. It challenges the "city within a city" concept through revised programming.



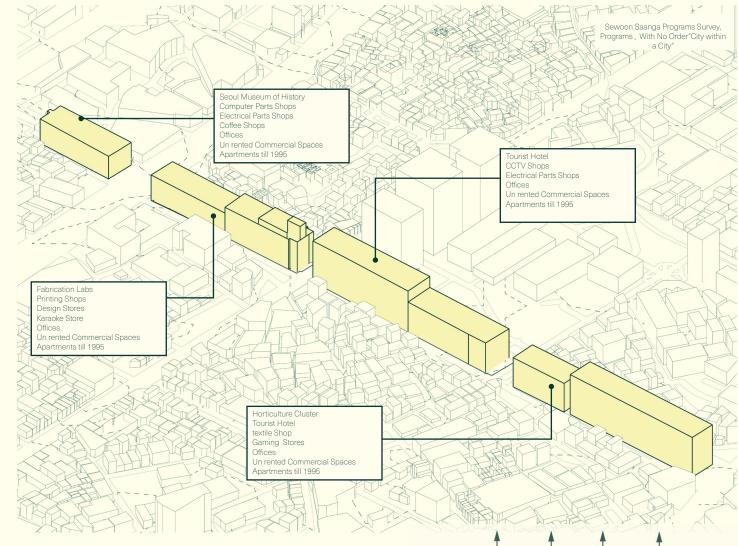


Background:

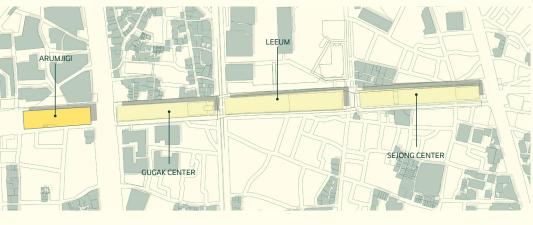
Sewoon Sanga is a 1.2 km mega structure in the heart of Seoul, designed in 1967 as part of the Sewoon Sanga Project.

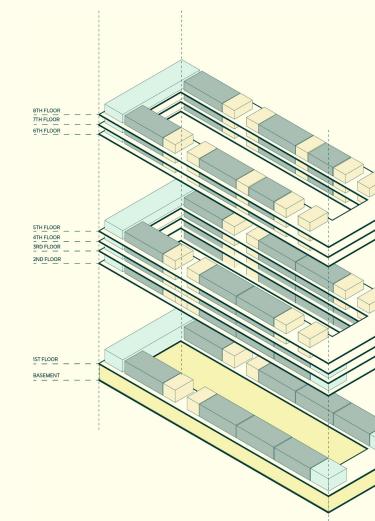
Located in the center of Seoul's historical district, the land on which the complex stands was left vacant during the Japanese colonial era towards the end of WWII to prevent fires from spreading due to bombings.

When the Korean War began, refugees started squatting there, creating a substandard living district. The current Sewoon Sanga complex was designed by architect Kim Swoo Geun. Although intended to be a brutalist icon, the building's density, extreme diversity in programming, and unfavorable light and air conditions have left it in ruins.



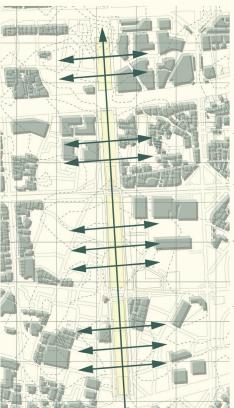
megastructures were 'an invention of architects [...] as a could not manage'.

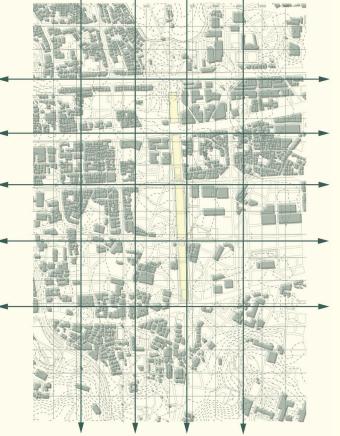




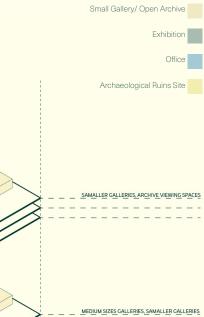
Architectural Design Order

Revisions to the architectural order must begin by understanding the broader urban context. The grid of streets points towards the palace, and this order must be respected to ensure the proposed cultural hub aligns with its historical influences. Thus, the larger urban context should be scaled to the architectural order, maintaining respect and orientation towards the palace.





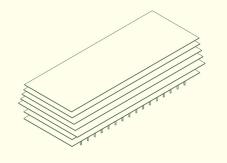
'The Meaning of Megastructure', Banham concludes that way of imposing a form of order on "the chaos of our cities", before they were 'finally abandoned by them because it offered to generate a form of order that they themselves



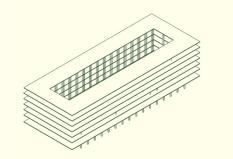
Developing a Cultural Hub

This project architecturally revises the first building within the assembly o this mega structure while proposing a master plan for the entire urban-scale mega-structure. Each building is allocated to an arts or cultural institution within the city. The building closest to the palace is awarded to the cultural institution Arumjigi. This organization has made significant strides in preserving traditional Korean artifacts, educating visitors about these artifacts, and introducing them to the modern evolution of Korean culture.

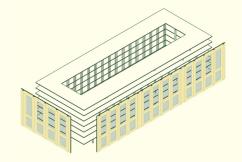
LARGER GALLERIES, OFFICE SPACES, SAMALLER GALLERIES ARCHEALOGY SITE TO BE MANAGERD BY ARUMJIGI



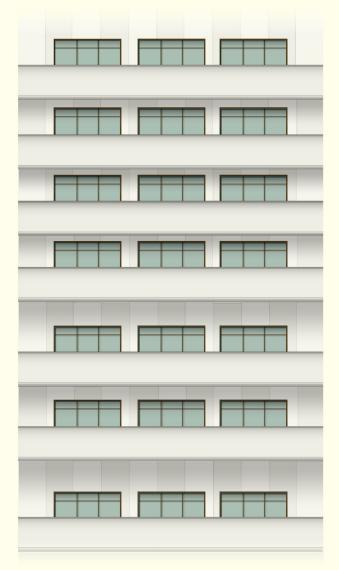
existing structure



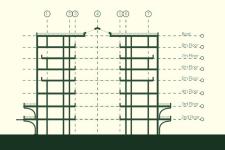
slabs made even, atrium added for light and air

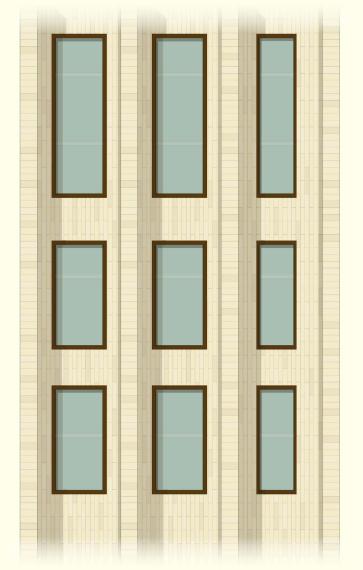


new CLT facade alludes to traditional architecture



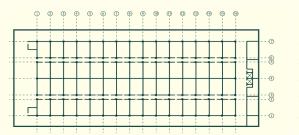
existing facade





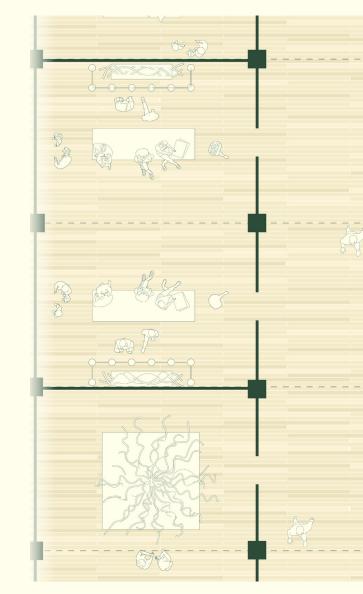
new facade providing more light and air

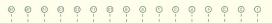




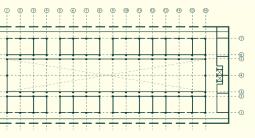
existing plan creating small cumbersome spaces

ne

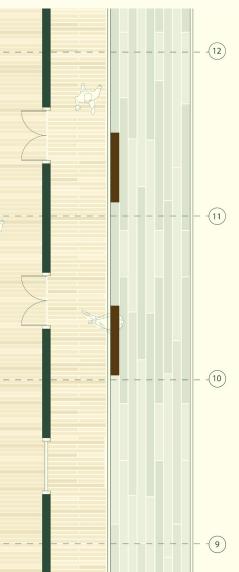


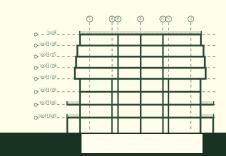


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new slabs made even, atrium added for light and air



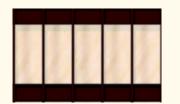


CONTINENTAL

40.7128° N, 74.0060° W



The proposal focuses on developing an intervention for the Seagram Building facade to manage solar heat gain. The project utilizes a louver system that adjusts in response to solar exposure.



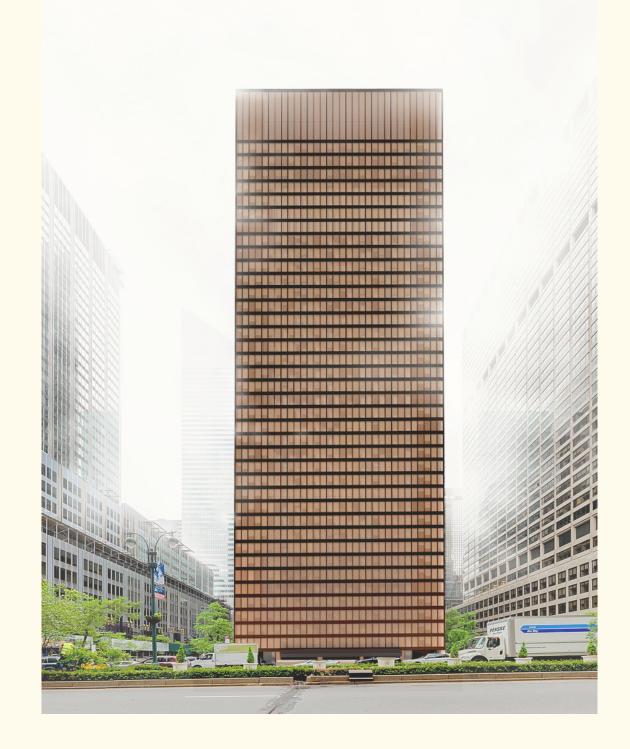


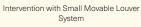
Existing Facade



Context

The Seagram Building, completed in 1958 in New York City, is a significant example of modernist architecture designed by Ludwig Mies van der Rohe and Philip Johnson. It is renowned for its sleek, minimalist design, characterized by a bronze-andglass facade and a distinctive plaza. The building is celebrated for its influential impact on the development of skyscraper design.







Intervention with Large Movable Louver System

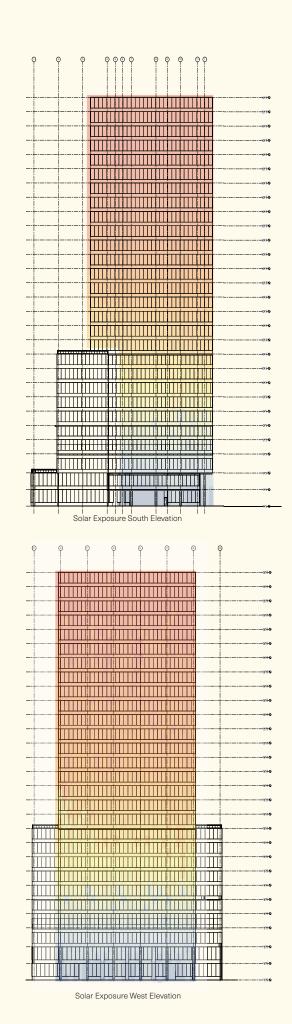
Climate:

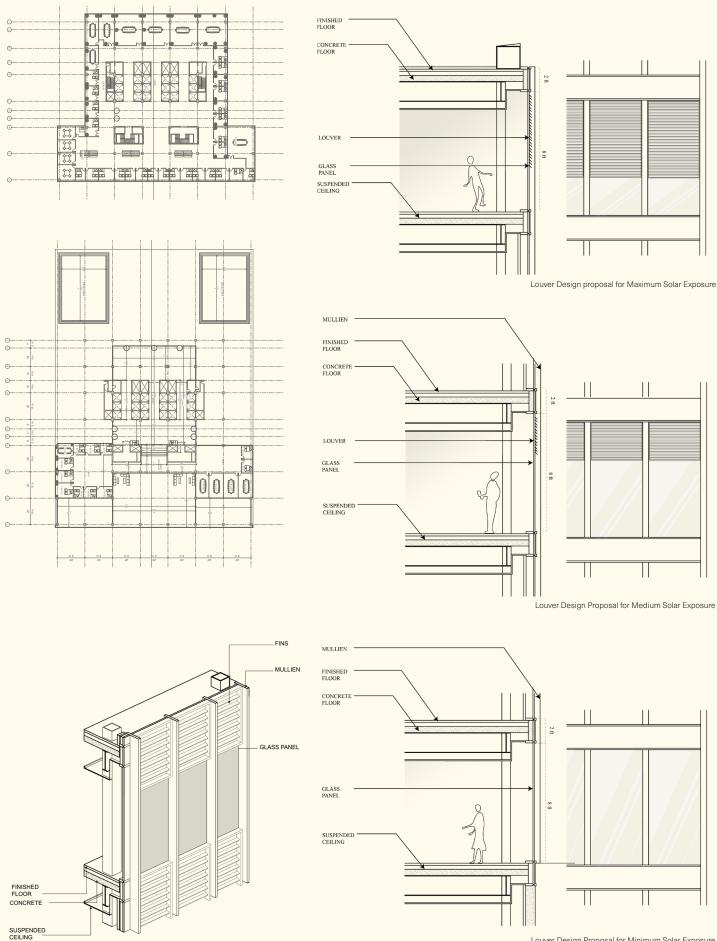
The building has varying solar exposure on all the facades. Variation in louver systems is required.

Culture:

Given the buildings iconic facade, minimal changes c be introduced especially to exterior. Thus thermashade YKK louver system is used inspiration for design prope as it blends with the bronze mullions of the building and doesn't interfere with existi design proposal.

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	Solar Exposure North Elevation	
3000 with/M^2		
3000 wiH/M*2		
8000 wH/M^2		
8000 WH/M^2		





Louver Design Proposal for Minimum Solar Exposure

Project Archive A research project founded by Namrata Dhore in 2017. It has been co-authored and edited along with Christina Truwit and Sofie Kusaba, and published by Oro Publications. This research is a survey of regionally specific and sustainable housing projects. Graphic design by ILVZ Studio and Namrata Dhore.







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OFFICE IN	TERIOR	NE
FACADE RI	ENDERINGS	BRO
BAR INTER	NOR	FOR
NON PROF	FIT OFFICE	NE
OFFICE SC	HEMATIC	NE
12 STORY	BUILDING	BR

PROFESSIONAL WORK SAMPLES

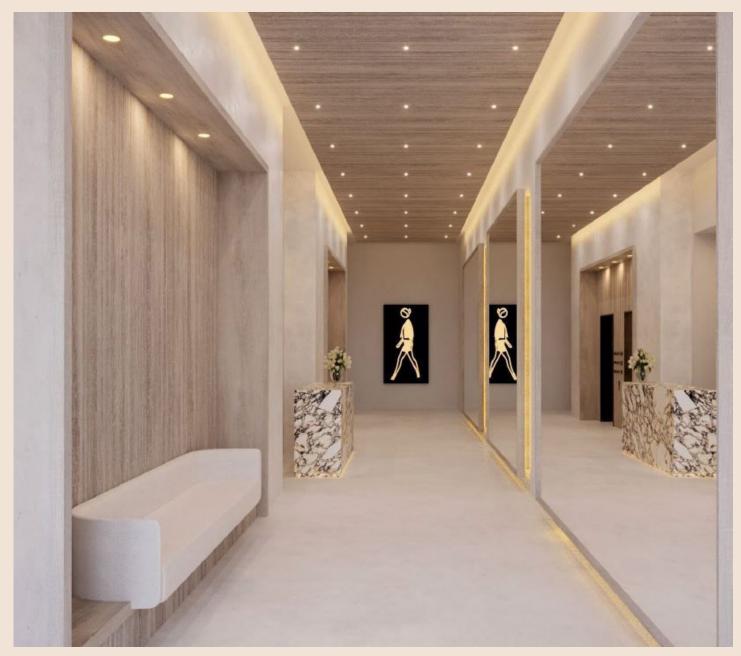
W YORK , NY	SRAA+E
OOKLYN, NY	SRAA+
RT WORTH, TX	AA
EW YORK, NY	SYDNESS ARCHITECTS
EW YORK, NY	SYDNESS ARCHITECTS
OOKLYN, NY	STREKTE CORP

Office Design

Firm: SRAA+E Proejct Location: New York, New York

Architectural Designer for the interior renovation of a commercial space. Worked closely with clients and project managers to develop a proposal for longstanding clients with a 7000 sq ft office space in Soho. Produced the Interior Design Set for finishes and trained junior staff to produce design presentation materials. Collaborated with product companies to specify FF&E according to client preferences and budget.

Softwares Used: Rhino, Adobe Suite, Vray, AutoCAD, Revit













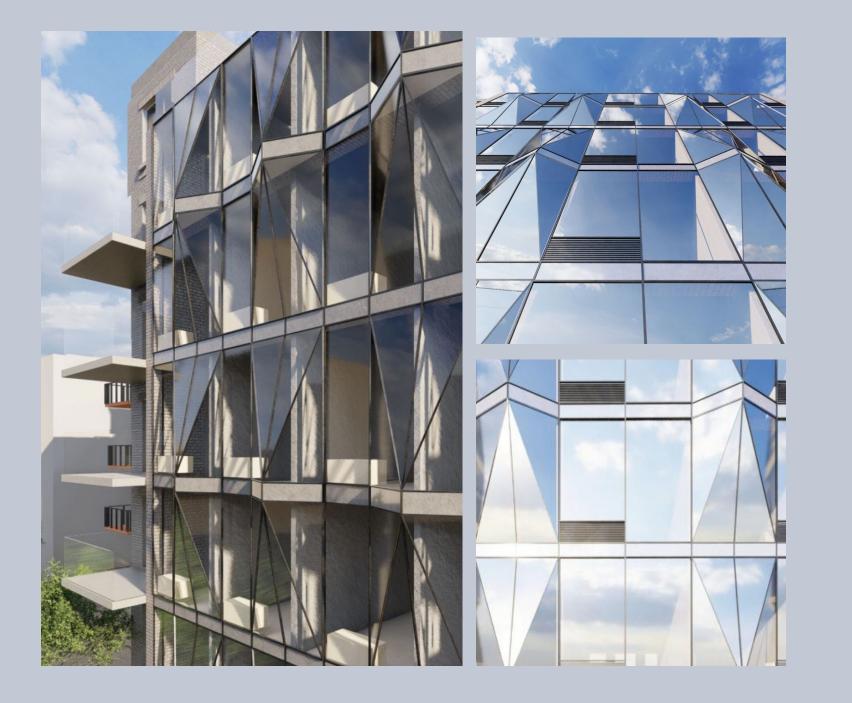


Facade Concepts

Firm: SRAA+E Project Location, Brooklyn, New York

Sketch facade concepts for ongoing projects

Softwares Used: Rhino, Adobe Suite, Vray, AutoCAD, Revit







Firm: AA Project Location: Fortworth, Texas

Junior designer for speakeasy proposal in Fort worth, Texas. Produced design presentation materials, and helped with some specification work. Worked closely with project manager to curate finishes as per client requirements.

Softwares Used: Rhino, Adobe Suite, Vray, AutoCAD



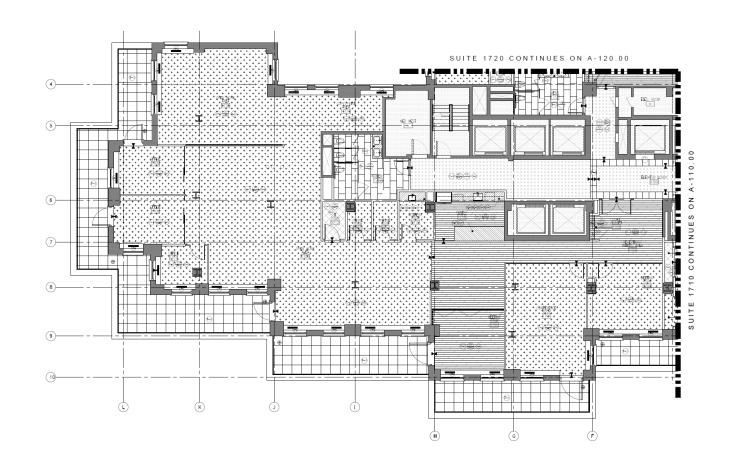


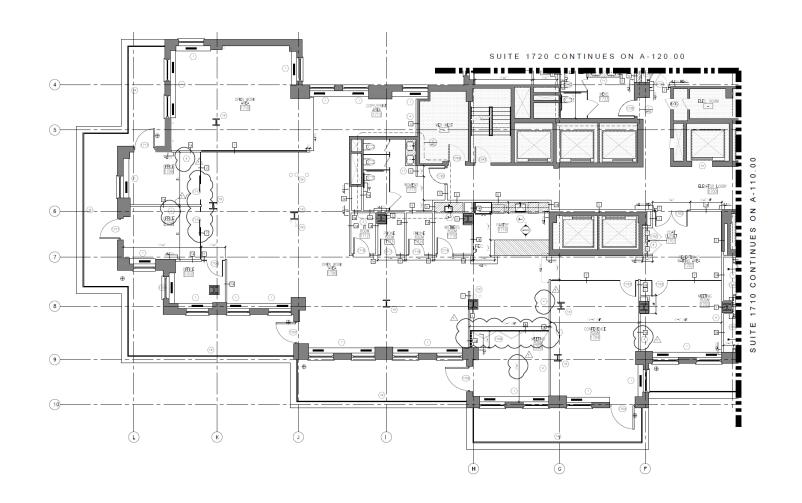
Non Proffit Office

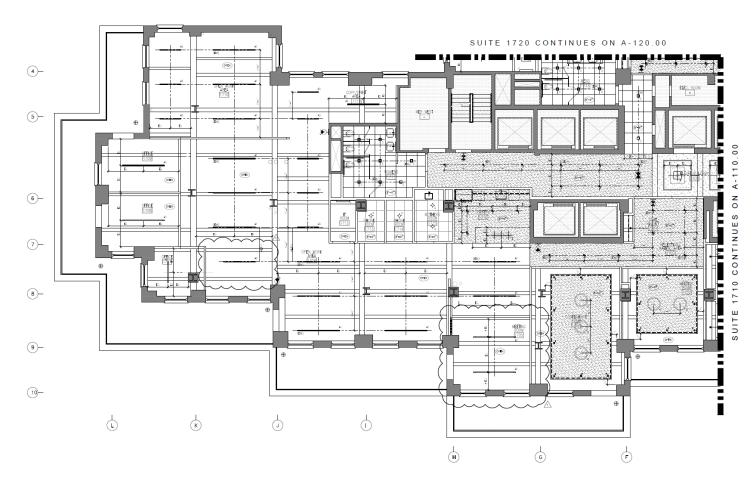
Firm: Sydness Architects Project Location: New York, New York

Assisted with drafting and compilation of construction documentation for 3,100 sqft office space located in landmark building.

Softwares Used: AutoCAD





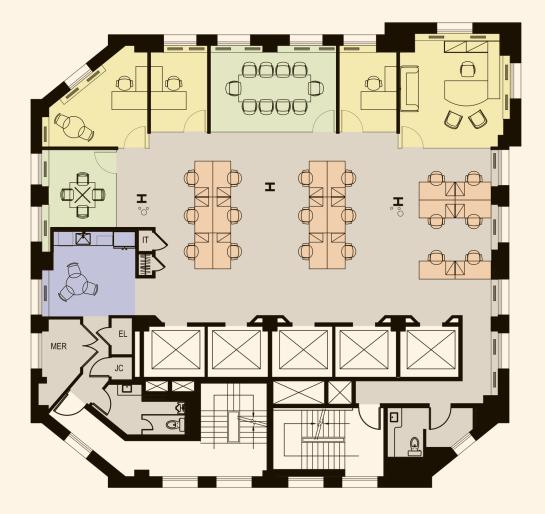


4,800 RSF Office

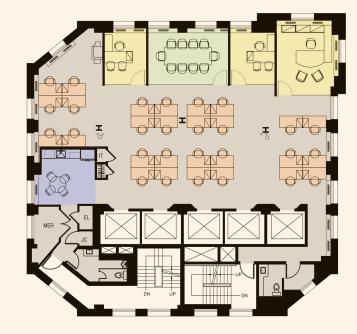
Firm: Sydness Architects Project Location: New York, New York

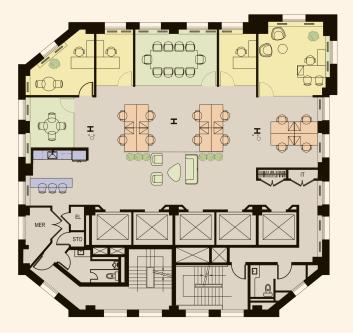
Produced schematic design, marketing materials, and preliminary construction documentation for New York headquarters for tenant. Assisted with design corrections as per property management, tenant and Realtor feedback.

Softwares Used: AutoCAD, Adobe Suite











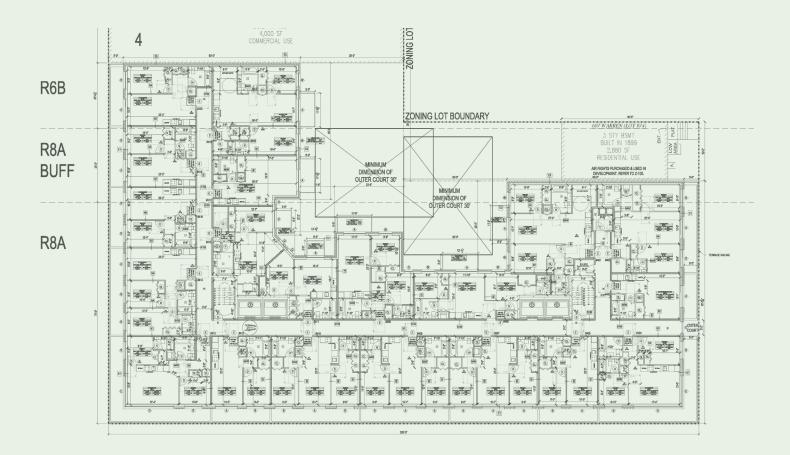
12 Story Ground-Up

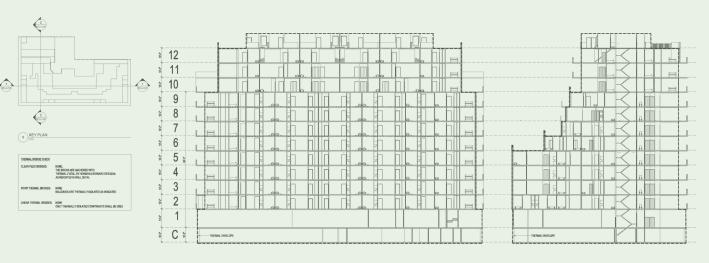
Firm: Strekte Corp Project Location: Brooklyn, New York

Designed building envelope and unit layouts for 189 units as per New York building code and zoning resolution. Filled DOB, DOT, OER, DEP, approvals. Coordinated meetings with structure, MEP, ID teams, worked closely with developers to meet design and project timeline expectations.

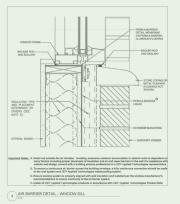
Softwares Used: Revit, Adobe Suite, Vray, AutoCAD, Grasshopper, Dynamo

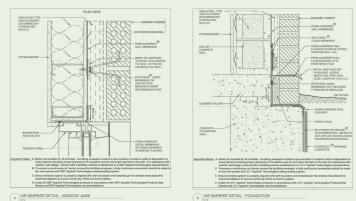




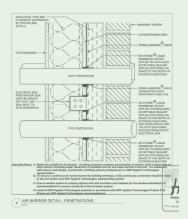


1 THERMAL ENVELOPE SECTION DIAGRAM





2 THERMAL ENVELOPE SECTION DIAGRAM













Model Making Samples

