

ARCHIVES

projective preservation

Reframing Rudolph's Tower for Boston

by Jessica K. Turner
B.A. Architecture and Philosophy
University of Pennsylvania, 2008

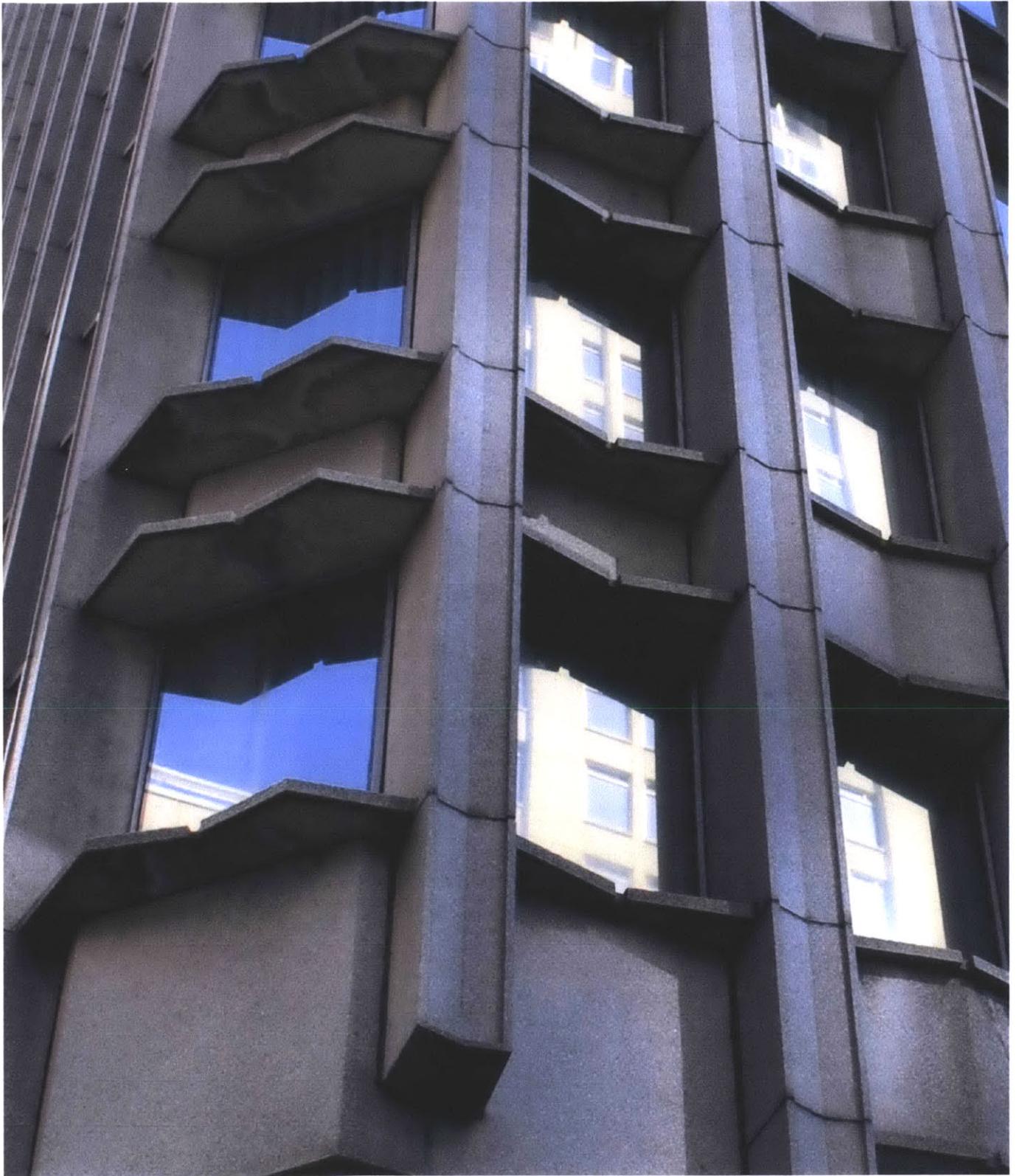
*Submitted to the Department of Architecture on August 10, 2012
in partial fulfillment of the requirements for the degree of
MASTER OF ARCHITECTURE
at the Massachusetts Institute of Technology
September 2012*

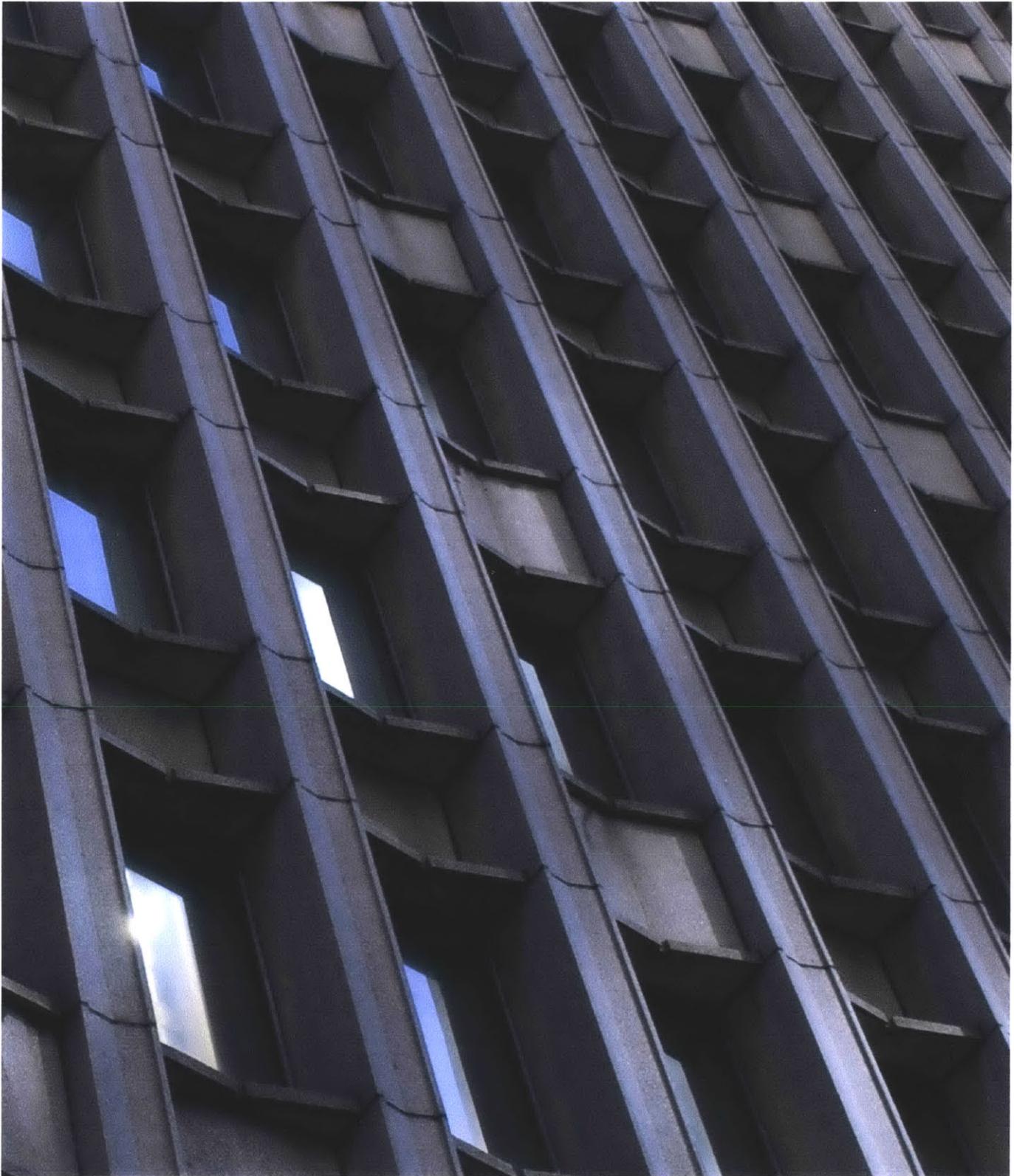
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Reframing Rudolph's Tower for Boston

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abstract

By 2012, the fate of Paul Rudolph's tower in downtown Boston has been in question for years while a vision of a denser city calls for its demolition. Projected development on the site currently argues that to move forward, the existing building must be erased entirely. While progressive at the time of its construction, the outscaled tower is now perceived as obsolete and thus disposable. This brutalist work is representative of a class of buildings in crisis; architects and preservationists must decide quickly how to handle the sometimes fraught histories of the still massive urban infrastructures that are widely being excised from the urban landscape.

This thesis questions how to balance the desire for some physical persistence of brutalist architectural ideals with the progressive spirit that marks the architectures of both past and present. The project proposes an aggressive, partial preservation of the Rudolph building that uses the original architecture as a basis for iteration. Investigation of the embedded tensions in preservation practice between the preserved and the intervention reveals space for preservation operations that translate architectures, holding more potential for projection than tactics of simple monumentalization or juxtaposition.

*Thesis Supervisor: Michael Dennis, BArch
Title: Professor of Architecture*

acknowledgments

I would like to thank my thesis advisors for their guidance, inspiration, patience, and support over a long process of study.

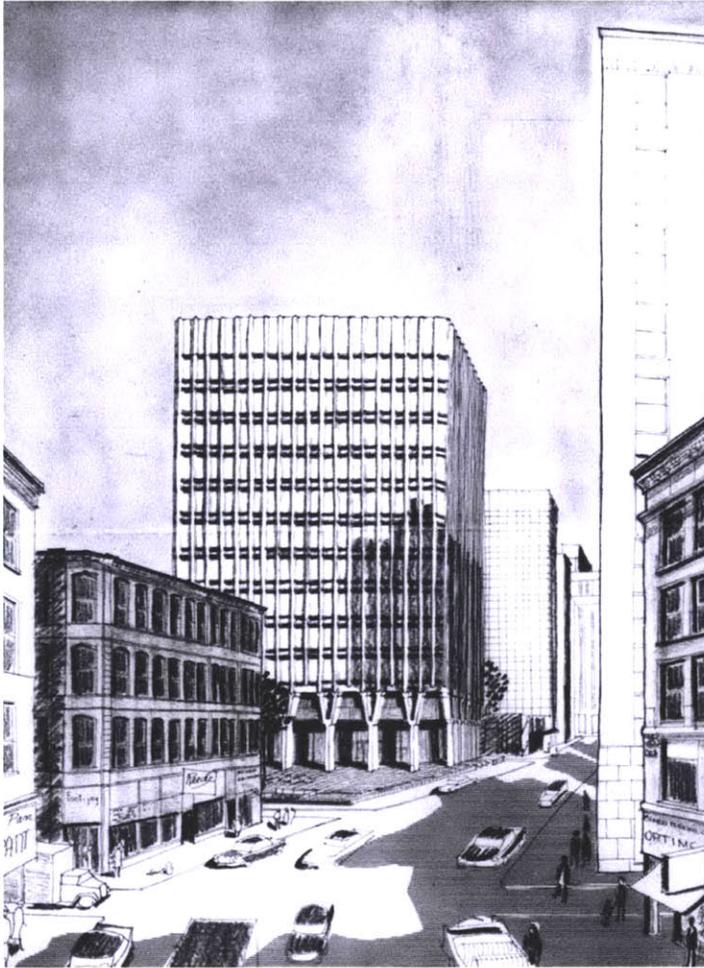
I would also like to thank all of the readers who helped me develop the right questions during the research process, and my past professors whose coursework inspired my interest in this topic.

I owe much of what I learned, accomplished, and enjoyed while in this program to my brilliant peers and studiomates.

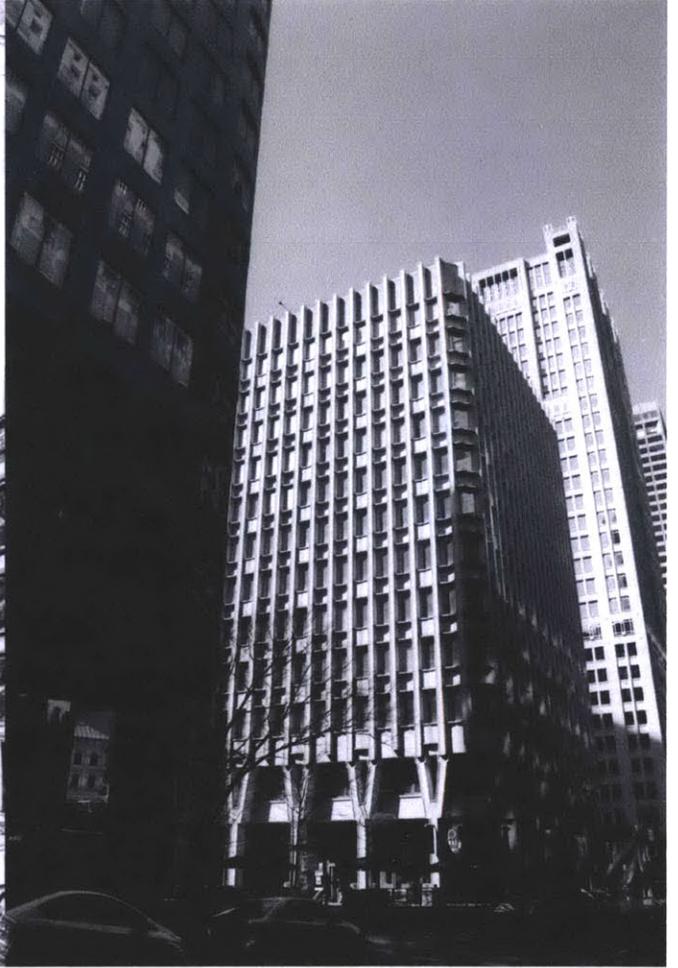
And I would like to thank my loving family for placing their constant support and energy behind my projects. I feel so lucky to have you all in my life.

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PROPOSED URBAN SCALE IN 1958



URBAN SCALE IN 2012

“A collector’s item, this building is a singularly studious work in which you can find comment on the condition of modern architecture as it entered the sixties. The best architects were confidently searching for forms of expression that would be rich in visual texture and appropriately scaled, but rooted still in the basic elements of construction. The building is structure embodied, structure shaped to give it measurable, discernible form—to be seen in sunlight and to be wondered about. It comes from a period when architects still thought they could control the building process, not just clothe it. And they knew their heritage.... For all that, like too many scholars, the building earns more respect than affection.”

— Donlyn Lyndon, The City Observed, 1982





introduction

Methods of inquiry



introduction

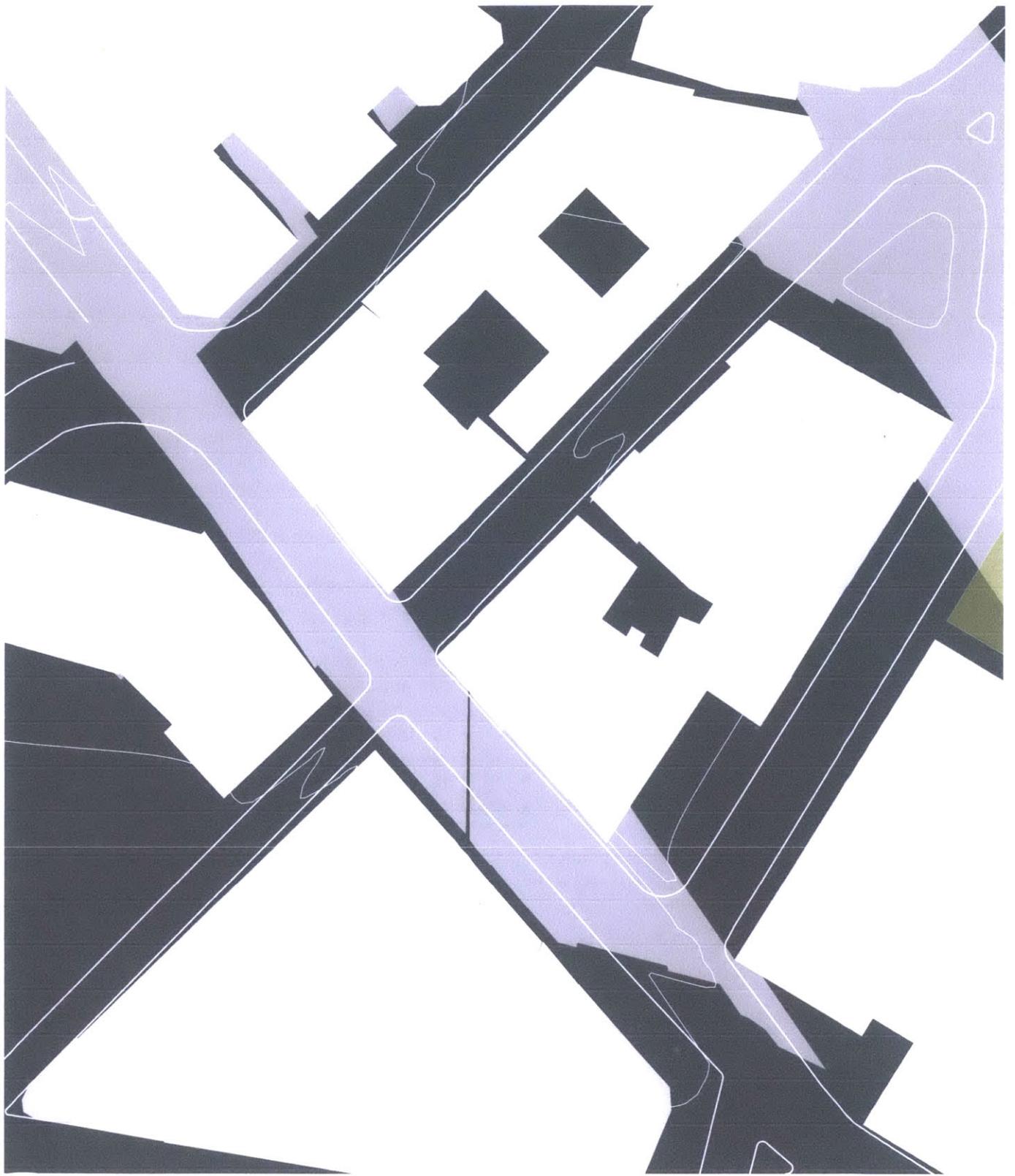
This thesis inquiry began with two fundamental, charged questions: how may architects preserve and frame an urban architectural history while balancing progressive aims in the realms of form, systems, efficiency, usage, and more? And what non-conventional preservation strategies may offer both critical and projective potential for designers as they seek to integrate with structures from the recent past?

While the investigation necessitated historical research into the discipline of preservation, its trajectories, tactics, and assumptions, but it took root in the situation of a timely design project.

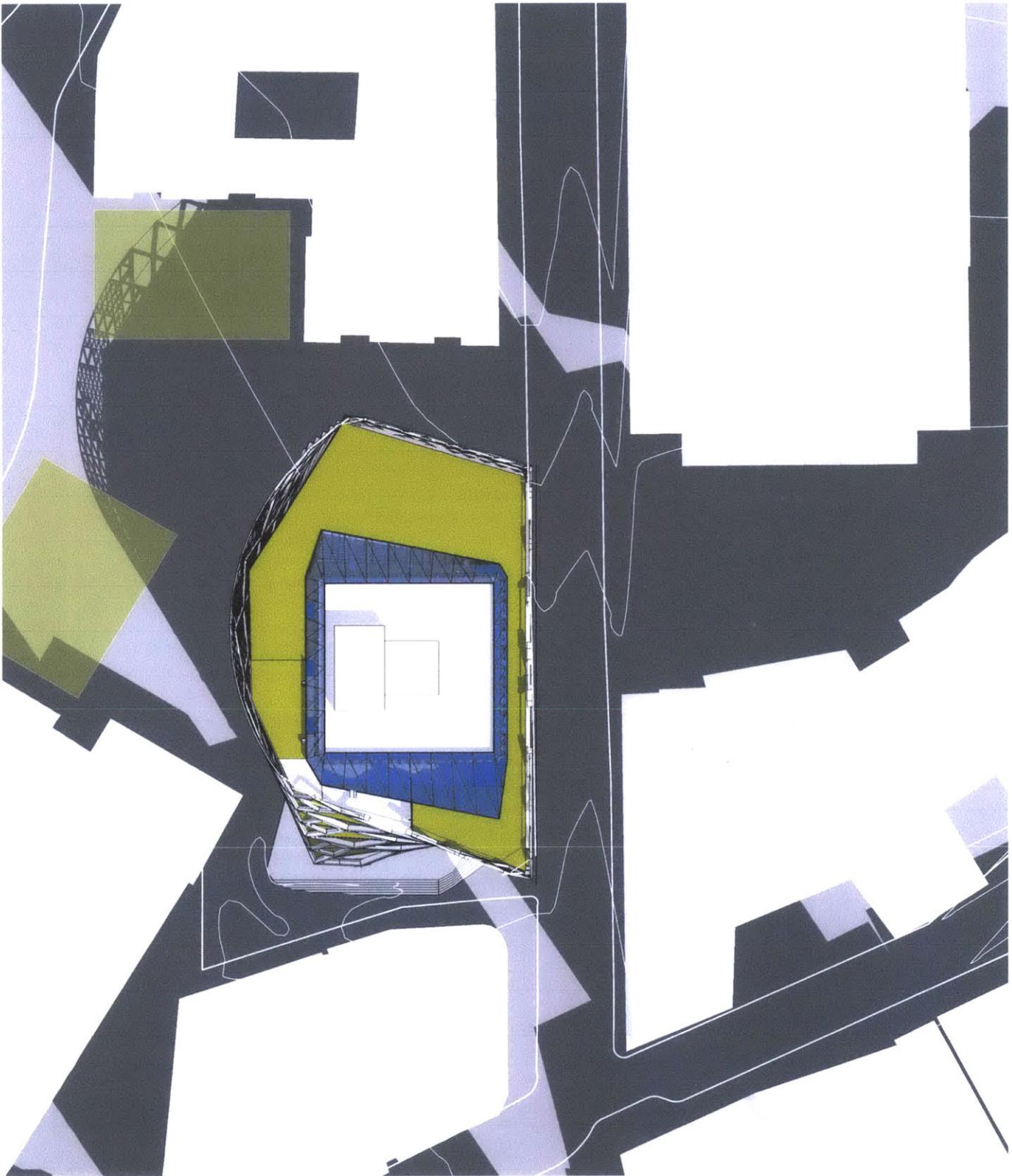
The Blue Cross Blue Shield building, a mid-rise tower in Boston, designed by Paul Rudolph in 1958, was selected as a laboratory upon which to explore a non-static, non-juxtapositional model of partial preservation—a site

whose existing structure could be partially retained and renovated to serve as the first iteration of a larger project. Currently slated for demolition and total replacement by a supertower that is essentially unrelated architecturally, the Rudolph building is here imagined to have a greater impact on the city by generating the fundamental interests and strategies of a new, larger structure.

The proposal that follows is the culmination of a series of studies of ways in which the Rudolph tower could impact a proposed densification of the site. Ultimately, several key elements of the brutalist structure—its mass, integration of thermal systems and structure, open layouts, and essential flexibility as an infrastructure—find new value in their rearticulation in a contemporary wrapper, reflecting their continuing relevance for projective architectures.



SITE PLAN



proposal

Preservation as hybrid via tectonic iteration



SITE SECTION EAST-WEST

preserve via iteration

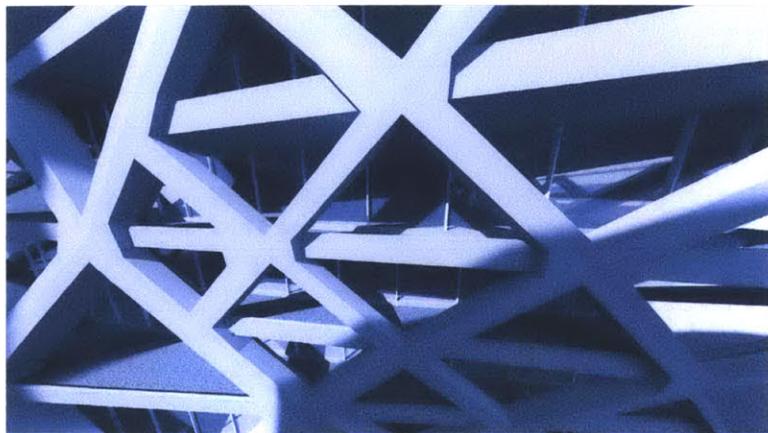
Rudolph's original curtainwall aspires to provide structure, thermal systems, ventilation, texture, durability, and scale.

Using the existing building logic of simple core surrounded by densely functional and expressive skin as iteration one, the new structure converts Rudolph's building into the massive core of a new structure with an expanded footprint.

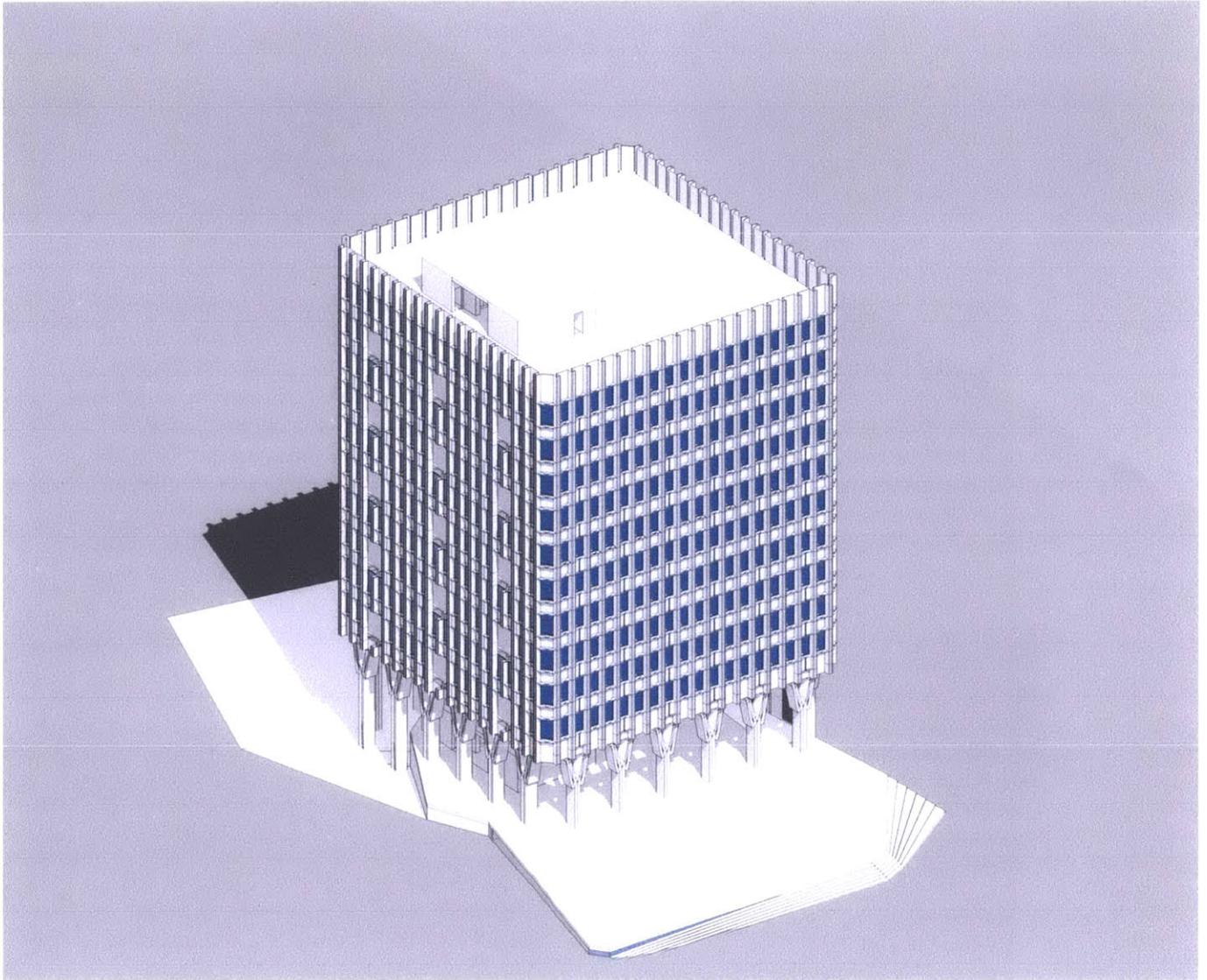
A toroidal addition is built around the Rudolph structure, at once prizing it in the "glass box" while perversely concealing it in the same act. While distant viewing of the original structure at urban scale is obfuscated, immediate interaction with the skin as a new interior partition at human scale becomes possible, as small incisions provide space for light bridges between existing and added floorslabs.

The original thermal system of the Rudolph building reclaims efficiency, as interiorizing it prevents heat loss to the exterior. Its new atrium exposure connects it to a larger thermal building strategy relying on the passive, thermally active concrete masses of both old and new building assemblies. Hydrothermic radiant heating and cooling systems within the concrete mass of the new building, and applied to the re-exposed concrete ceilings of the original building, provide lower energy and more comfortable thermal controls.

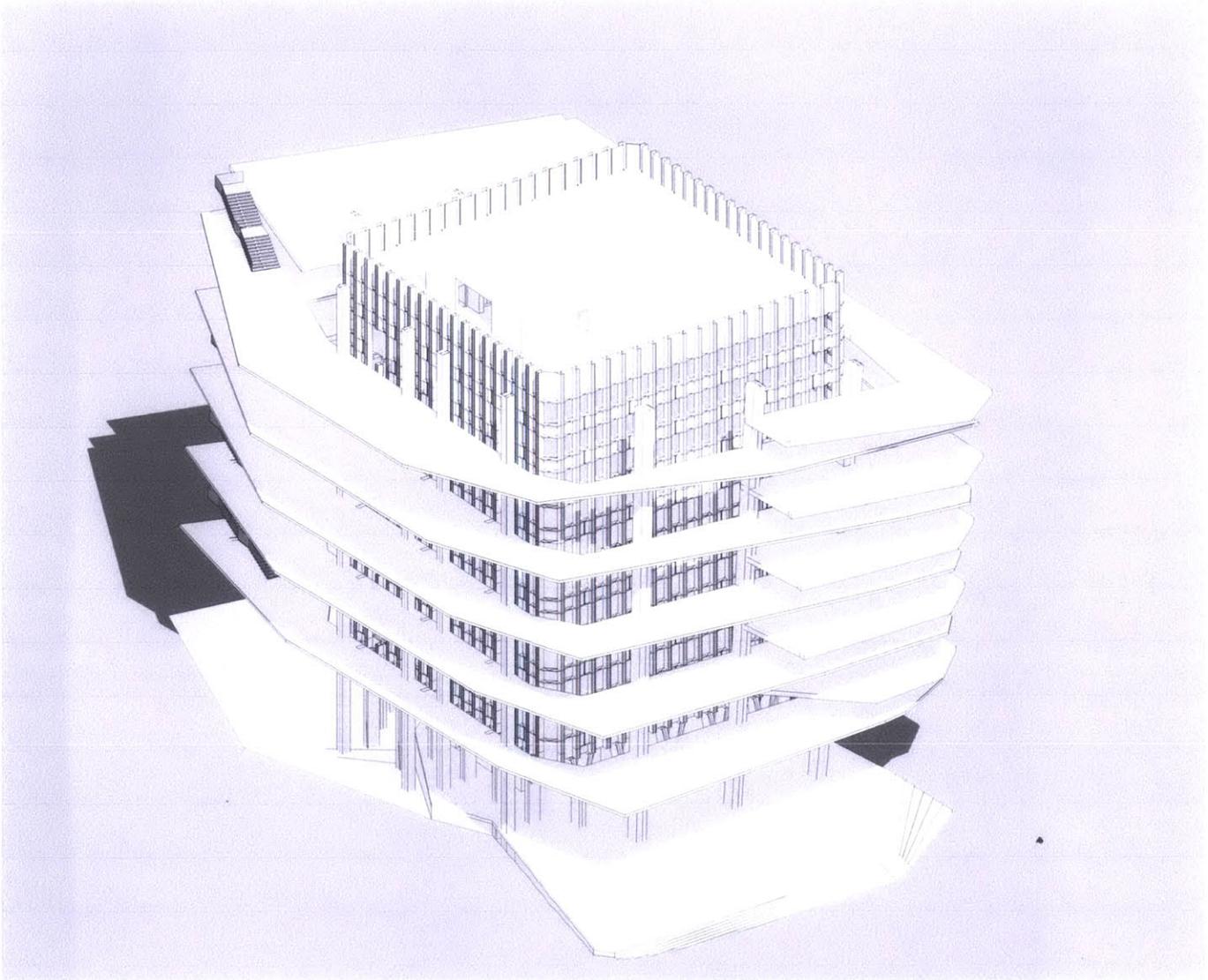
A diagrid structure wraps the exterior of the new cocoon that wraps the existing building. The redundant nature of the tubular structure allows for increased plasticity of form, and greater flexibility to play with visual scale on a tight urban lot.



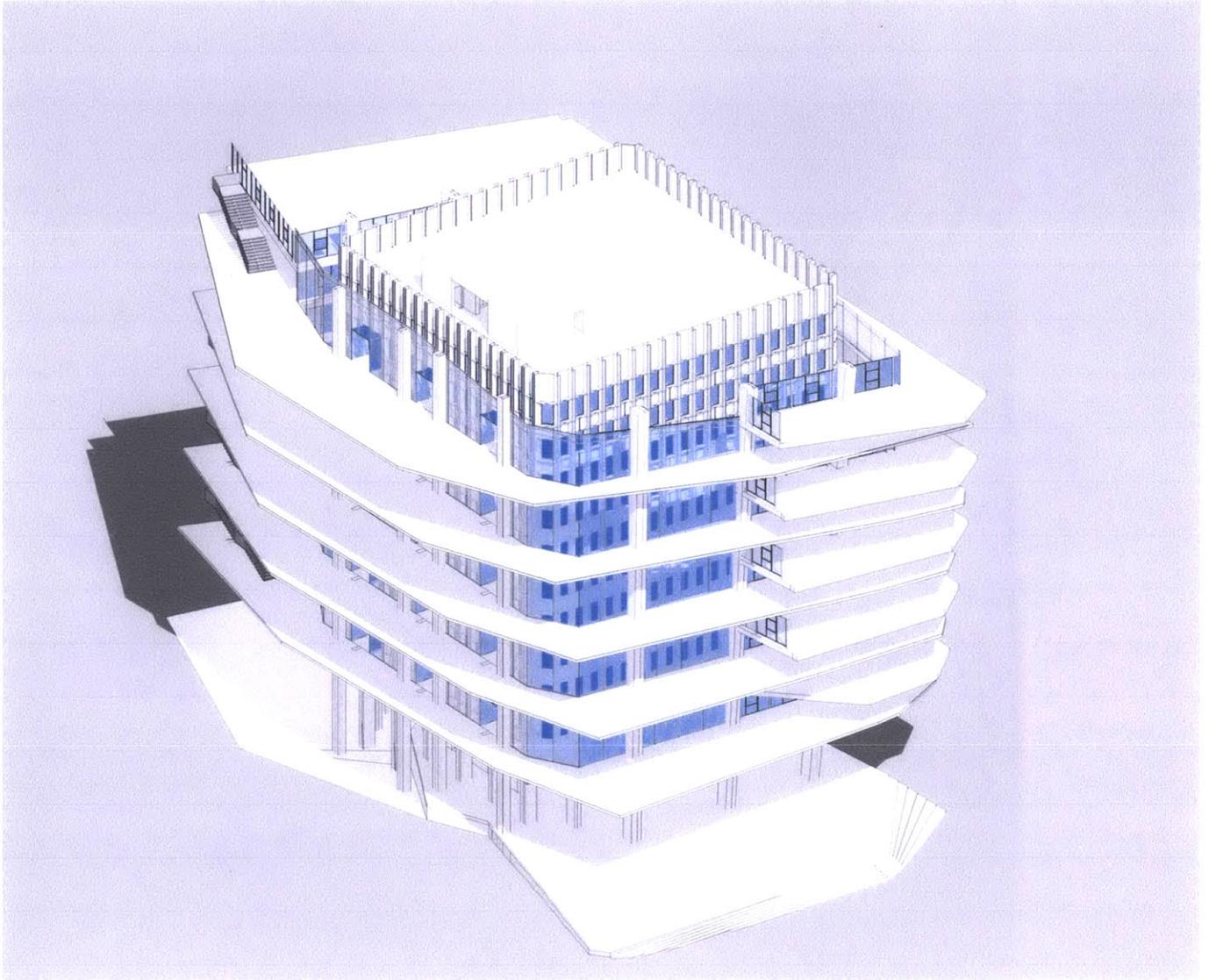
SOUTH ELEVATION STRUCTURE AND BALCONIES



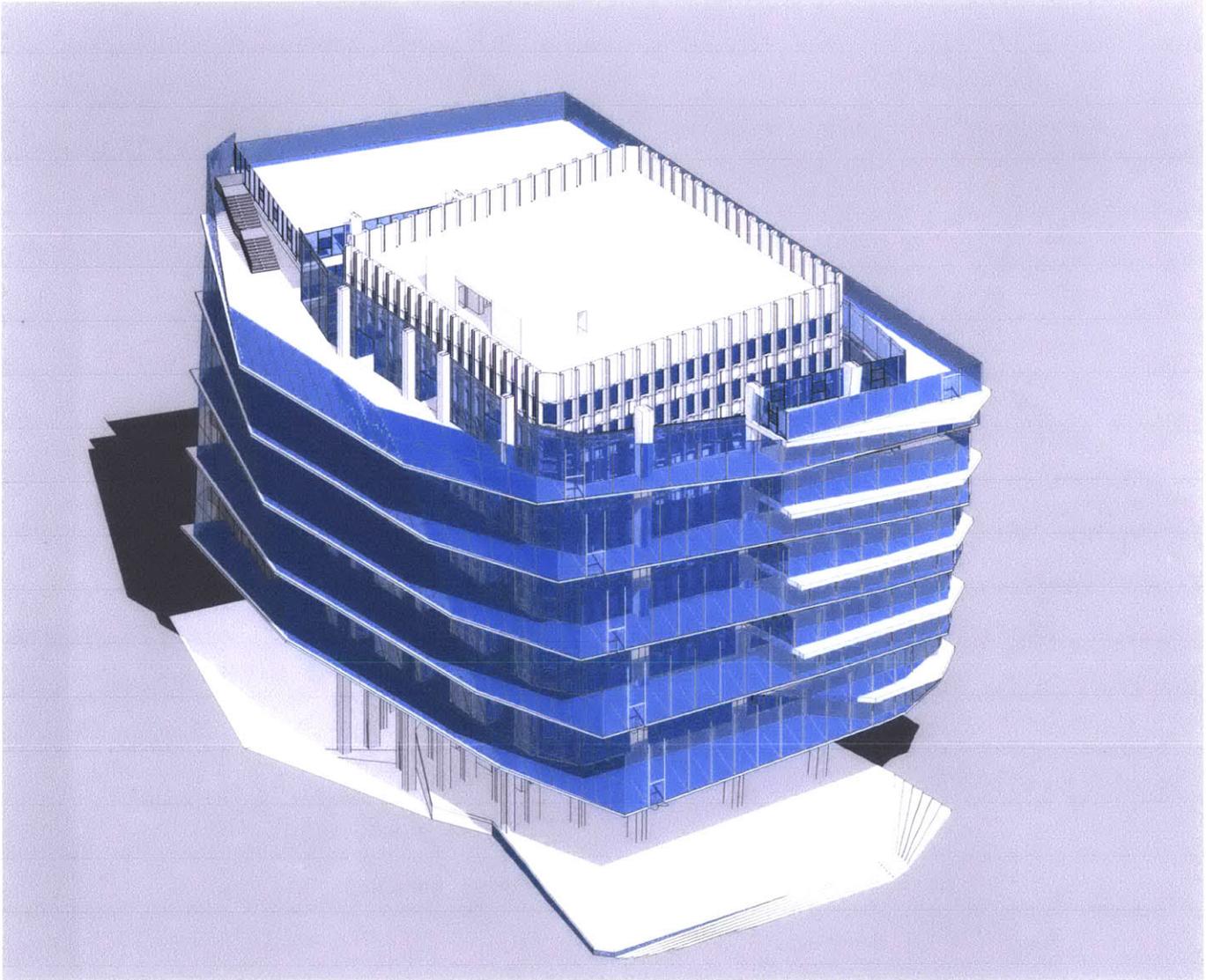
The existing rudolph structure serves as the core for a new expanded structure, while the sloping site is partially excavated to allow two-level lobby. The existing basement opens along its north wall to become accessible from Federal Street and the new passage connecting Federal Street to Winthrop Square.



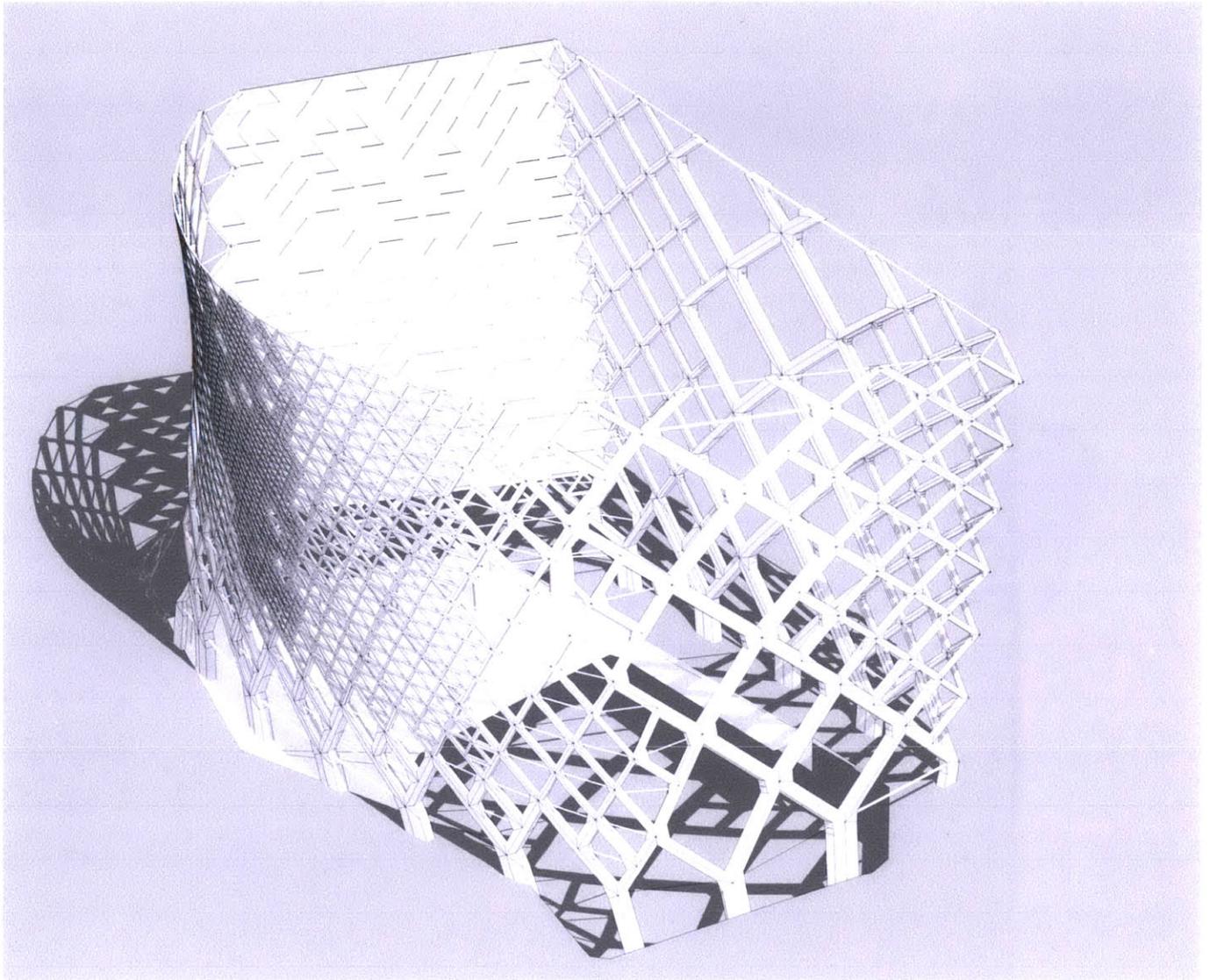
New floorplates are supported internally by new central columns, wrapping around the existing structure to create double-height spaces along the west elevation. New floorplates are aligned with those of the existing building in section, connecting to existing floorplates via bridging. Spaces located exterior to the atrium in the new construction rely on expanded centralized cores with the Rudolph tower for primary circulation and services.



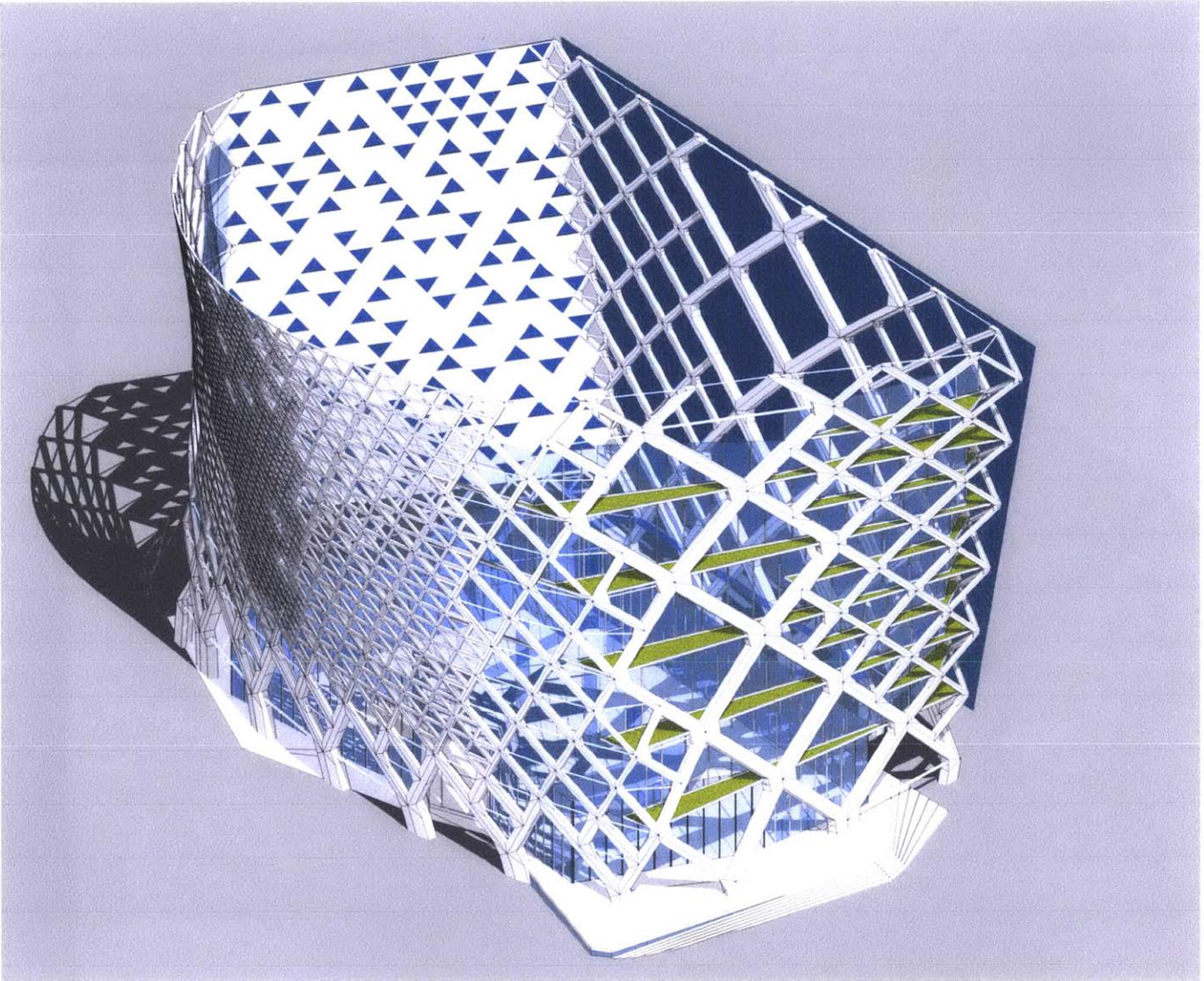
Interior curtain walls partition the new occupiable spaces into discrete thermal zones around a central atrium, which moves heated air from the ground level lobbies to rooftop exhaust openings venting over the central tower's roof.



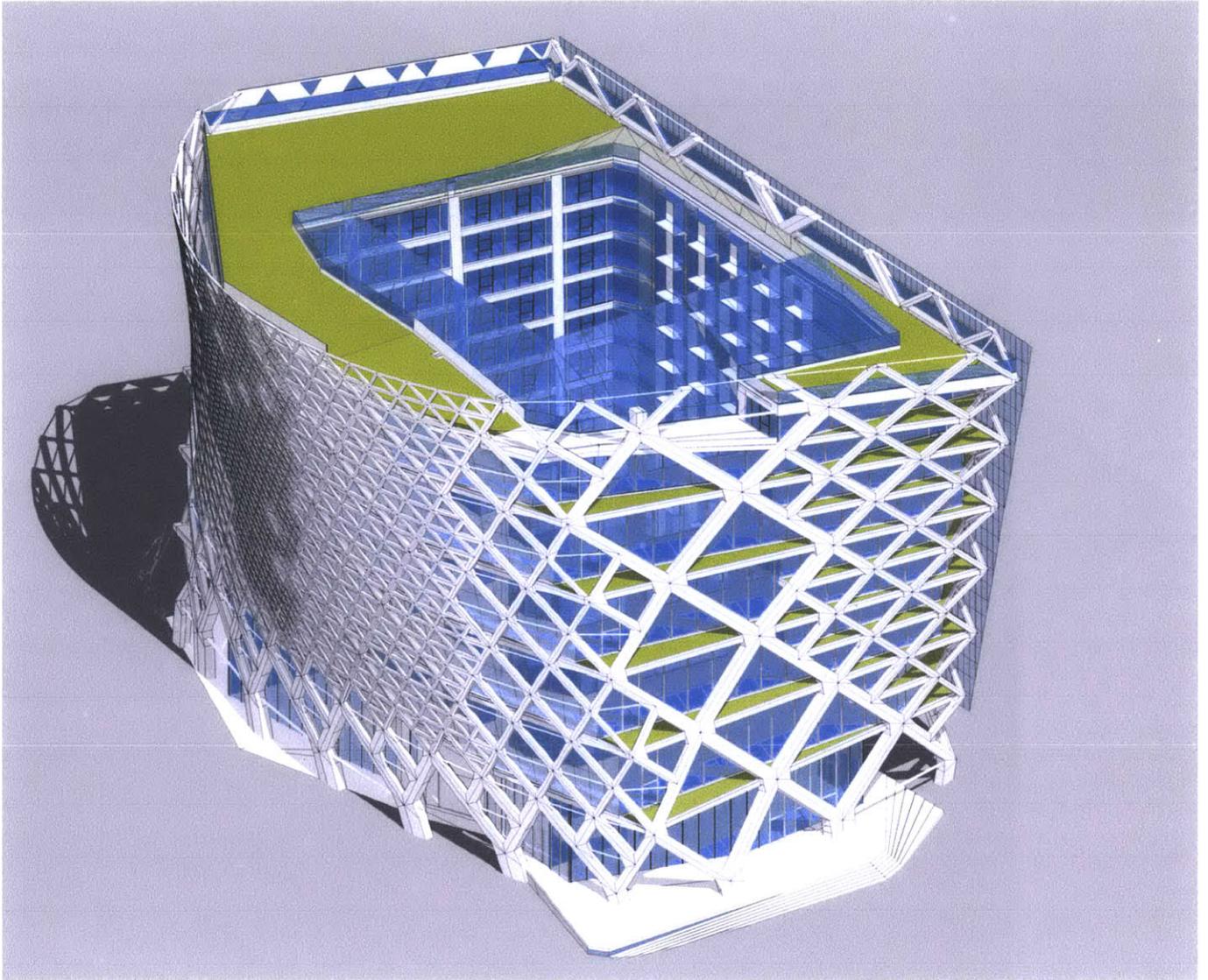
Exterior glazing responds to varying exposures as either double glazing external to the diagrid structure (east elevation), an insulated curtain wall internal to the diagrid structure (west and south elevations), or integrated insulated glazing units embedded within the thickness of the concrete wall (north elevation).



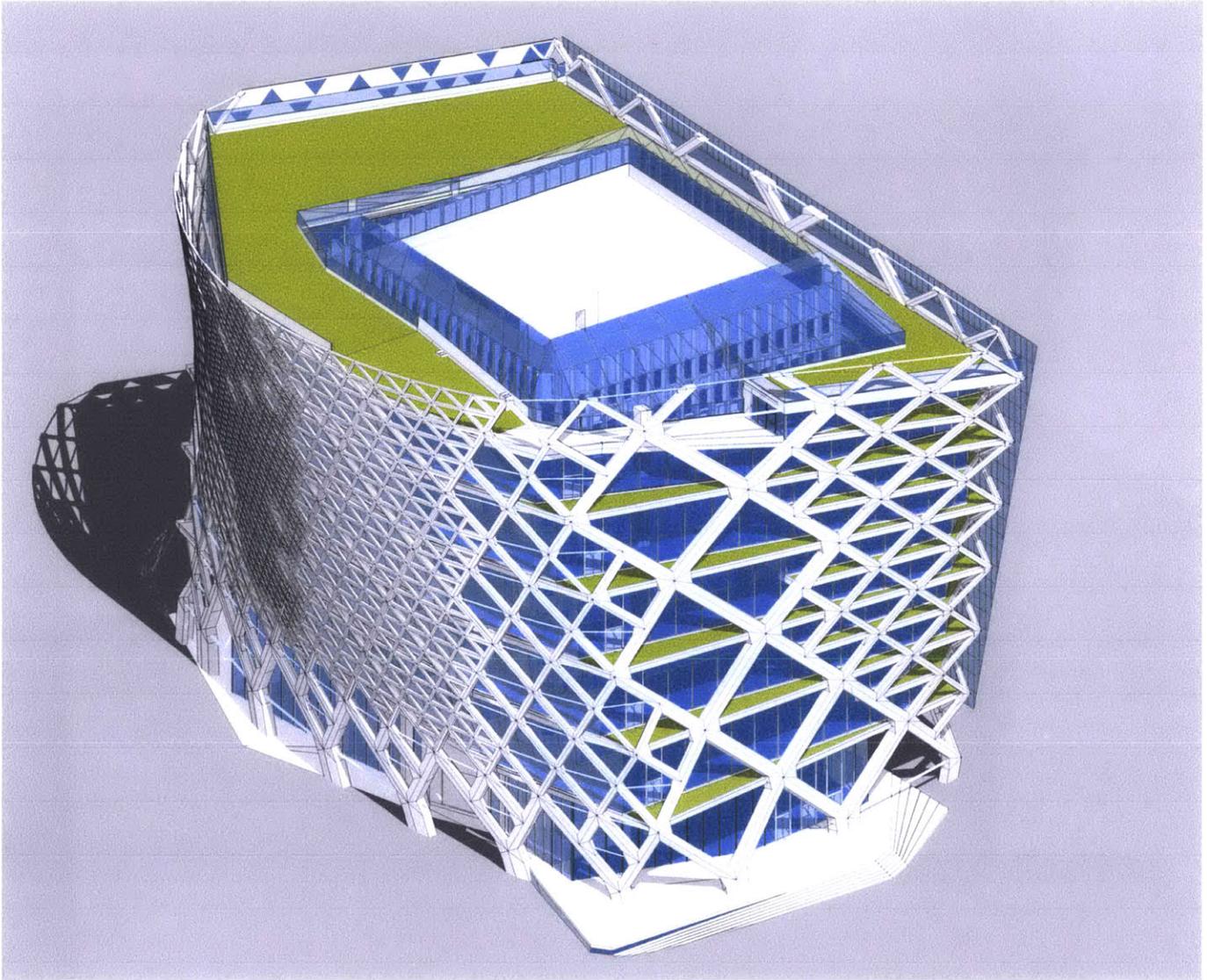
A concrete diagrid structure frames the outer membrane of a toroidal addition. The concrete framework provides thermal mass in a plastic form which maximizes floorplate area. The irregular form also minimizes the visual scale of the structure's width and exaggerates the visual scale of the structure's height, responding to the visual height of surrounding buildings.



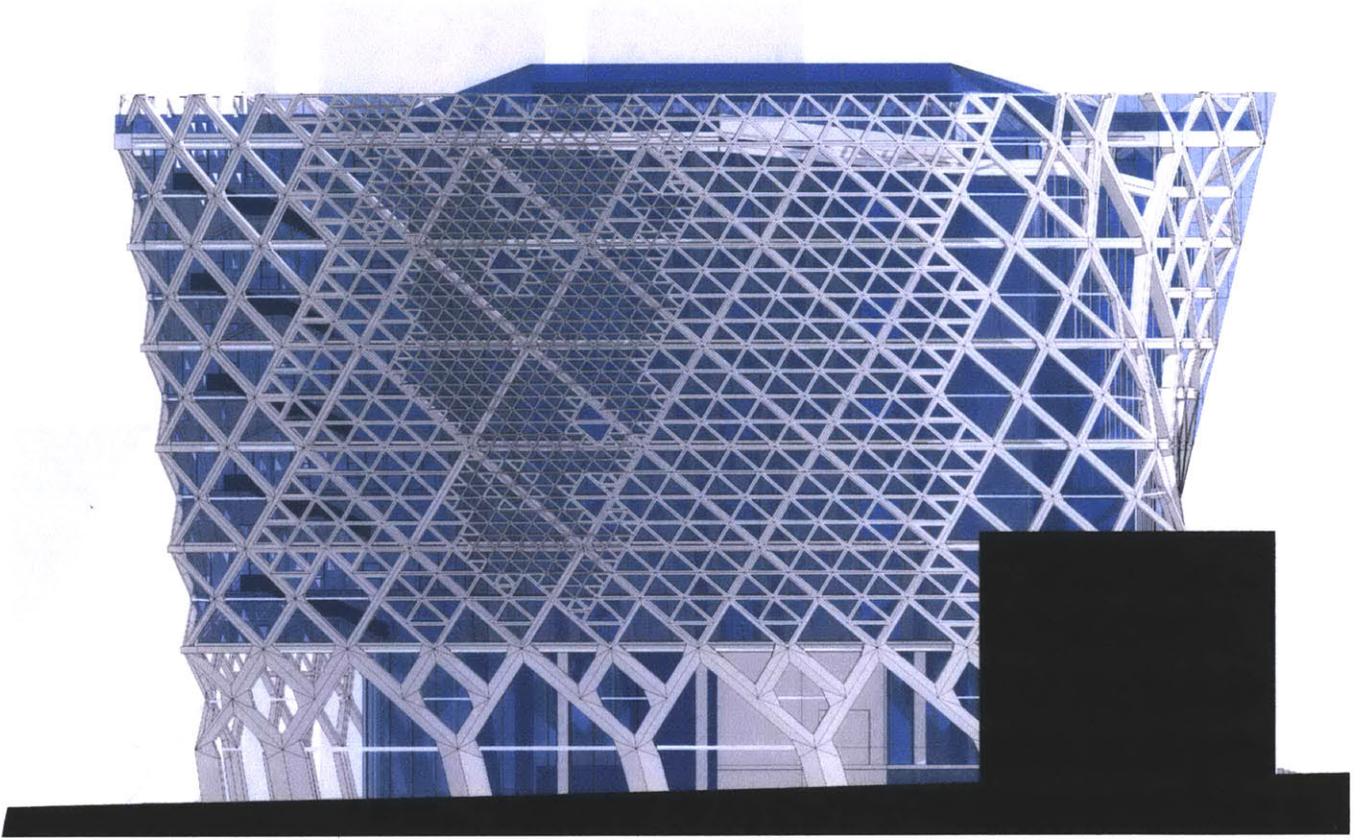
Glazing integrates with the diagrid structure to enclose new floorplates and to serve as a thermal modulator, with operable window systems and structural solar shading.



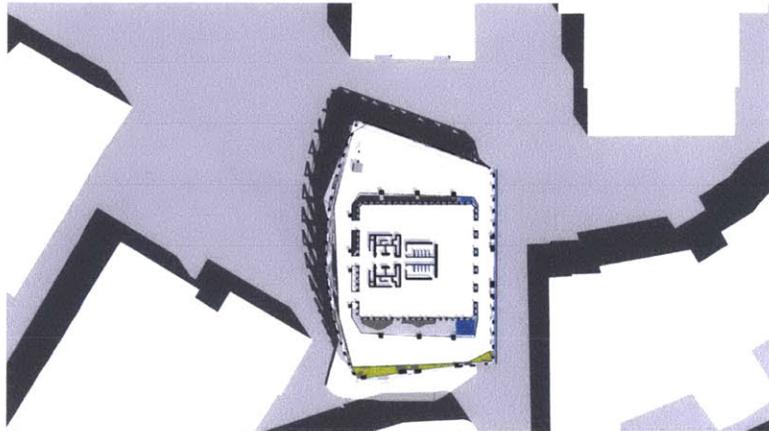
Planters and green roof surfaces insulate exposed concrete floor slabs and provide outdoor access for occupants.



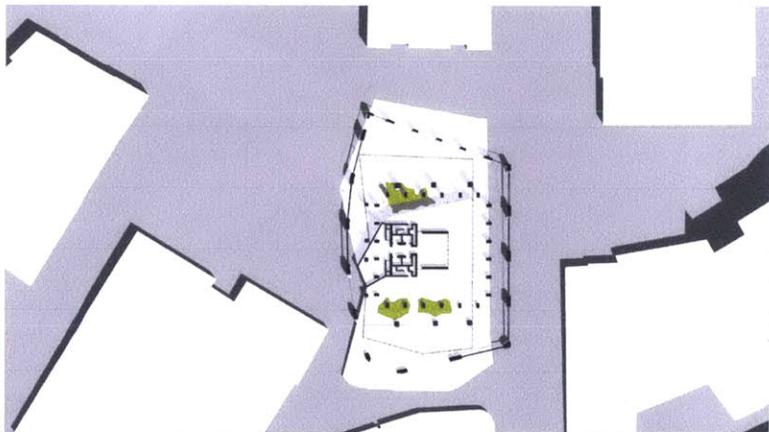
Rooftop glazing covers the atrium and serves as the only point of connection between the existing structure and the new floorplates apart from the internal bridges, draining rainwater away from the existing historic curtain wall, onto green roof surfaces, and down south planters as a passive irrigation system.



Increased density of structural members along the west elevation allows for shading of the double-height galleries from strong afternoon sun.

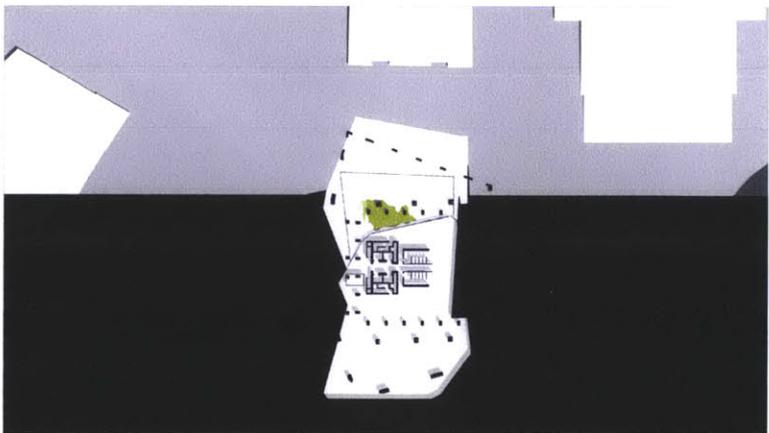


LEVEL ONE

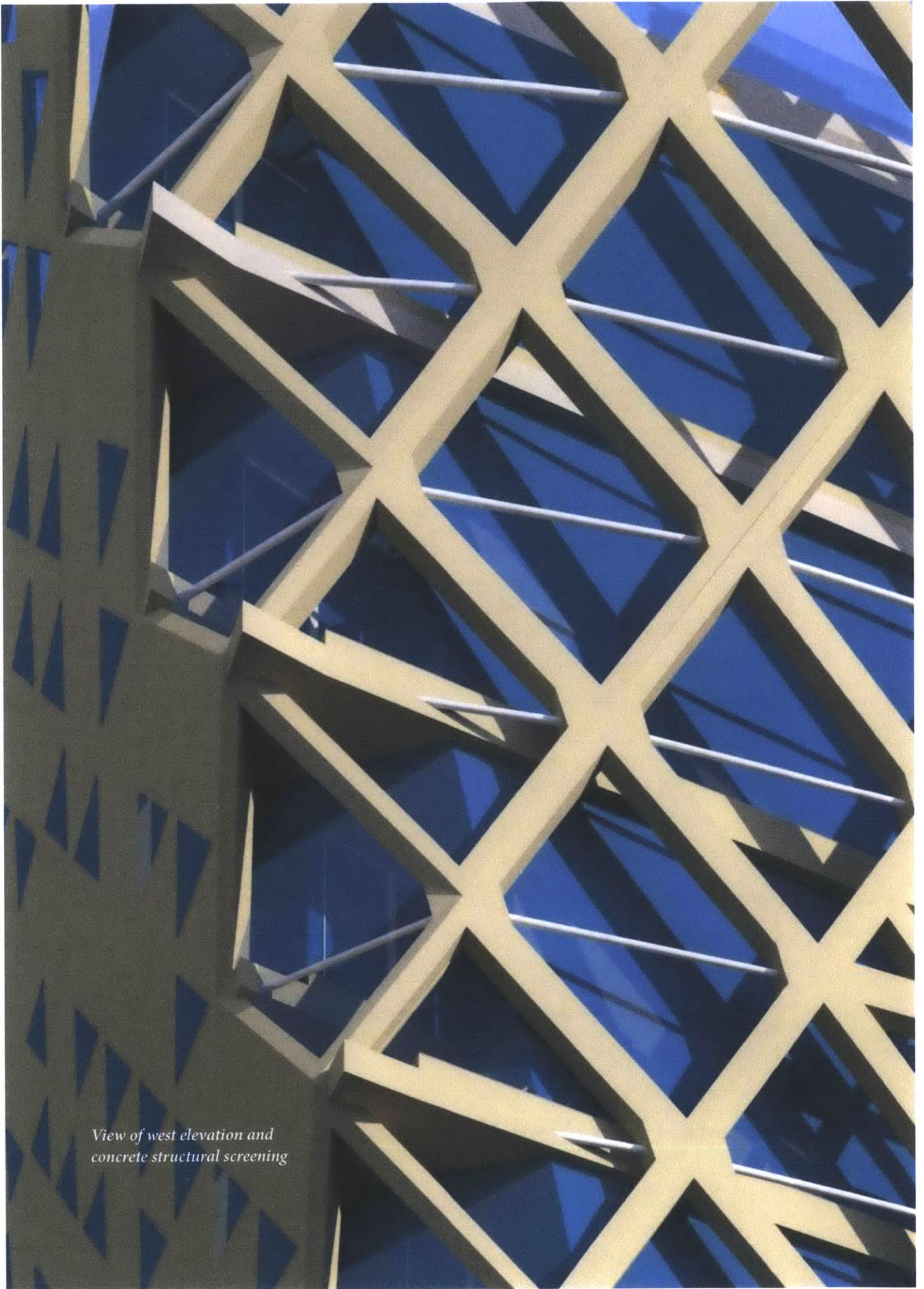


UPPER LOBBY LEVEL

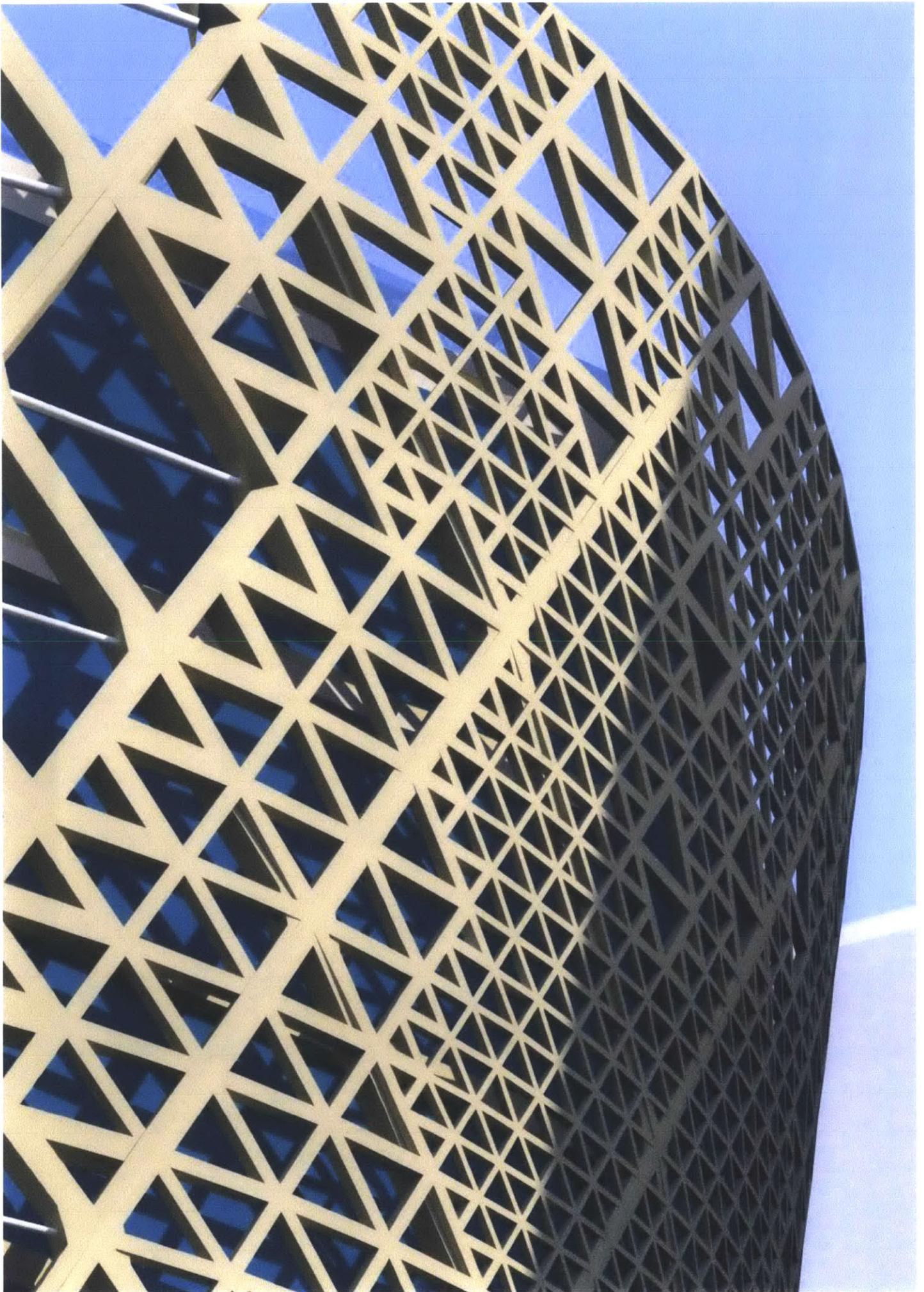
The lobby is expanded after the addition of additional interior space defined after the footprint of the diagrid structure. The lower lobby features a triple-height space, while the upper lobby becomes a double-height space after the removal of the existing mezzanine.

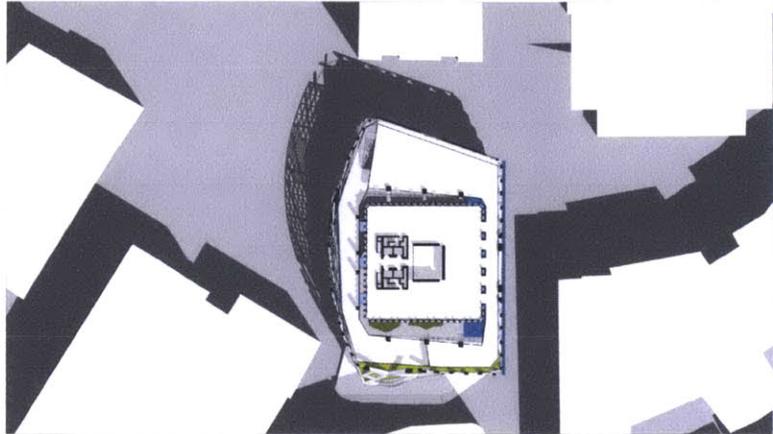


LOWER LOBBY LEVEL

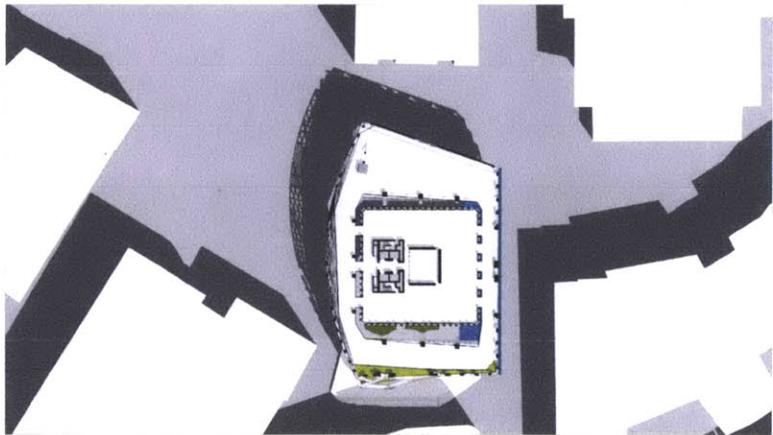


*View of west elevation and
concrete structural screening*



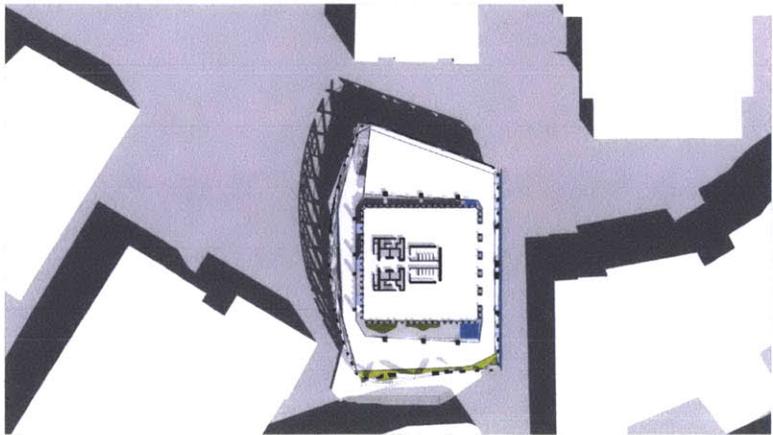


LEVEL FOUR

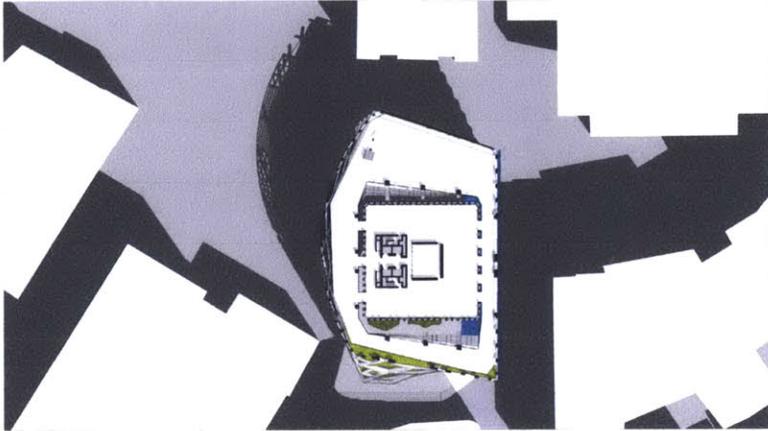


LEVEL THREE

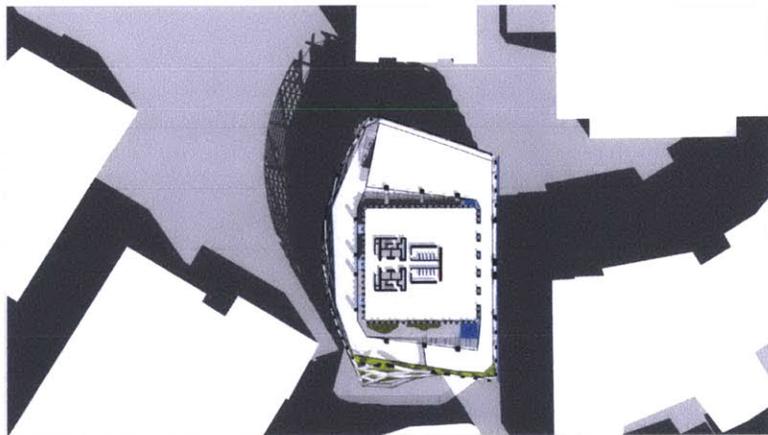
Added levels alternate between full enclosures of the Rudolph core and U-shaped spaces wrapped around the Federal Street elevation, leaving double-height galleries along the southwest of the outer structure.



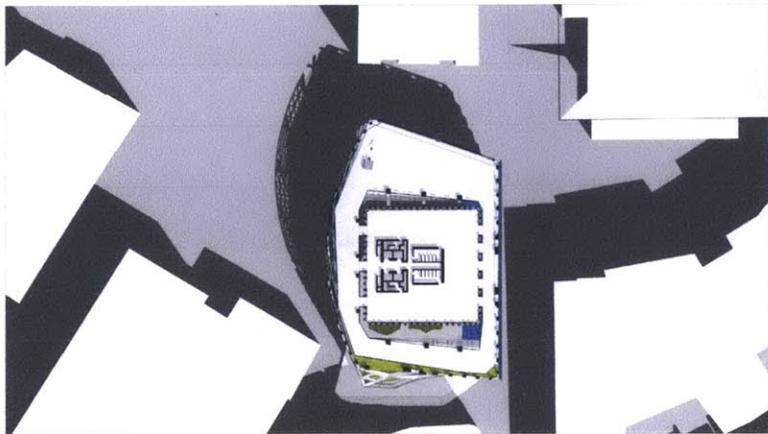
LEVEL TWO



LEVEL SEVEN



LEVEL SIX

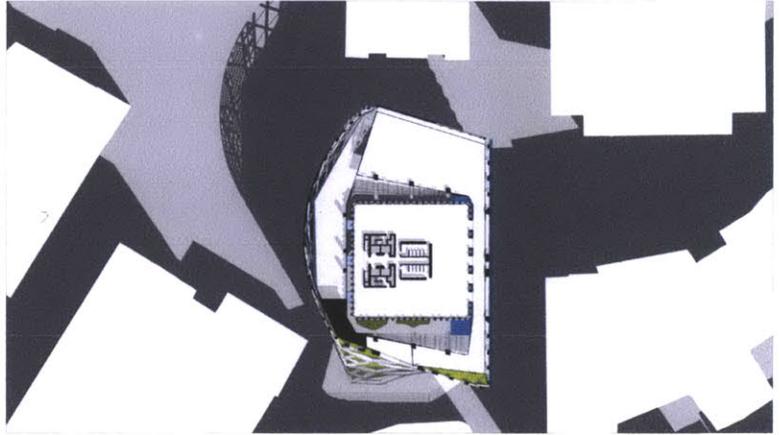


LEVEL FIVE

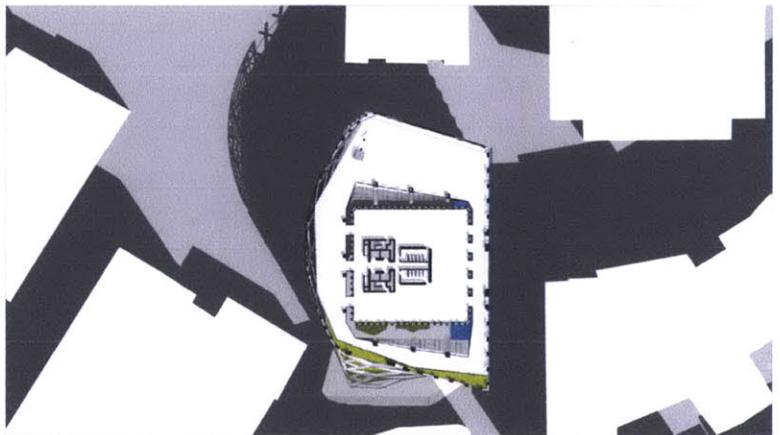




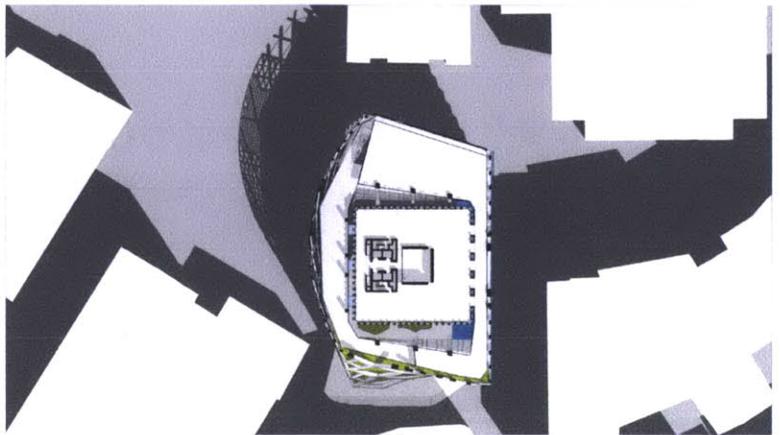
Within the new atrium, air flows between the south gallery, to the left, and the existing Rudolph façade, to the right. A new experience of the façade is created as Rudolph's curtain wall system is opposed to new workspaces at eye level.



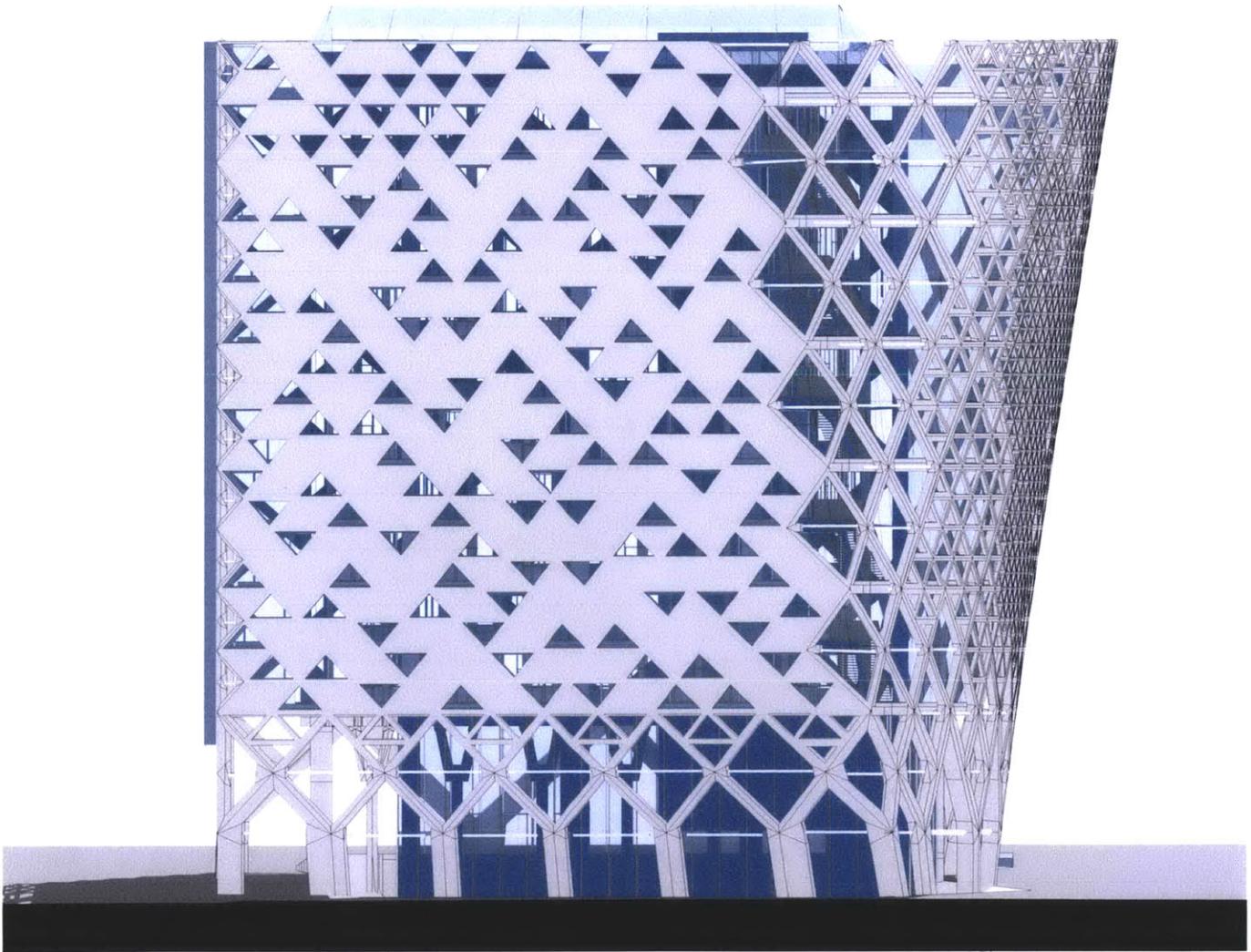
LEVEL TEN



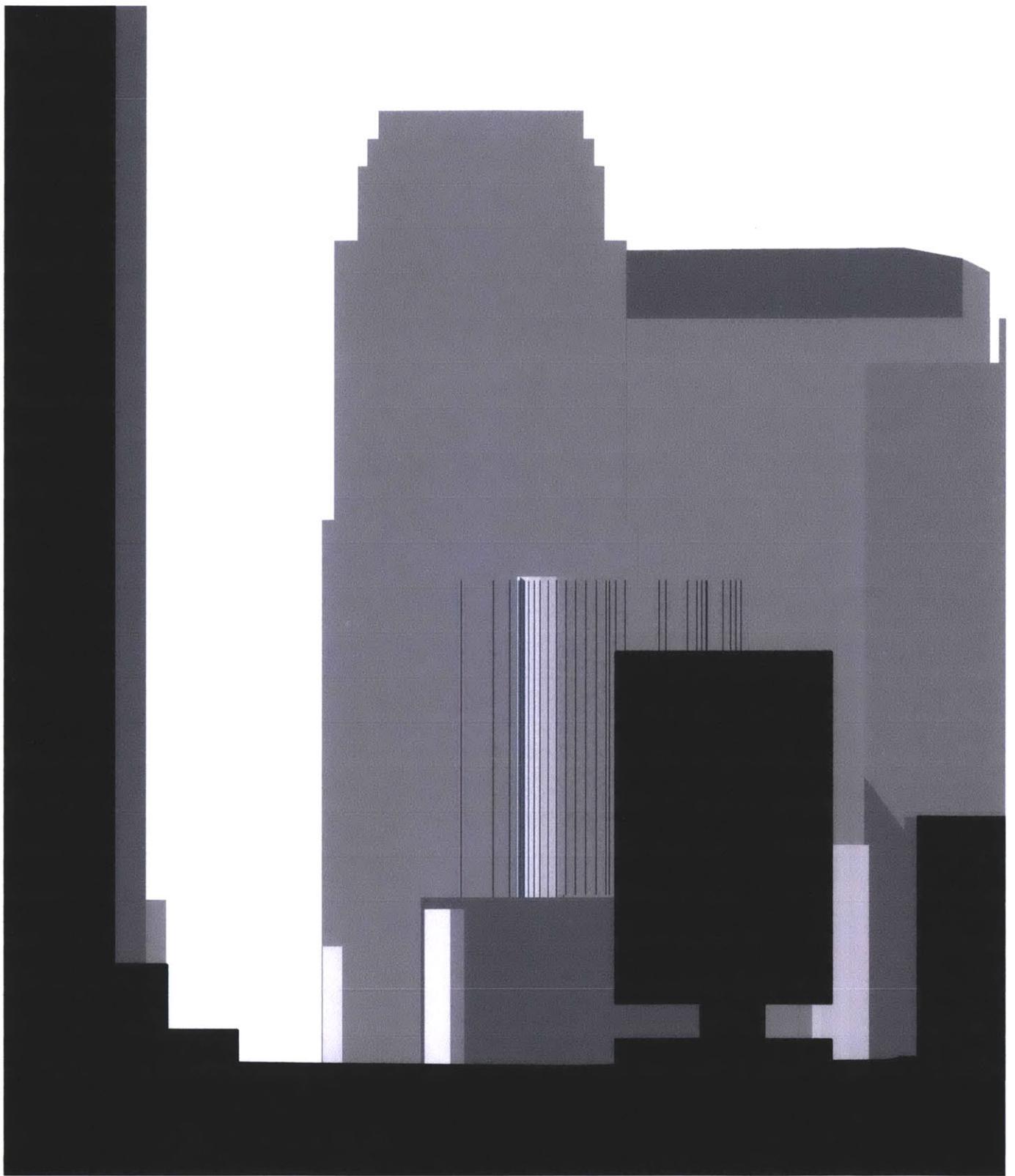
LEVEL NINE

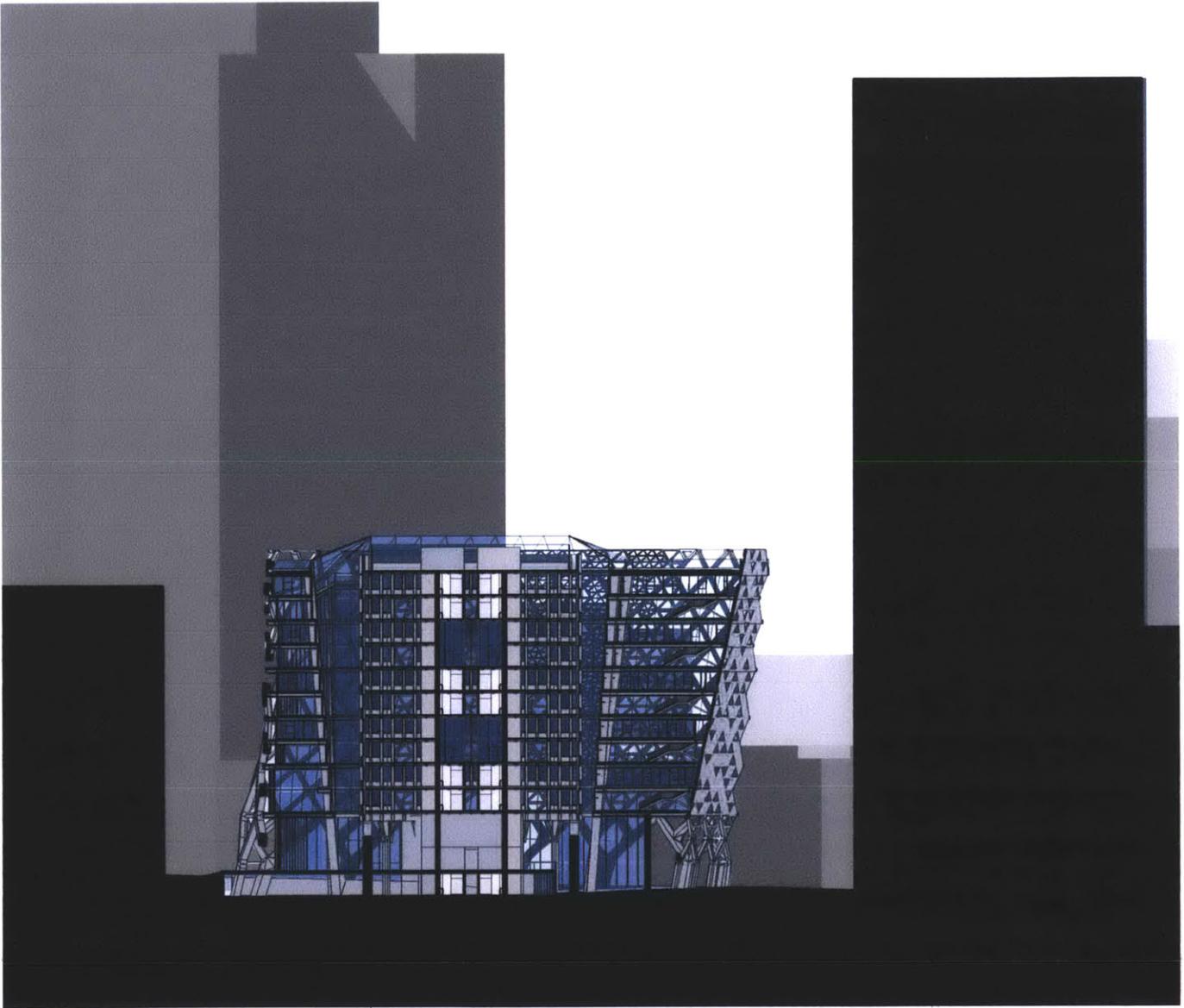


LEVEL EIGHT

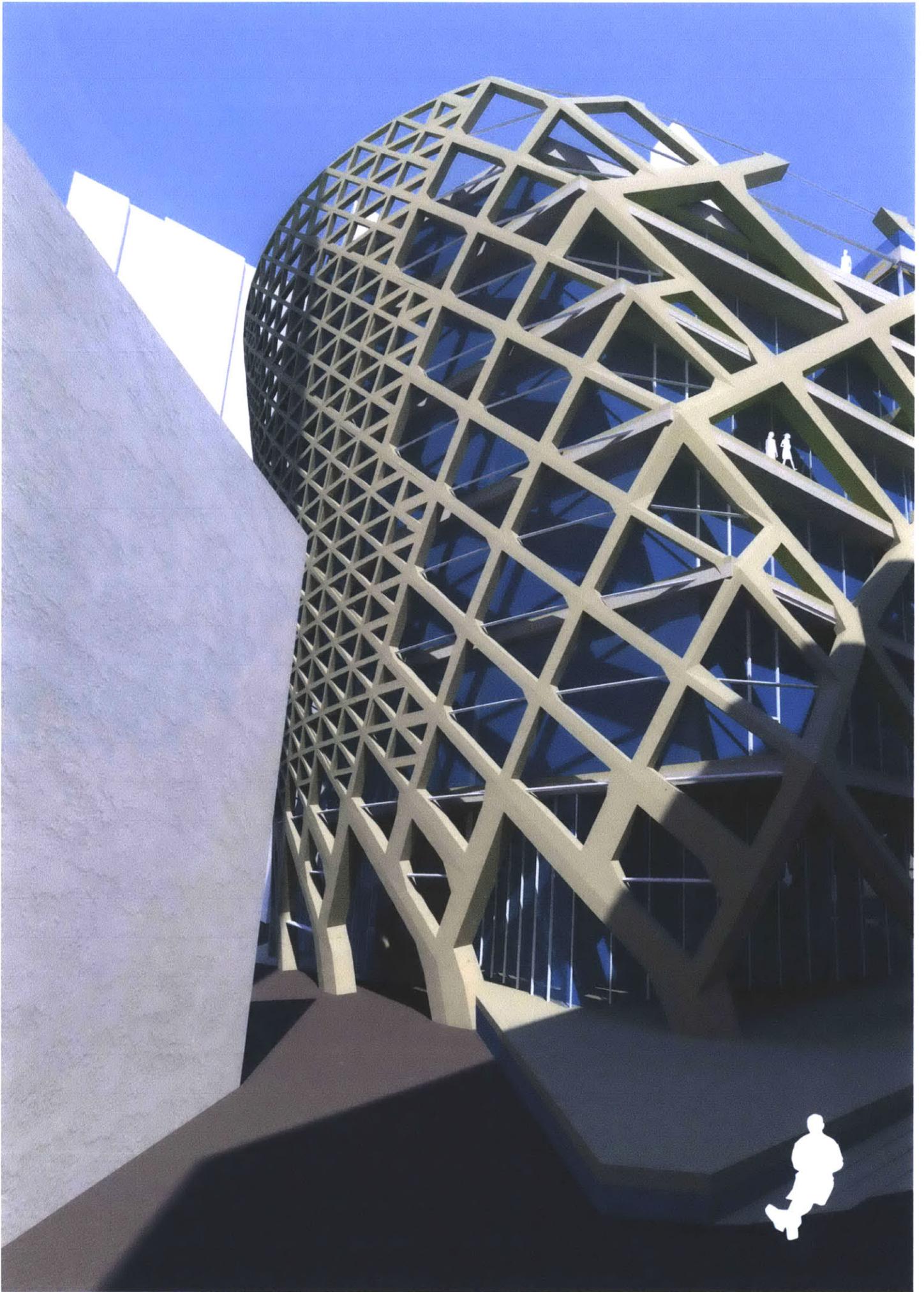


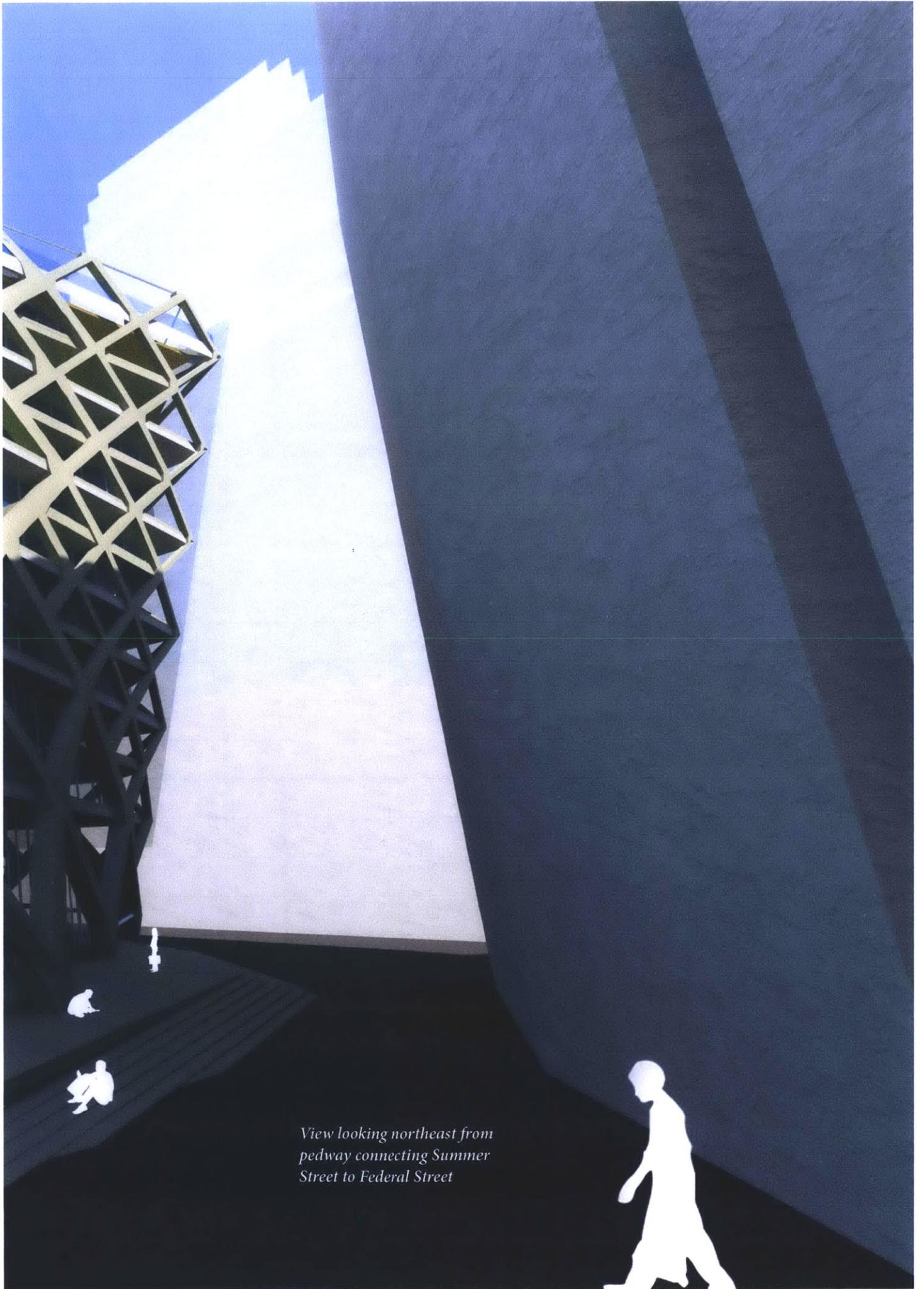
A far more massive north elevation is created by filling in many of the gaps in the open diagrid framework to provide increased insulation along a cool, shaded exposure.



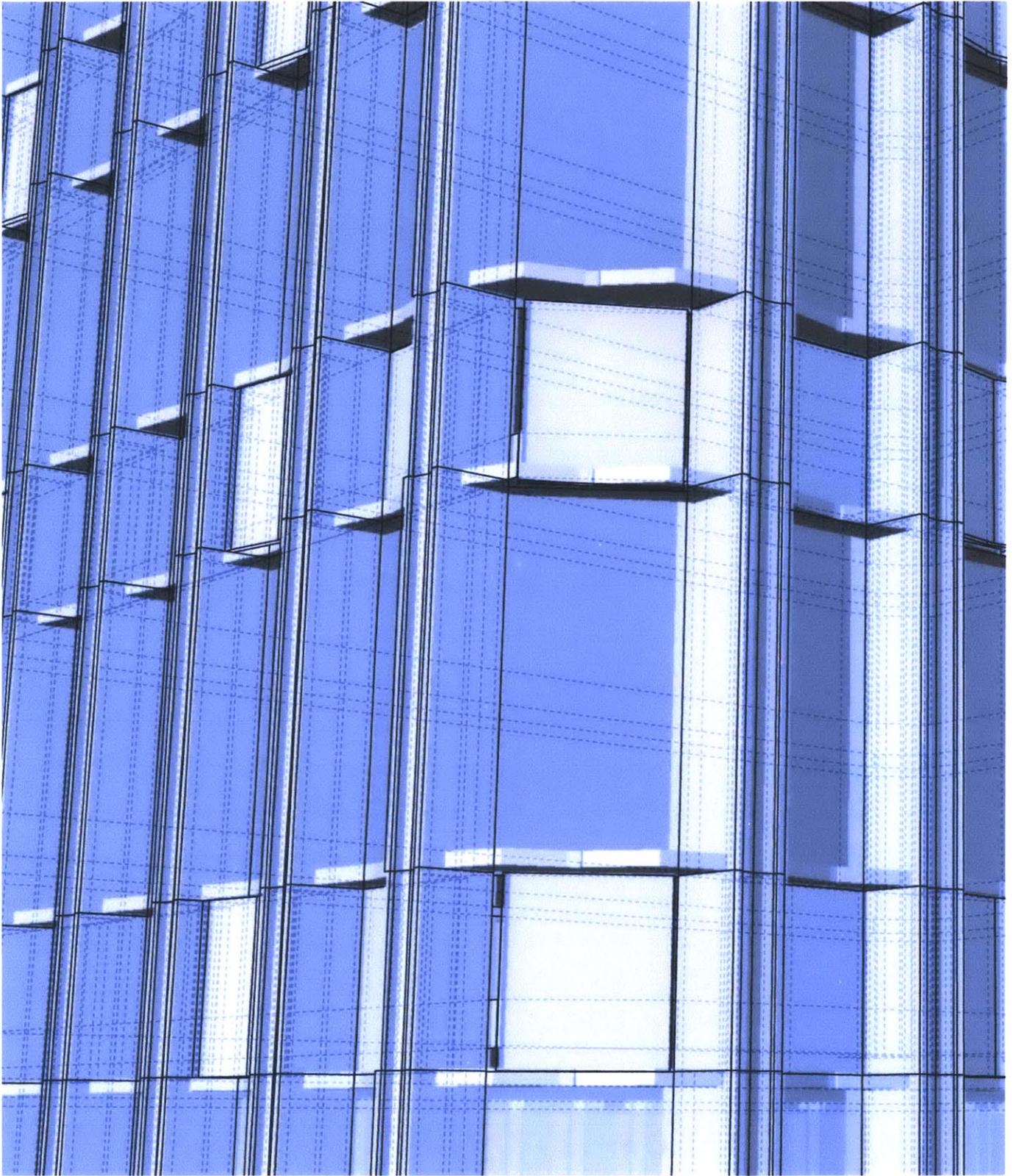


SITE SECTION NORTH-SOUTH

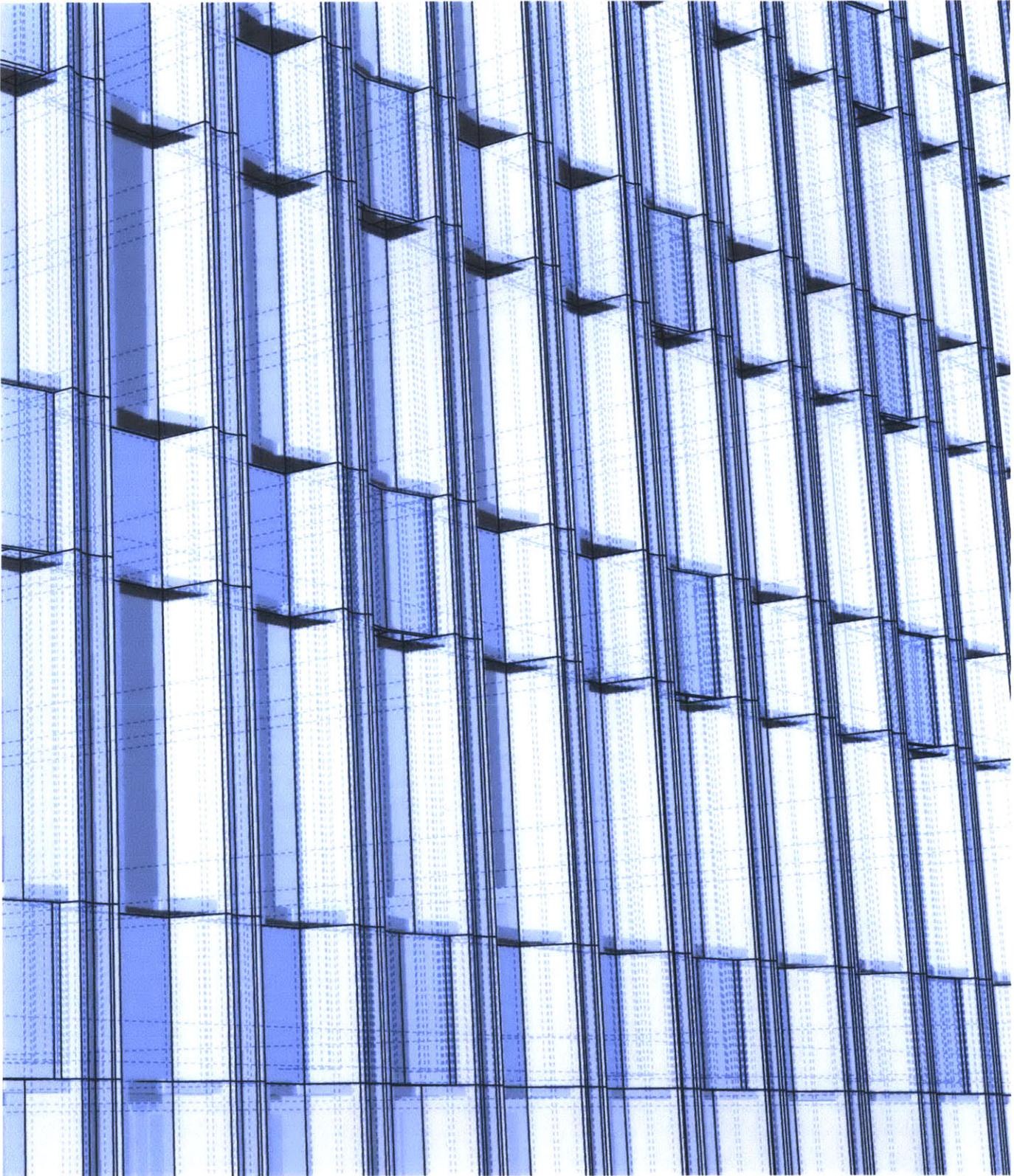




*View looking northeast from
pedway connecting Summer
Street to Federal Street*



RENDERING OF PRECAST CONCRETE PANELIZED CURTAIN WALL OF 133 FEDERAL STREET



situation

Past and Future of 133 Federal Street

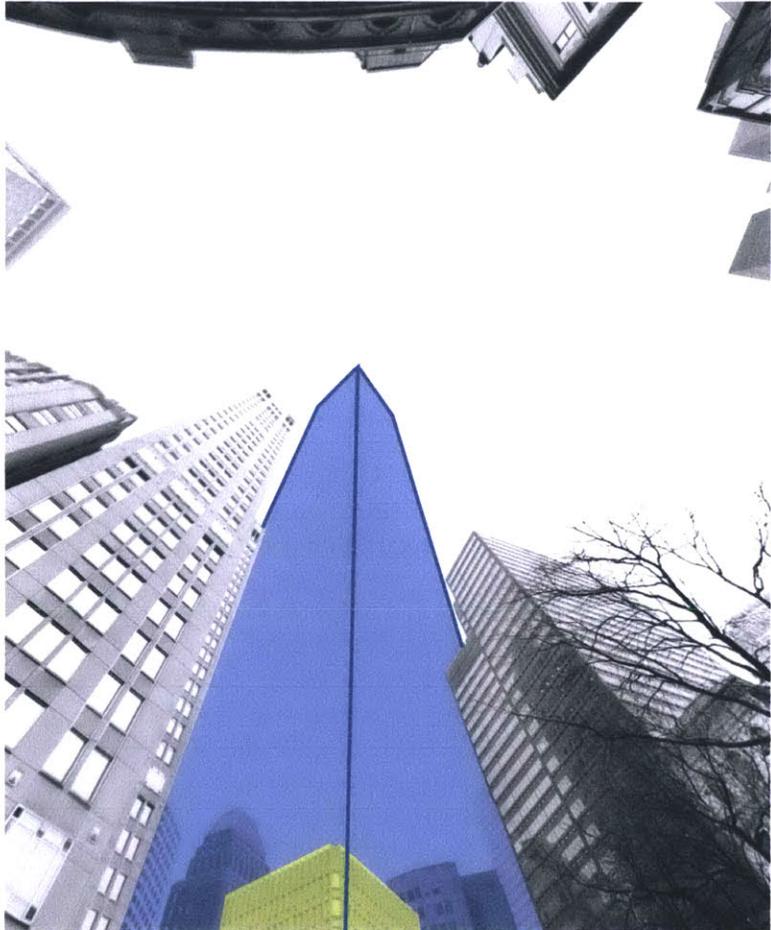
In May of 2006, Boston Mayor Thomas M. Menino announced a call for the design of a new 'iconic' skyscraper to rise far above the moderate skyline of Boston's Financial District. His call was answered that November by a sole proposal; developer Steven Belkin and architect Renzo Piano unveiled a scheme for a 1.3 million square foot, 1,000-foot-tall glass tower on the site of an existing municipal parking garage at 115 Federal Street.

Belkin is the chairman and founder of the TransNational group, and his interest in the project site at 115 Federal Street was precipitated by the fact that his corporation TransNational owns and occupies the adjacent building at 133 Federal Street. Uniquely poised to expand the scope of the Mayor's original project, Belkin and Piano proposed merging the two Federal Street parcels and developing a single 80-story building primarily within the footprint of the parking structure. It was Piano's conviction that a tower of such a scale would demand a large public 'green space' at its base, in addition to the smaller landscaped plazas already present in the Financial District. To make room for the new one-acre park proposed, the existing Trans National building at 133 Federal Street would be demolished.

There was, however, a hitch: the building at 133 Federal Street differed from the nondescript parking garage in a critical way. The building, originally commissioned for the Blue Cross Blue Shield company, was designed by architect Paul Rudolph, one of the key figures of the American Modern movement in architecture. Dean of the Yale School of Art and Architecture and designer of its 1963 'A&A Building', Rudolph designed several buildings in Boston in the 1950s and 1960s that experimented with precast concrete, a burgeoning technology in the post-WWII period.

Highly controversial upon its construction and subsequent publication, the design of 133 Federal Street was either loved or seemingly misunderstood by its contemporary critics. Ada Louise Huxtable praised it, as she later did Rudolph's Yale Art and Architecture Building; others felt that the Rudolph himself admitted to being unsatisfied with the height of the tower, as he had desired a taller elevation with a correspondingly slimmer proportion. In the decades following its construction, conversation surrounding the building died down as brutalist concrete works fell out of favor with the general public (if they ever were favored to begin with).

Upon announcement of Piano's proposal for its demolition, critical conversation around Rudolph's almost forgotten Blue Cross Blue Shield (BCBS) building was quickly revived. In light of the building's history and particular structural and material innovations, the question was raised: did the TransNational BCBS building deserve preservation? The conversation between supporters of the tower and preservationists shifted towards UNESCO-esque defenses or denunciations of the building's hotly contested 'outstanding cultural value'. Piano admitted his admiration for Rudolph's building but argued that urbanistically, it would not fit with the lightness that he was seeking in his projected design. Perhaps ironically, there are many parallels between the work and philosophy of Piano and Rudolph; it could be argued that Rudolph's exposure of the ventilation systems on the facade of the BCBS building even prefigured Piano's Centre Pompidou (1971-1977), a fact not lost on preservationists urging a re-evaluation of the plan to save at least a portion of the BCBS building.



EXISTING VS PROPOSED SKYLINE FROM WINTHROP SQUARE



URBAN ADJACENCIES AND STREET VIEW FROM SOUTH STATION

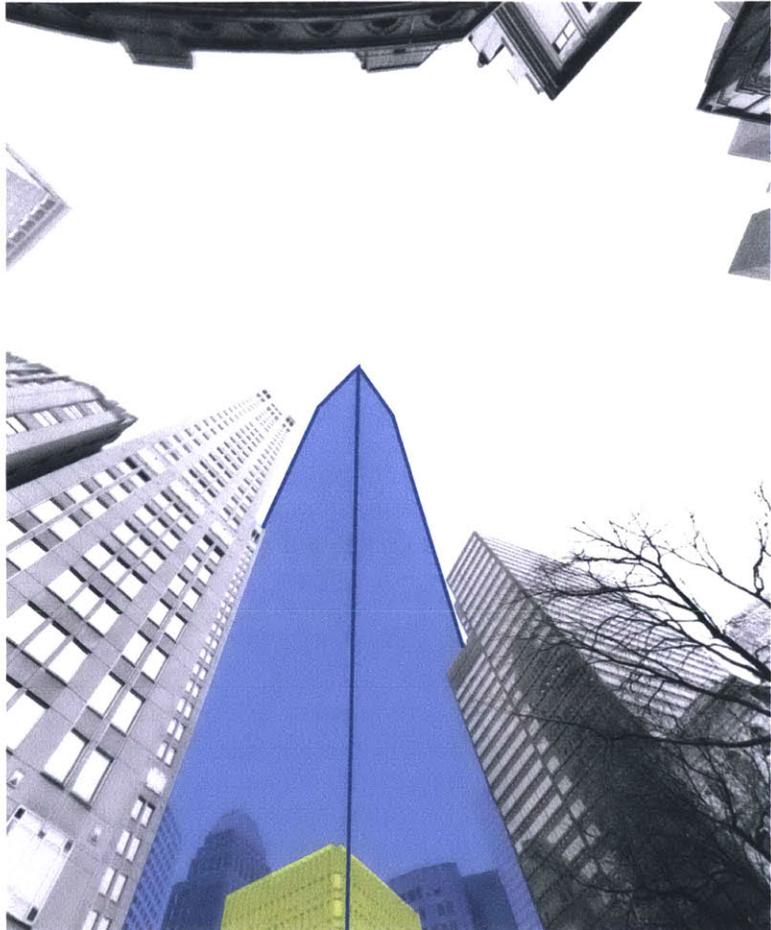
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EXISTING VS PROPOSED SKYLINE FROM WINTHROP SQUARE



URBAN ADJACENCIES AND STREET VIEW FROM SOUTH STATION

The Blue Cross Blue Shield Building is not the only building of Rudolph's in jeopardy; similar debates centered around his Riverview High School in Sarasota, as well as residences in Florida and Connecticut that were ultimately demolished in recent years. Theodore Prudhon, founder of DOCOMOMO US, compares Rudolph's Orange County Courthouse in Goshen, New York (1963-1968) to the Kallman, McKinnell & Knowles' Boston City Hall (1963-1967) Even Rudolph's most admired work, the Yale Art and Architecture Building (), was saved from destruction primarily due to the high cost of demolishing the massive concrete structure; renovation and addition was completed as a second choice to replacing the building.

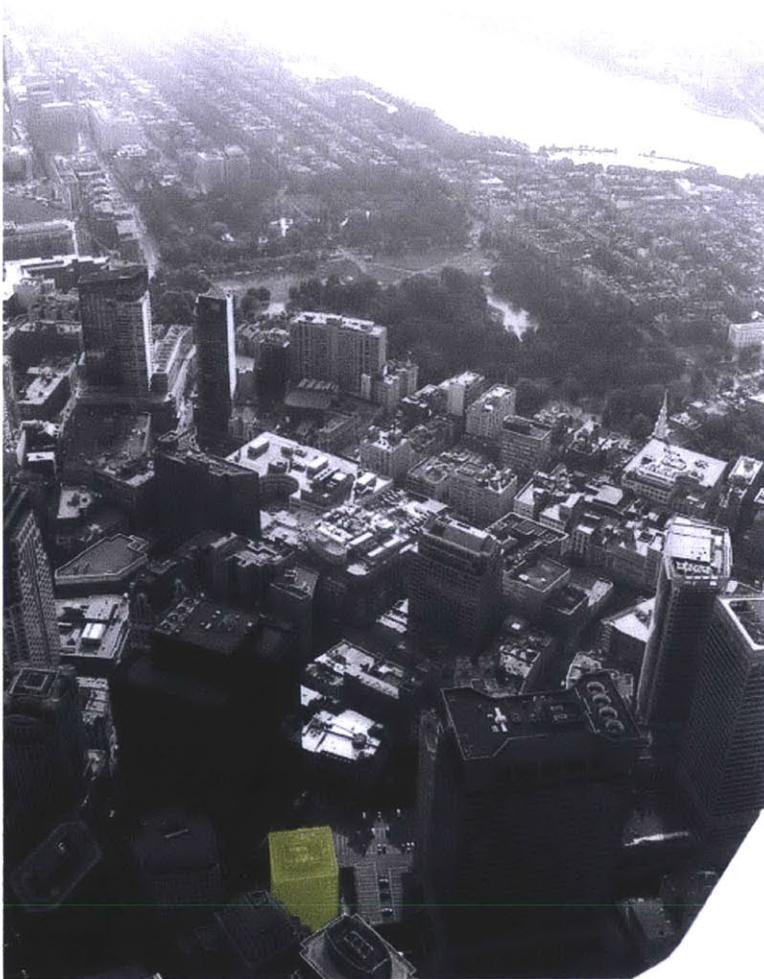
What to make of all this debate? Certainly, most buildings are eventually demolished to make way for new construction; we elect not to live in a world composed solely of relics, and our cities retain the capacity to evolve and adapt. At the same time, there are other structures deemed by institutional bodies important enough to defend, and often to continually remake. Each strategy, destruction and perpetuation, clearly has valid applications in particular situations. But many buildings, perhaps particularly catalogues of buildings designed by notable representatives of a movement such Rudolph, may sit in a grey area between the two.

Not all of Rudolph's works can be preserved as they were originally constructed, nor should they be. To dismantle the entirety of his built legacy would be to lose the voice of an important operator within the modern movement, who expanded the palette of mid-century practice from within the field and whose BCBS building represents a sensitive counterpoint to the 'graph paper architecture' of 1950's high-rise design.

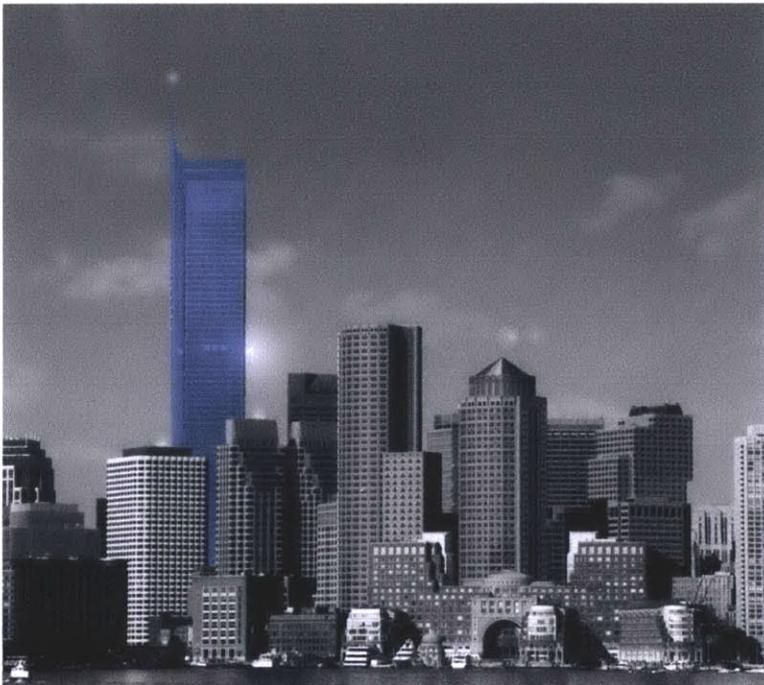
Moreover, in a time of increasingly scarce resources it is the responsibility of the design and building industries to conserve those infrastructures that have the ability to be recycled. The ambiguity as to the long-term 'cultural imperative' of maintaining this particular example of Rudolph's built works is what makes the BCBS building an ideal candidate for an operative preservation. Its uncertain future provides an opportunity for re-visioning its existence in Boston's next century, as speculation over the adjacent 115 Federal Street will surely reenter public debate at some point after the contemporary period of economic stagnation.

Merely taking into account the economic and political circumstances surrounding the project's initial cessation could dramatically reframe the aspirations for 115 Federal Street and suggest a more modestly-scaled intervention that critically engages with the BCBS building, yielding a far richer and more discursive architecture than that of erasure. Mayor Menino's original call asked for an "innovative," "green," "exemplary," and "iconic" tower.

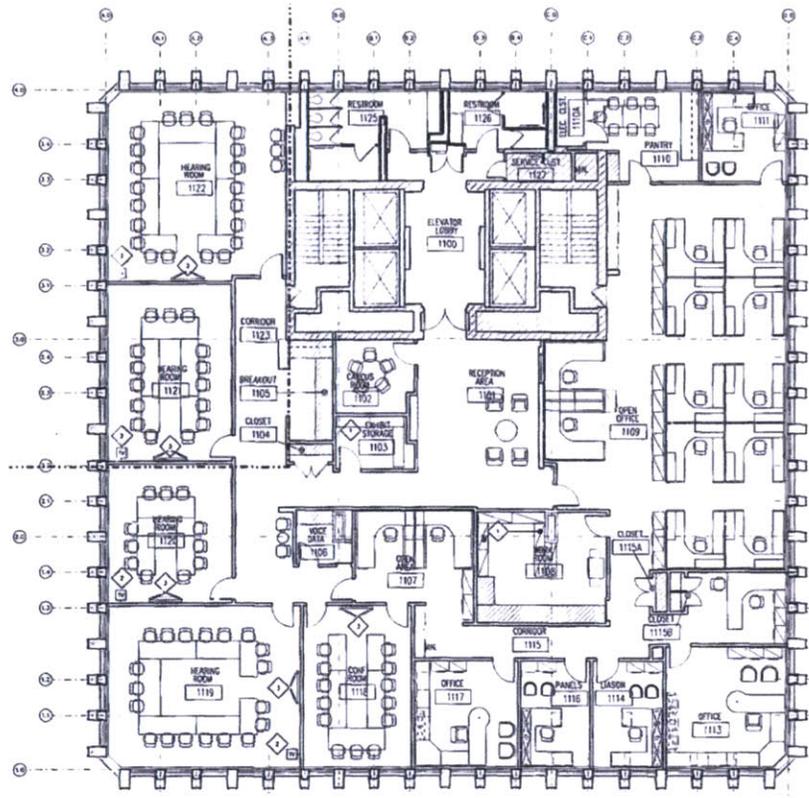
Recasting these lofty ambitions to a different conception of urban and architectural innovation, one grounded in Boston's unique resources and situation rather than the standard "green" global tower, can provide a basis for reprogramming the site and developing a projective architecture that references and builds upon Rudolph's earlier work.



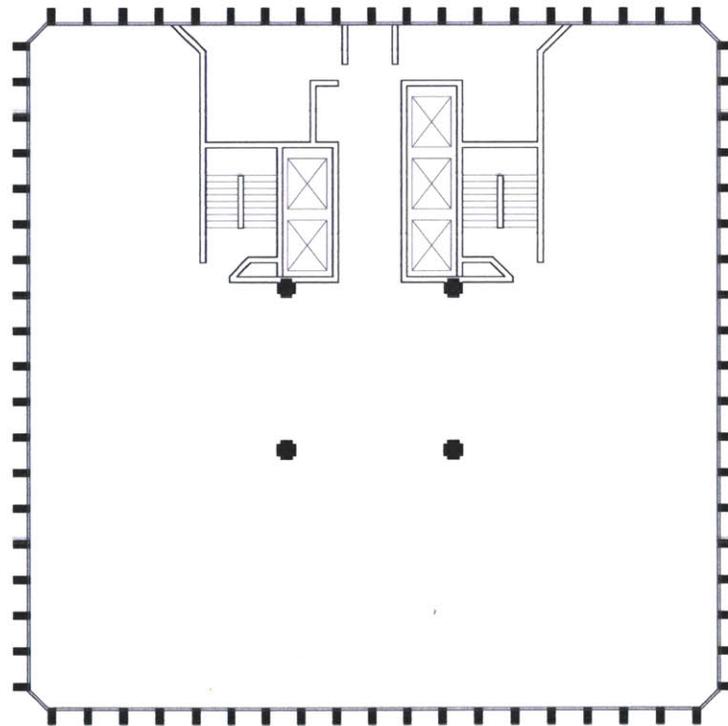
AERIAL VIEW OF EXISTING SITE



RENDERING OF PROPOSED TOWER DESIGNED BY RENZO PIANO BUILDING WORKSHOP

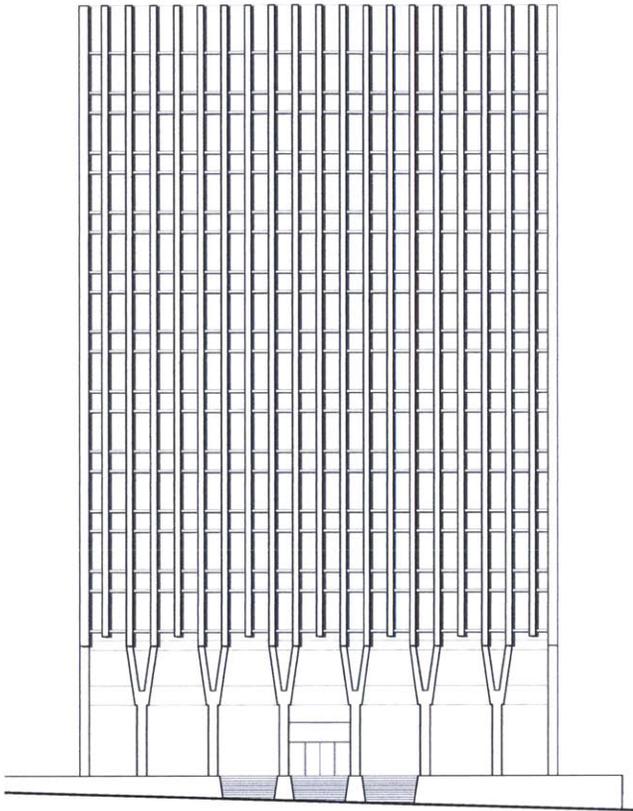


TYPICAL RENOVATION PLAN FROM 2001: PARTITIONED



TYPICAL ORIGINAL FLOORPLAN FROM 1960: OPEN WORKSPACES

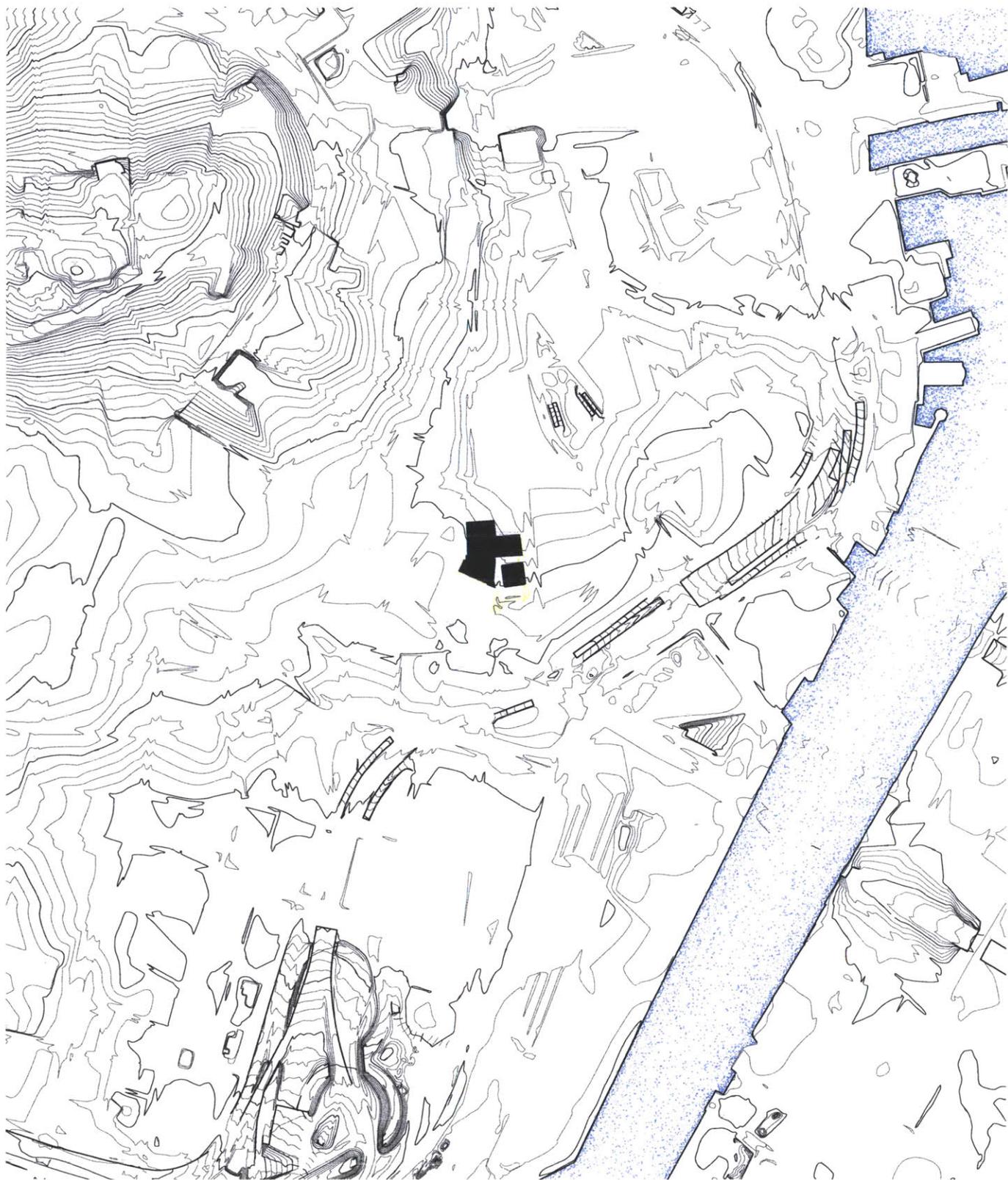
Preservation as renovation: the most recent renovation of the interior was completed in 2001, after additional work in 1976, 1991, 1993, and 1996.

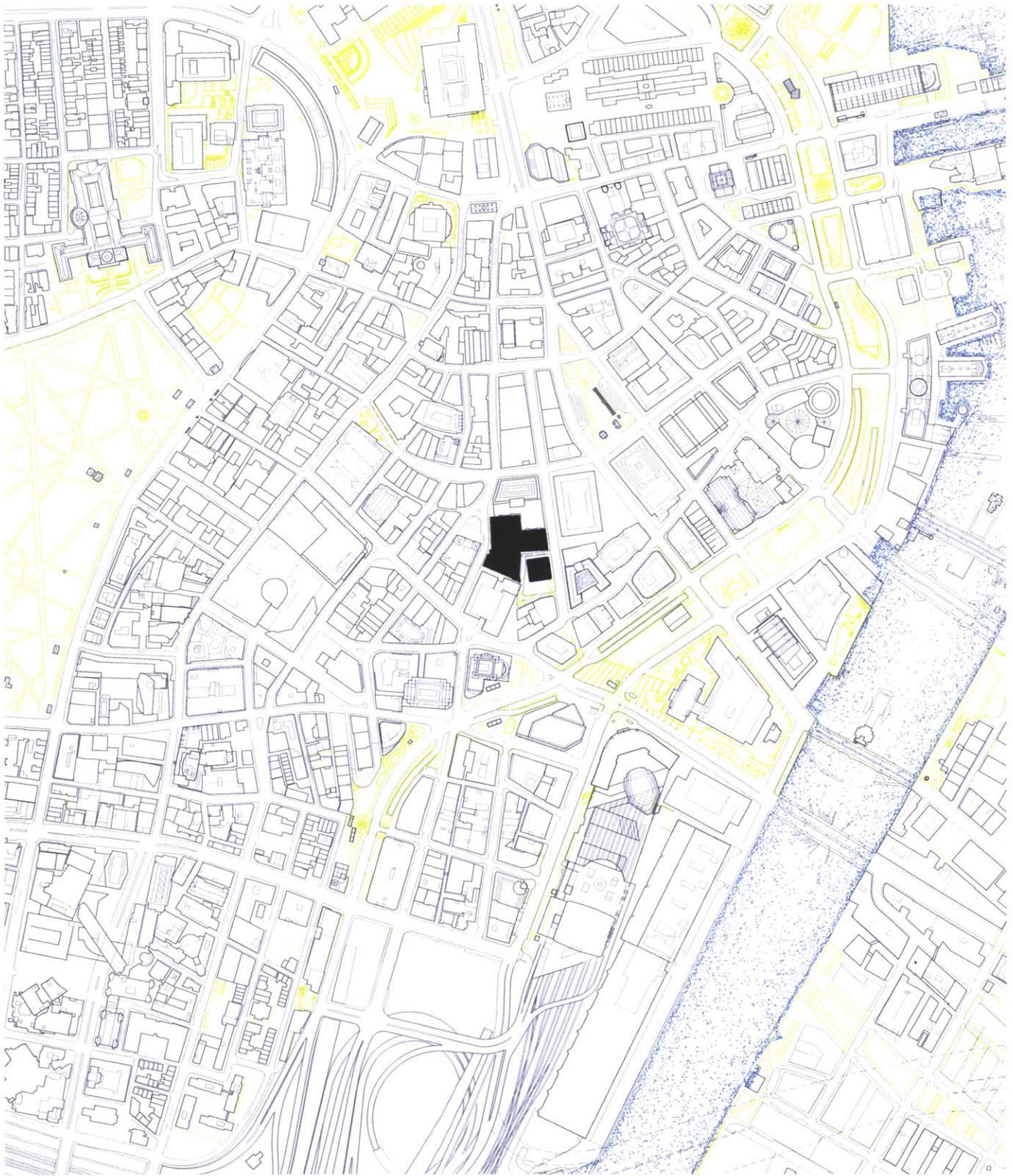


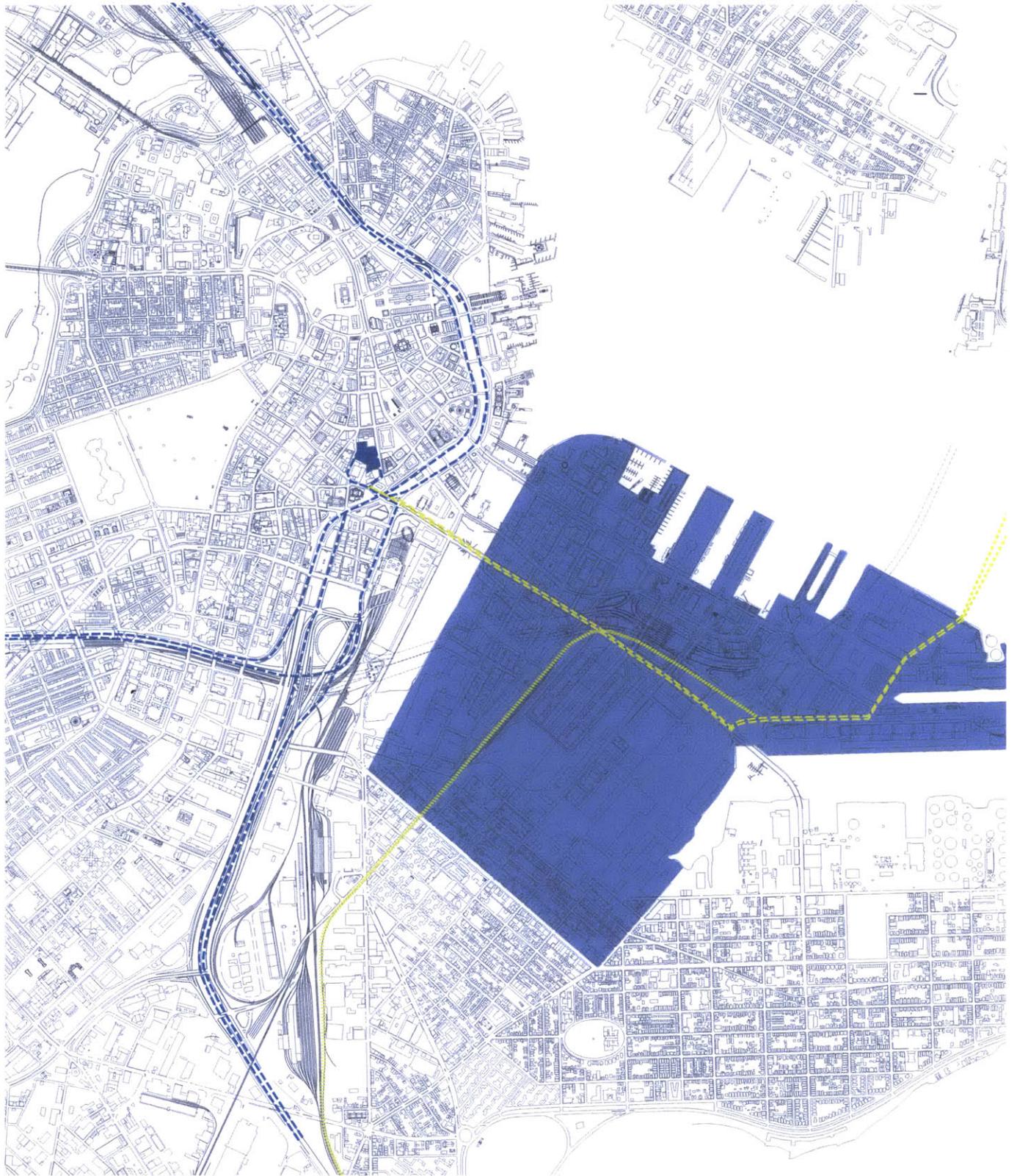
EXISTING EAST ELEVATION ALONG FEDERAL STREET



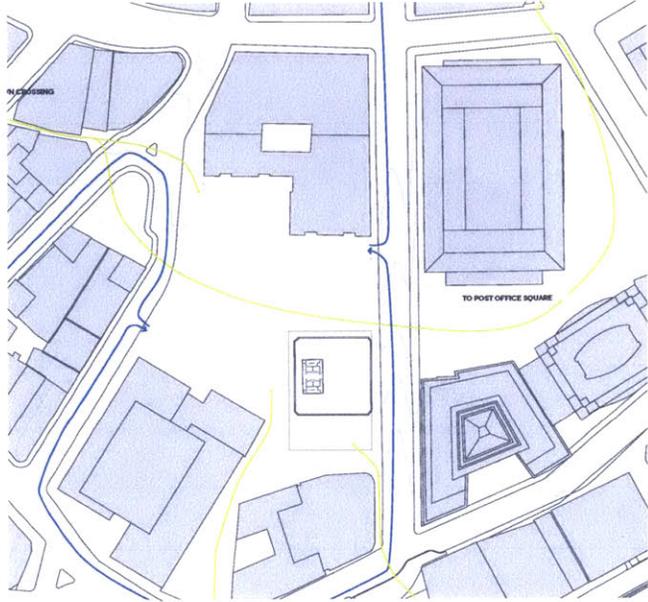
EXISTING VIEW NORTH ALONG ELEVATED PLINTH



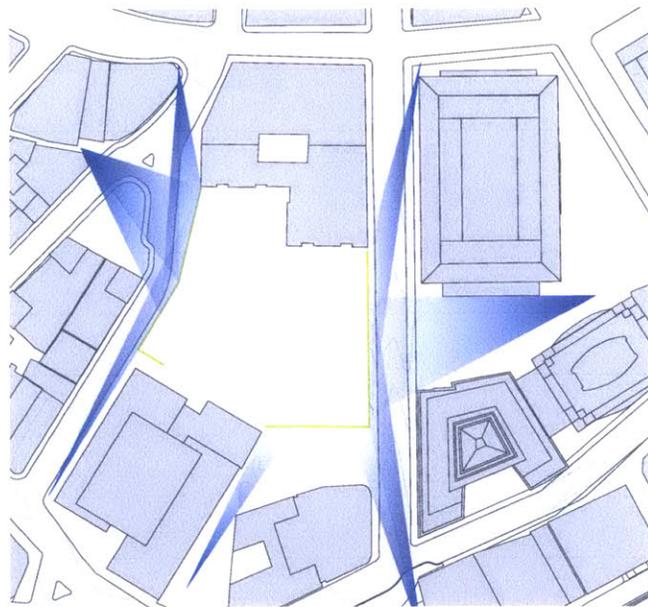




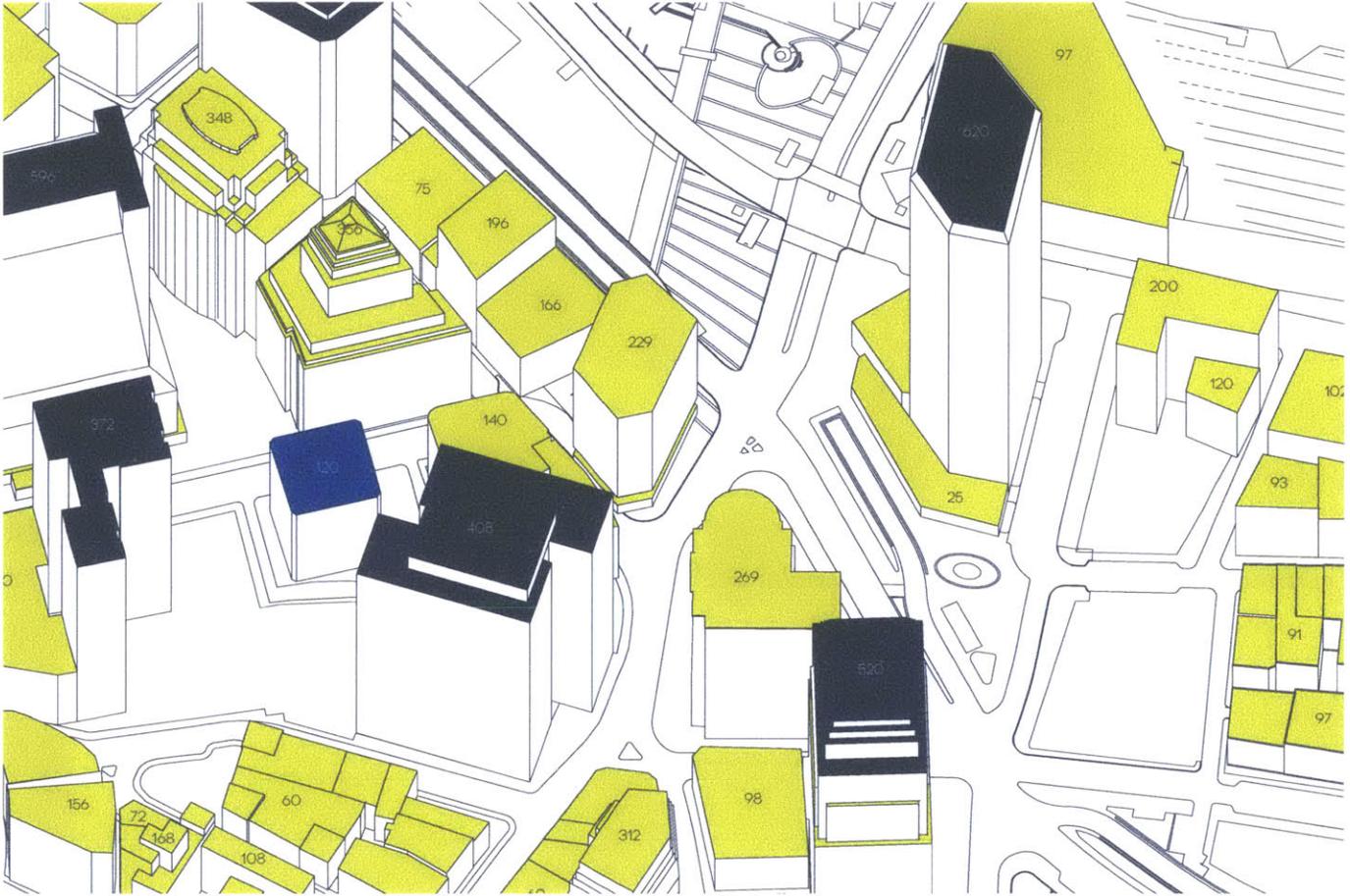
URBAN CIRCULATIONS CONNECTING SITE TO MAJOR TRANSPORTATION ARTERIES AND SEAPORT INNOVATION DISTRICT

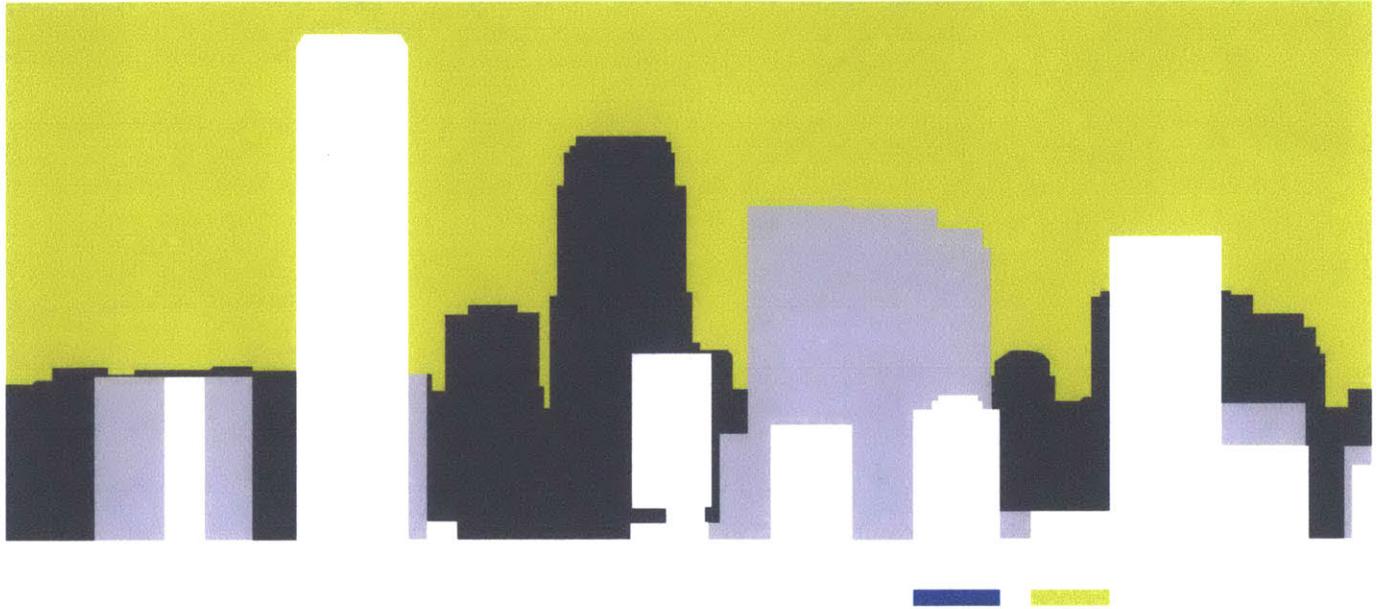


SITE PEDESTRIAN CIRCULATIONS



MAJOR VIEWS OF 133 FEDERAL STREET AND 115 WINTHROP SQUARE





URBAN SECTION NORTH-SOUTH





VIEW OF 133 FEDERAL STREET BEYOND EXISTING GARAGE BORDERING WINTHROP SQUARE



VIEW OF RUDOLPH TOWER LOOKING SOUTHEAST ACROSS WINTHROP SQUARE

OFFICE /
1,300,000

RETAIL /
RESTAURANT
250,000



PIANO PROPOSAL
PROGRAM

OFFICE /
233,000

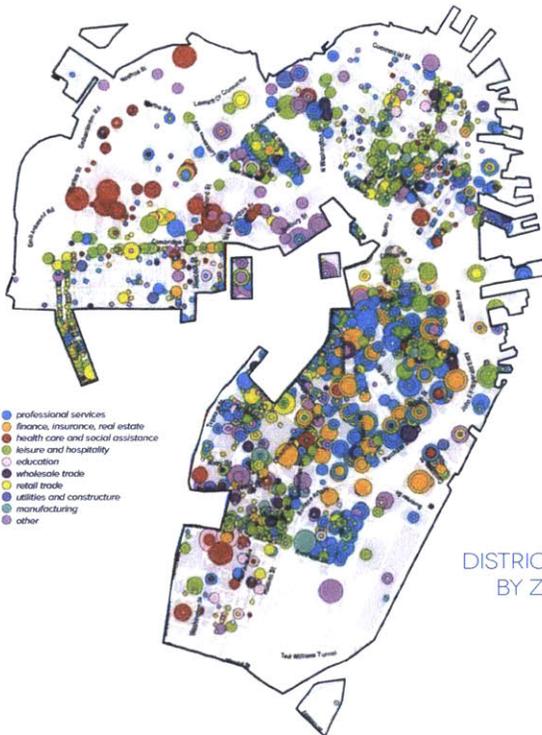
RETAIL /
18,000



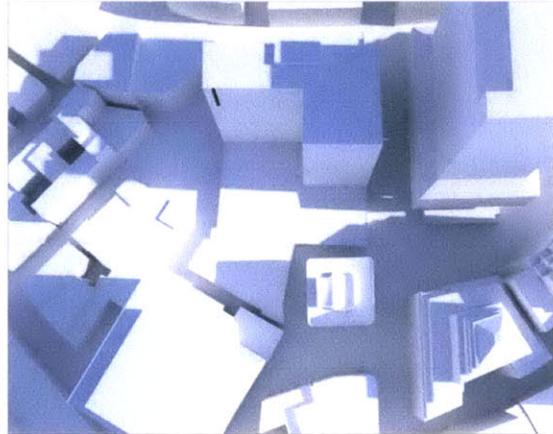
EXISTING
PROGRAM



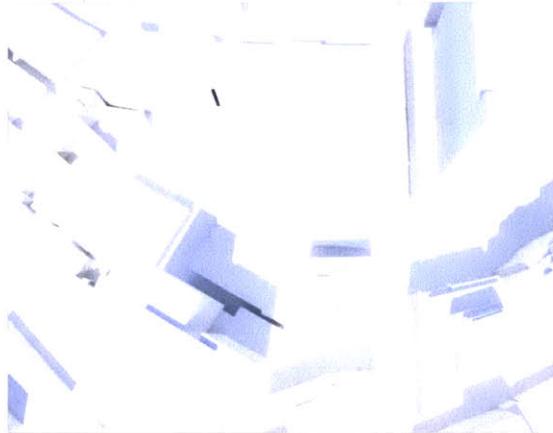
DISTRICT LAND USE
IN FINANCIAL,
INSURANCE,
& REAL ESTATE.



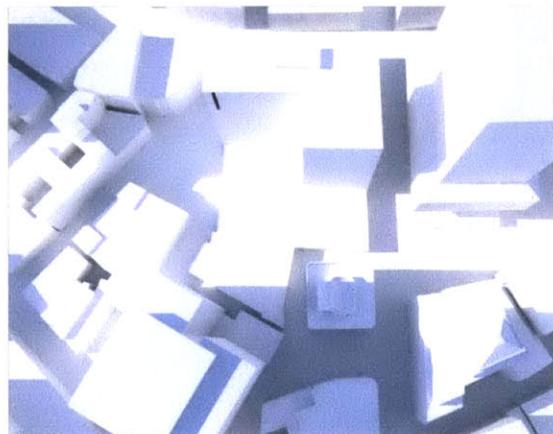
DISTRICT LAND USE
BY ZONING TYPE



SUMMER 8 AM

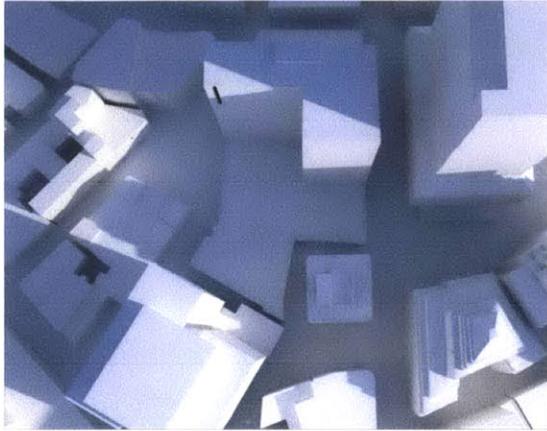


SUMMER 12 PM



SUMMER 4 PM

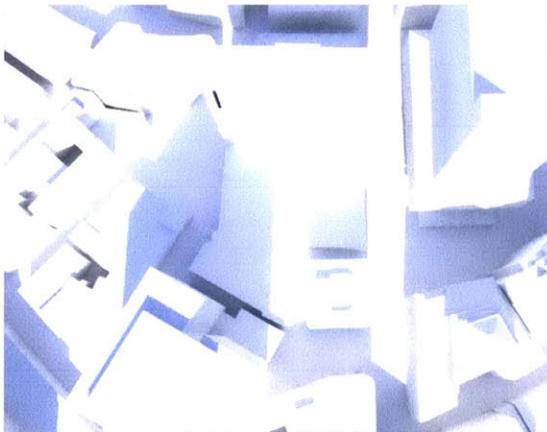
Solar exposures vary greatly based on time of day as well as season, with significant shading provided by surrounding towers. Afternoon sun along the west exposure provides the most consistent and direct light to the existing tower.



FALL / SPRING 8 AM



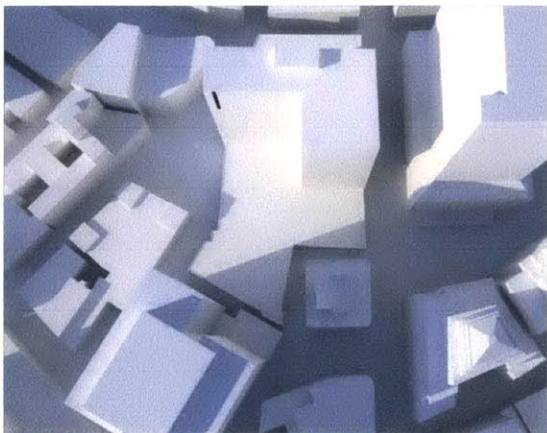
WINTER 8 AM



FALL / SPRING 12 PM



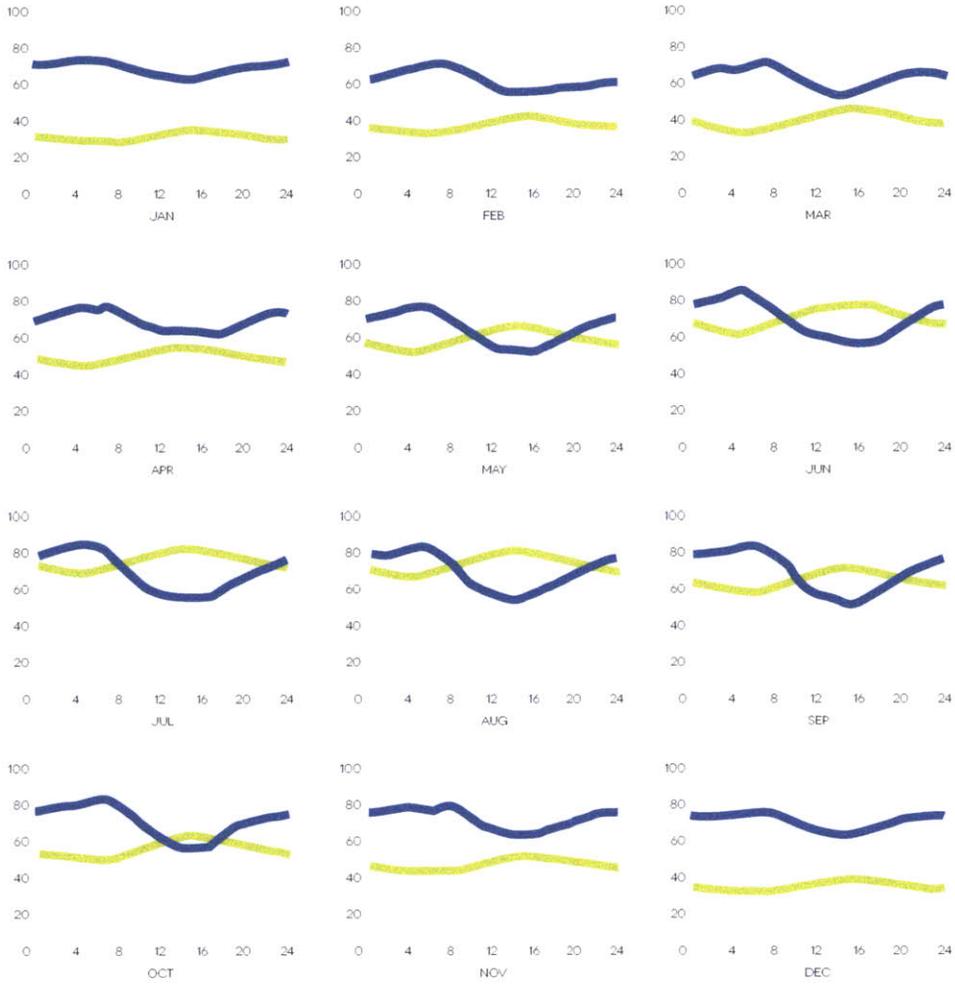
WINTER 12 PM



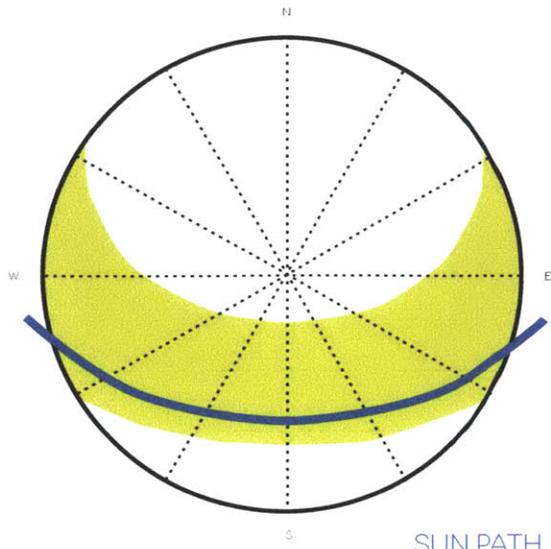
FALL / SPRING 4 PM



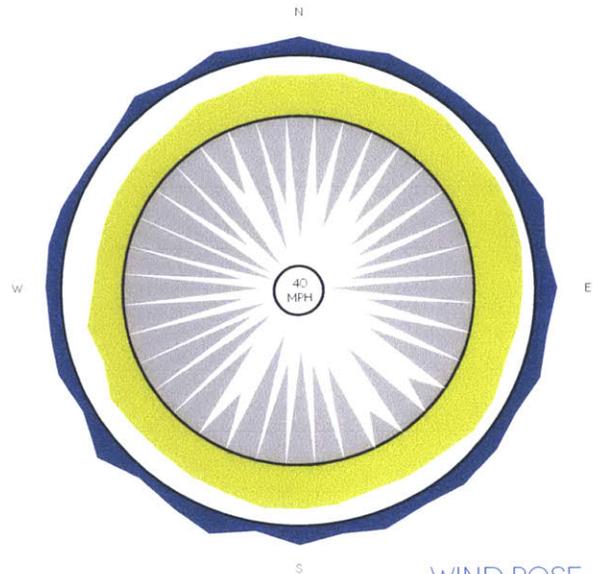
WINTER 4 PM



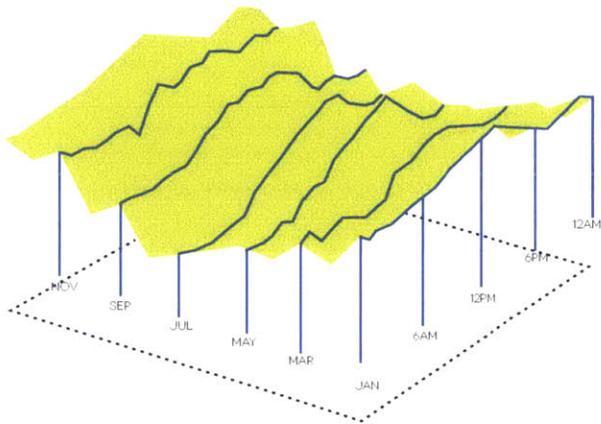
DRY BULB TEMPERATURE VS RELATIVE HUMIDITY



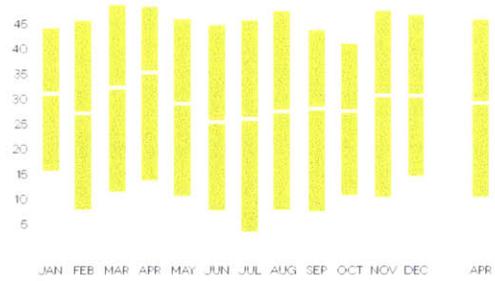
SUN PATH



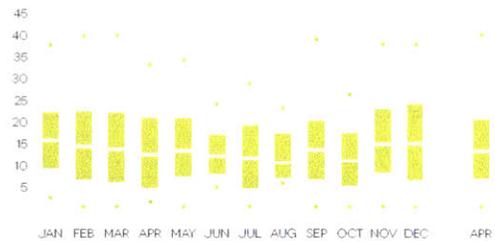
WIND ROSE



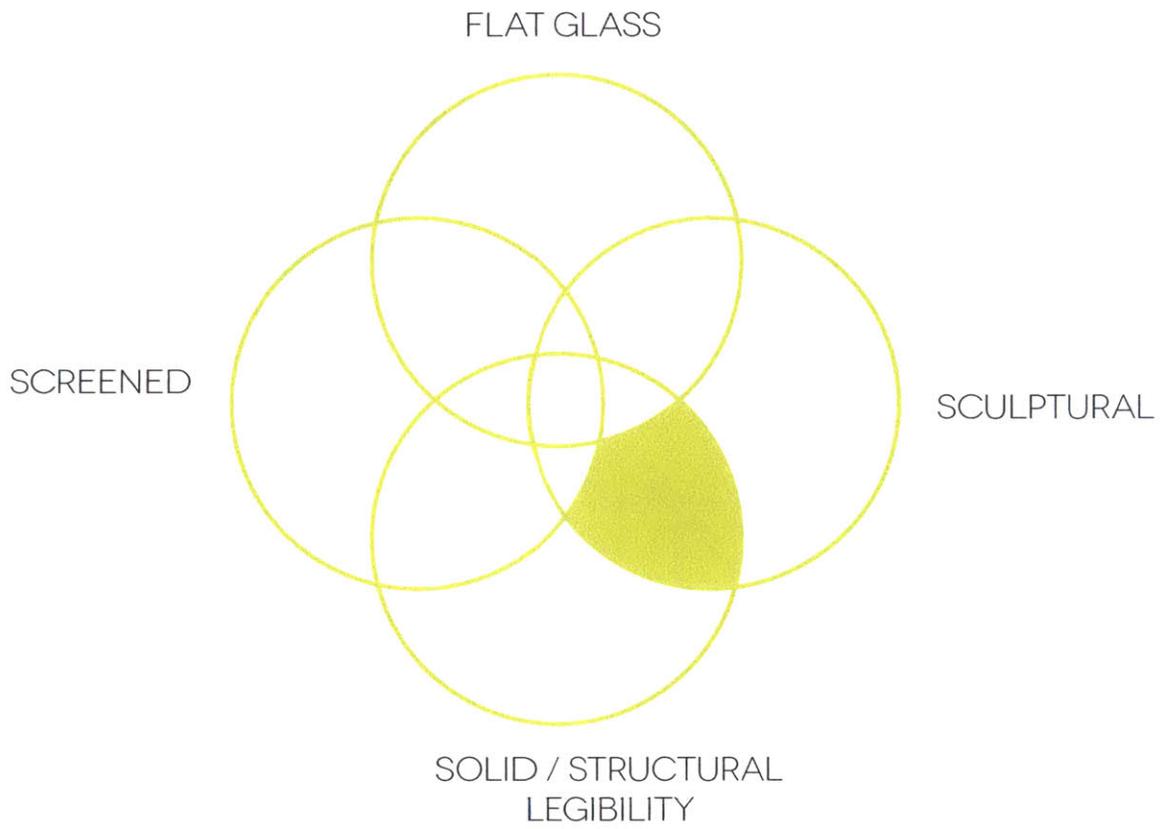
WIND VELOCITY BY TIME OF DAY



SKY COVER



WIND VELOCITY



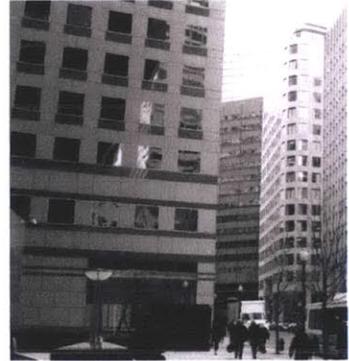
space for iteration

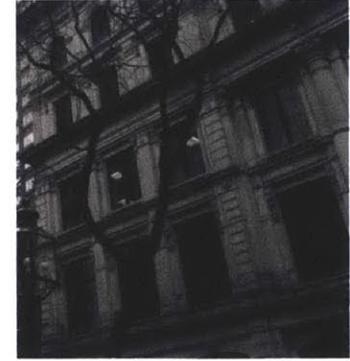
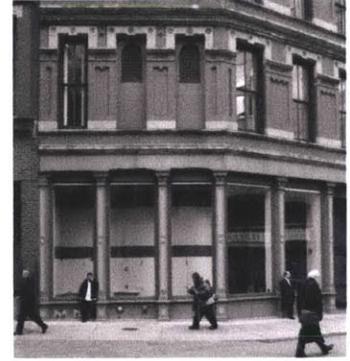
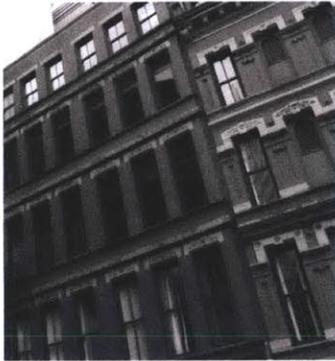
In comparison to historical examples of curtain wall design, the existing Blue Cross Blue Shield curtain wall falls into the space between high-tech structuralism and sculptural or textural investigation. The projections on the facades are not responsive to orientation and do not perform as optimized brise-soleils—their inclusion is rather to make legible the structural tactics of the building and to create depth, rhythm, and texture in the exterior plane.

Rethinking this space today—the sculptural, performing, curtain wall that makes legible a structural system pushed to the exterior—could preserve the existing Rudolph building via iteration, as well as forming a version of the “glass museum box” to preserve it physically.

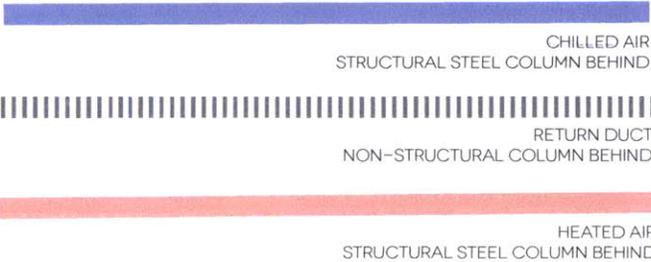


DETAIL OF MO-SAI PANEL AGGREGATE AND JOINT CONDITION

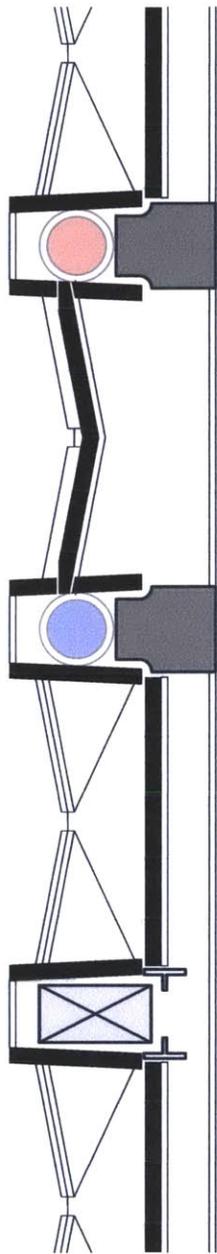




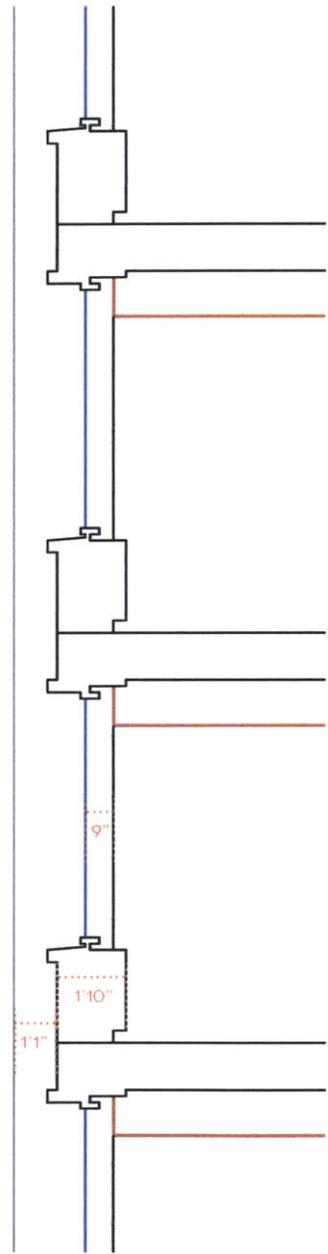
SURROUNDING SKINS: MIX OF CAVITY AND PANELIZED CURTAIN WALL CONSTRUCTIONS



Systems expressed: Mo-sai panels clad the original HVAC ductwork embedded within the curtain wall.

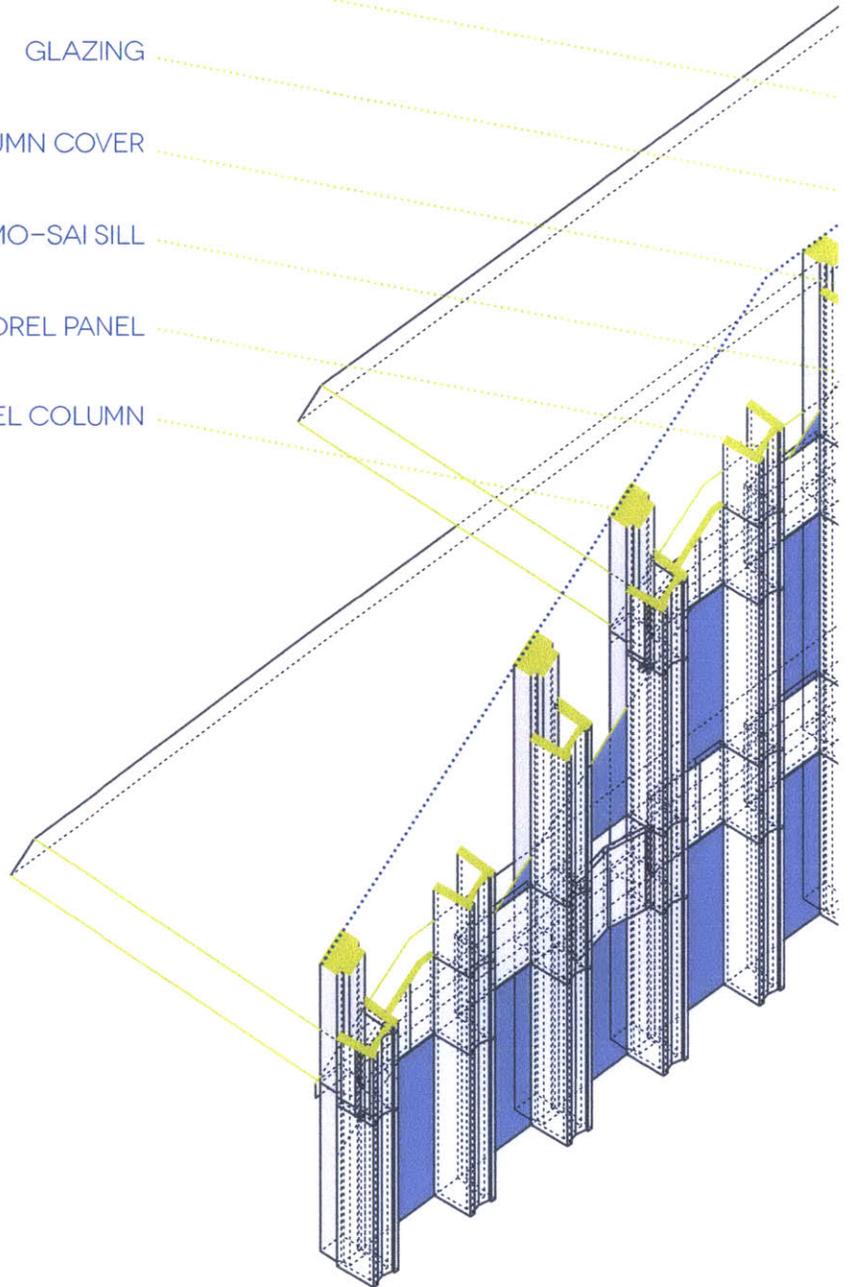


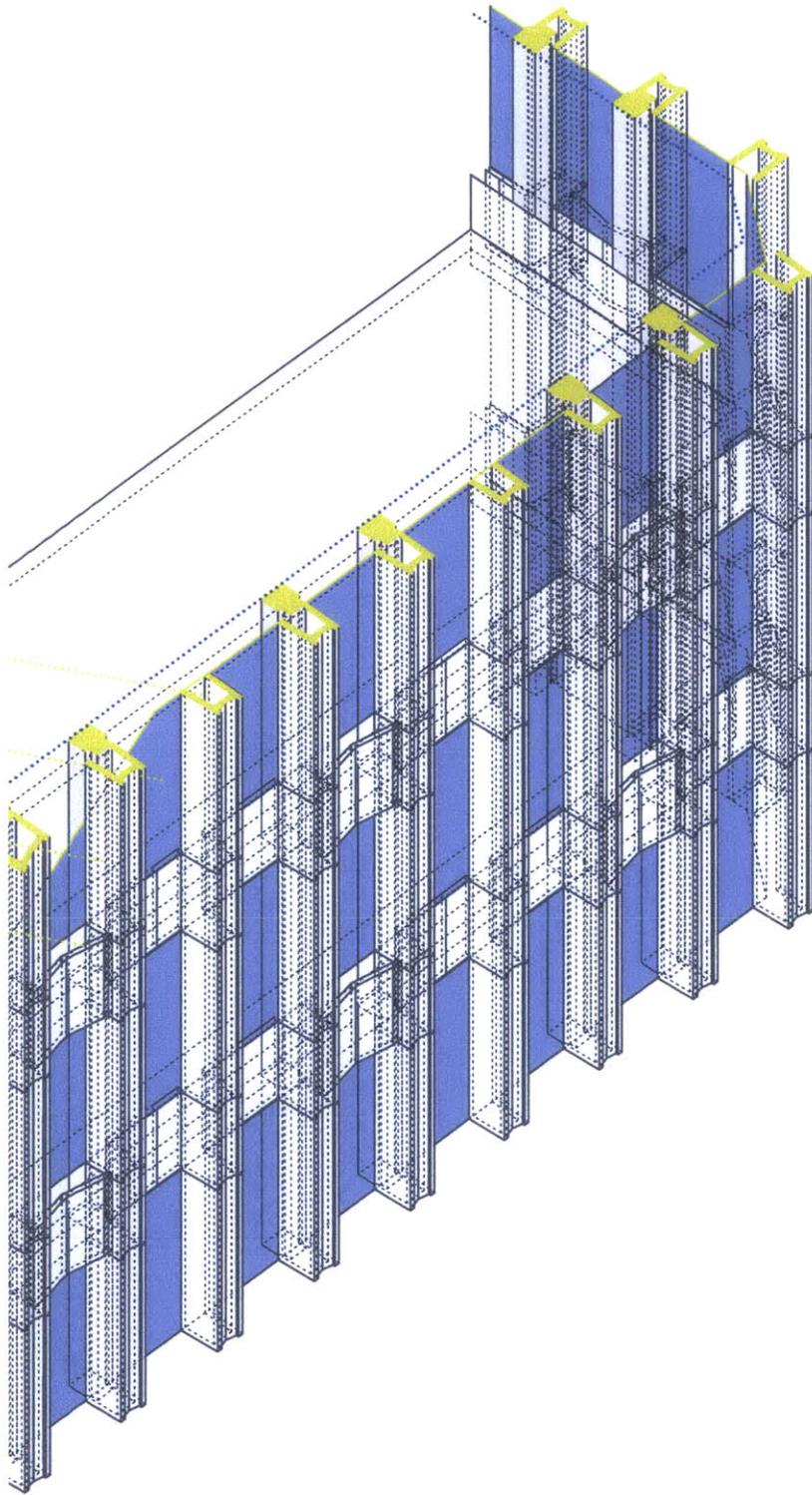
DETAIL PLAN OF ENVELOPE STRUCTURE



FLOOR TO FLOOR SECTION

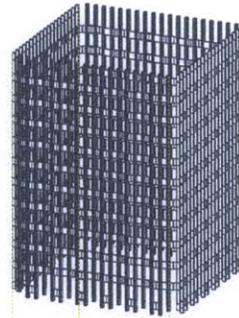
ORIGINAL VENTILATION DUCTS
GLAZING
PRECAST MO-SAI COLUMN COVER
PRECAST MO-SAI SILL
PRECAST MO-SAI SPANDREL PANEL
STEEL COLUMN



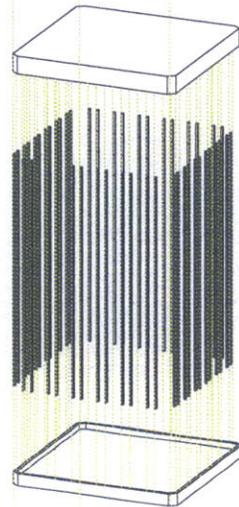


Structural Envelope: Exterior wall infrastructure houses load-bearing columns and HVAC services returning to mechanical floors above and below workspace levels.

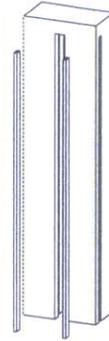
MO-SAI PRECAST CONCRETE PANELS
TEXTURED CUSTOM PANELS COVERING
STRUCTURAL ELEMENTS OF ENVELOPE



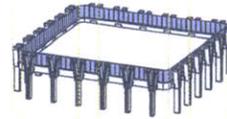
STRUCTURAL AND MECHANICAL SYSTEMS
COLUMNS AND HVAC DUCTS
TIED BETWEEN MECHANICAL FLOORS



MIRRORED CORES AND INTERIOR COLUMNS
MINIMIZED STRUCTURE INSIDE OF FLOORPLAN



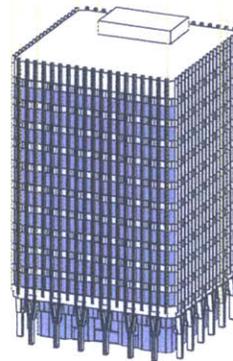
MEZZANINE AND STRUCTURAL Y-COLUMNS
TRANSFERENCE OF LOADS TO EXTERIOR

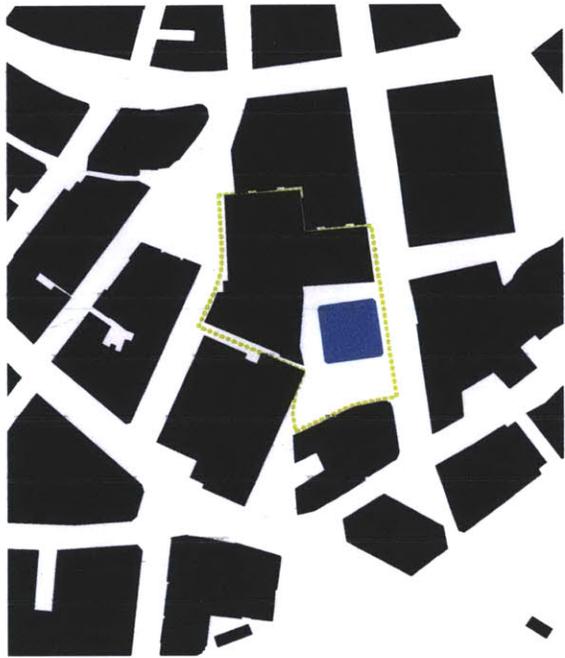


GROUND LEVEL LOBBY
INSET NON-ORIGINAL GLAZED CURTAIN WALL



OVERALL BUILDING STRUCTURE
TOTAL HEIGHT = 160 FT

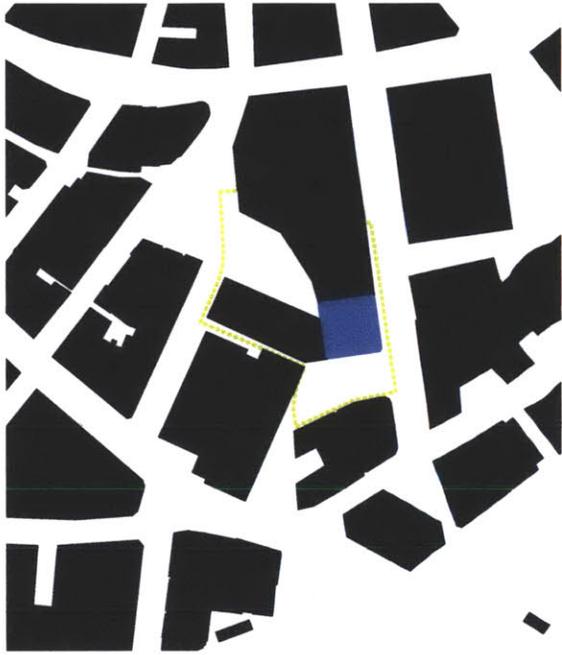




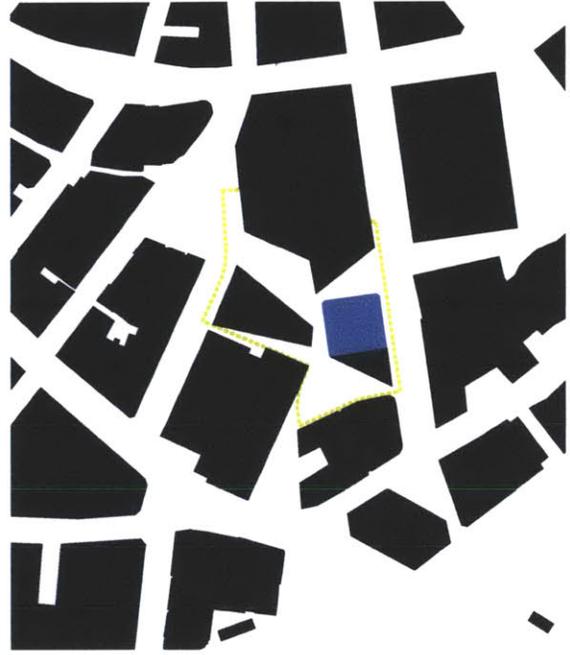
EXISTING SITE MASSING



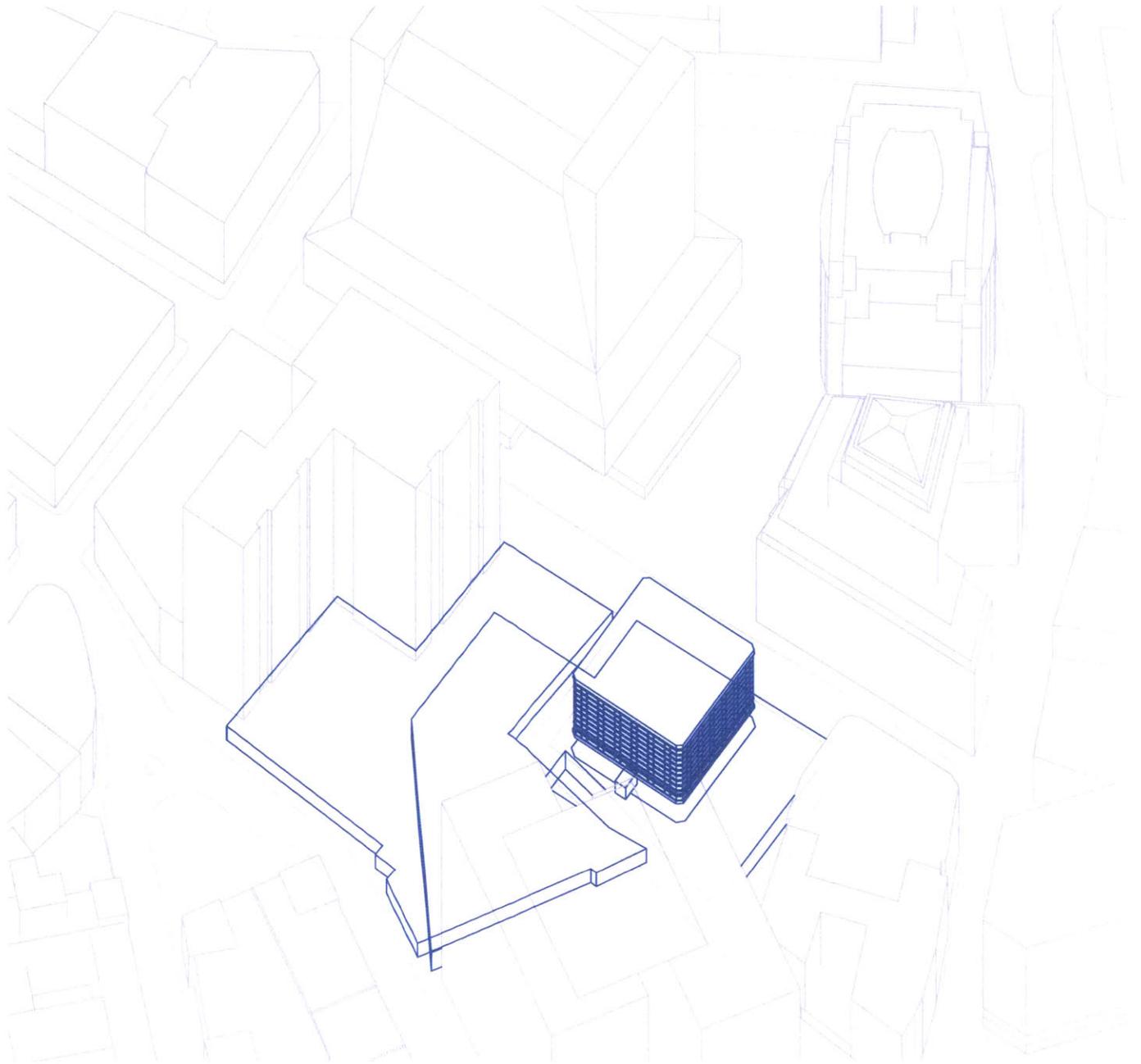
PROPOSAL AS FIGURE



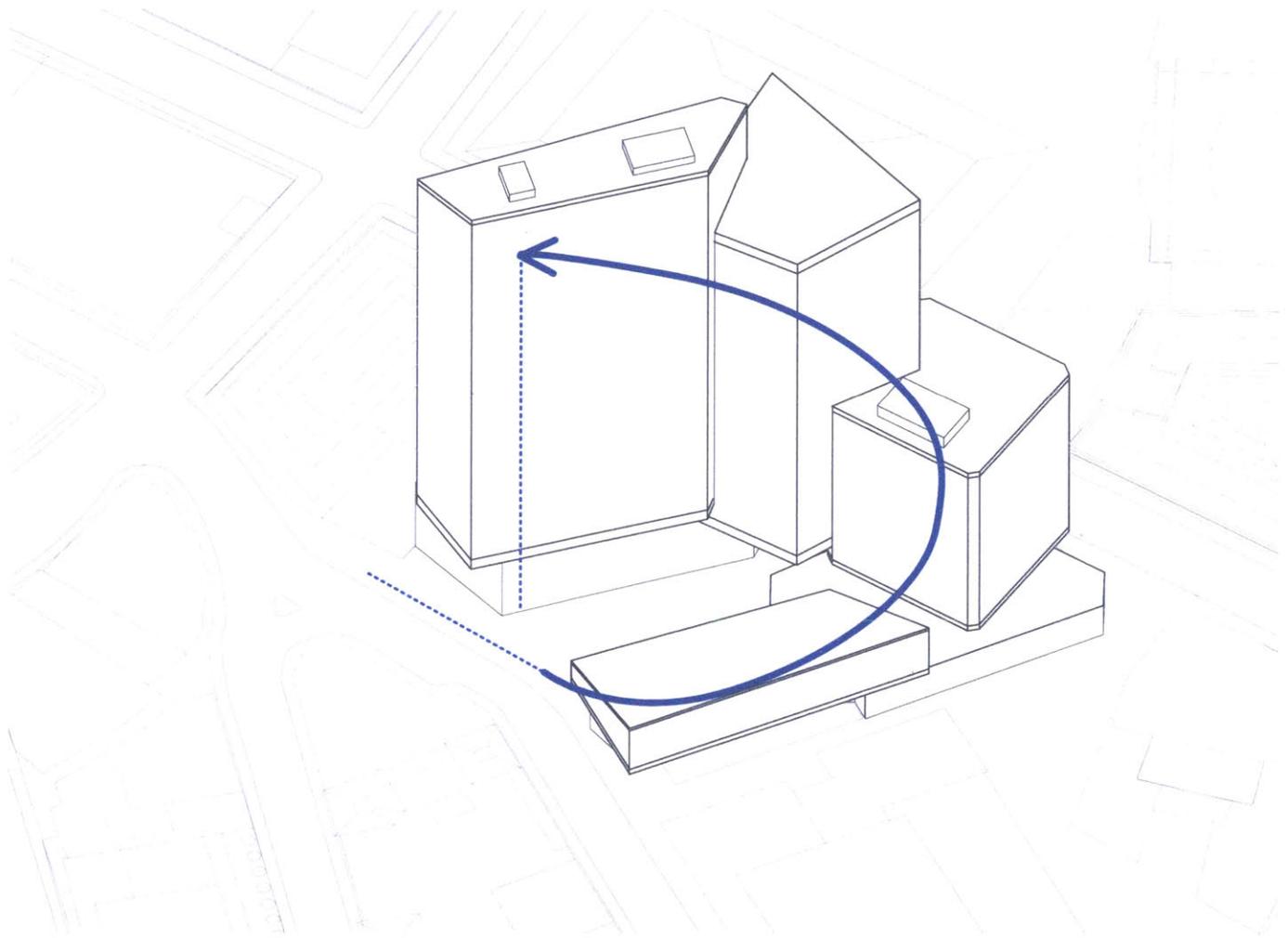
PROPOSAL AS GROUND



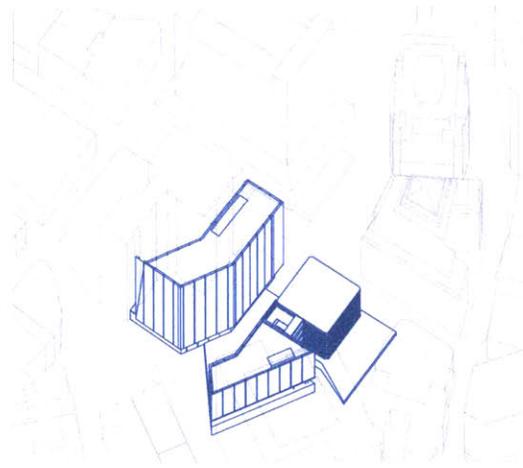
PROPOSAL AS FIGURAL GROUND



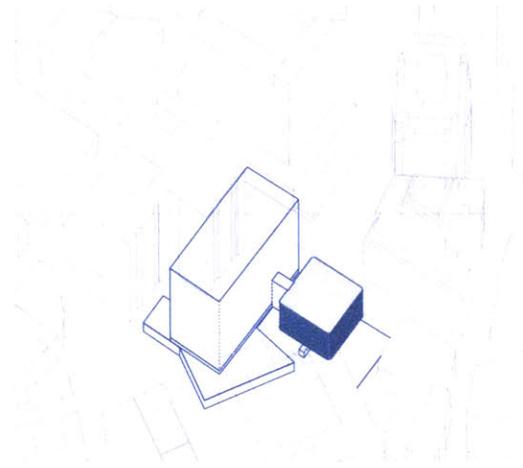
The two-story parking garage adjacent to the existing tower provides a visual space within the skyline that would disappear with the construction of a new supertower, but could be maintained with moderate development.



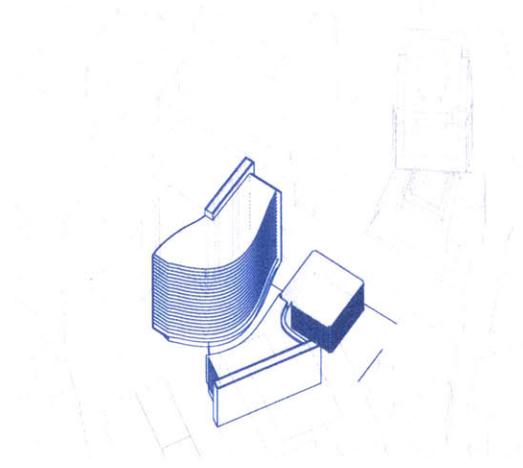
A study for a high-density site massing that builds upward to match the heights of adjacent towers constructed since Rudolph's tower was built.



MASSING STUDY: TOWER-FRAMED PASSAGE

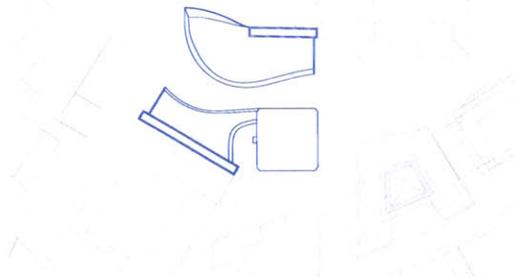
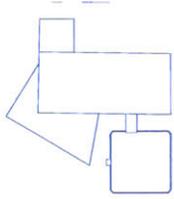
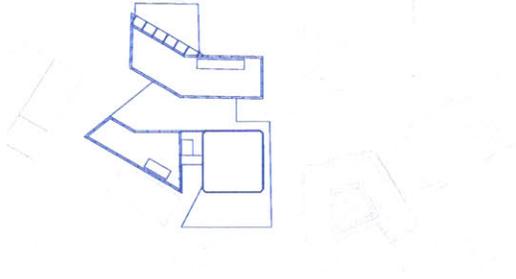


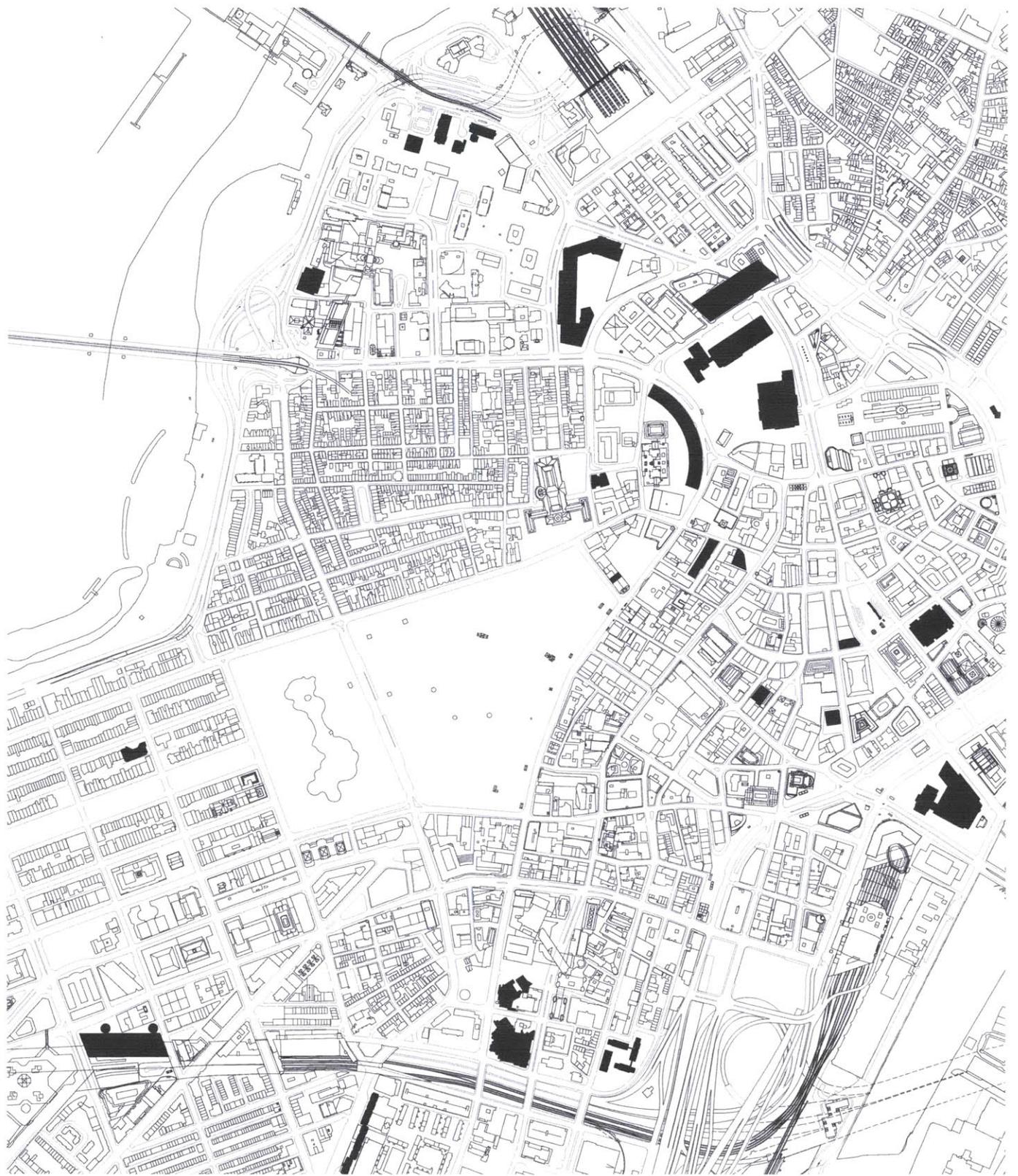
MASSING STUDY: BRIDGED CONNECTION TO ADDED TOWER



MASSING STUDY: CURVED TOWERS

Initial site massing investigations focused on circulations at the urban scale. A connection between Winthrop Square and Federal Street necessitates a passage along the north side of 133 Federal in the place of the parking garage.





BUILDINGS IN CONCRETE, CONSTRUCTED DURING THE BRUTALIST PERIOD IN BOSTON



preservation operations

Strategies of temporal relation

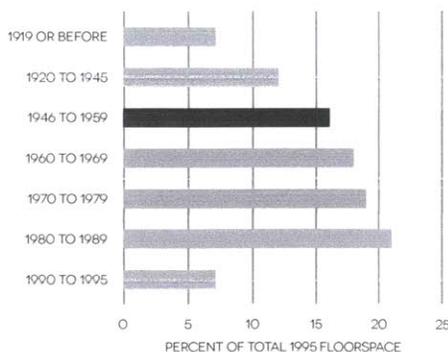
“In the United States, support for preservation has always been tied to perception: the perceived value of a building or place (whether visual, historic, cultural, or otherwise) in the present and as it is directly related to both the past and the future. [...] The perception of modern architecture, particularly from the period immediately following the war, has been characterized since the 1980s in stark terms and, presumably, as indifferent to human scale, comfort, or well-being. Many of the period’s icons are appreciated and praised by a professional audience for aesthetic or social values but have been rejected by the public at large, which has a great deal of negative perceptions about modern building design. These perceptions remain a serious obstacle to preservation efforts—not just for more ordinary examples, but even for the more canonical buildings, particularly those dating from the postwar decades.”

— Theodore Prudon

boston near past, near future

Boston is home to many significant works of Modernism in concrete. The city's most obvious examples of brutalism—city hall and government center—have long been held in distaste by many Bostonians, despite their significance within mid-century formal and material innovations. As Boston continually rebuilds itself, as cities naturally do, will there be a place held for the concrete works of the last century? If they are to survive as a layer in the urban narrative, conscious projection of their futures must soon be made by designers.

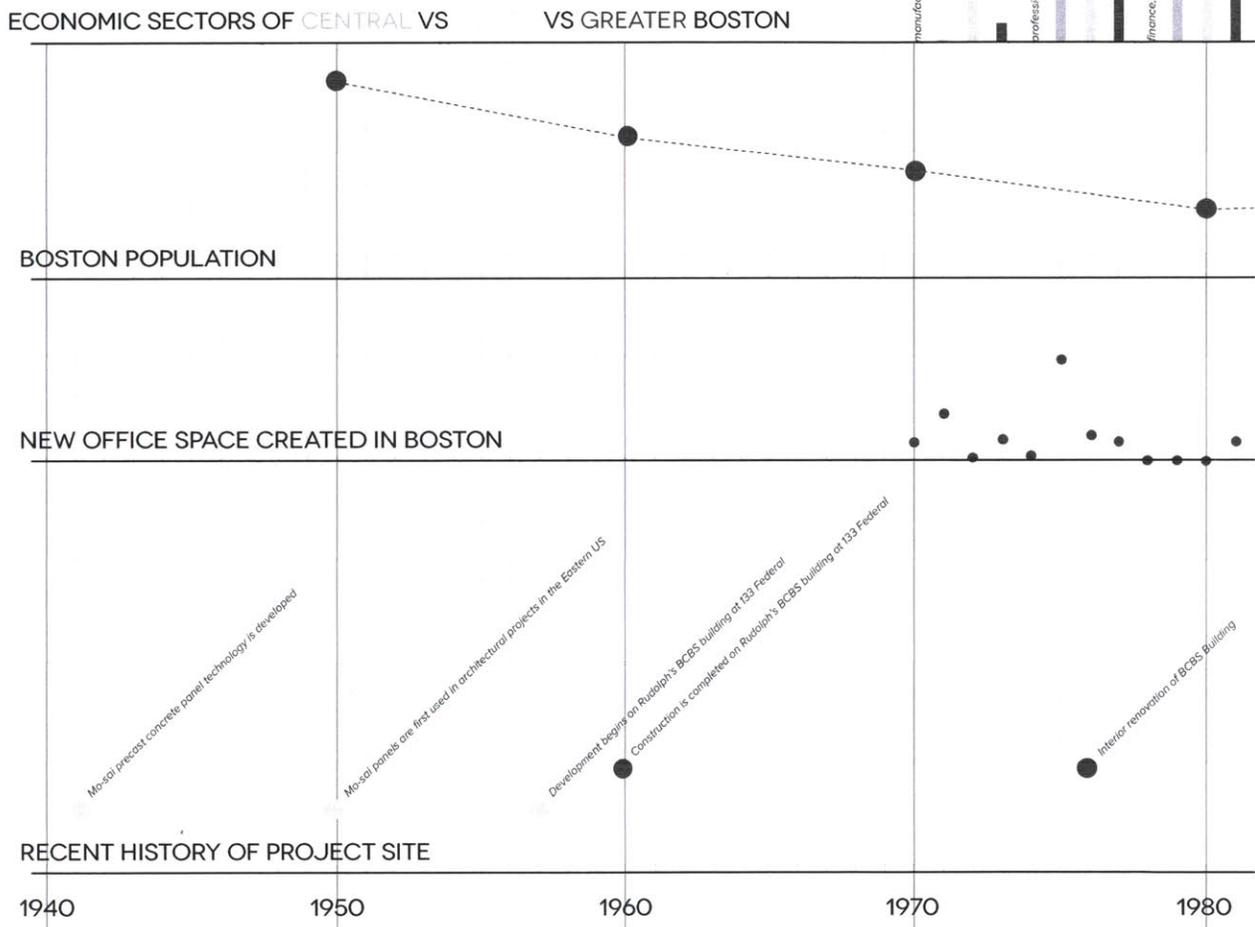
Many impressive and contested brutalist works are located in central Boston. One building at most immediate risk is Paul Rudolph's Blue Cross Blue Shield building. Recently in danger of being replaced by an 'iconic' supertower, it deserves reconsideration in light of its own urban situation and embodied energies. Its central location within the city and easy access to transportation channels as well as the nearby 'Innovation District' suggest that the site could be developed for increased density while maintaining continuity with the medium to high-rise district in which it is situated. Considering the future of Rudolph's small tower in its context begins to problematize the adjacent site of a city parking garage slated for demolition.

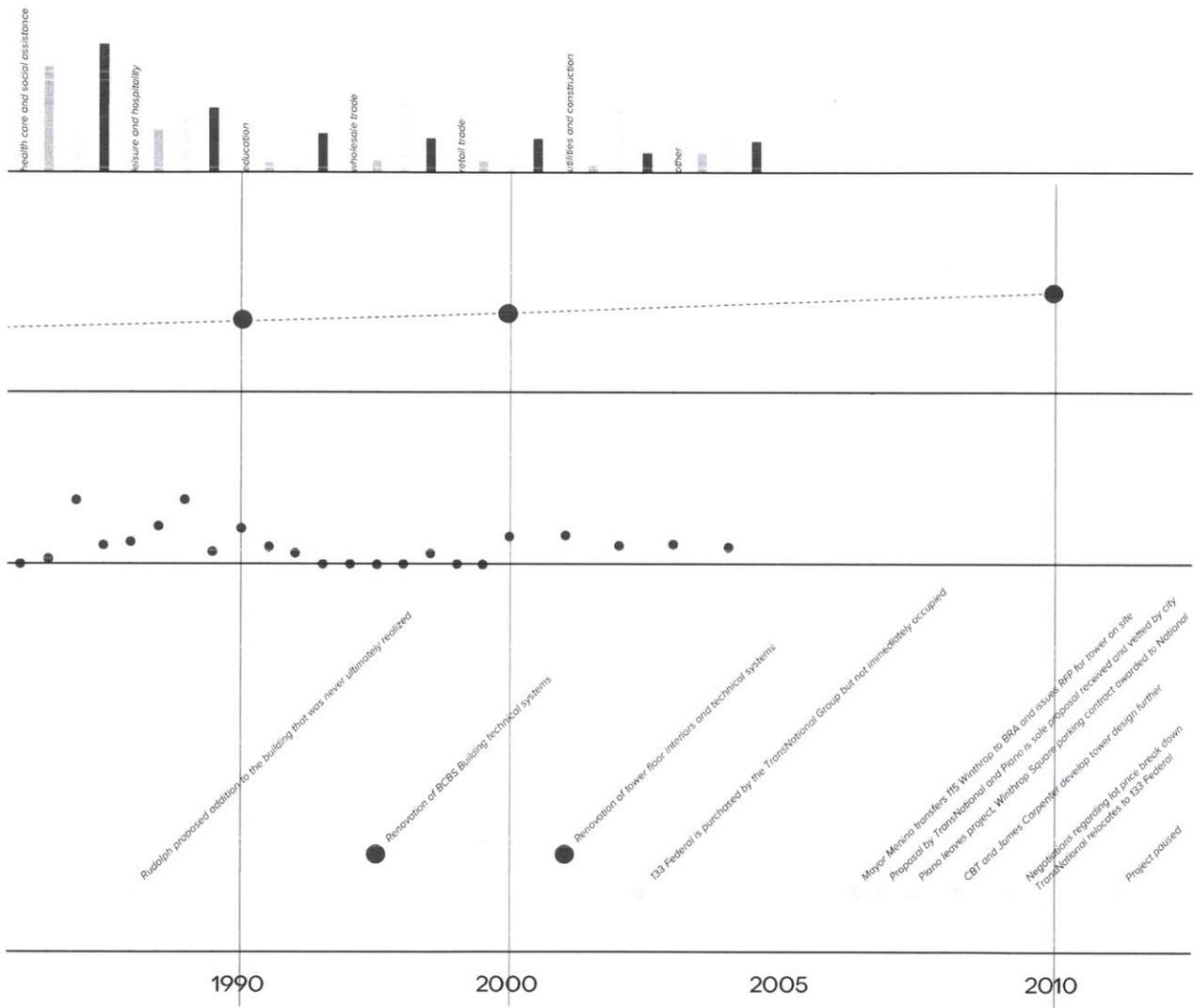


35% OF EXISTING US FLOORSPACE WAS CONSTRUCTED BETWEEN 1945 + 1969

50% OF EXISTING US FLOORSPACE WILL BE RENOVATED BEFORE 2040

17% OF EXISTING US FLOORSPACE WILL BE DEMOLISHED BEFORE 2040





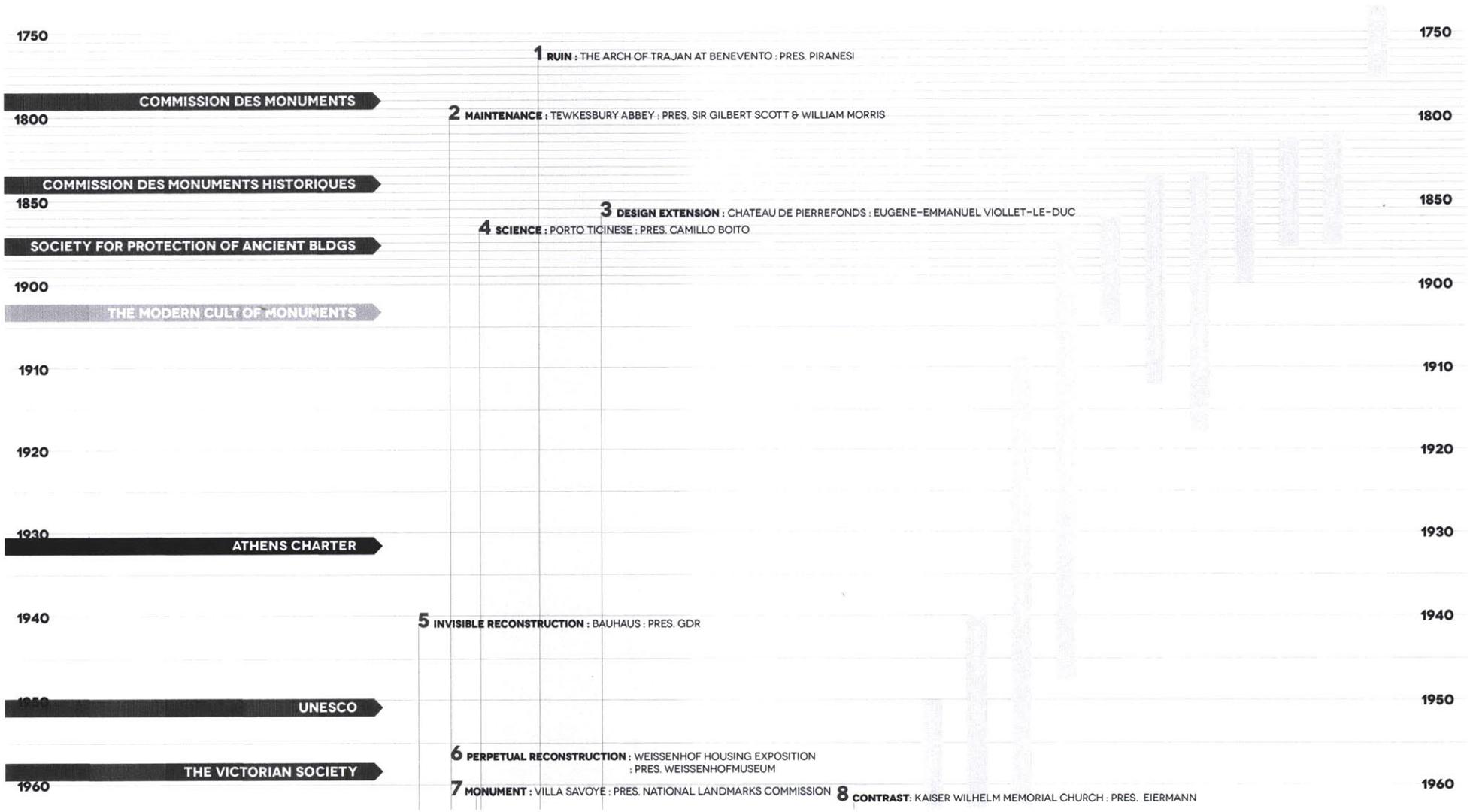


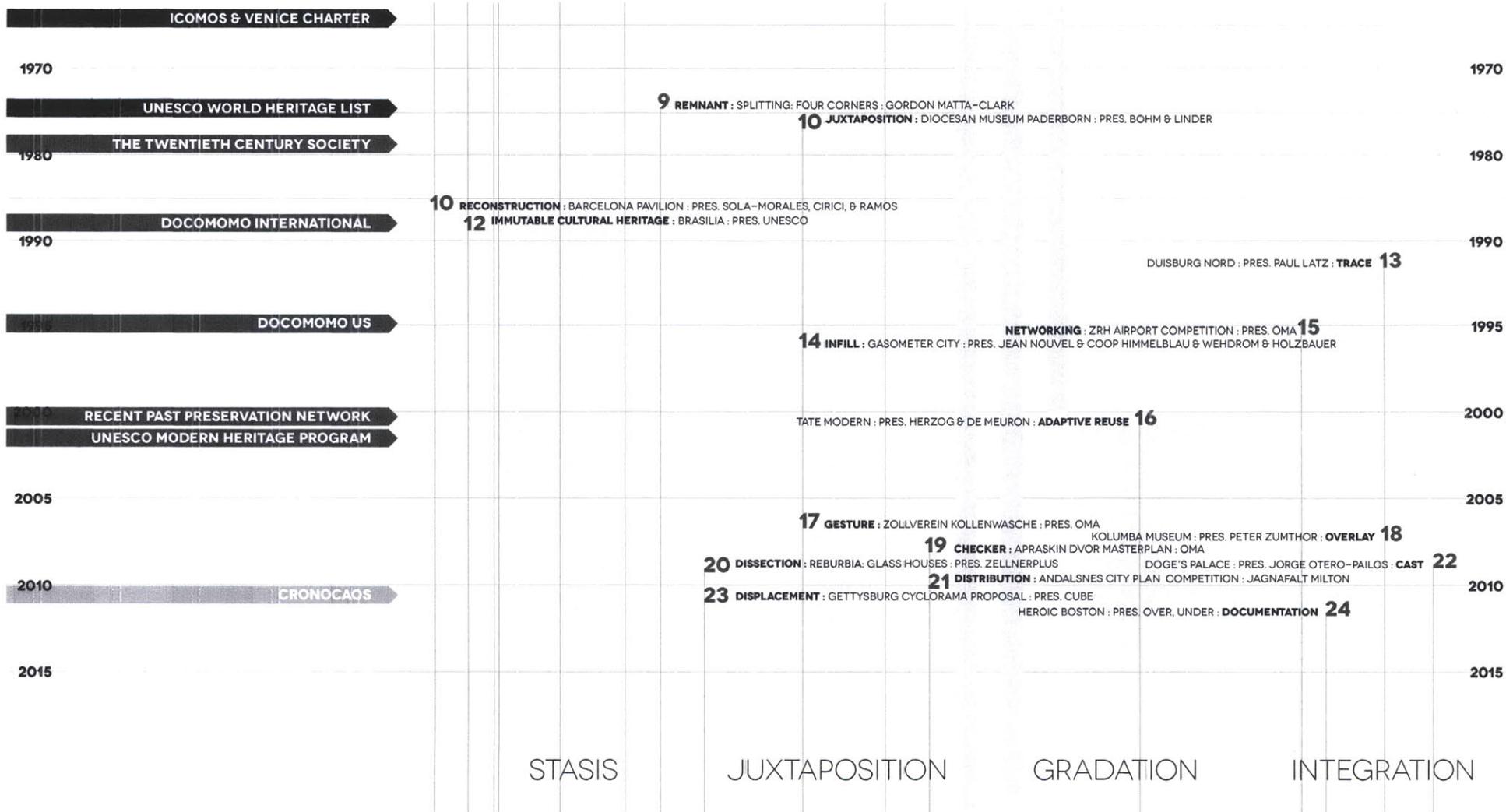
the rise of the practice of preservation

Preservation was invented as a disciplinary practice in the modern period. Early theorists of preservation organized committees to promote architectural preservation that in many cases continue to operate today. These committees collectively set the political agenda for preservation on a global scale.

Heritage preservation as typified by the UNESCO World Heritage List program articulates the following definition of an architecture worthy of maintenance: possessing outstanding universal value, or being outstanding, superlative, exceptional, universal, important, significant, valuable, unique, traditional, human, natural, or vulnerable.

Heritage preservation entails the perpetuation of the contemporary site, to be preserved according to the state of the site as it was when listed, or when constructed. Past modifications of the architecture are part of the rich tapestry of the heritage site; future modifications may be prohibited as distortions and irreparable destructions of objects of cultural value. But if these objects can no longer be modified, they cannot come into dialogue with future architectures, and they become relics of a present or past. Traces of unfavored architectural periods may be excised surgically. Curated in a global system of static spaces, these heritage architectures are made frozen reminders, not living architectures. This does not align with the modern ideal of authenticity—but can it foster dialogue between diverse architectures?





1984

In 1984, ten years after its establishment, 1% (1/84) of sites on the UNESCO World Heritage List were from the modern period (nineteenth or twentieth centuries).

The first modern buildings to make the list were the collective works of Gaudi in 1984.

2003

In 2003, 1.5% (12/730) of sites on the UNESCO World Heritage List were from the modern period (nineteenth or twentieth centuries), representing a slow growth in advocacy for the preservation of buildings from this period.

2009

In 2009, only 3% (29/911) of listed sites were from the modern period.

UNESCO's recognition of a slowly increasing number of modern sites is

“the core aim of ‘preserving’ should be to negotiate between both the old and the new in an active and engaging manner, siding with neither ruin nor restoration but establishing a new architectural configuration altogether.”

— OMA, CRONOCAOS, 2010

~~ruin
A~~

~~restoration
B~~

~~stasis
A~~

negotiation
A + B

juxtaposition
A v B

gradation
A to B

integration
A + B

practices in the preservation of modern architecture

Preservation of Modern architecture began as early as the 1950s and 1960s in Europe, with a limited set of interventions on important buildings from the early twentieth century. Interest in a curatorial model of preservation increased following the renovations of key modern structures such as Gropius' Bauhaus (1925, restored 1970s), Le Corbusier's Unite d'Habitation (1947-1952, national landmark 1964), or Duiker, Bijvoet, and Wiebenga's Zonnestraal Sanatorium (1926-1928, restored 1990s) during the latter half of the twentieth century.

The reconstruction of Mies van der Rohe's Barcelona Pavilion (1929, demolished 1930) in the 1980s was perhaps the boldest manifestation of the preservation strategy of maintaining the building according to the architect's (assumed) intent; it was completely rescon-

structed per van der Rohe's photographs and restrospective drawings illustrating his vision for the building that wasn't even fully acheived upon its original construction.

Postwar buildings were largely untouched by preservationists until the 1990s, when many of them began to pass forty years in age, and became increasingly vulnerable to destruction due to material or functional obsolescence. The rise of preservation authorities during the late twentieth century such as UNESCO and DOCOMOMO has led to a narrow definition of preservation's goals, practices, and methods. Though the subject of preservationists may have begun to shift, the theoretical paradigm through which modern buildings are considered for preservation has remained largely unchanged since the field was shaped by early thinkers like William Morris, John Ruskin, and Eugene Emmanuel Viollet-le-Duc. Increased theorization of the projective potential of architectural preservation is long overdue.

problematics of preservation: modernism through the 21st century

The preservation of Modern architecture remains undertheorized within the preservation discipline, but critical exploration is especially scarce within the scope of contemporary design practice.

In an urban culture, built indicators of any cultural period retain potential value, even if they are not of popular taste, as no one time is dominant—we must operate as architects with that recognition. Architecture as a cultural product should seek dialogue with and operate with sensitivity to other times both past and future.

There is the potential for a reactive, critical architecture that is still inherently contemporary via its own lens, its inescapable

cultural situation. As we can't avoid this bias of our own cultural perspective—the current context of American architectural practice, theory, tastes, culture, and views of the past—we should exploit it to add richness and diversity to future cities.

Critical partial preservation does this by offering not only the perspective of our time opposing some fragment of past perspectives, but also our commentary on those extant architectures.

Our contemporary work is thus an informed urban layer in dialogue, not an erasure—in sharp contrast to the method of many Modernists, though not that of Rudolph.



SAINT PETERS CARDROSS IN SCOTLAND: ANOTHER SIGNIFICANT BRUTALIST STRUCTURE IN JEOPARDY OF DEMOLITION

visions in jeopardy

Brutalist structures of any quality are increasingly left to ruin or demolished by force worldwide. In the past ten years, as many of these buildings reach their fifty year mark, the pace of demolition has dramatically quickened. High-profile debates are being held in the urban realm over the fate of these contested structures, usually pitting preservationists and appreciators of Modern architecture against public officials, developers, and sometimes the public.

While sometimes the conversation incorporates the suggestion of adaptive reuse, partial preservation is rarely proposed as a viable alternative means of addressing the again structure. This thesis seeks to propose such a partial preservation on the site of a contested Modern building to allow another option to enter the conversation at the redevelopment level.



RIVERVIEW HIGH SCHOOL IN FLORIDA: DEMOLISHED 2009

rudolph's disappearing body of work

Paul Rudolph was one of the most influential and important American architects working during the mid to late-twentieth century. An academic, educator, writer, draftsman, and urban theorist, Rudolph designed many important structures in the Northeast US and in Florida, before the bulk of his design work moved to Asia late in his career.

Although many of his buildings are prized by architects, historians, and preservationists, their sometimes stark abstract forms and textured but unadorned concrete exteriors do not gain popularity with American audiences currently disdainful of this mode of structural expressionism. As a result, some of his important works have been destroyed and many more are slated for demolition.

One of several examples: Rudolph's Riverview High School in Sarasota, widely praised by architectural critics for its forward-looking sustainable features within the expression of Modernist principles, was destroyed in 2009 to make room for a parking lot adjacent to a new school building. School board officials did not pursue adapting or restoring the building despite specific design proposals from the architectural and local community.

In 2012, two of Rudolph's projects on the east coast of the US are slated for demolition: the Goshen Courthouse in New Jersey and the tower at 133 Federal Street in Boston.

RUIN

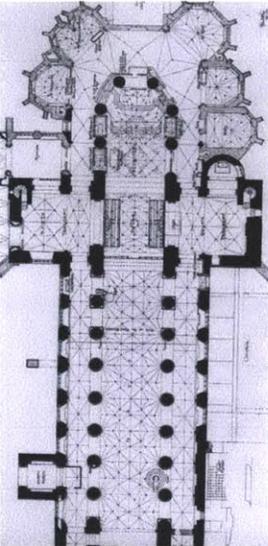


The Arch of Trajan at Benevento : Preserved by the drawings of Piranesi

Piranesi documented this Roman structure in its ruined state in 1762. His drawings of the crumbling edifice are part of a larger body of work that examines and documents the presence of ruins in urban contexts, objectifying the decay of architectural objects and recording them as a part of their contemporary identity.

The implied attitude of the preservationist of this architectural project is typified by a mono-temporal perspective on the site, namely the time of the observer. However, the act of preservation does not introduce contrasting historical and contemporary perspectives on the architecture, instead a documentation of its decline. For that reason, this method of preservation, the strategy of preservation by ruin, may be classified as static operation in the architectural context.

MAINTENANCE

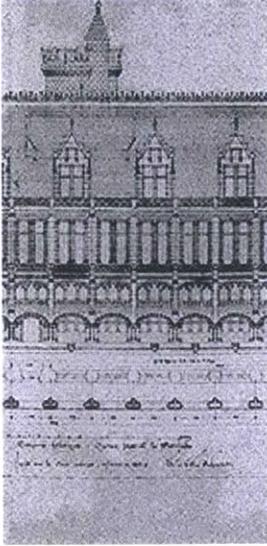


Tewkesbury Abbey : Preserved by Sir Gilbert Scott and William Morris

The abbey was originally constructed in the eleventh century. The stated aim of Scott and Morris's nineteenth century intervention was to maintain and restore the abbey based on the original design and crafts of its construction. Though they made modifications to the structure, they were in service of these aim of restoration to an idealized original whole state.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of maintenance, may be classified as static operation in the architectural context.

DESIGN EXTENSION



Chateau de Pierrefonds : Eugene-Emmanuel Viollet-le-Duc

The chateau was restored in 1857 by Viollet-le-Duc, an influential thinker and practitioner working early in the disciplinary practice of preservation. Viollet-le-Duc's work was often characterized by his unorthodox method of design extension, by which he would assume the unrealized or logical extensions of the original architecture based on its contemporary state, then build in these perceived additions to the original structure. Viollet-le-Duc did not characterize these additions as a contrast or complement to the original architecture, but rather as its continued development or inevitable extension.

The implied attitude of the preservationist of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's perceived original design intentions. For that reason, this method of preservation, the strategy of design extension, may be classified as static operation in the architectural context.

SCIENCE



Porto Ticinese : Preserved by Camillo Boito

This medieval tower was restored by Camillo Boito in 1865. An early theorist of preservation, Boito promoted a scientific approach to building maintenance, that sought to ascertain the original construction and nature of the architecture through objective means, and then used scientific methods to return a structure to its original state.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original physicality. For that reason, this method of preservation, preservation via science, may be classified as static operation in the architectural context.

INVISIBLE RECONSTRUCTION



Bauhaus : Preserved by the GDR

Originally built between 1925-26, the Bauhaus was first restored in the 1940s following the war. This was the first in a series of renovations, including overhauls in 1964 and 1974. Designated a National Landmark, this building is reconstructed perpetually by the government to conform to its original design.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of invisible reconstruction, may be classified as static operation in the architectural context.

PERPETUAL RECONSTRUCTION



Weissenhof Housing Exposition : Preserved by the Weissenhofmuseum stuttgart

This exhibition of housing prototypes was built in 1927. Since then, it has been restored multiple times, with many but not all structures preserved; reconstruction campaigns were undertaken in 1956-1958, 1981-1987, and 2002. Though intended to be a speculative project, the exhibition drew such critical acclaim that it has been remade continually over the last half century in order to preserve the physical example of this projective design research.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of perpetual reconstruction, may be classified as static operation in the architectural context.

MONUMENT



Villa Savoye : Preserved by the Commission de Monuments, France

Le Corbusier's famous Modern residence, completed in 1929, was first restored in the 1940s. In the 1960's it became one of the first Modern structures in France to be listed as a National Landmark, less than four decades after its original construction. The frame of temporal reference for defining monuments was greatly compressed as the preservation movement gained power and influence via the support of governmental institutions.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of monumentalization, may be classified as static operation in the architectural context.

ITERATION

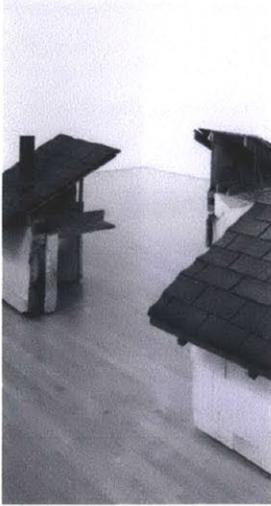


Kaiser Wilhelm Memorial Church : Preserved by Egon Eiermann

This gothic church was constructed in Berlin in 1891. The structure was severely damaged in 1942 during the bombing campaigns of WWII, and one of its towers was completely demolished. The church stood in a partially ruined state for almost two decades before it was restored by architect Egon Eiermann in 1961. The preservation of the church did not shy from bold modernity, clearly contrasting the original stone tower with its newly constructed concrete and glass twin. The stark contrast between ruin and reconstruction was consciously foregrounded as an articulation of the church's difficult history.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the existing ruin with the contemporary addition in binary opposition. For that reason, this method of preservation, the strategy of direct contrast and comparison, may be classified as an operation of juxtaposition in the architectural context.

REMNANT

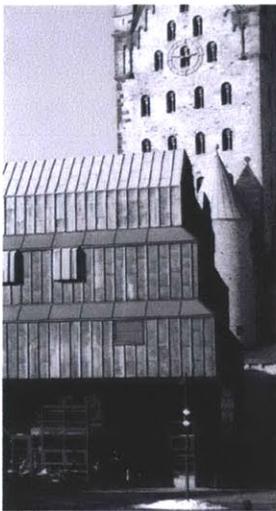


Splitting: Four Corners : Preserved by Gordon Matta-Clark

This installation was created in 1974, around the time of Matta-Clark's other investigations regarding the dissection and exposition of abandoned buildings. By cutting building assemblies into segments and then repositioning them in the surreal context of the whitebox gallery, Matta-Clark documents and objectifies otherwise unknown or neglected architectures.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of monumentalization, may be classified as static operation in the architectural context.

JUXTAPOSITION



Diocesan Museum Paderborn : Preserved by Bohm & Linder

In this project, a new museum was built in the 1970s directly adjacent to architectures from varying historical periods lining a town square in Paderborn. The project draws attention to itself via its stark insertion, playing its modernist proportions and materiality against a diverse urban backdrop.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, contrasting the existing structures with the contemporary addition in direct opposition. For that reason, this method of preservation, the strategy of adjacency, may be classified as an operation of juxtaposition in the architectural context.

RE-ERECTION

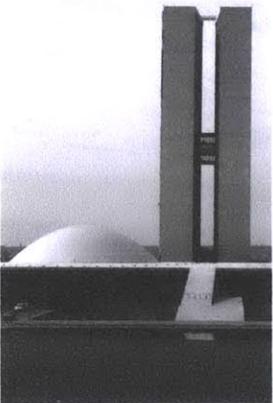


Barcelona Pavilion : Preserved by the Barcelona Pavilion Foundation & Sola-Morales, Cirici, & Ramos

The pavilion was built in 1929 for the world's fair and demolished 1930. In 1986, architectural scholars rebuilt the pavilion according to its original specifications.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of reconstruction, may be classified as static operation in the architectural context.

IMMUTABLE CULTURAL HERITAGE



Brasilia : Preserved by UNESCO

Oscar Niemeyer designed the massive urban experiment that is Brasilia between 1956-1960. Thirty years later, UNESCO designated the entire city a World Heritage Centre in 1987.

The implied attitude of the preservationists of this architectural project is typified by a mono-temporal perspective on the site, namely that of the project's original design and construction. For that reason, this method of preservation, the strategy of designation of immutable cultural heritage, may be classified as static operation in the architectural context.

TRACE

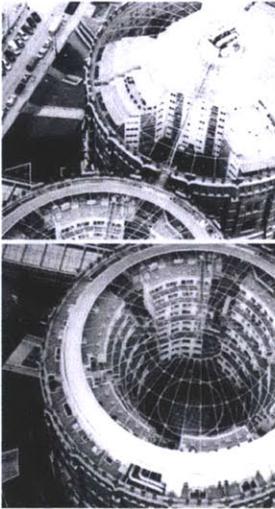


Duisburg Nord : Preserved by Paul Latz

This 1991 project saw the conversion of a former industrial park into a large recreational park that repurposed the remaining manufacturing structures. The buildings were reprogrammed as found objects and given new, inventive recreational programs. The structures became part of the landscape as a ruin, but reinterpreted through the lens of new overlaid programs and landscaping. The preserved structures are left as palimpsests in a reimagined regional landscape.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, layering time periods to create unexpected relationships between the architectures of different eras. For that reason, this method of preservation, the strategy of preservation by trace, may be classified as an operation of integration and layering in the architectural context.

INFILL

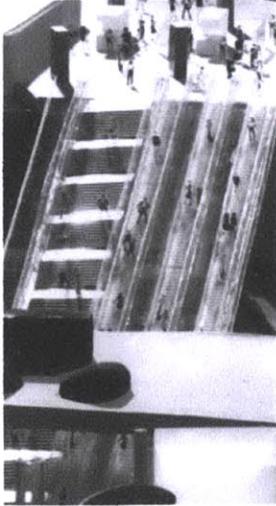


Gasometer city : Preserved by Jean Nouvel & Coop Himmelblau & Wehdrom & Holzbauer

Originally built 1896, these massive towers were originally industrial structures. In 1995 the immense cylinders were refilled with residences in the ultimate act of facadeism, in which several architects proposed new interior developments to line the maintained shells of the huge buildings. The new insertions played to the openings of the existing facade but broke down the scale of the interiors via varying formal strategies. The diversity of the new interiors was not reflected on the maintained exteriors.

The implied attitude of the preservationists of this architectural project is typified by a bi-temporal perspective on the site, contrasting the existing building shells with the contemporary infills in binary opposition. For that reason, this method of preservation, the strategy of infill, may be classified as an operation of juxtaposition in the architectural context.

NETWORKING



ZRH Airport Competition : Preserved by OMA

In this 1995 competition entry, OMA examined the redesign on the ZRH Airport. Instead of proposing a new structure, OMA suggested that all of the component pieces of a new successful airport could be found in the layers of existing disconnected structures on the site. The project proposed preservation of the existing structures, with new linkages that yield previously unknown ways of navigating through the different strata of construction on the site, to create an integrated system of development.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, knitting together building sections with a contemporary system of linkages that attempts to create meaningful relationships between the architectures of different eras. For that reason, this method of preservation, the strategy of networking, may be classified as an operation of integration and layering in the architectural context.

ADAPTIVE REUSE

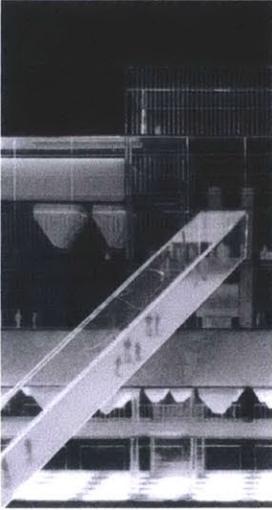


Tate Modern : Preserved by Herzog & de Meuron

The building was constructed in 1947 as a large industrial facility in London. Restored in 2000, the building was fully reprogrammed and the interior remodeled to create a massive home for art exhibitions.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, adapting the existing structure for a contemporary reprogramming. For that reason, this method of preservation, the strategy of adaptive reuse, may be classified as an operation of gradation or juxtaposition in the architectural context.

GESTURE

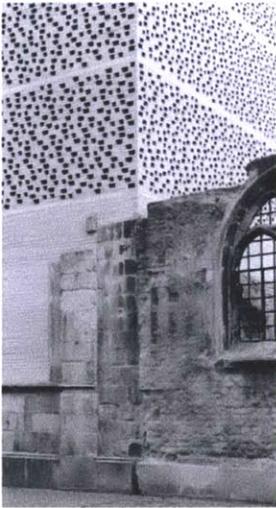


Zollverein Kollenwasche : Preserved by OMA

This project for the redevelopment of an existing industrial building was undertaken in 2006. The pivotal architectural gesture, the introduction of a large, vibrantly-illuminated escalator, was done as a statement with reference to the building's industrial past as an echo of the large coal elevators that once dominated the district.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the restored existing structure with the contemporary gesture in binary opposition. For that reason, this method of preservation, the strategy of the gesture, may be classified as an operation of juxtaposition in the architectural context.

LAYERING



Kolumba Museum : Preserved by Peter Zumthor

In 2007, Zumthor designed this space for art and religious study on the ruins of an ancient sacred space. Carefully and studiously integrating one layer of construction with the next, Zumthor allows the new project to become a trace upon the former architecture that enlivens the space and highlights key moments in the existing art and experience of the ruin.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, layering assemblies to create meaningful relationships between the architectures of different eras. For that reason, this method of preservation, the strategy of overlay, may be classified as an operation of integration and layering in the architectural context.

DISSECTION

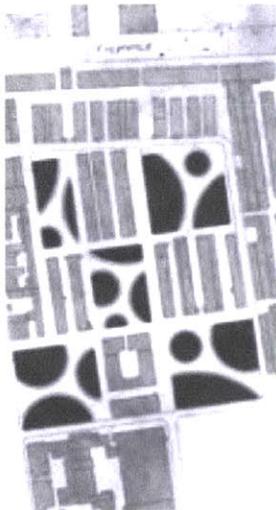


reburbia: Glass Houses : Preserved by Zellnerplus

This speculative project from 2009 addresses the question of how to critically approach the standard American suburban development. Using the slice as a device of dissection, a glass corridor cut through otherwise banal suburban tract homes creates unusual confluences of public and private space.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the existing structure with a contemporary critical intervention, in binary opposition. For that reason, this method of preservation, the strategy of dissection, may be classified as an operation of juxtaposition in the architectural context.

CHECKER



Apraskin Dvor Masterplan : Preserved by OMA

This 2008 proposal for development with the historic fabric of Apraskin Dvor suggested replacing blocks of existing development with new structures according to a checkerboard plan at the urban scale. The geometries of the introduced buildings contrast with the rectilinear grid system of the city and introduce new paths and views within the existing urban pattern. The plan contrasts old and new while allowing each enough integrity and scale to remain recognizable. The project hints at a model of preservation by juxtaposition that could be applied at an urban or regional level, beyond the concerns of a particular building.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the existing fabric with a contemporary pattern in binary opposition. For that reason, this method of preservation, the strategy of the urban checkerboard, may be classified as an operation of juxtaposition in the architectural context.

DISTRIBUTION



Andalsnes City Plan Competition : Preserved by Jagnafalt Milton

This 2009 competition entry proposed using the decommissioned rail system of a small city as a basis for a series of rolling pavilions that could be distributed and reconfigured throughout the landscape. These repurposed pavilions gained new programs and urban prominence once they were made mobile and distributed throughout the landscape in unexpected and changing ways.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the displaced artifact with new contemporary contexts in binary opposition. For that reason, this method of preservation, the strategy of distribution, may be classified as an operation of juxtaposition in the architectural context.

CAST

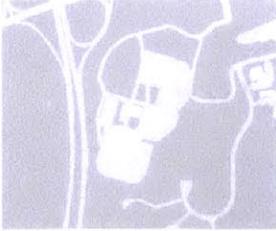


Doge's Palace: Preserved by Jorge Otero-Pailos

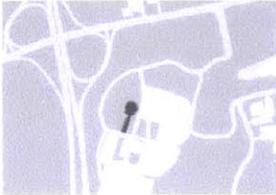
This installation was performed in 2009 in Venice. A latex cast revealing the centuries of pollution that had accumulated on the structure was exhibited as a pull from the cleaned wall, giving form to an otherwise ephemeral quality of the building's history.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, allowing the cast of one time to make a statement from the context and position of another. For that reason, this method of preservation, the strategy of the cast, may be classified as an operation of integration and layering in the architectural context.

DISPLACEMENT



Entry Icon :: The building serves as the monume sign, a visual icon for the development, ent displaying all of the tenants' logos. A welcome cent or property management and leasing office would appropriate uses for this location.

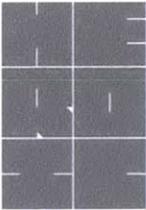


Gettysburg Cyclorama Proposal : Preserved by CUBE

This 2010 proposal by CUBE addresses Neutra's cyclorama in gettysburg, proposing adaptations of it via various strategies of partially destrcutive preservation. One such strategy is that of displacement; by changing the context of the building, they argue that it could open up to new programmatic and formal possibilities.

The implied attitude of the preservationist of this architectural project is typified by a bi-temporal perspective on the site, contrasting the displaced building object with a new context in binary opposition. For that reason, this method of preservation, the strategy of displacement, may be classified as an operation of juxtaposition in the architectural context.

DOCUMENTATION



About the Heroic Project

Building Information
Building Map
Extended Building List

Buildings

Holyoke Center
John F. Kennedy Federal Office
Carpenter Center for the Visual Arts
Health and Human Services Building
Green Center for Earth Sciences
Boston University School of Law
Peabody Terrace
Saltonstall Building
State Street Bank

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"Heroic
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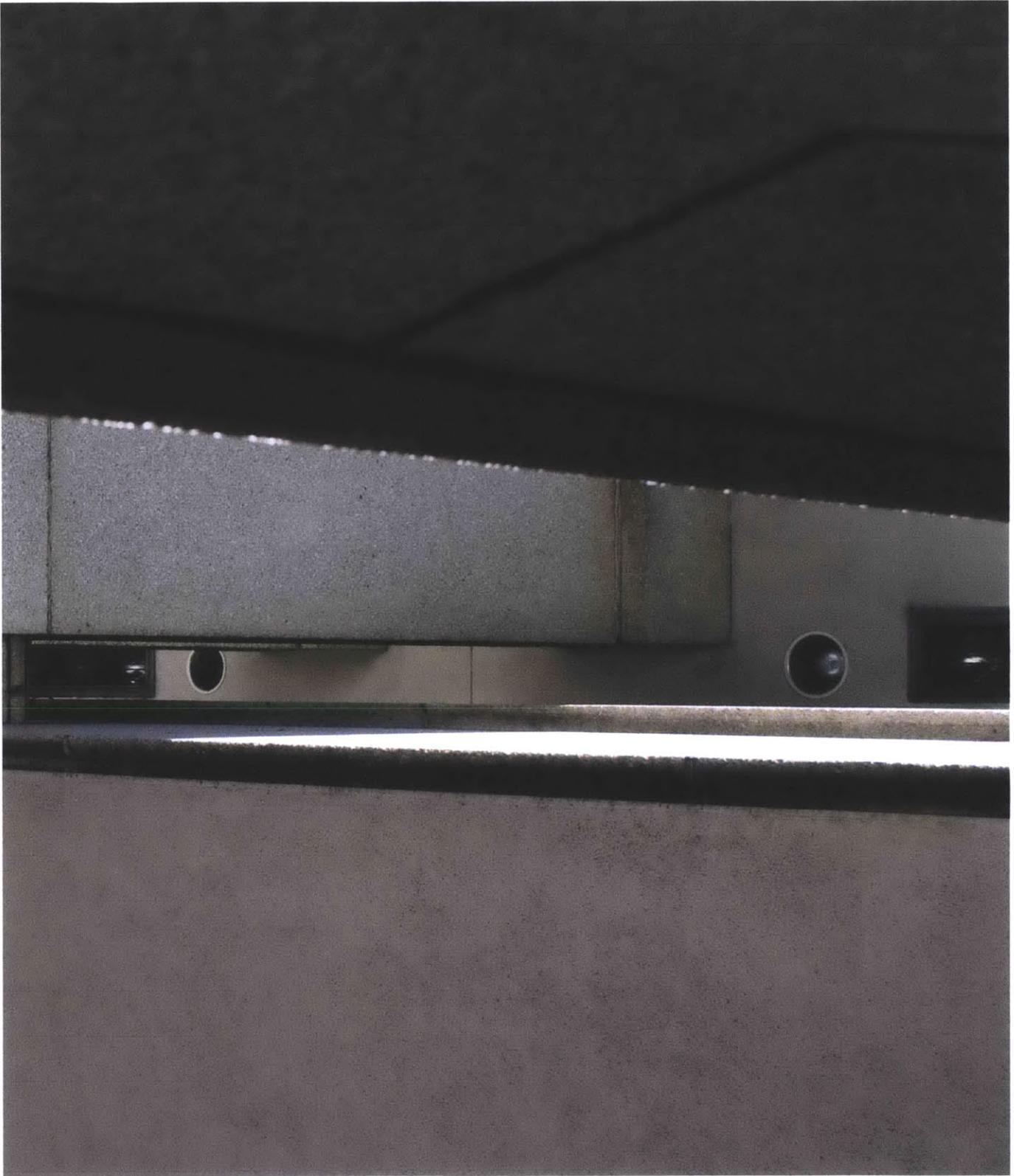
Heroic Boston : Preserved by over, under

This 2009 online exhibition of Boston's Modern concrete heritage includes an index of notable structures, collection of historical critiques of those structures, as well as contemporary essays on the nature of concrete modernism in the city. The project seeks to preserve these at-risk buildings by promoting their study and appreciation but also purely through their documentation and critical situation relative to the contemporary city.

The implied attitude of the preservationist of this architectural project is typified by a multi-temporal perspective on the site, layering accounts of architectures and responses to them through history to create meaningful relationships between the architectural persepctives of different eras. For that reason, this method of preservation, the strategy of critical documentation, may be classified as an operation of integration and layering in the architectural context.



DETAIL VIEW OF CONNECTION BETWEEN EXISTING CURTAIN WALL STRUCTURE AND MEZZANINE



principles
Guidelines for preservation studies

#1 : architectural preservations can demonstrate three different attitudes regarding temporal relations among gestures within the historical continuum of design:

sublimation / monumentalization

opposition / juxtaposition

dialectic / hybridization

#2 : preservation has a didactic function in illuminating (currently) significant qualities of existing architectures conceived and constructed in the past—curation, but of what?

#3 : the tension between architectural gestures at different points in the historical continuum may be variable expressed or concealed via the manner of preservation.

#4 : clear expression and engagement of this tension through dialectical moments creates a productive interstitial, inter temporal space—the collision in which object and operation transform one another.

#5 : preservation as a projective process privileges this third zone as the critical junction, as the forced cross-fertilization of systems generates strange new mixes that blur expected contexts, while the preservationist plays historian, critic, and speculator.

"The challenges facing preservationists working with modern architecture will continue to evolve and resolve as the discipline focuses on the appropriate principles and tools for this era of the built fabric."

"[...] Acknowledgement of the compressed historical perspective from which these buildings are being addressed—that is, how little time has passed since their construction—is necessary to the longevity of the buildings. The transitory and evolving nature of the interpretation of their significance is as much a challenge for the preservation of modern architecture as the ephemeral and some- times semipermanent quality inherent in the materials of which they are built."

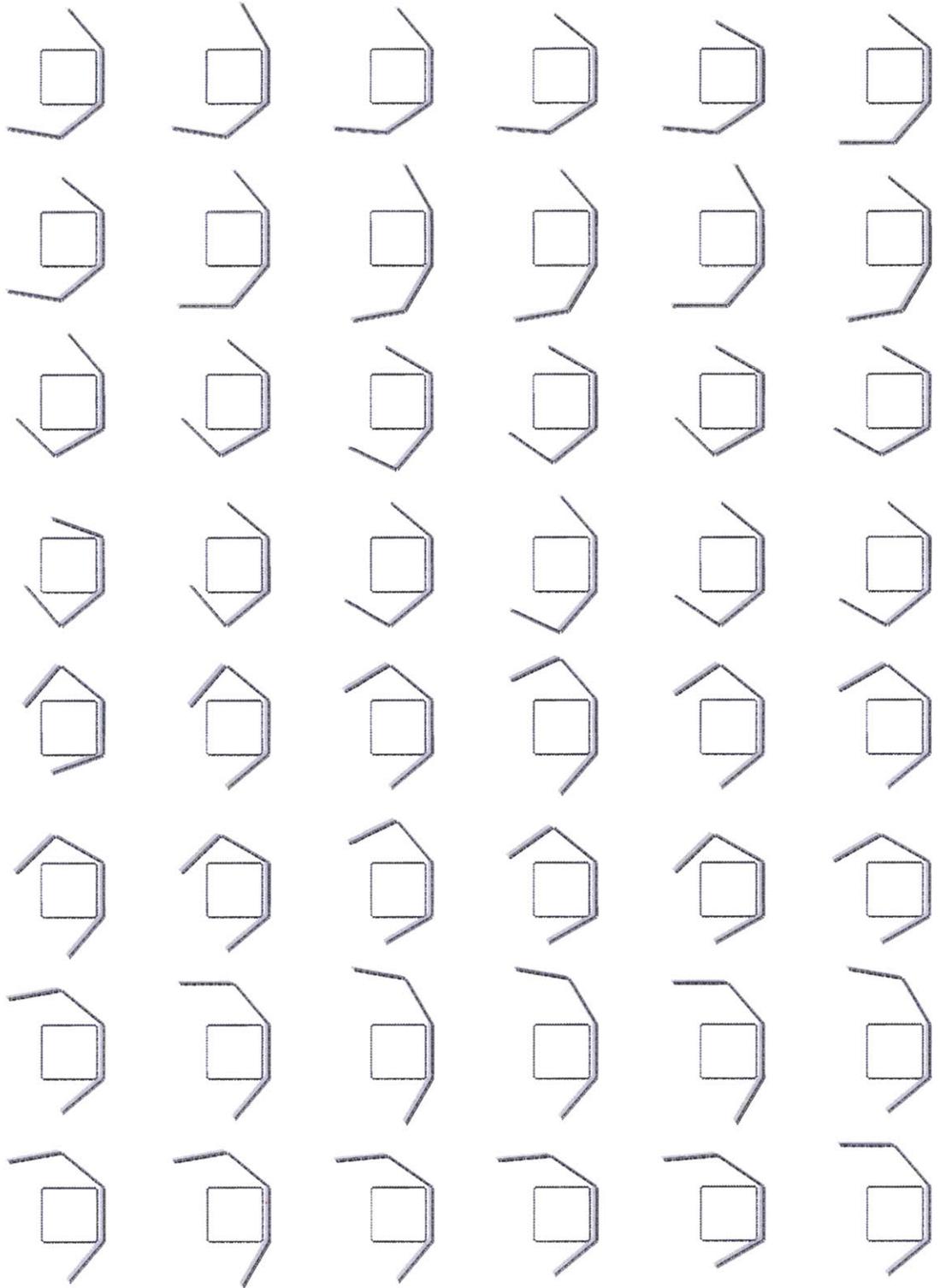
— Theodore Proudhon, *Preservation of Modern Architecture*, 2008, 21

Challenges specific to the preservation of Modern architecture include temporality, ubiquity, functional and physical obsolescence, material and assembly lifespans, development pressures, and public perception.

Work is needed in the discipline that clarifies the tools, methods, and considerations of the critical practitioner in positioning the preservation of Modern architecture, with special attention to valuable architectures that will not be marked for perpetual restoration or ruin, to quote OMA's CRONOCAOS commentary, by preservation authorities.

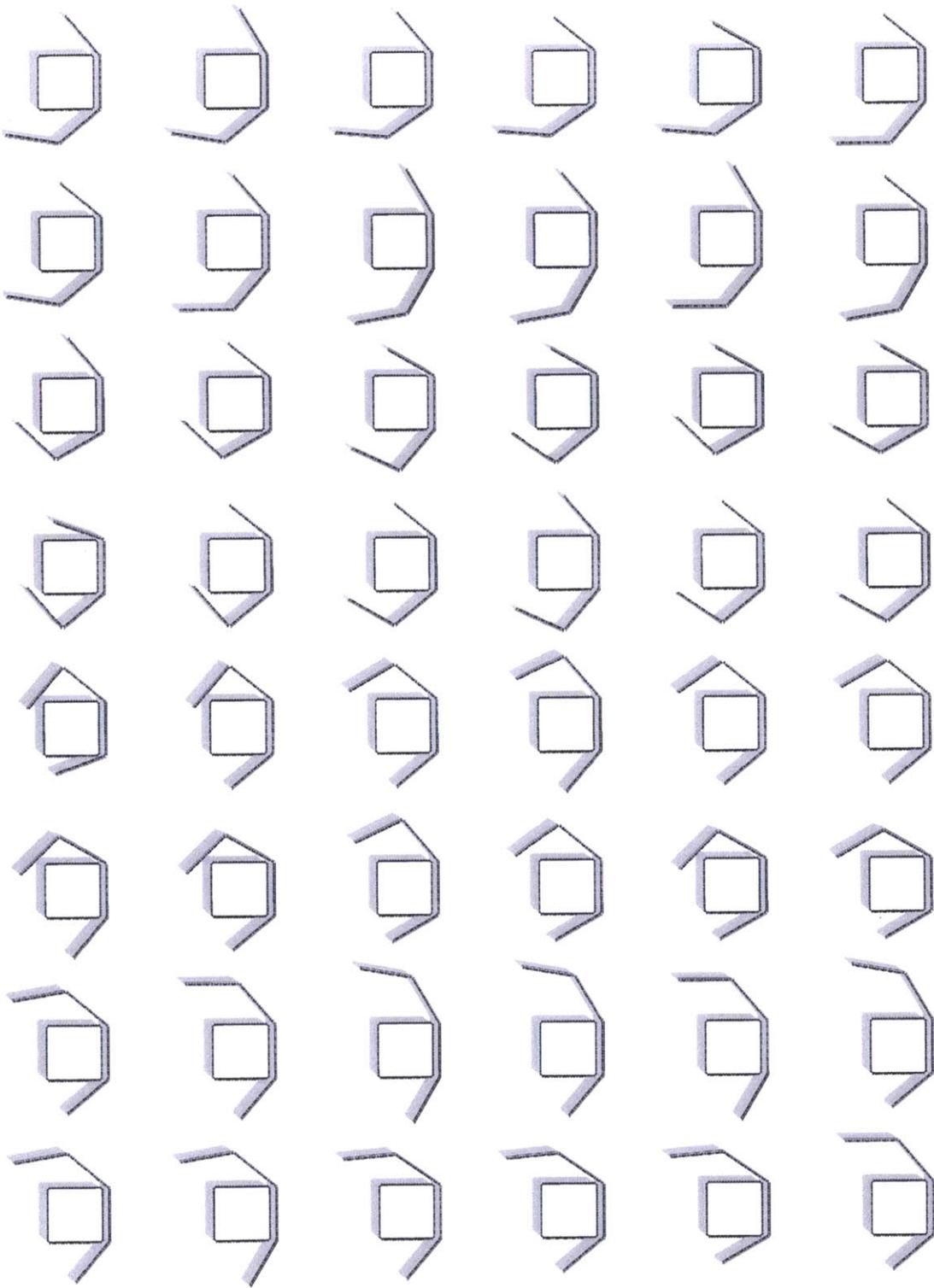
In testing the hypothesis that partial preservation is a solution to the challenges that face such non-landmark Modernisms, this thesis will aim to develop research into applicable methods of analysis and design of temporal hybrids and functional yet critical preservations.

15' : S2.N1



15' : S1.N2

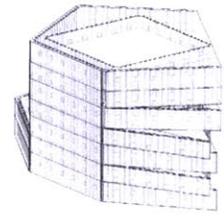
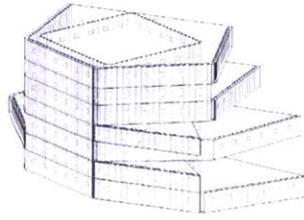
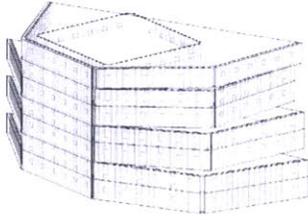
Studies of formal variations of unwrapping a glass skin from the plan of the existing Rudolph tower as a generator of diverse floorplans.



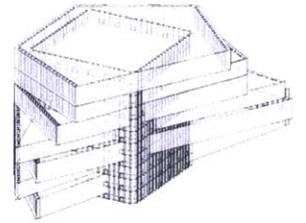
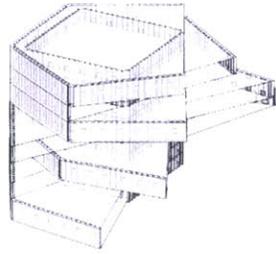
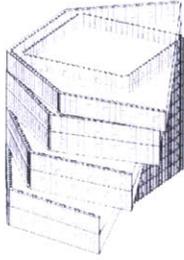
studies

Formal explorations of iteration as strategy of preservation

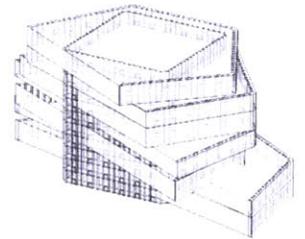
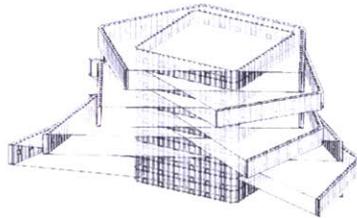
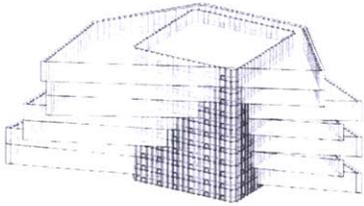
from northeast corner



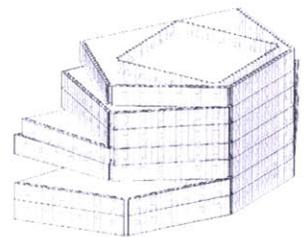
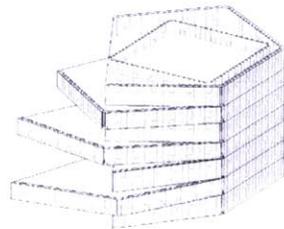
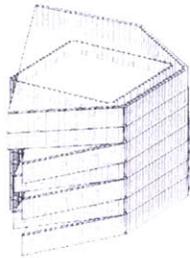
from northwest corner



from southwest corner



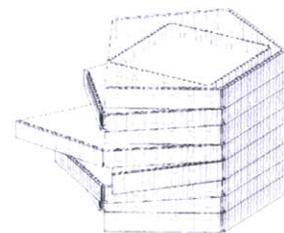
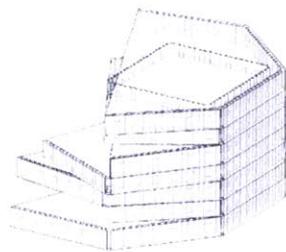
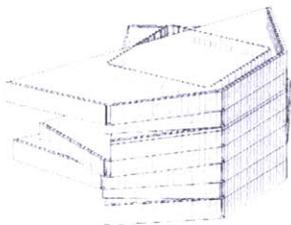
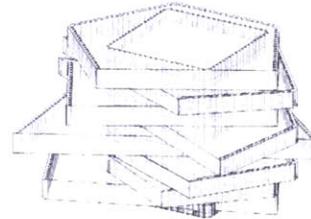
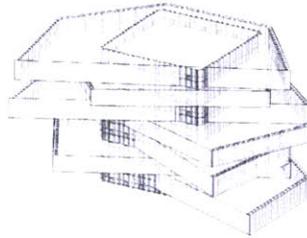
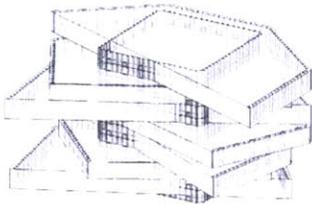
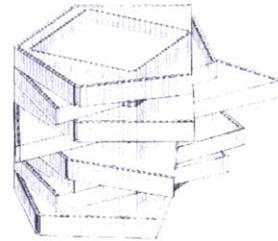
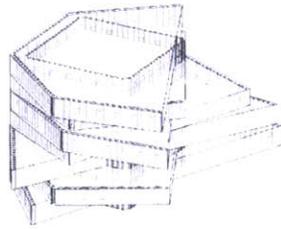
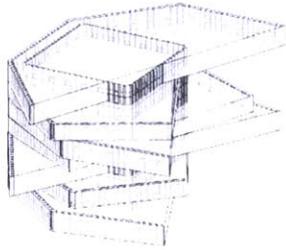
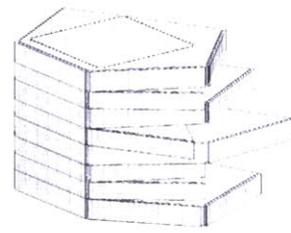
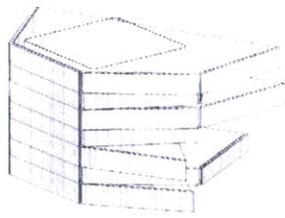
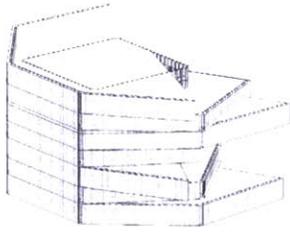
from southeast corner



type 1 : pyramidal

type 2 : alternating pyramidal

type 3 : grouping pyramidal

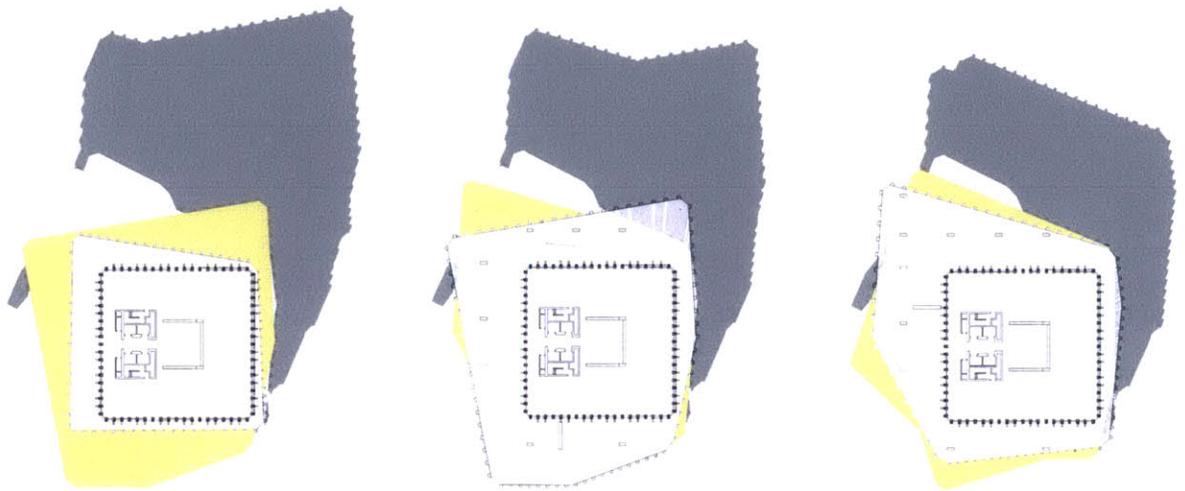


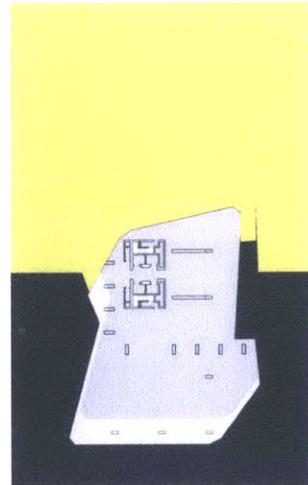
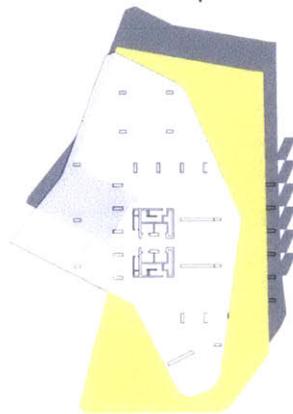
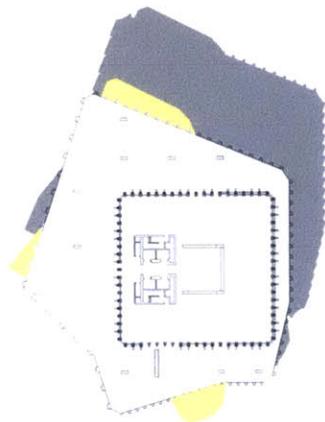
type 4 : alternating grouping, density NE up to SW

type 5 : alternating grouping, density SW up to NE

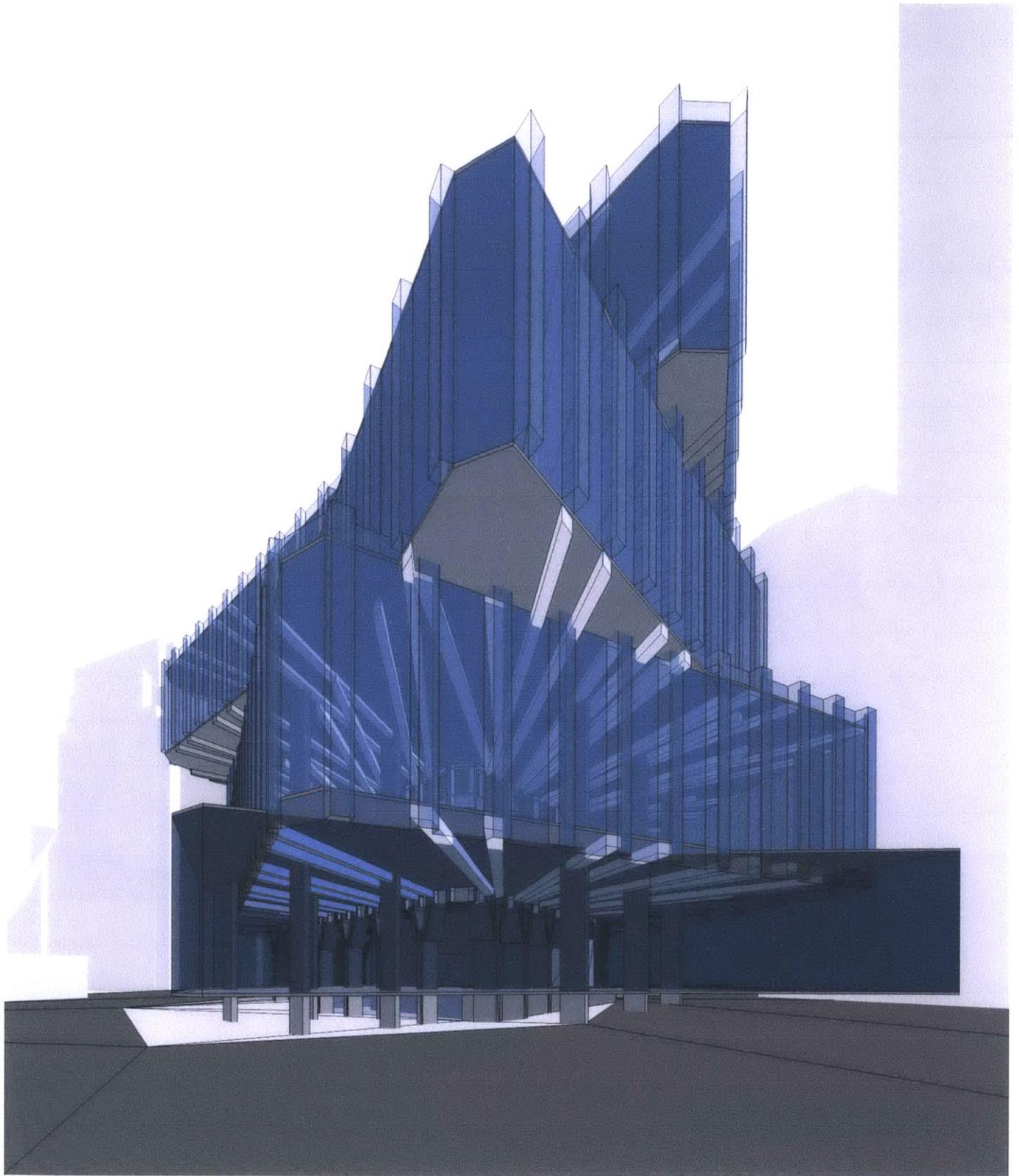
type 6 : alternating cylindrical

Multi-story galleries bounded by the unwrapped glass curtain walls are arranged around the central core of the existing tower according to various schema. This operation seeks to iterate Rudolph's original plan of open space surrounding a dense core or services, using the original tower as support.

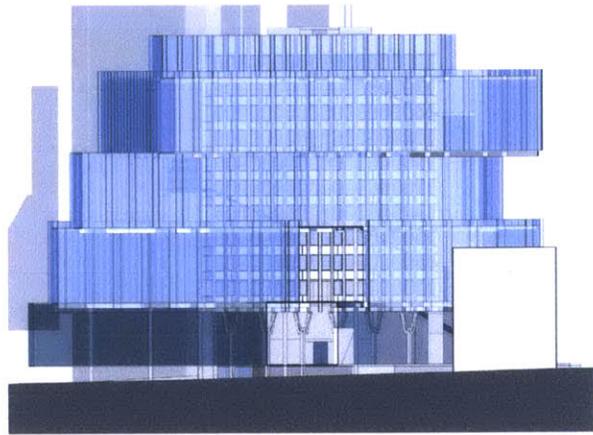




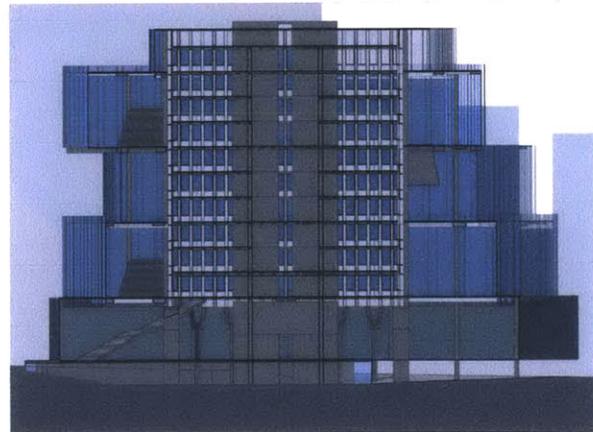
A study of the plan implications of the unwrapping operation yields stacked volumes cantilevered around the central core of the Rudolph building. The existing basement opens up to a sloped ground level at the north as a lobby.



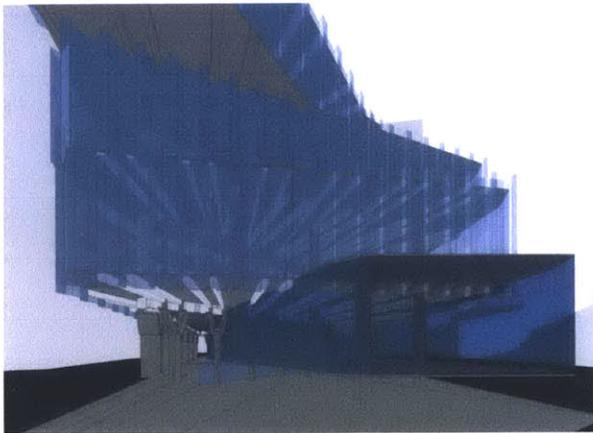
Conceived as unwrapped or stretched bands of glass pulled away from the façade of the original Rudolph building, the multi-story curtain walls of the addition are linked to a central ring of support columns that address the major cantilevers. Radiating beam structures trace the pulled movement of the outer façade from the regular column rhythm of the preserved core.



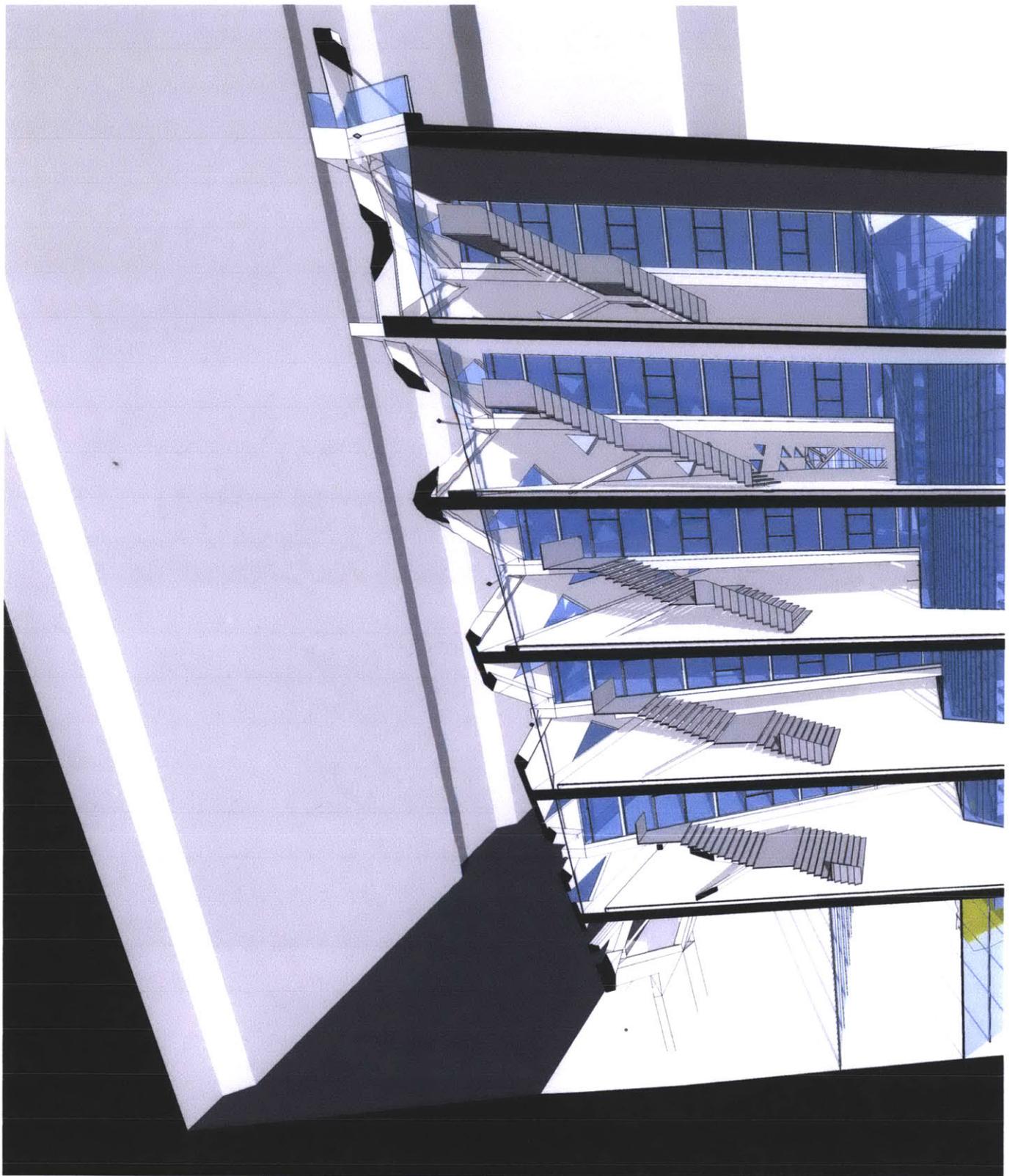
WEST ELEVATION



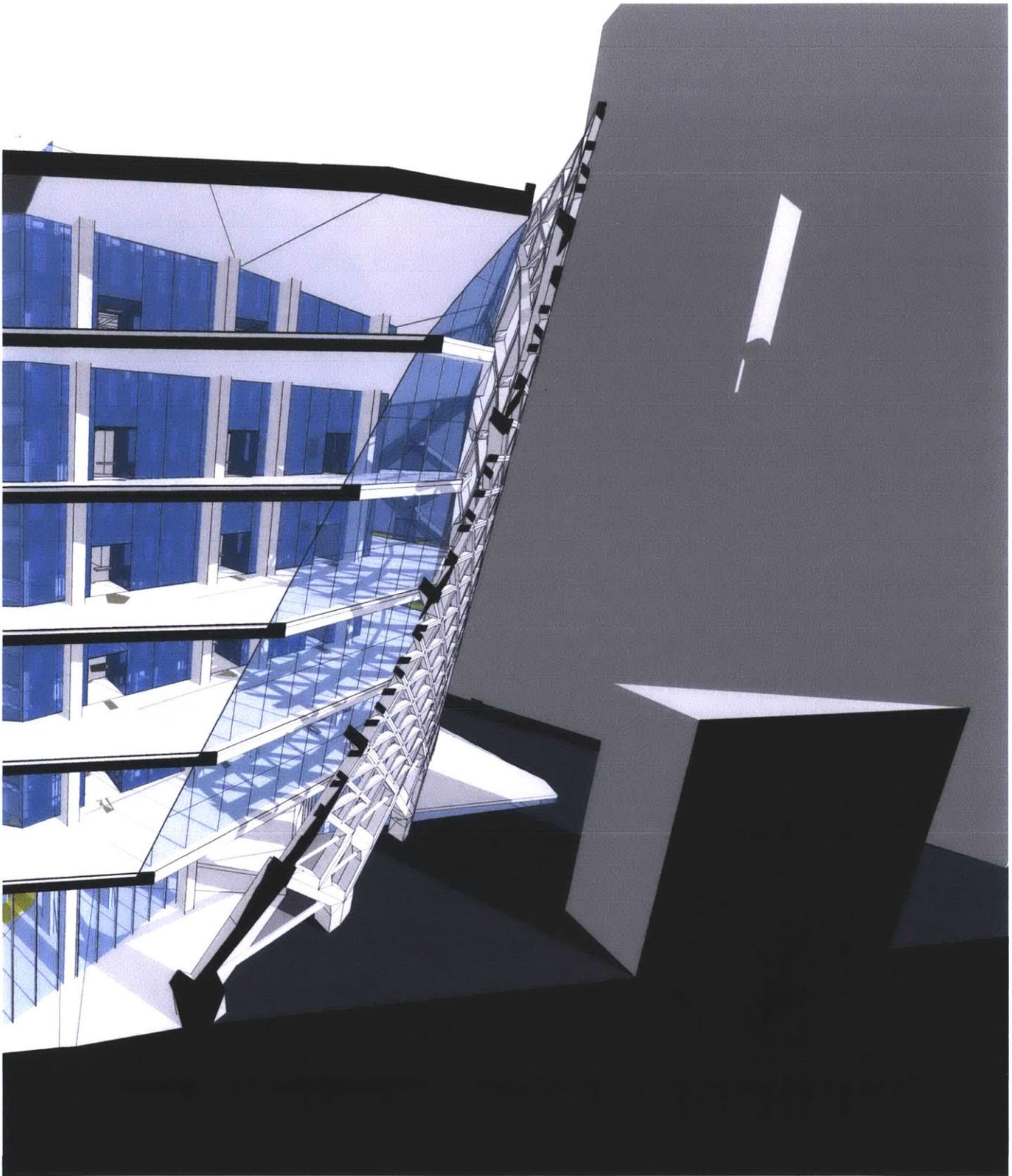
CROSS SECTION NORTH-SOUTH



VIEW LOOKING NORTH PARALLEL TO FEDERAL STREET

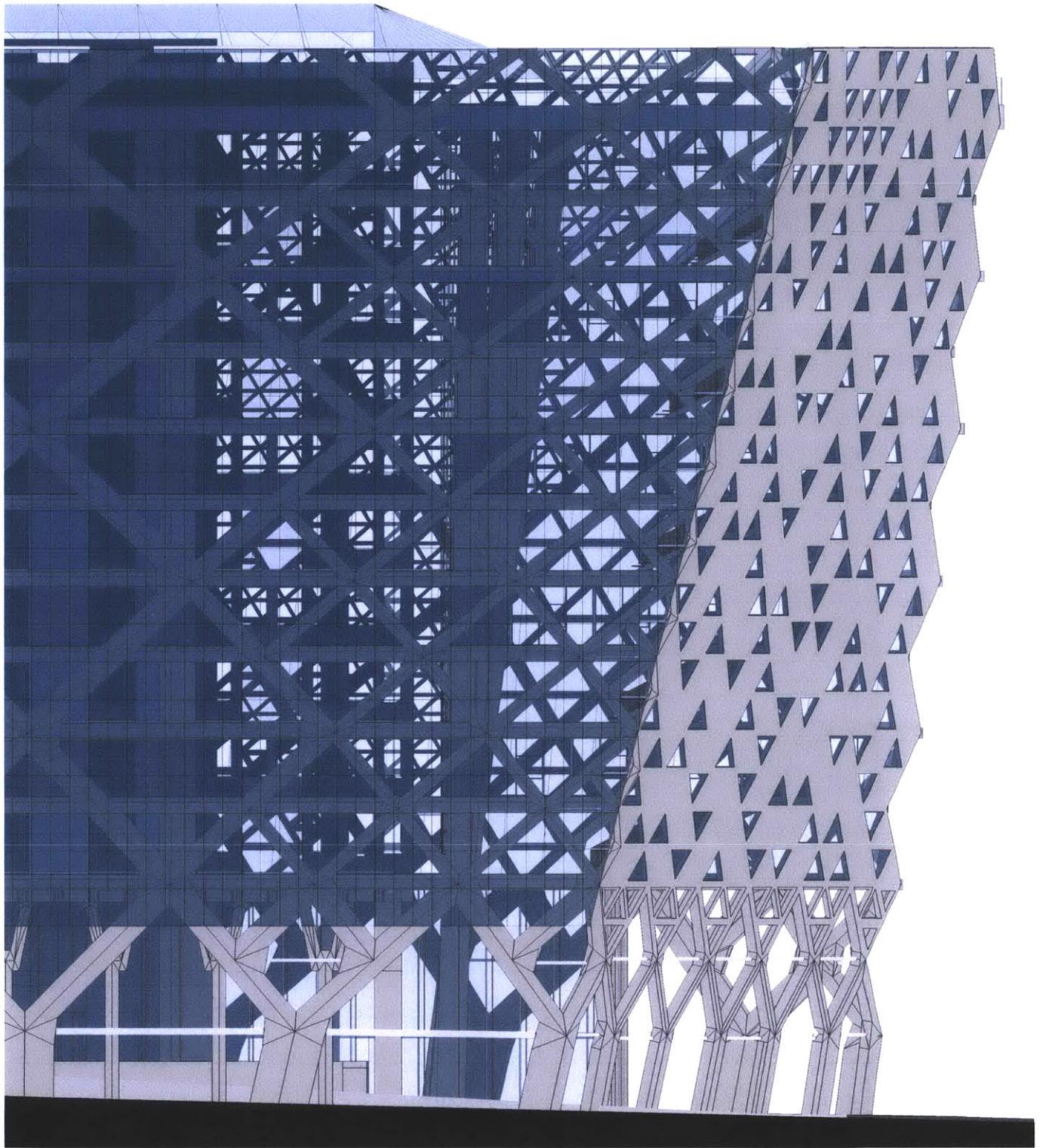


CUTAWAY PERSPECTIVE LOOKING SOUTHEAST INTO WEST GALLERIES AND LOWER LOBBY



strategies

Preservation versus projection



NORTH PORTION OF EAST ELEVATION FACING FEDERAL STREET

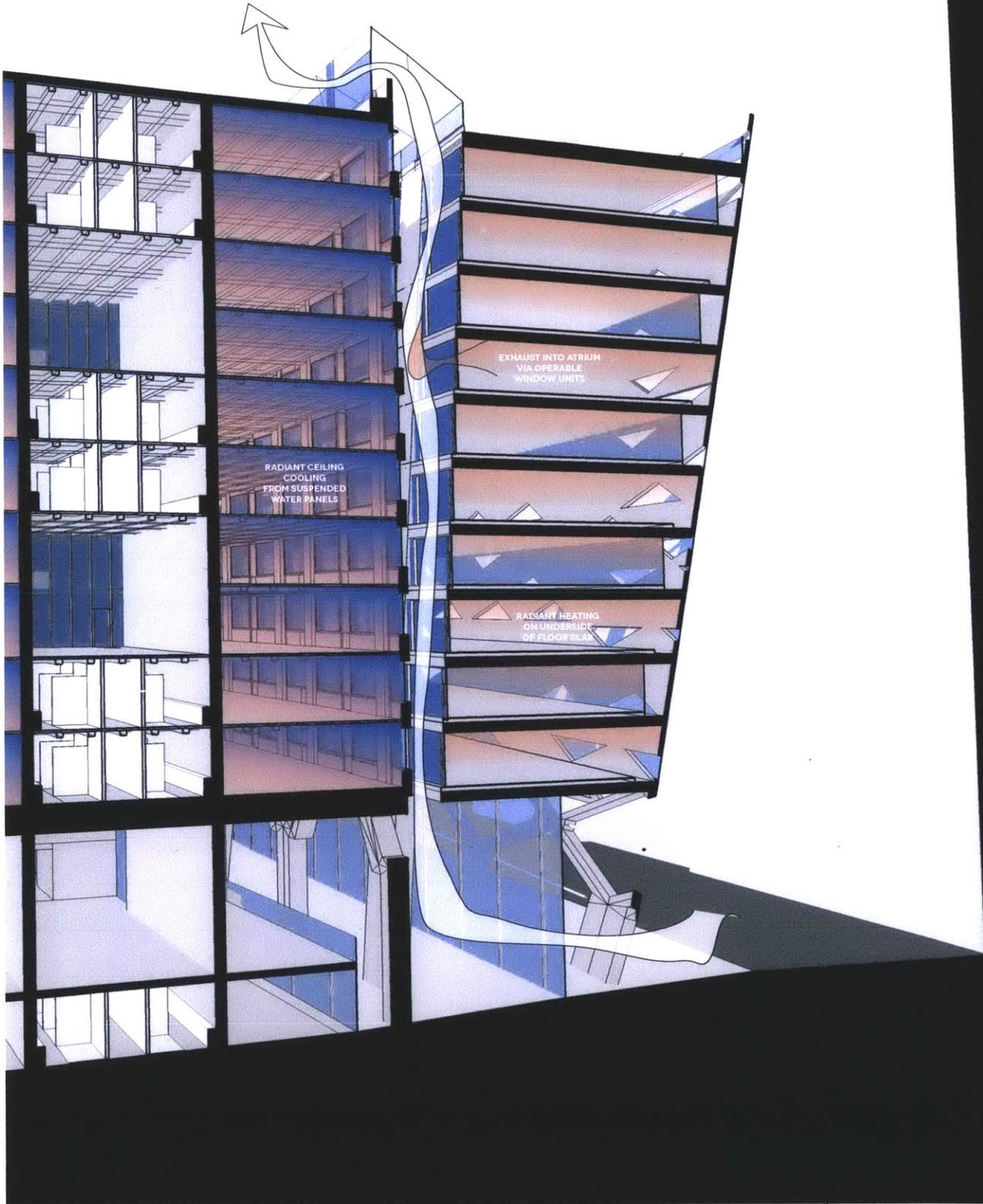
Every year, approximately 1 billion square feet of buildings are demolished and replaced with new construction in the United States. The Brookings Institution projects that some 82 billion square feet of existing space will be demolished and replaced between 2005 and 2030 – roughly one-quarter of today's existing building stock.

It is often assumed that the CO₂-reduction benefits gained by a new, energy efficient building outweigh any negative climate change impacts associated with the construction of that building. It takes 10 to 80 years for a new building that is 30 percent more efficient than an average-performing existing building to overcome, through efficient operations, the negative climate change impacts related to the construction process.

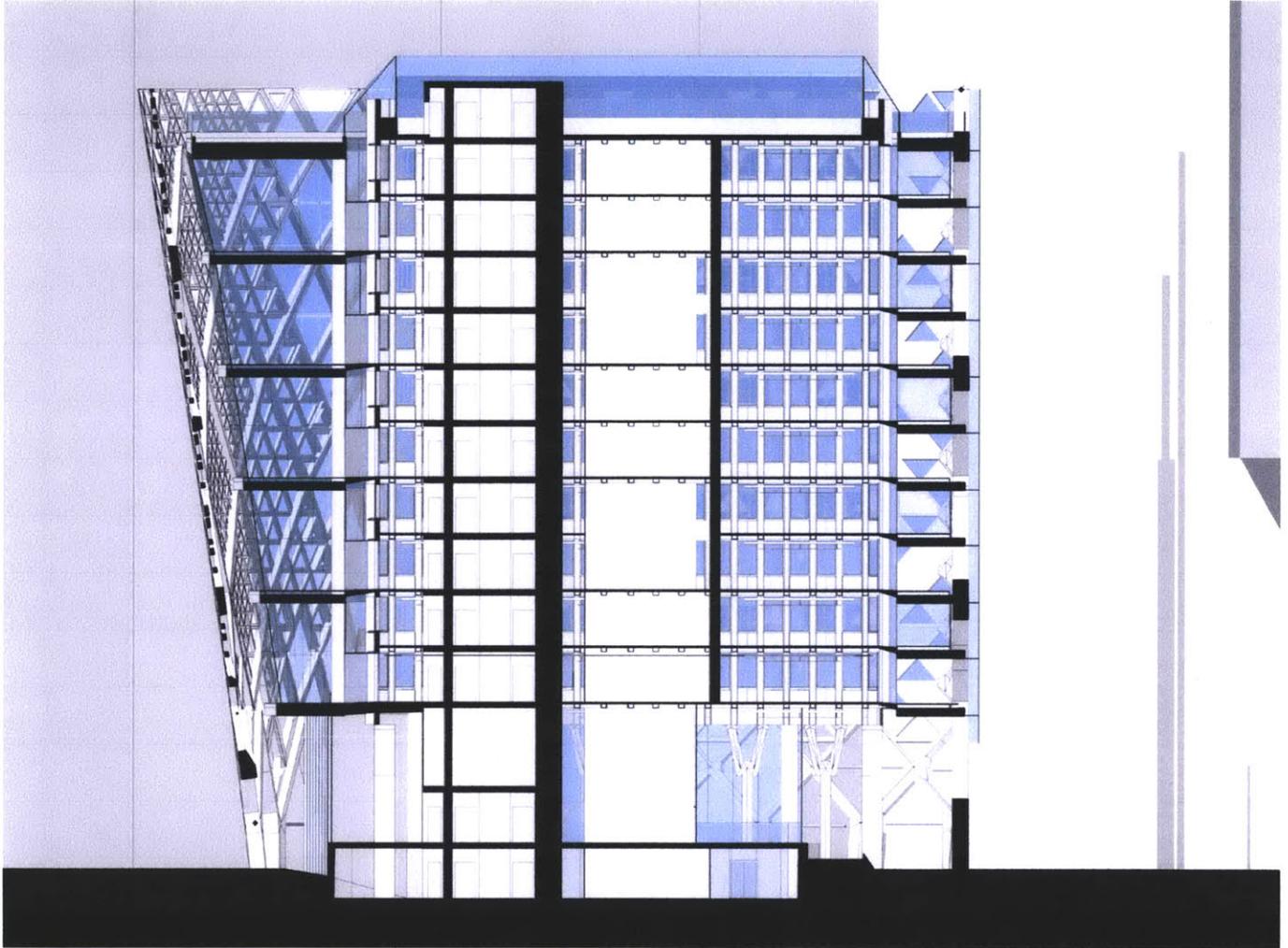
For those concerned with climate change and other environmental impacts, reusing an existing building and upgrading it to maximum efficiency is almost always the best option regardless of building type and climate. Most climate scientists agree that action in the immediate timeframe is crucial to stave off the worst impacts of climate change. Reusing existing buildings can offer an important means of avoiding unnecessary carbon outlays and help communities achieve their carbon reduction goals in the near term.

Cited: The Greenest Building: Quantifying the Environmental Value of Building Reuse, Preservation Green Lab, 2012.





CROSS SECTIONAL PERSPECTIVE EAST-WEST INDICATING THERMAL SYSTEMS



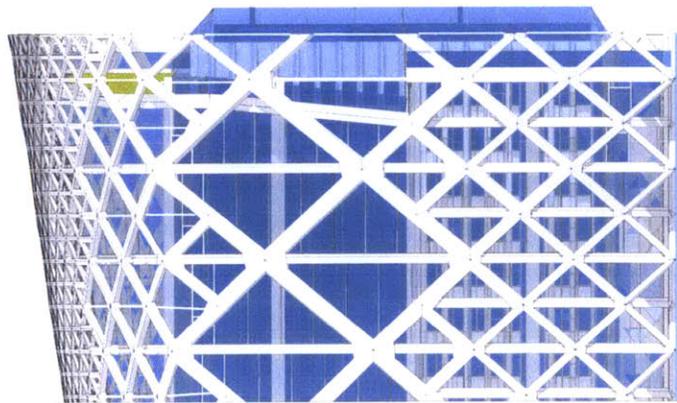
CROSS SECTION EAST-WEST

iteration

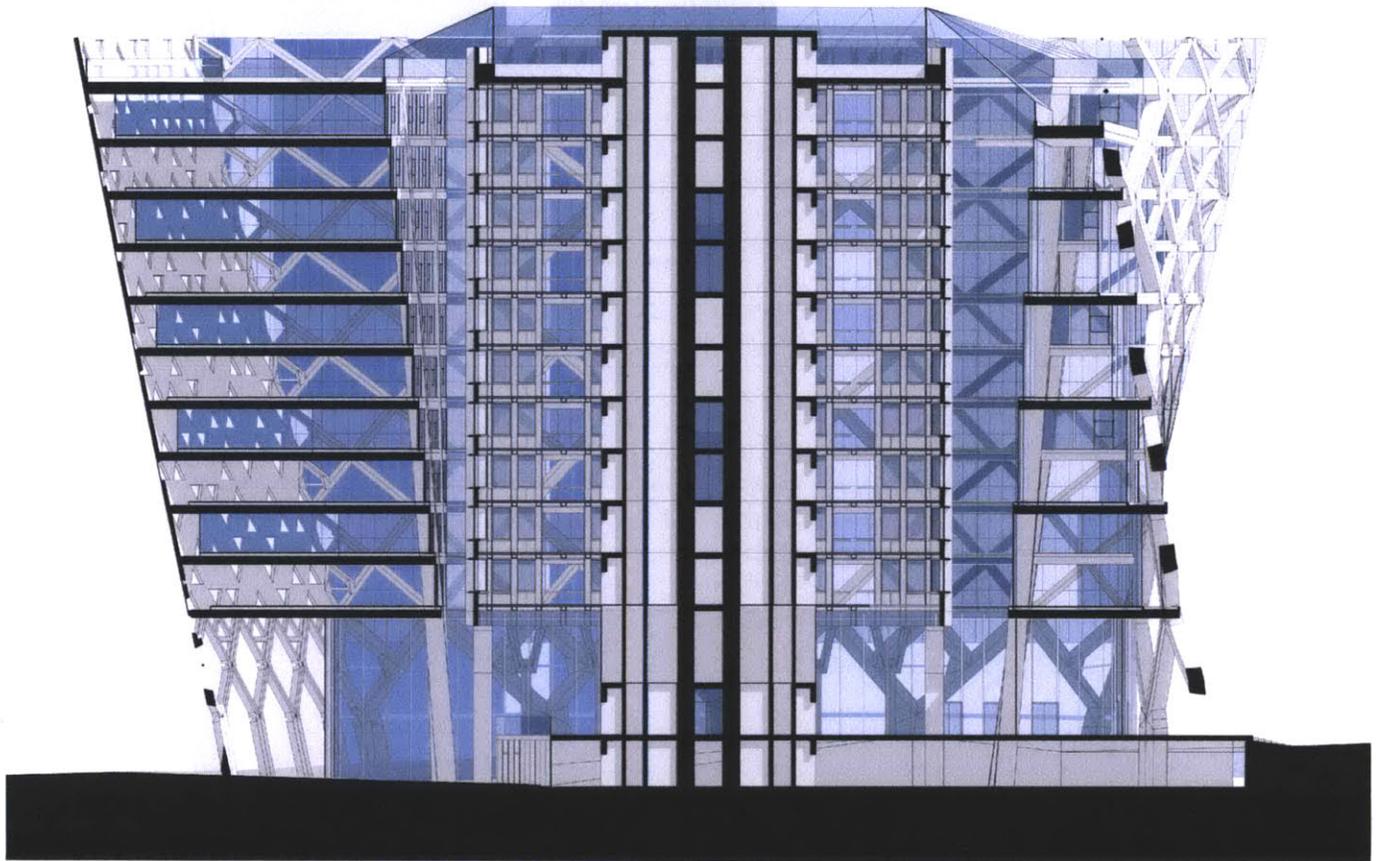
Much of the Rudolph structure was preserved in the proposal, due to its persisting quality, high thermal mass, and flexible, open planning. Instead of making major excisions to the structure, the existing tower was actually bulked up with an expanded concrete core to add increased stability and improve circulation and services for a larger building.

Small portions of the original façade were removed to allowing bridging between the old structure and the new. The original façade is then encased within the glass box of the inner curtain walls bounding the atrium, at once immediately on display yet screened from the street by the volume of the addition.

While the original textured façade no longer heralds the new project, it does rediscover its intended functionality after its enclosure in the atrium. After years of renovation, the original ventilation systems located in the original façade are no longer in use due to their inefficiency compared to centralized HVAC systems. However, the introduction of a hydrothermic radiant slab heating and cooling system in the renovation makes these service infrastructures useful again, as ideal locations for the placement of new pipes circulating heated or chilled water to modulate the temperature of the inner concrete floorslabs.



DETAIL VIEW OF SOUTH ELEVATION AND RAMPING CIRCULATION TO GREEN ROOF

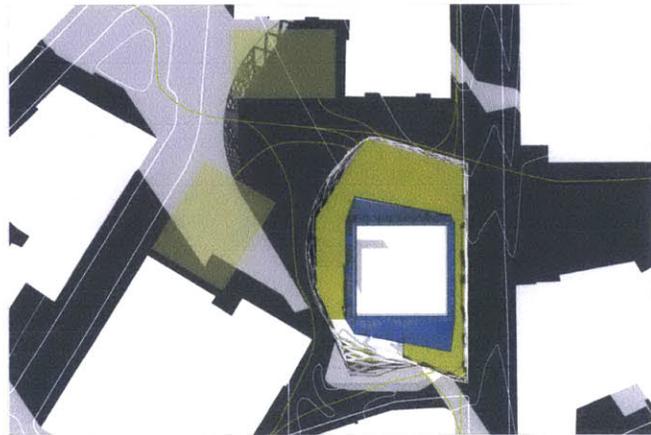


TRANSVERSE SECTION NORTH-SOUTH

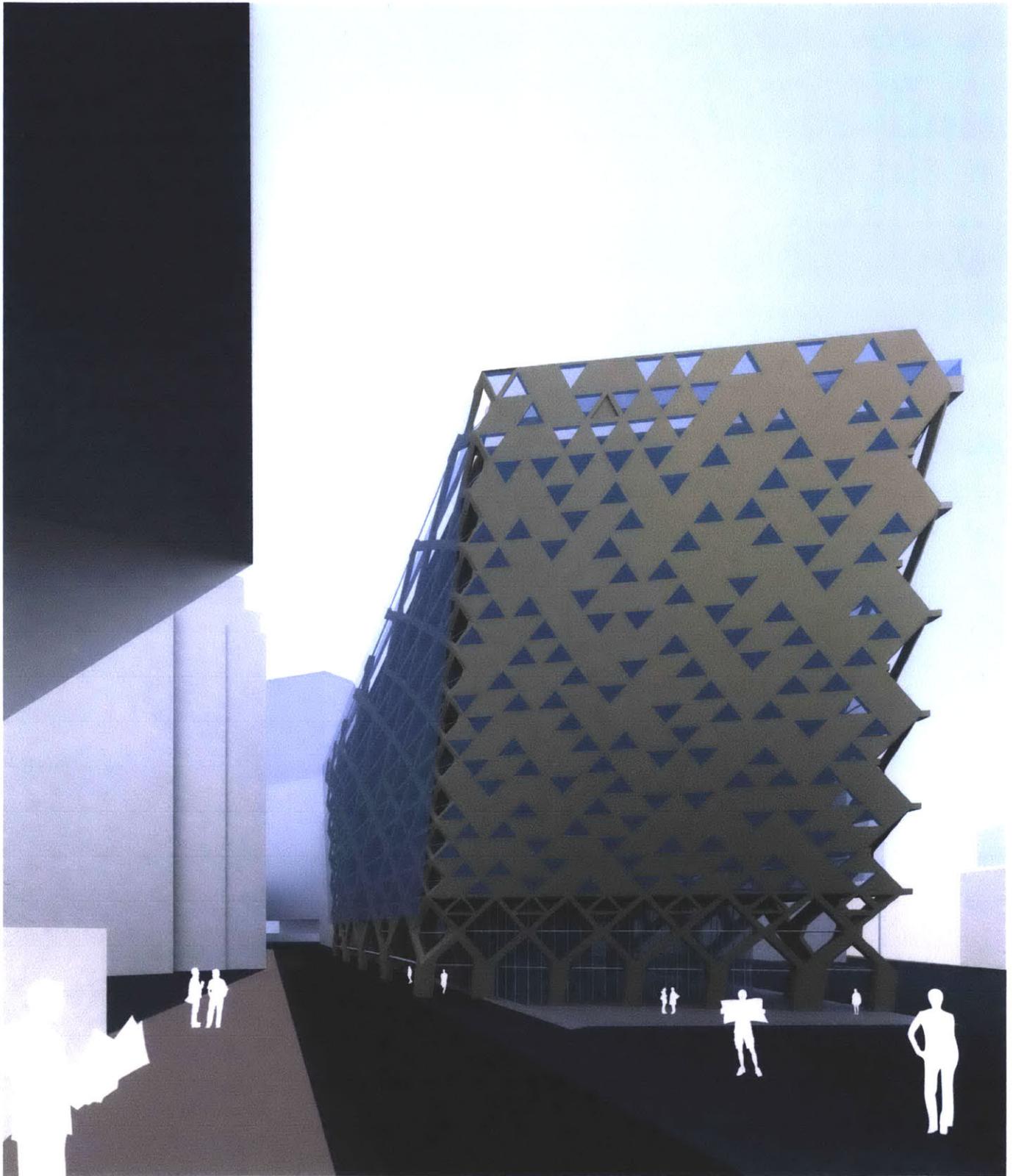
integration

The new building seeks to build upon the formal logic of the existing tower: a simple regular core surrounded by free occupiable space, supported by a high-performance structural skin whose integration of systems frees up the floorplan further. Though the vocabulary of the diagrid differs from that of the precast panel system found on the original tower, they each seek to make visible both the structures and the systems at work within the building.

Controversial and progressive in the 1960s, this structural expressionism has become familiar today. But the diagrid makes the logic of the structure one step clearer, in that the thermal system and the structural systems become integrated in the concrete thermal storage scheme.



PEDESTRIAN CIRCULATIONS

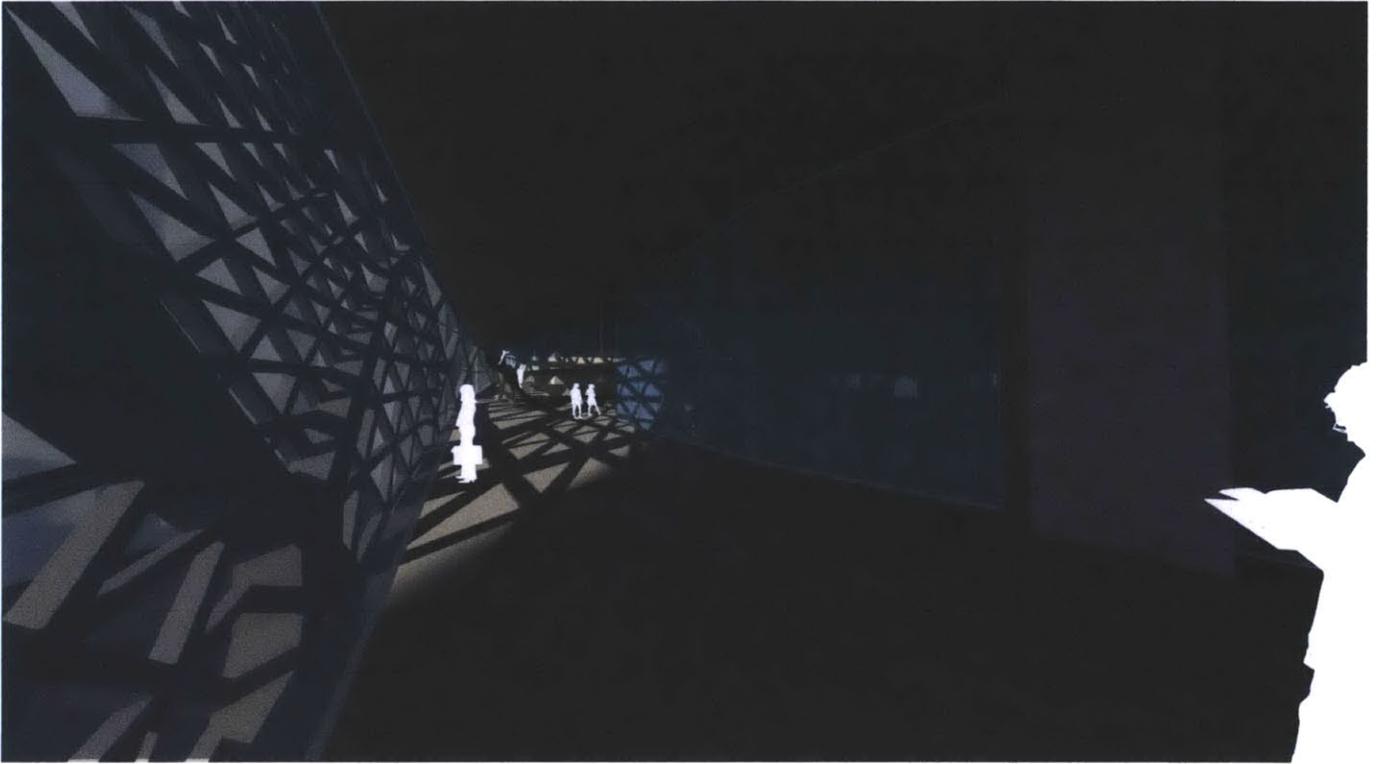


VIEW LOOKING SOUTH ALONG FEDERAL STREET TOWARD LOWER LOBBY ENTRANCE



The lower lobby is accessed from the new passage connecting Federal Street and Winthrop Square. It's south end opens onto an enclosed basements level, with the original lobby above. A ramp alongside the lower lobby leads up sloping Federal Street to the upper lobby entrances.

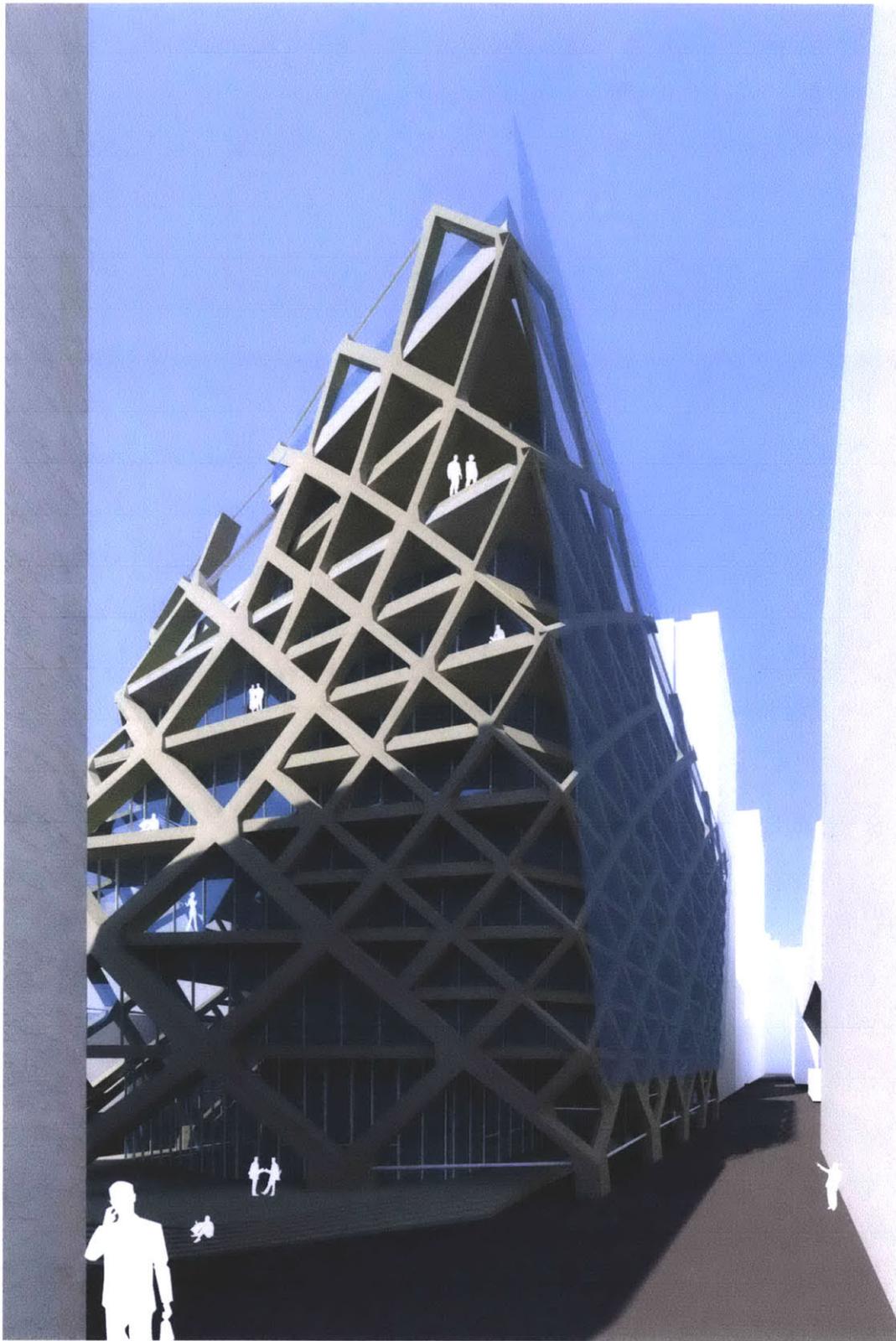
VIEW LOOKING SOUTH TOWARD UPPER LOBBY FROM SOUTH LOBBY



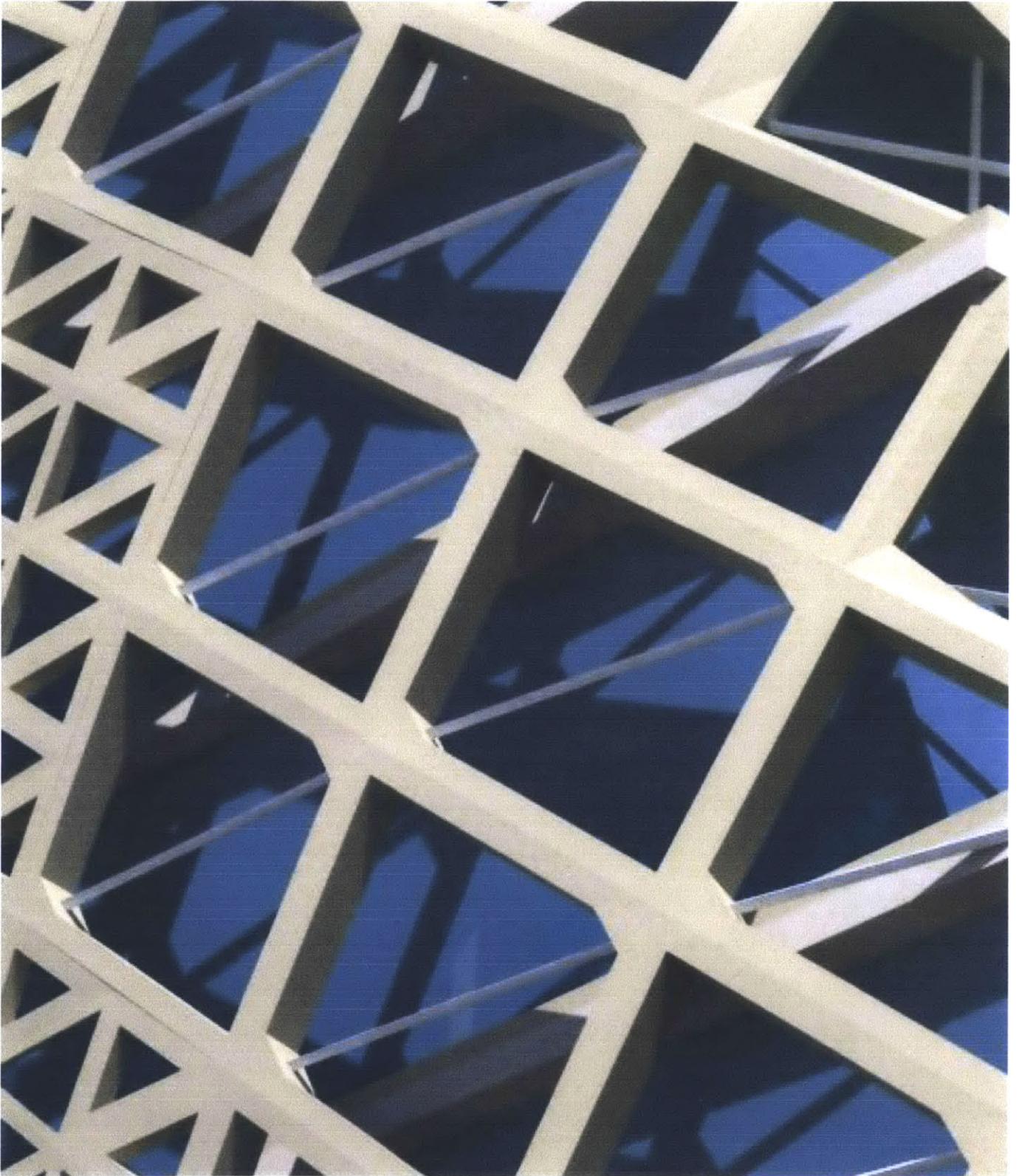
VIEW LOOKING NORTH WITHIN WEST LEVEL SIX GALLERY

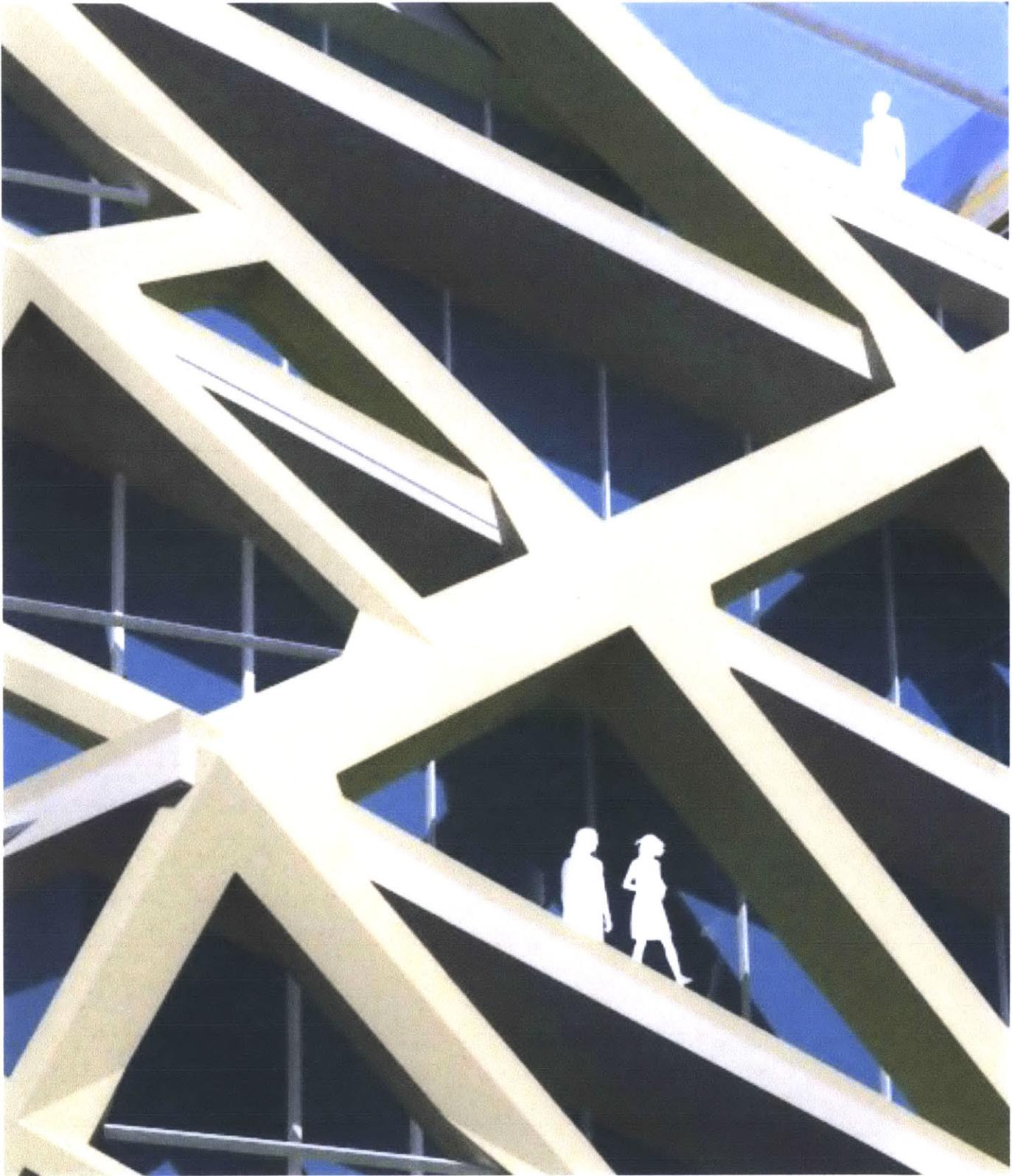


VIEW LOOKING EAST FROM WITHIN EXPOSED CORE STRUCTURE TO WEST GALLERY



VIEW LOOKING NORTH DOWN FEDERAL STREET





conclusion

partial preservation: a model for addressing brutalism today

Ultimately, the project suggests a model of partial preservation in which the interdependence between preserved structure and new architecture is ultimately more important than either of the architectures alone.

By applying the progressive tactic of iteration, the achievements of the Rudolph structure—as we interpret them today—are showcased as the genesis of new, experimental forms in the developed exterior.

Further research into alternative models of preserving brutalist structures, that neither treasure them too carefully nor erase them too completely, are needed today as the fate of many similar structures remains in question.

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