

EMBASSY OF NEW NATIONS

COOPER JOSEPH SCHILDER

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the requirements for the degree of**

**Master of Architecture
In
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Susan Piedmont-Palladino

Marcia Feuerstein

Scott Archer

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ABSTRACT

As the world becomes both more urbanized and both natural and man-made threats increase there is a growing concern for the resiliency of cities. How can a city adapt to absorb and recover from shocks? Public places today are threatened by the existence of terror attacks that result in unprecedented levels of destruction. The recent terror attacks in Paris, Berlin, and London have illustrated the disastrous effects of failing to adequately safeguard our public spaces.

The concept for an embassy that is designed not for one nation but for any number of potentially new ones created the opportunity to look at how the building type and technologies could play a larger role in the development of an architecture of defensive resiliency in an urban context. The design of this embassy undertook the challenges associated with the creation of a safe public space integrating with a highly secure facility. By challenging material assumptions and looking toward the present future of material science in the built environment this project sought to establish a new way of implementing a protected structure.

This project exposes how current material developments can change how we perceive security in architecture. Defensive structures do not need to present themselves as fortresses within the city, but can be inviting and open.

GENERAL ABSTRACT

More of the world's population is living in cities than ever before and threats to their existence have been increasing in frequency. These threats include both natural (flooding, heatwave, tsunamis, tornadoes, hurricanes) and man-made (terrorism, over-population). How can a city adapt to absorb and recover from these events? Public places today are threatened by the existence of terror attacks that result in unprecedented levels of destruction. The recent terror attacks in Paris, Berlin, and London have illustrated the disastrous effects of failing to adequately safeguard our public spaces.

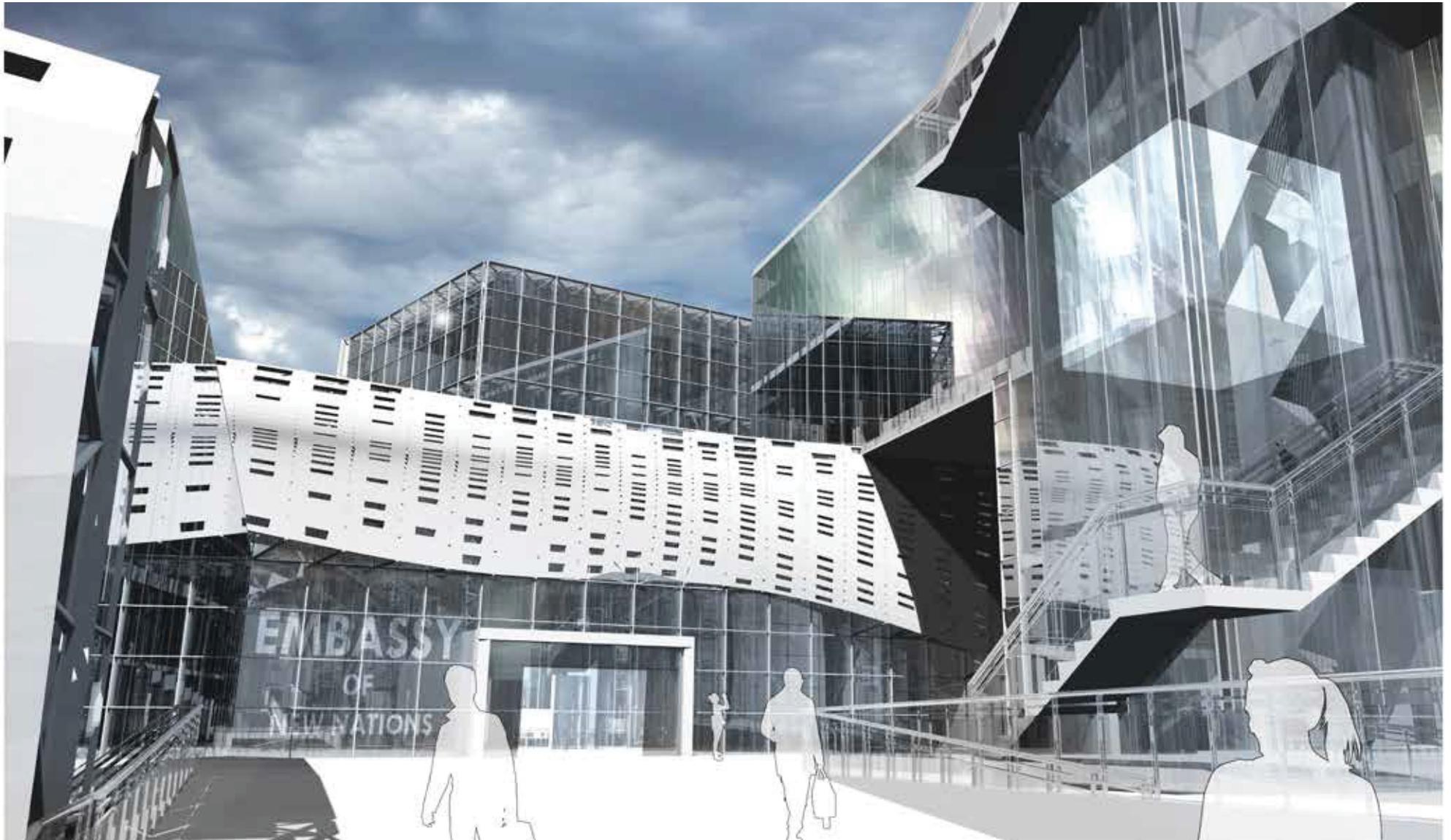
The concept for an embassy that is designed not for one nation but for any number of potentially new ones created the opportunity to look at how the building type and technologies could play a larger role in the development of an architecture that can survive these events in cities. The design of this embassy undertook the challenges associated with the creation of a safe public space integrating with a highly secure facility. By challenging material assumptions and looking toward the present future of material science in the built environment this project sought to establish a new way of implementing a protected structure.

This project exposes how current material developments can change how we perceive security in architecture. Defensive structures do not need to present themselves as fortresses within the city, but can be inviting and open.

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INTRODUCTION



As the world becomes both more urbanized and both natural and man-made threats increase, there is a growing concern for the resiliency of cities. How can a city adapt to absorb and recover from shocks? Environmental impacts on architecture have been the focus for many years with sustainability and green architecture becoming more commonplace. In defensive structures that are designed to withstand attack, there has only recently been a desire in the US for more buildings to be blast-resistant following the terror attacks of 9/11. Not only secure buildings but large offices, malls, and architectural icons must be secure against all forms of destruction. Public places today are threatened by the existence of terror attacks that result in unprecedented levels of destruction.

The design of a start-up embassy was chosen to explore the concepts regarding resiliency in the city. An embassy plays several roles but architecturally primarily two: representation and security. The concept for an embassy that is designed not for one nation but for any number of potentially new ones created the opportunity to look at how the building type and technologies could play a larger role in the development of an architecture of defensive resiliency in an urban context.

Resiliency demands quick recovery from shocks. An architecture that can mitigate the effects of shocks and become quickly reusable following an event is desired in the face of evolving threats.

Architecture is inescapably a political art, and it reports faithfully for ages to come what the political values of a particular age were. Surely ours must be openness and fearlessness in the face of those who hide in darkness. Precaution. Yes. Sequester. No. -Senator Daniel Patrick Moynihan¹





BRITISH EMBASSY IN WARSAW



PRECEDENT: BRITISH EMBASSY WARSAW EXTERIOR

"The threat of attack has dictated not only its siting but also the adoption of a circulation system that it is a good deal more constipated than any architect would wish for and a structure of a mass capable of withstanding the effects of an explosion. The building's principal achievement lies in the effectiveness with which it circumnavigates the fortress-like expression that this last constraint would seem to imply. It manages this through the use of a highly sophisticated double external wall assembly. The chunky inner layer is in-situ concrete, punctured by openings fitted with blast resistant double-glazing and faced externally in insulation and bronze-anodized aluminum panels.

This, however, is veiled by the sacrificial — and therefore much more finely detailed — outer wall which is set just over a meter in front and comprises a sheer plane of toughened glass, supported on a grid of slender, bronze-anodized aluminum frames.

The outer wall's role is in part an environmental one: closing the louvers that have been fitted at parapet level during the winter months allows a blanket of warm air to be maintained in the cavity between the two walls while opening them in summer allows a stream of cool air to be drawn across the inner facade. However, the wall's aesthetic contribution is just as significant. While the insistent horizontal module of its grid corresponds to that of the columns behind, the extremely tall panes of glass from which it is composed establish an image that is both grander and less forbidding than might otherwise have been achieved"

Text & Image: "British Embassy / Tony Fretton Architects" 02 May 2011. ArchDaily. Accessed 3 Jun 2017. <<http://www.archdaily.com/131780/british-embassy-tony-fretton-architects/>>



PRECEDENT: BRITISH EMBASSY WARSAW INTERIOR

Image: "British Embassy / Tony Fretton Architects" 02 May 2011. ArchDaily. Accessed 3 Jun 2017. <<http://www.archdaily.com/131780/british-embassy-tony-fretton-architects/>>

US EMBASSY IN LONDON



PRECEDENT: US EMBASSY LONDON EXTERIOR

"Openness and transparency" were KieranTimberlake's watchwords. The design, the firm explained, was inspired by European castles—not in having 20-foot-thick stone walls and chutes for showering boiling oil down on the enemy, but in that the building's defensive strategy would be hidden in the landscape. In principle, the scheme isn't too far from a medieval motte and bailey. The 200-foot glass cube is raised up on a hill, set back from the nearest street by over 100 feet, and surrounded by a moat—or a "pond," as the architects would prefer you to call it.

To the north, the site is bordered with an English yew hedge, which leads to meadowland planted with species native to North America ("analogous to the special relationship between the United States and the United Kingdom," the architects reason). But

this isn't any old yew hedge. Secreted inside the foliage will be a line of steel and concrete bollards capable of stopping an eight-ton truck driving head-on at 40 miles per hour. If, by some miracle, a hostile vehicle does break through the hedge of steel, it will be confronted by a wall of seating at the other end of the meadow, along with two sharp changes of level, and then the great pond—a 100-foot expanse of water, behind which the embassy stands on a raised plinth, its defensive wall disguised by a gushing waterfall.

To the south, the site is edged with another seating wall—benches affixed to a thick slab of truck-impeding concrete—behind which the landscape rises in a defensive berm, a.k.a. a "meadow" with the "sense of expansion characteristic of the rolling American plains."¹ As the cross section in the planning application shows, a third of the way along this mound the ground plummets into a steep ditch. It is labeled as a "bioswale" for environmental purposes, but it

just so happens to be conveniently scaled so as to trap any kind of moving vehicle that might try to make a break across the meadow. It is a traditional British ha-ha, originally used to keep animals off the lawns of country houses, updated for 21st-century security needs.

Text & Image: Oliver Wainwright. "Fortress London: The New US Embassy and the Rise of Counter-Terror Urbanism" 2016. Harvard Design Magazine. Accessed 3 Jun 2017. <<http://www.harvarddesignmagazine.org/issues/42/fortress-london-the-new-us-embassy-and-the-rise-of-counter-terror-urbanism>>



PRECEDENT: US EMBASSY LONDON INTERIOR

Image: David Basulto. "US Embassy in London / KieranTimberlake Architects" 24 Feb 2010. ArchDaily. Accessed 3 Jun 2017. <<http://www.archdaily.com/50922/us-embassy-in-london-kieran-timberlake/>>

FRENCH EMBASSY IN TOKYO



PRECEDENT: NEW FRENCH EMBASSY TOKYO EXTERIOR

This project called for the rebuilding of the French Embassy, planned in 2008, the year marking 150 years of Japan-French relations. Embracing the huge forest on the 25,400-square-meter site taken over from the Owari Tokugawa family as a maximum asset, the plans called for preserving the trees, harmony with the landscape, and consideration on the environment. With the theme of “an office in the forest,” as well as positioning the buildings in areas surrounding the forest, the shape of the buildings was planned so there would be minimal cutting of the trees.

The project consists of two buildings, one symbolic building facing the road, and the office building positioned at the back of the site. In order for comfortable work while looking out over the huge green forest on the northern side of the office building, the northern

façade of the building is composed of a full-height curving glass curtain wall, realizing a workspace becoming one with the view of the forest. Standing on the forest-side common-space wood deck, one gets the peaceful feeling of being hugged by the forest.

With the façade on the sides facing the nearby buildings, aiming for a feeling of becoming one with the forest and the natural perspective, the openings have been kept small to maintain the privacy of the neighboring apartment buildings. They are composed of pre-cast concrete (PCa) boards containing water-polished large-grain greenish black granite and small-grain limestone.

Three-dimensional greening has been carried out on the retaining wall, called the “green wall,” leading along a 50-meter slope to the entrance hall, realizing an approach space with the feeling of unity with the historical nature. The chain of top lights

covering the ceiling of the four-level atrium leading to the entrance hall creates a space with abounding nature and light, expressing the high grade dignity and dynamism of the embassy.

Text: New French Embassy. Tokyo, 2009. Takenaka. Accessed 4 June 2017. <http://www.takenaka.co.jp/takenaka_e/projects/office/a21810532009.html>

Image: Tokyo French Embassy. Architizer.com. Accessed 4 June 2017. <<https://architizer.com/projects/tokyo-french-embassy/>>



PRECEDENT: NEW FRENCH EMBASSY TOKYO INTERIOR

Image: New French Embassy. Tokyo, 2009. Takenaka. Accessed 4 June 2017. <http://www.takenaka.co.jp/takenaka_e/projects/office/a21810532009.html>

EMBASSIES IN THE DISTRICT



16TH STREET AND FRENCH EMBASSY

[16th Street and French Embassy, Washington, D.C]. Washington D.C, None. [Between 1910 and 1926] Photograph. Retrieved from the Library of Congress, <https://www.loc.gov/item/npc2008012884/>. (Accessed June 04, 2017.)



CUBAN EMBASSY

Cuban Embassy. Washington D.C, 1922. [or 1923] Photograph. Retrieved from the Library of Congress, <https://www.loc.gov/item/npc2008004222/>. (Accessed June 04, 2017.)



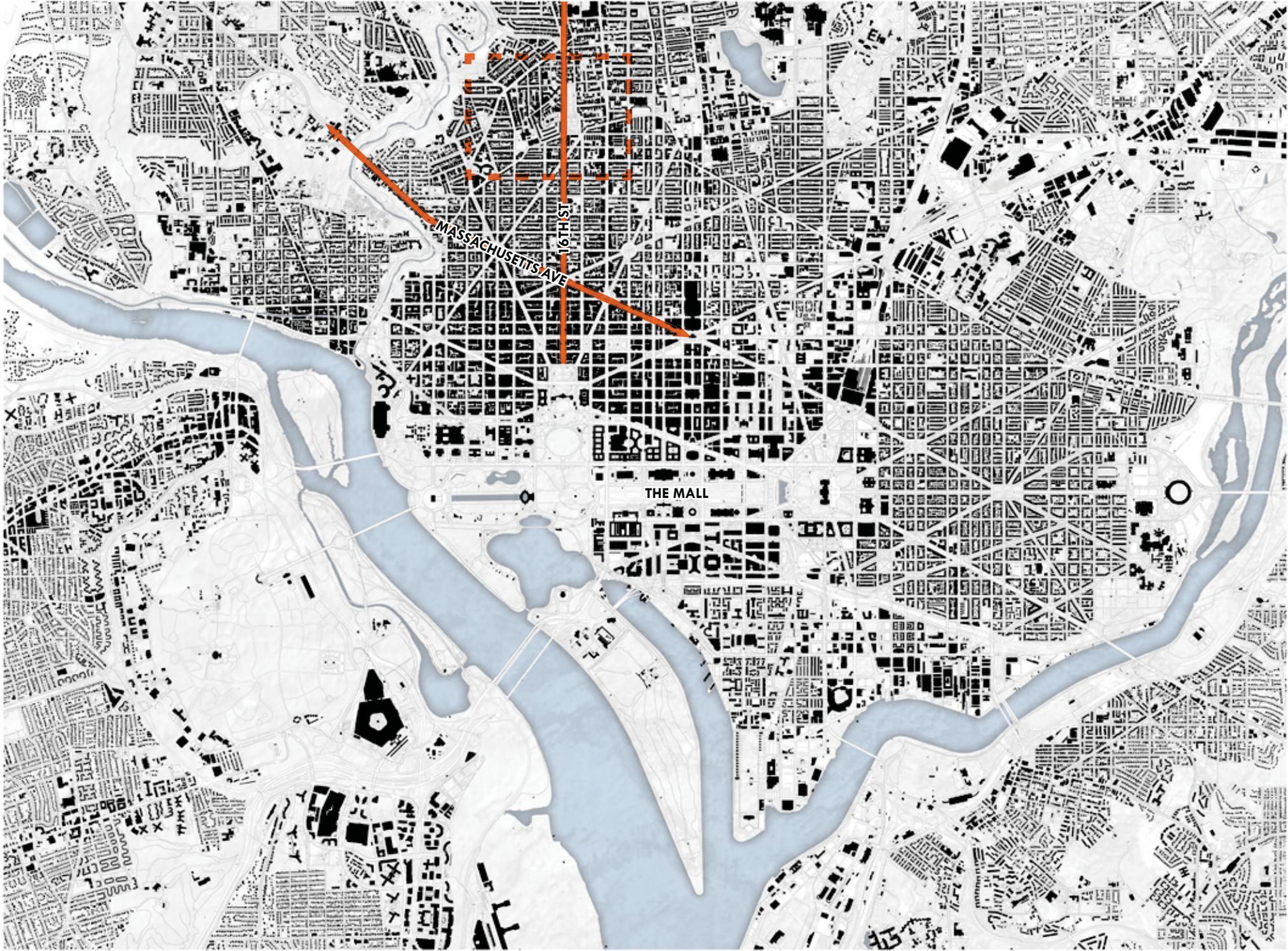
NETHERLANDS LEGATION

Netherlands Legation, 11/3/22., 1922. [November 3] Photograph. Retrieved from the Library of Congress, <https://www.loc.gov/item/npc2008010898/>. (Accessed June 04, 2017.)

Embassies have historically been located in several parts of the nation's capital. The original plan envisioned the Mall has hosting military parades and being lined by embassies that would be able to witness the strength of the new nation. During the 1800's however, 16th St, which is in perfect alignment with the center of the White House, became the location for many embassies.

Toward the northern boundary of the original city plans at Meridian Heights several buildings were constructed by Mary Foote Henderson as potential embassies and most were filled. The French, Dutch, Spanish, Italian, And Lithuanian embassies became situated here as a result. However, following the collapse of the stock market in 1929 mansions along Massachusetts Ave became available as wealthy businessmen were forced to move out.

Today embassies are still located mostly along this street with a small enclave being established further north more recently.



SITE OVERVIEW



VIEW AT 16TH STREET CORNER BEFORE MERIDIAN HILL PARK COMPLETION 1929

National Park Service. *View at 16th Street corner before completion 1929.* Retrieved from National Park Service, <https://parkplanning.nps.gov/document.cfm?parkID=198&projectID=50039&documentID=56850>

The neighborhood map depicts the embassies that have been historically and that are presently sited in the vicinity. The site location is highlighted as 1: Proposed Embassy of New Nations. 16th St separates the site location from Meridian Hill Park to the east and is in direct alignment with the White House.

- 1: Proposed Embassy of New Nations** 2300 16TH ST NW
- 2: Embassy of the Central African Republic** 2704 ONTARIO RD NW
- 3: Embassy of Poland** 2640 16TH ST NW
- 4: Embassy of Cuba** 2630 16TH ST NW
- 5: Embassy of Lithuania** 2622 16TH ST NW
- 6: Former Embassy of France** 2460 16TH ST NW
- 7: Embassy of Angola** 2100 16TH ST NW
- 8: Embassy of Equatorial Guinea** 2020 16TH ST NW
- 9: Embassy of Ecuador** [Former Netherlands Legation] 2535 15TH ST NW
- 10: Former Embassy of Hungary** 2437 15TH ST NW
- 11: Former Legations of Egypt and Nicaragua** 2401 15TH ST NW



SITE HISTORY



HENDERSON CASTLE

Henderson Castle in 1917. The only remnant of the mansion is the retaining wall visible here with spectators sitting along its length.

Harris & Ewing, photographer. FRENCH COMMISSION TO U.S. PROCESSION DOWN 16TH STREET. Washington D.C., 1917. Photograph. Retrieved from the Library of Congress, <https://www.loc.gov/item/hec2008005846/>. (Accessed June 04, 2017.)

“In 1816, . . . , Commodore David Porter, a naval hero from the war of 1812, purchased a 110-acre tract of [the Georgetown landholder Robert] Peter’s land and forever changed it’s name by dubbing it ‘Meridian Hill.’”¹ 16th Street was understood to be the “central meridian of the District of Columbia.” The house he constructed on this site was to be situated directly in line with this meridian in the middle of present-day 16th St. “Following his presidential term in the White House, [John Quincy] Adams . . . retired to Porter’s Meridian Hill House.”²

During the Civil War the house was converted into a hospital and in 1863 burned to the ground following a major fire.³ In 1867 the *Hall & Elvans’ Subdivision of Meridian Hill* was created “for Isaac E. Messmore [which] consisted of 22 squares between Boundary Street (Florida Avenue) and Columbia Road and 15th Street and 18th Street.”⁴

In 1888 the Hendersons bought up land here and built a mansion on the former boundary of the city called Boundary Castle. Mrs. Henderson had grand visions for 16th St and was successful in establishing several embassies in the area.⁵ Meridian



MRS. HENDERSON

Mrs. Henderson lived in the boundary castle mansion visible in the image on the right. She has had a lasting impact on the development of this neighborhood.

Harris & Ewing, photographer. HENDERSON, JOHN, MRS., None. [Between 1905 and 1945] Photograph. Retrieved from the Library of Congress, <https://www.loc.gov/item/hec2009002759/>. (Accessed June 04, 2017.)

Hill Park was also a successful proposal of Mrs. Henderson’s which took many years and congressional approval to have constructed and fit with her City Beautiful vision of the area.⁶

In 1918 Meridian Mansion Apartments, now the Envoy, “was the residence of Tomas Masaryk when he established the nation of Czechoslovakia and from which the flag of that country was first flown on October 18, 1918.”⁷ Following the stock market crash in 1929 many mansions properties suitable for embassies became available along Massachusetts Avenue which has become the new “Embassy Row.”

1 National Register of Historic Places, *Meridian Hill Historic District*, 28.

2 *Ibid.*, 29.

3 *Ibid.*, 30.

4 *Ibid.*

5 *Ibid.*, 33-34.

6 *Ibid.*, 36.

7 Ganschietz, *Meridian Mansions National Register of Historic Places Inventory Nomination Form*, 3.

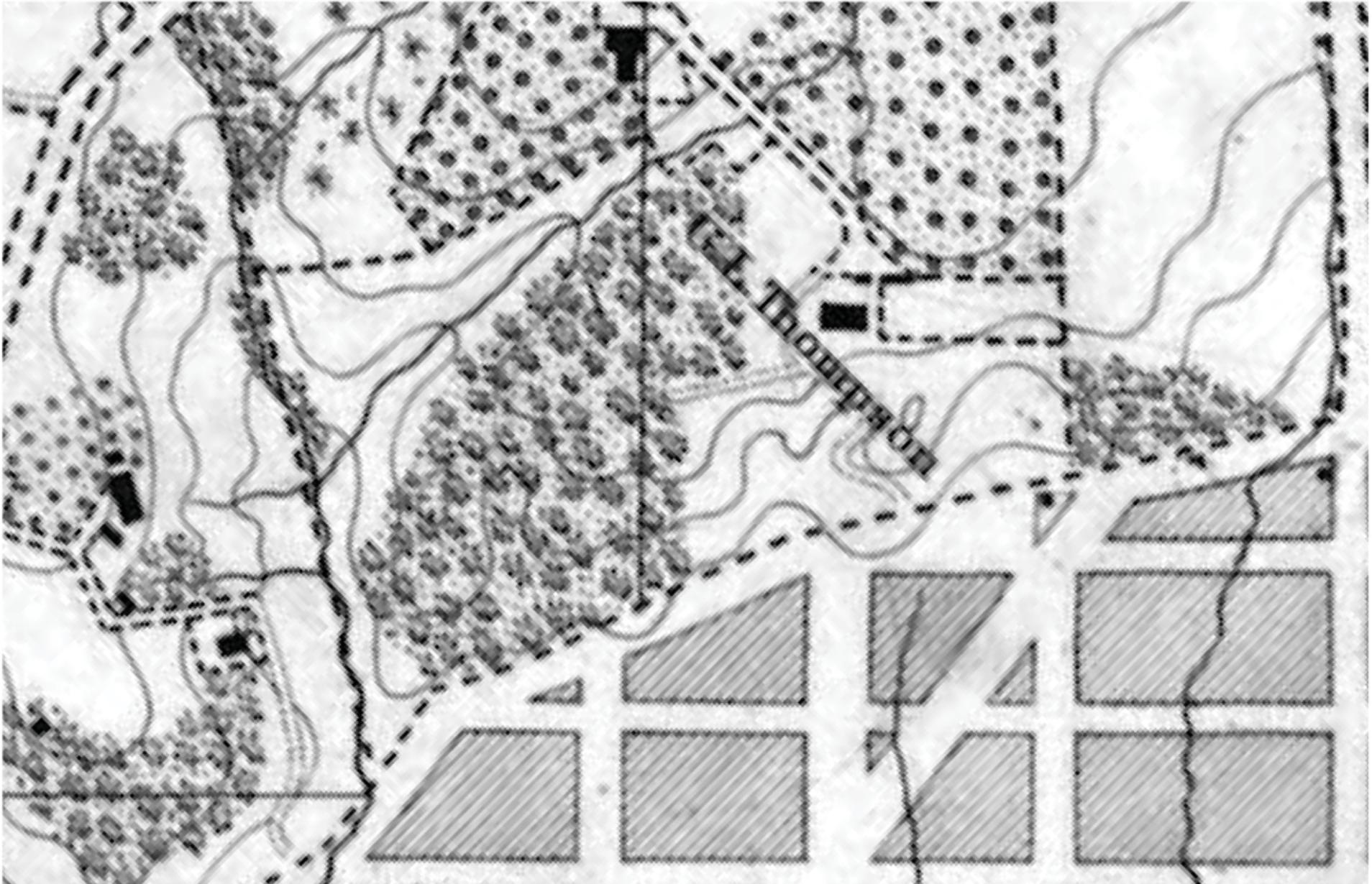


MERIDIAN HILL PARK OVERLOOKING SITE HISTORIC PHOTO

The White-Meyer House is visible in the background as a man overlooks the proposed embassy site location. This Balustrade is proposed to be partially removed in order to bridge over 16th the proposed plaza at the site.

National Park Service. Meridian Hill Park Historic Photograph. *A man gazes out over 16th Street during the park's construction.* Retrieved from National Park Service, <https://www.nps.gov/media/photo/gallery.htm?id=29CE775E-1DD8-B71C-07054614AA09E776>. (Accessed June 03, 2017.)

1850

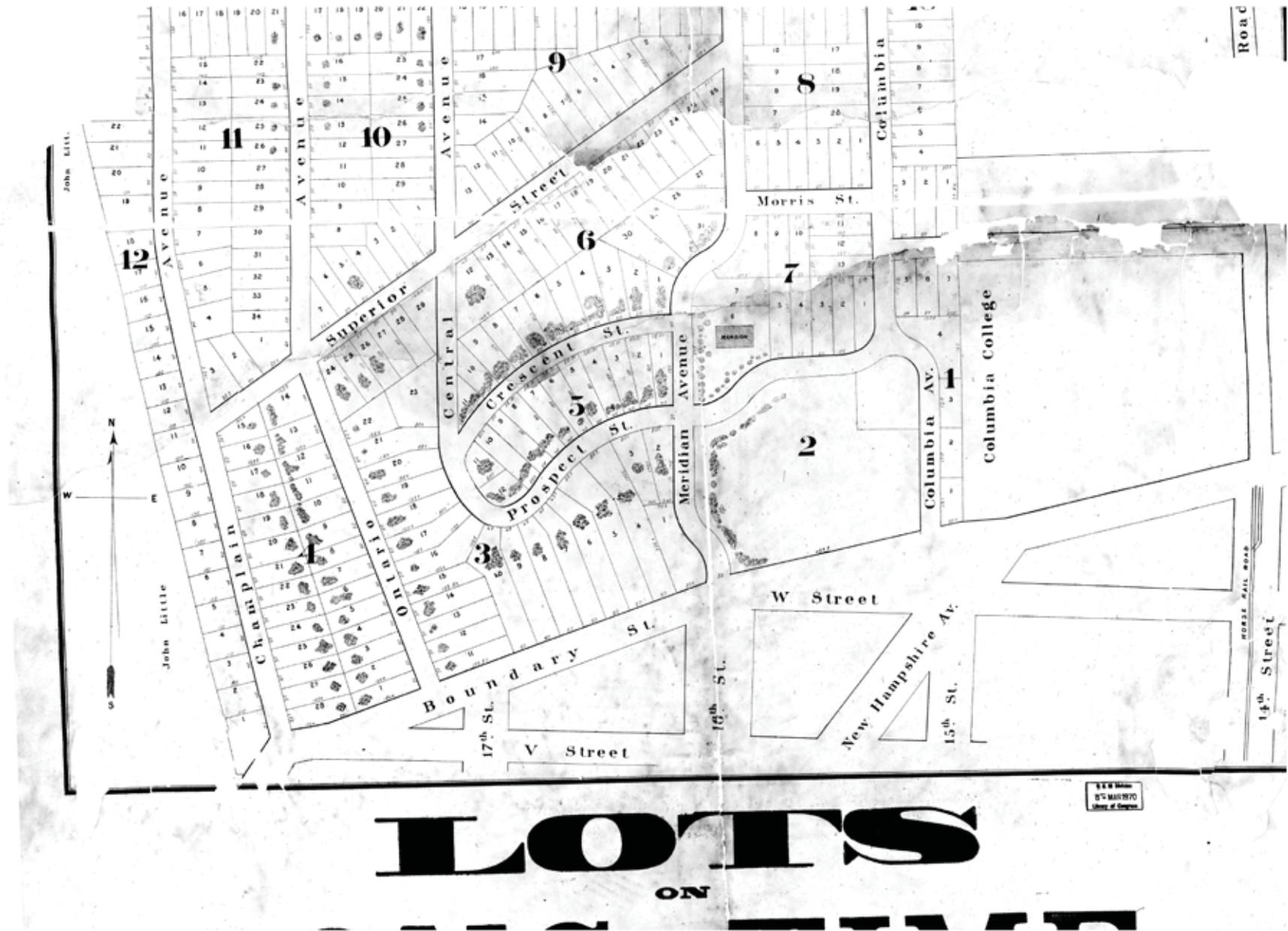


1861 TOPOGRAPHIC MAP OF THE DISTRICT OF COLUMBIA

Following the establishment of the district of Columbia the site lay just beyond the city boundaries. The Porter House is shown here as being owned by Thompson just before the civil war. It is situated in the middle of the present-day 16th St and is aligned to the White House similarly to the bridge proposed in the design.

Boschke, A, D McClelland, Hugh B Sweeny, Thos Blagden, and Blanchard & Mohun D. McClelland. Topographical map of the District of Columbia. Washington: D. McClelland, Blanchard & Mohun, 1861. Map. Retrieved from the Library of Congress, <https://www.loc.gov/item/88694013/>. (Accessed June 03, 2017.)

1867

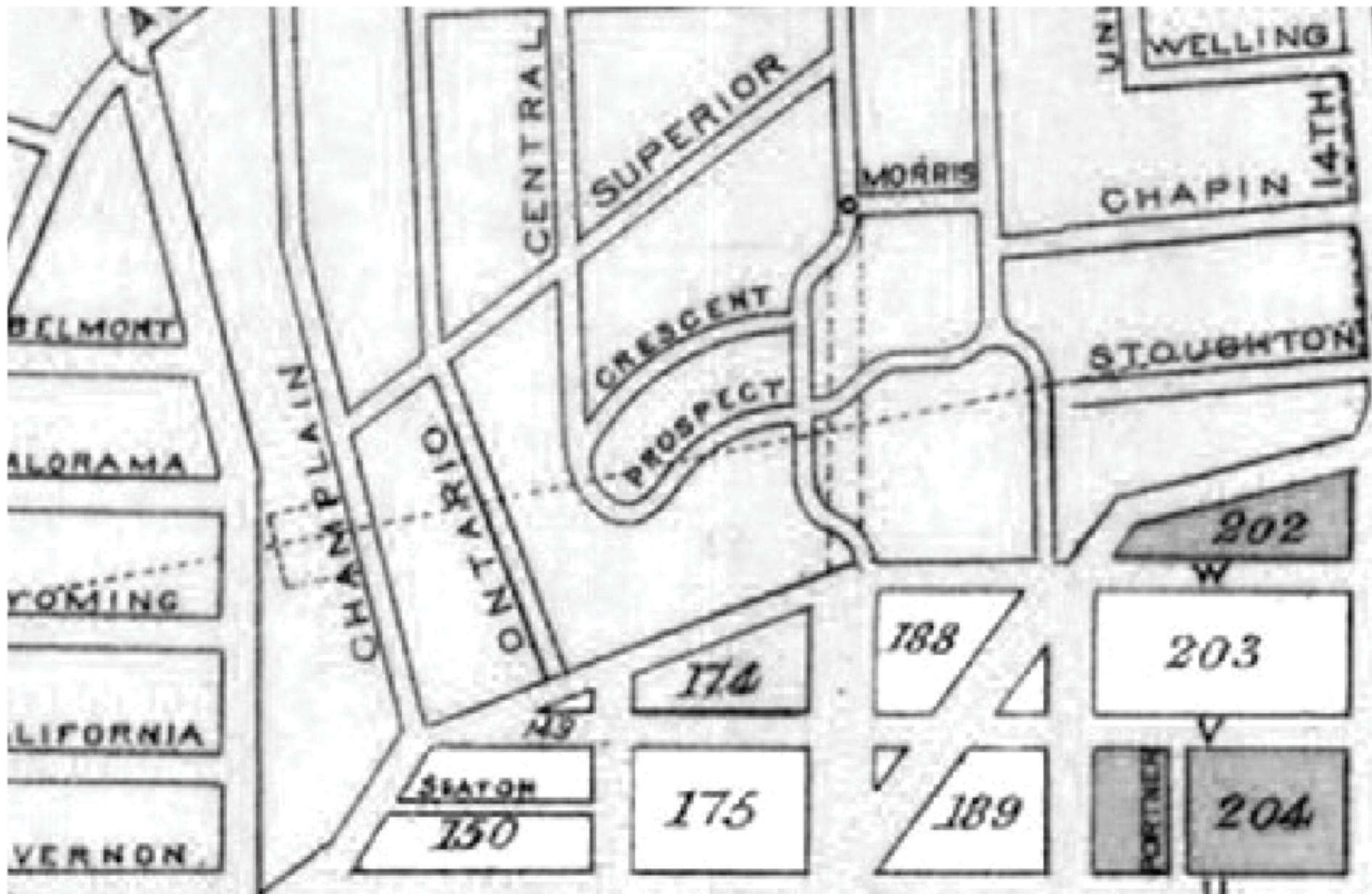


**1867 HALL AND ELVANS' SUBDIVISION OF MERIDIAN HILL,
WASHINGTON COUNTY, D.C.**

The lots were subdivided in order to be sold following the end of the Civil War.

Bliss, Charles H, Hall's Real Estate Exchange, and Black & Sturn Snyder. *Hall and Elvans' subdivision of Meridian Hill, Washington County, D.C.*: Sept. 1867. [Washington: Hall's Real Estate Exchange, ?, 1867] Map. Retrieved from the Library of Congress, <https://www.loc.gov/item/88690982/>. (Accessed June 03, 2017.)

1891

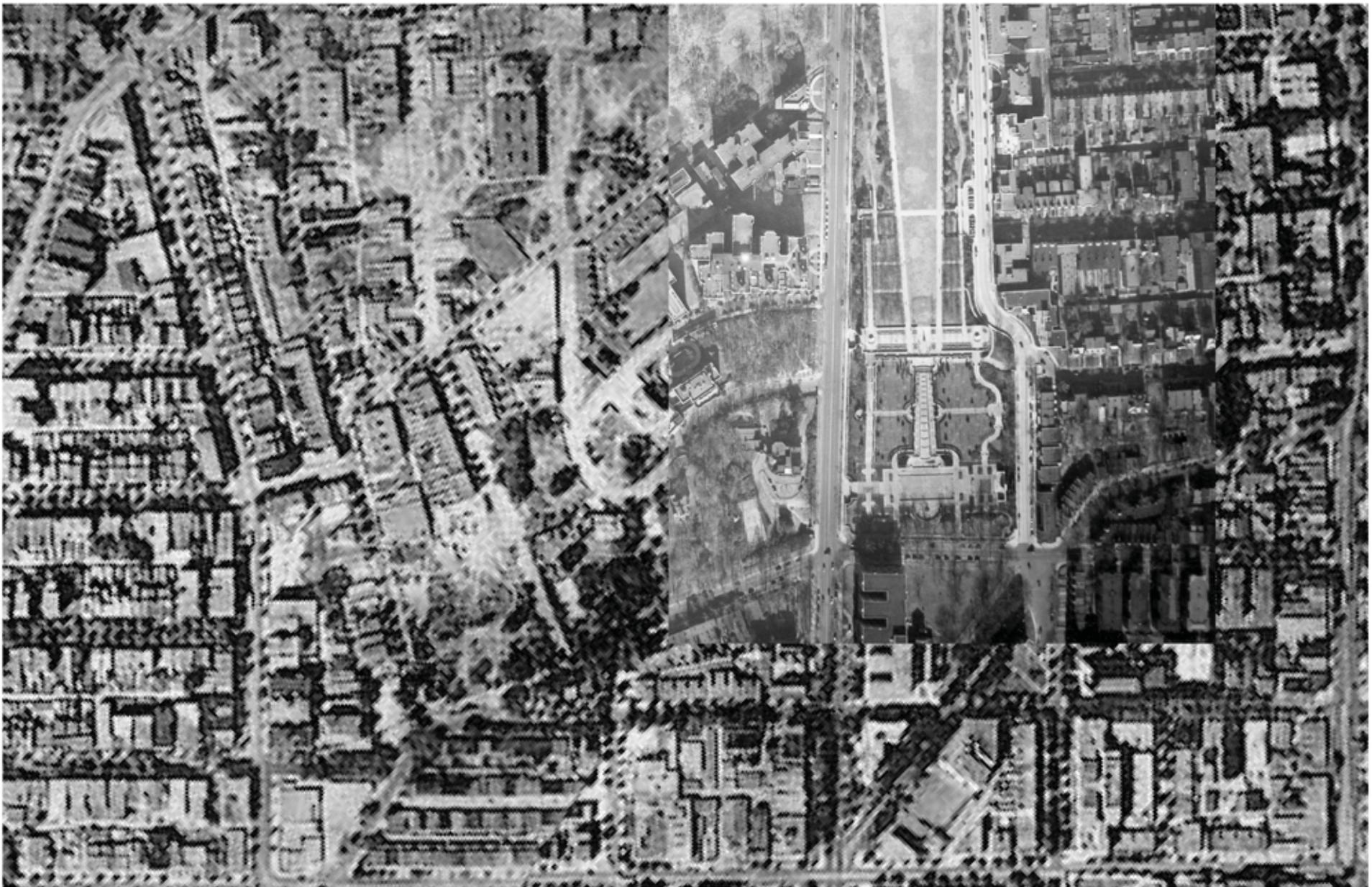


1891 VALUATION MAP OF THE DISTRICT OF COLUMBIA

The mansion that lay in the middle of present-day 16th St burned down and the alignment of 16th St was corrected in order to stay straight on axis from the White House. The Henderson's bought up many of the lots during this time period.

Rossell, W. T., J. L Lusk, District Of Columbia. Engineer Department, United States Government Printing Office, and District Of Columbia. Board Of Commissioners. [Maps accompanying the report of the operations of the Engineer Department of the District of Columbia: for the fiscal year ended June 30, 1891: Washington D.C]. Washington: G.P.O, 1891. Map. Retrieved from the Library of Congress, <https://www.loc.gov/item/90685664/>. (Accessed June 03, 2017.)

1930



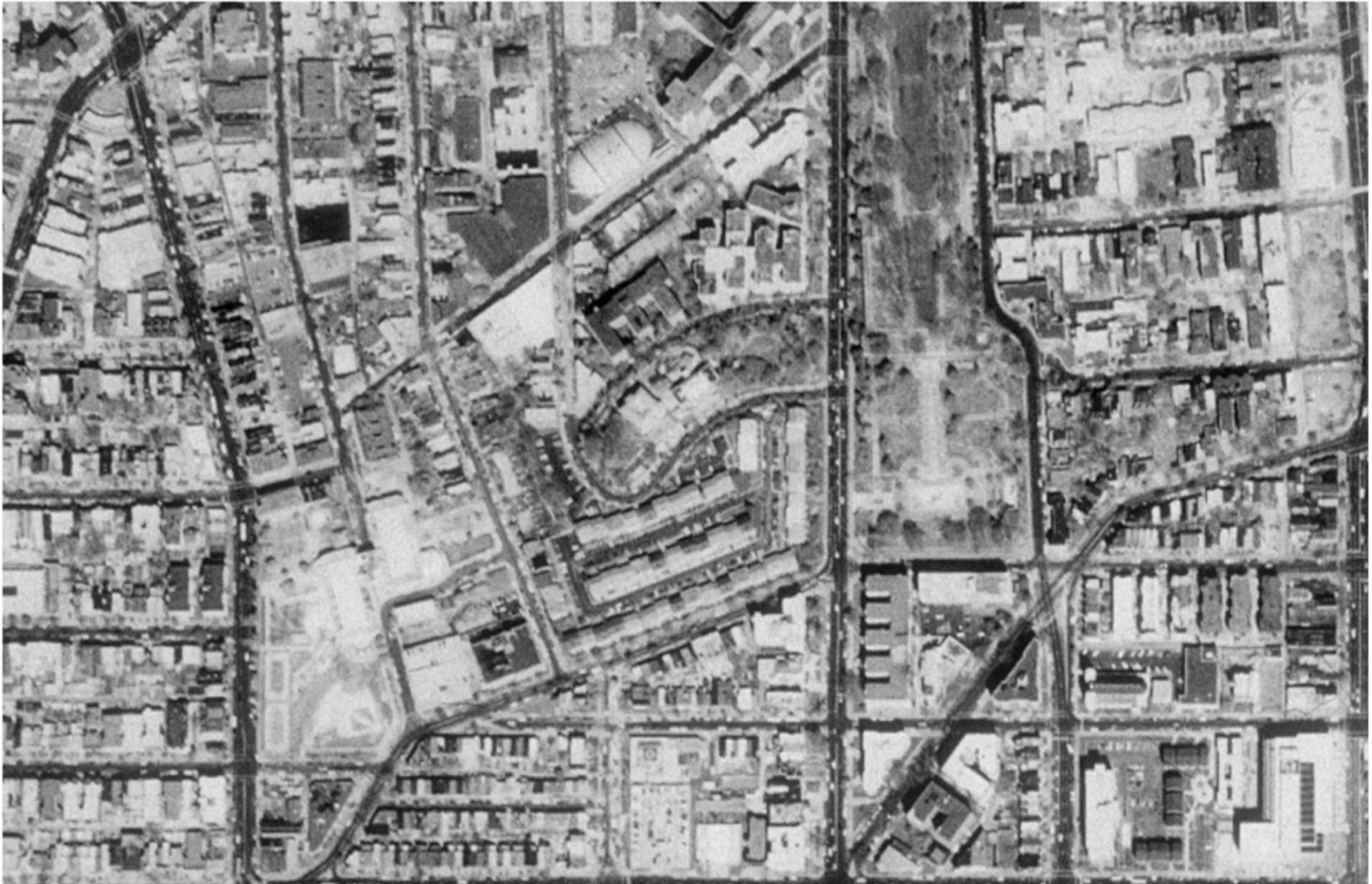
1930 AERIAL IMAGERY

Several of Mrs. Henderson's embassies can be seen in this aerial. The center image of Meridian Hill Park was taken during its completion and includes higher resolution imagery of the surrounding buildings. Notably among them are the Henderson's Boundary Castle on the southeast, the White-Meyer House adjacent to east the proposed embassy site, and the Envoy Residences just to the north of the site.

United States Army. Air Service. 3rd Photo Section. Aerial photographic mosaic map of Washington, D.C. [Bolling Field, Washington: Aerial Photo Section No. 3, U.S. Army Air Service, 1922] Map. Retrieved from the Library of Congress, <https://www.loc.gov/item/87693346/>. (Accessed June 03, 2017.)

National Park Service. Aerial View of Meridian Hill Park. Retrieved from National Park Service, <https://www.nps.gov/media/photo/view.htm?id=2A1877A3-1DD8-B71C-0714743121D226C8>. (Accessed June 03, 2017.)

1988



1988 AERIAL IMAGERY

In the 1949 Henderson's Boundary Castle was razed to and in 1977 Beekman Place Condominiums were constructed on that site.

US Geological Survey. Aerial Imagery (1988). Accessed through Google Earth. (June 3, 2017)

2016



2016 AERIAL IMAGERY

Several of the previously empty lots have been filled, but otherwise not much has changed since the 1988 aerial imagery.

Google Earth. Aerial Imagery (2016). Accessed through Google Earth. (June 3, 2017)

CONTEXT 2017



Meridian Hill park today has hundreds of visitors weekly and features a drum circle and large expanses of lawn for recreation and relaxation. It functions for the city in many ways, primary among them as a place for peaceful protest. It's proximity and activity make it an ideal connection point to the rest of the city for an embassy. The park currently has limited street access due to its elevation in relation to the street edge. Most of the edges of the park are walled with access points along 16th limited to only a few openings. Immediately adjacent to the chosen site is a vertical wall 44 feet in height. In the above image the site and proposed bridge location would be directly in front of the viewer beyond the fountain. The Envoy is visible to the right of the above image.



A man looks out over the site location at the proposed bridge connection point. November, 2016

SITE



The site has several characteristics that naturally add defensive capabilities. The topography of the site was constructed partially out of the delineation of 16th St as it cuts through the hill which results in the site being several feet higher than all of the surrounding roads. While 16th St is a large road and carries high volumes of traffic the two adjacent roads of Belmont and Crescent Place are very low volume and mostly one-way. This also adds to the defensiveness as the only plaza entrance at-grade happens on the north from Crescent Place which is a one-way that exits out to 16th St. As a result a traffic approaching from that direction is in the line of sight of the embassy from its entrance onto Belmont St and during special events can be shut down to allow a more thorough screening process to all vehicles entering the vicinity.

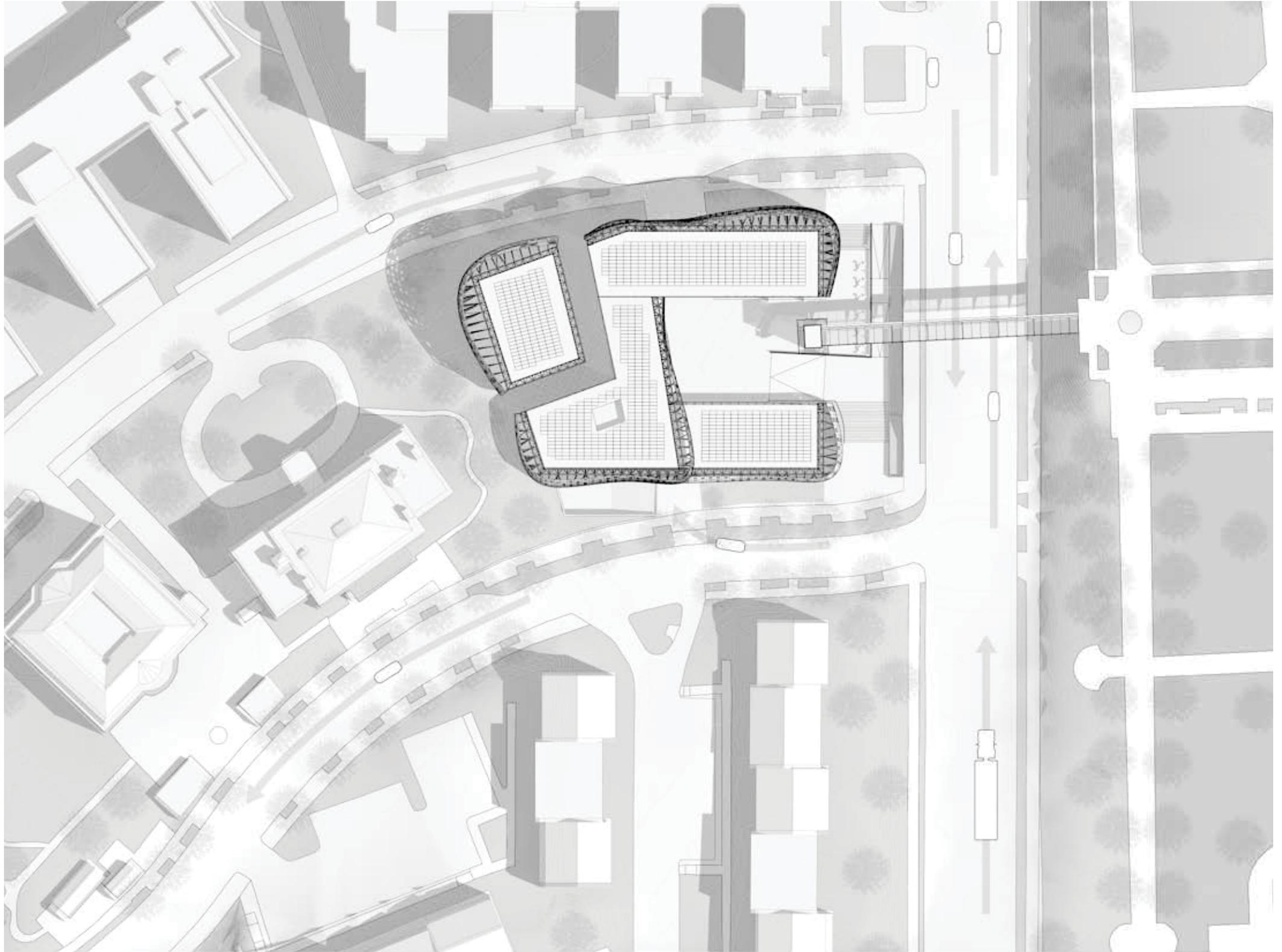
The adjacent buildings are mostly housing with the exception of the White-Meyer and Meridian Houses which are owned and operated by the Meridian International Foundation which is a non-profit dedicated to public diplomacy and “advancing effective global leadership.”¹ The parking lot that exists on the site currently is owned by Meridian International.

The Envoy is now an apartment building after losing some of its former opulence. The towers that existed when it was constructed are no longer present.

A remnant from the Henderson’s Boundary Castle is the Seneca sandstone that forms the wall visible in the image above on the left. Following the razing of their residence the only remaining element on the site is this wall which serves as a retaining wall.

¹ Meridian International. Accessed June 7, 2017
<<https://www.meridian.org/>>

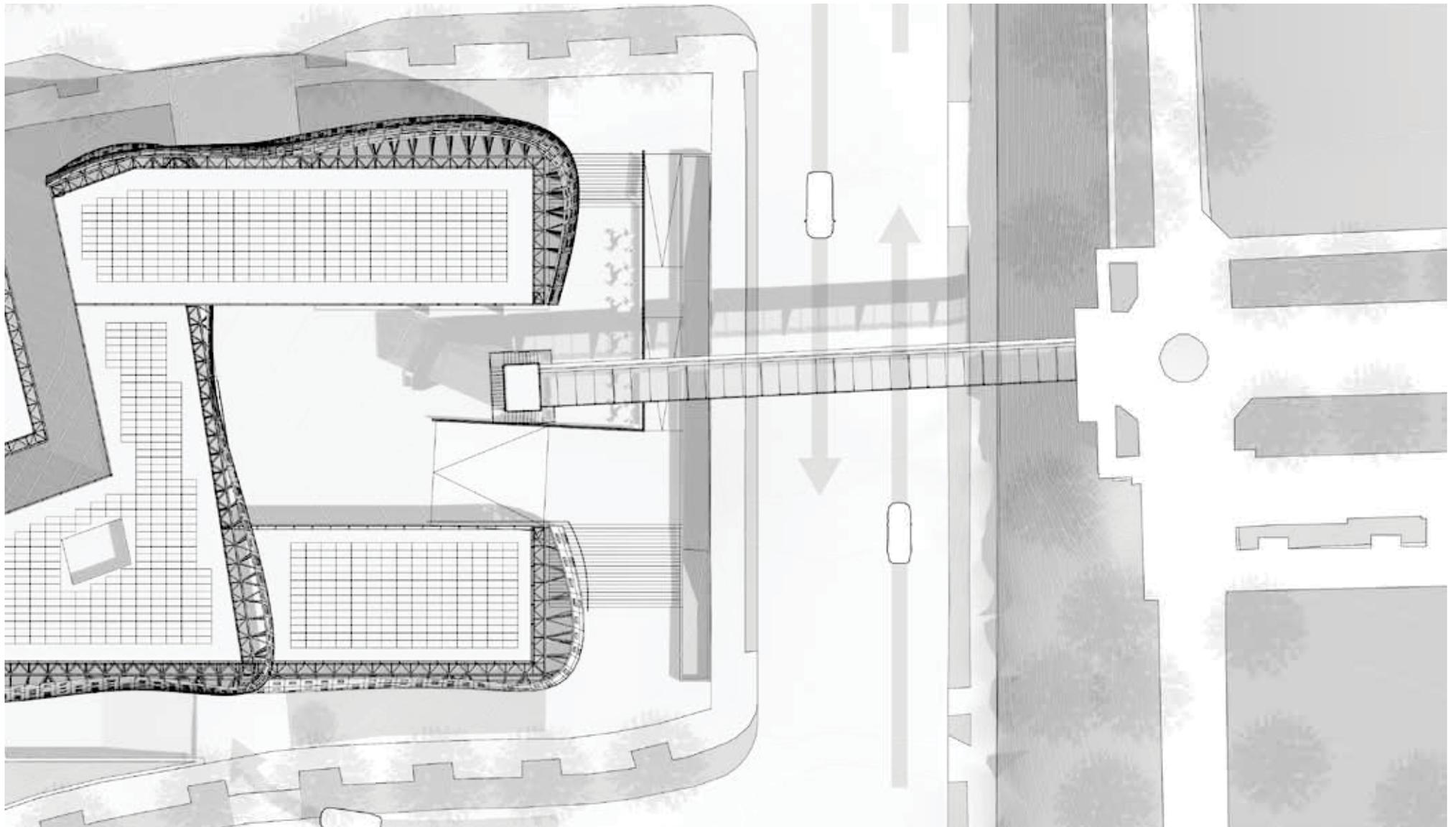
Traffic on 16th Street is fairly heavy and the road serves as an emergency route from the center of the city. The crosswalks visible in the foreground lead on the closer side of 16th St to the retaining wall for Meridian Hill Park. Access to the park is only possible from an entrance 250 feet south of this point or 500 feet north of this point. The proposed bridge would allow unimpeded access from the neighborhood surrounding the site to the park from the proposed plaza.



SITE PLAN



BRIDGE DESIGN



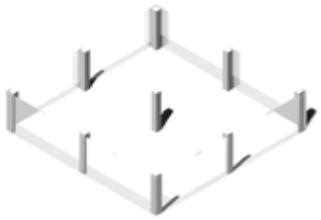
Connecting the proposed plaza to the park links the host nation and the embassy nation and allows for increased circulation in the neighborhood. The park currently acts as a place for both recreation and peaceful protest and a connection to the plaza would allow for an extension of these activities. Without this bridge, residents and visitors are required to make a several hundred foot detour to access a non-accessible route through the park or a thousand foot detour to an accessible portion of the top. The proposed bridge would link the neighborhoods to the park with continuous accessible access directly to the park.

The bridge is designed to correlate but not compete with the proposed embassy. It lands directly into the plaza just within the site lines aligning with adjacent lots. Its steel structure is on one side of the bridge only and has structural 5-ply glass

walkways and a structural glass railing which will provide unimpeded views of the traffic and down 16th St to the White House and Washington Monument.



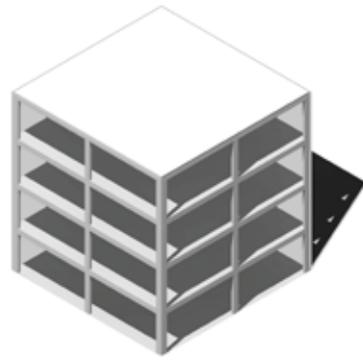
BLAST-RESISTANCE DESIGN



PREVENT PROGRESSIVE COLLAPSE

Column spacing should not be greater than 9m

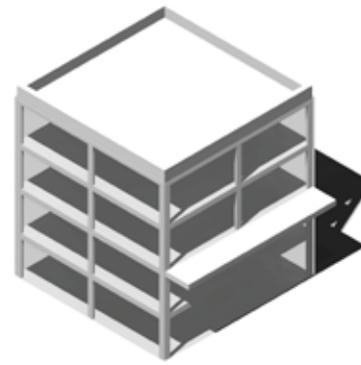
The loss of any one column should not initiate global collapse



STANDARD FLOOR HEIGHTS

Vertical stiffness regularized

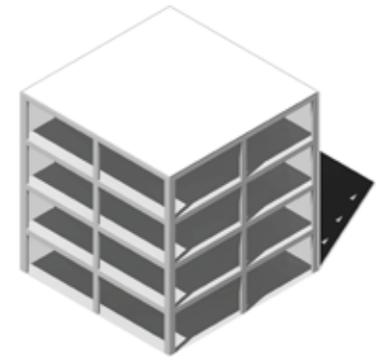
Non-local stress configurations



NO PARAPETS OR OVERHANGS

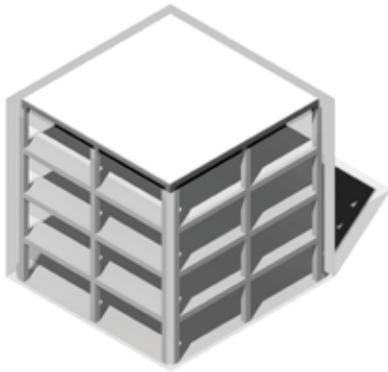
If strong will increase uplift and reflected blast pressure

If weak might fragment and act as missiles



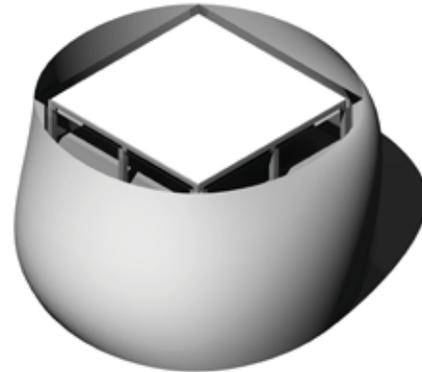
CONTINUOUS WALL SYSTEM

Embedded into structure transfers forces directly



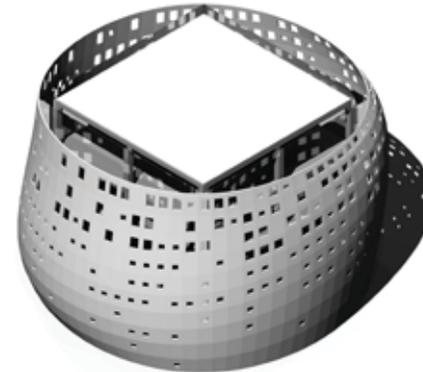
SACRIFICIAL WALL ADDITION

Absorbs some of the force from the blast



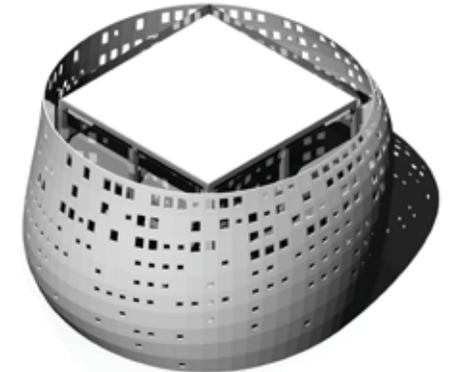
CONVEX FORM

Allows blast pressure to dissipate over form



LIMIT GLAZING EXPOSURE

Limits potential for glazing to become dislodged or broken due to blast pressure



HARDENED FACADE

Standoff distance will result in the largest gains against blast effects

Hardened facade in urban areas will be necessary where standoff not great enough

Structure must be hardened where blast effects greatest.

REPRESENTATIONAL DESIGN



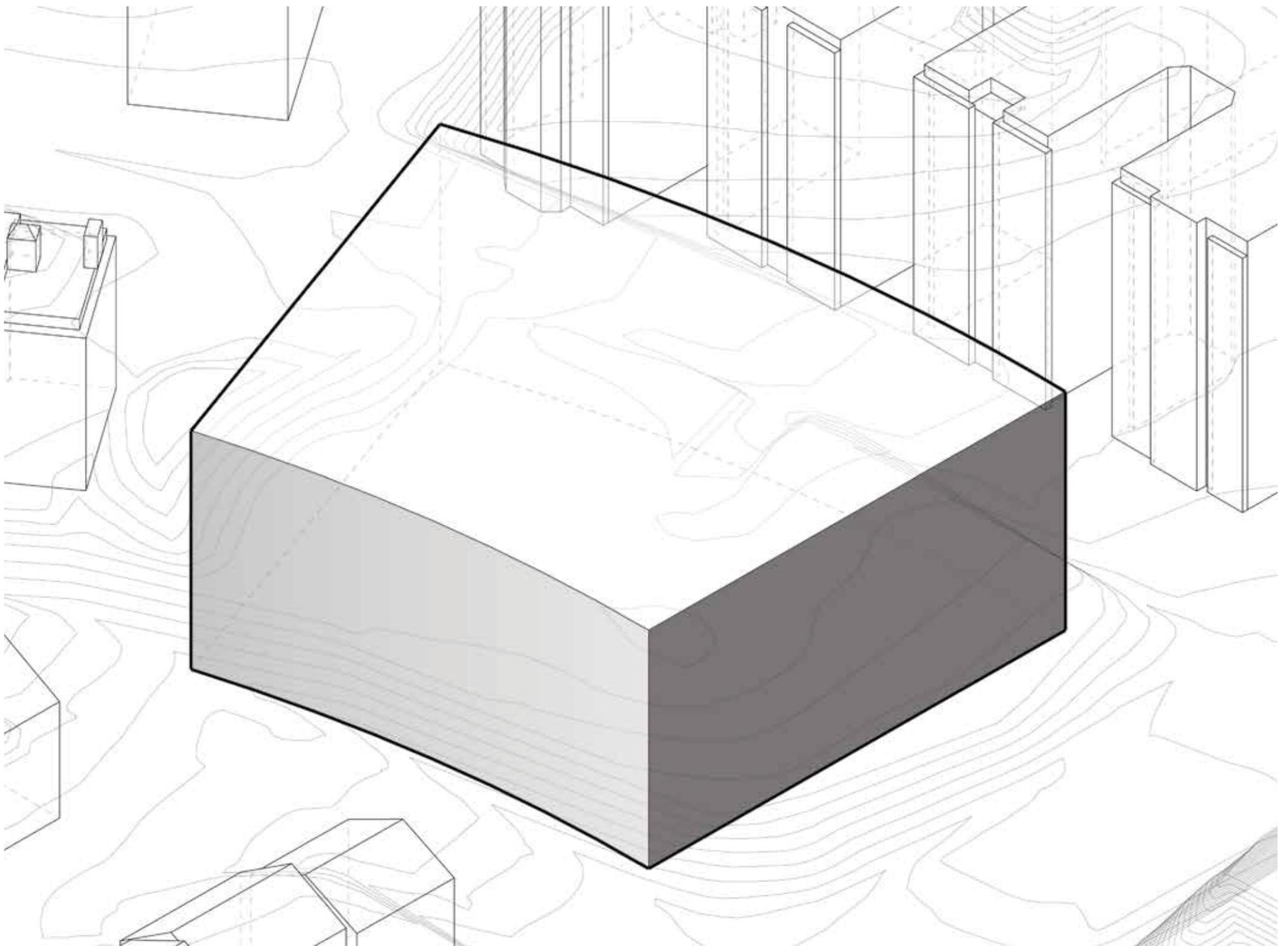
In representational architecture the design of the facade can become a way to transmit cultural ideas. However, with a start-up embassy for multiple unknown new nations the architecture of this embassy must adapt to each culture.

American embassies being constructed abroad following the Second World War were built to adapt to the local culture through architecture which were based on a “series of fantasies - orientalist, tropicalist, Gaelicist, Africanist - [which] led to an inevitable trivialization of local motifs.”¹ Authenticity was lost due to replication. Instead this proposal calls for the use of actual authentic cultural elements to be introduced into specific areas designated for cultural appropriation.

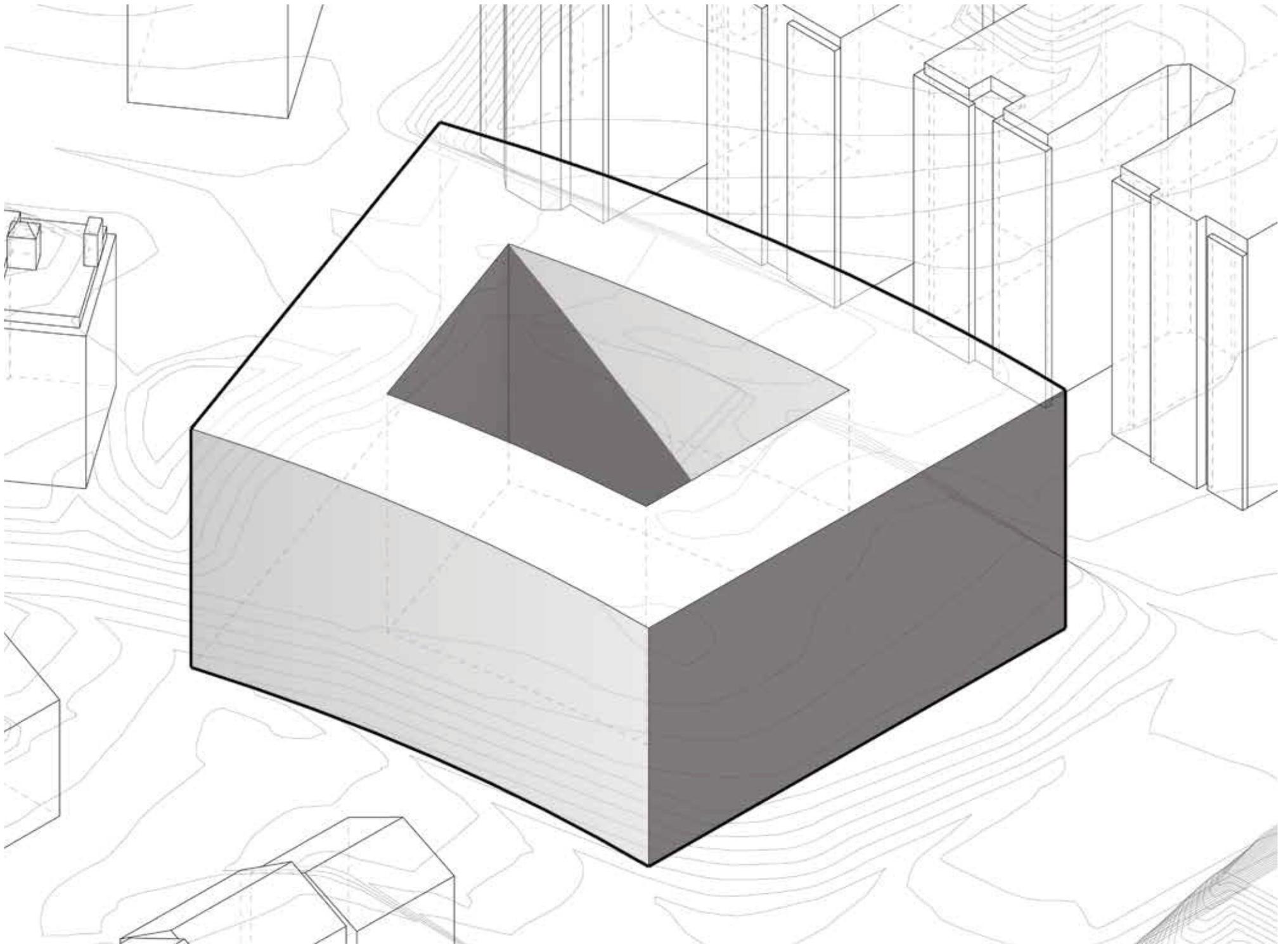
The design of this embassy focuses on the use of glass as a means to allow changeable cultural elements for each new nation. Glass can be embedded with digital imagery of the nation the embassy represents and elements can be placed within the rooms that will be visible to the exterior. Another aspect of the cultural elements that are changeable for each nation are the botanical garden planting zones: one located at the office atrium space and another located at the barrier wall on the front entrance.



MASSING CONCEPT

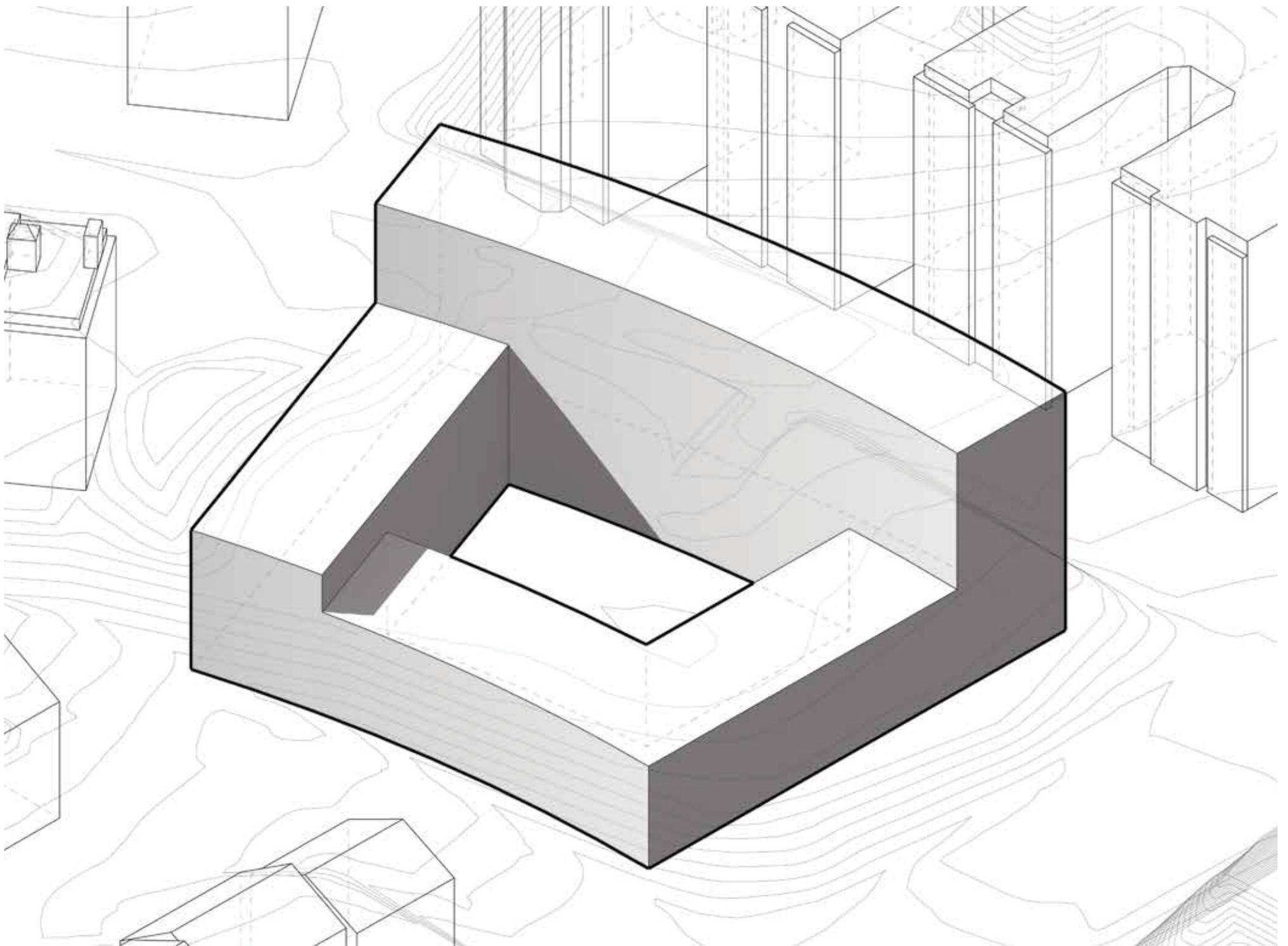


INITIAL SITE MASSING: Extrusion of the site boundaries

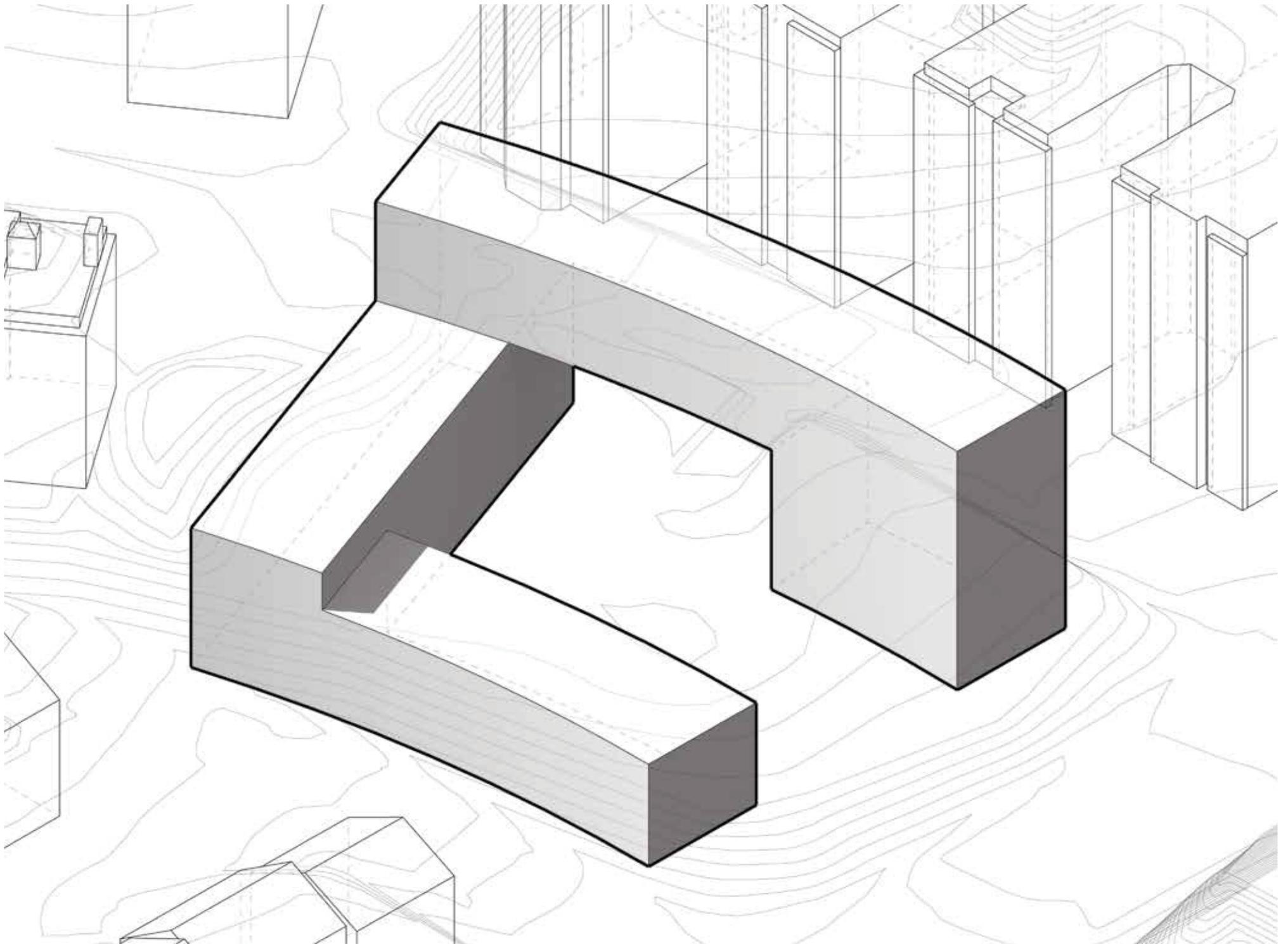


COURTYARD TYPOLOGY: Universal architectural typology

MASSING CONCEPT

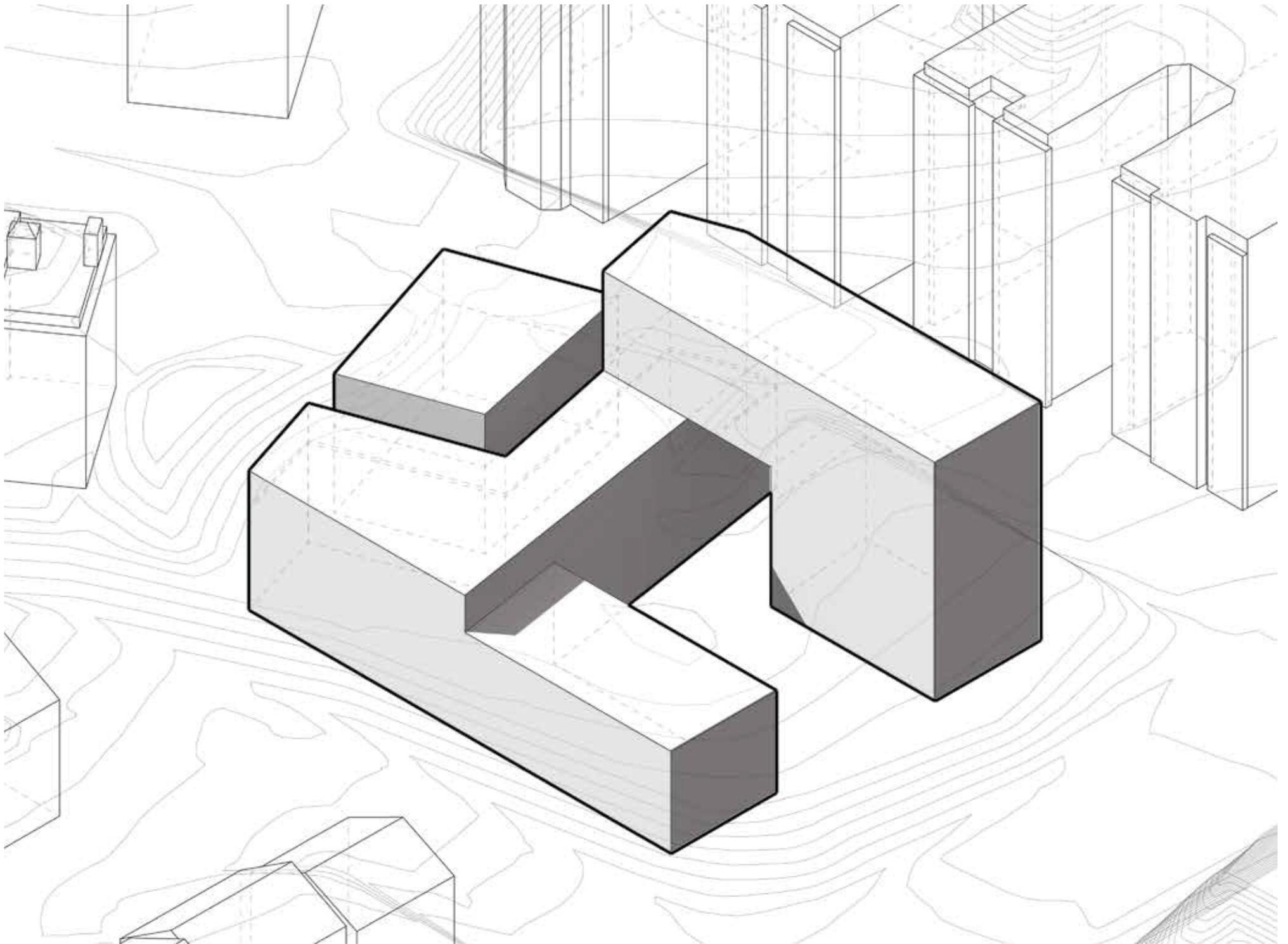


CORRELATE TO CONTEXT: Heights are adjusted to respect historic context



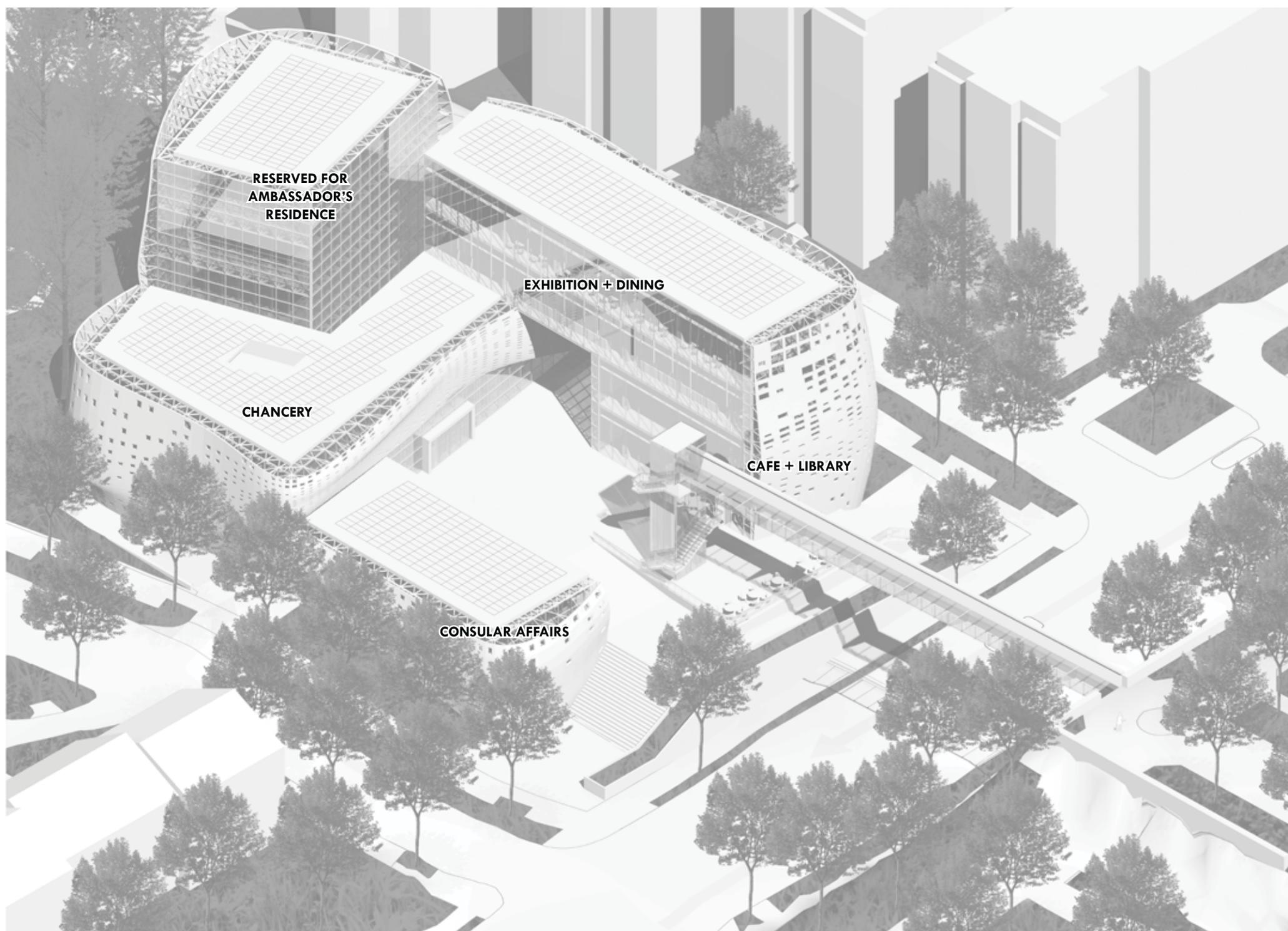
ADAPT FOR CONNECTIONS: Circulation to and from neighborhood and Meridian Hill Park

MASSING CONCEPT

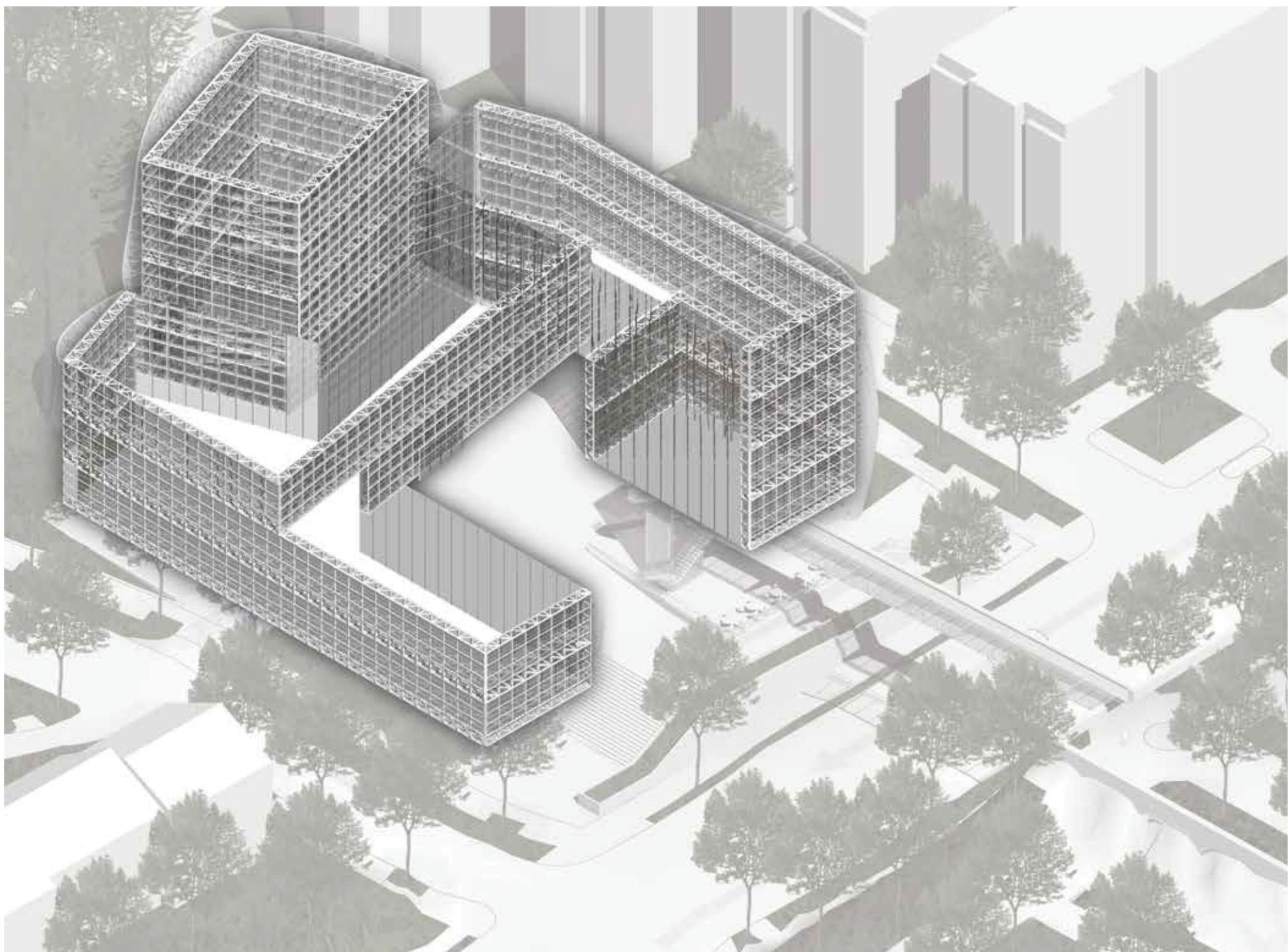


PROGRAMMATIC ADJUSTMENT: More secure elements located further from 16th Street

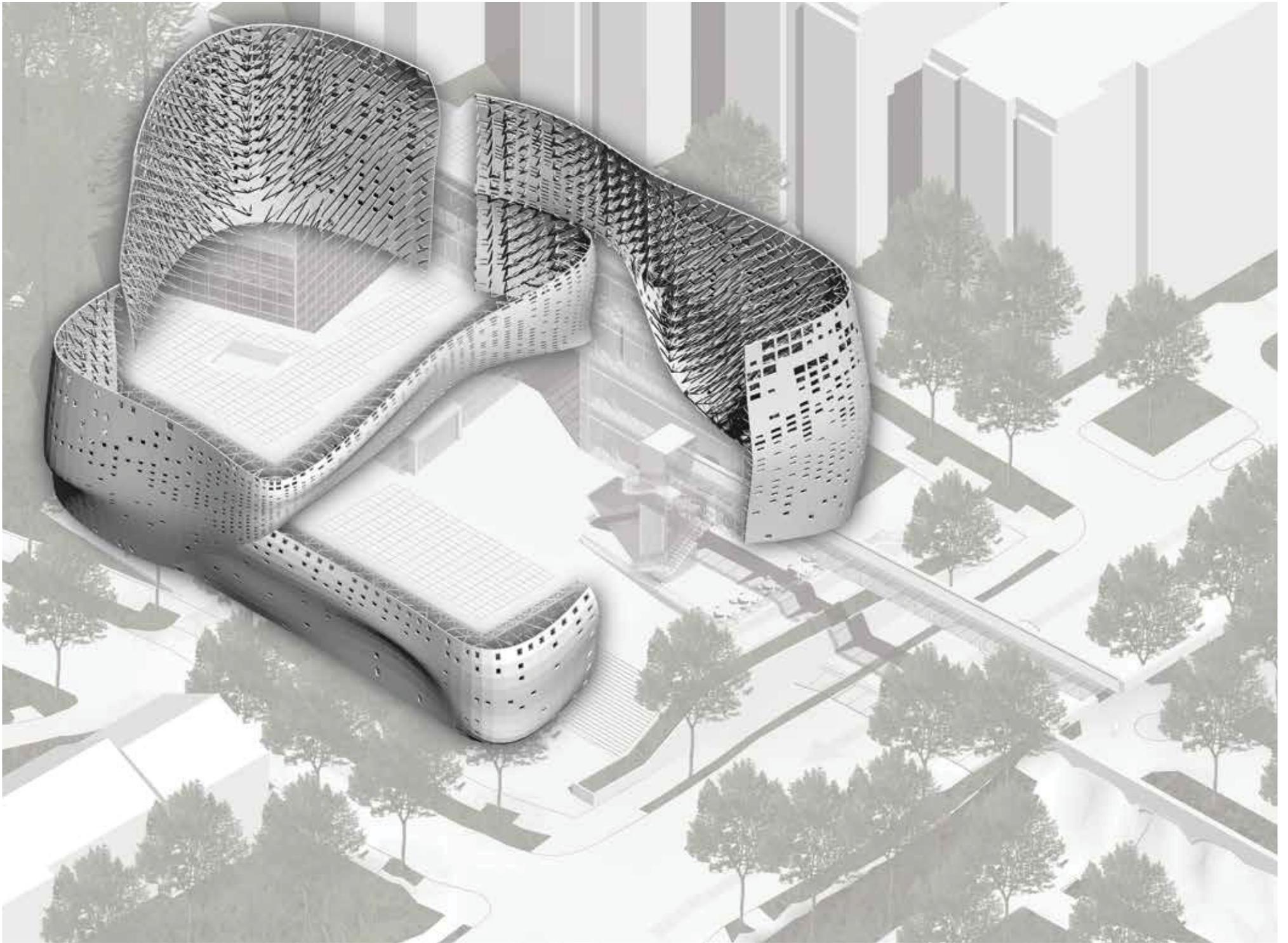
FINAL DESIGN



FACADE CONCEPT



INTERIOR GLASS LAYERS



EXTERIOR SKIN LAYER

FACADE DESIGN



INNER LAYER

5'X16' EOC & Seele 4-ply laminated tempered glass
South facing with PV glass interlayer
Strong connection to structure with glazing equal to floor-to-floor height.

SACRIFICIAL MIDDLE LAYER

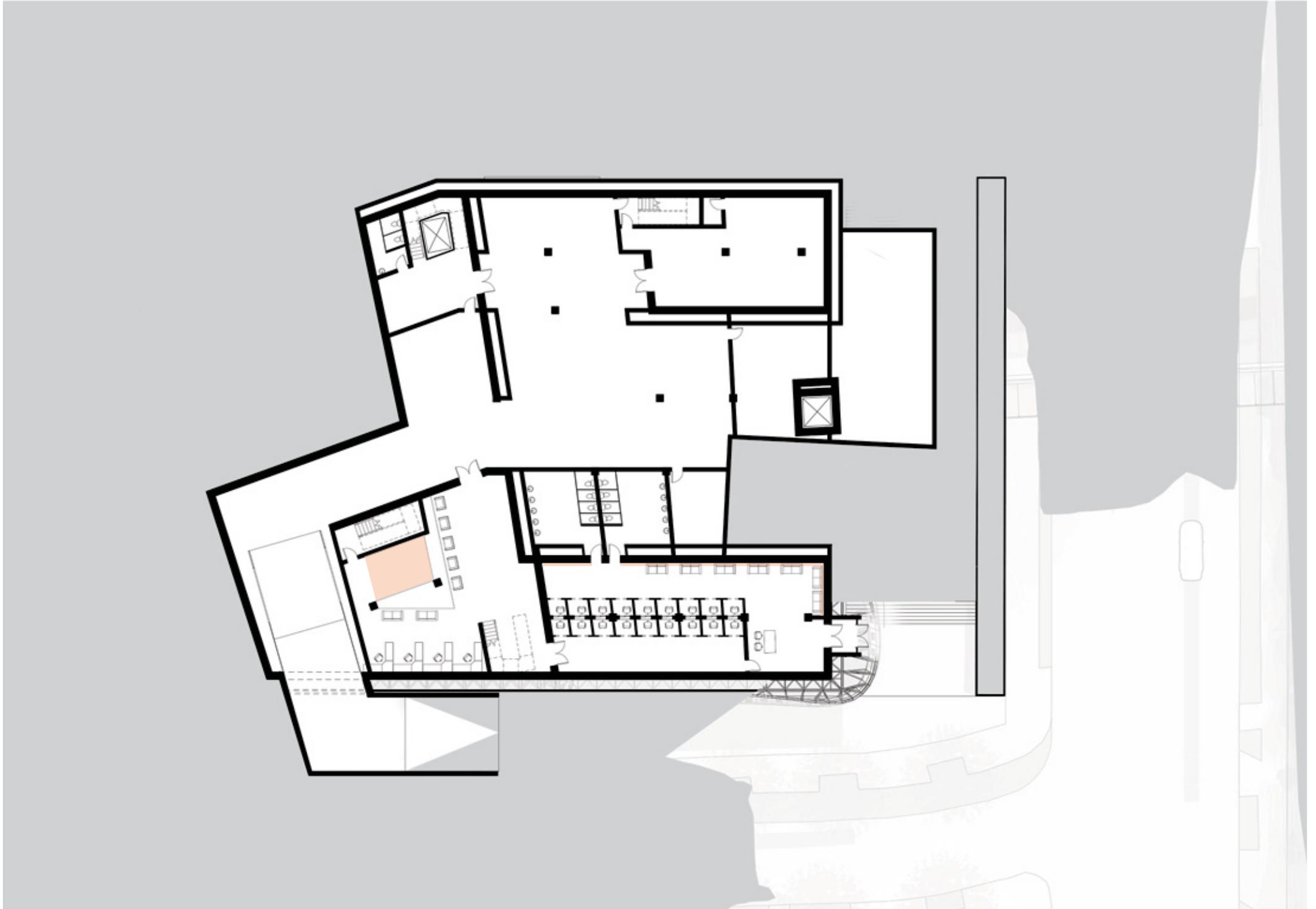
Soda lime glass exterior
PVB interlayer
1.5Mm Gorilla Glass
Aluminum frames with wet glazing
Sacrificial joints

EXTERIOR SKIN

-Opaque polycarbonate with integrated PV
-Sacrificial aluminum struts



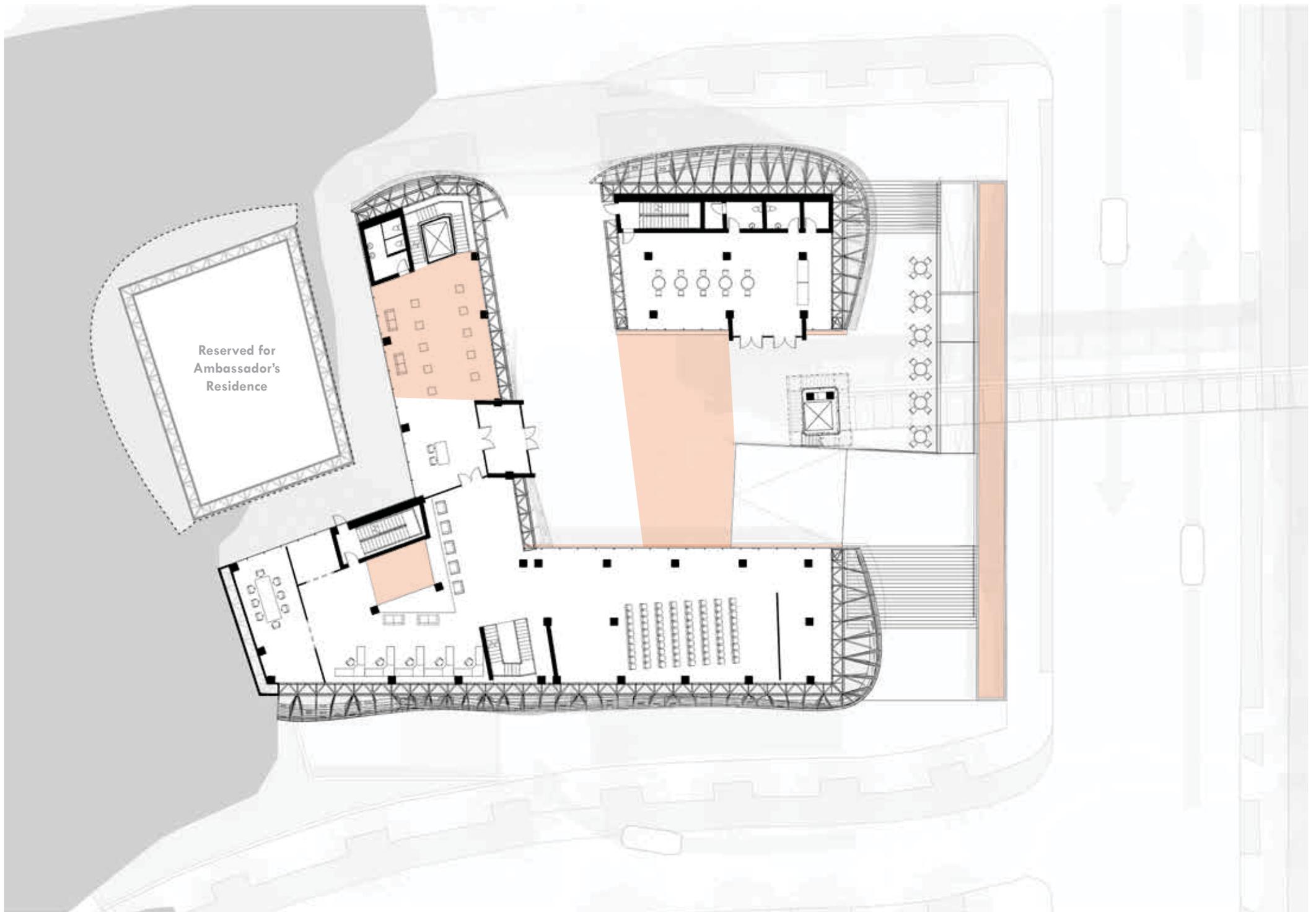
1



The first floor is situated so that the street entrance from 16th St is at the southeast corner of the site. This is the entrance to the visa and consular affairs section of the embassy with links back to the consular affairs offices. A vehicle ramp leads to the embassy motor pool and loading dock adjacent to the storage room and elevator.

DESIGNATED AREAS FOR CULTURAL APPROPRIATION





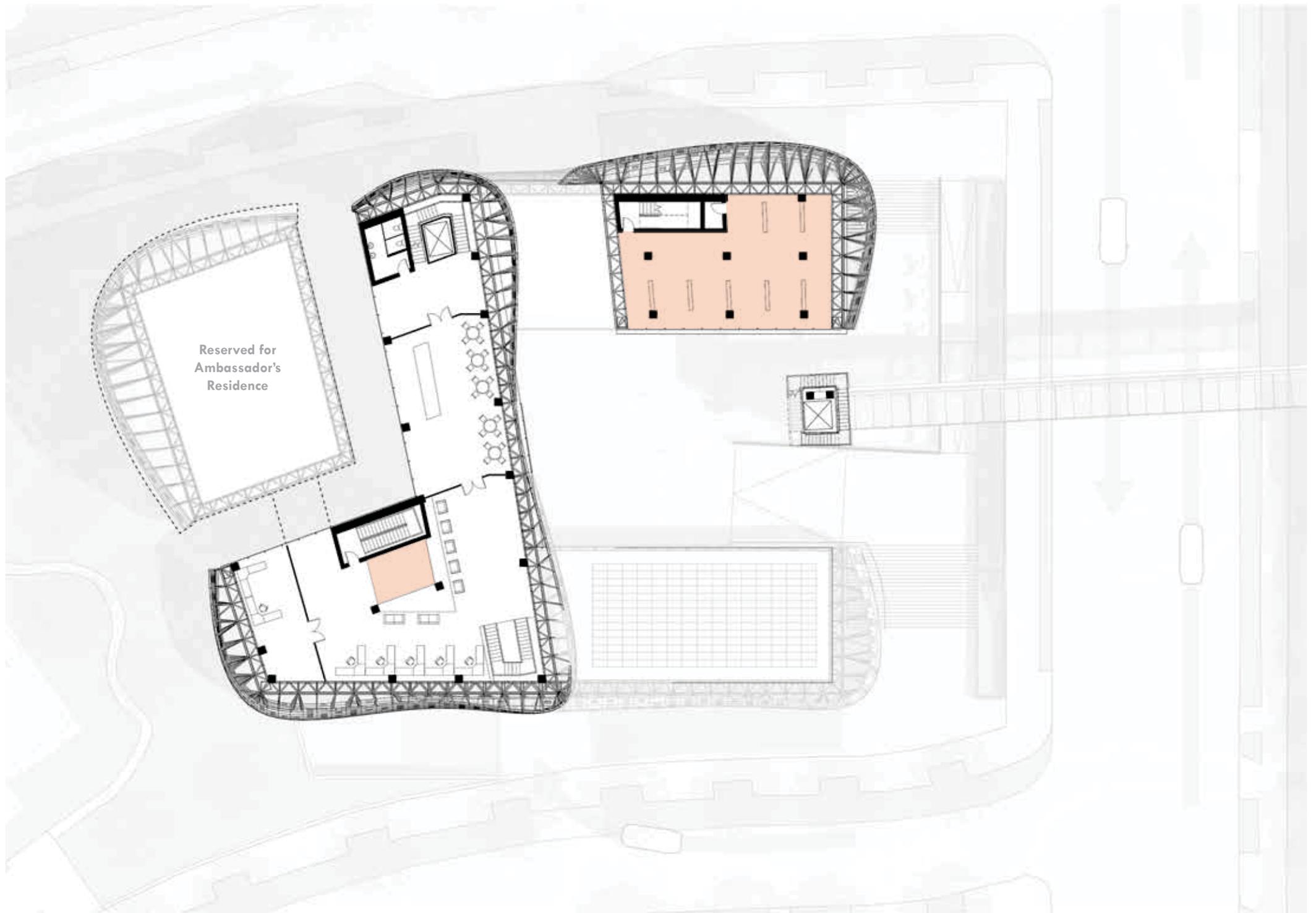
The northern portion of the building is more public and contains a cafe on the plaza level and a library upstairs. The main entrance to the embassy is located in the center of the plaza with a small gallery directly north which leads to the upper exhibition and formal dining levels. The southern portion of the building contains offices for the embassy and an auditorium. The central plaza hosts outdoor seating for the cafe and can accommodate large sculptural artwork. Digital displays on the glass facades can show

new from the country being represented. The elevator and stair connection from Meridian Hill Park exits into the center of the plaza.

DESIGNATED AREAS FOR CULTURAL APPROPRIATION



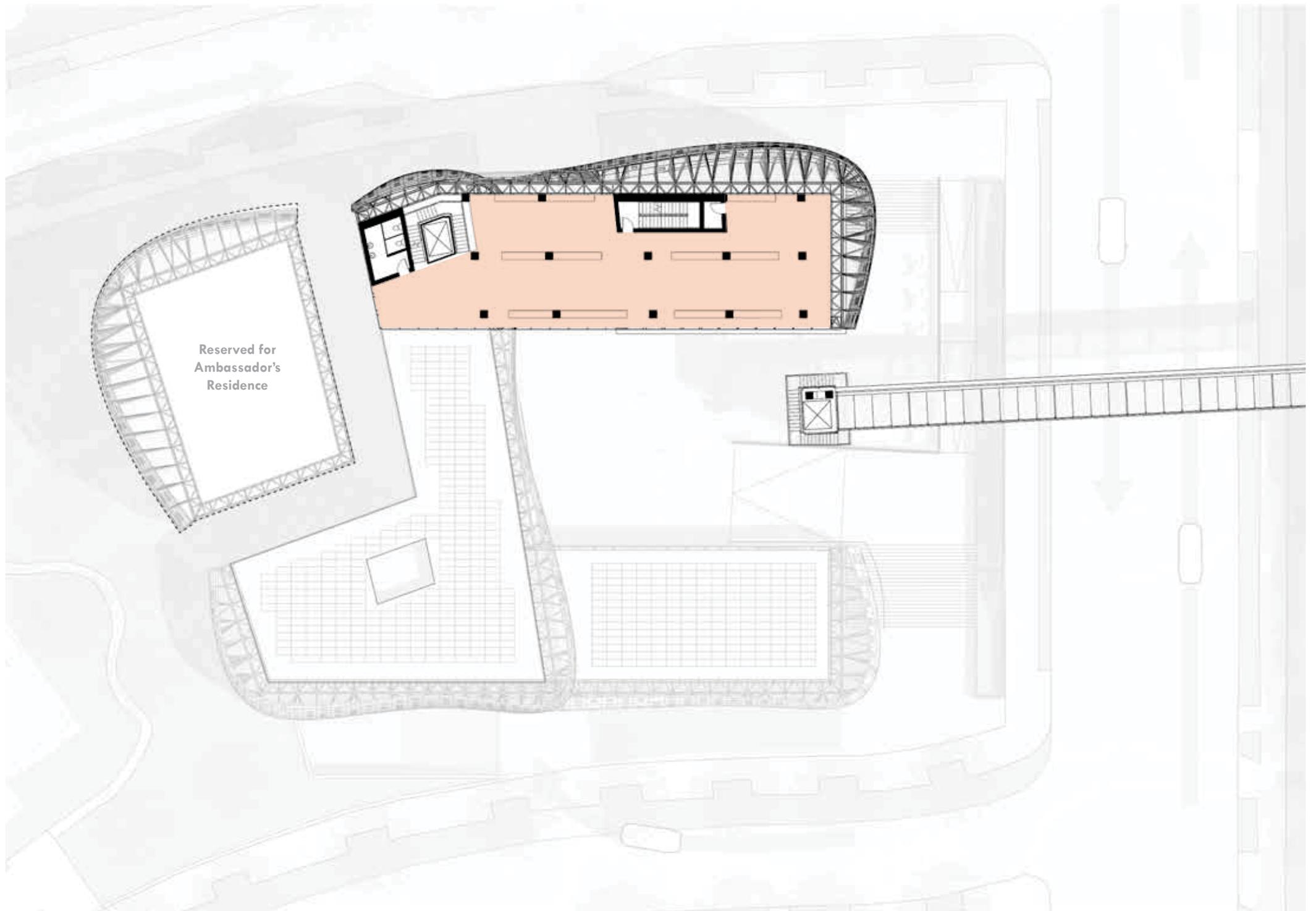
3



The Ambassador's office and immediate staff are accommodated in the southern portion of the building with the atrium space. [See rendering on page 58] The central portion is a flexible cafe space for the embassy employees. The northern segment of the building is the library with connections down to the plaza level cafe.

DESIGNATED AREAS FOR CULTURAL APPROPRIATION



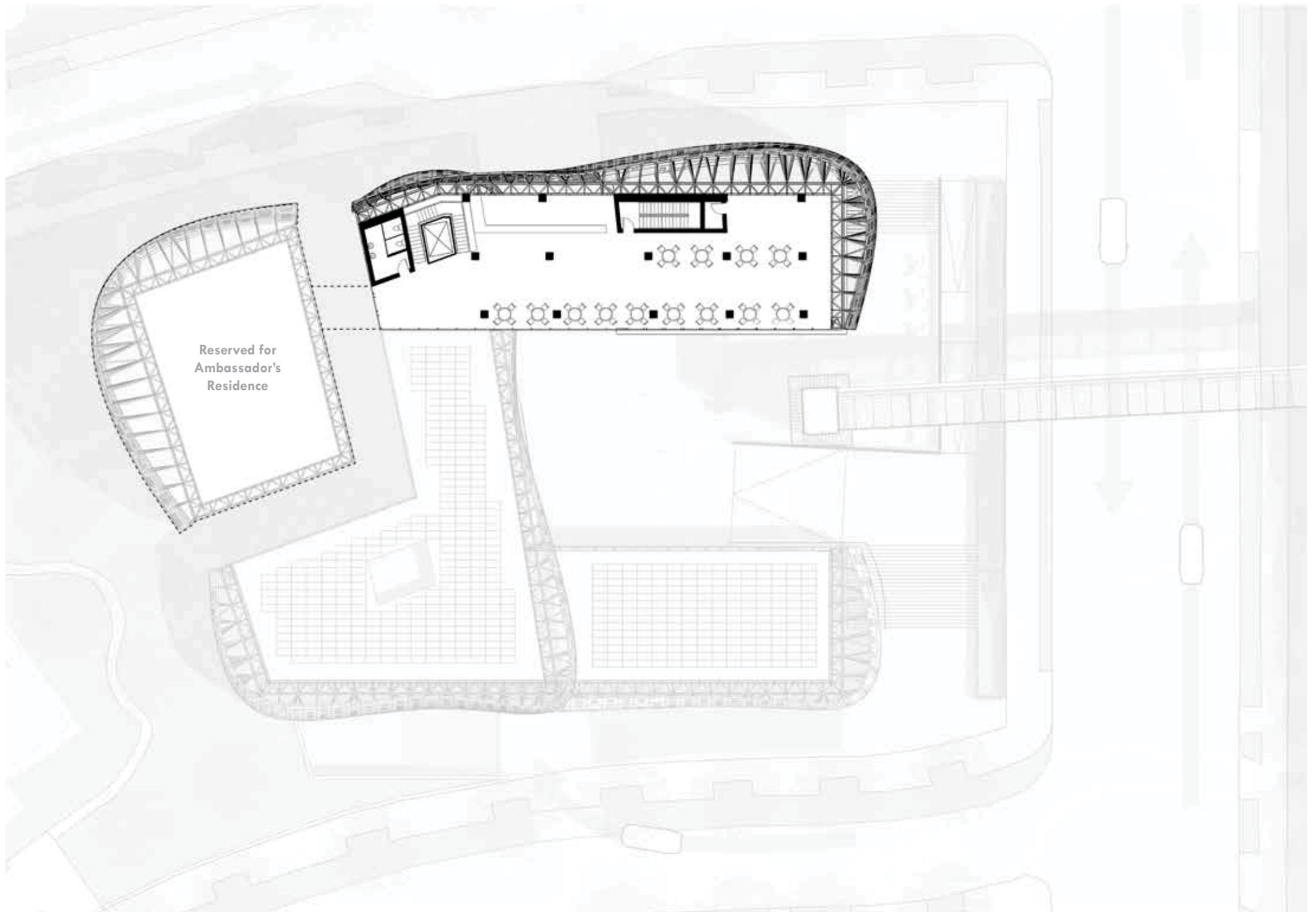


This level houses the main exhibition and gallery space for the embassy. The entire floor can be rearranged for various cultural elements to be displayed.

DESIGNATED AREAS FOR CULTURAL APPROPRIATION



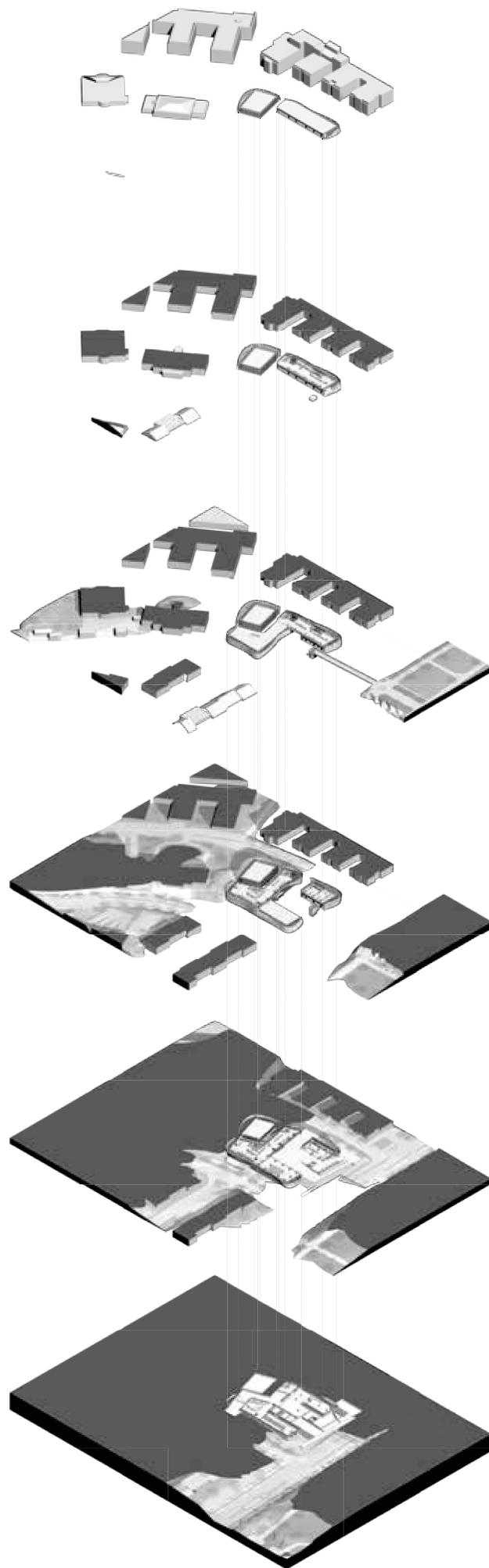
5



The top level is set aside for the formal dining space with grand views of the city. A bar is situated on the north wall.

DESIGNATED AREAS FOR CULTURAL APPROPRIATION





R

5

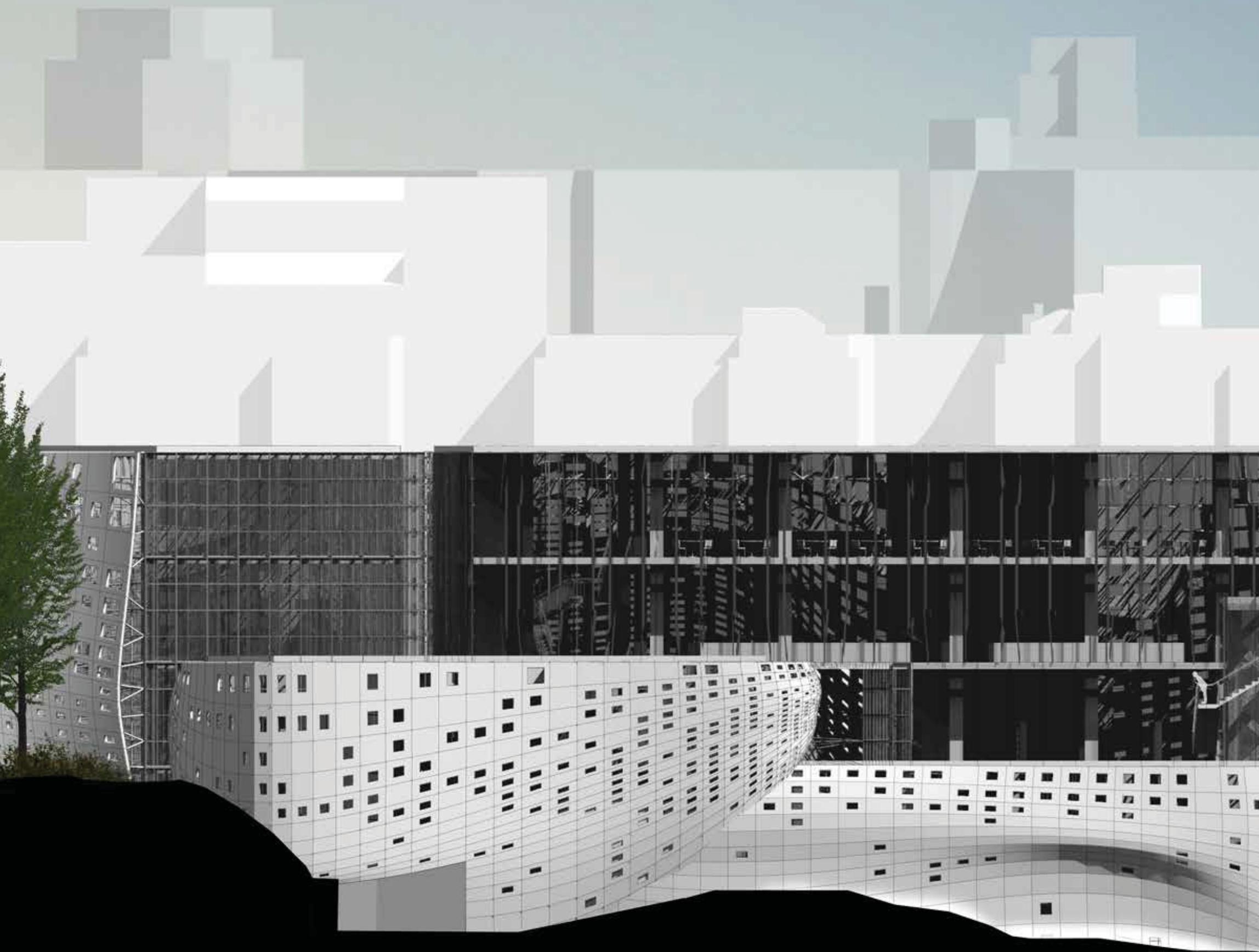
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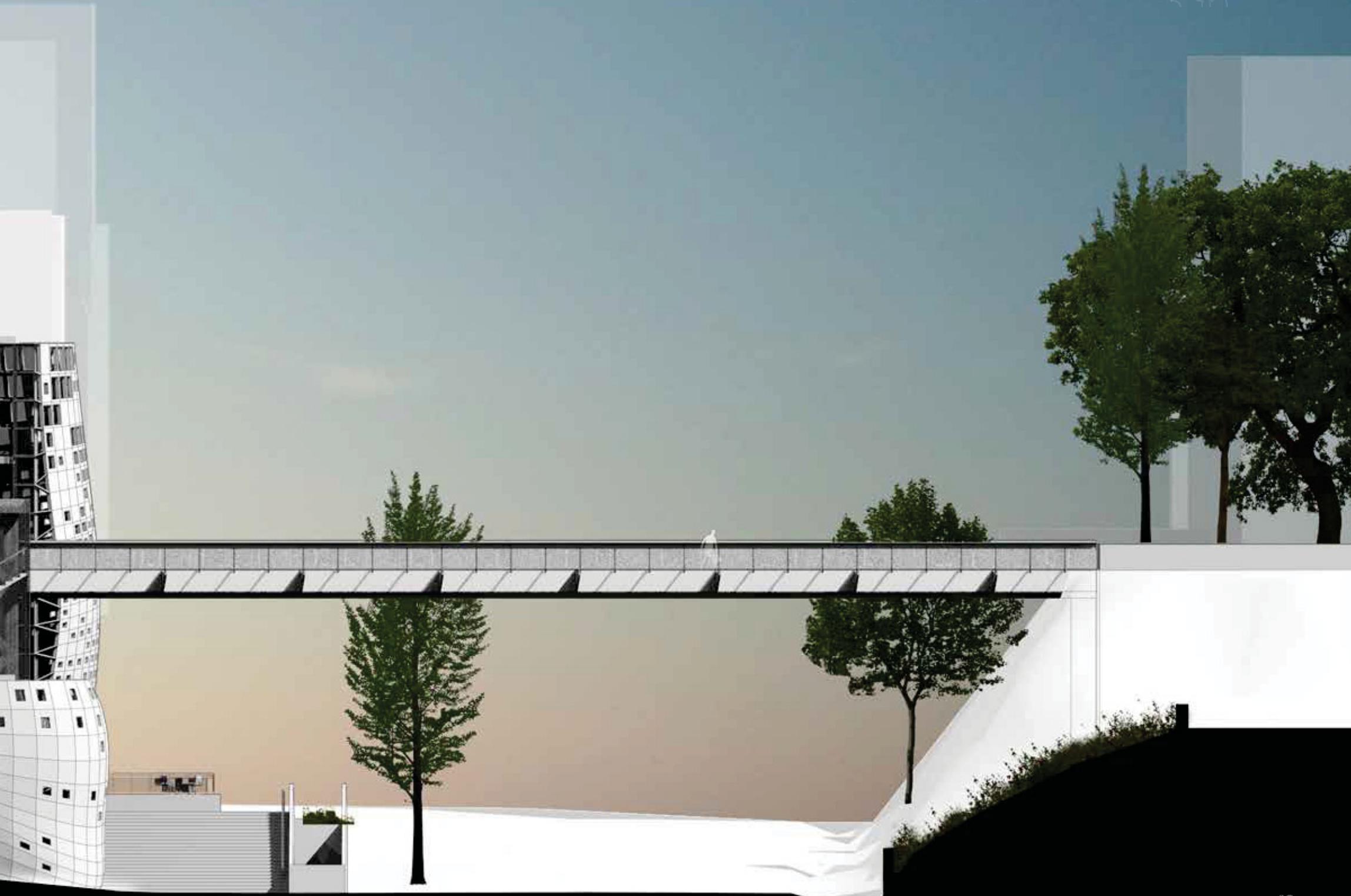
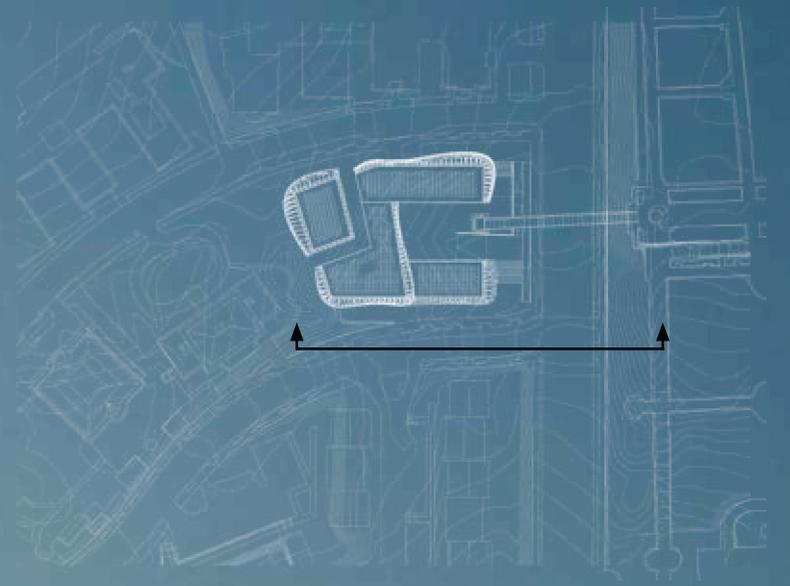
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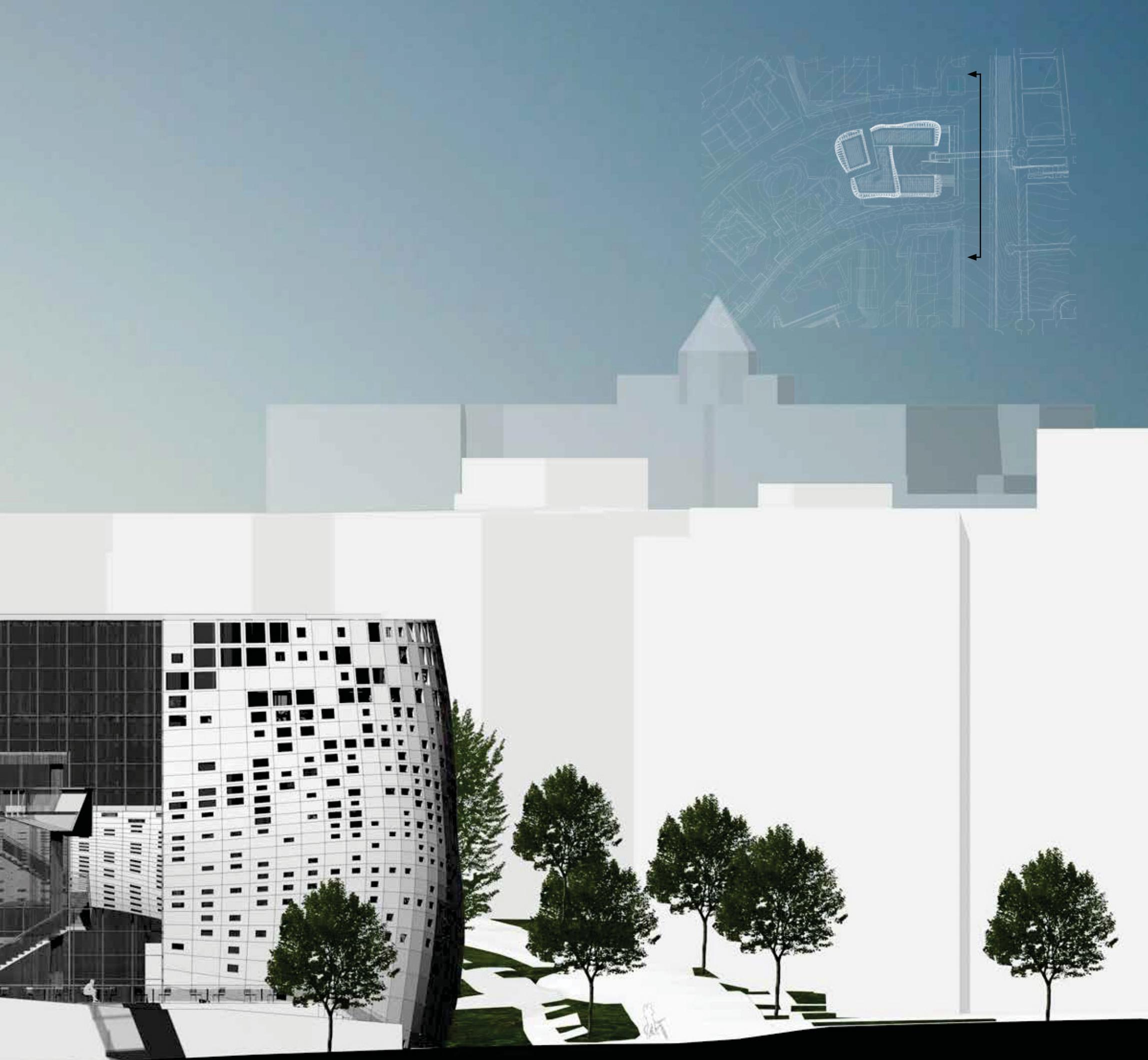
SOUTH ELEVATION



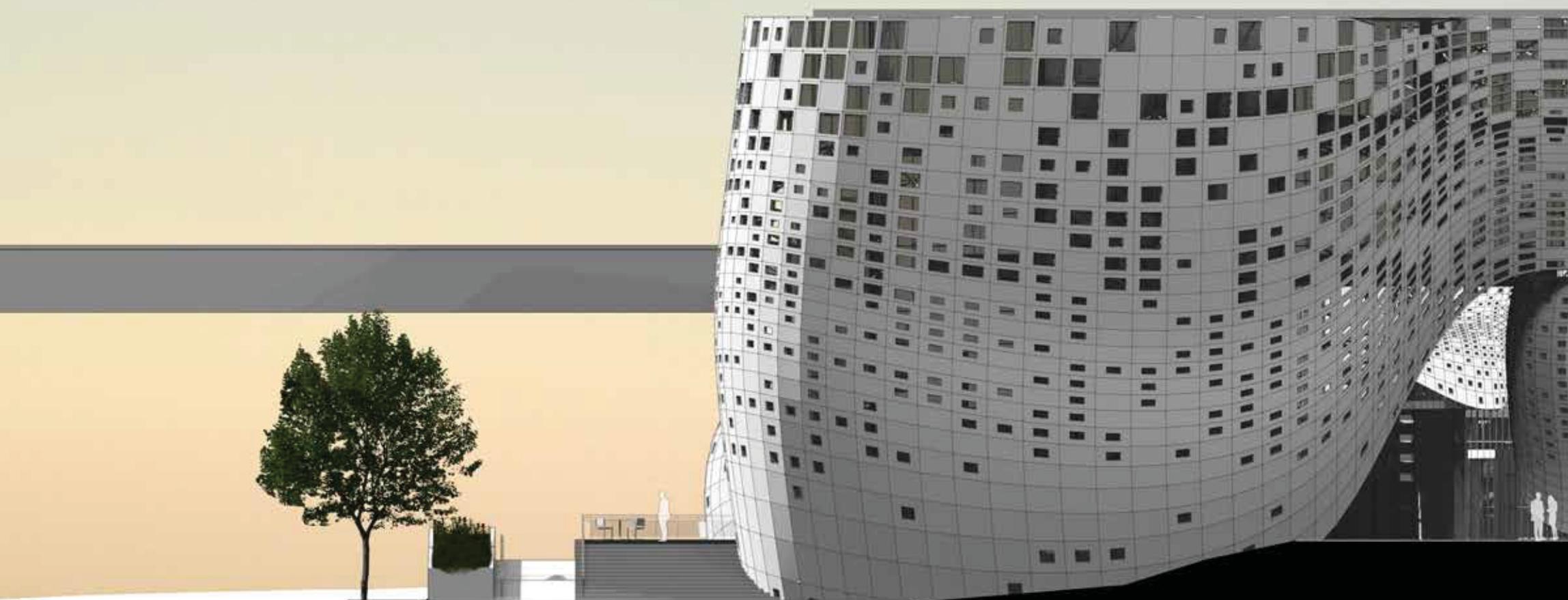


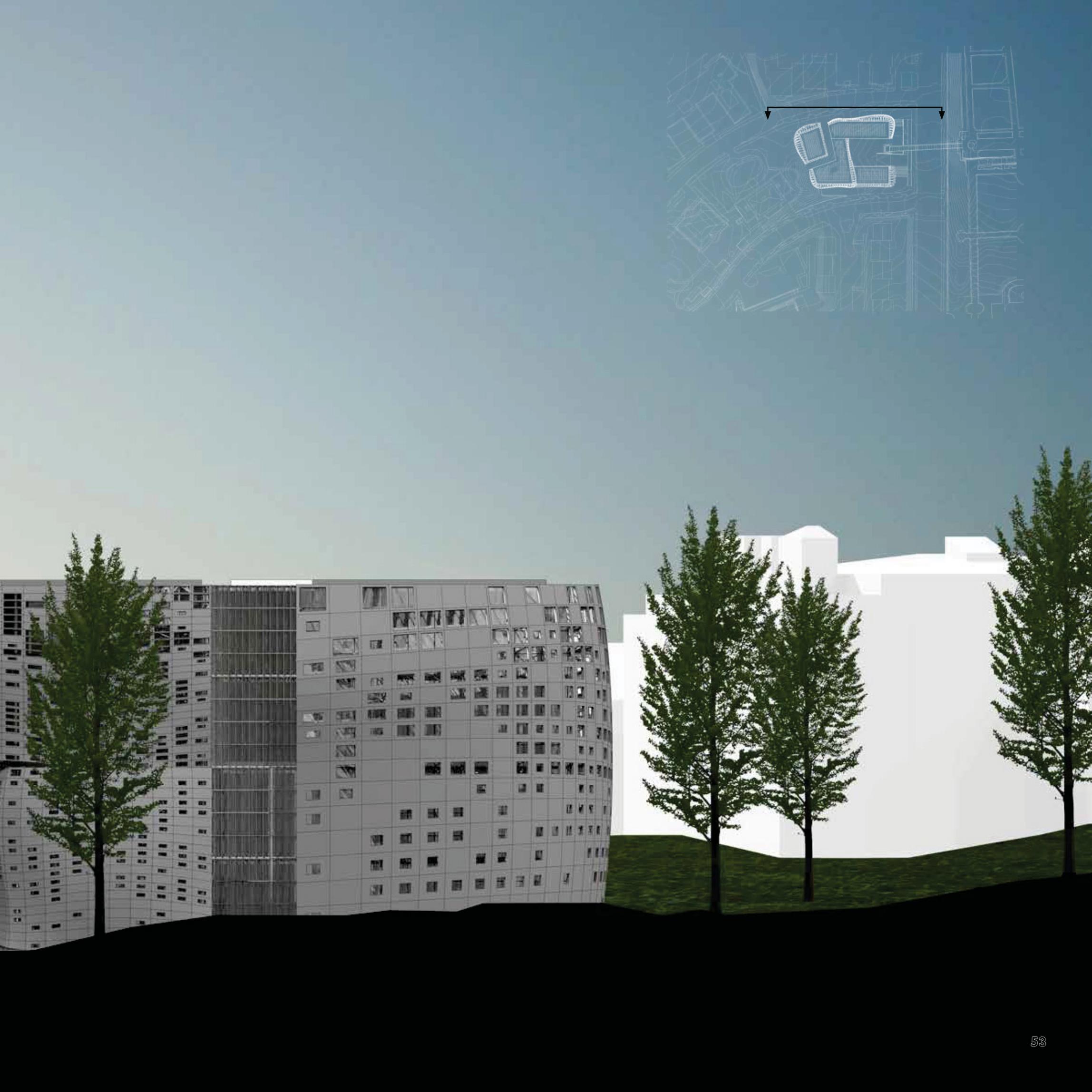
EAST ELEVATION



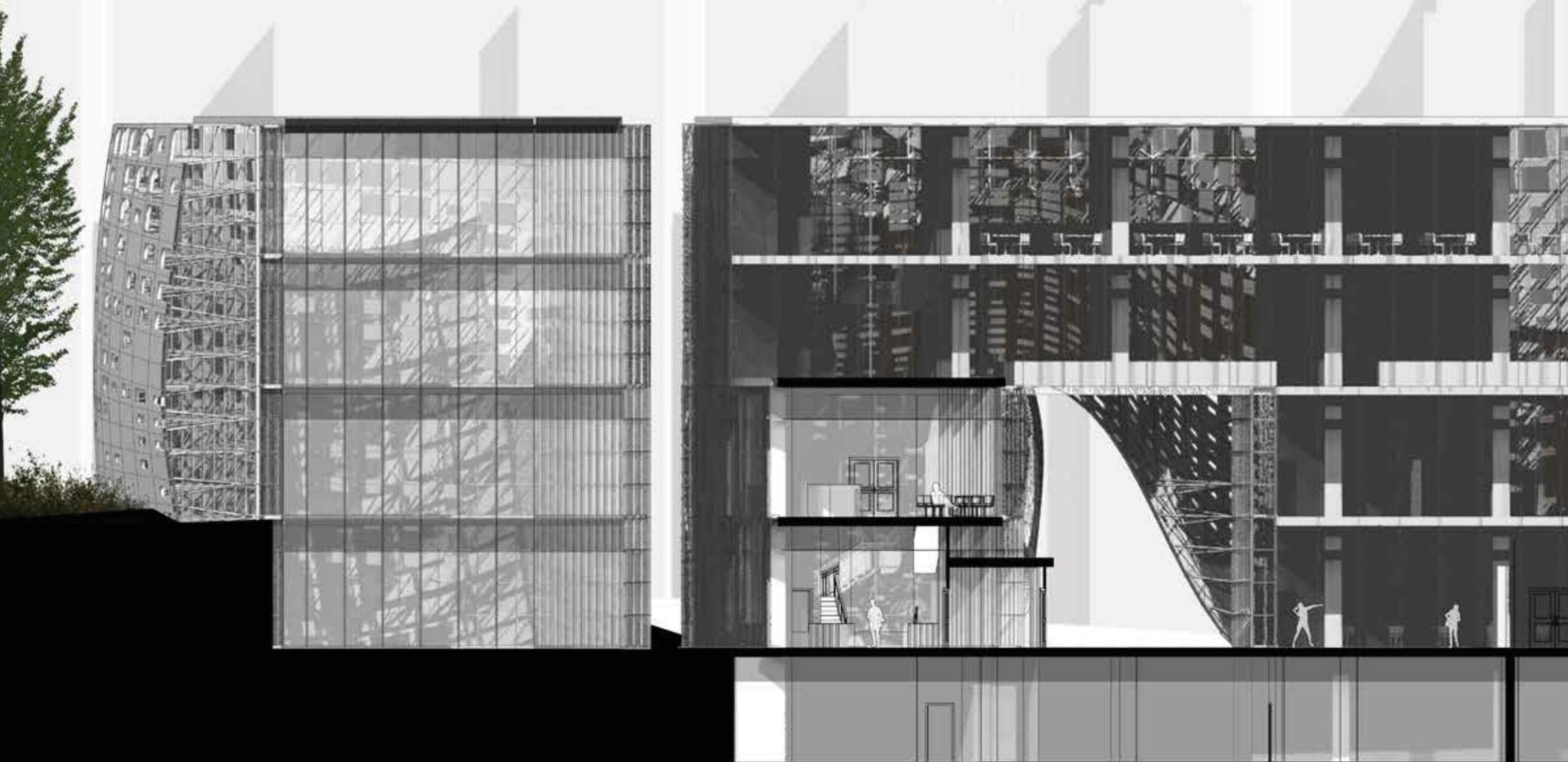


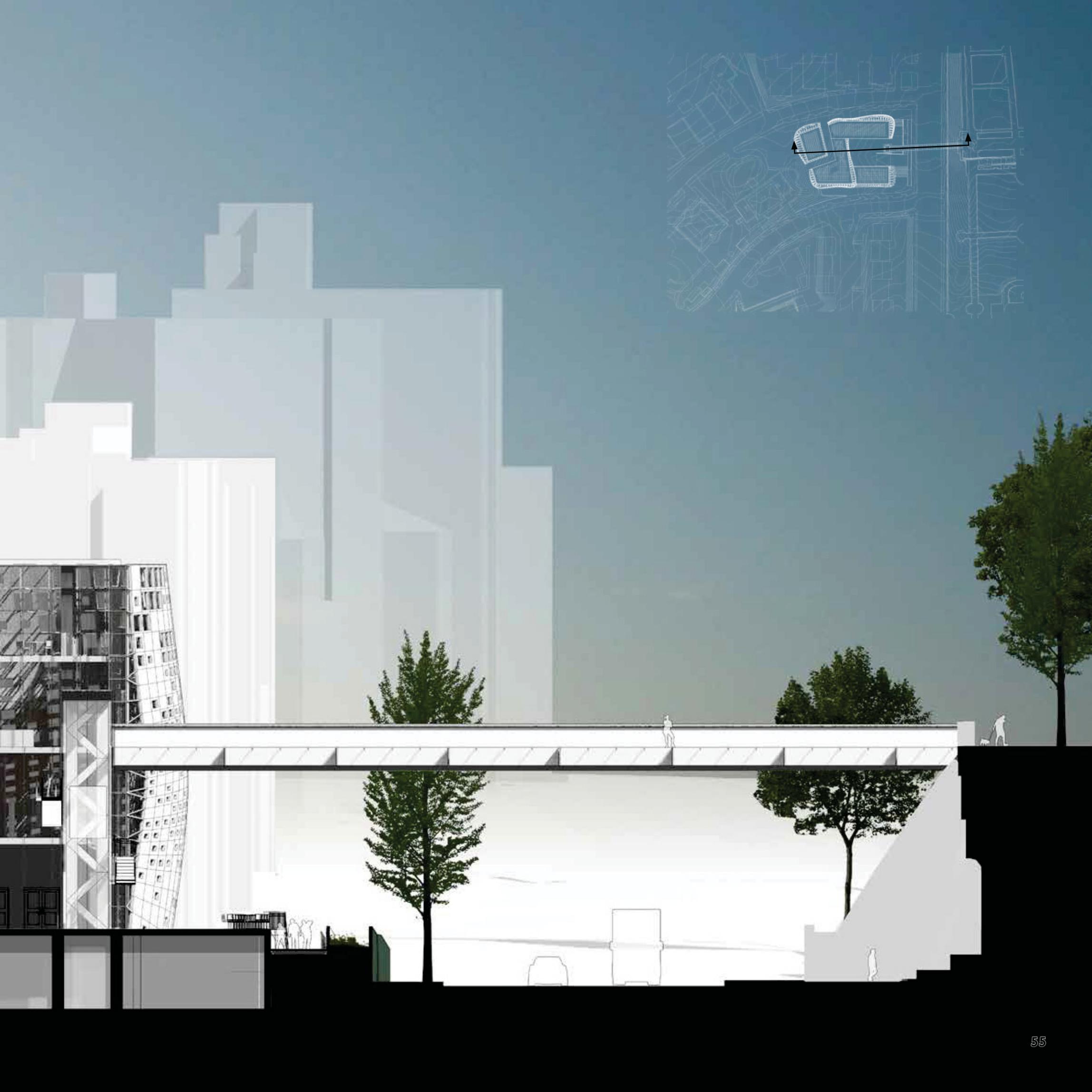
NORTH ELEVATION



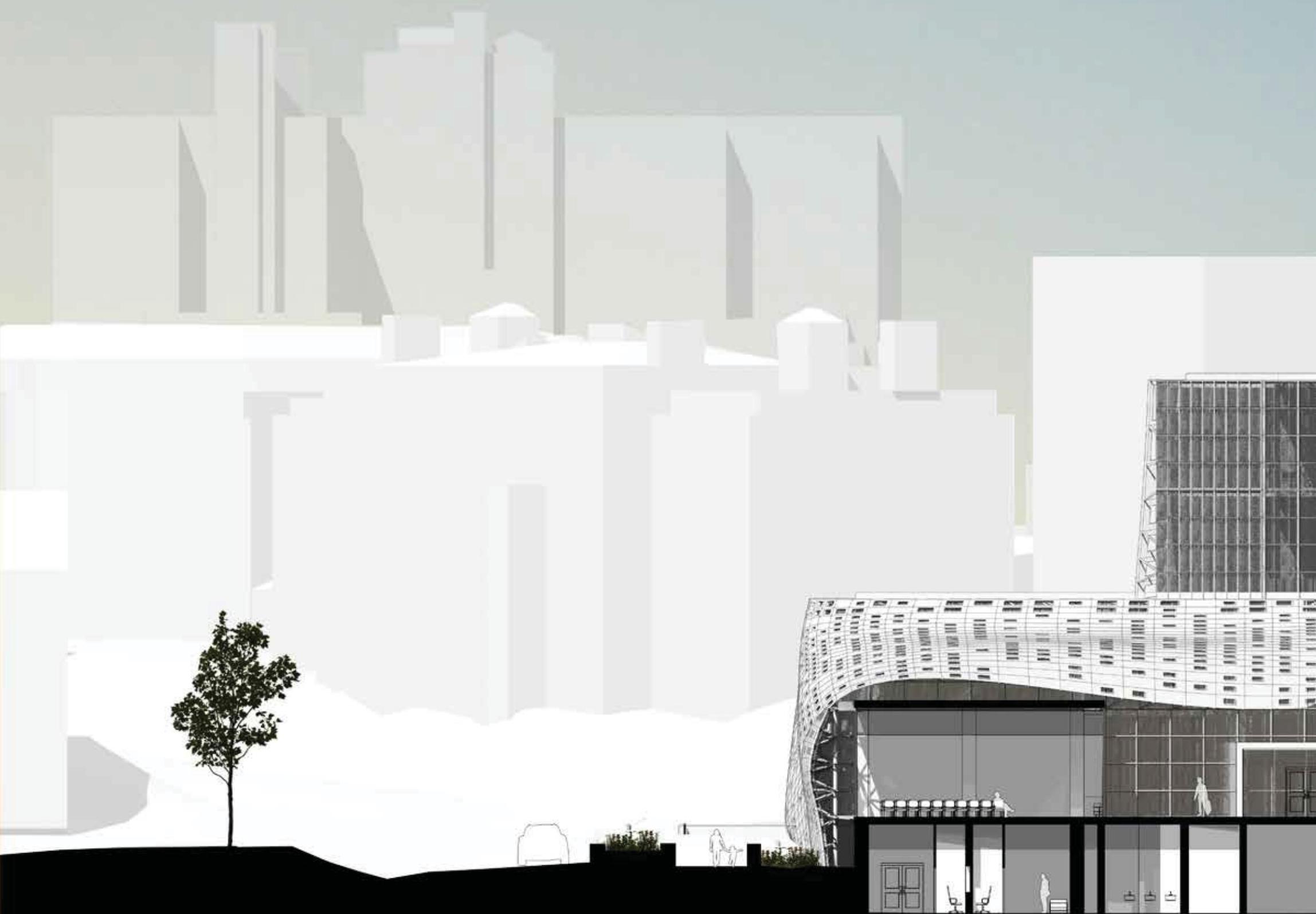


EAST-WEST SECTION





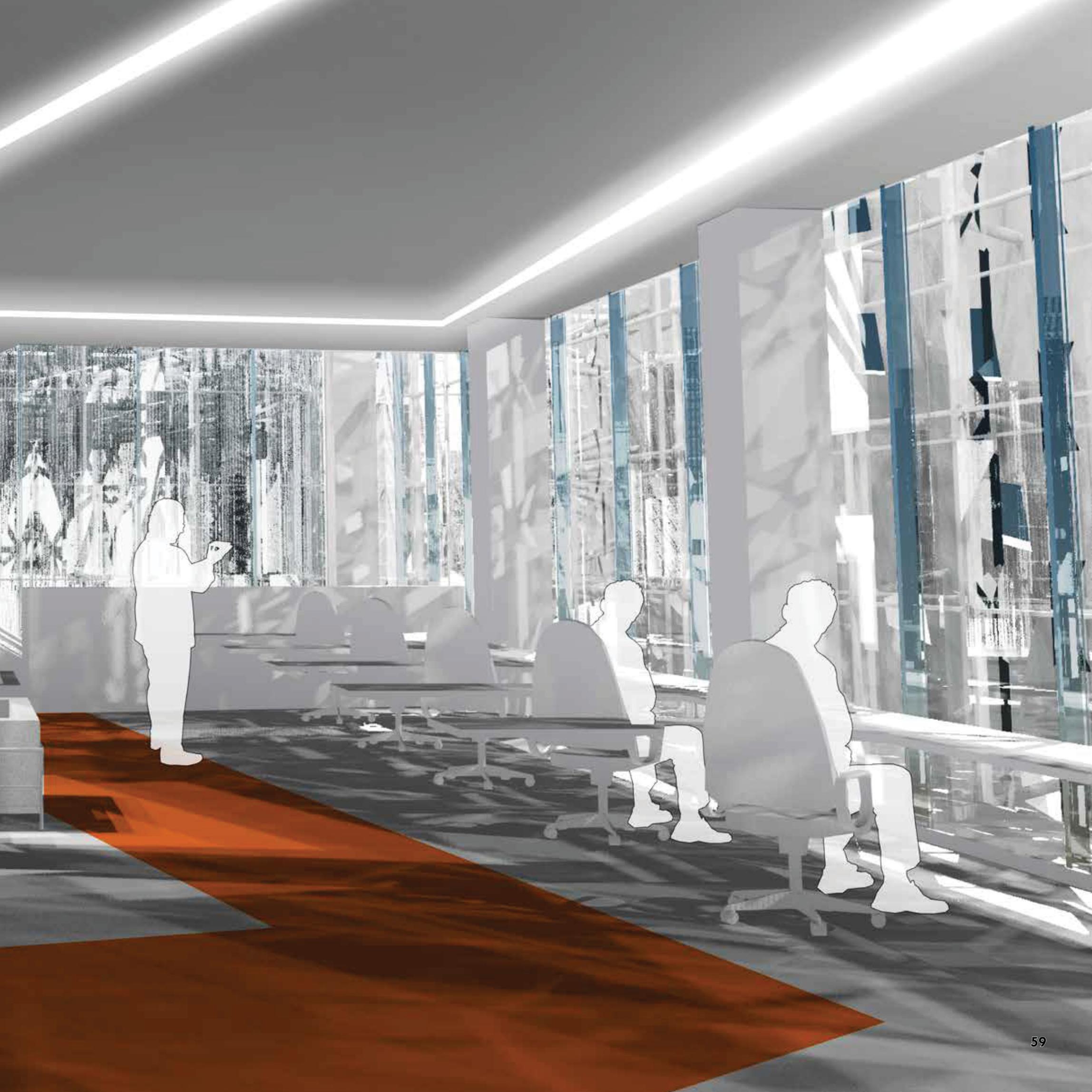
NORTH-SOUTH SECTION







The office spaces contain a botanical garden green wall along the fire stairs to the north. An atrium space cuts through the building adjacent to the wall down to the lowest level to provide light. Surrounding this atrium is a flexible work space with built in tables. The facade skin screens the activities within the building.





The formal dining space overlooks Meridian Hill Park and south over the city toward the Washington Monument.



CONCLUSIONS



As security in the built environment becomes more of an issue and the defensive architectural technologies such as protective glazing becomes cheaper and more common, standards for architecture will likely gravitate toward new standard practices for security being required in all buildings regardless of function. New regulations should be implemented similarly to how fire and building codes are enacted currently and have evolved over time. FEMA's work toward establishing public and easily accessible guidelines for blast protection in structures is the first step towards this. The technologies used for the protection of buildings and the blast incidents that will occur are two sides of a developing situation that will inform and advance each other. As better standard blast resistant building materials become ubiquitous the

design of the weapons to penetrate them will also advance. The guidelines that eventually form must become a secured knowledge of the architectural and structural engineering design professions.

The design of this embassy undertook the challenges associated with the creation of a safe public space integrating with a highly secure facility. By challenging material assumptions and looking toward the present future of material science in the built environment this project sought to establish a new way of implementing a protected structure. Fundamental blast-resistance and anti-ram barricades should be seamlessly integrated into how urban environments are designed. The recent terror attacks in Berlin and London have illustrated the disastrous effects of failing to safeguard our public space. Implicit in this design is the

understanding of how protected spaces can be deterrents for attacks. The more of the city that has a basic level of security; the less likely an attack will take place within it.

This project exposes how current material developments can change how we perceive security in architecture. Defensive structures do not need to present themselves as fortresses within the city, but can be inviting and open.



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