

Assignment 5: Site Analysis

SITE ANALYSIS

EDI 255: ENVIRONMENTAL FACTORS I

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01_Introduction of the Site

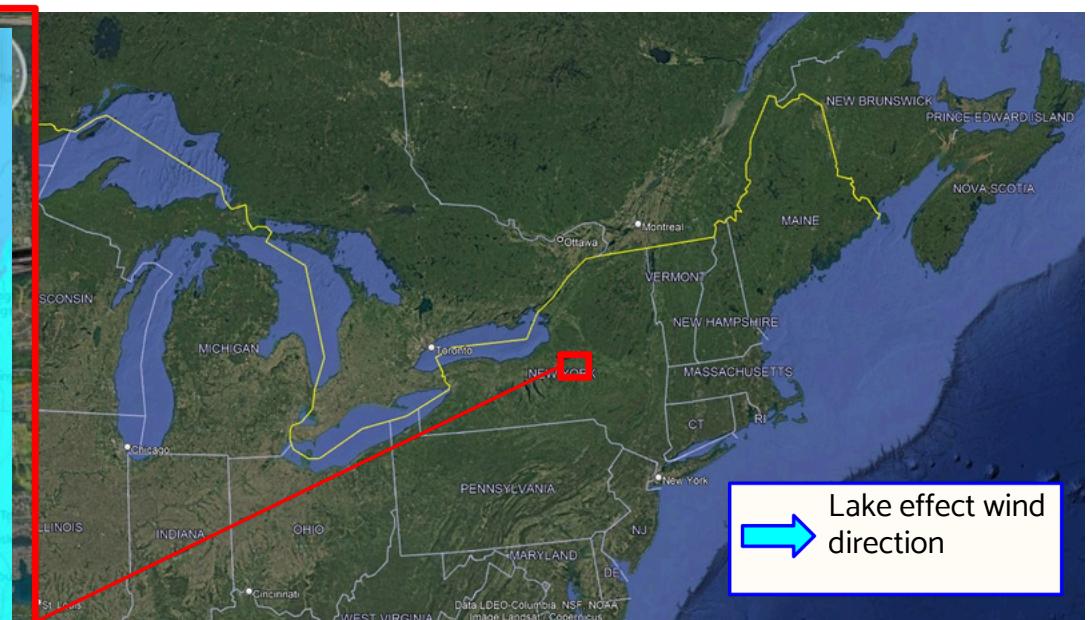
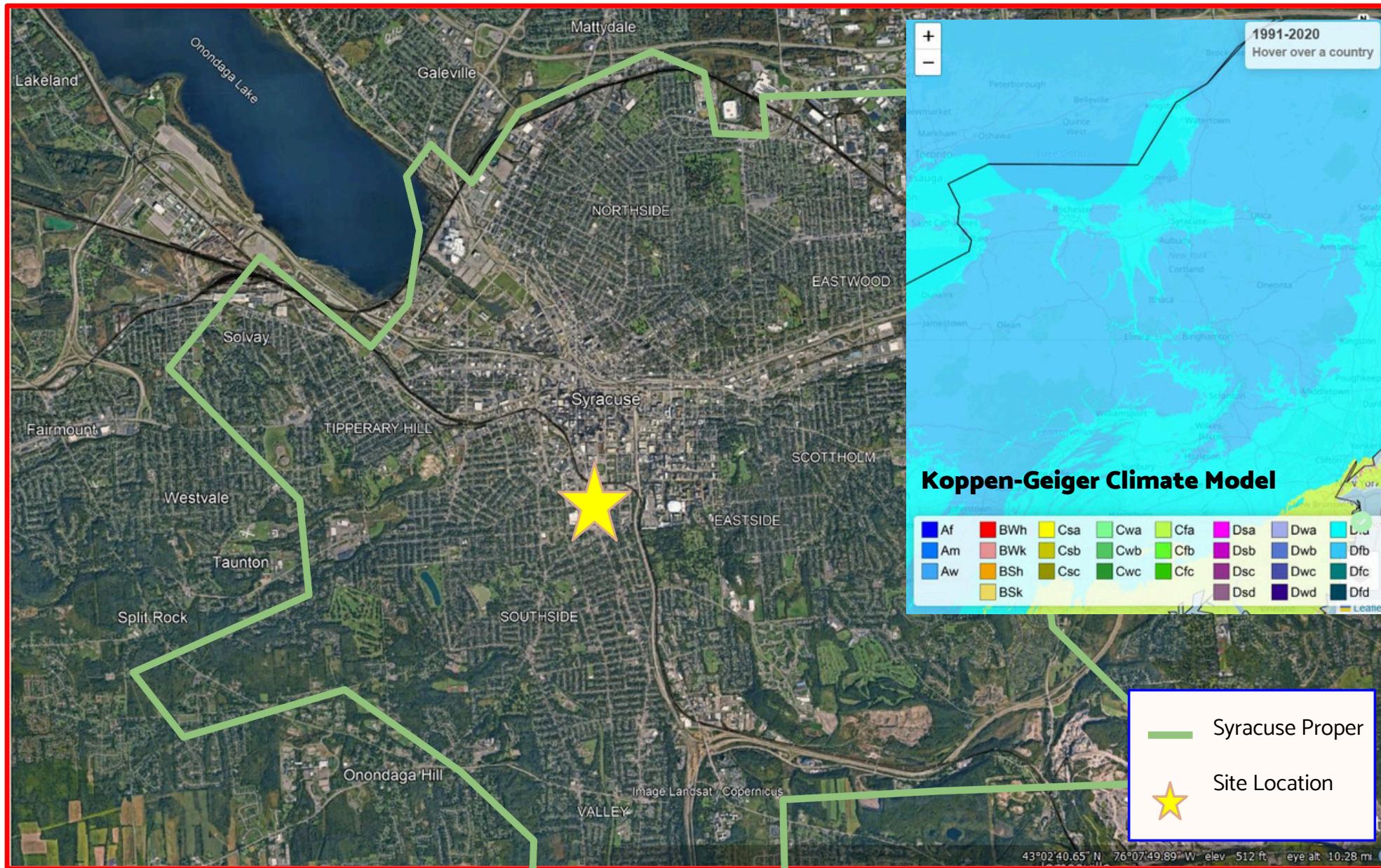
This site analysis examines 400 S. Salina Street (City Center), Syracuse, NY, emphasizing its location and historic structure to underscore their importance in shaping interior design choices and making the audience feel their expertise is valued.

- This presentation will evaluate how the building's interaction with its surroundings influences interior design directions, including aspects like sunlight, thermal comfort, and neighborhood context:
- Sunlight and daylight quality
- Indoor thermal comfort
- Ventilation and air movement
- Indoor air quality
- Structural conditions
- Views (interior → exterior and exterior → interior)
- Neighborhood context and microclimate
- Building envelope performance

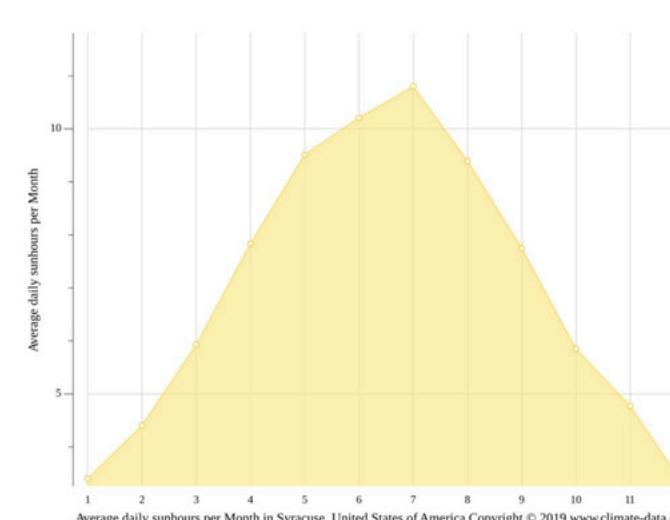
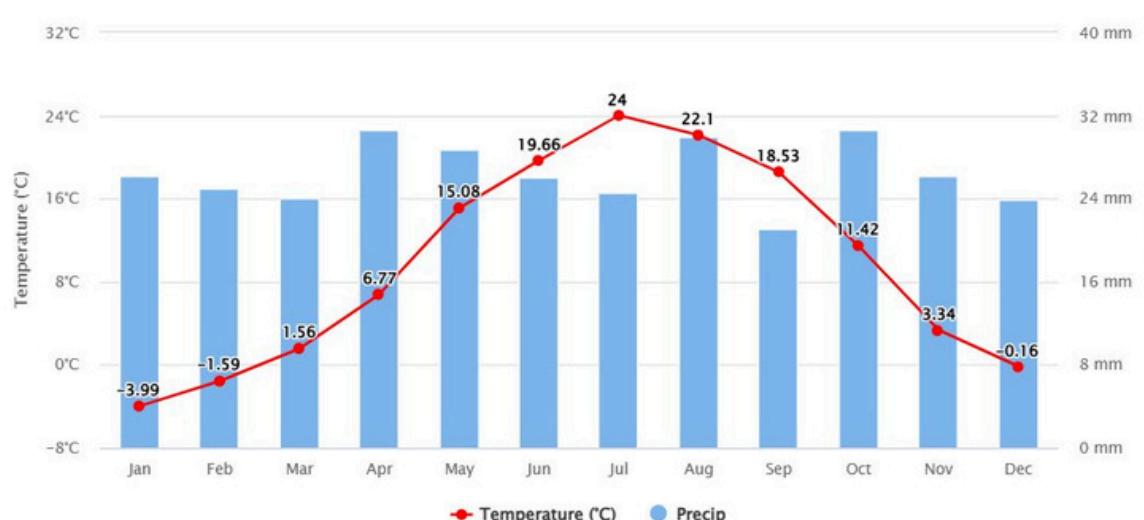
These findings lay the foundation for an evidence-based, human-centered interior design approach that ensures the final design responds directly to its environmental context while prioritizing occupant comfort, safety, usability, and well-being.



02_Location (Meso-scale)

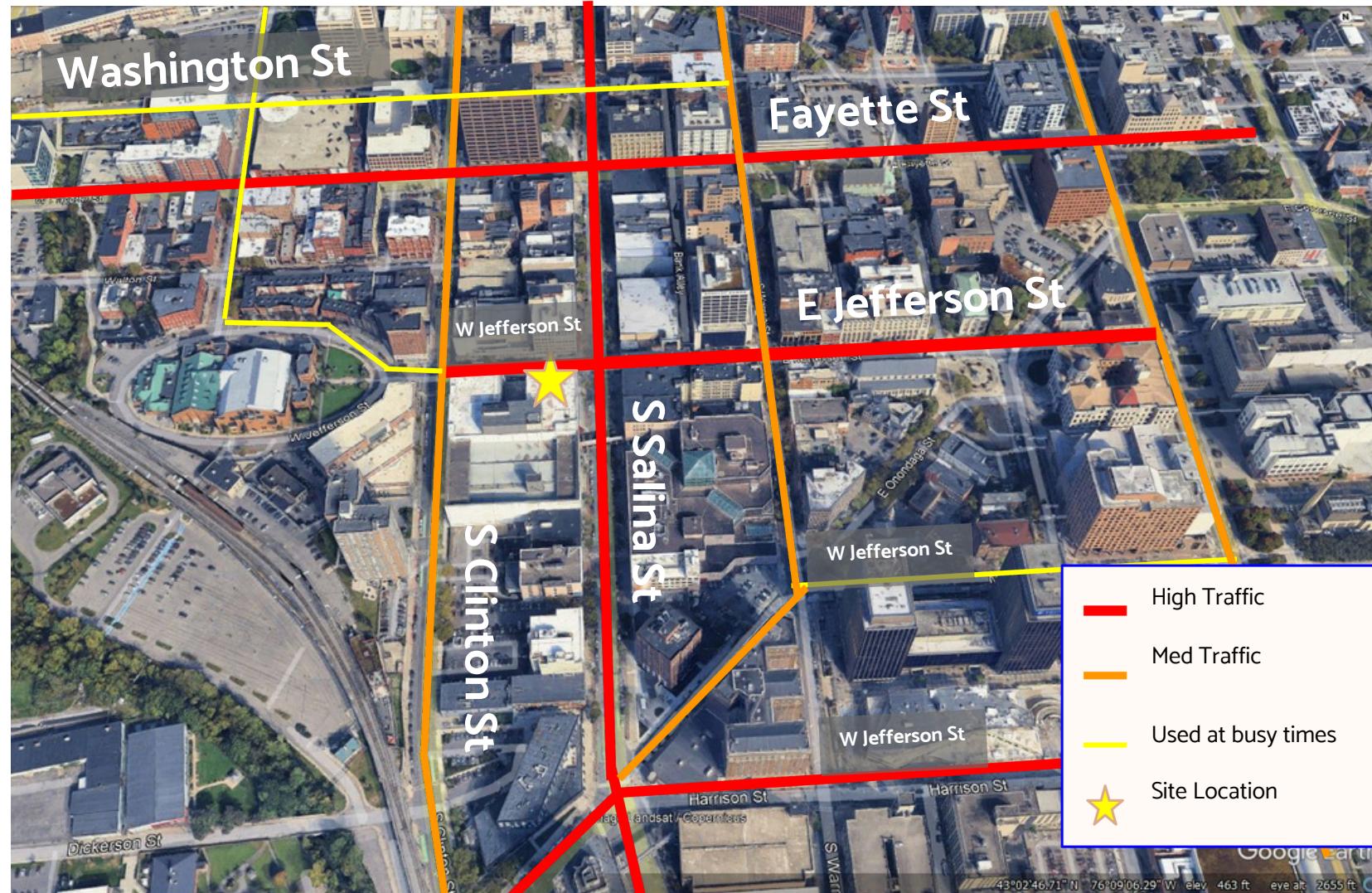


- The city records one of the highest annual snowfall totals in the United States, averaging between 115 and 128 inches.
- The region is significantly influenced by lake effect precipitation, resulting in both rain and snow, accompanied by substantial westerly wind activity.
- According to the Köppen-Geiger Climate classification system, the climate is categorized as Dfa, indicating a humid continental climate with warm summers. Koppen-Geiger Climate model



July	24.0°C 75.2°F
August	22.1°C 71.78°F
June	19.66°C 67.39°F
September	18.53°C 65.35°F
May	15.08°C 59.14°F
October	11.42°C 52.56°F
April	6.77°C 44.19°F
November	3.34°C 38.01°F
March	1.56°C 34.81°F
December	-0.16°C 31.71°F
February	-1.59°C 29.14°F
January	-3.99°C 24.82°F

02_Location (Local-scale)



Motor Vehicle Traffic Circulation Paths

- Heavy intercity traffic occurs on Salina Street from 7 to 8 AM and 4 to 5:30 PM, on Adams Street from 12 to 1:30 PM and 4 to 5:30 PM, and on Harrison Street from 7 to 8 AM and 12 to 1:30 PM.
- Clinton Street, Warren Street, Fayette Street, Washington Street, and State Street experience steady traffic throughout the day.
- Madison Street and Franklin Street serve as alternate routes or detours during busy periods on Salina Street.

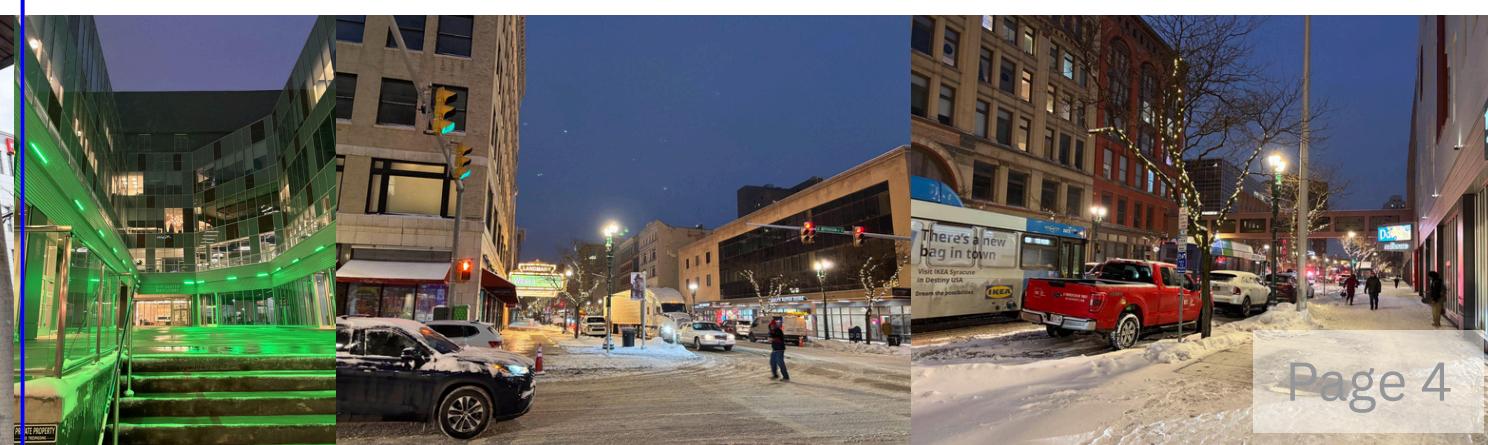
TRAFFIC COUNTS	
S. Salina Street @ E. Jefferson St.	11,451 AADT
W. Jefferson Street @ S. Clinton Street	3,839 AADT
S. Clinton Street	3,072 AADT

SOURCE: COSTAR Report 2024 (counts taken 2022)

Daytime Conditions

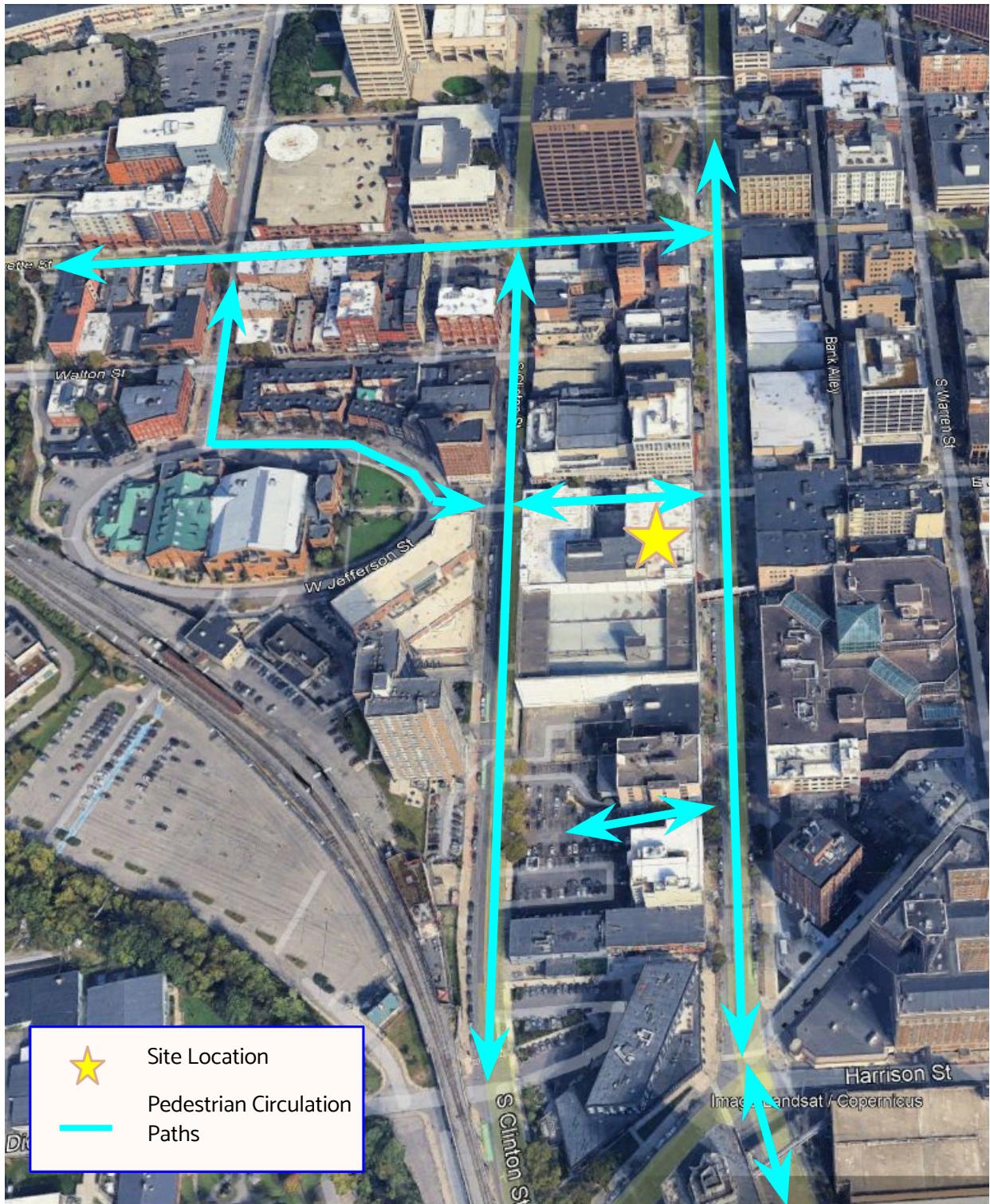


Nighttime Conditions



02_Location (Local-scale)

WALK SCORE ®	BIKE SCORE ®
Walker's Paradise (91)	Very Bikeable (77)
SOURCE: COSTAR Report 2024	



< Pedestrian Flow

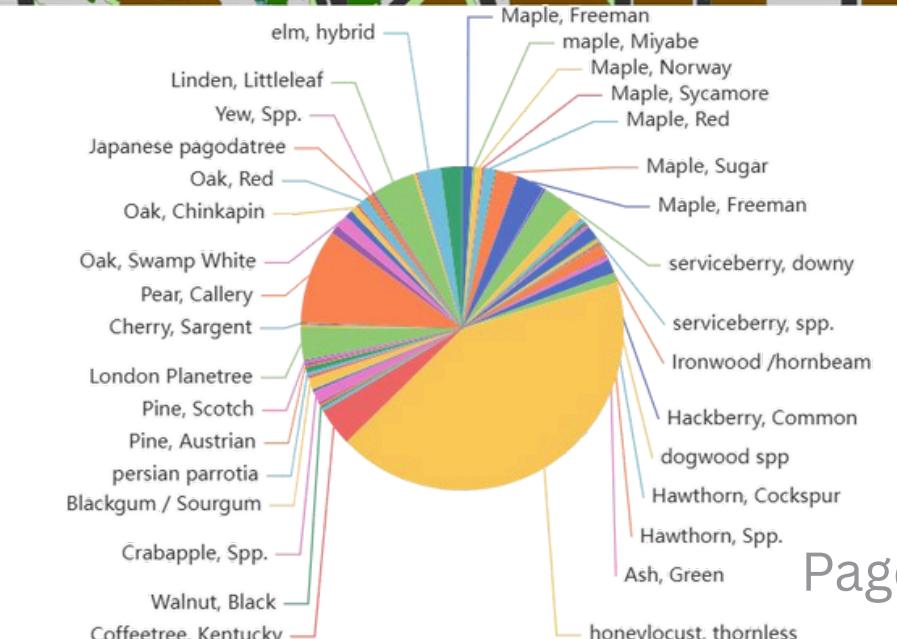
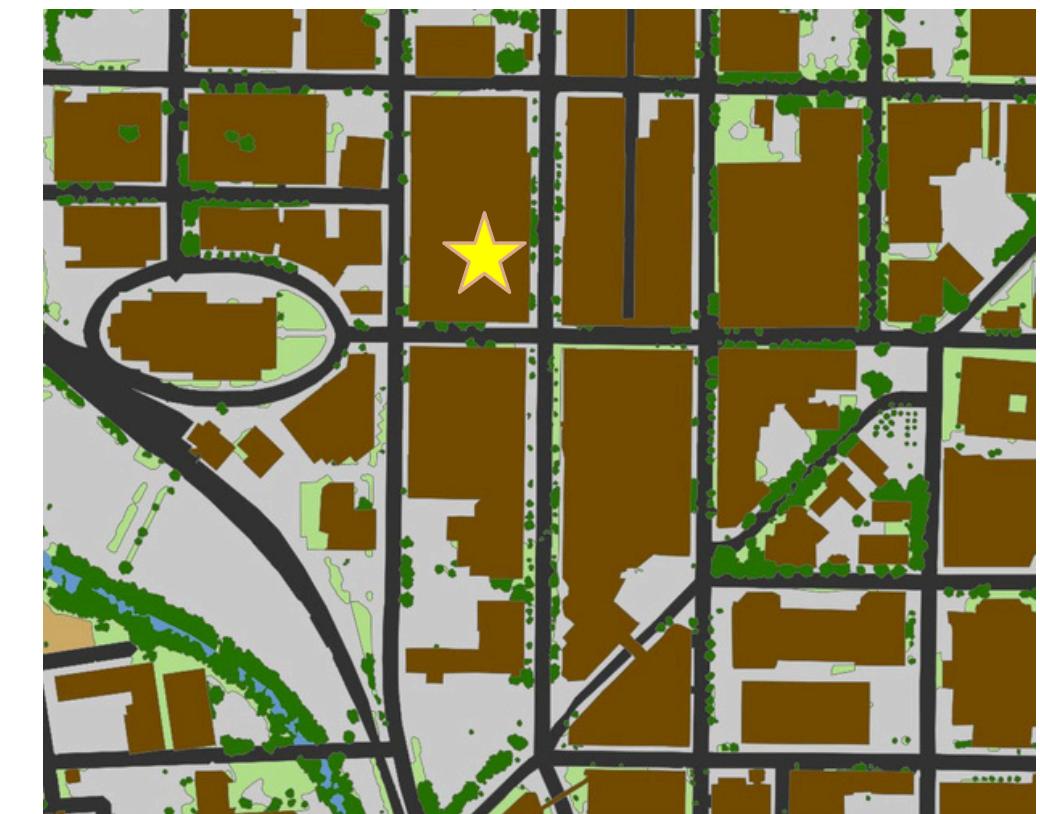
Most observed pedestrians used these paths to move between parking lots, bus stops, and buildings

Vegetation >

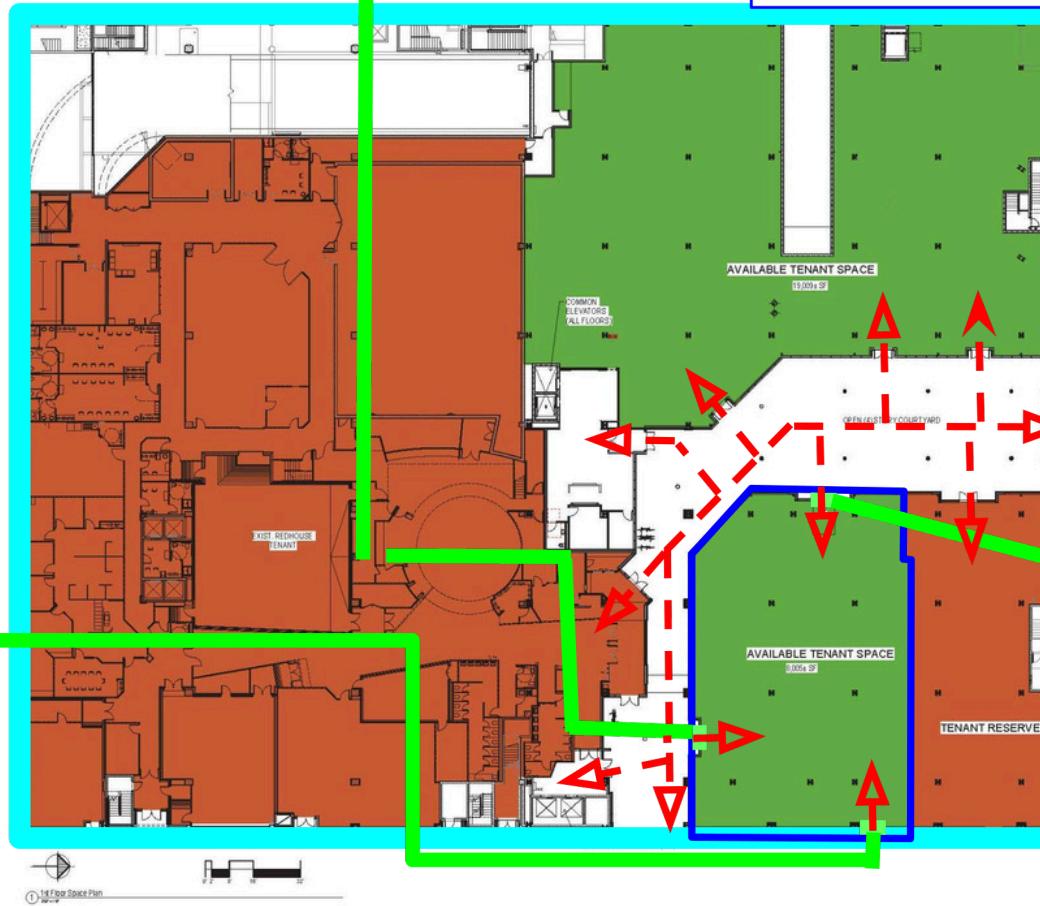
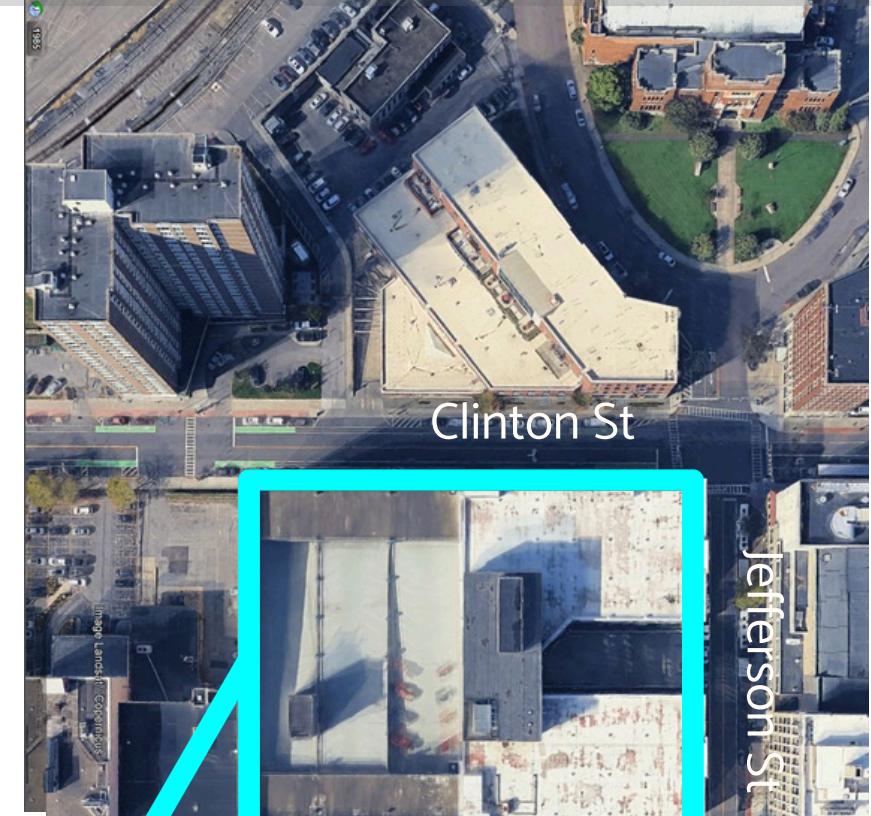
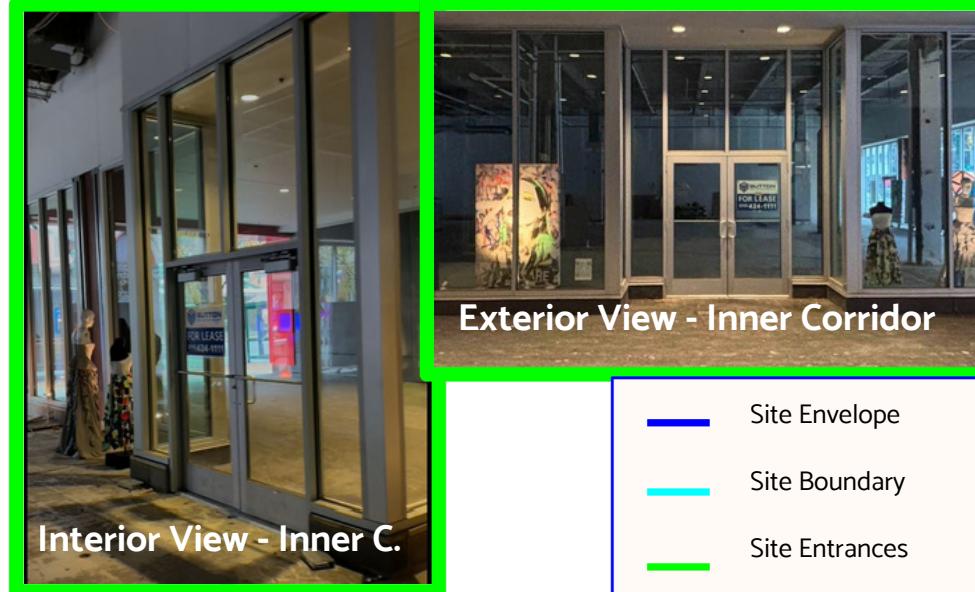
Pollination happens for most of the year with many different species of trees, pollinating anywhere from Jan to late July with fe outliers to late August. Most trees overlap pollinating from Feb - late March.

DEMOGRAPHICS		
By Radius	1 Mile	3 Mile
Population	24,246	148,479
Households	11,692	59,745
Businesses	6,159	10,447
Daytime Employees	74,285	129,862

SOURCE: COSTAR Report 2024

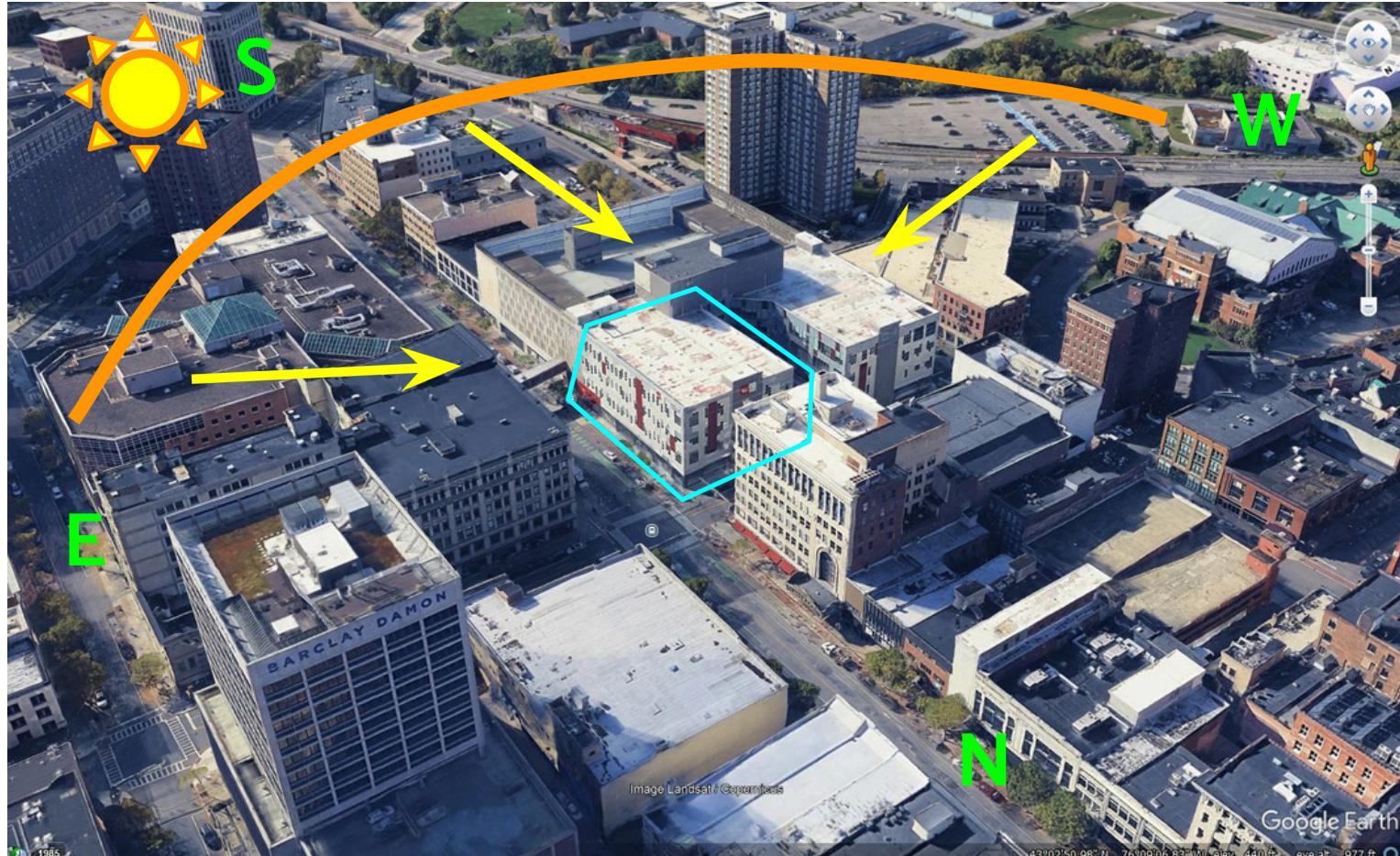


02_Location (Micro-scale)

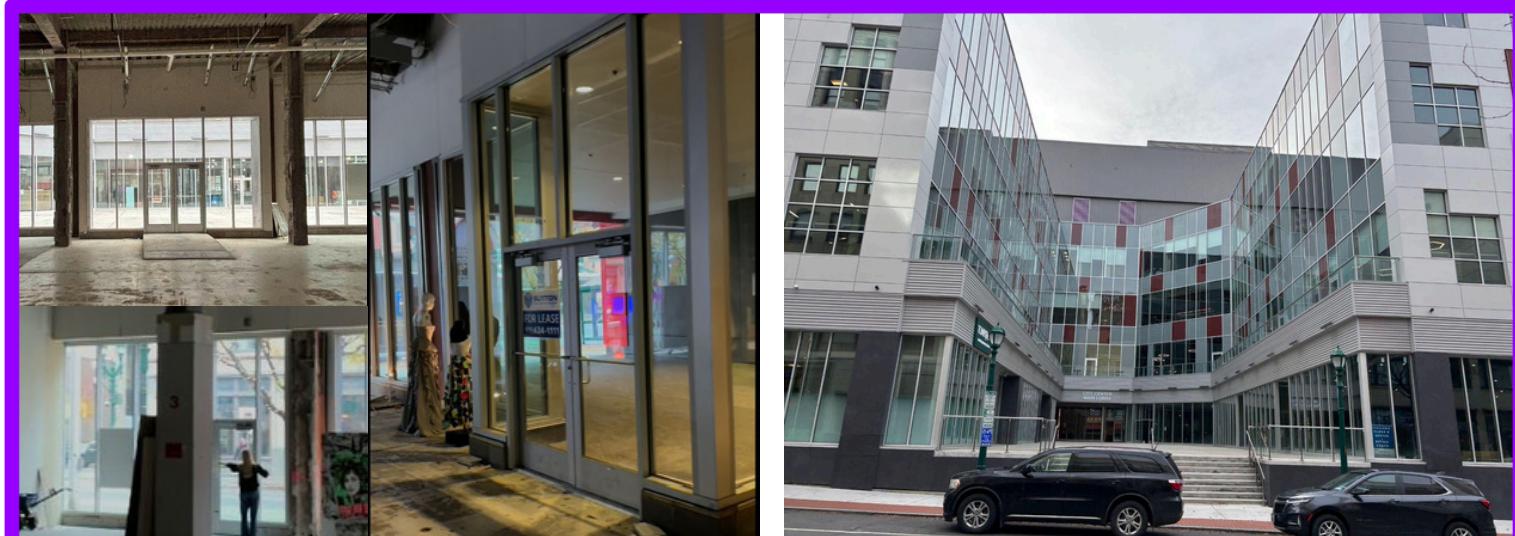


02_Location (Micro-scale)

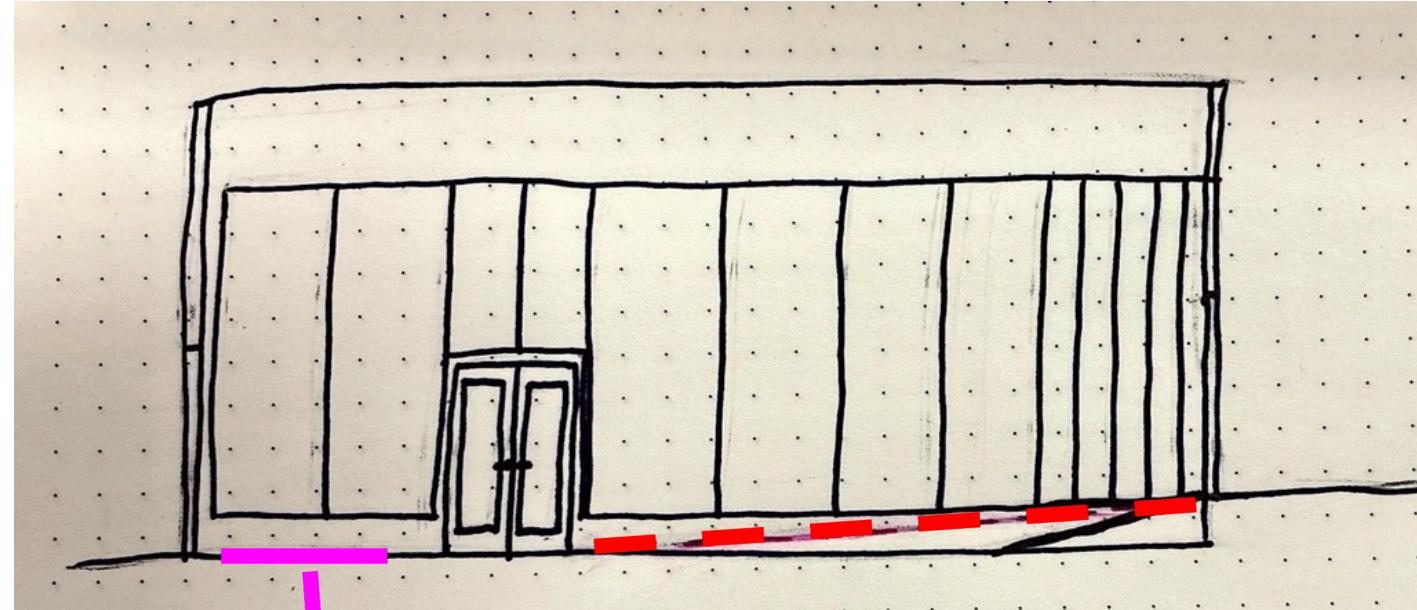
Shade Impact



The interiors are mostly shaded, while the exterior receives bright direct and indirect light.



Slopes, drainage, and Environmental Transitions



One downward slope from interior courtyard to S Salina St. Only visible drainage are open metal pipes in the SE corner of site.

02_Location (Micro-scale)

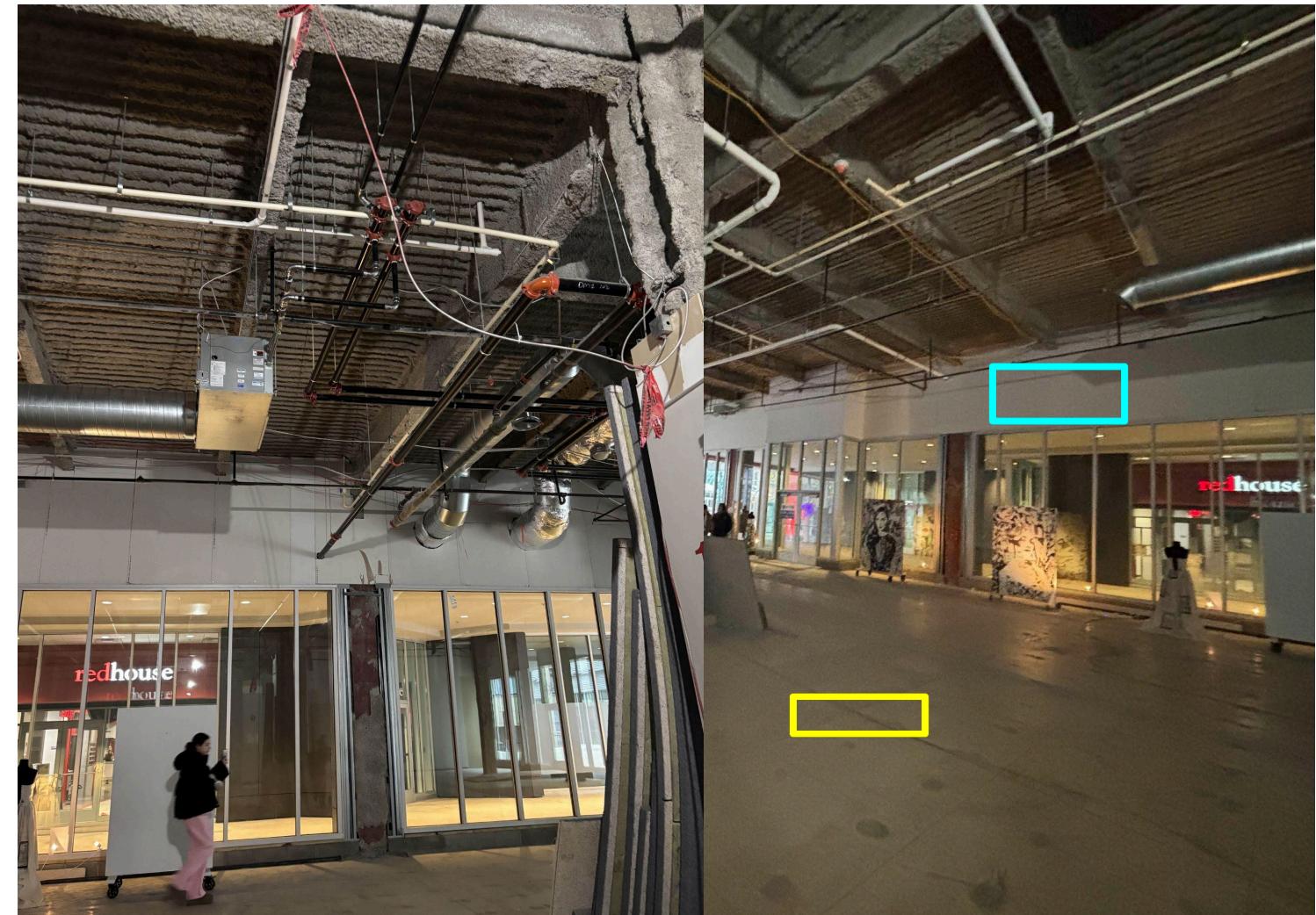
Exterior Surface Materials



All siding panels are different metals. Glass, metal frames, and a slate like stone encase the first floor.



Interior Surface Materials



Poured concrete, drywall, steel support columns and beams, glass windows with metal framing, and sprayed cement.



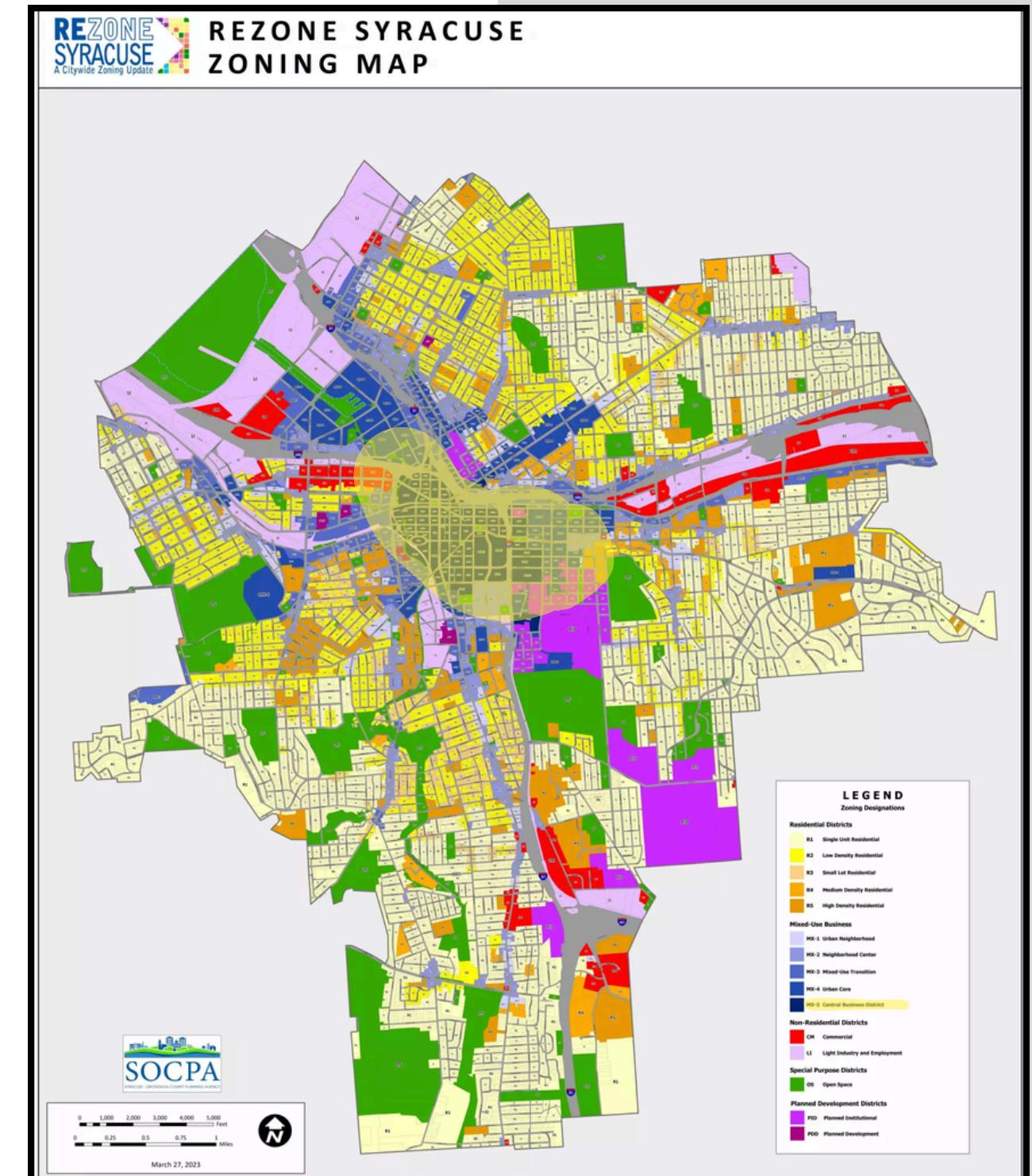
03_Legal and Authorities

1. Zoning regulations, building permissions, permitted uses

- In the MX-5 – Central Business District zone
 - code *encourages* mixed: offices, arts uses, and residential
- New interior layouts or tenant fit-outs are typically allowed as-of-right as long as they stay within these use categories;
 - Need special permit for certain assembly/nightlife uses

2. Height restrictions, setbacks, easements

- The building may sit directly on the sidewalk but must respect the continuous street wall and urban edge.
- **Max height**= none
- **Minimum height**= 7'-6"
- Some vertical additions are possible except design is already existing
 - interior height decisions are determined by building code
- 70% to 80% max must be building coverage.
- Structural easements/MEP must be respected in final documents



03_Legal and Authorities (cont.)

3. ADA / accessibility requirements

- Ensure there at least one continuous path
 - street → lobby → retail space → restrooms and exits.
 - Have wide corridors, no fixtures or furniture get in way of main travel path, avoid dead ends
 - Keep the pathways at least 36" or 32" for short distances
 - Slopes= ($\leq 1:20$) unless they're ramps.
 - ADA requires that pathway should include at least one accessible entrance, restroom, and drinking fountain
-

4. Occupancy classification and egress requirements

- **Class A** office building
- At least two remote exits are required; number will vary depending on the amount of high loads, assembly spaces, and large floor plates
- Corridors/hallways that create a path to an egress have a minimum width and fire-rating depending on occupancy and load
 - Mercantile occupancy must have an accessible egress route



03_Legal and Authorities (cont.)

5. Historic district rules & façade modification constraints

- The City Center sits in a historic context and was formerly the Sibley's Department Store
 - downtown landmark structure
 - For interior design, avoid interior changes like blocking historic openings without checking preservation implications.
-

6. Ownership & municipal council / approval requirements

- A pre-application conference is where the **City Planning Commission** reviews and decides on major site plans.
 - For big changes to site layout or facade
 - just exterior- not major for us
- Rezoning petitions go to the City Planning Commission for recommendation and then the Common Council for public hearing and decision.
 - Any future change to the MX-5 district or to preservation status would involve the Council.
- Changes for interior design must be approved by...
 - **Building Management/Owner**
 - **City of Syracuse Department of Code Enforcement** (for permits)
 - **Onondaga County Planning Board if it affects public right-of-way** (possibly)



04_Site History and Significance

Timeline



1920

Keith's Theatre

The theatre was billed as the “Most Magnificent theatre in all the Universe”. The grand opening was headlined by “The incomparable” belle Parker

The theatre ran from 1920 to 1967.



1925

Modernisation

Renovations and improvements aim to maintain its prestige and attractiveness



City Center

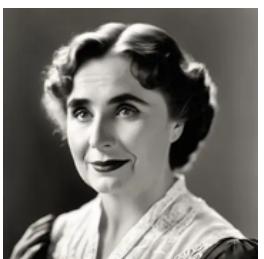
The site officially adopted the name City Center



2014

Kaufman's Department store

The building became a store to continue its commercial vocation.



1920

Hellen Keller Performance her stage act, “Star of Happiness” for a week of performance in June of 1920. Other Notable acts over the years included georges Burns.



1928

Most Daring Holdup

A notorious robbery took place at the theatre, marking it in the history building

1967

The theatre

The grand auditorium ceased operations

City Center

The City Center boasts a timeless architectural design that seamlessly blends historic charm of its past use as Sibley's Department Store, into modern functionality. Its distinctive facade, courtyard, and balcony make it a standout landmark.

The City Center site at 400 S. Salina Street holds significant historical, cultural, and urban importance in the city of Syracuse.

Originally constructed in 1920 as B.F. Keith's Theatre, the building emerged as a major center for vaudeville and live performance during the early 20th century. At the height of its success, it was celebrated as one of the most elegant theaters in America and hosted nationally renowned performers, reflecting Syracuse's role as a vibrant cultural destination.

Over time, the building's evolution mirrored broader social and economic changes in the city. The decline of vaudeville, the impacts of mid-20th-century urban renewal, and shifts toward retail use transformed the site from a cultural landmark into a commercial space.

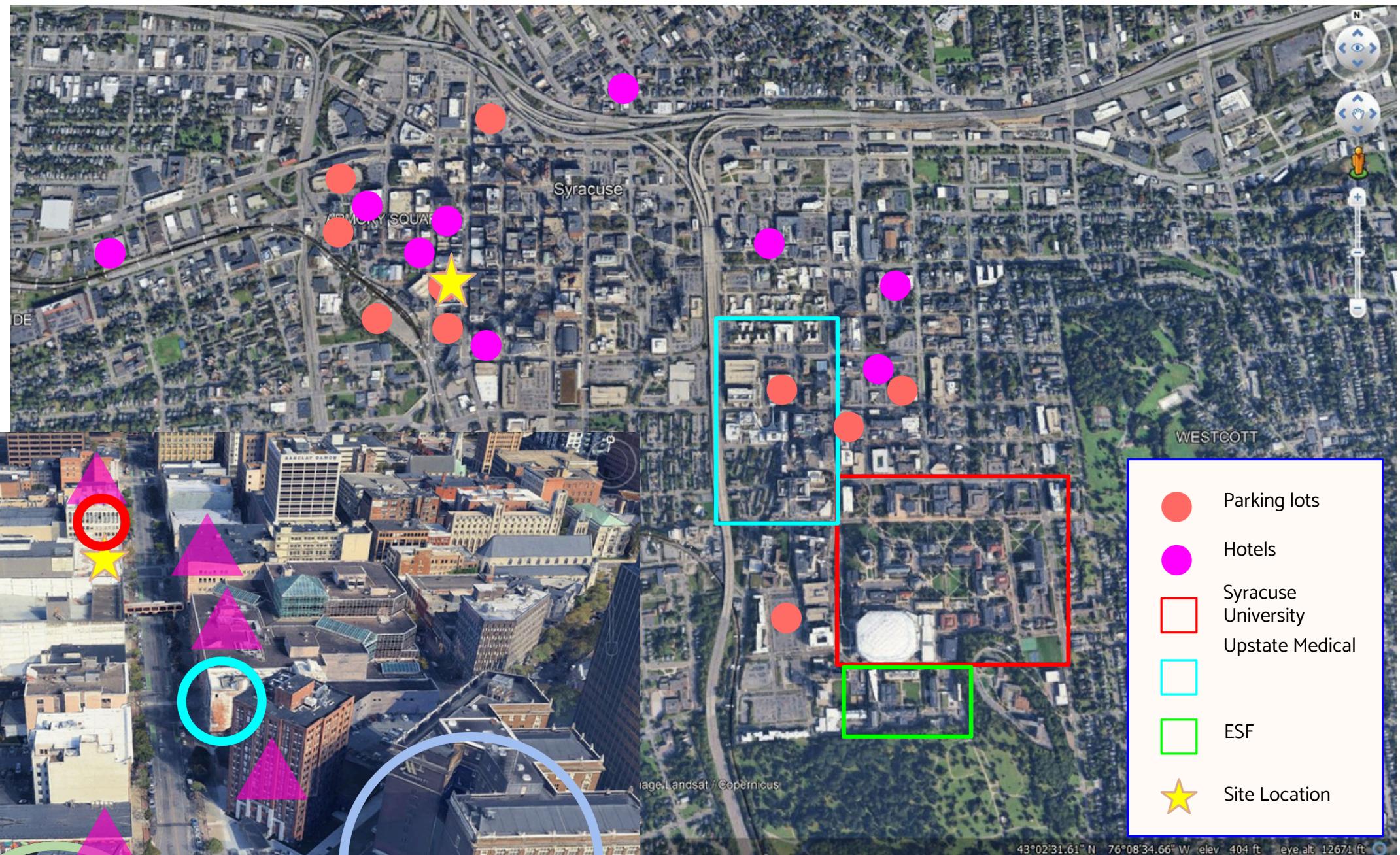
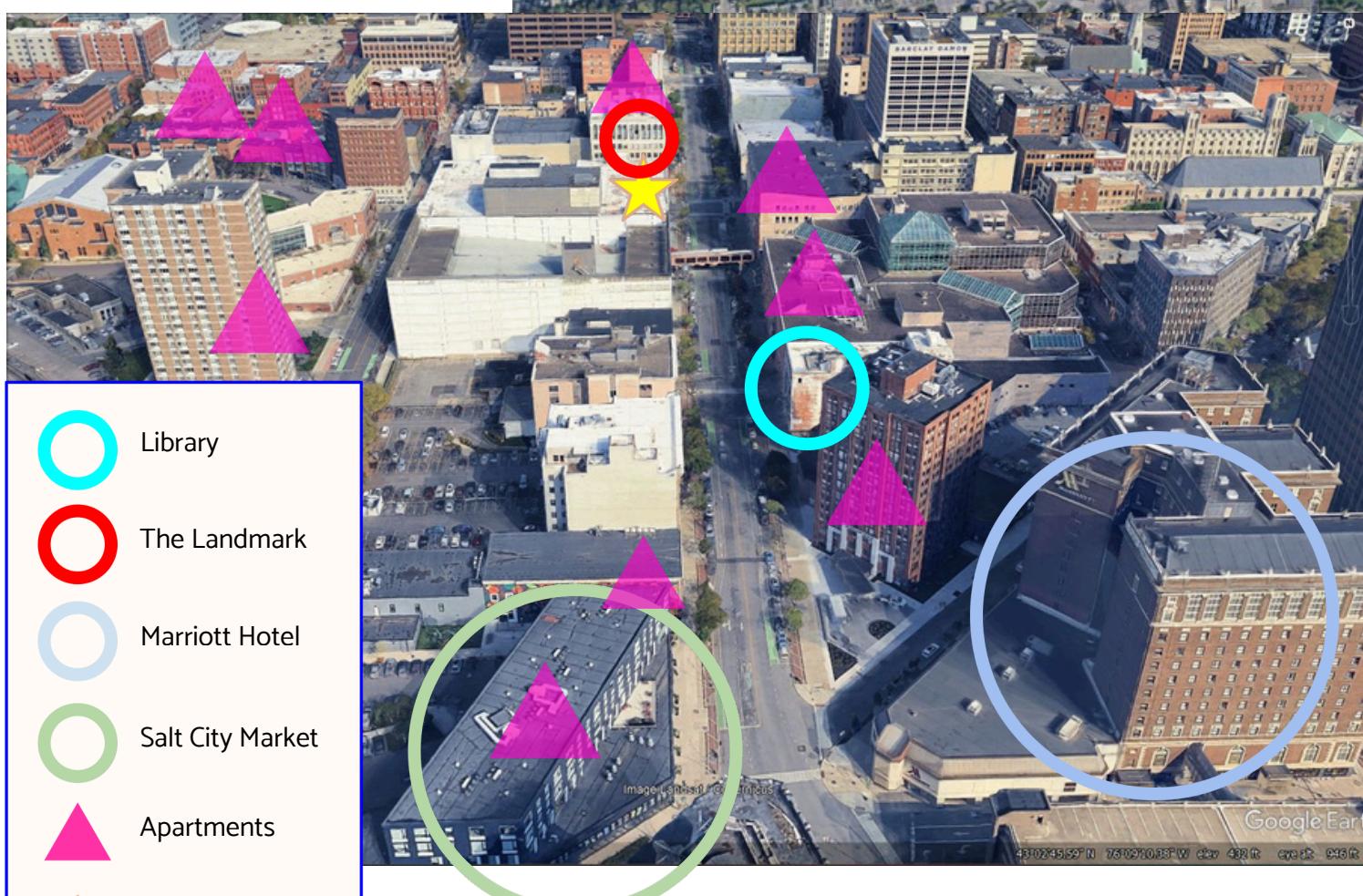
The partial demolition and repurposing of the building illustrate the challenges faced by historic downtown structures during periods of modernization.

In the 21st century, the site regained its cultural significance with the return of performing arts through the Redhouse Theater and later its redevelopment as City Center.

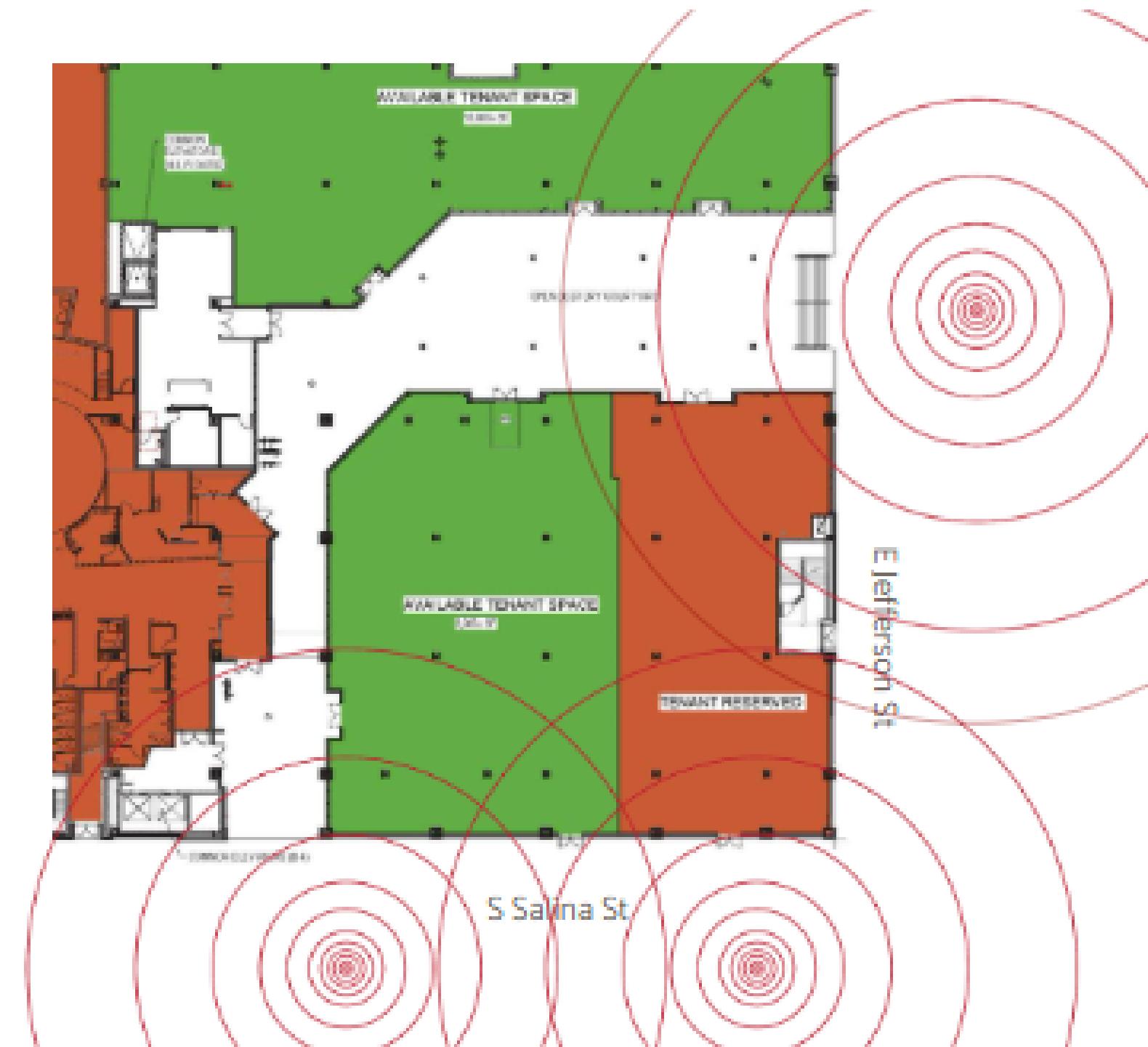
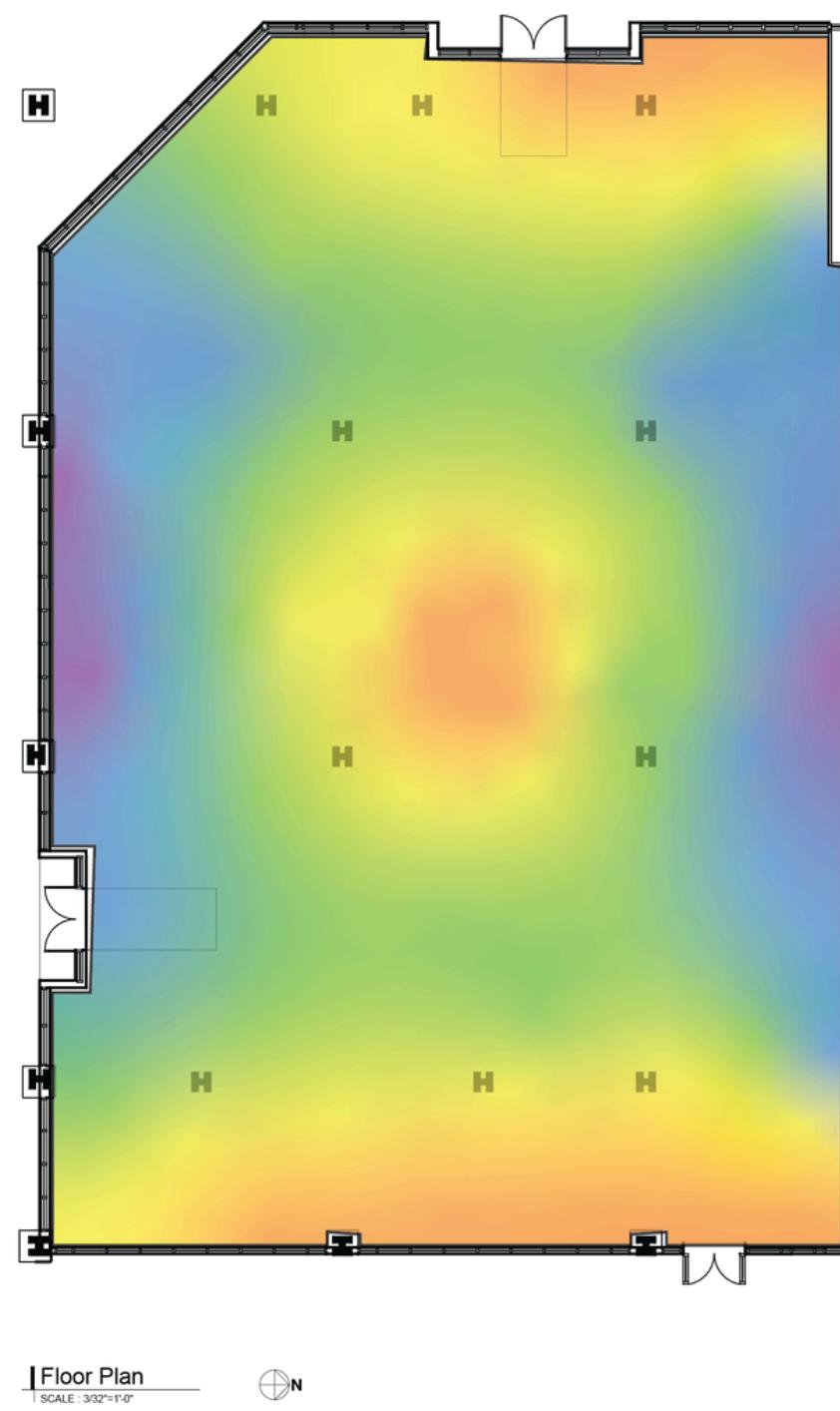
Today, the building represents a successful example of adaptive reuse, combining arts, community space, and mixed-use development. Its transformation highlights the importance of preserving historic identity while supporting economic revitalization and community engagement in downtown Syracuse.

05_Neighborhood Context - Nearby Activities

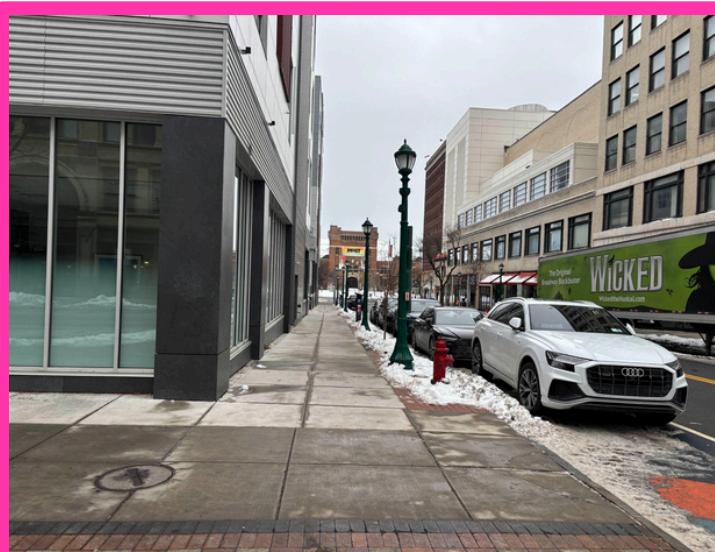
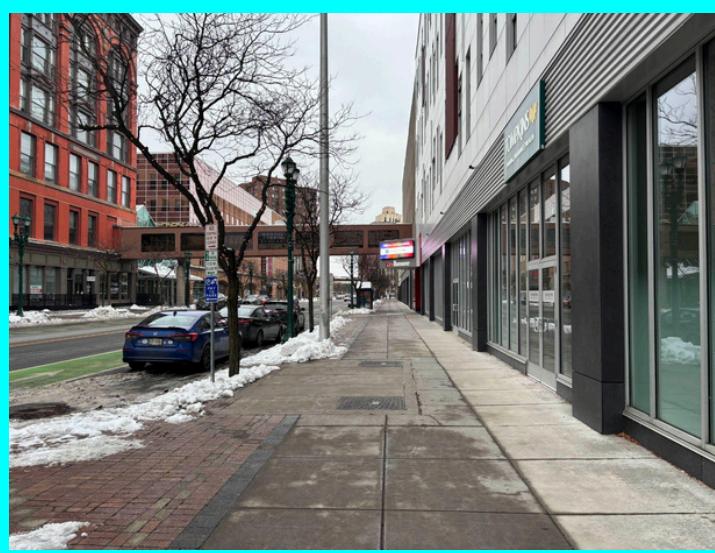
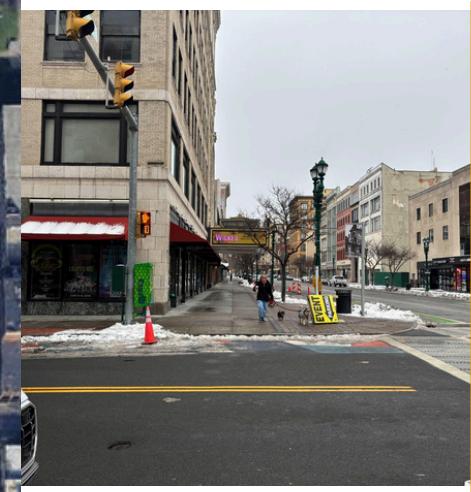
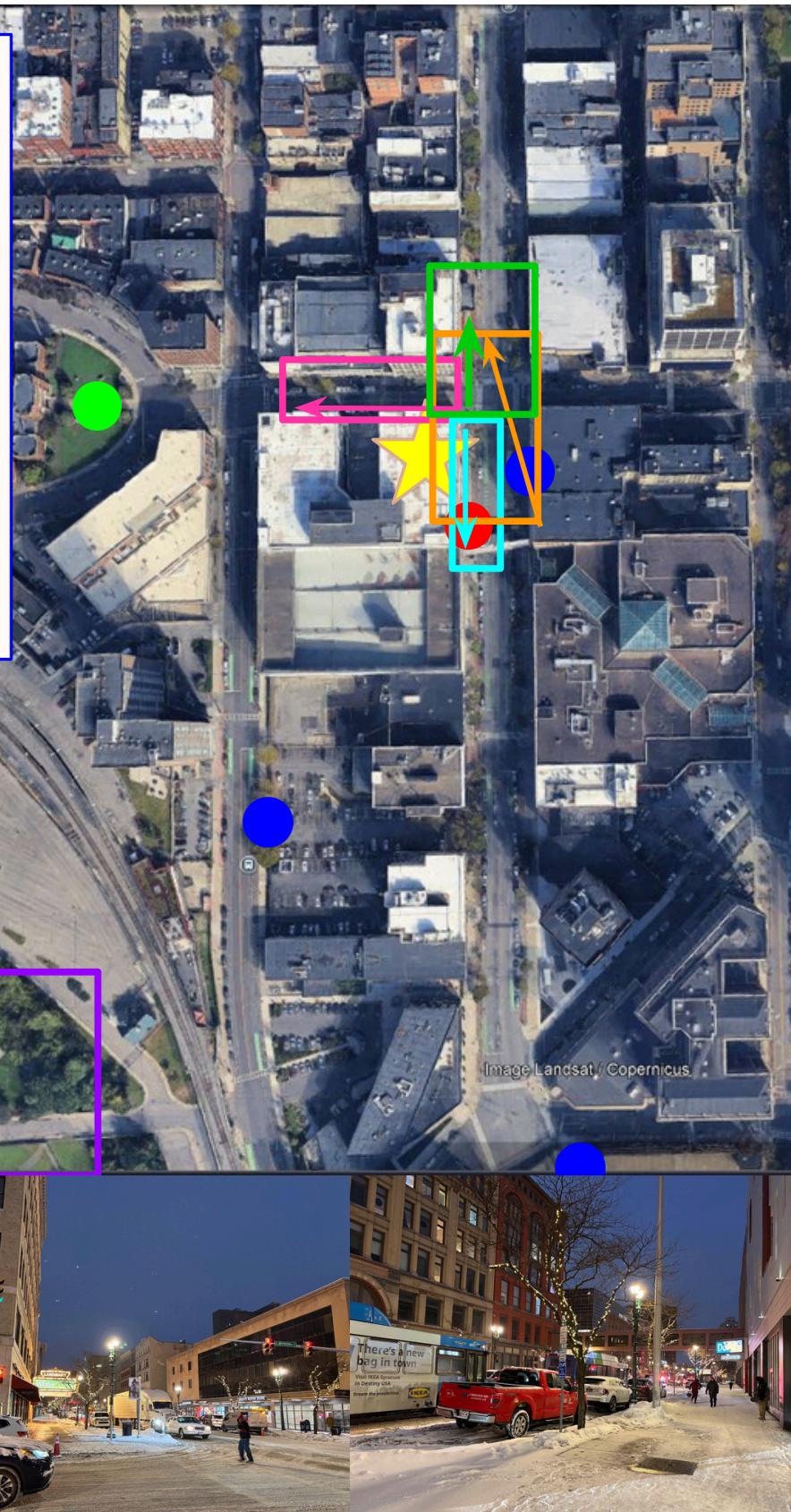
- Many universities in the area
 - Hotels concentrated downtown
 - Parking Garage located beneath site
 - Landmark Theater across the street
- Museums such as the Most and Everson
- Centro Central Bus Station
- Red House and the public library



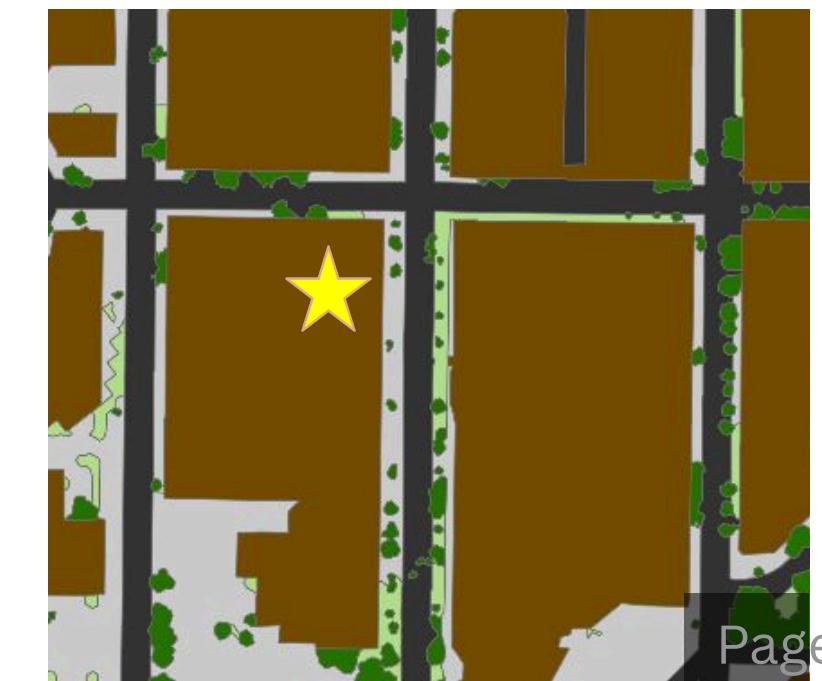
05_Neighborhood Context - Thermal and Acoustic Comfort



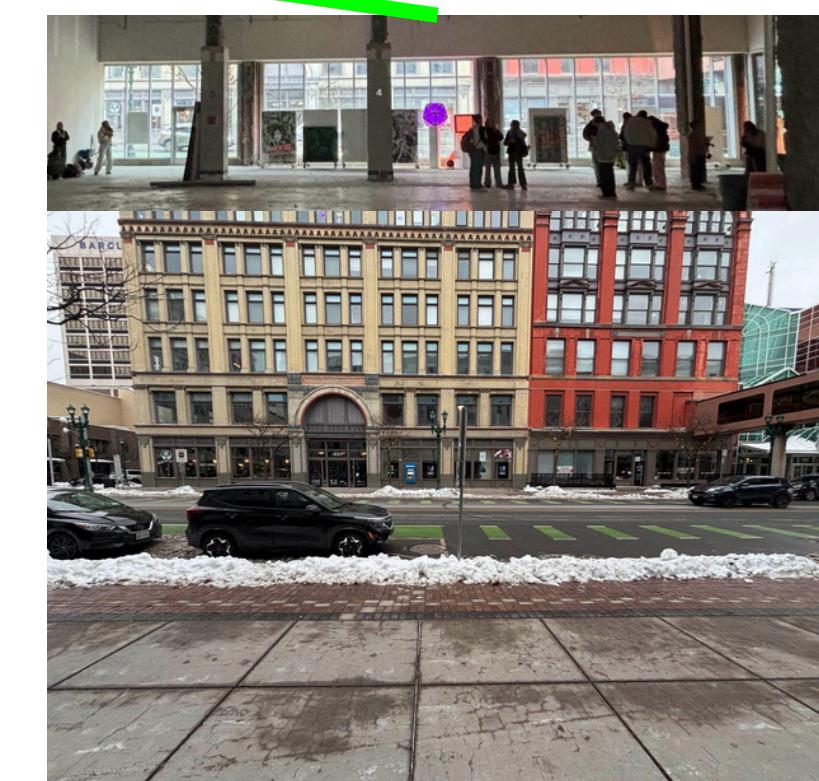
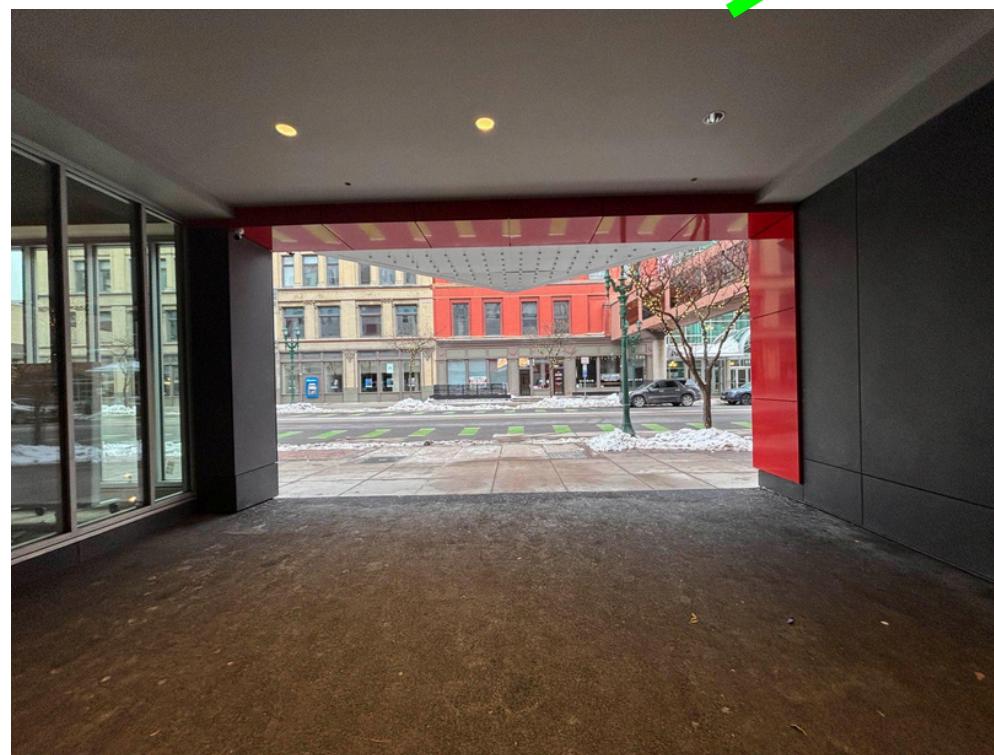
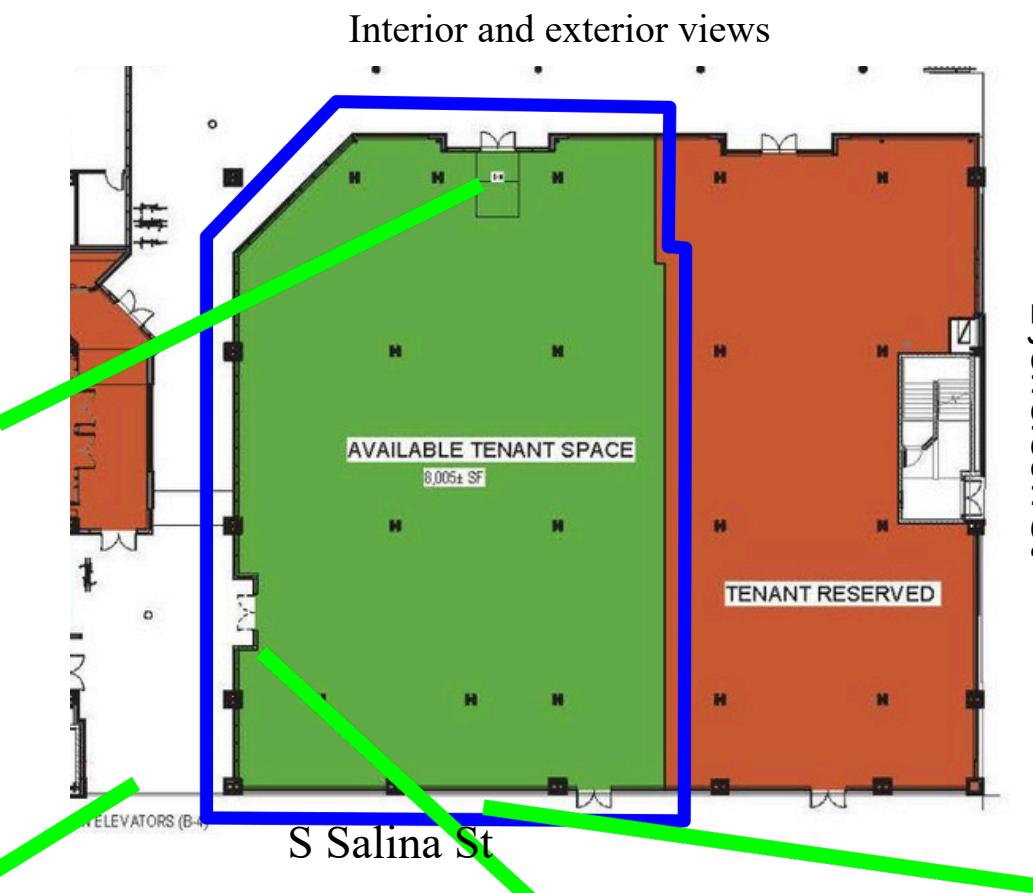
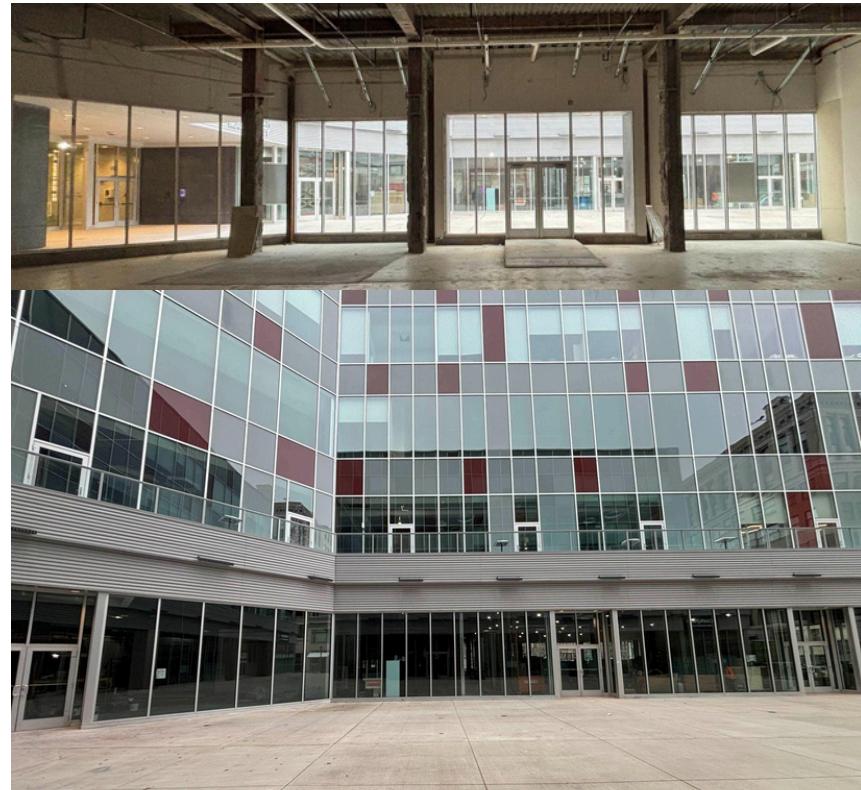
05_Neighborhood Context - Nighttime Safety & Pedestrian Experience



Current pedestrian experience and night time safety is quite low. No sun shade, no weather shelters, no gathering place, little to no vegetation, no places to rest. Ample lighting but no security and many incidents of people being harassed.

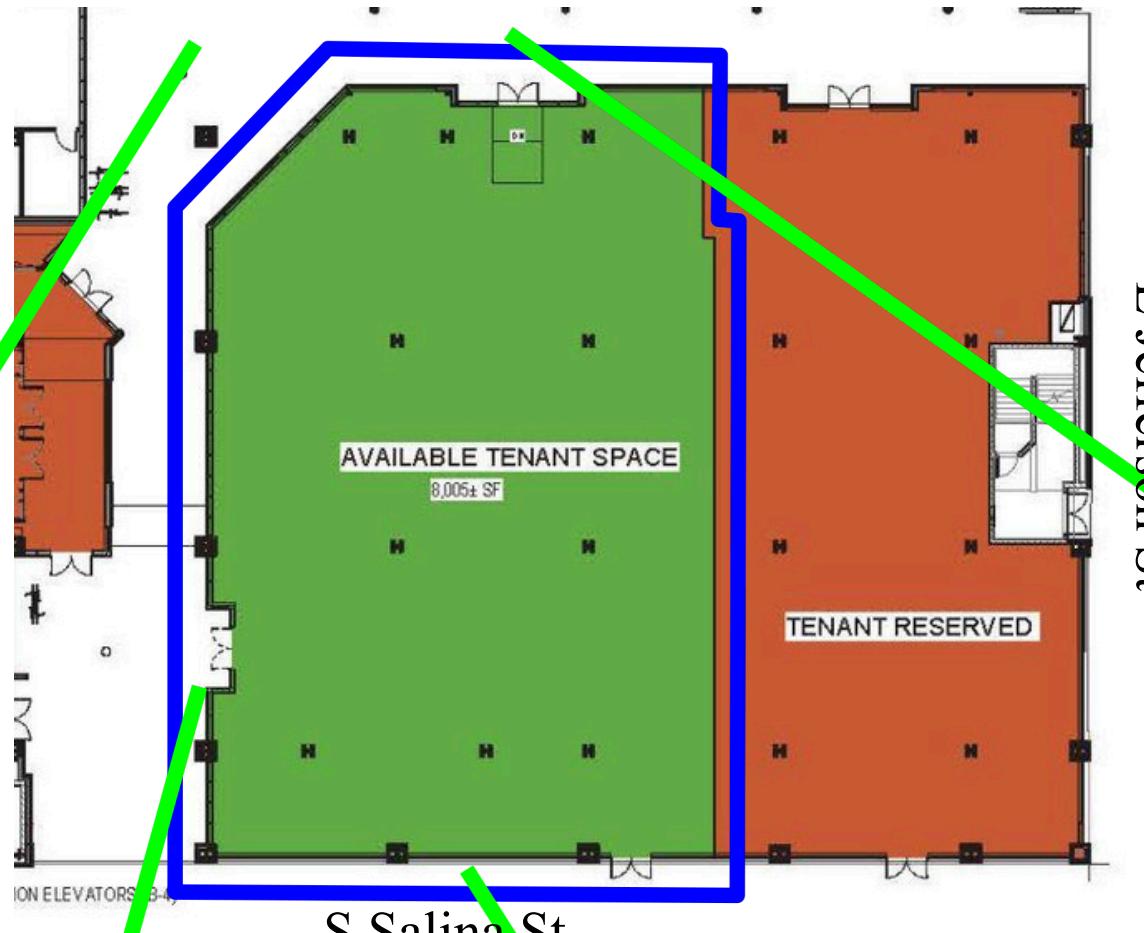
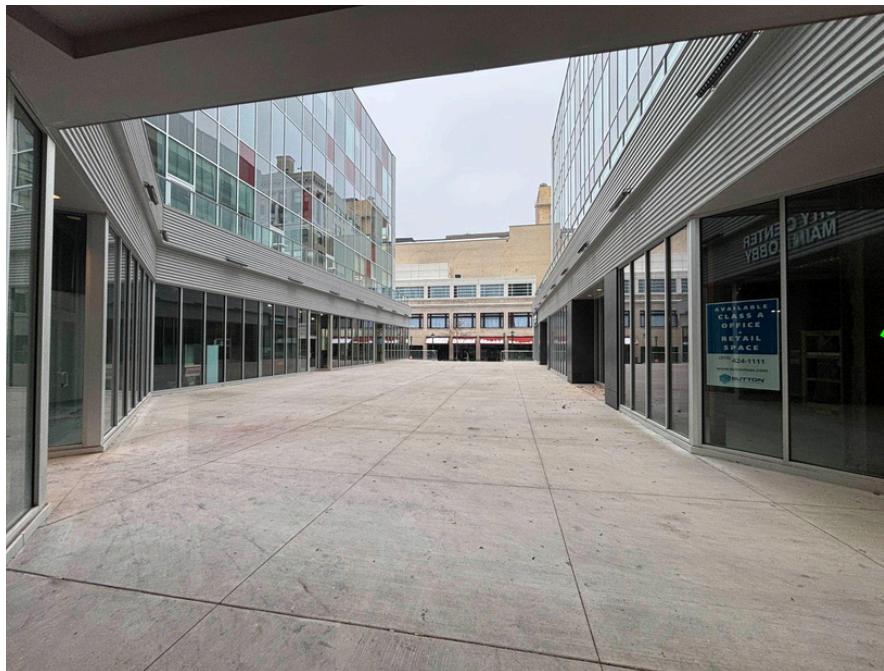


05_Neighborhood Context - Privacy, View Quality, & Spatial Experience

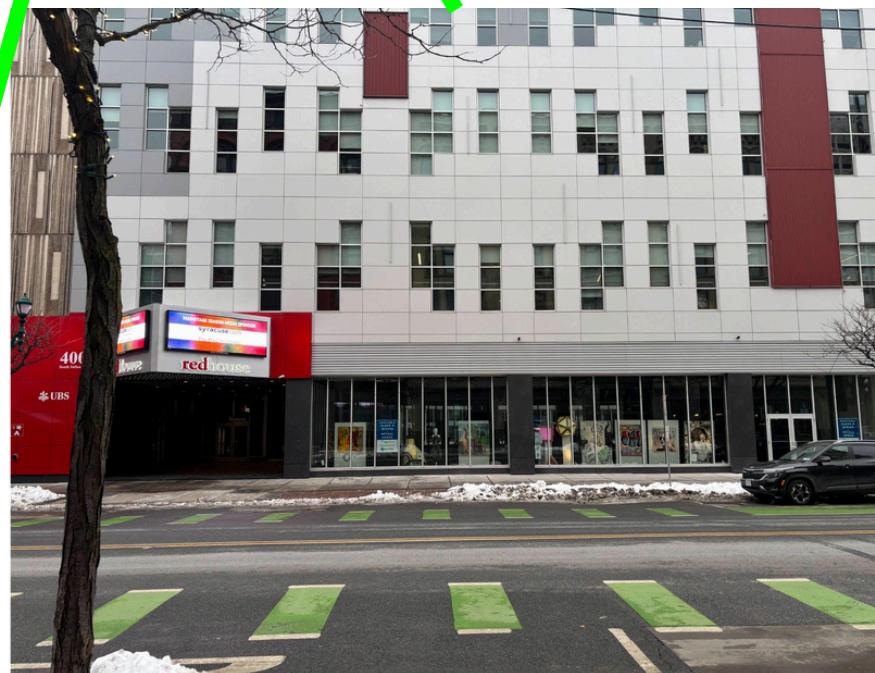


The site exhibits minimal privacy from exterior spaces, as all surrounding pathways are designated public thoroughfares. The overall visual quality is notably lacking, except for the historic building facades, which provide some aesthetic value. Furthermore, the spatial experience is significantly diminished by the absence of interactive elements, designated areas for rest and dining, or engaging experiences within the site's boundaries.

06_Existing Conditions Photographs - Exterior



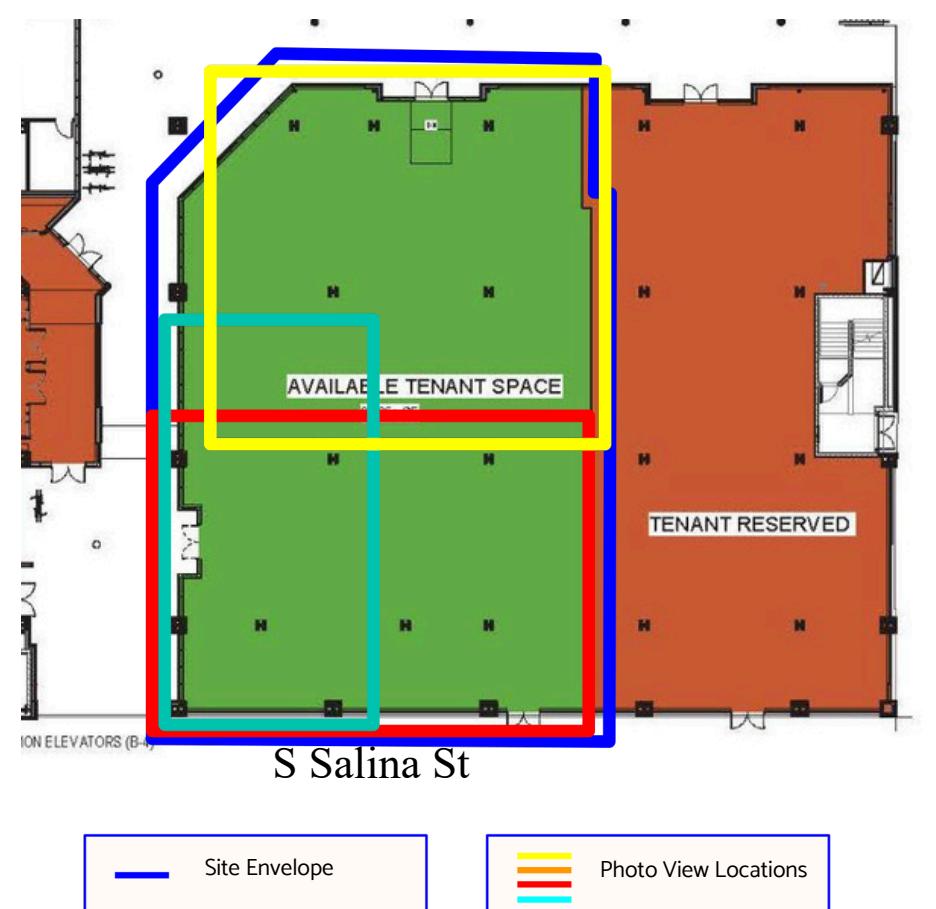
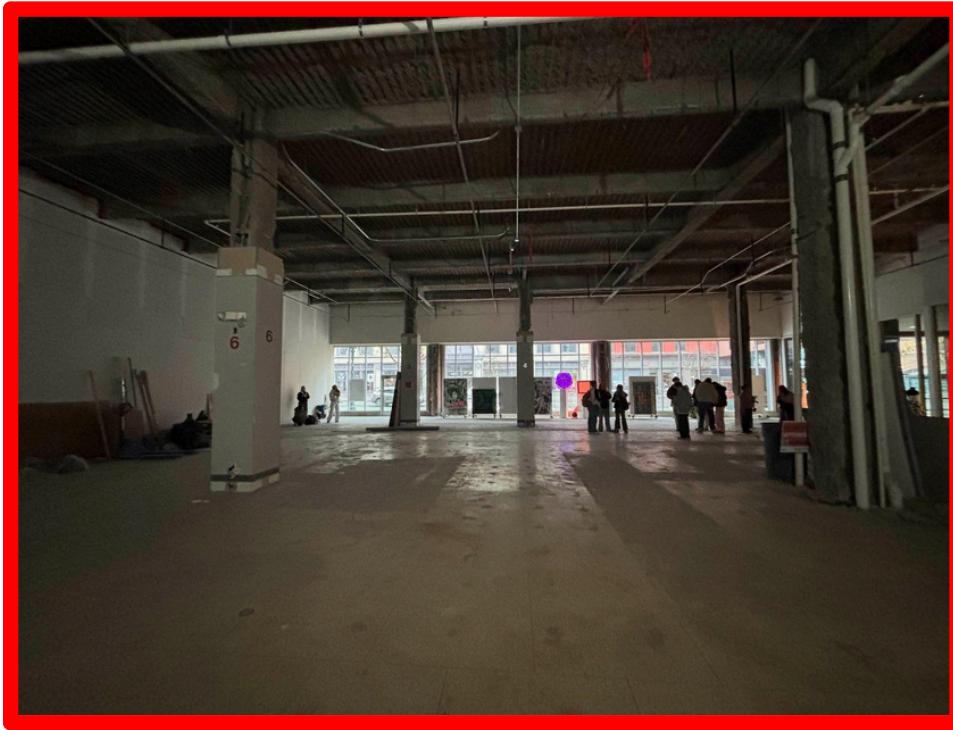
— Site Envelope — Photo View Locations



The building features exterior metal panels that reflect solar radiation, helping to maintain cooler interior temperatures by reducing heat gain. The glass elements have a light tint to filter light and heat, further contributing to thermal management.

Notably, shading devices are minimal, relying primarily on window distance for solar protection. Insulation is limited to the window paneling, which may restrict overall thermal efficiency. The open courtyard lacks awnings or additional shading, exposing it to direct sunlight and potentially increasing heat accumulation. This design raises questions about the effectiveness of passive cooling strategies and overall comfort across various climatic conditions.

06_Existing Conditions Photographs - Interior



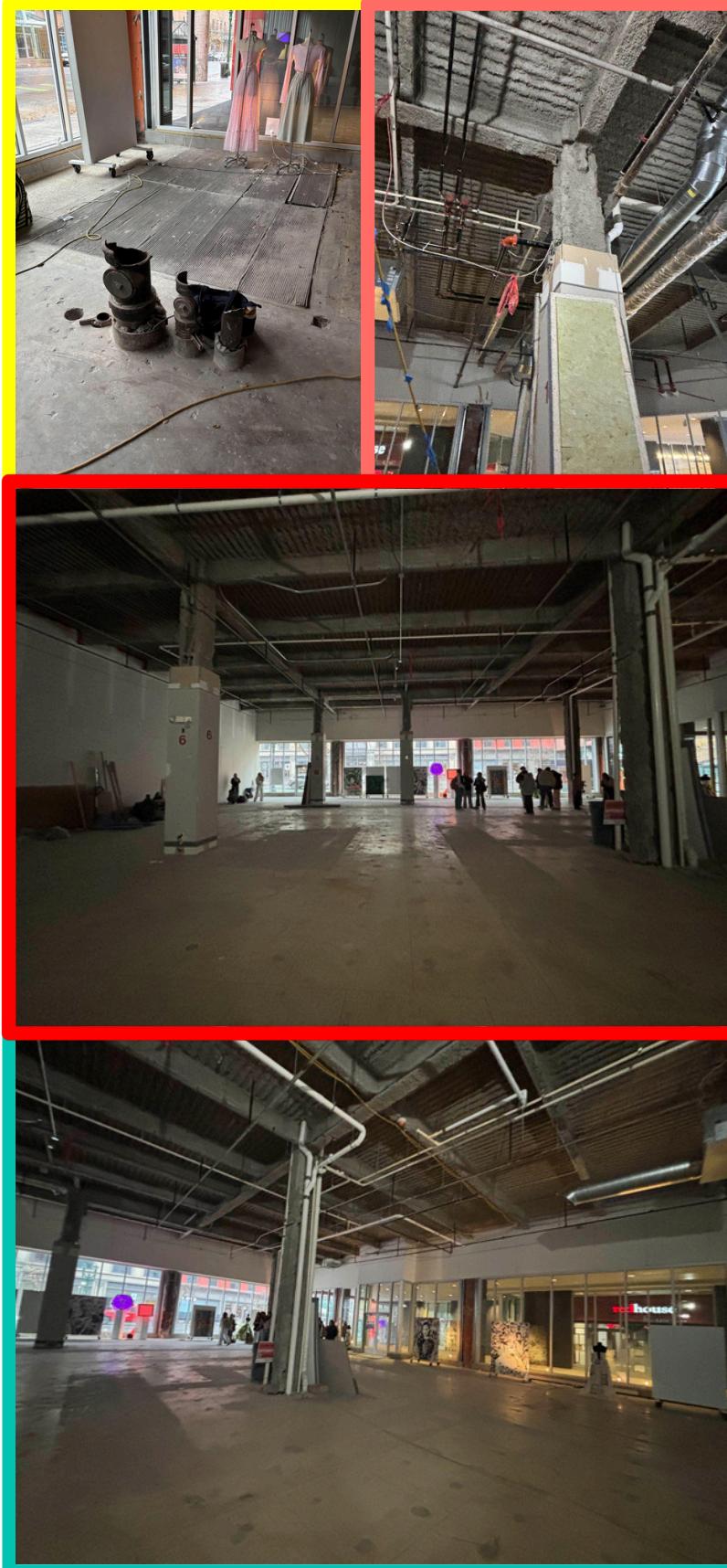
The architectural design of the building incorporates inoperable windows, which serve to enhance acoustic dynamics. This design choice is further supported by high ceilings that facilitate improved airflow and enable effective acoustic control. While natural light permeates the interior spaces, there is a notable presence of exterior glare; however, visibility from within to the external environment remains satisfactory.

In terms of air quality, the building's design presents certain challenges. The absence of operable windows and the limited functionality of HVAC systems contribute to suboptimal air conditions, resulting in stagnant air unless the main access doors are utilized for ventilation.

From an acoustic perspective, the sound quality within the space is commendable, characterized by minimal echo and a comfortable level of reverberation. Additionally, the window frame insulation effectively mitigates external noise, particularly from traffic, enhancing the overall auditory experience.

The interior space is maintained in a commendable state of cleanliness, with no visible indicators of dust, mold, or condensation, thereby promoting a healthy indoor environment.

06_Existing Conditions Photographs - Structural

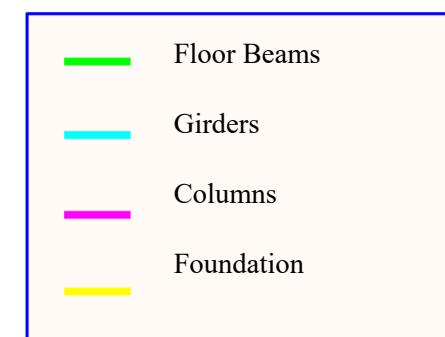


All columns, girders, and floor beams play a crucial role in supporting the structure, establishing a robust framework for the space. While we can lower the ceiling for aesthetic purposes, any alterations to its design are not allowed. One notable element of the interior is the grated floor, which adds a unique industrial flair. In the southeast corner, you'll find open metal pipes that contribute to the space's overall character, enhancing its authenticity and providing an interesting visual focal point.



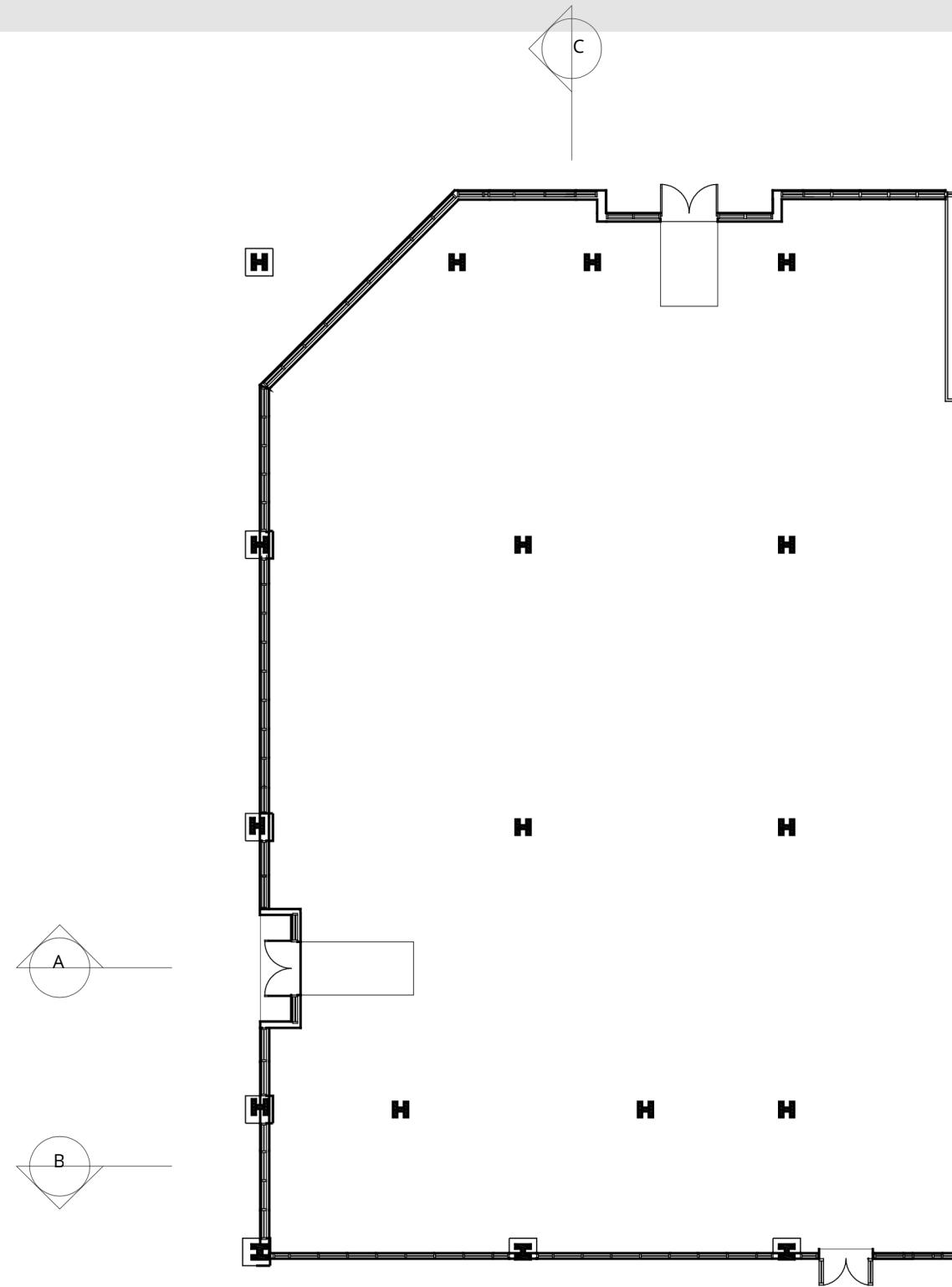
E Jefferson St

In this space, all windows, doors, and exterior frames are movable and interchangeable, allowing for flexible layouts. However, the structural elements—columns, MEP systems, and drywall walls separating adjacent spaces—are fixed and cannot be modified. Our focus will be on enhancing the finishes to align with your vision.



07_Streetscapes, elevations and sections

Floor Plan

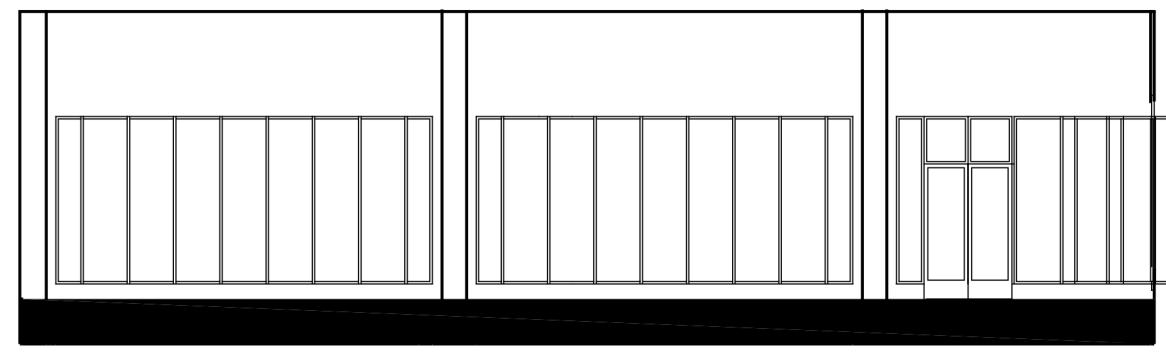


Floor Plan
SCALE : 3/32"=1'-0"



07_Streetscapes, elevations and sections

Section B & Section A



Section B (N-S SECTION FACING EAST)

SCALE : 1/8"=1'-0"

0 5 10 15 20



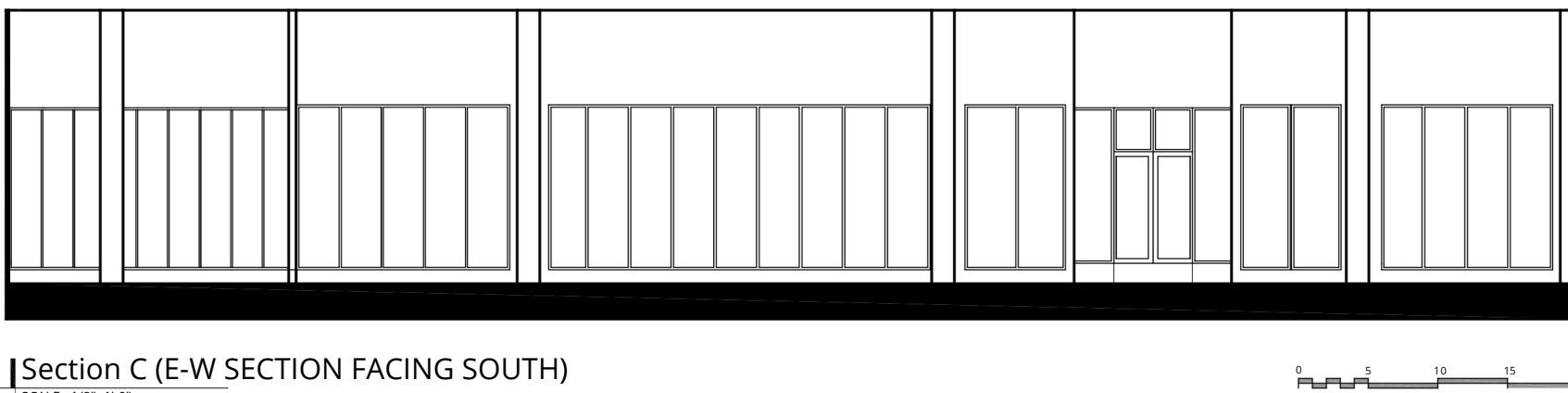
Section A (N-S SECTION FACING WEST)

SCALE : 1/8"=1'-0"

0 5 10 15 20

07_Streetscapes, elevations and sections

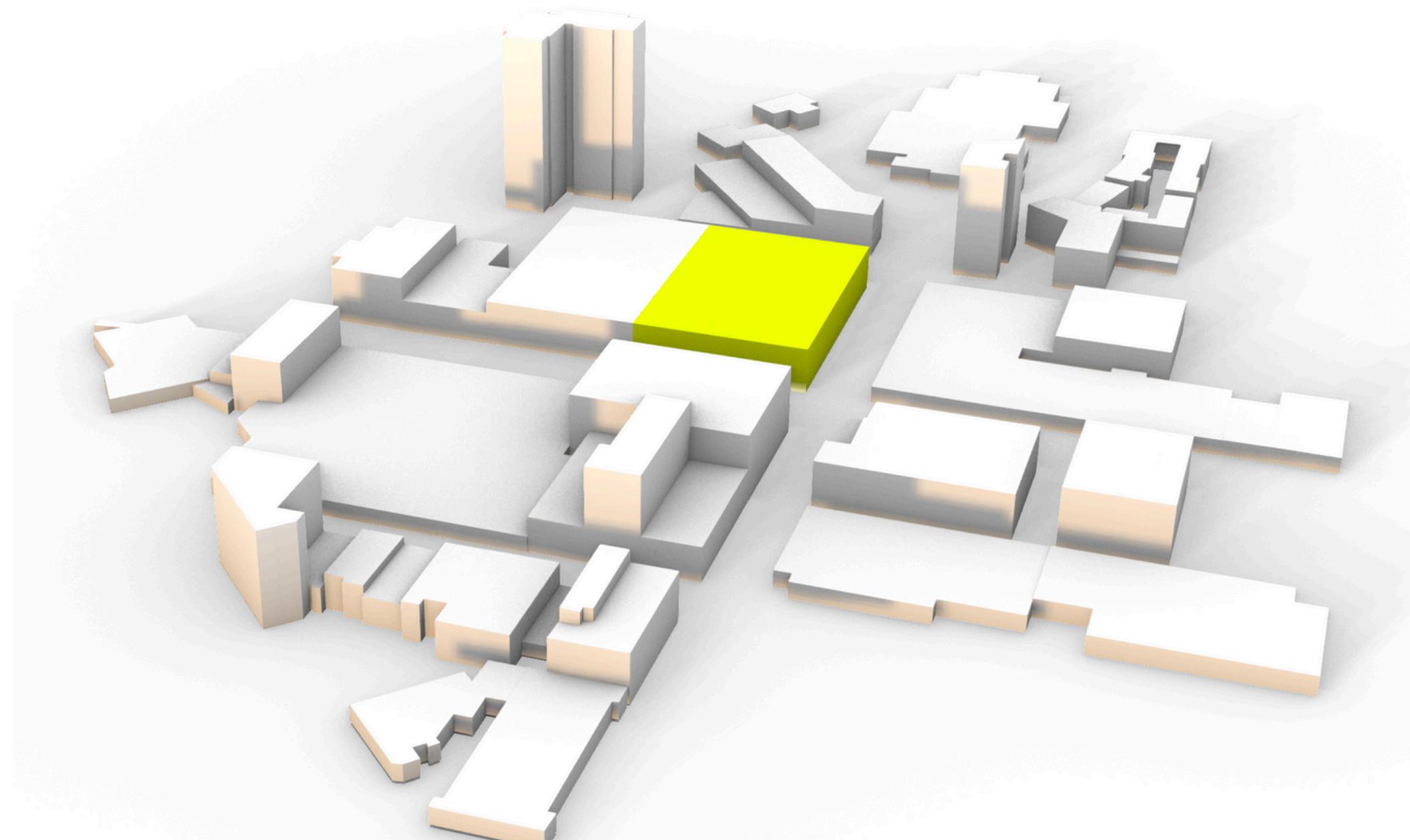
Section C



07_Streetscapes, elevations, and sections

Streetscapes

- Adjacent buildings
- Setbacks and alignments
- Shadow patterns created by surrounding structures



08_ Structural Analysis

Structural modules influencing interior planning 3D Modeling

- The column grid structure organizes the interior into clearly defined, usable bays.
- This modular layout facilitates flexible planning options for various uses and configurations.
- Large uninterrupted spans are limited unless beams or slabs are reinforced for strength.
- Effective interior planning must align with the column spacing to ensure proper load transfer.
- Misalignment can lead to costly structural modifications.
- The grid system promotes creative design while maintaining necessary functional constraints.



Beams HORIZONTAL loads

Primary beams run horizontally across the plan, connecting columns and perimeter walls. Beam directions indicate how loads are collected and distributed into vertical elements. Lateral forces are primarily resisted by:

- Perimeter load-bearing walls (vertical loads)

Floor and ceiling structural conditions

The system is consistent with:

- Flat slab with drop beams
- Beam-and-slab system, possibly slab-on-grade at ground level.

Ceiling heights are constrained by:

- Beam depths

Load transfer patterns VERTICAL loads

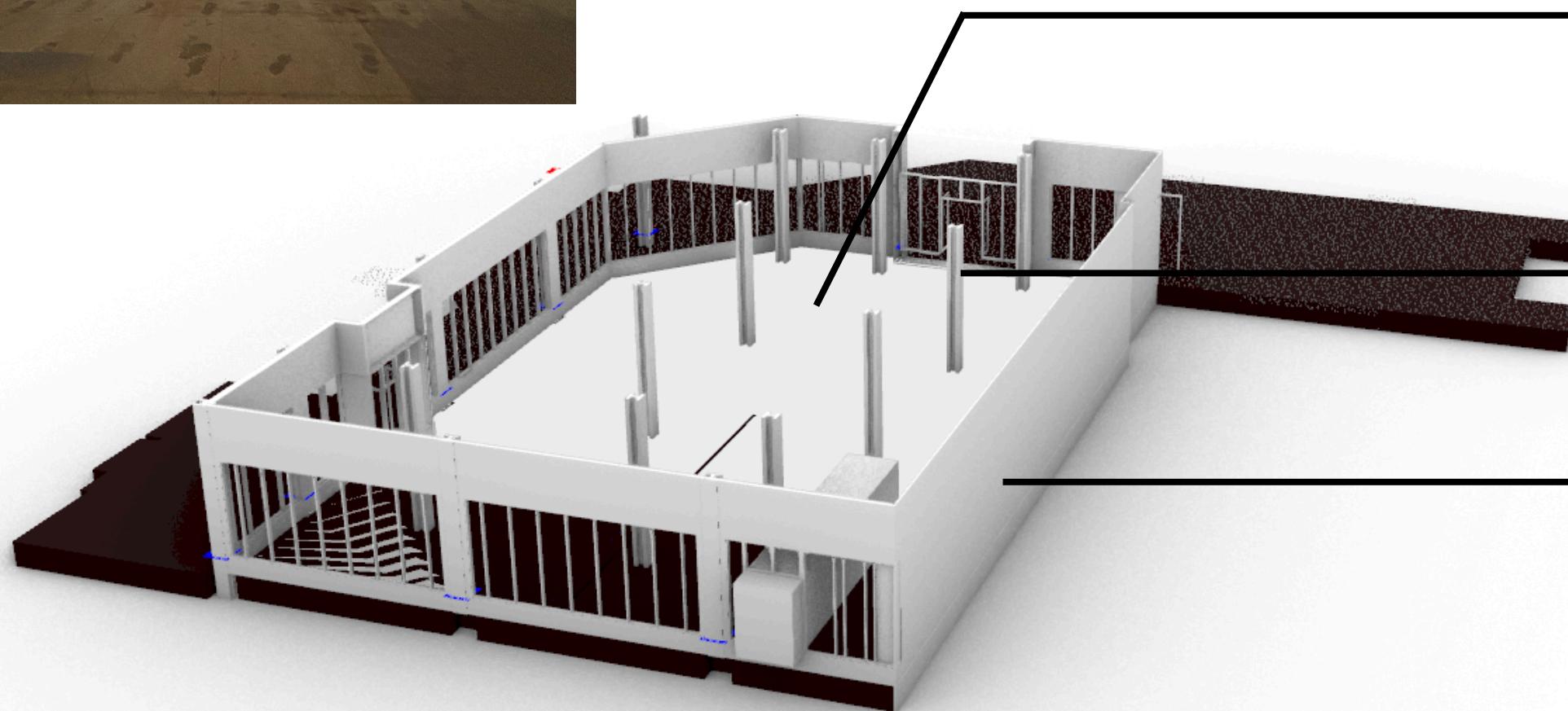
Roof / floor slabs
→ primary beams
→ columns & load-bearing walls
→ foundations

Columns VERTICAL loads

Interior reinforced concrete or steel columns carry vertical loads from slabs. Columns appear consistently spaced, suggesting a rational structural grid rather than ad-hoc supports.

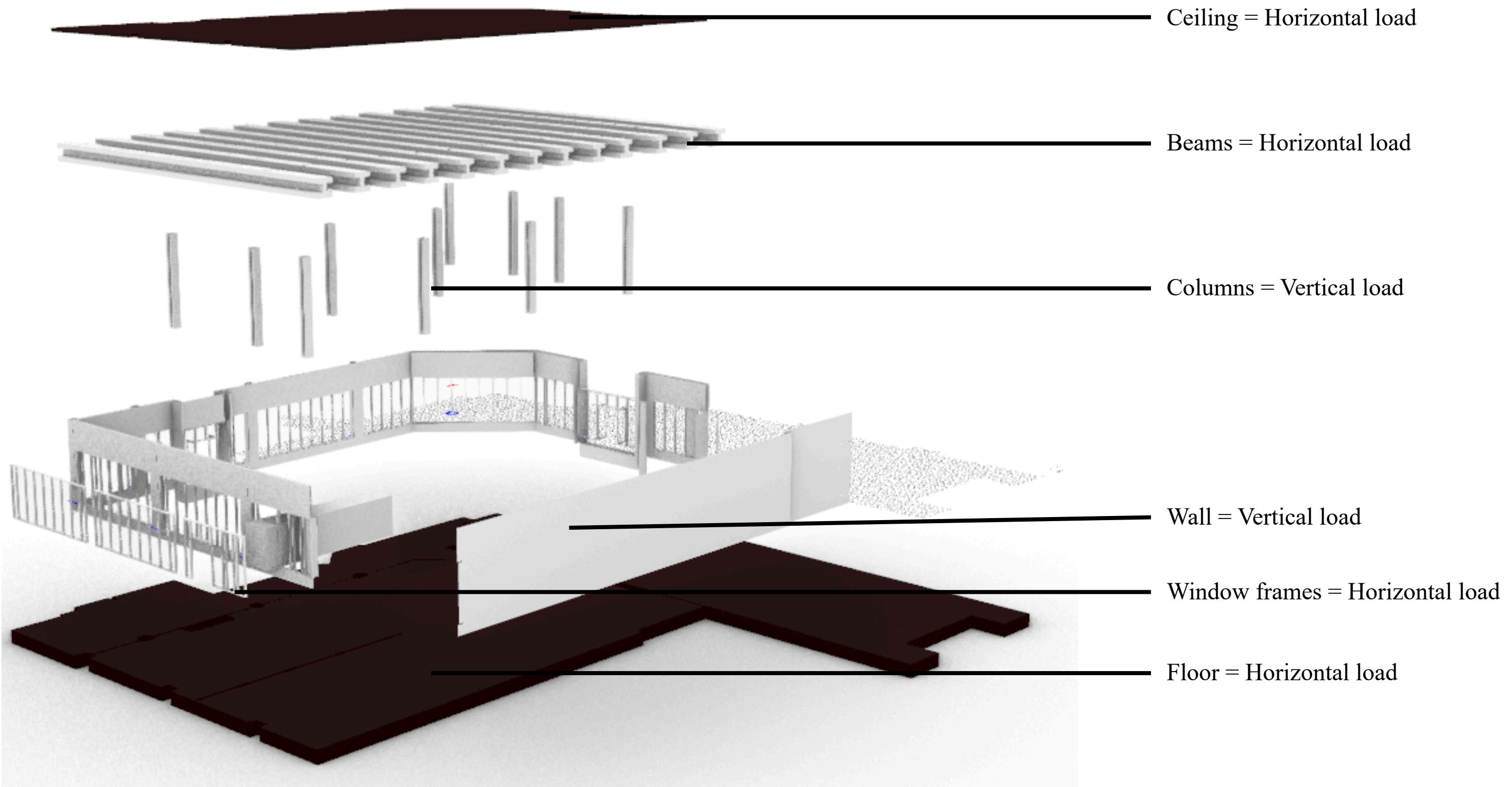
Load-bearing walls VERTICAL loads

The perimeter walls act as primary vertical and lateral load-resisting elements. They likely function as shear walls, contributing to overall stability (especially against wind or seismic loads).



08_Structural Analysis

Axonometric drawing of parts of the Site



08 Structural Analysis

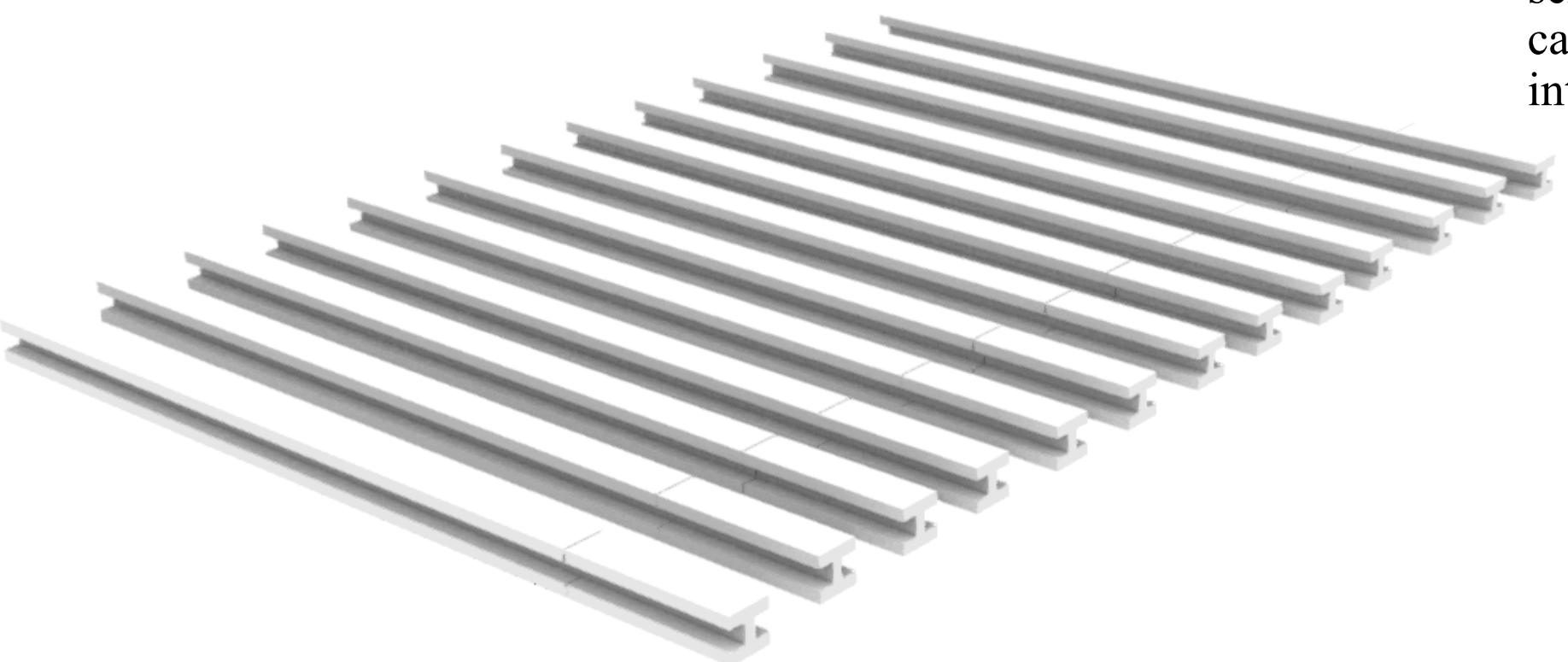
Implications for Design Changes

Horizontal Beams

In assessing the interior reconfiguration options, it's crucial to acknowledge the structural elements that shape design possibilities. Certain parts of the building support its stability, which limits where changes can be made.

The vertical columns define areas for potential open-plan layouts, allowing flexibility between these lines but restricting it across them without structural modifications. Additionally, horizontal beam spans must be respected to maintain integrity.

- The aim is to create functional and visually appealing spaces within these constraints, encouraging a modern, collaborative atmosphere while ensuring safety and stability.

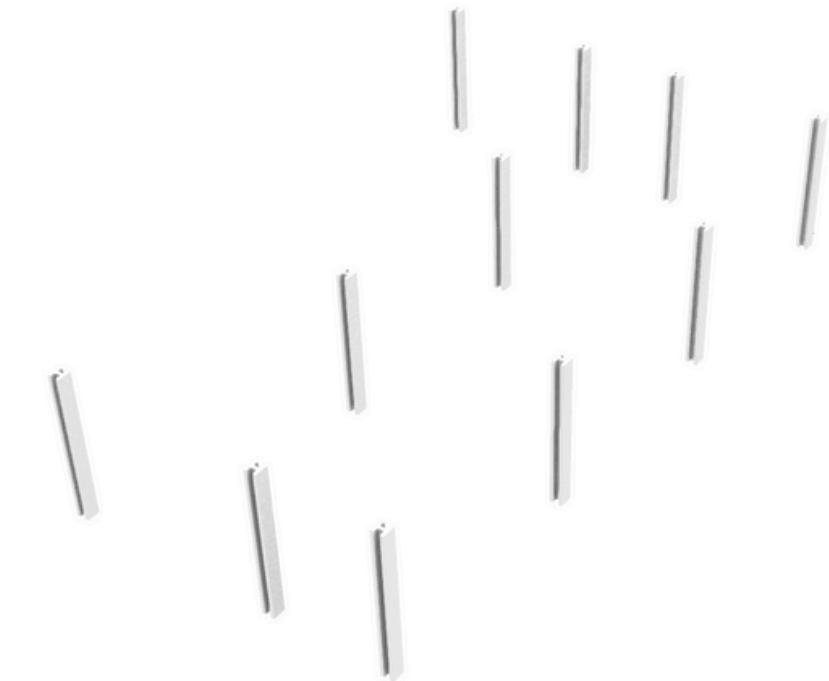


Vertical Columns

Non-load-bearing partitions offer flexibility for relocation, allowing for layout changes without structural worries. In contrast, moving perimeter walls requires careful reinforcement, such as adding lintels or frames. Windows and doors can also be repositioned to improve light and flow.

Raising ceilings can open up a room, but is often limited by beam depth. Options include exposing the structure for an industrial look or restructuring the slab for a more spacious feel.

When relocating partitions, aligning them parallel to beam directions helps avoid conflicts with structural elements and services. Overall, with a focus on detail and creativity, we can effectively transform spaces while respecting their integrity.



09 Site climate and conditions

Data Collection

Syracuse has a humid continental climate characterized by hot summers.

- The annual precipitation, which includes both rain and melted snow, averages around 41 to 43 inches.
- Snowfall is a notable aspect of the climate, with Syracuse often ranking among the snowiest metropolitan areas in the United States.
- Cloud cover and daylight hours vary significantly by season. The winter months tend to be overcast and gray, while the summer months, particularly from late spring through early fall, are generally clearer.
- The frequency of wind and rainy days changes with the seasons, with the "wetter season" typically lasting from spring through early winter.

Month	Avg High (°F)	Avg Low (°F)
January	32-34	17-19
April	53-58	36-39
July	78-82	59-63
October	58-60	43-44
December	35-37	24-25

Climate Dynamics of Syracuse

At 400 S Salina St. downtown, the building will experience typical city-core climate dynamics of Syracuse



Winter (Dec-Feb, possibly into March)
cold temperatures (lows often in the teens °F), frequent snow/rain, overcast skies, potential snow accumulation and snow-management needs (roof loading, snow removal, ice, freeze-thaw cycles)



Spring (March-May)
transition period; temperatures gradually rise, snow melts, precipitation remains moderate; fluctuating conditions may lead to freeze-thaw cycles in early spring, wet ground from rain + snowmelt



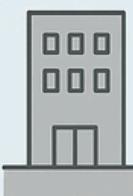
Summer (June-Aug)
warm to hot (highs often upper-70s to low-80s °F), moderate to high humidity, generally clearer skies—but occasional rain, increased solar input, potential heat accumulation especially on surfaces



Autumn (Sep-Nov)
cooling temperatures, gradually shorter days, moderate precipitation; shifting from summer warmth toward winter cold; leaves/fall foliage may influence shading, ground albedo, drainage

Urban Climate Dynamics

At 400 S Salina St. downtown, the building will experience typical city-core climate dynamics of Syracuse



Urban heat accumulation / "heat-island" effect
adjacent buildings, pavement, asphalt-roads, concrete, limited vegetation during summer heat and sunny-days downtown

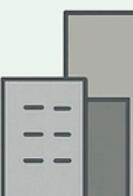


Shading patterns

neighboring buildings may cast shadows, especially in narrow downtown streets. In winter the could reduce solar warming (good for snow/ice persstence).



Wind pockets / urban wind behavior
downtown urban fabric often channels wind between buildings, this can lead to increased wind at street level ("wind tunnels") or, conversely, sheltered pockets depending on orientation and lay yeut.

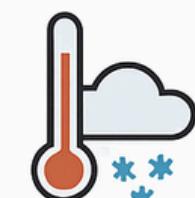


Snow & melt water accumulation / drainage issues

Given high annual snowfall and freeze-thaw cycles, combined vit sidewalks, pavement, and limited permeable surfaces downtown —dranang, anow removal

Climate Change

According to projections, the number of hot days in a typical year (exceeding ~ 89.1 °F) is expected to increase significantly in coming decades for Syracuse area.



That implies increased heat-stress periods, greater cooling demand for buildings, and potential strain on infrastructure and energy use.

Meanwhile, snowfall and precipitation patterns might affect natural ventilation and daylight access.

What This Means for Building / Site Use & Design

(for Tompkins Community Bank Building)



HVAC and insulation design needs accommodate wide temperature swings (cold snowy winters + warm humid summers)



Roof, drainage, and facade design should consider heavy snow loads, freeze-thaw cycles, melting runoff, and water management (drains, gutters, waterproofing)



Urban shading and wind patterns miight affect natural ventilation and daylight access; facade orientation and window piacement



Snow removal and site maintenance (sidewalks, entrances) must account for frequent snow events, potential "lake-effect" snow, ice format1



09 Site climate and conditions

Sun Path Diagrams

Summer:

During the summer solstice, the sun follows a high and steep path across the sky, reaching a maximum altitude of about 65° at noon. This high sun angle results in short shadows around midday, while morning and afternoon shadows are longer but still relatively compact due to the elevated altitude of the sun. East- and west-facing facades receive strong direct sunlight in the morning and late afternoon.

Winter:

In winter, the sun travels much lower along the horizon, reaching only about 22° at noon and dropping to as low as 3° in the late afternoon. This low solar altitude creates very long shadows throughout the day, significantly reducing direct sunlight, especially on the north side of buildings. Sunlight enters at shallow angles, which limits solar penetration and increases shading from nearby structures. As a result, spaces remain cooler and receive less natural light in winter months.

Spring/Fall:

During the spring and fall equinoxes, the sun path is moderate and balanced between summer and winter extremes. At noon, the sun reaches an altitude of approximately 41° , producing shadows of medium length that are shorter than winter but longer than summer. Morning and afternoon sun angles allow for more even solar distribution on east and west facades.

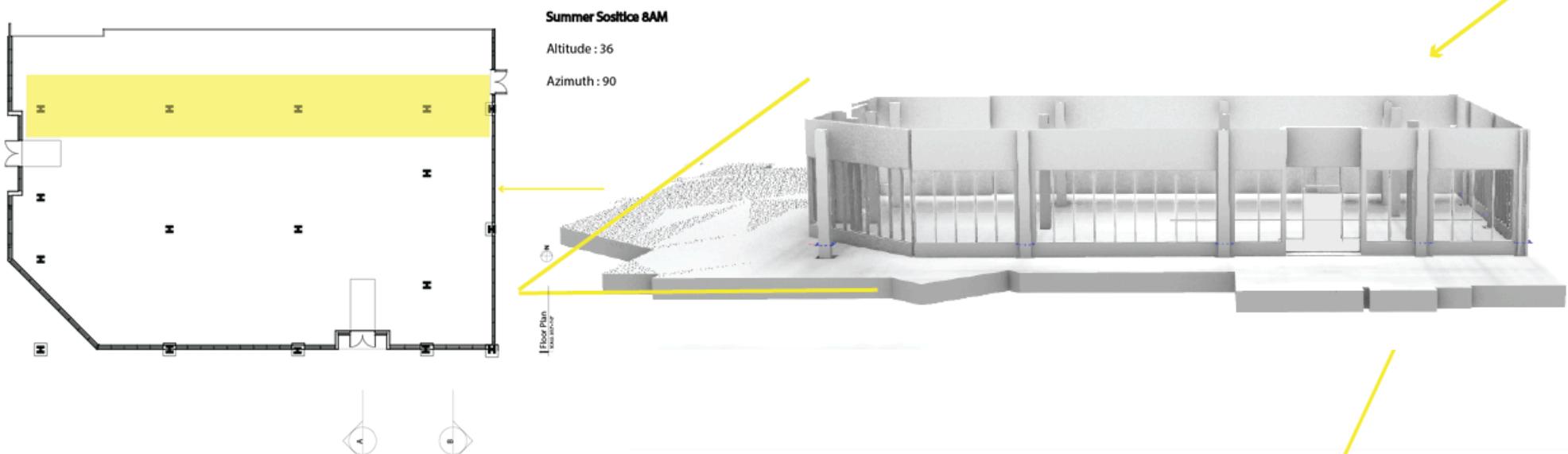
In ideal conditions, where the site is independent, the solar paths shown on the next few slides would be observed. However, given the surrounding buildings and the site's ground-level placement, there is a significant limitation on the amount of natural light that penetrates the interior. This results in suboptimal indoor lighting conditions and reduced thermal comfort. Sunlight reaches the interior of the space during mostly in early afternoons in summer and fall/spring seasons.

09 Site climate and conditions

Sun Path Diagrams

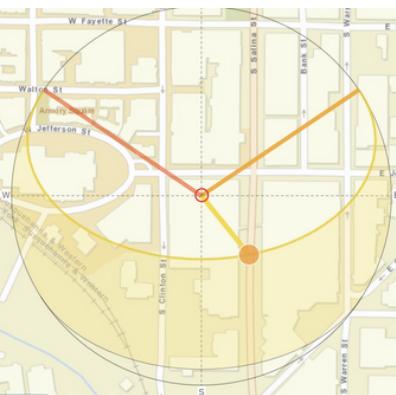
Summer Solstice 8AM

Altitude = 36
Azimuth = 90



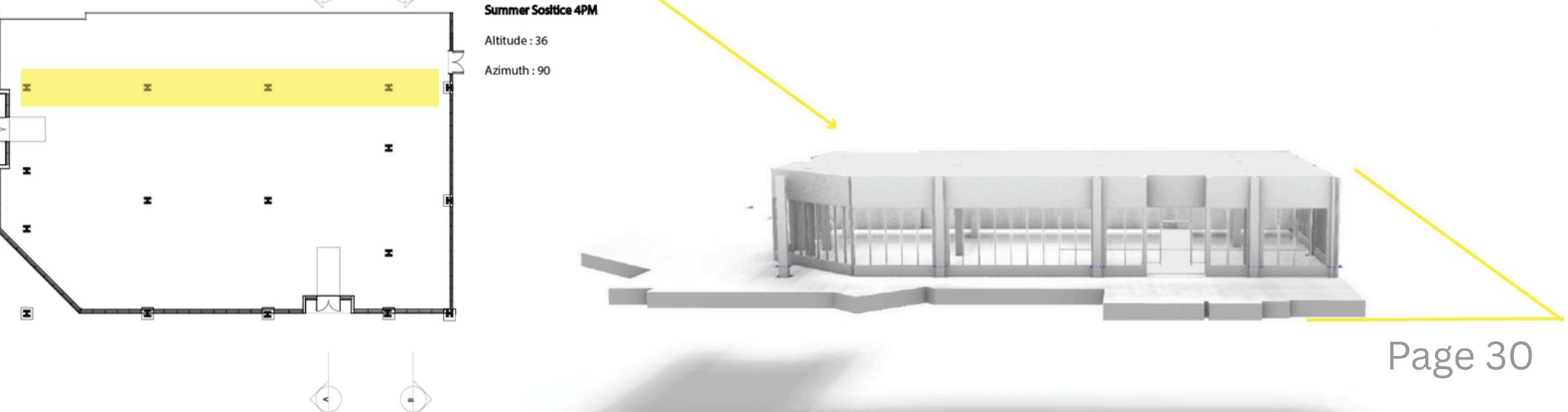
Summer Solstice 12PM

Altitude = 65
Azimuth = 0



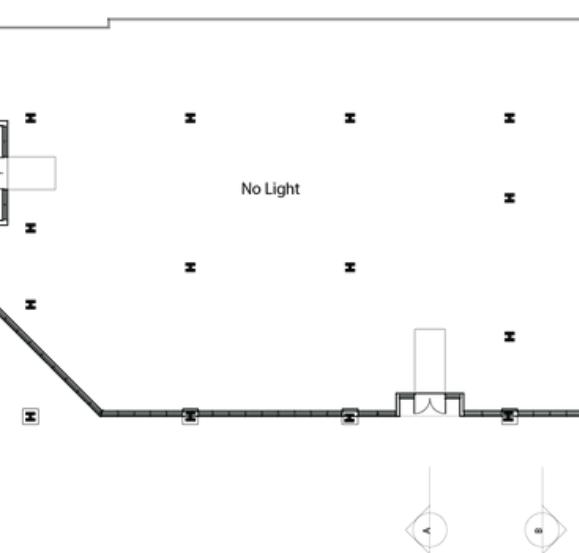
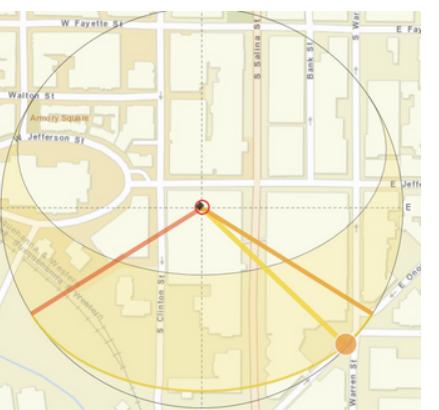
Summer Solstice 4PM

Altitude = 36
Azimuth = 90



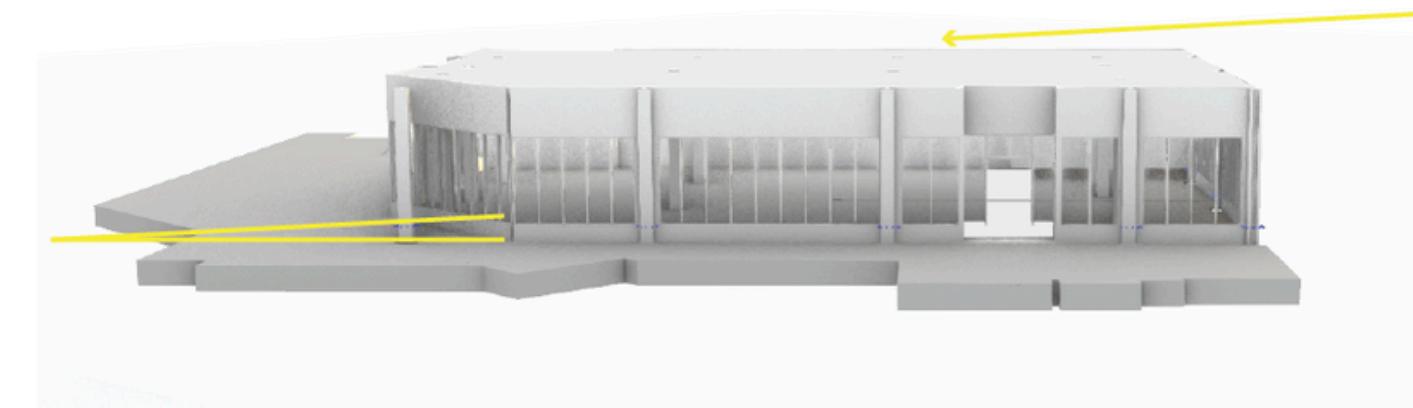
Winter Solstice 4PM

Altitude = 3
Azimuth = 126



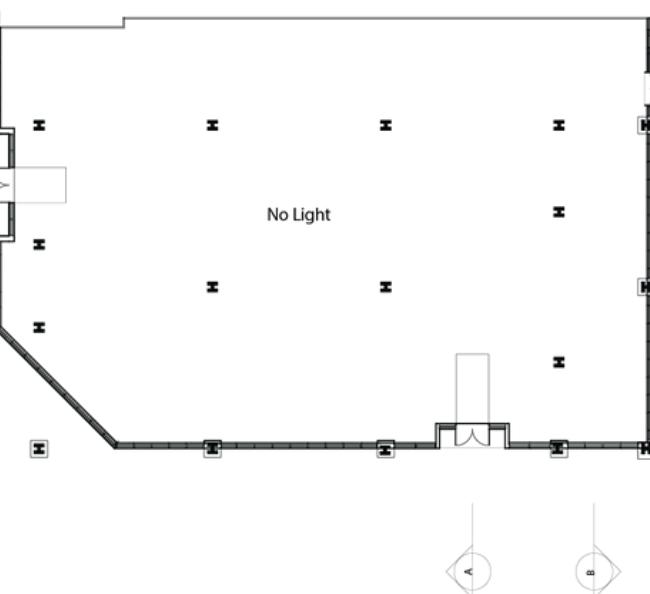
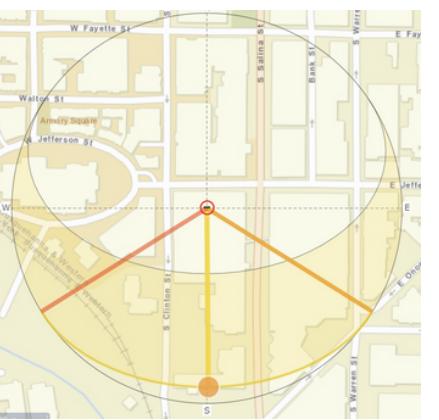
Winter Solstice 4PM

Altitude : 3 = -90 + 3.62 = 87
Azimuth : 232.29



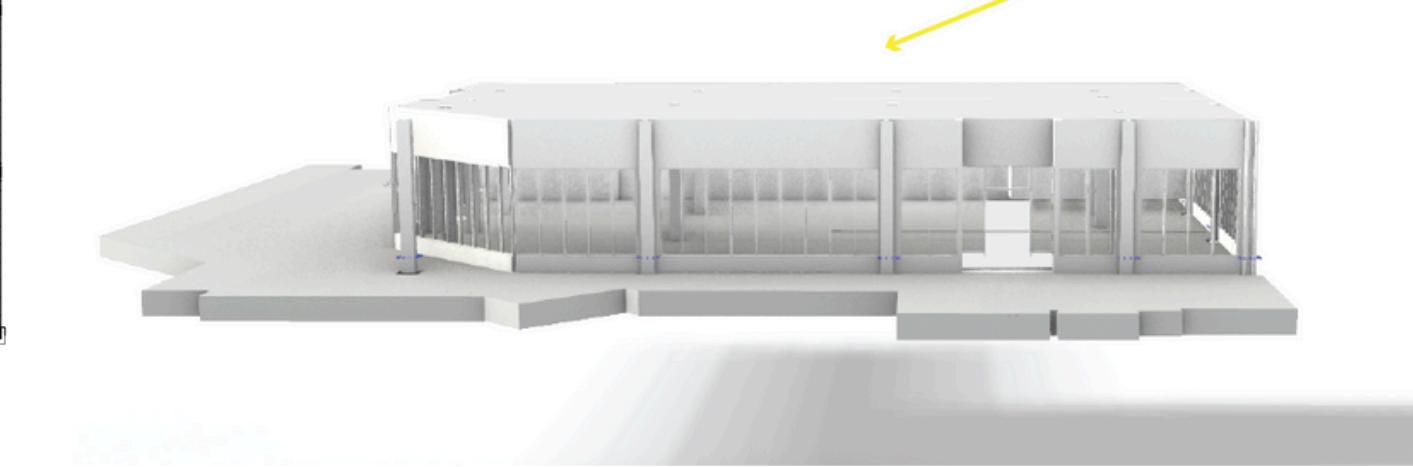
Winter Solstice 12PM

Altitude = 22
Azimuth = 0



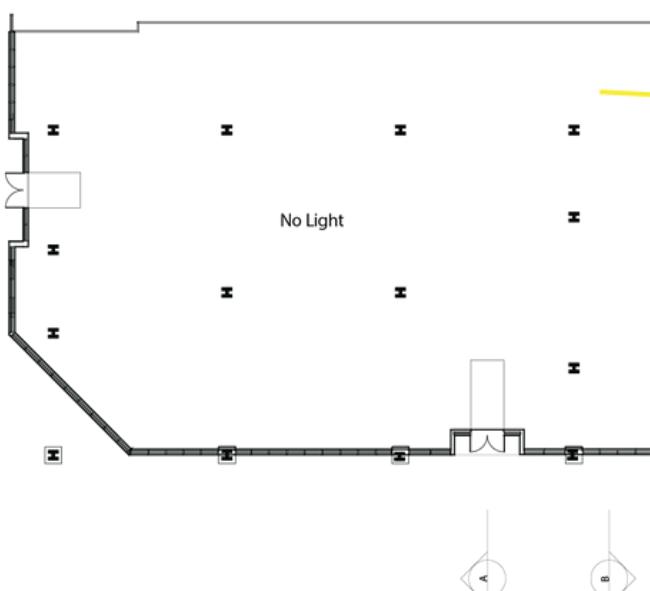
Winter Solstice 12PM

Altitude : 22
Azimuth : 0



Winter Solstice 4PM

Altitude = 3
Azimuth = 232



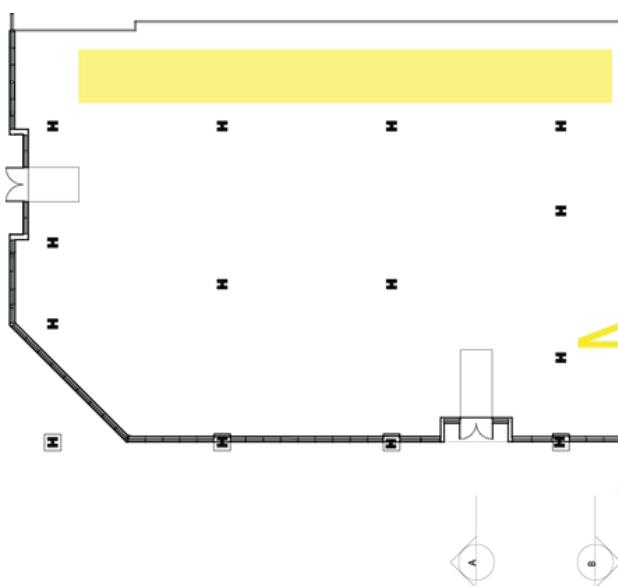
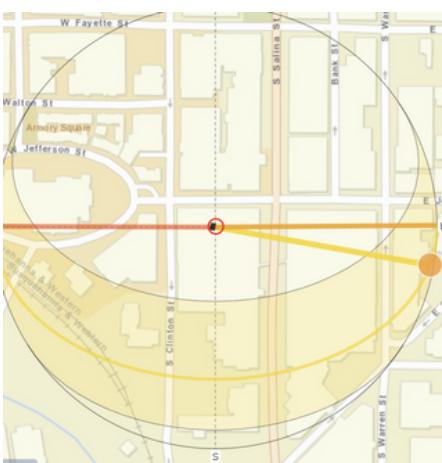
Winter Solstice 8AM

Altitude : 3
Azimuth : 126

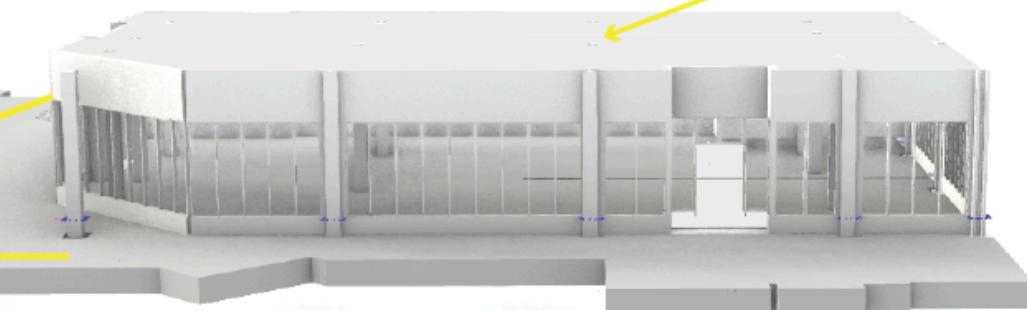


Fall/Spring Equinox 8AM

Altitude = 21
Azimuth = 98

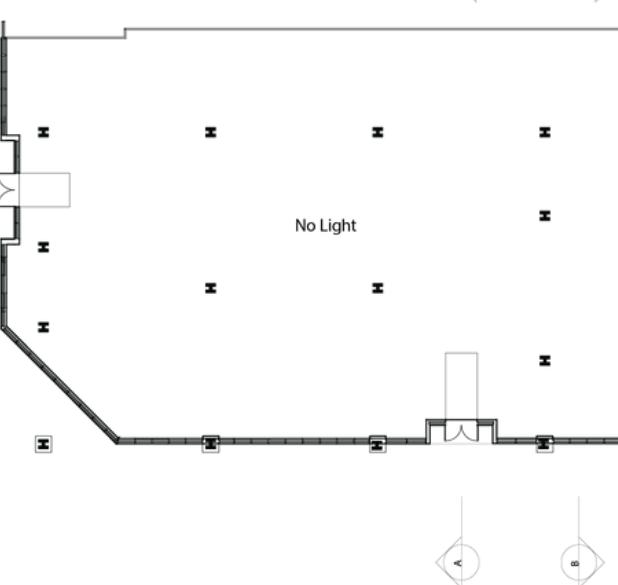
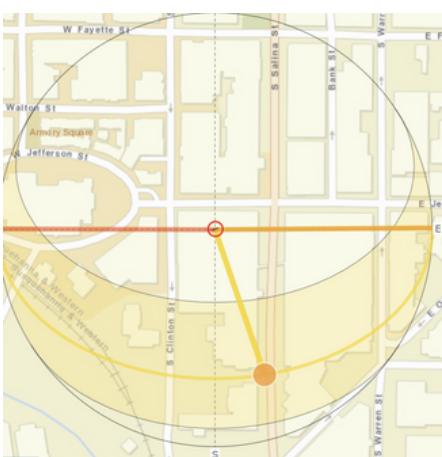


Fall/Spring Solstice 8AM
Altitude : 21 // -90+21 = -69
Azimuth : 98.24

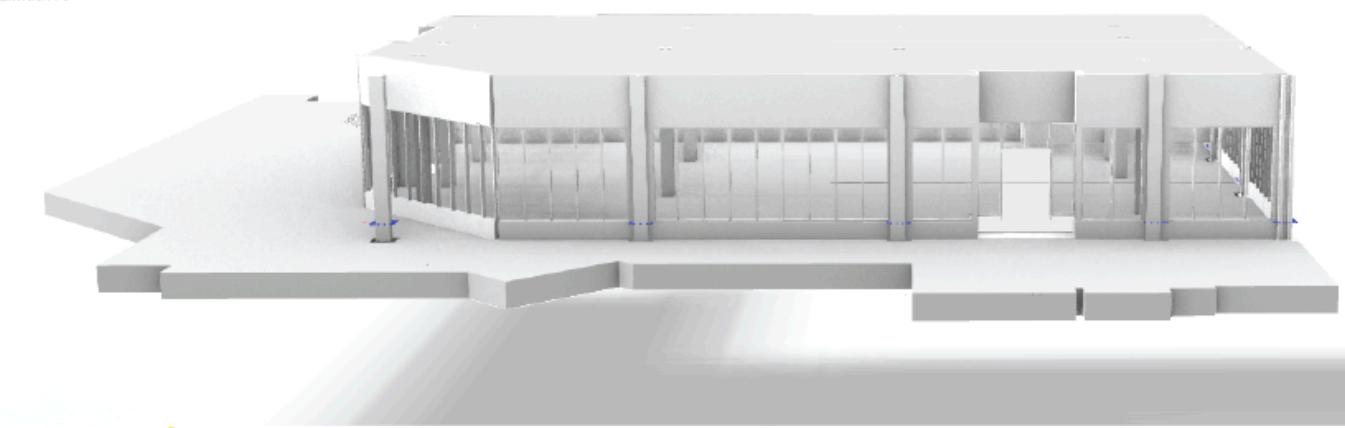


Fall/Spring Equinox 12PM

Altitude = 41
Azimuth = 0

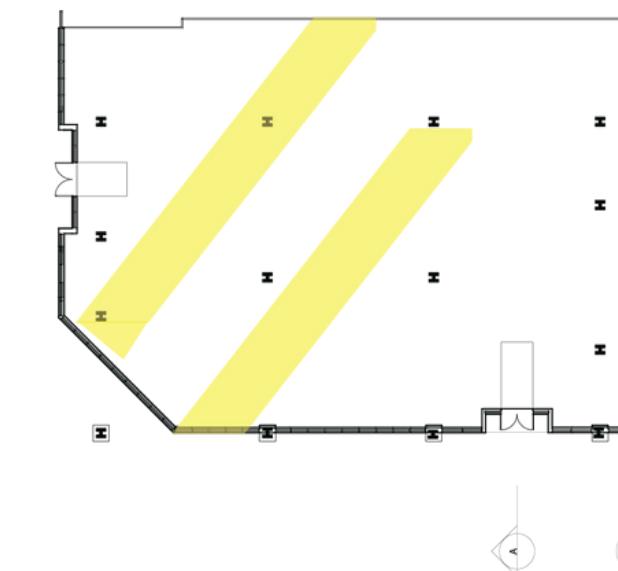


Fall/Spring Solstice 12PM
Altitude : 41 // -90+41 = -49
Azimuth : 0



Fall/Spring Equinox 4PM

Altitude = 21
Azimuth = 232



Fall/Spring Solstice 4PM
Altitude : 21
Azimuth : 232.99



10_View and Vista Analysis



Exterior → Interior Views

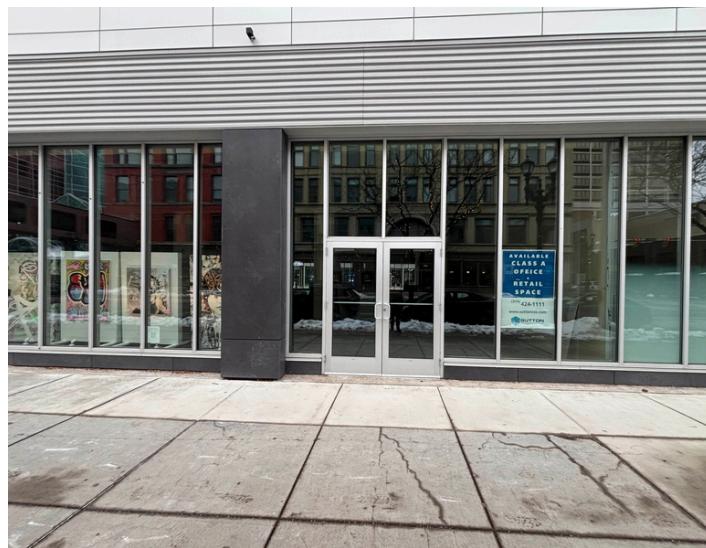
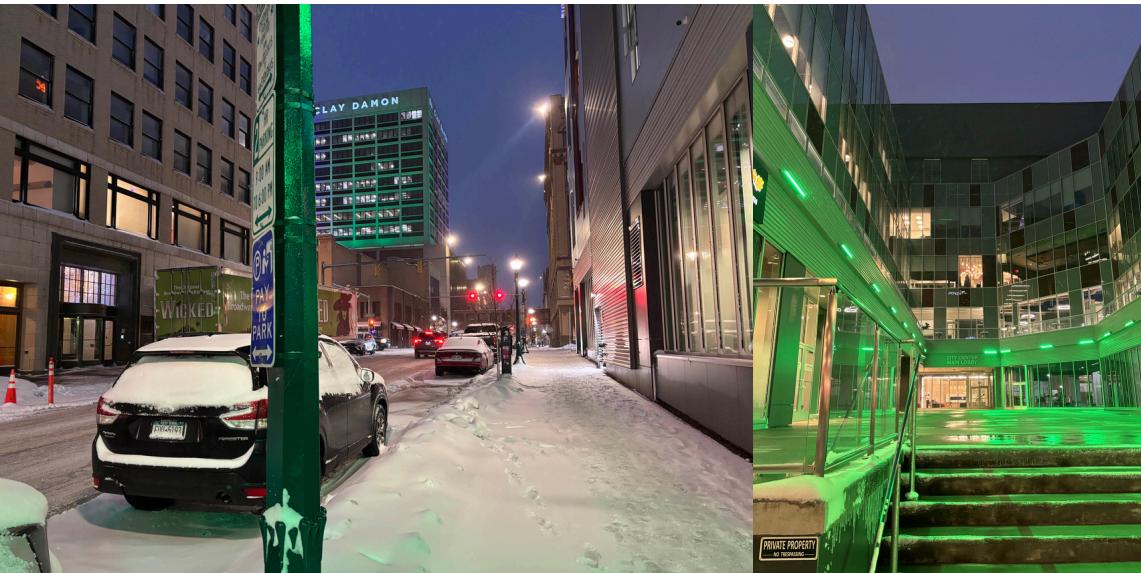
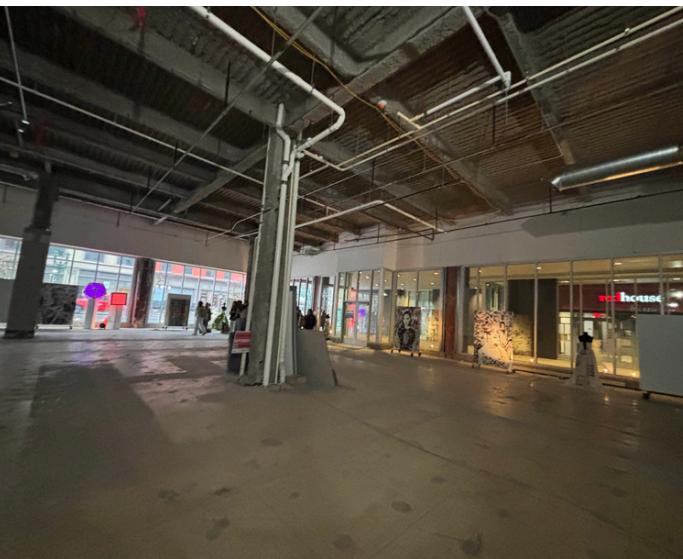
- High transparency allows maximum visibility of interior activities to pedestrians.
- Low privacy unless mitigated by partitions or furnishings, which may pose challenges for private functions.



Interior → Exterior Views

- Full-height glazing enhances visual depth into the plaza and circulation zones.
- Unobstructed views at eye level with structural columns providing a rhythmic visual experience.
- Focus on horizontal views towards pedestrian areas, retail fronts, and the City Center plaza.

10_View and Vista Analysis



Positive vs. Negative View Corridors

- Positive Views: Active pedestrian pathways, along with sufficient daylight entering from the plaza, contribute to a dynamic spatial quality that fosters user engagement.
- Negative Views: In contrast, elements such as exposed service ceilings and unfinished architectural features detract from the overall quality of the space. Furthermore, blank walls and deep recesses may limit visual interest, highlighting the need for the incorporation of focal elements to enhance aesthetic appeal.

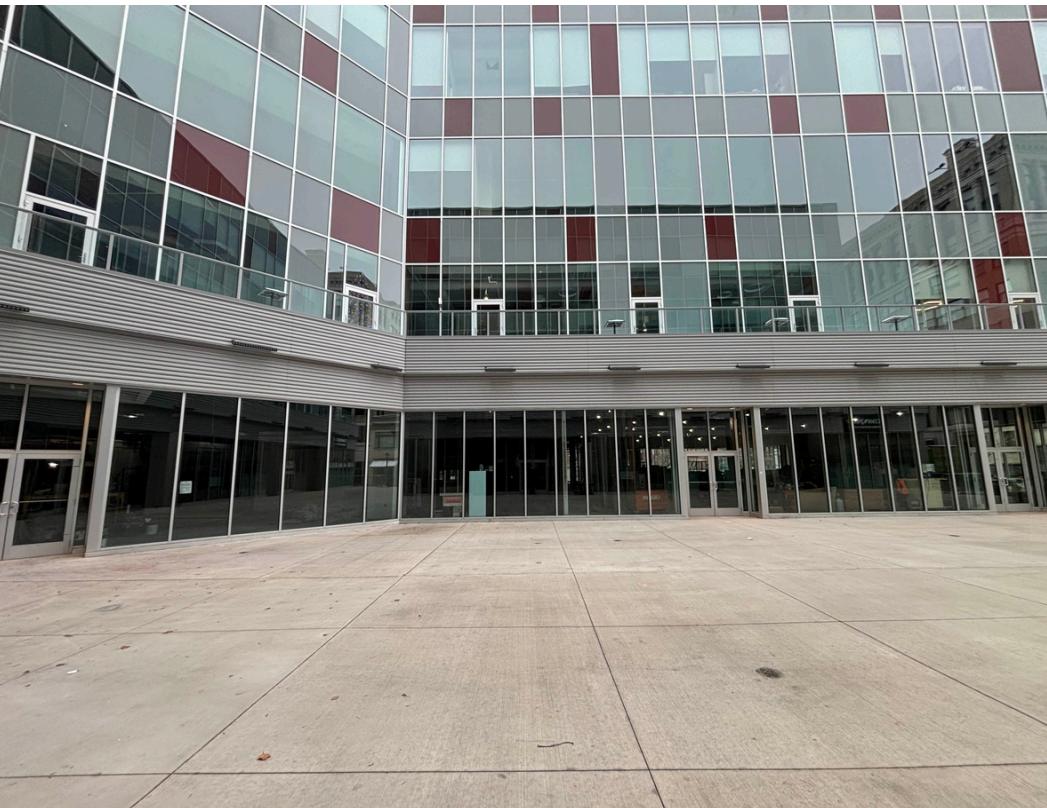
Seasonal Variations

- The warmer months are associated with increased pedestrian activity, which in turn enhances visual vibrancy within the urban landscape. Conversely, winter months, while providing additional daylight, can present challenges such as glare caused by low sun angles and reflective snow surfaces.

View-Related Comfort and Glare

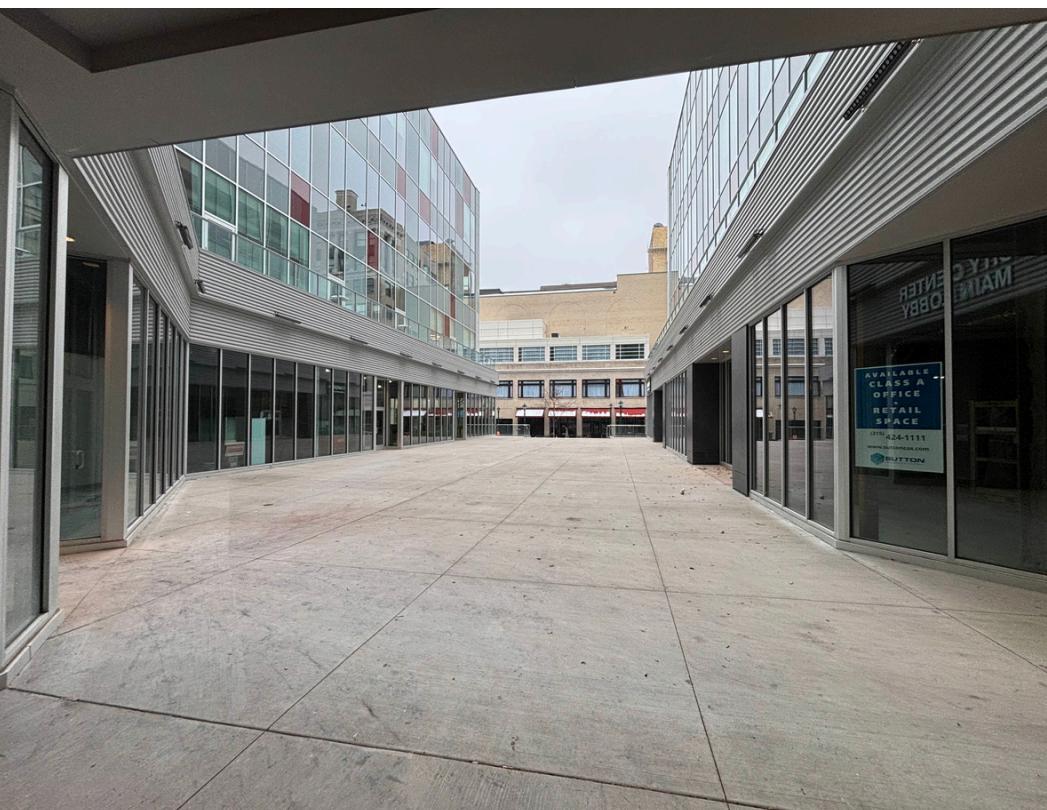
- The use of glazing increases daylight access but also raises the potential for glare during winter months. Thus, implementing control measures is critical to maintaining occupant comfort and enhancing well-being.

10_View and Vista Analysis



Opportunities for Enhancing Views

- Introducing framing elements and employing strategic finishes can effectively guide sightlines and improve comfort within the space. Additionally, placing seating areas along glazed facades can activate views and create a connection between indoor and outdoor environments while ensuring occupant comfort.



Synthesis with Other Findings

- Enhanced visual permeability supports pedestrian movement within urban environments and strengthens the public role of ground-floor spaces. Therefore, it is critical to balance view exposure with considerations for comfort and privacy to achieve optimal environmental performance and user satisfaction.

11_Conclusion



Key Findings

1. Impact of Structural Elements on Spatial Dynamics: The existing structural elements significantly influence the spatial experience within the site. Their positioning and configuration contribute to the site's overall aesthetic and functional dynamics.
2. Passive Thermal Management: The building's design encourages passive heating throughout, optimizing energy efficiency while creating a comfortable indoor environment. The strategic placement of windows and thermal mass elements should be considered in future design interventions.
3. High Pedestrian Activity: There is considerable pedestrian flow in and around the site, indicating the need for zones that facilitate movement while also promoting moments of pause and interaction.
4. Strategic Location: The site is advantageously located, making it a focal point for community engagement. This location presents an opportunity to create inviting and functional public spaces.
5. Restraints on Modifications: The existing design elements, such as windows and walls, are limited in terms of removability or relocation, necessitating a thoughtful approach that respects these constraints while enhancing usability and aesthetics.
4. Static False Wall: The presence of an unmovable false wall poses a challenge in reconfiguring layouts but can also serve as a canvas for creative design solutions, such as integrated storage or display options.
5. Shading from Surrounding Buildings: The shadows cast by adjacent structures must be accounted for in the design process, influencing decisions regarding lighting, plant selection, and the overall sense of openness within the interior spaces.

11_Conclusion

Constraints:

1. Inherent Passive Heating Challenges: While passive heating is beneficial, it also restricts the potential for significant alterations to the orientation and size of openings, which limits adaptive strategies for improved heating and cooling.
2. Fixed Window Installations: The inability to remove or alter windows necessitates creative solutions to enhance light control and privacy while maintaining visible connections to the outdoors.
3. Immovable Diagonal Bracing: The diagonal bracing cannot be shifted, requiring interior design innovations that work around this structural component to enhance functionality without compromising structural integrity.
4. Static False Wall: The presence of an unmoving false wall poses a challenge in reconfiguring layouts but can also serve as a canvas for creative design solutions, such as integrated storage or display options.
5. Shading from Surrounding Buildings: The shadows cast by adjacent structures must be accounted for in the design process, influencing decisions regarding lighting, plant selection, and the overall sense of openness within the interior spaces.

Opportunities:

1. Expanding into the Courtyard: The possibility of utilizing the courtyard opens up opportunities for outdoor living or communal spaces that enhance the connection between indoors and outdoors.
2. Segmenting the Site: Dividing the site into distinct areas can create multifunctional spaces that cater to varied uses while preserving overall site integrity.
3. Varying Ceiling Heights: Incorporating a design strategy that raises floors and lowers ceilings can create a dynamic visual narrative across the space, adding interest and intimacy in appropriate zones.
4. Window Tinting for Enhanced Privacy: Utilizing tinted windows can improve privacy without sacrificing natural light, allowing for a more comfortable atmosphere while addressing occupants' needs.
5. Strategic Door Relocation: Adjusting door placements according to egress requirements opens up possibilities for reconfiguring flows and maximizing usable space, thereby enhancing overall functionality.

11_Conclusion

Site analysis plays a vital role in bridging creativity with practical design, transforming environmental constraints into opportunities that enhance human comfort. In the context of 400 S. Salina Street, this analysis guides specific interior interventions essential for creating an effective space.

For instance, Syracuse's meso-scale climate data highlights the area's high annual snowfall and lake-effect winds, emphasizing the need for thermal comfort. The design must incorporate robust transition zones, such as vestibules made from durable materials, to effectively manage moisture and temperature fluctuations. Additionally, because the existing interiors are mostly shaded, a lighting strategy is necessary to maximize limited daylight while providing warm artificial illumination to counteract the building's orientation.

Furthermore, since this area is a "Walker's Paradise" marked by heavy foot traffic, the ground-floor layout should engage visually with the streetscape while minimizing noise intrusion for occupants. Ultimately, this comprehensive analysis ensures that the final design goes beyond renovation, resulting in a holistic ecosystem that is well-adapted to its urban and climatic context.