

Design Review

Lot U



Presented by:

DW NP Property, LLC

c/o DivcoWest Real Estate Investments

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August 19, 2020

Ms. Catherine Preston Connolly, Chair
Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

Via: Electronic Mail and Hand Delivery

Reference: Parcel U Design Review
PB #179
Cambridge Crossing
Cambridge, Massachusetts

Dear Chair Connolly and Members of the Board:

DivcoWest Real Estate Investments and its affiliate DW NP Property, LLC (DivcoWest) (collectively, "DivcoWest") respectfully submit this package for Design Review approval for Parcel U, which is part of the Cambridge Crossing development. The development on Parcel U is proposed to contain a twelve (12)-story office / laboratory building consisting of approximately 313,270 square feet ("sf") of Gross Floor Area ("GFA") and other public realm improvements (the "Project").

We are proud to bring forward the first project on Morgan Avenue, named in honor of Gertrude Morgan. As shown on the master plan included as part of this Application, the site is located at 441 Morgan Avenue, entirely within Cambridge (the "Site"), and is bounded by Morgan Avenue to the northeast, Leighton Street to the northwest, the Gilmore Bridge to the southeast and an adjoining lot to the southwest. Given the Site's location at the southern corner of the Cambridge Crossing neighborhood, the Project will be a welcoming point of entrance for visitors arriving under the Gilmore Bridge and will serve as an important framing element for Cambridge Crossing's central Common.

We have designed Parcel U to manage difficult Site conditions while enhancing Site safety and pedestrian connections between Cambridge Crossing and the greater East Cambridge community. Subject to approval by the Massachusetts Department of Transportation (MassDOT), the Project connects to the Gilmore Bridge with a publicly-accessible elevator and a bridge connection. The Project discourages access along its southeast and southwest parcel boundaries, as well as under the downward-sloping portion of the Gilmore Bridge.

In the Planning Board's consideration of Parcel U, we note that the proposed design extends the building envelope beyond the build-to line suggested in the North Point Design Guidelines at one location – on the eastern corner of Parcel U. DivcoWest feels that the proposed design is necessary not only to enhance pedestrian safety and accessibility, but also to improve the on-the-ground experience. Extending beyond the build-to line in this location will block the view to the underside of the Gilmore Bridge, limit the



visibility of traffic on top of the bridge, spatially enclose the central Common, guide pedestrian traffic towards the sidewalk under the Gilmore Bridge, maintain a continuous street wall and increase the visibility of the elevator to pedestrians on Morgan Avenue.

The Project building complies with the uses, height, massing (including, without limitation, the approved maximum GFA for the Site) and other provisions set forth in the underlying zoning and the Special Permit as reviewed and approved in previous meetings by the Planning Board, dating back to Amendment No. 3 (Major) issued on November 16, 2012. As more fully described in the Application, under the applicable underlying zoning provisions, Parcel U is required to achieve LEED Silver accreditation. We have designed Parcel U to achieve LEED Gold v. 4 accreditation, the highest level achieved on any Cambridge Crossing building.

We believe that the Parcel U project, as depicted in the enclosed drawings, will create public benefits for the East Cambridge and Cambridge Crossing neighborhood, among them:

- Enhancing connections into Cambridge Crossing from the Gilmore Bridge with a public elevator, which, when paired with the existing Glassworks Avenue public staircase, will facilitate bicycle, pedestrian and handicap access, pending approval by MassDOT.
- Completing the frontage on the southern side of the Common, defining the street wall and the park spatially.
- Activating the Common with a glass façade along Morgan Avenue
- Providing a landscaped setback along Morgan Avenue, part of the open space network that spans across Cambridge Crossing.
- Programming the Morgan Avenue setback with publicly accessible, outdoor musical instruments.
- Providing a rainwater recharge area along the southeastern facade.
- Replacing a surface parking lot with a vibrant new use, while moving existing spaces to one of the previously approved accessory parking garages in Cambridge Crossing, pursuant to existing agreements.
- Eliminating the visibility from the public realm of rooftop mechanical equipment with full enclosures and a screen wall height that matches the height of the tallest piece of equipment.
- Generating a host of new jobs (both construction and permanent), tax revenue and ongoing Incentive Zoning payments

Additionally, in connection with the Parcel U development, and at the request of Cambridge City Staff, DivcoWest is also undertaking critical transportation enhancements surrounding the Site, including the building of a raised traffic table at Earhart Park. As you know, Earhart Park is the terminus of a park network that connects to the Common, Baldwin Open Space and the EF/G Open Space. The traffic table will serve to slow down vehicular traffic along Morgan Avenue, improving pedestrian safety and access to the open spaces. As further requested by city staff, DivcoWest will also relocate an EZ Ride bus stop from Parcel U to North First Street, adjacent to Station Plaza, the future MBTA Lechmere station and the Bicycle Center. This centrally located stop will help facilitate intermodal access to the Cambridge Crossing site.



As part of this Application, we have included eight (8) copies, as well as a flash drive containing an electronic version, of the following materials for review by the Cambridge Planning Board:

- Site Plans;
- Floor Plans and Building Sections;
- Architectural Elevations;
- A Zoning Compliance Summary;
- LEED/Green Building Compliance Summary;
- Shadow Study;
- Wind Study;
- Acoustical Report and Noise Mitigation Narrative;
- Landscape Design Plan;
- Compliance Checklist- Zoning Ordinance and NorthPoint Design Guidelines;
- Log of Cambridge City Staff Comments and Responses;
- Materials showing the Cross-Sections of Abutting Streets; and
- Subdivision Plan, previously approved by the Cambridge Planning Board.

Given the current remote public meeting environment due to the COVID-19 pandemic, we are also providing a package of high-resolution photographs of material samples, in lieu of the materials that would be shown at an in-person hearing under other circumstances.

We look forward to the opportunity to meet with the Planning Board to discuss the Application and to bring this exciting project to Cambridge Crossing. Thank you for your consideration.

Sincerely,
DIVCOWEST REAL ESTATE INVESTMENTS

Mark Johnson

Mark Johnson, FAIA
Director of Development

Attachment

CAMBRIDGE CROSSING

DEVELOPMENT STATUS TABLE

Phase 1a

Building	Use(s)	Approved GFA per Special Permit Appendix I	GFA approved thru Design Review	Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)
N	Residential	394,000 Total	385,400 ¹	Construction Completed. Occupied.
	Retail	8,600	8,600	Construction Completed. Not Occupied.
S	Residential	112,398	112,398	Construction Completed. Occupied.
T	Residential	242,194	242,194	Construction Completed. Occupied.
JK	Office/Laboratory	371,828 Total	356,228	Under construction. Anticipated Completion Q3 2020.
	Retail	15,600	15,600	Under construction.
W	Retail	16,395	16,395	Under construction. Anticipated Completion Q3 2020.
Q1	Office	18,851 Total	10,318	Under construction.
	Retail	8,533	8,533	Under construction.
L	Residential	314,038 Total		Special Permit approval. Design Review timing TBD.
	Retail	None		Special Permit approval. Design Review timing TBD.
M	Residential	221,831 Total		Special Permit approval. Design Review timing TBD.
	Retail	3,000 (Required)		Special Permit approval. Design Review timing TBD.
I	Residential	397,102 Total	371,066	Building permit application has been filed with ISD. Construction commencement planned for Q3 2020.
	Retail	26,036	26,036	

¹ Development of Parcels N, S and T was completed before issuance of Major Amendment No. 6, and, therefore, the revision of Appendix I. As a result, Appendix I reflects the as-built GFA of each of N, S and T.

Phase 1b

Building	Use(s)	Approved GFA per Special Permit Appendix I	GFA approved thru Design Review	Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)
G	Office/Laboratory	450,895	450,895	Under construction.
H	Office/Laboratory	365,110	365,110	Under construction.
EF	Office/Laboratory	419,529	419,529	Under construction.
	Retail	TBD (Allowed)	TBD (Allowed)	
C	Mixed-Use	382,746		Special Permit approval. Design Review timing TBD.
	Retail	TBD (Allowed)		Special Permit approval. Design Review timing TBD.
U	Office/Laboratory	320,192	313,270 ²	Special Permit approval. Design Review underway.

² Applicant proposes a building consisting of 313,270 sf of GFA on Parcel U. The remaining approved GFA per Special Permit Appendix I will be reallocated as the design of other commercial parcels advance.

Phase 2

Building	Use(s)	Approved GFA per Special Permit Appendix I	GFA approved thru Design Review	Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)
A	Residential	93,971		Special Permit approval. Design Review timing TBD.
B	Residential	335,251 Total		Special Permit approval. Design Review timing TBD.
	Retail	TBD (Allowed)		Special Permit approval. Design Review timing TBD.
D	Mixed Use	306,491		Special Permit approval. Design Review timing TBD.
	Retail	TBD (Allowed)		Special Permit approval. Design Review timing TBD.
Q2	Office/Laboratory	162,126 Total		Special Permit approval. Design Review timing TBD.
	Retail	1,801 (Required)		Special Permit approval. Design Review timing TBD.
R	Mixed Use	134,211 Total		Special Permit approval. Design Review timing TBD.
	Retail	17,660 (Required)		Special Permit approval. Design Review timing TBD.
V	Residential	186,695 Total		Special Permit approval. Design Review timing TBD.
	Retail	4,840 (Required)		Special Permit approval. Design Review timing TBD.

Special Permit #179, Condition 19.d.

Statistical Summary of Dwelling Units Constructed

Parcel	Total Residential Units	Approved GFA	Use(s)	All Residential Units							
				Studio		1 Bedroom		2 Bedroom		3 Bedroom	
				No. Units	Avg. SF	No. Units	Avg. SF	No. Units	Avg. SF	No. Units	Avg. SF
N	355	394,000	Residential Retail	74	501	180	732	85	1,030	16	1,392
S	99	112,398	Residential	0	--	94	921	5	1,285	0	--
T	230	242,194	Residential	40	663	138	878	51	1,044	1	1,923
I ¹	468	371,066	Residential	247	437	93	630	105	973	23	1315

Parcel	Affordable Residential Units	Approved GFA	Use(s)	Affordable Residential Units ²							
				Studio		1 Bedroom		2 Bedroom		3 Bedroom	
				No. Units	Avg. SF	No. Units	Avg. SF	No. Units	Avg. SF	No. Units	Avg. SF
N	41	394,000	Residential Retail	8	516	21	734	10	1,062	2	1,407
S	12	112,398	Residential	--	--	11	887	1	1,179	--	--
T	26	242,194	Residential	4	678	15	834	6	999	1	1,839
I	54	371,066	Residential	28	450	10	643	12	961	4	1165

Issued: August 19, 2020

¹ Applicant filed a building permit application for the residential building on Parcel I with Cambridge ISD on May __, 2019, and anticipates commencing construction of the residential building in the third quarter of 2020.

² This chart assumes that these residential properties and affordable units are in compliance with the associated affordable housing covenants as on record at the Middlesex County Registry of Deeds (Parcel N: Book 61574 Page 442; Parcel S: Book 45918 Page 224; Parcel T: Book 46408 Page 98). Additional information regarding these properties is available from the Housing Department at CDD.



Divco West **Cambridge Crossing 441 Morgan Avenue**

Design Submission
August 28, 2020

 **DIVCOWEST**  **Cambridge Crossing**

ennead JACOBS

MICHAEL
VAN
VALKENBURGH
ASSOCIATES
INC

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1. Design Review Narrative

Design Concept

441 Morgan Avenue* is a proposed commercial laboratory / office building containing approximately 313,270 square feet of GFA in the mixed-use Cambridge Crossing development. The parcel, which is depicted as Parcel U on the Master Plan attached as Exhibit A to Amendment No. 8 (Minor) to PUD Special Permit No. 179, is sited south of Morgan Avenue, facing the Common**, between Leighton Street and the Gilmore Bridge. The 12-story building includes ten tenant floors, topped by two floors of mechanical penthouse. Below grade are three and a half levels of underground parking garage.

The building's primary entry is through a lobby centered on the northeast façade facing Morgan Avenue. The underground parking is accessed by a ground-level entrance on the northwest façade, leading to an internal ramp. Elevators connect the garage to the public lobby. There is a separate pedestrian exterior entrance to the garage located at the east corner of the building. A fully enclosed loading dock, also along the northwest façade, leads directly to the core elevators. Short-term bicycle parking is provided, outside along the northeast façade of the building, and long-term bicycle parking is located in an interior bicycle room at the northeast ground floor. The long-term bicycle parking area provides showers and bicycle repair stations that connect to the main lobby. Pedestrian circulation between the park and the Gilmore Bridge is provided by an accessible elevator adjacent to the bike room, pending MassDOT approval. This elevator is accessed by an outdoor public vestibule on Morgan Avenue and by a planted terrace at bridge level.

The building integrates with and enhances the character of its public context, in keeping with the Design Guidelines. This complementarity with the character of the neighborhood is carried out with sustainable and context-sensitive façades, careful articulation of the massing, and attention to the pedestrian experience.

* Also referred to as Parcel U in this presentation

** Also referred to as "The Northpoint Commons" in this presentation

Sustainability and Materials

The design of the building exterior is driven by the need for solar shading on the southwest and southeast faces, and maximal openness to the park-facing northeast and northwest. The north sides use a glass curtain wall to open the building to the street and views to the park. On these two façades terra cotta fins block early morning and late afternoon light in the summer. These façade elements have a secondary, urban design role: they orient alternately towards the street and towards the park in order to further articulate the massing and break down the scale of the façade, in accordance with the Design Guidelines.

The southwest and southeast façades use smaller windows to reduce daytime sunlight. The warm colors of the terra cotta fins are continued on these faces by vertical pilasters, which are variably angled to achieve subtle rippling shadows. Areas of penthouse mesh at the top and fully-glazed openings on the southwest and southeast accentuate the building's division of base, middle and top.

Massing Design

Within the overall massing envelope, the northeast and northwest faces are faceted to create terraces and smaller areas of façade. These smaller facets have a dynamic, shifting relationship that communicates movement in addition to articulating the elevation in accordance with the Design Guidelines. The scale of the building is reduced with this articulation, and different façade facets are oriented to address either the park or the street geometry. The primary setback is at 65 feet (level five), creating a distinct plinth along Morgan Avenue and Leighton Street conforming with the Design Guidelines. Further terraces at levels seven and ten establish continuity with the large northwest terrace at level nine.

On the southeast and southwest sides, vertical breaks selectively open up the more solid façades to the Gilmore Bridge and more distant views from the south. The primary cut, a "picture window" on the south corner, carries over the base and top lines from the north side. The two additional cuts are matched to the set-back profile of the building at the terraces, using the terraces to represent smaller-scale volumes on the south elevations. Articulation and emphasis is provided by a color change at the smaller volumes.

Pedestrian Experience

Specific massing refinements and material choices are designed particularly for the pedestrian experience. The green areas of the Morgan Avenue frontage continue the setback plantings of the Sierra and Tango condominiums. At the first floor, low-iron glass is used to create a welcoming transparency for pedestrians at the lobby. This façade type is continued west along Morgan Avenue and wraps the north corner. A finely articulated canopy liner extends over this area to accentuate the ground level and emphasize the wrapping.

While holding to the Build-To line in all other areas per the Design Guidelines, the building flares out at the east corner for an elevator from the Gilmore Bridge to Morgan Avenue, pending MassDOT approval. This extension beyond the Build-To line is a deliberate design choice to enhance the streetscape by terminating Morgan Avenue pedestrians' line of sight with an accessible bridge connection, improving the public realm – rather than directly exposing the traffic above, and grey space under, the bridge. It manifests the Guidelines' emphasis on sightlines to public amenities, context-appropriate variation in building lines, and an streetscape of active uses. The elevator pairs with the existing adjacent stair at Glassworks Avenue to provide a southern connection from the Gilmore Bridge to the Cambridge Crossing neighborhood. This complements the Murphy stair and escalator from the north – with the added advantage of opening directly on to the Common, a benefit accentuated by its flared orientation.

Public Realm

The Streetscapes of Parcel U are planted with high canopy street trees consistent with the wider Cambridge Crossing neighborhood.

Located at a major entry to the Cambridge Crossing neighborhood, the building and surrounding public realm is a key part of the sense of welcome to visitors arriving from the east under the Gilmore Bridge, and an important framing element to the Common. The streetscape along Morgan Avenue continues the richly planted streetscapes of the Sierra and Tango buildings, and outdoor musical instruments provide a focus of activity at Parcel U, with a grand piano, xylophone, and chimes tucked into small paved gathering spaces. Stainless-steel vine structures above the instruments and running along the front of the building, create a playful character and encourage people to stop for a while, listen to and perhaps play some music, and enjoy the view to the Common across the street. The vine structures are continued around the north corner of the building onto Leighton Street to help screen views to the loading dock from the Common. Fixed benches, with and without backs, bike racks, trash receptacles and lighting and paving materials are also consistent with the wider neighborhood. Bike parking is provided conveniently located near the Community Path.

The southwest landscaping is enhanced with canopy trees of a vertical habit, which will help shade the south façade of the building. On the southeast side of the building use is restricted by the maintenance easement of the Gilmore Bridge and service access to the building's electrical transformer. Gates will discourage general use while allowing passage if required. Pending MassDOT approval, the building engages the sidewalk of the Gilmore Bridge, with a direct link to a public elevator at the east corner of the building leading down to Morgan Avenue. The Gilmore Bridge connection is enhanced with wayfinding, planting and an emergency blue phone.

Morgan Avenue

(Formerly North Point Boulevard)

Parcel U will be the first building constructed with a Morgan Avenue address.

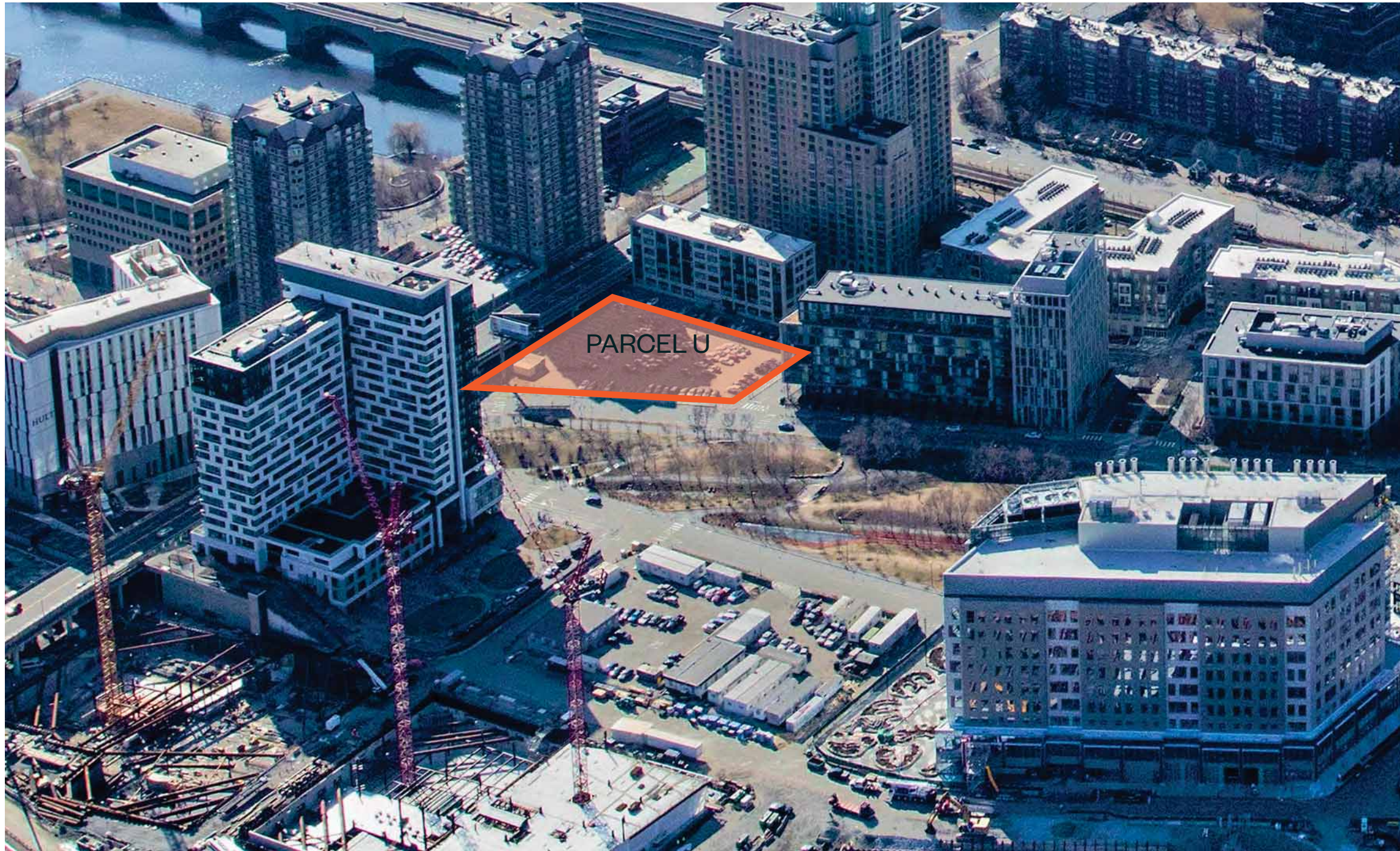
DivcoWest is proud to have had its proposal to rename this street accepted by the City of Cambridge, and to propose this design for 441 Morgan Avenue.



Gertrude Wright Morgan

- Born in Springfield, Illinois in 1861. She was the first black female student to attend high school in Springfield. She graduated high school third in her class and became a teacher.
- Married Clement G. Morgan in 1896 and moved to Cambridge.
- Both Gertrude and Clement were involved in the Niagara Movement and the establishment of the NAACP. They hosted prominent citizens and civil rights leaders in their home at 265 Prospect Street.
- Gertrude was active in the suffrage movement and represented her ward on a committee for better city government. She was president of the Women's Era Club and member of the board of the Harriet Tubman House.
- She was appointed by Governor Cox to represent Massachusetts at the dedication of the Frederick Douglass House Museum in 1922

2. Design Review Graphics





VIEW FROM PARK



VIEW FROM GILMORE BRIDGE



VIEW FROM GLASSWORKS AVENUE



VIEW FROM LEIGHTON STREET

EXISTING NEIGHBORHOOD IMAGES



North View

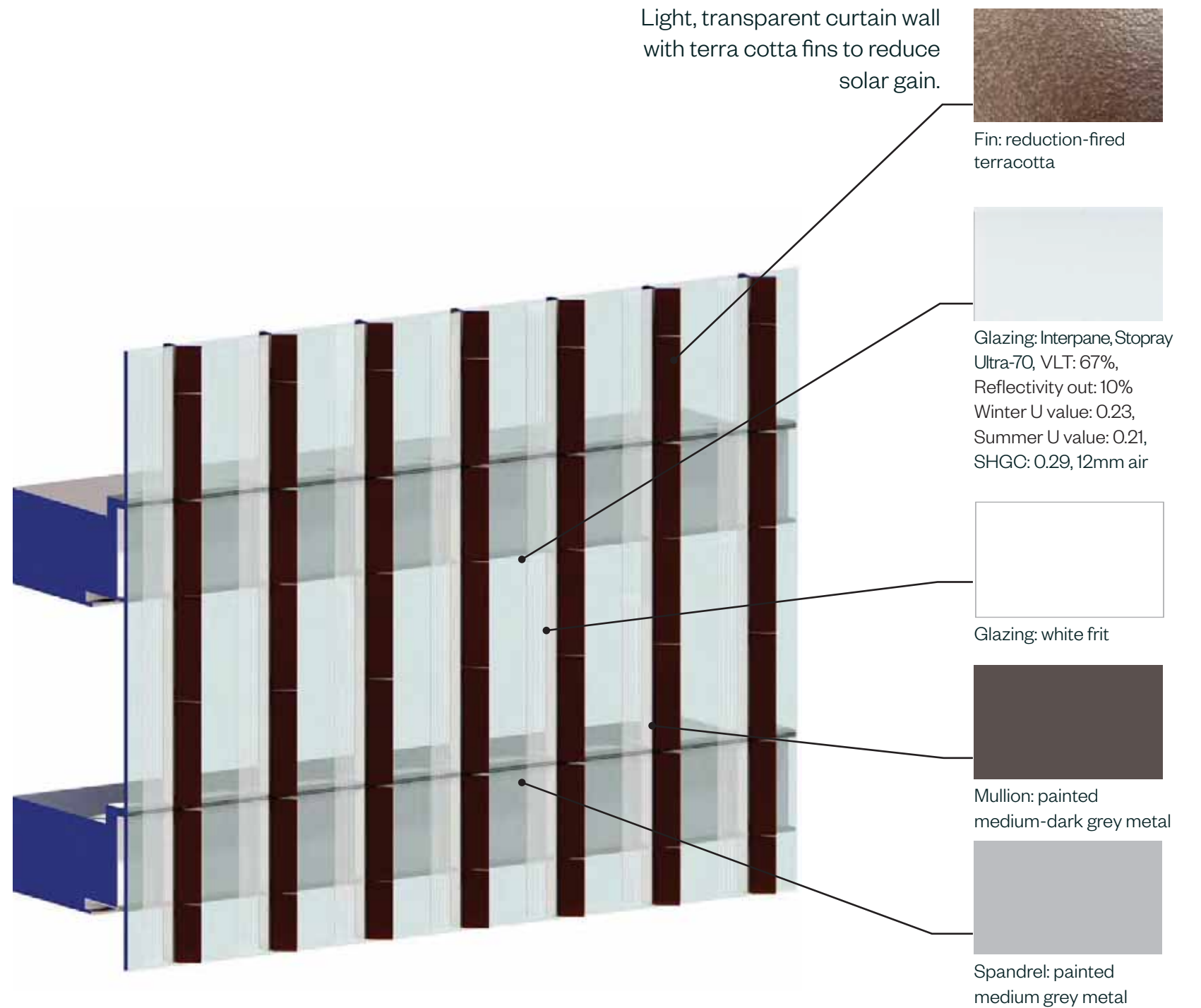


South View

Connection to Gilmore
Bridge shown pending
approval from MassDOT



- The northeast and northwest elevations employ a highly transparent curtain wall, and use oriented facets and fins to embrace the park.
- The northeast façade faces Morgan Avenue, and the northwest façade faces Leighton Street. These two façades are visually articulated as a composition of smaller masses through the use of vertical breaks, shifting faces and material transitions.
- The nature of the terraced setbacks, projecting terracotta fins and varied façade angles help to create shifting and varied roof lines while clearly expressing the top of the building.



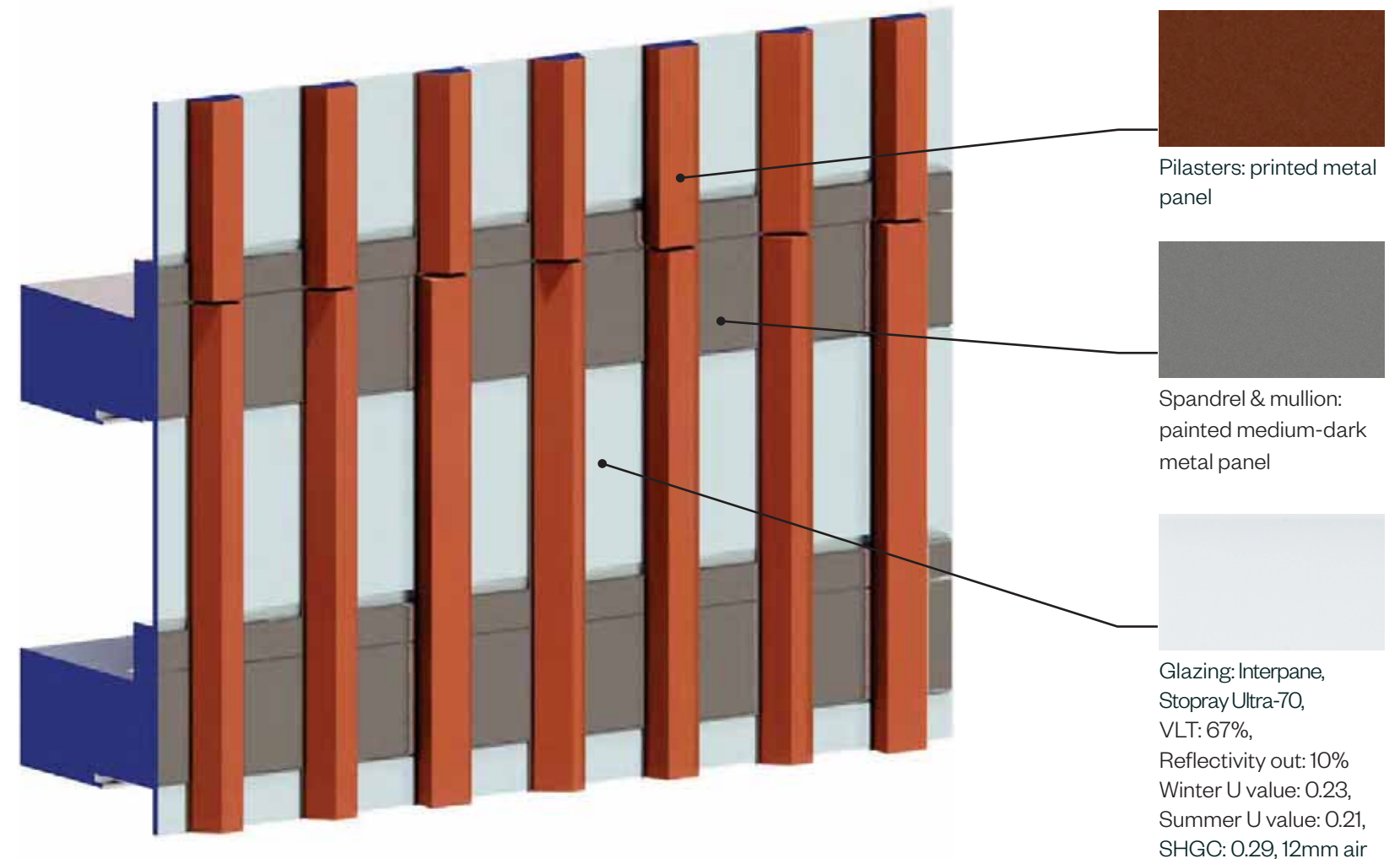


- The southeast and southwest elevations adopt metal panel cladding in context with adjacent buildings.
- The distinct base, middle and top are further accentuated by the large picture window on the south façade. The bottom of this large picture window is aligned with the setbacks that create the 'base' on the northeast and northwest façades. Similarly, the top of the window delineates a 'top' that is aligned with the top that is expressed on the northeast and northwest façades.
- 441 Morgan uses variable pilasters along its Gilmore Bridge frontage to create a striking visual ripple, with vertical cuts and a picture window opening to relate to the scale of the bridge. The faceting and terraced setbacks of the Leighton Street and Morgan Avenue elevations create a complementary iconic presence on these frontages. The prominent material palette of glass and natural-toned materials also creates a striking presence on all sides.

Connection to Gilmore Bridge shown pending approval from MassDOT



Solid façade on sun-facing elevations with earth-toned rippling angled pilasters.



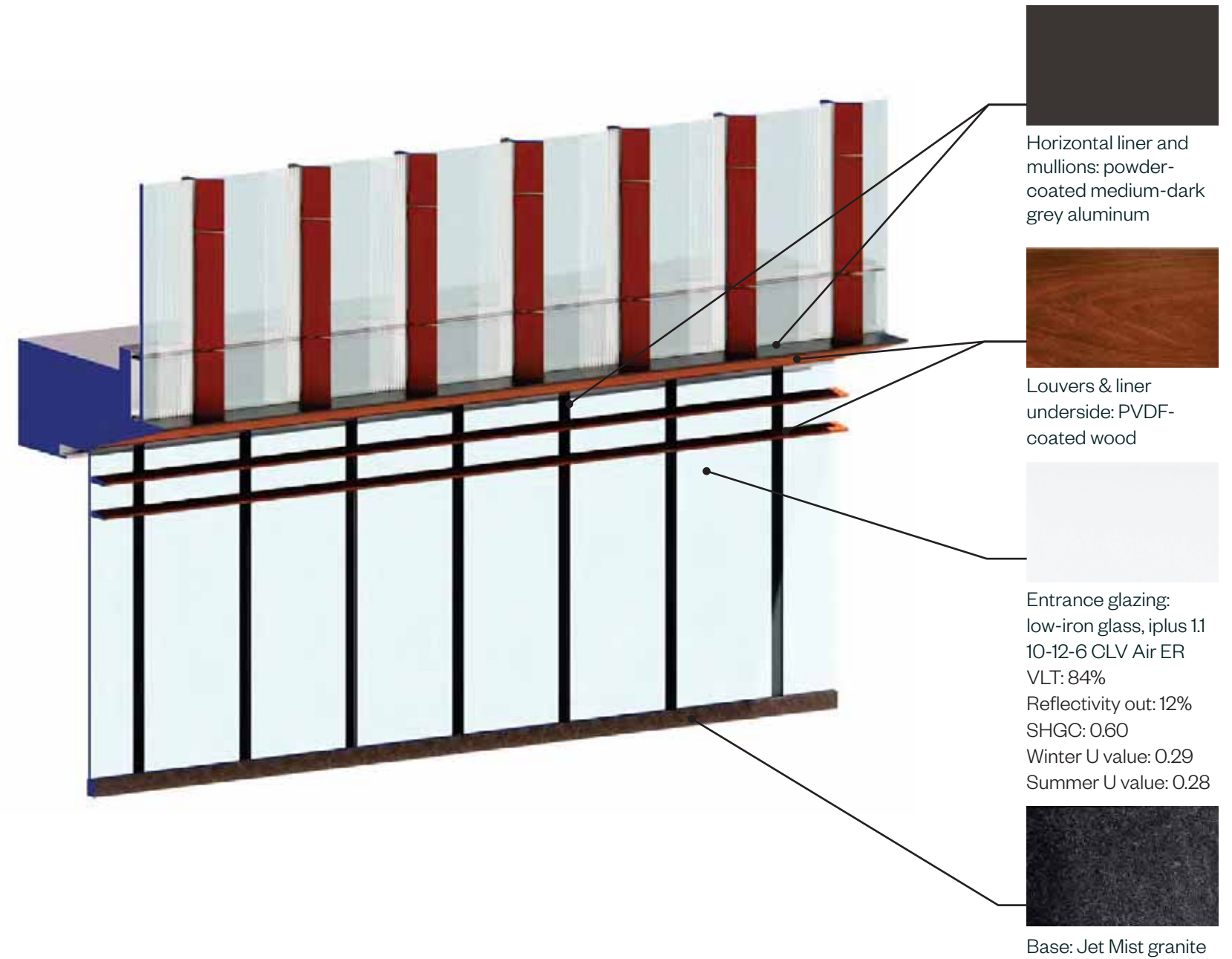


- The two-storey portal at the main entrance provides additional transparency and enlivens the pedestrian experience.
- The eastern corner of 441 Morgan is comparable in height to the adjacent Sierra and Tango buildings.
- The northeast façade shifts planes and materials four times over the entry portal in order to create an articulated pedestrian experience.
- A transparent and inviting lobby glazed entrance with high-transparency low-iron glass is accentuated by framed portals and celebrated entries.
- A human-scaled horizontal line is clearly expressed at the second floor by the canopy. The intimate pedestrian experience is proposed under the entry canopy.

Note: park-side trees hidden for clarity



High-transparency glazed entrance façade that welcomes pedestrians.





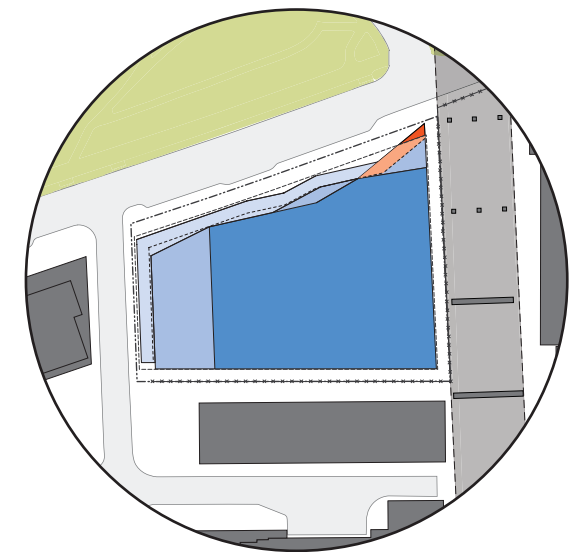
- The design achieves a distinct base, middle and top by clear expression of the horizontal shifts on the façade and the orientation of the fins, as well as the material shift at the top of the building.
- The base and middle portions of 441 Morgan are designed to the street line, with setbacks for open space and entrance portals.
- The east edge of the building frames the Common open space and terminates the Morgan Avenue street wall.

Connection to Gilmore Bridge shown pending approval from MassDOT



- Variegated angles and plane shears at 20' to 50' on the northeast and northwest elevations create an organized rhythm that stitches together the varied surrounding context.
- The nature of the terraced setbacks, projecting terracotta fins and varied façade angles help to create shifting and varied roof lines while clearly expressing the top of the building.
- 441 Morgan engages the Gilmore Bridge with an accessible elevator to provide pedestrian access to Morgan Avenue.

Connection to Gilmore Bridge shown pending approval from MassDOT





- The building conforms with the Design Guideline Build-To line with the exception of the east corner. This corner flares slightly beyond the build-to line for several reasons. First, it forms a more continuous street wall with the fence line north of the Gilmore Bridge piers. Second, it blocks the view of the underside of the Gilmore Bridge from the public realm in front of the building. Third, it makes the at-grade entrance to the public elevator more visible from the sidewalk in front of the building and the common. Fourth, it helps enclose the eastern end of the Common. Finally, it helps block noise and sightlines to the traffic on the Gilmore Bridge.

Connection to Gilmore Bridge shown pending approval from MassDOT



- The human-scale ground level windows have a high level of transparency for pedestrians and inhabitants, creating visual interest from interior and exterior.
- A transparent and inviting lobby with high-transparency low-iron glass is accentuated by framed portals and celebrated entries.
- The building conforms with the Design Guideline Build-To line with the exception of the north corner. This corner flares slightly beyond the build-to line for several reasons. First, it forms a more continuous street wall with the fence line north of the Gilmore Bridge piers. Second, it blocks the view of the underside of the Gilmore Bridge from the public realm in front of the building. Third, it makes the at-grade entrance to the public elevator more visible from the sidewalk in front of the building and the common. Fourth, it helps enclose the eastern end of the Common. Finally, it helps block noise and sightlines to the traffic on the Gilmore Bridge.

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Alternate view revealing bridge with full setback at east corner



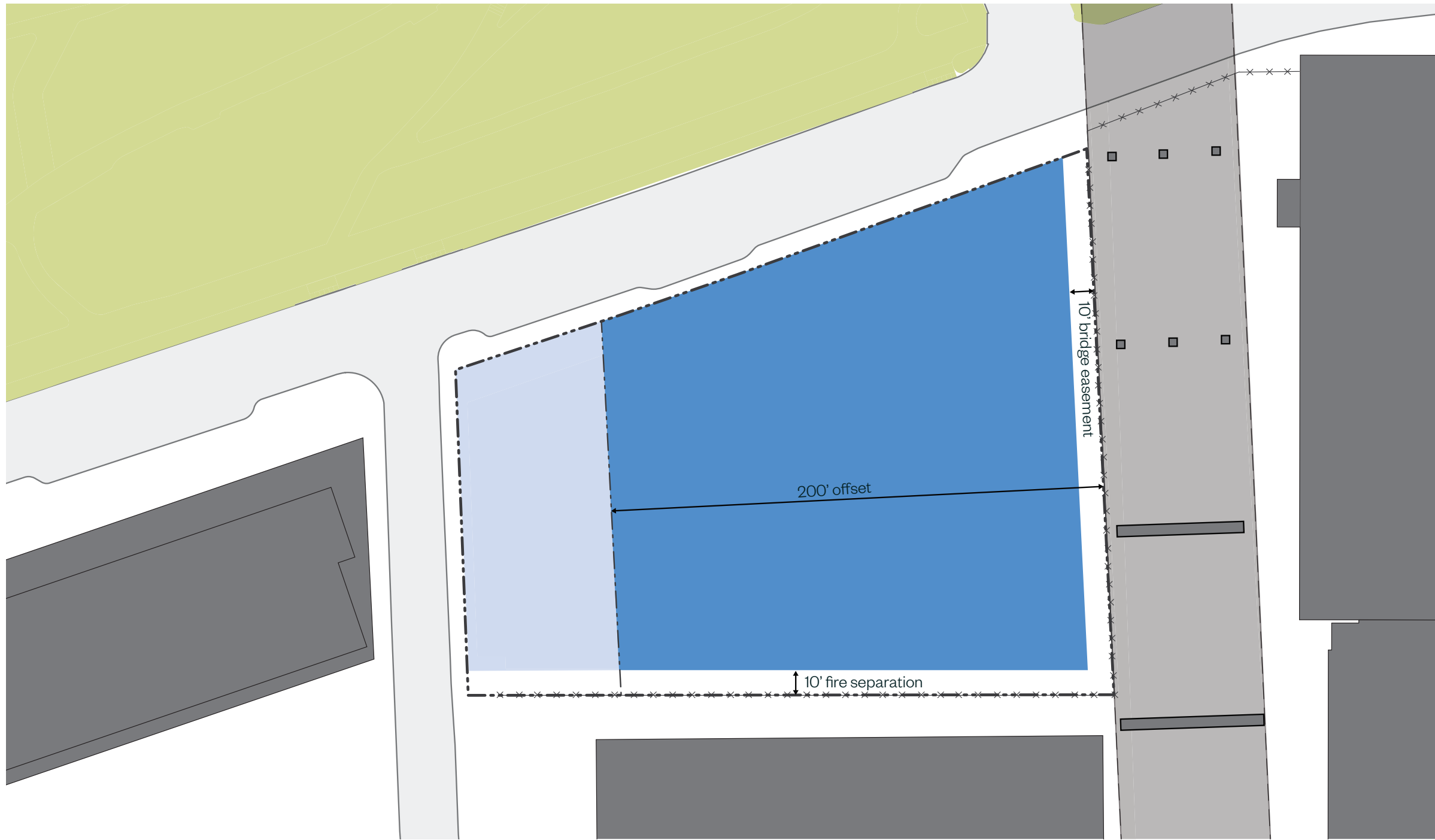
- The more solid façade of the southeast and southwest sides relates to the punched windows of nearby buildings. Vertical cuts in these south façades create a visual connection across Glassworks Avenue and the Gilmore Bridge, and more distantly to the Back Bay and Boston.
- Variable expression of the southeast and southwest pilasters also repeat on a 42' bay rhythm. This is further articulated on all façades by the typical 5'-3" façade module, which is comfortable for the pedestrian experience as it relates to human scale.



- Loading dock and garage entrance follow Masterplan approved locations.
- Pedestrian experience of the sidewalk is enhanced by vine structures, building-side planters and paving differentiation to emphasize pedestrian through-flow.
- Pedestrian experience of the building is enhanced by portal lighting and transparency at vehicle doors into designed ceilings beyond. The patinated metal finish uses a similar earthy material palette to the terra cotta above and pilasters on the southeast side, while creating an elegant industrial ambience at the garage and loading areas.



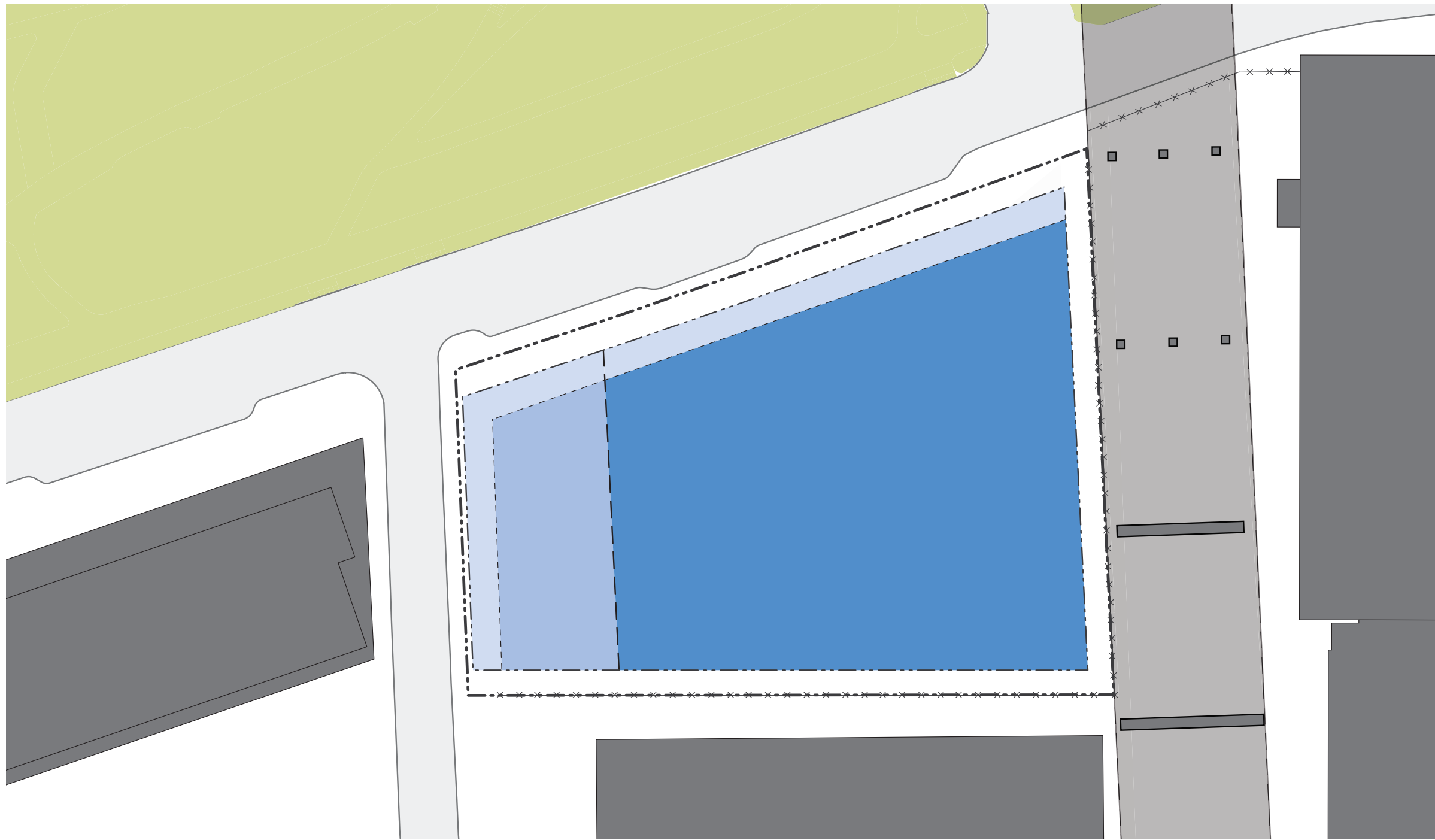
- Additional view of Parcel U from Longfellow Bridge, requested by City Staff.
- The large vertically oriented opening at the south corner of Parcel U provides a distinctive marker on the skyline.
- The large-scale gestures of the civic south façades are highlighted as appropriate and contextual when viewed in the larger urban framework, across the Charles River basin.



- 10' easement from the southeast property line is required for Gilmore Bridge
- Massachusetts State Building Code requires 10' fire separation from southwest property line.
- Zoning limits height to 120' beyond a 200' offset from the Gilmore Bridge.

- 150' height limit as defined by zoning
- 120' height limit as defined by zoning
- Property line
- ×× Fence

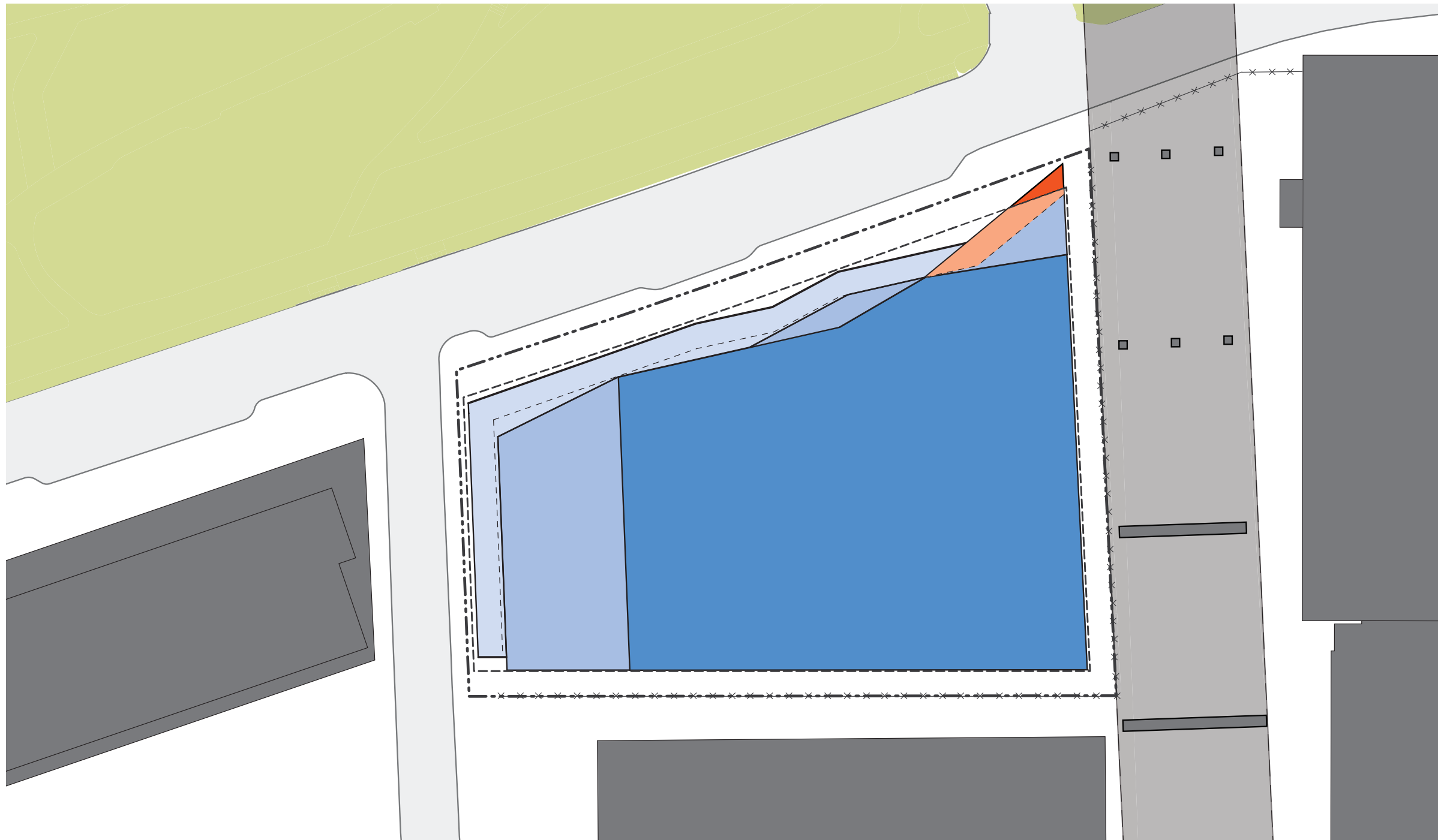




- Design Guidelines recommend Build-To lines at street elevations on the northwest and northeast.
- Guidelines also include 10' offset above 65' at street elevations on the northwest and northeast.

- Build-To line
- 65' massing within 10' of street build-to lines
- 10' offset massing edge
- x-x Fence



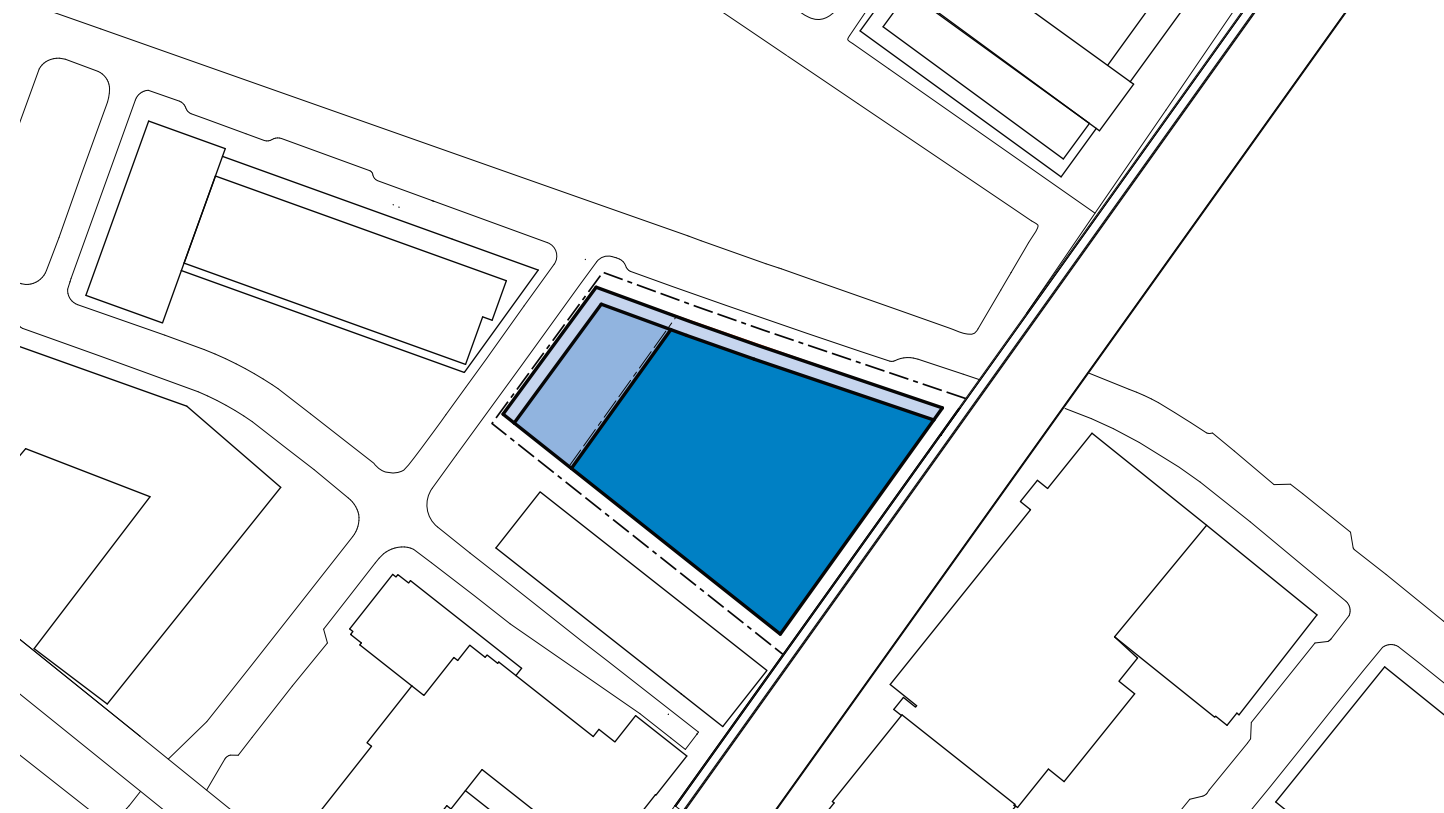


Proposed design follows all zoning requirements. Design follows Guidelines except where the public realm is improved by an extension beyond the Build-To line in the following ways:

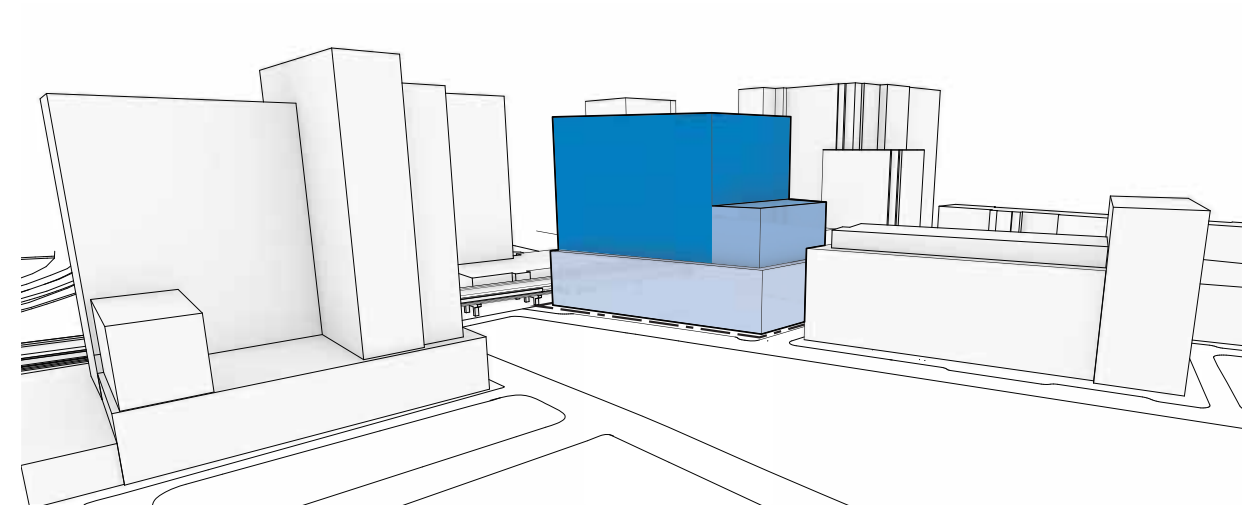
- An extension blocks view of chain-link fence and underside of Gilmore Bridge.
- An extension blocks view of bridge.
- An extension encloses the east end of the park.
- An extension improves sight lines along Morgan Ave to the Gilmore Bridge elevator

- Build-To line
- 65' massing within 10' of street build-to lines
- 10' offset massing edge
- ✕✕ Fence
- < 10' offset above 65'
- Beyond build-to line

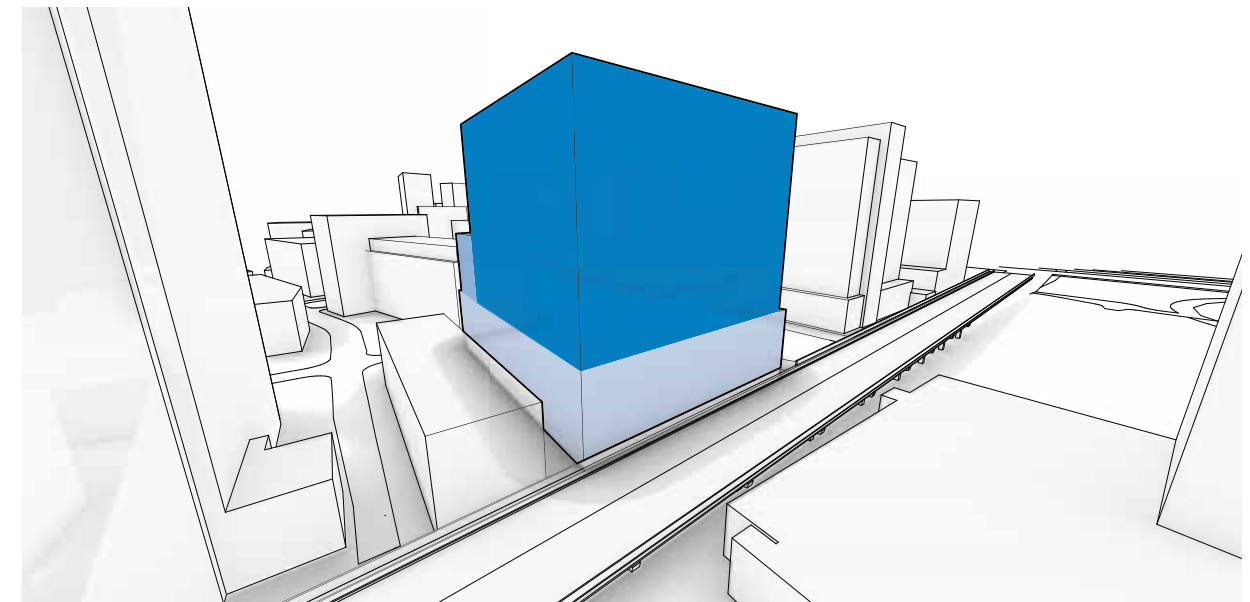




⌚^N PLAN

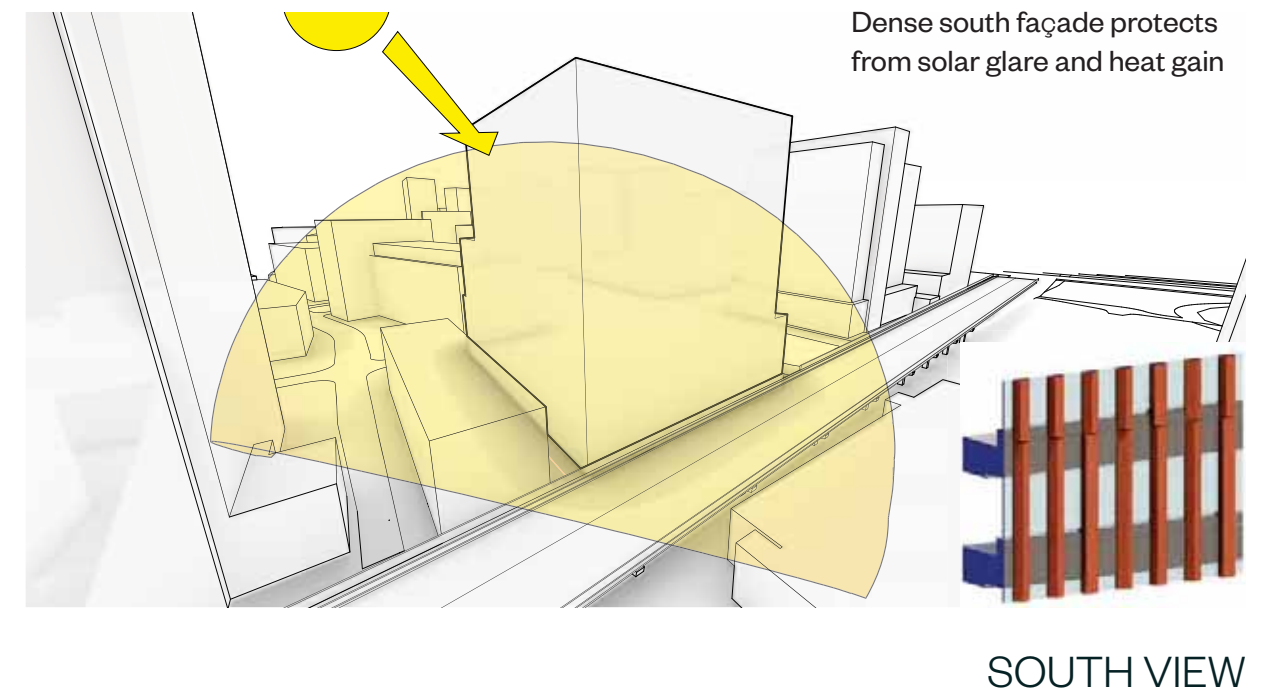
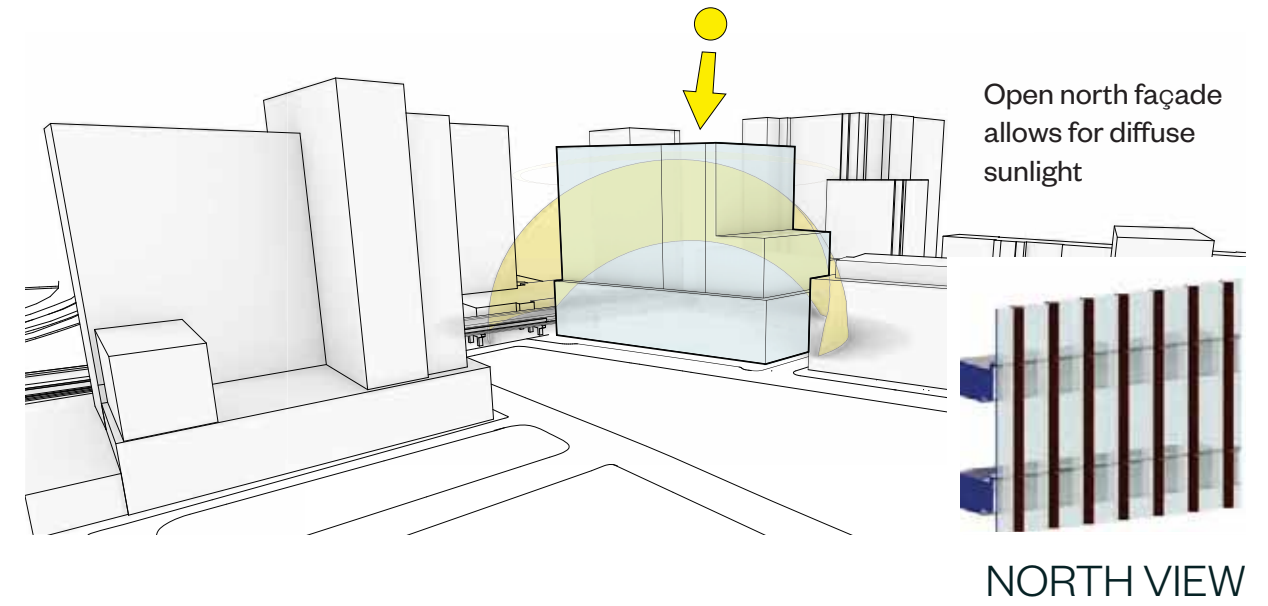
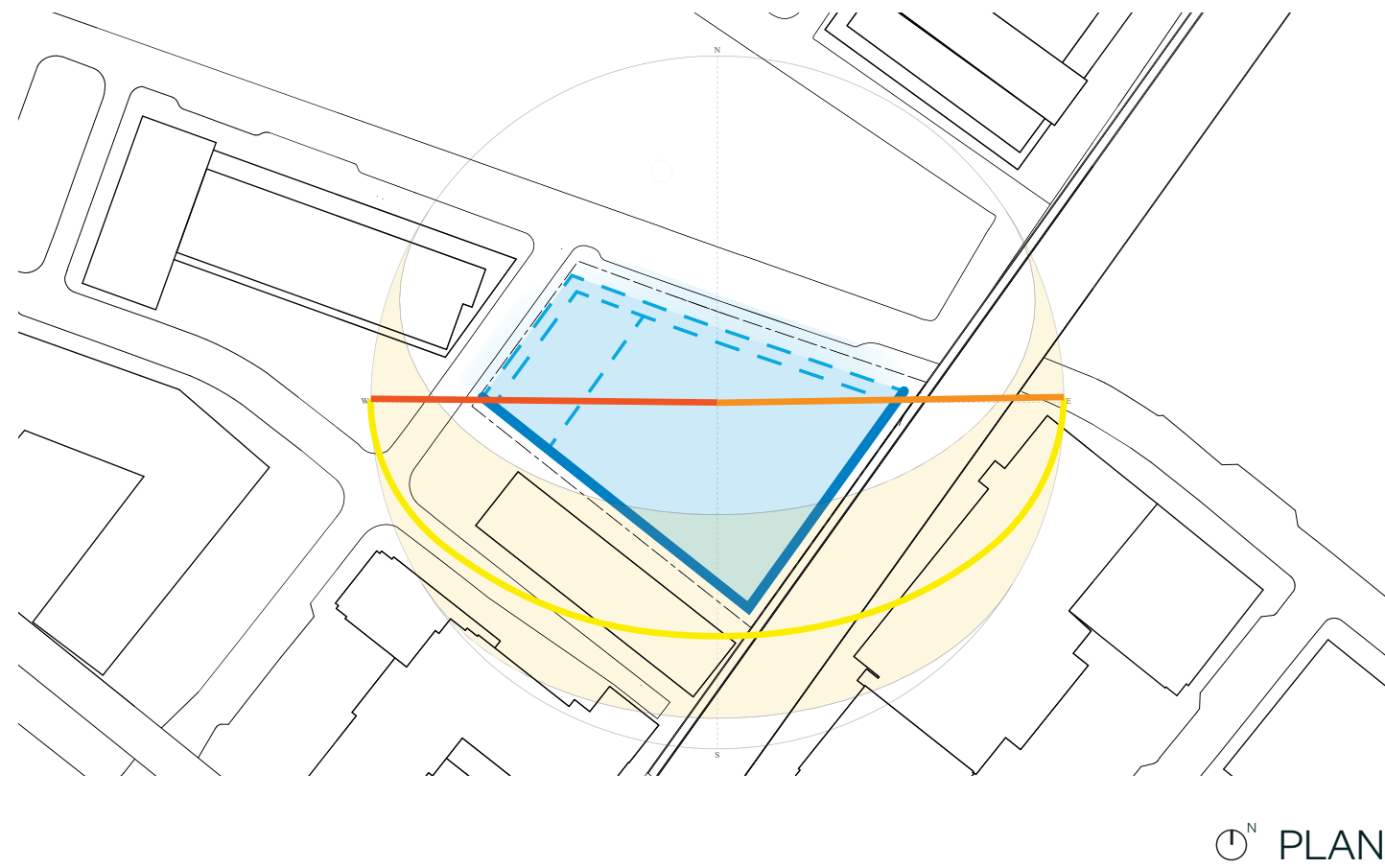


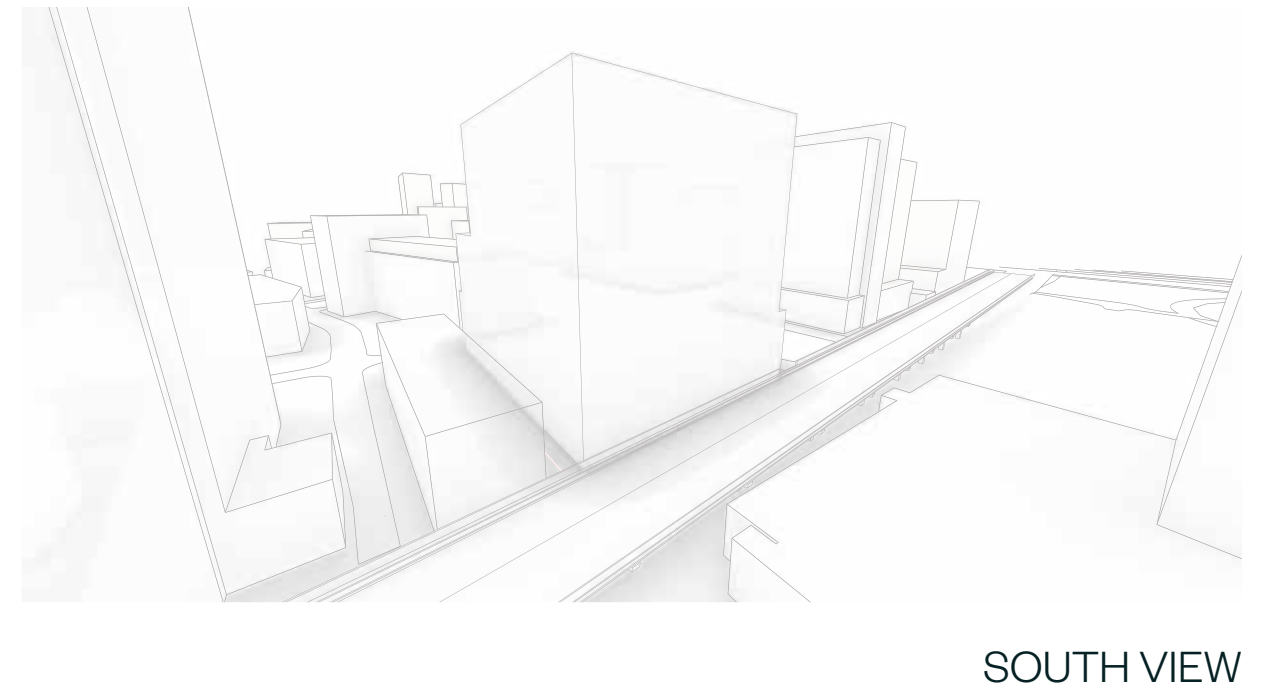
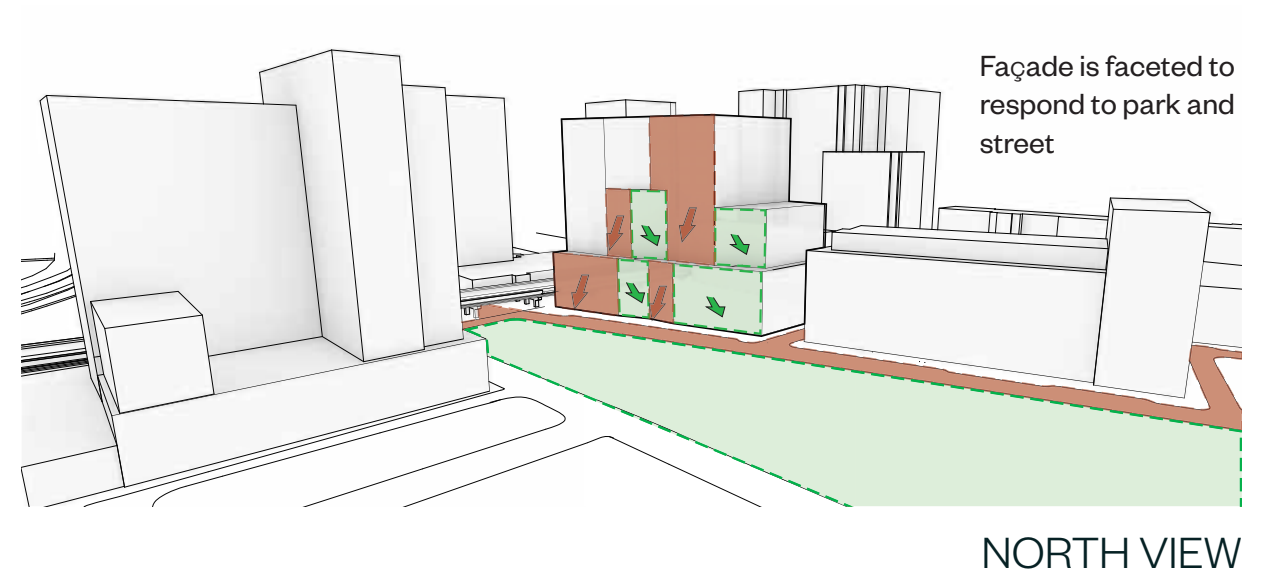
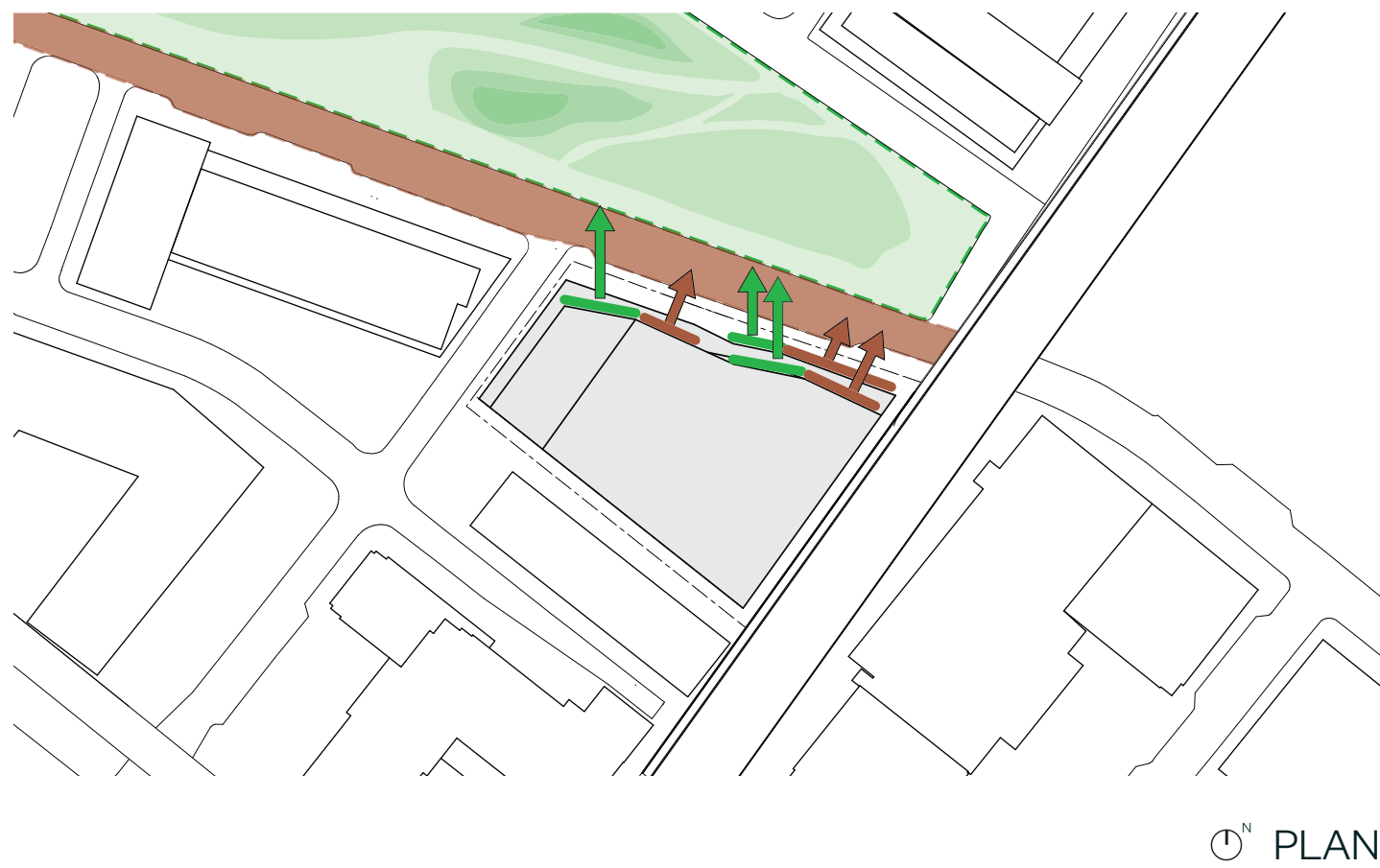
NORTH VIEW

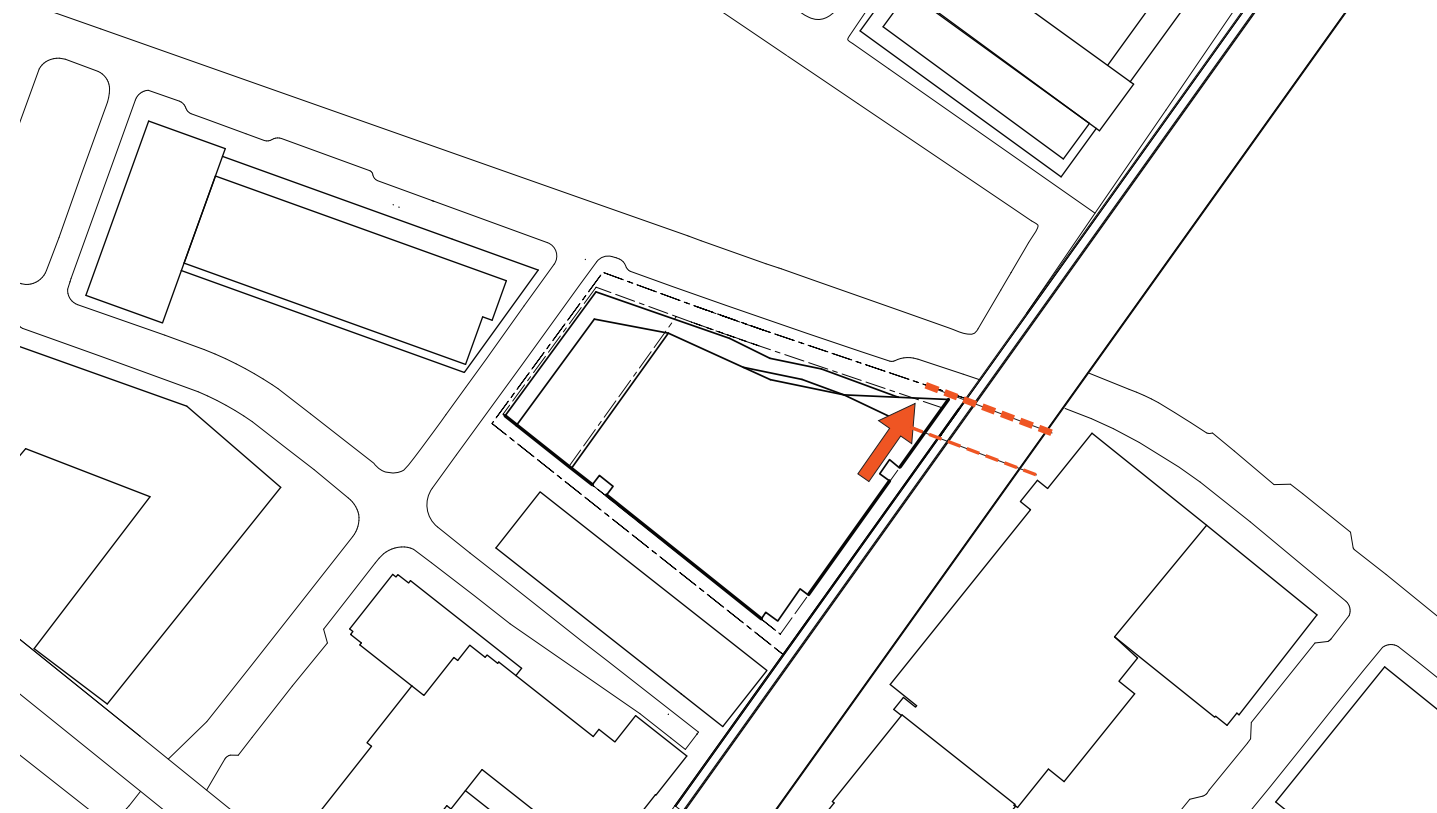


SOUTH VIEW

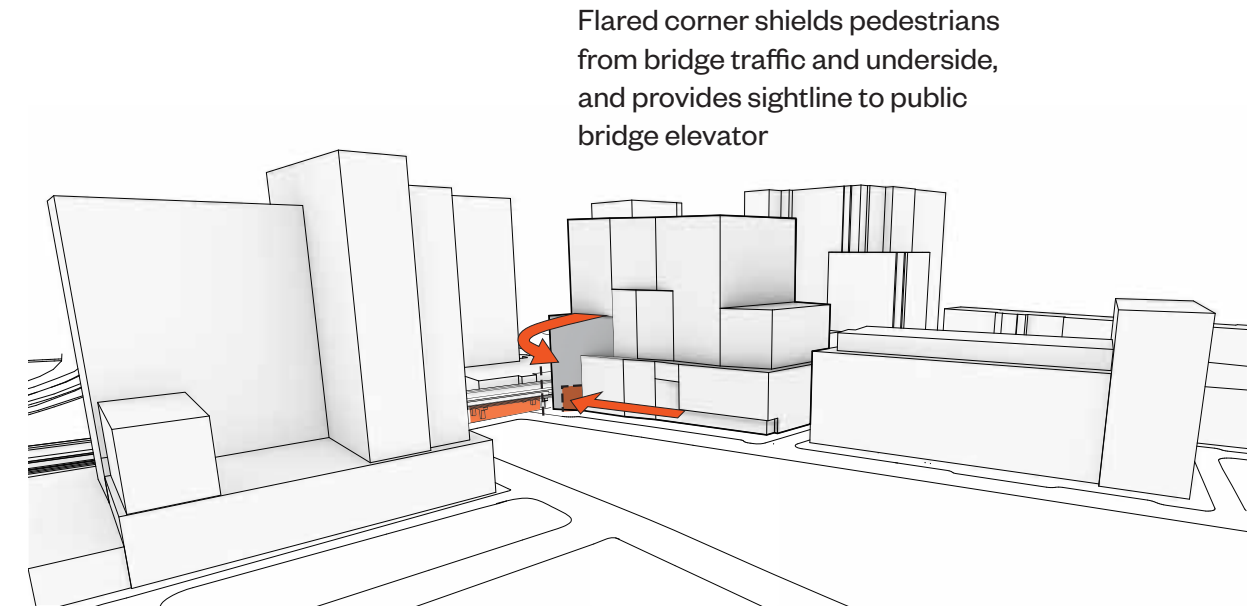
DESIGN CONCEPTS: INITIAL MASSING







⌚^N PLAN



Flared corner shields pedestrians from bridge traffic and underside, and provides sightline to public bridge elevator

NORTH VIEW

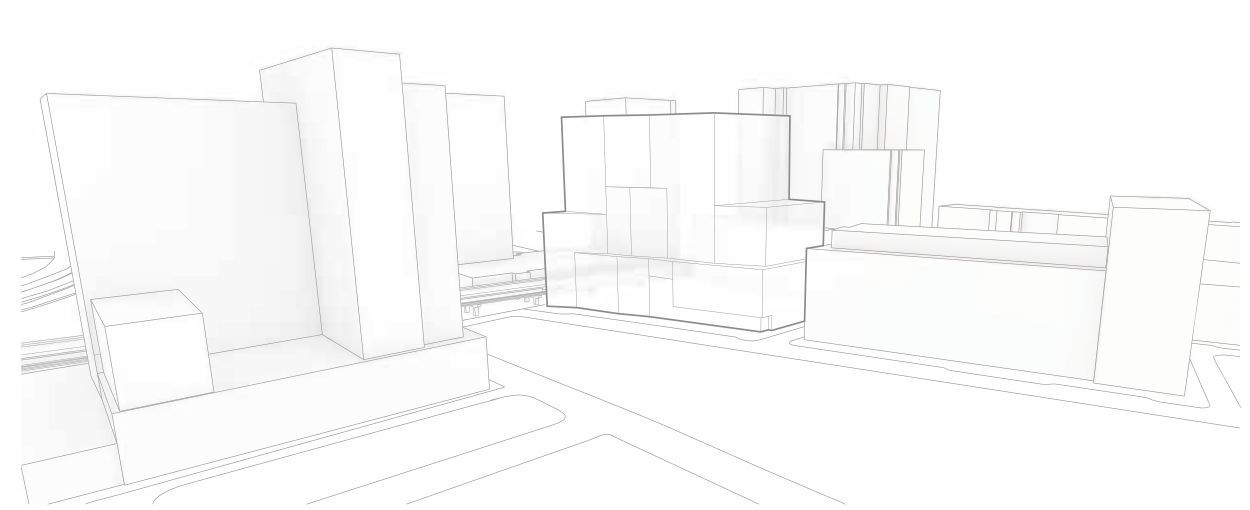
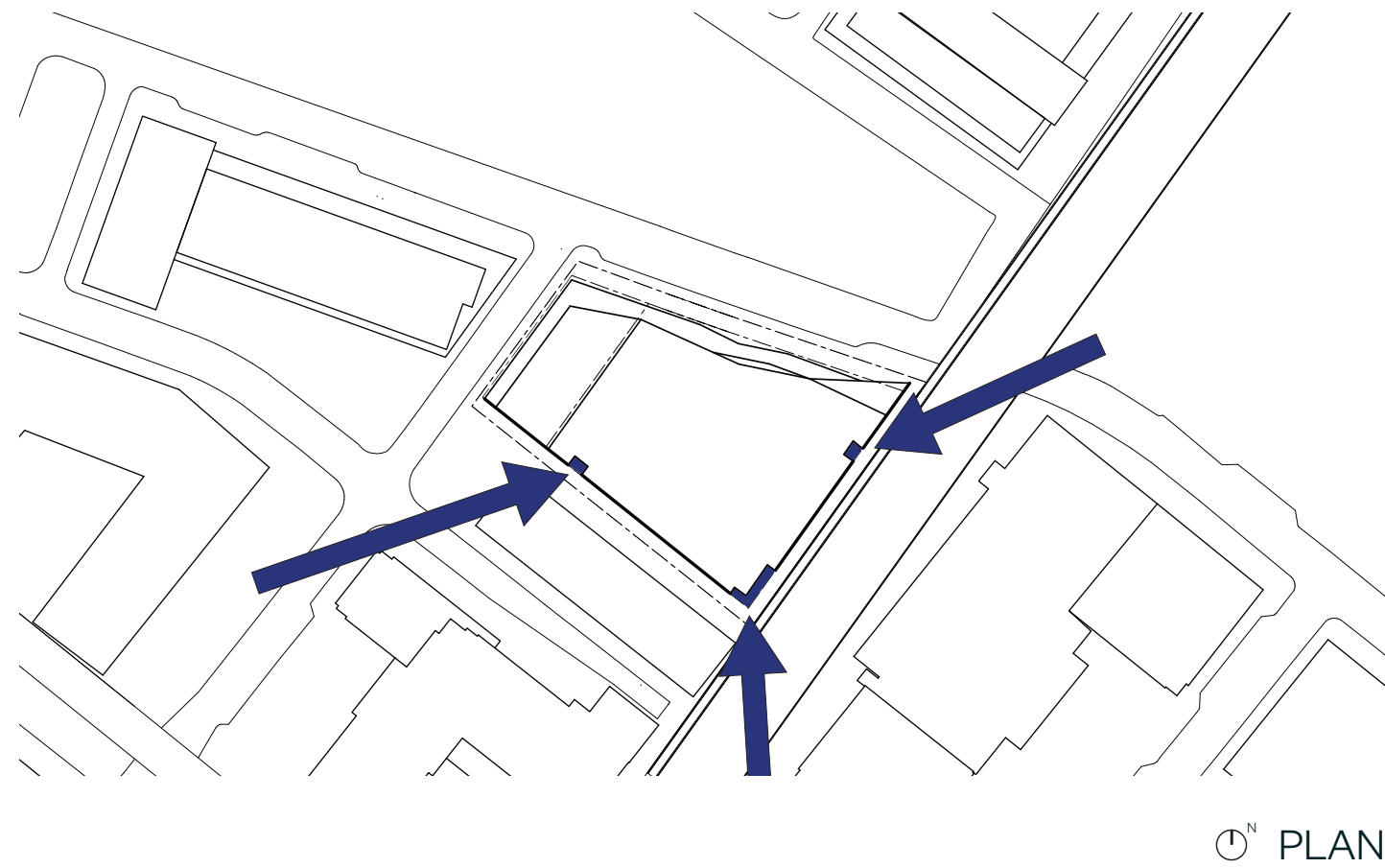


ORIGINAL SETBACK

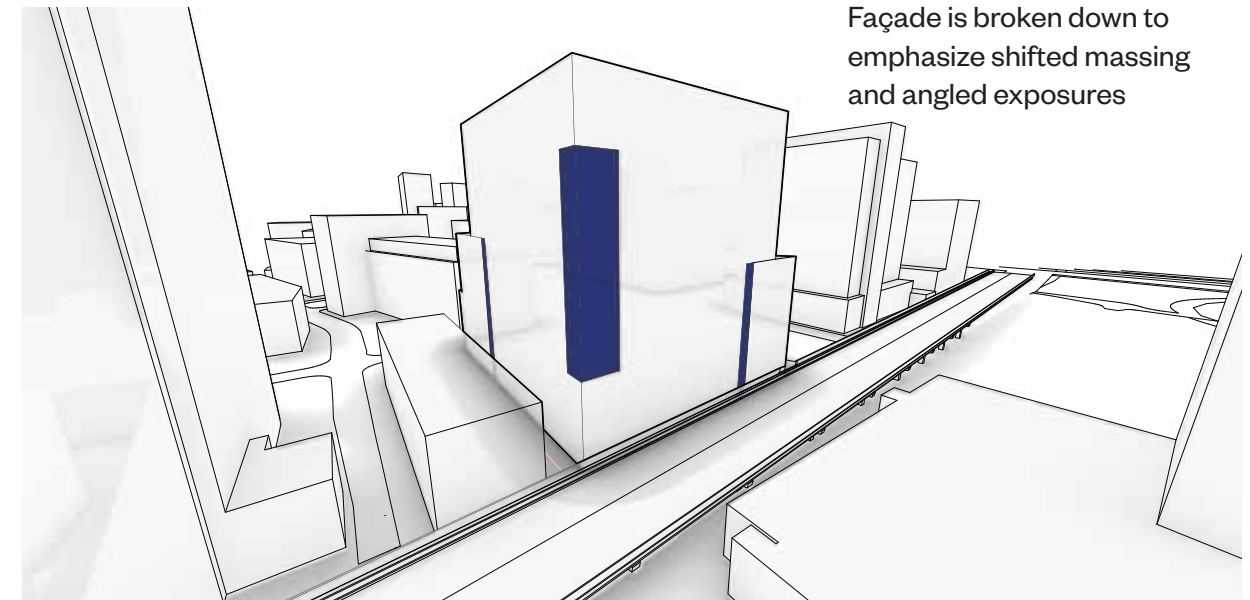


PROPOSED DESIGN

Connection to Gilmore Bridge shown pending approval from MassDOT



NORTH VIEW



SOUTH VIEW

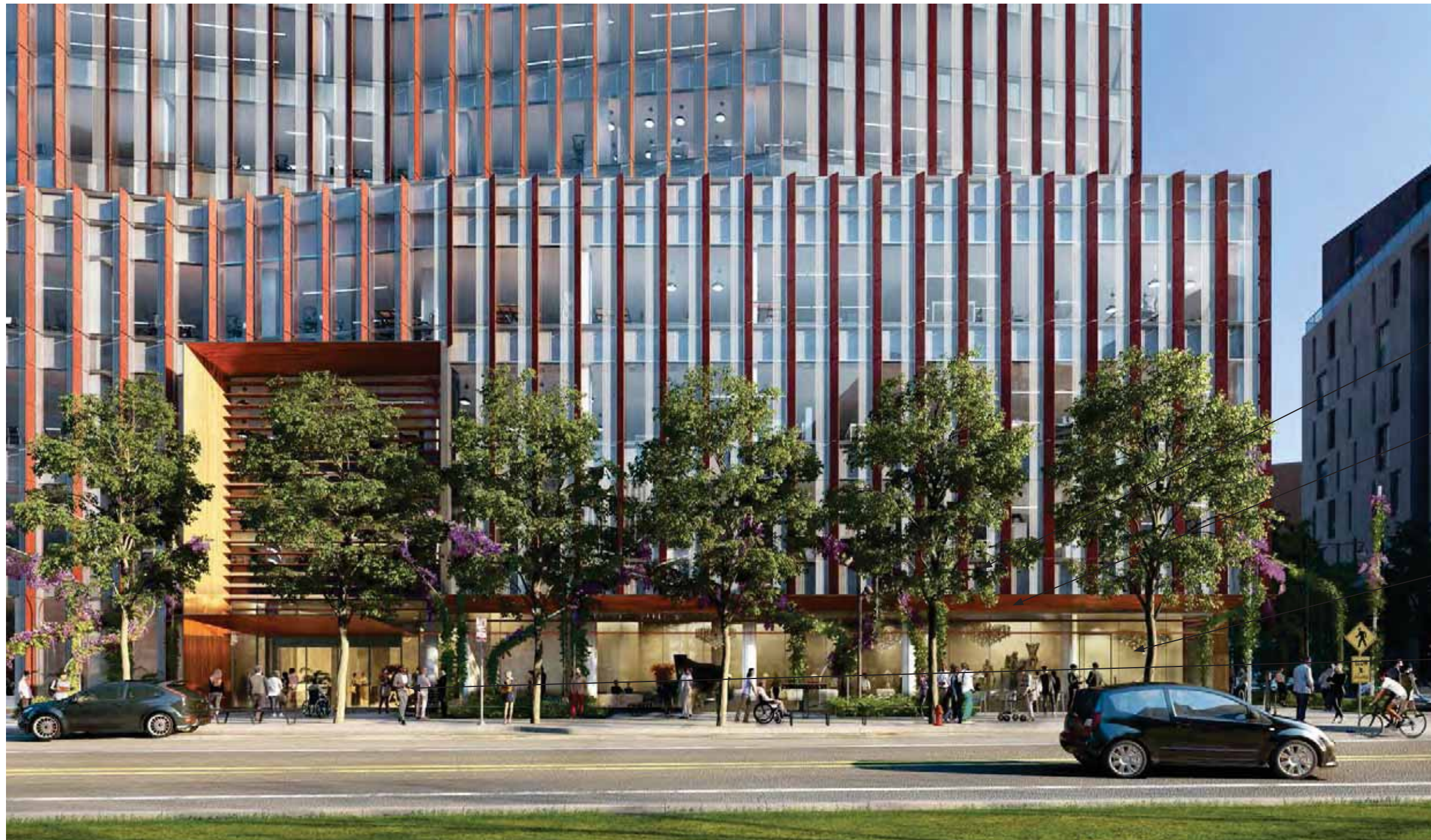
DESIGN CONCEPTS: MASSING REFINEMENT



“Use architectural expression on any portion of the building above 65 feet to prevent continuous massing. Buildings should have a clearly expressed base, middle, and top.”

Base pulls back 10’ or more above fourth floor when facing streets. Material and window expression changes maintain continuous top line.

Connection to Gilmore Bridge shown pending approval from MassDOT



“Buildings should have a carefully articulated base of one or two floors with a high level of transparency and lightness.”

- Transparent curtain wall articulated by frit
- Transition from base to floors above articulated with horizontal louvers and liner
- Ground floor transparent glazing wraps corner
- Transparent lobby entrance

Connection to Gilmore Bridge shown pending approval from MassDOT



BUILDING ENTRIES



- Proposed public elevator from Gilmore Bridge is paired with existing public staircase on Glassworks Avenue, adding bicycle accommodation and handicapped accessibility.
- Elevator access at the east corner of Parcel U mimics other connections to Gilmore Bridge and allows pedestrians to access the bridge from street level.

Connection to Gilmore Bridge shown pending approval from MassDOT

— Pedestrian circulation





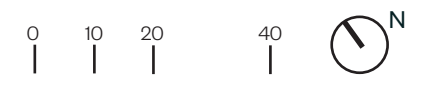
Connection to Gilmore Bridge shown pending approval from MassDOT

- Tenant area
- Common area
- Back-of-house area

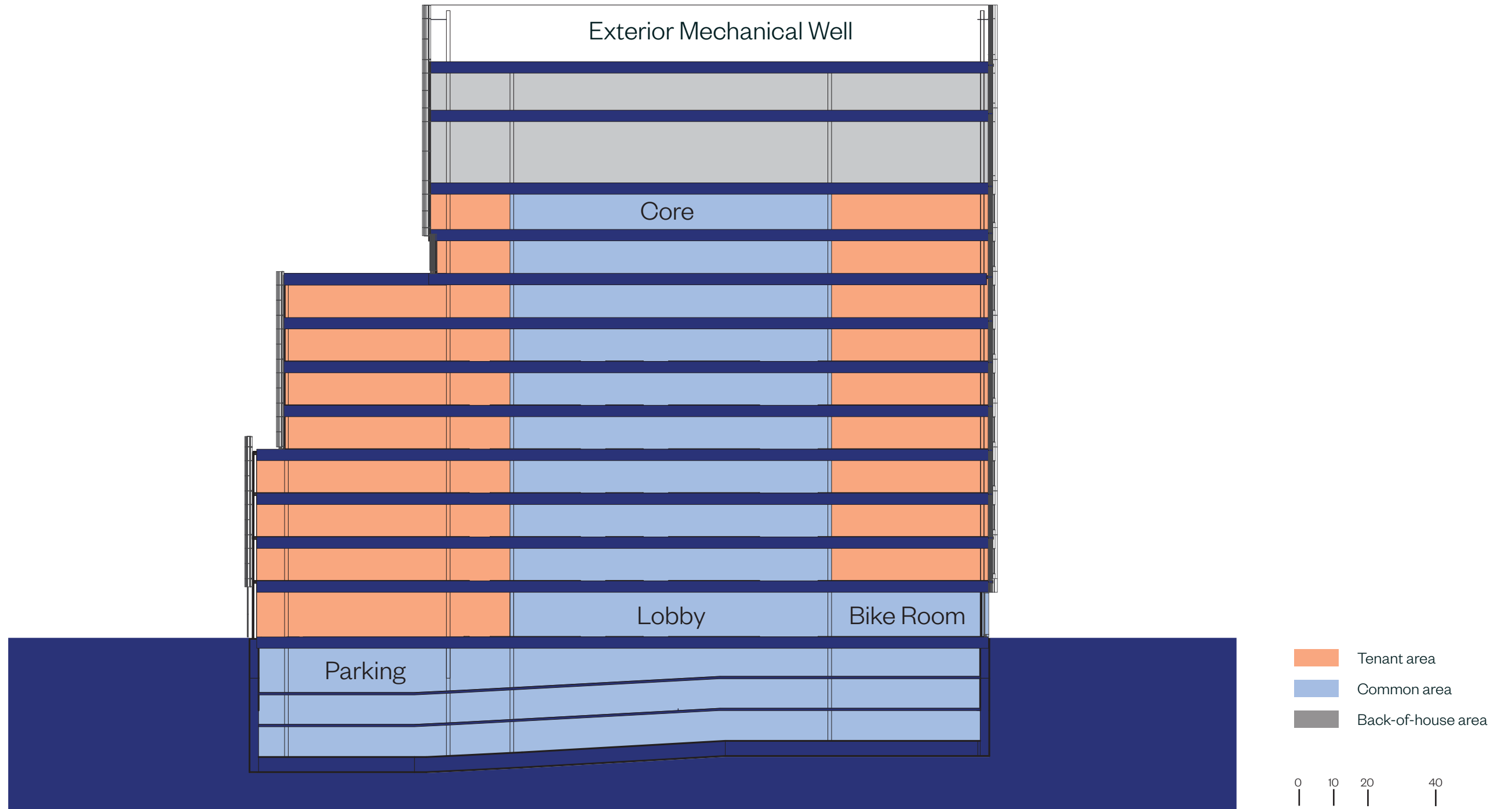




- Tenant area
- Common area
- Back-of-house area

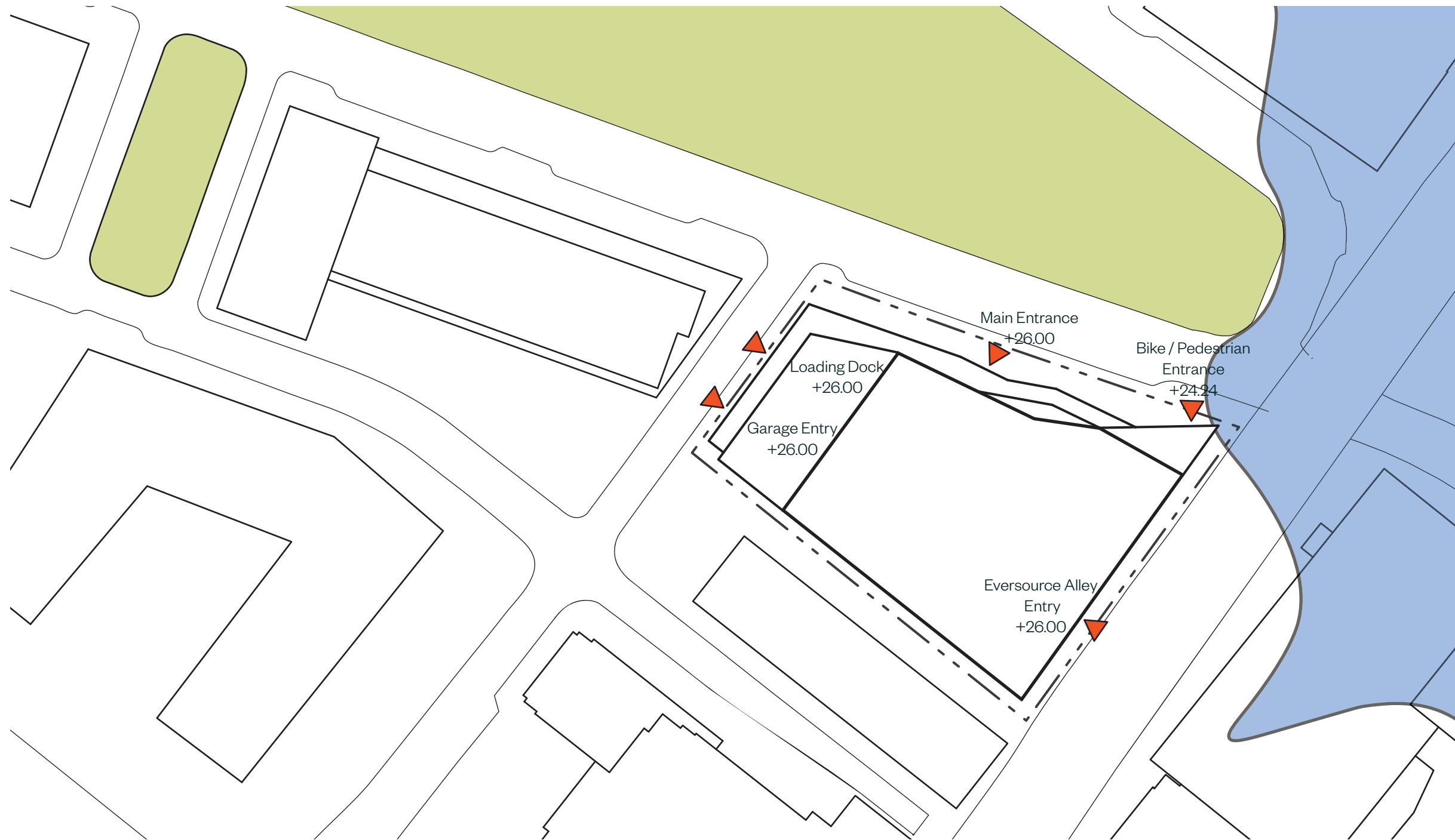


TYPICAL FLOOR PLAN




3. Studies

Resiliency / Solar / Wind / Shadow / Acoustical



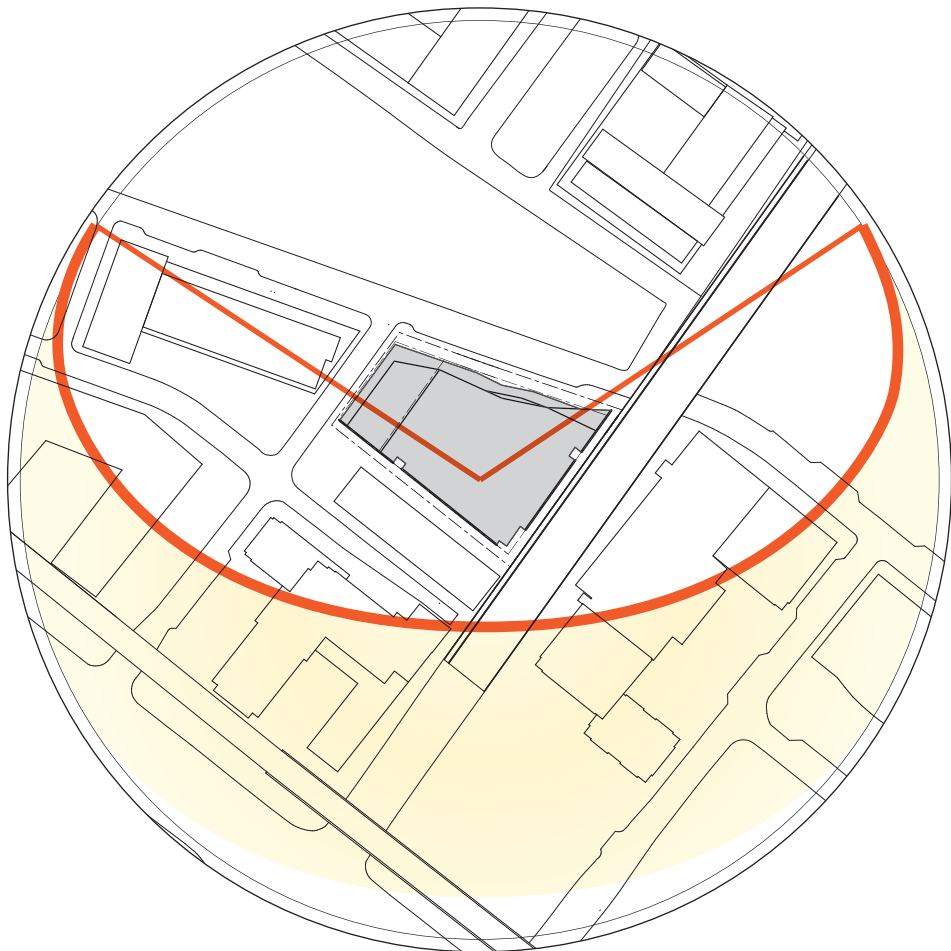
RESILIENCE STRATEGIES

1. The existing site is above the +24.00 flood level designated as the sea level rise / storm surge level for a 100-year storm by 2070. Where the east corner of the site drops below +24.00, an impermeable retaining wall is to be installed.
2. The first floor is located at +26.00 to avoid flooding of ground floor entrances.
3. Where possible, critical building equipment is located above the +24.00 elevation line. The garage ramp rises to +26.00 to prevent flood damage to critical equipment located below ground.

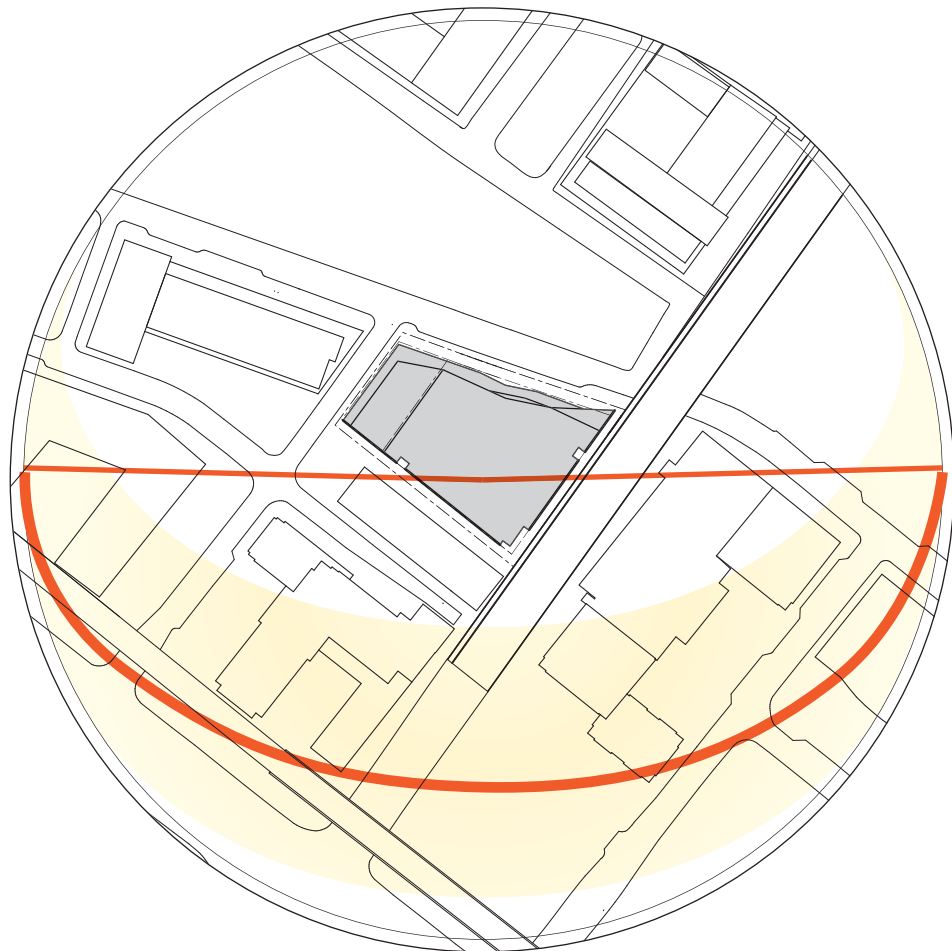
 Cambridge CCVA predicted flood elevation: +24.00' sea level rise / storm surge flooding, 2070: 100-year storm



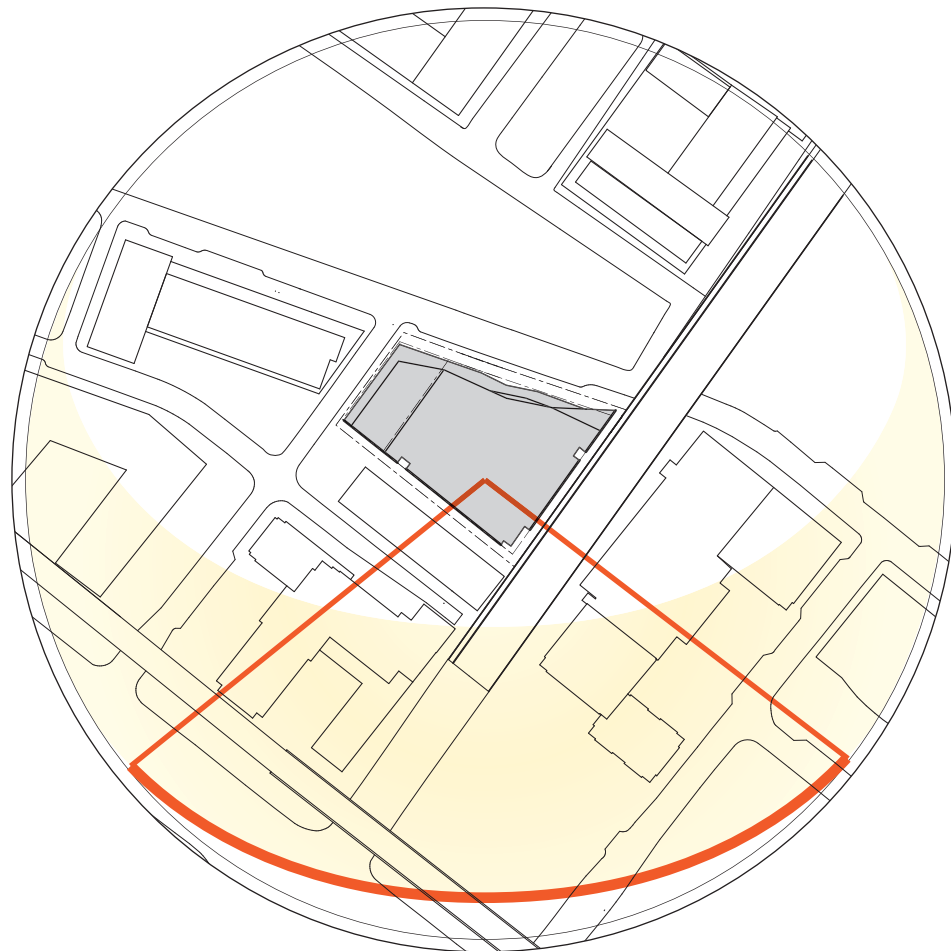
Solar analysis reveals the differential needs of the elevations. Limited sun on the northern façades allow for high transparency. Vertical fins are used to block low angle summer sunlight early in the morning or late in the afternoon. Southeast and southwest elevations have high solar exposure and require a more solid façade.



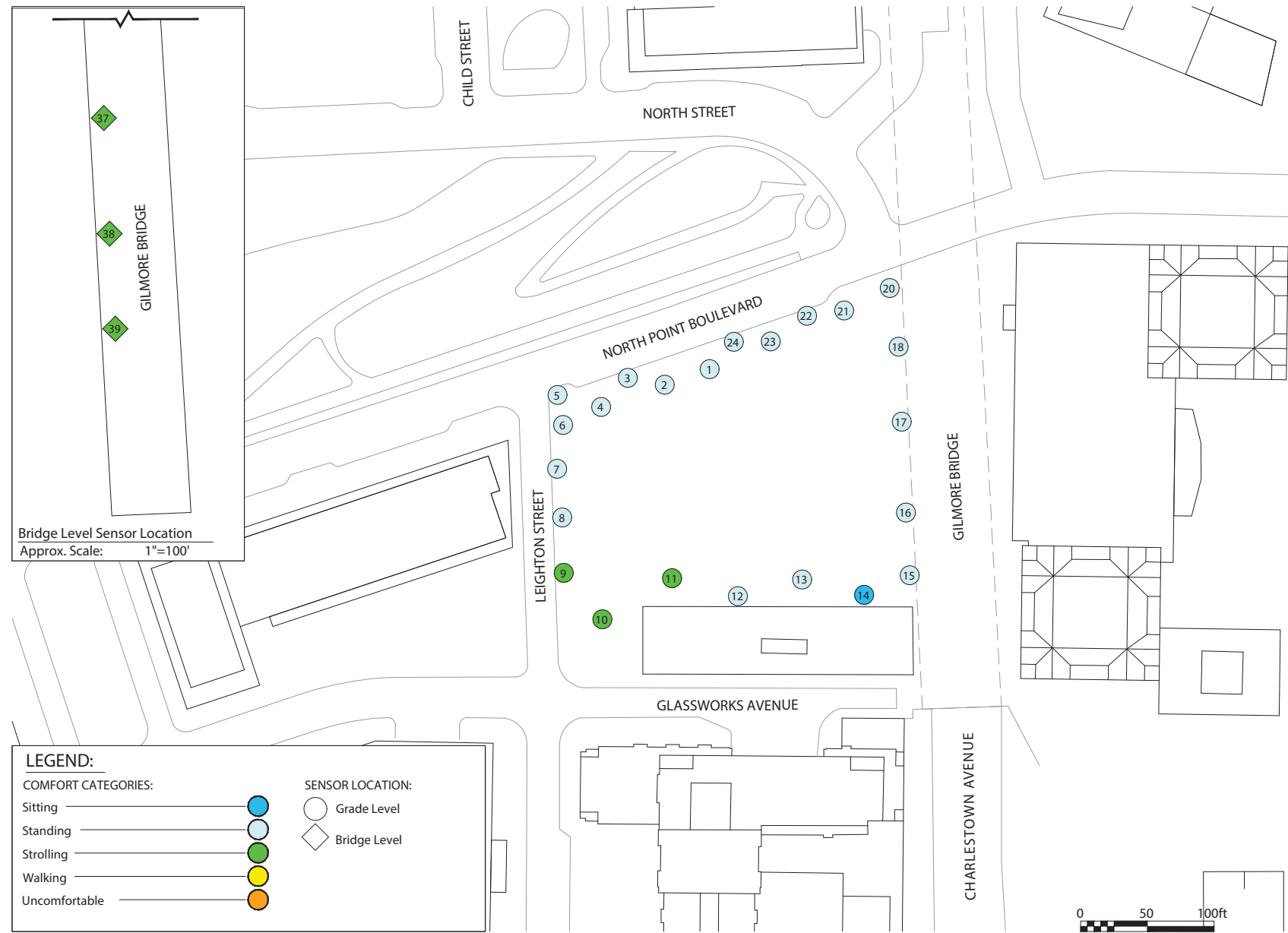
JUNE 21ST



SEPTEMBER 21ST



DECEMBER 21ST



Pedestrian Wind Comfort Conditions Existing Configuration Summer (May to October, 6:00 to 23:00) Parcel U - Cambridge Crossing - Cambridge, MA	True North 	Drawn by: DF Figure: 1A	
	Project #1904292	Approx. Scale: 1"=100' Date Revised: Mar. 27, 2020	

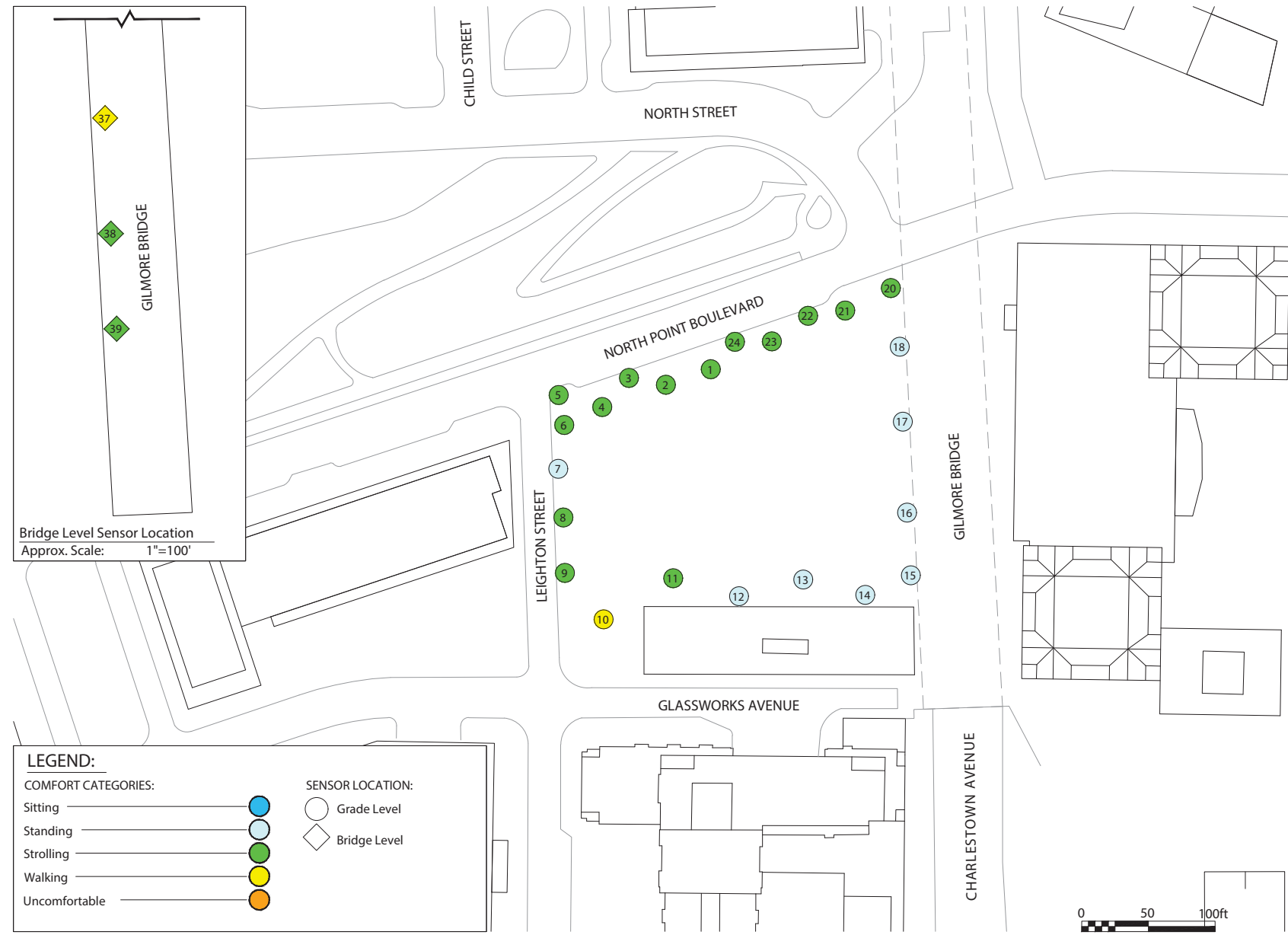


Pedestrian Wind Comfort Conditions
 Proposed Configuration
 Summer (May to October, 6:00 to 23:00)
 Parcel U - Cambridge Crossing - Cambridge, MA

Project #1904292

Drawn by: DF Figure: 1B
 Approx. Scale: 1"=100'
 Date Revised: Mar. 27, 2020





LEGEND:

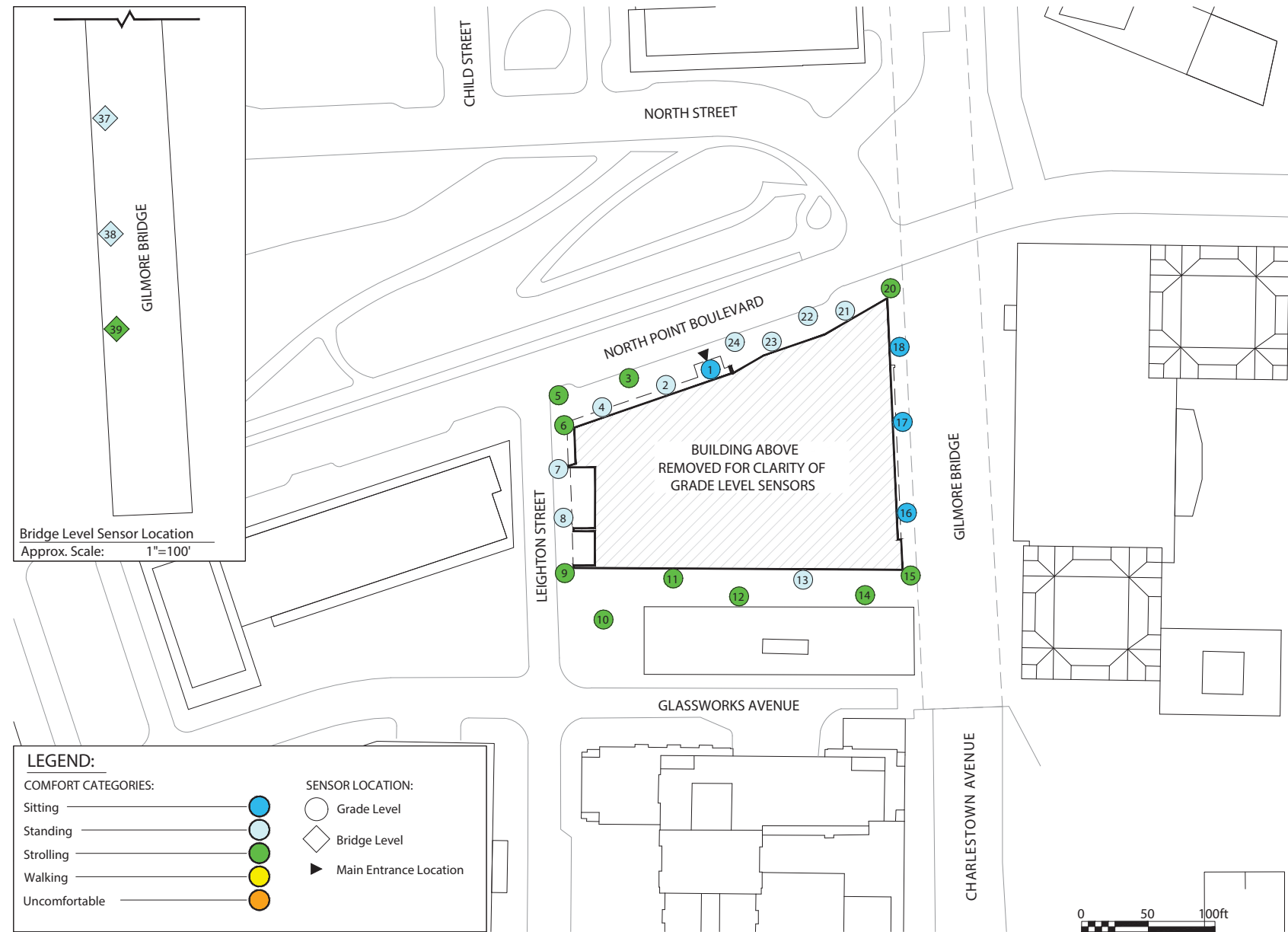
COMFORT CATEGORIES:

- Sitting ———— ●
- Standing ———— ●
- Strolling ———— ●
- Walking ———— ●
- Uncomfortable ———— ●

SENSOR LOCATION:

- Grade Level
- Bridge Level

<p>Pedestrian Wind Comfort Conditions Existing Configuration Winter (November to April, 6:00 to 23:00)</p> <p>Parcel U - Cambridge Crossing - Cambridge, MA</p>	<p>True North</p>	<p>Drawn by: DF</p>	<p>Figure: 2A</p>	
	<p>Approx. Scale: 1"=100'</p>			
	<p>Date Revised: Mar. 27, 2020</p>			



LEGEND:

COMFORT CATEGORIES:

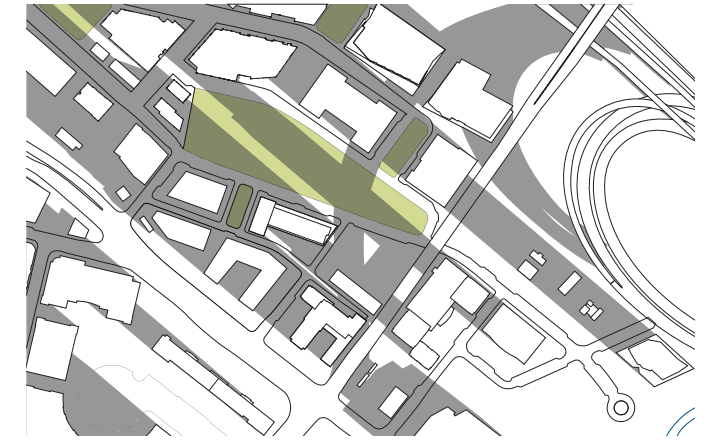
- Sitting ———— ● (light blue)
- Standing ———— ● (medium blue)
- Strolling ———— ● (green)
- Walking ———— ● (yellow)
- Uncomfortable ———— ● (orange)

SENSOR LOCATION:

- Grade Level
- ◇ Bridge Level
- ▶ Main Entrance Location

Pedestrian Wind Comfort Conditions Proposed Configuration Winter (November to April, 6:00 to 23:00) Parcel U - Cambridge Crossing - Cambridge, MA	True North 	Drawn by: DF Figure: 2B	
		Approx. Scale: 1"=100'	
		Date Revised: Mar. 27, 2020	

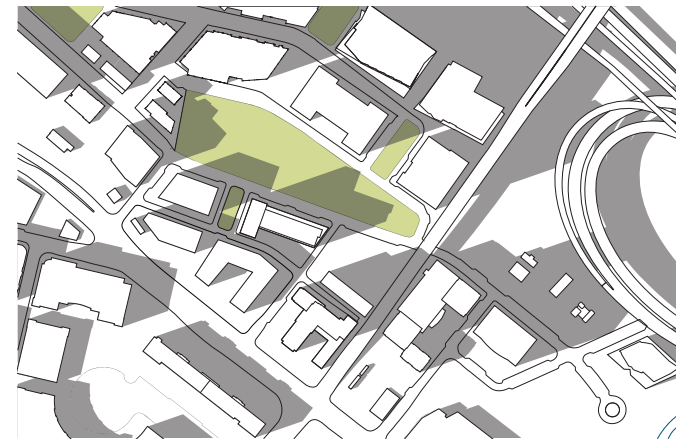
8 AM



12 PM



4 PM

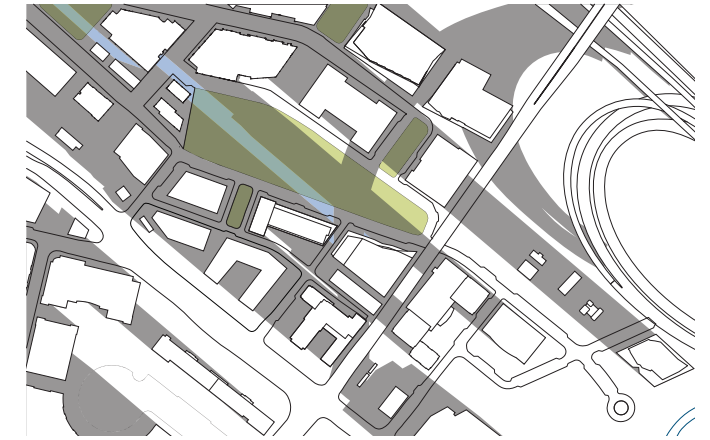
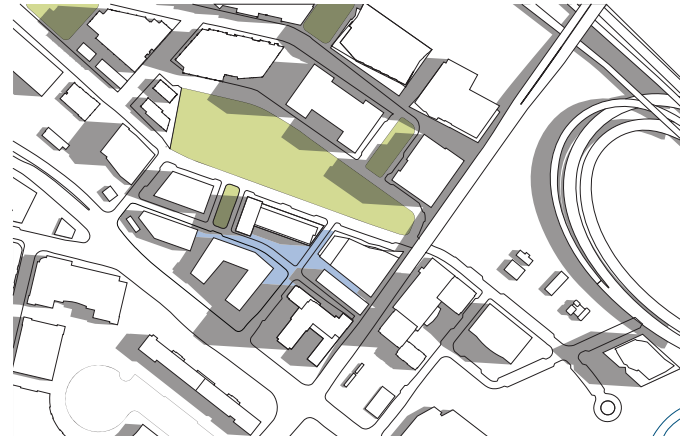


SUMMER SOLSTICE

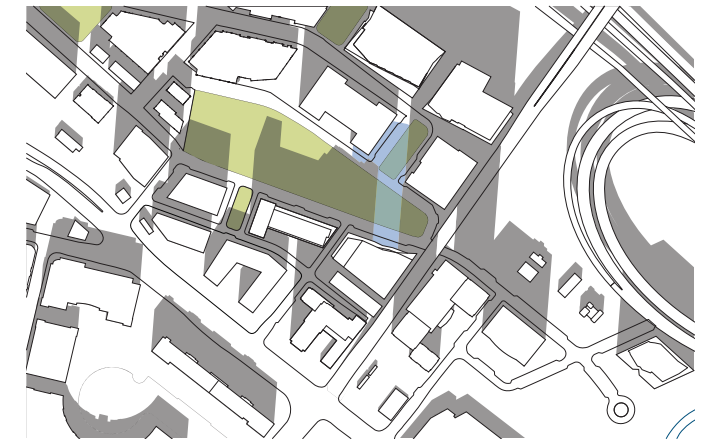
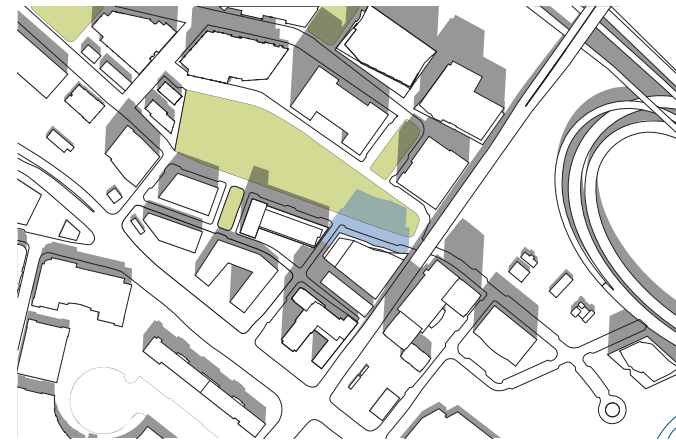
EQUINOX

WINTER SOLSTICE

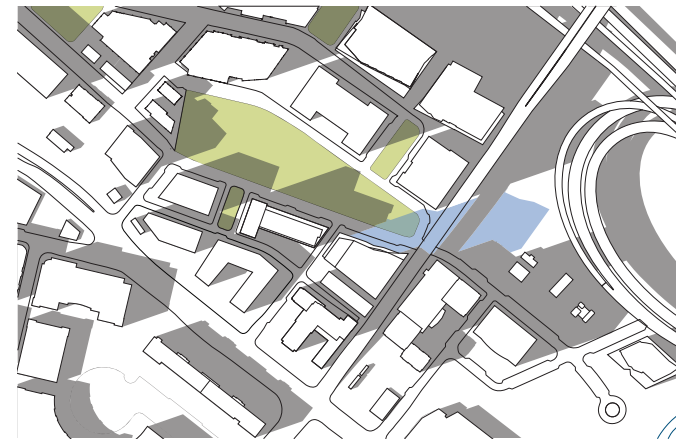
8 AM



12 PM



4 PM



SUMMER SOLSTICE

EQUINOX

WINTER SOLSTICE

August 6, 2020

Eric Hollenberg
Jacobs
120 St James
Boston, MA 02116

Subject: Cambridge Crossing Parcel U – Analysis of Noise from Outdoor Mechanical Equipment

Dear Eric,

This letter presents our analysis of noise from outdoor mechanical equipment on the proposed building at Parcel U in the Cambridge Crossing development in Cambridge. Also included is our assessment of the calculated values with respect to the City of Cambridge noise regulation.

The equipment in our calculations includes cooling towers, makeup air units, lab exhaust fans, and emergency generators. Most of this equipment is in the mechanical penthouse, with the rest on the roof behind a tall screen. Our calculations include all sound attenuation currently in the equipment schedule.

Noise Model – Sources (Outdoor Mechanical Equipment)

Our analysis included a computer model to calculate noise at nearby receptors based on equipment noise data, noise reduction data for attenuators, shielding from building edges, and distance attenuation.

The following mechanical equipment included in the computer model:

- Emergency generators for base building and tenant
- Cooling Towers
 - CT-1 through CT-4
- Exhaust Air Handling Units
 - EAHU-1 through EAHU-4
- Air Handling Units
 - AHU-1 through AHU-4

Noise Model – Mitigation (noise control equipment included in design)

- Emergency generators are on the roof, in noise control enclosures rated for 30 dBA noise reduction.
- Cooling towers are selected for low noise operation, located on roof, solid screen on east side and west sides, louvers on the north side, south side is blocked by the mechanical penthouse.
- Exhaust air handling units (discharging exhaust air via stacks above PH roof) have sound attenuators in the vertical stack.

Eric Hollenberg, Jacobs
Cambridge Crossing Parcel U
Outdoor Mechanical Equipment Noise

- Air handling units (bringing outside air in via louvers on west façade PH level) have internal sound attenuators between the fan inlet and the intake louvers.

The calculated noise levels for day and night operation are shown in table 1. The daytime calculations assume all equipment is operating full speed. The night calculations assume all equipment running at full speed except for the cooling towers, which are expected to reduce to a lower speed when the building is not occupied.

Table 1 – Parcel U outdoor mechanical noise model results (dBA)

Location	Description	Elevation	Base Mechanical		Base + Generators	
			Day	Night	Day	Night
Sidewalk North	Sidewalk	5 ft	41	35	46	45
Sidewalk East			37	33	44	43
Sidewalk South			47	47	49	49
Sidewalk West			39	36	47	47

There are two scenarios in table 1:

1. Base Mechanical (normally operating mechanical systems)
2. Base + Generators (normally operating systems plus standby generators)

Table 1 shows day and night sound levels are shown for both scenarios.

Assessment

The City of Cambridge noise regulation requires that noise at a residential property does not exceed 60 dBA during daytime and 50 dBA at all other times. Daytime is defined as 7 AM to 6 PM except for weekends and holidays.

As shown in table 1, predicted noise from Parcel U mechanical systems is less than 50 dBA at all locations for both daytime and night operation. With the standby generators operating, the predicted noise is still less than 50 dBA at all four locations. This is very quiet for standby generators.

Based on our analysis, noise from mechanical equipment on the Parcel U building is expected to comply with the City of Cambridge noise regulation.

Please let me know if you have any questions regarding this report.

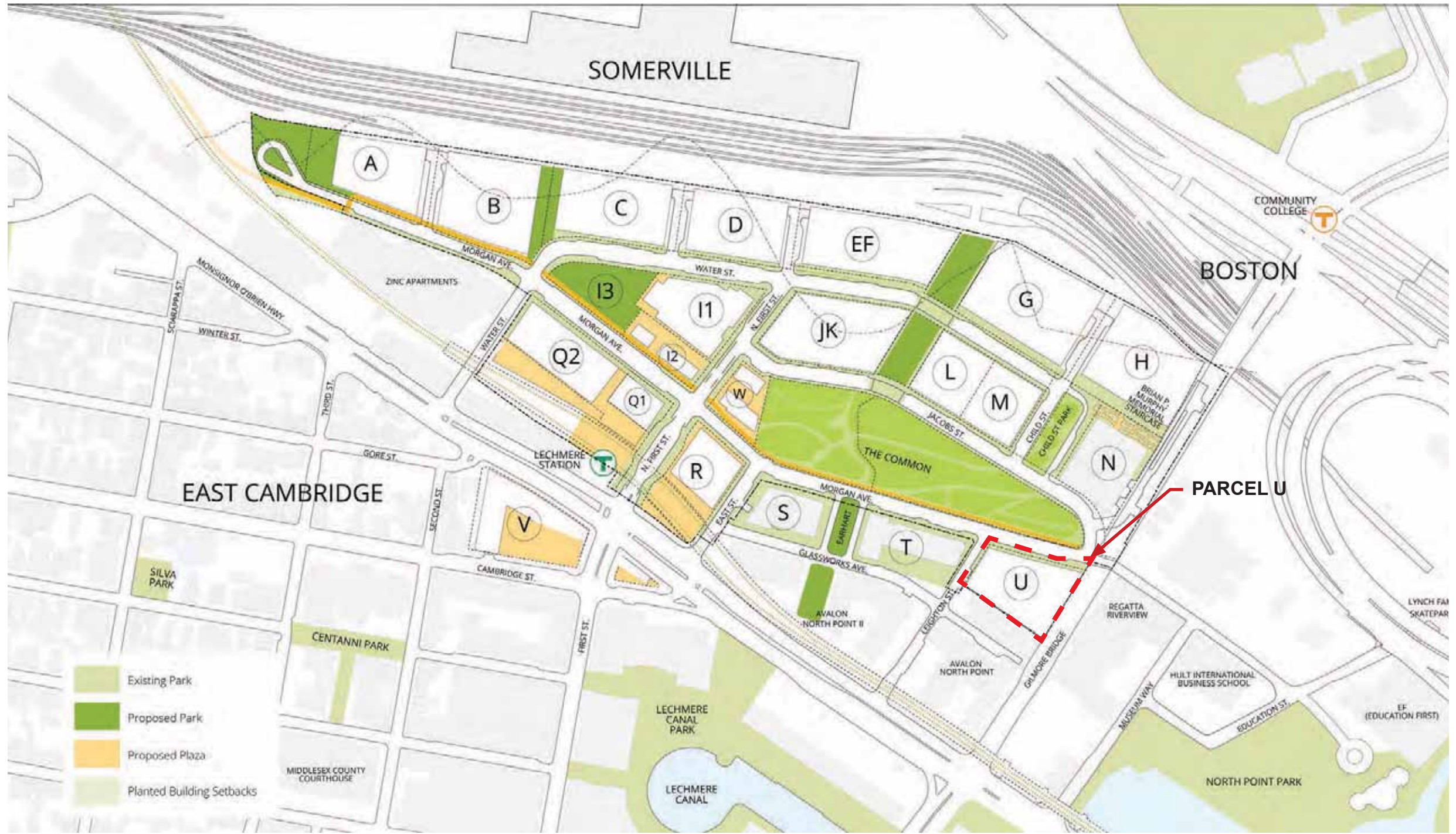
Sincerely,

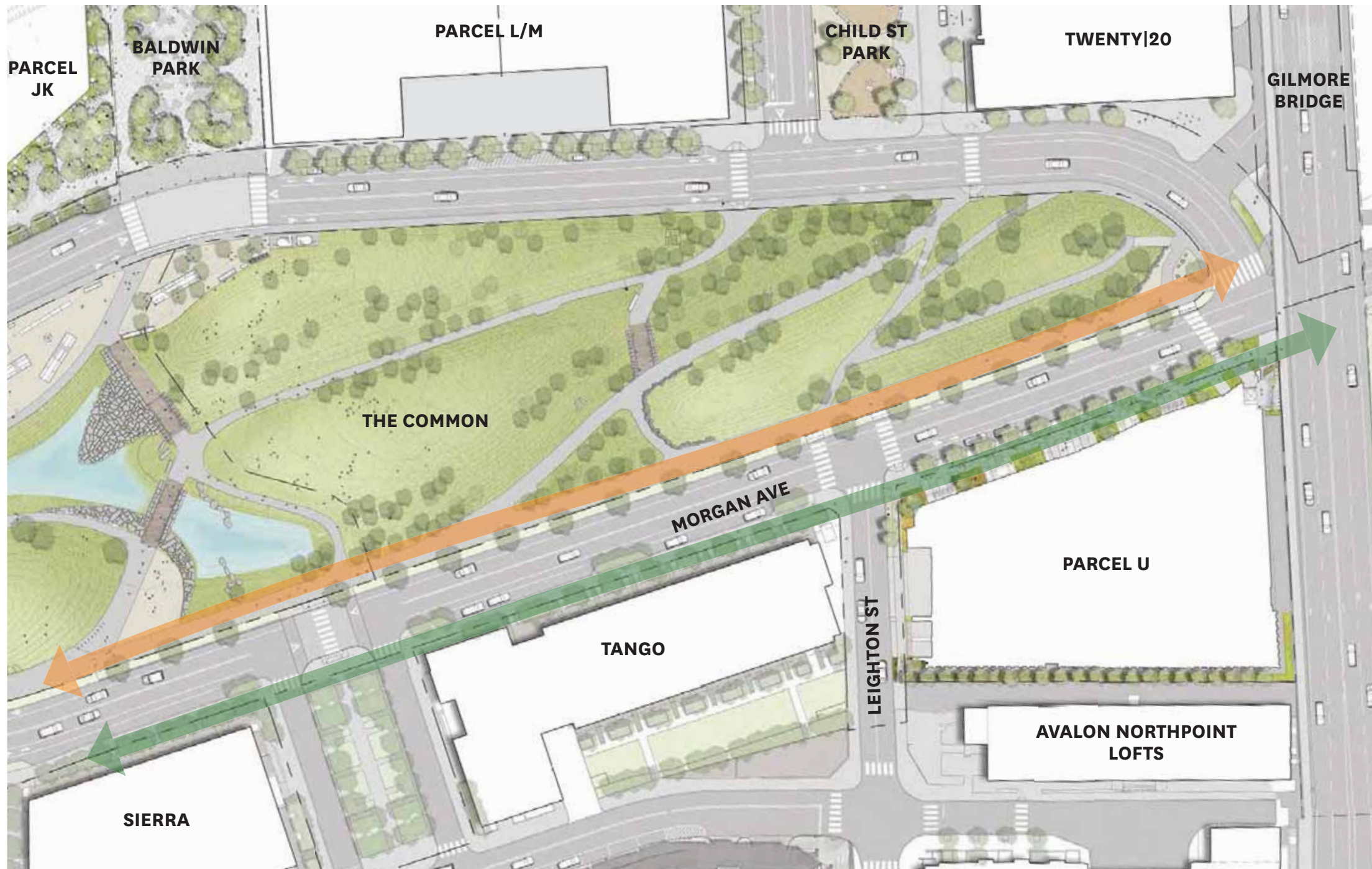
CAVANAUGH TOCCI ASSOCIATES



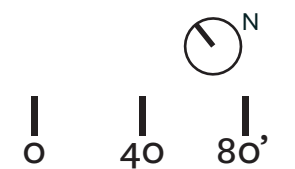
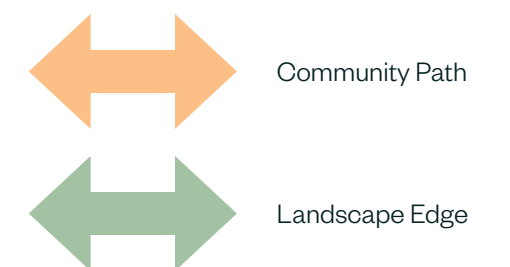
Timothy J. Foulkes

4. Landscape Design

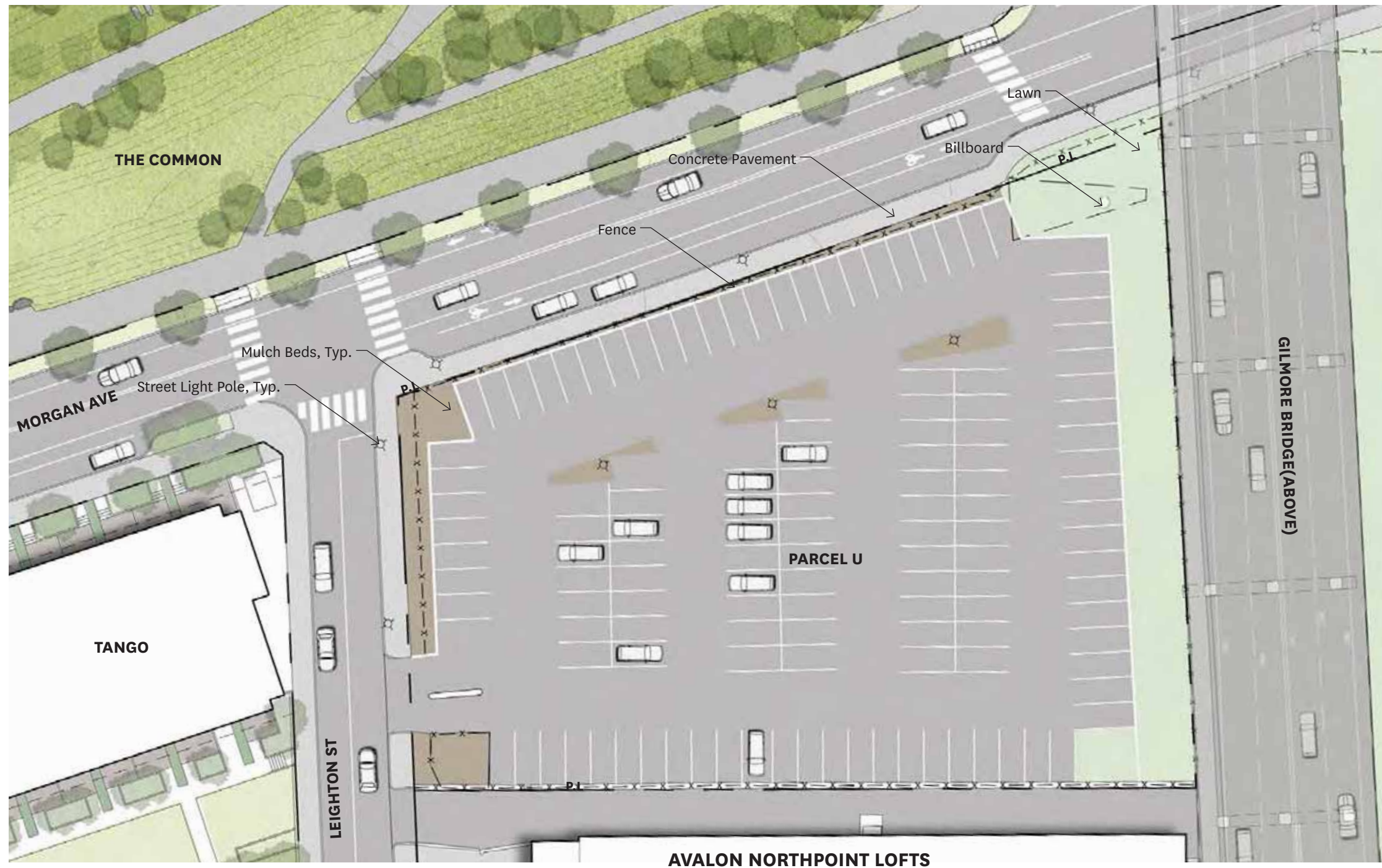




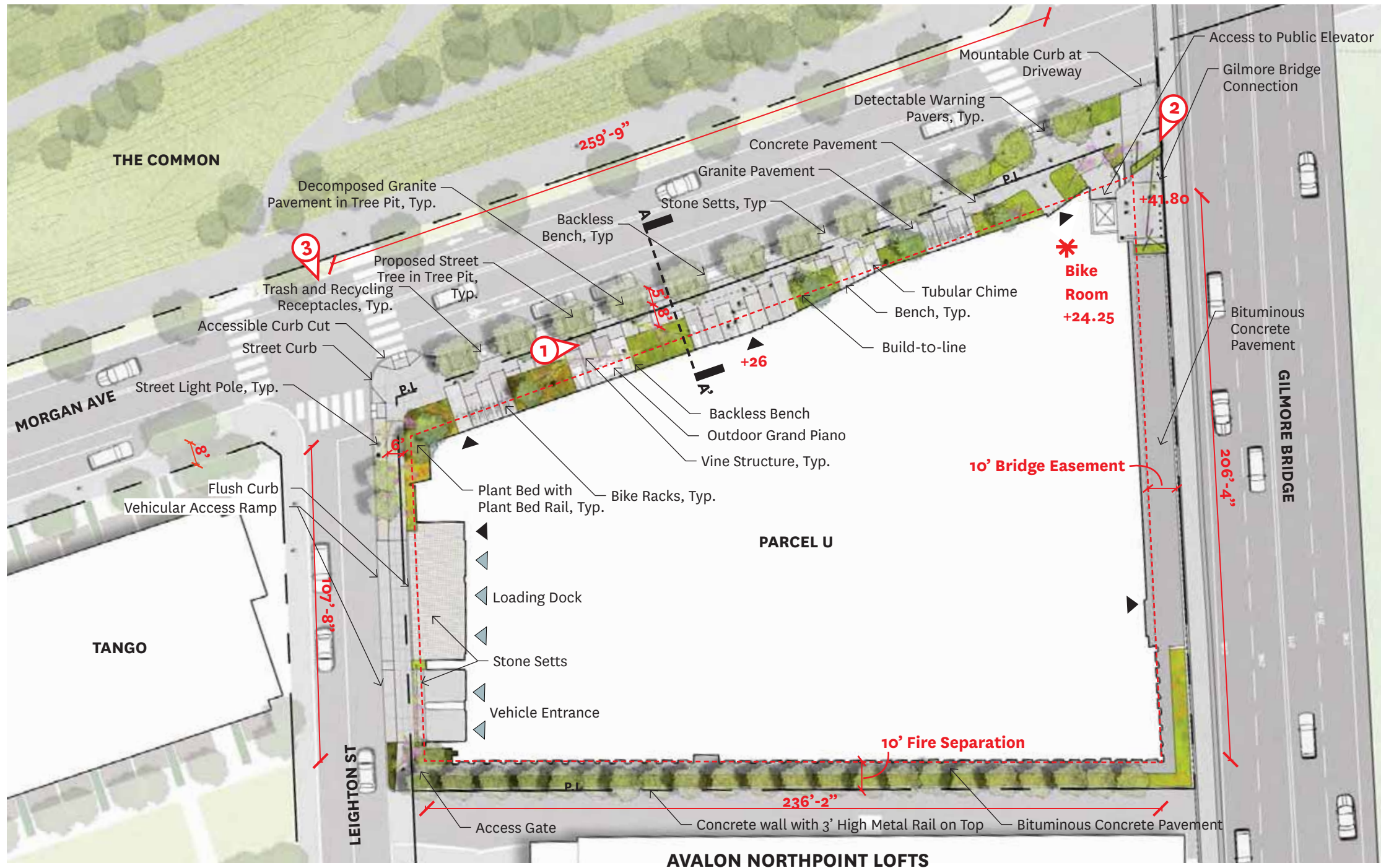
Connection to Gilmore Bridge shown pending approval from MassDOT



Note: Connection to Gilmore Bridge shown pending approval from MassDOT.



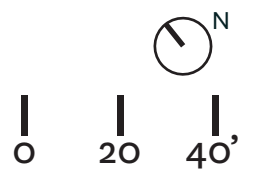
EXISTING CONDITIONS PLAN



SITE PLAN BELOW BRIDGE CONNECTION

Connection to Gilmore Bridge shown pending approval from MassDOT

Note: Connection to Gilmore Bridge shown pending approval from MassDOT.





SECTION A - A'





GROUND FLOOR LEVEL

BRIDGE LEVEL

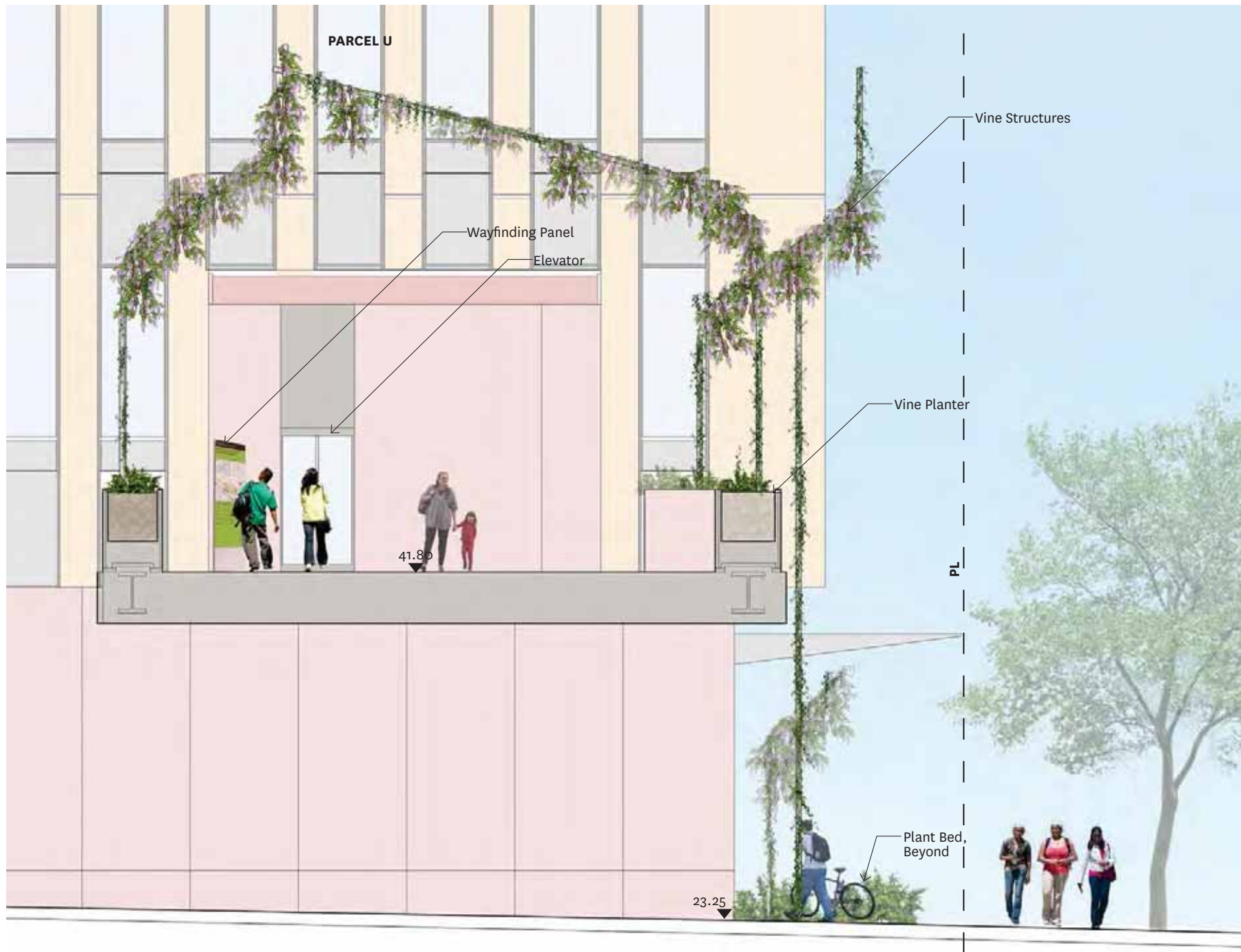
Note: Connection to Gilmore Bridge shown pending approval from MassDOT.

GILMORE BRIDGE CONNECTION



SECTION B-B'

Note: Connection to Gilmore Bridge shown pending approval from MassDOT.



SECTION C-C'

Note: Connection to Gilmore Bridge shown pending approval from MassDOT.





Rendered image is intended for landscape and plaza design review. As a result of the proposed landscape density, views of the building design may be obscured.

1. VIEW FROM MORGAN AVE



Connection to Gilmore Bridge shown pending approval from MassDOT

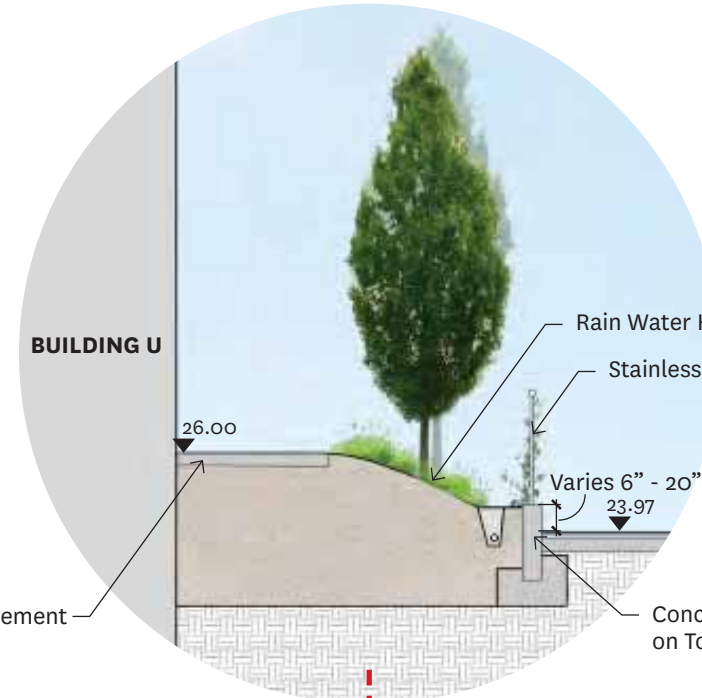
Rendered image is intended for landscape and plaza design review. As a result of the proposed landscape density, views of the building design may be obscured.

2. VIEW FROM GILMORE BRIDGE



Rendered image is intended for landscape and plaza design review. As a result of the proposed landscape density, views of the building design may be obscured.

3. VIEW FROM LEIGHTON ST / MORGAN AVE



BUILDING U

26.00

Rain Water Harvesting Plant Bed with Trees

Stainless Steel Mesh Fence with Vines

Varies 6" - 20"

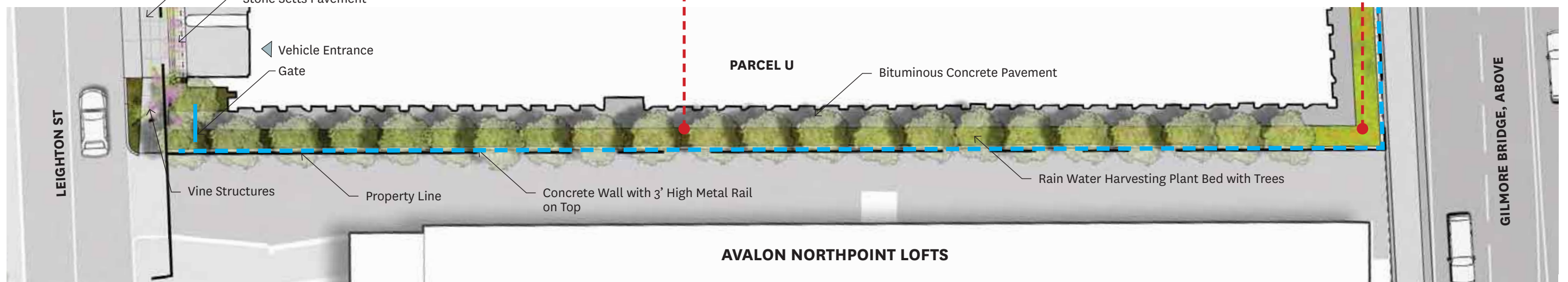
23.97

Bituminous Concrete Pavement

Concrete Wall with 3' High Metal Rail on Top

SECTION

Existing Condition



PARCEL U

AVALON NORTHPOINT LOFTS

LEIGHTON ST

GILMORE BRIDGE, ABOVE





Note:
 1. Connection to Gilmore Bridge shown pending approval from MassDOT.
 2. Diagram includes light contribution from existing street lights at Parcel U

- The building will adopt a motorized shade standard, and program the shades to deploy at night to minimize outside of the building the visibility of light from interior light fixtures.



① LP-PL: Morgan Ave Light Pole



② LP-S: Street Light Pole





Stone Setts Pavement



Decomposed Granite Pavement



Concrete Pavement



Granite Pavement



Bike Rack



Trash Receptacle



Light Pole - Morgan Ave



Light Pole - Street



Plant Bed Rail



Stainless Steel Mesh Fence with Vines



Bench



Backless Bench



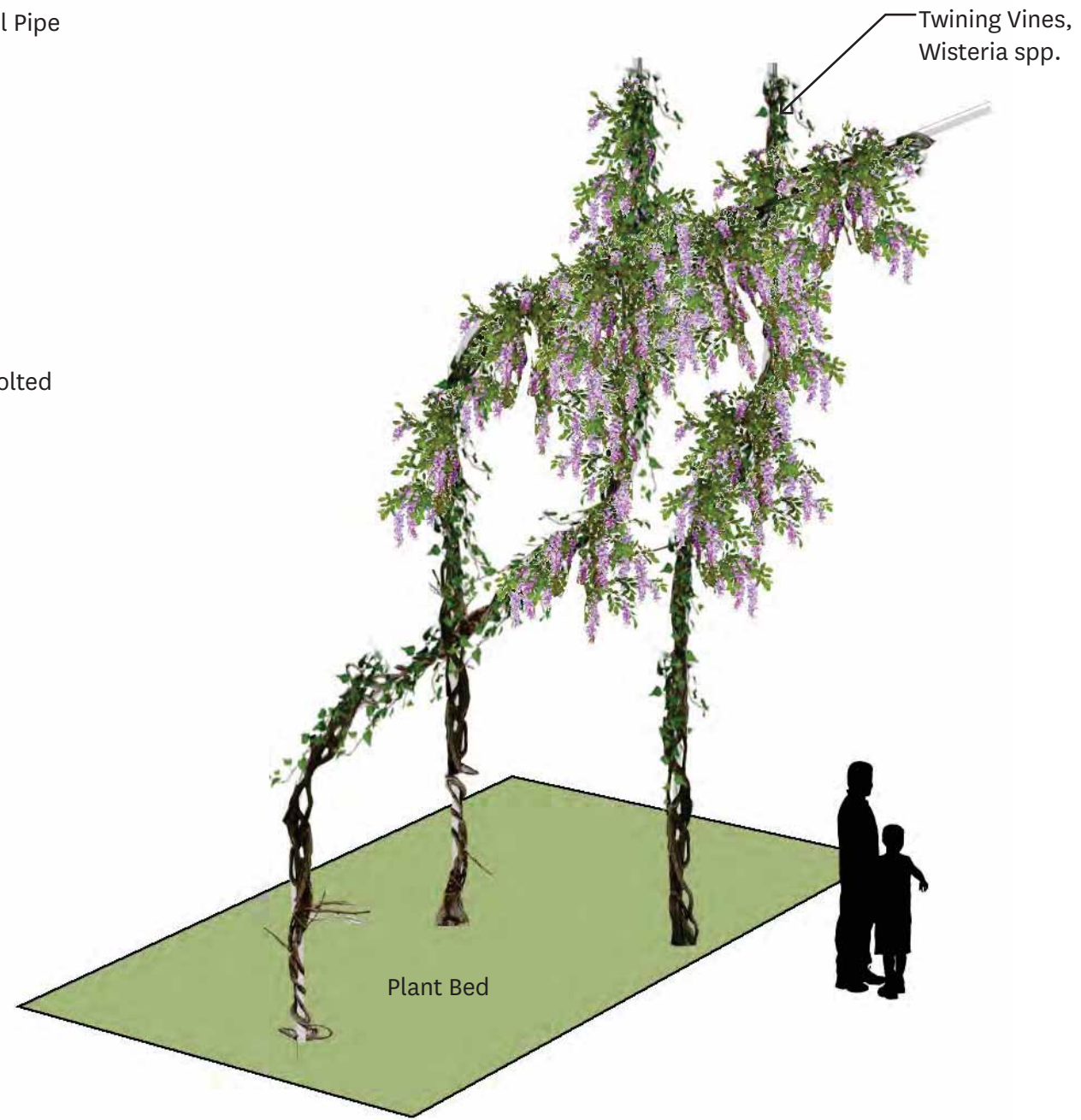
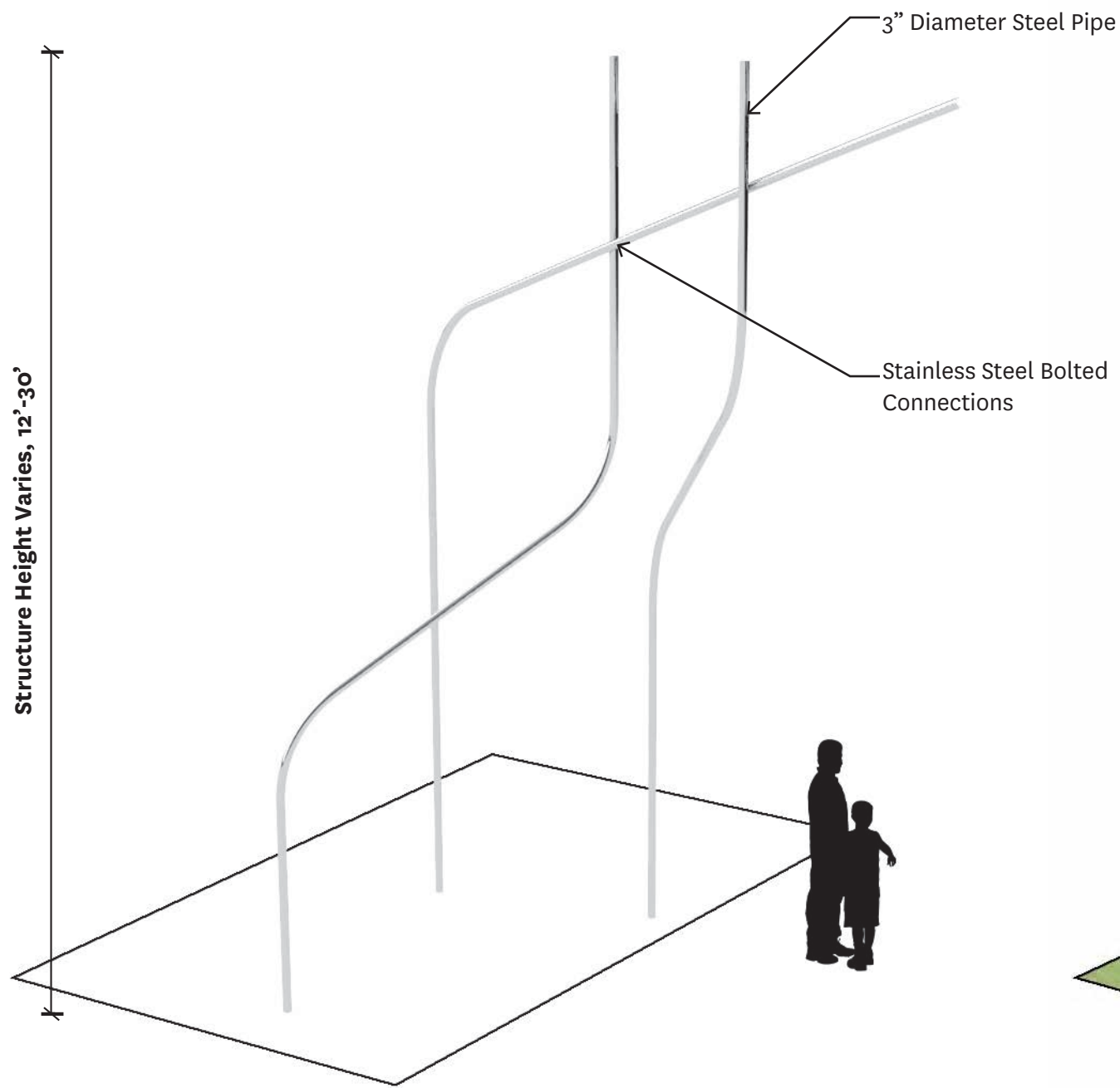
Tubular Chime



Outdoor Xylophone



Outdoor Grand Piano





Acer rubrum 'Redpointe'
Redpointe Maple



Ginkgo biloba
Ginkgo



Gymnocladus dioica
Kentucky Coffee Tree "Espresso"



Ulmus 'Morton Glossy'
Triumph Elm



Gleditsia triacanthos var. inermis
Honey Locust "Skyline"



Thuja occidentalis
American Arborvitae



Picea abies 'Cupressina'
Norway Spruce



Cercis canadensis
Eastern Redbud



Ostrya virginiana
Hop Ornbeam



Amelanchier canadensis
Serviceberry



Halesia carolina
Common Silverbell

All trees are included in the City of Cambridge recommended species list and additional recommended list from Urban Forest Master Plan
Total Number of Existing Trees Total Number of Added Trees Street Trees Evergreen Trees Landscape Trees



Kalmia latifolia
Mountain Laurel



Hamamelis x intermedia 'Arnold Promise'
itch a el



Hydrangea quercifolia
Oakleaf Hydrangea



Ilex glabra
Holly



Ilex verticillata
Winterberry Holly



Rhododendron 'Delaware Valley White'
Delaware Valley White Azalea



Ceanothus americanus
New Jersey Tea



Comptonia peregrina
Sweet Fern



Fothergilla gardenia
Dwarf Fothergilla



Liriope muscari
Lily Turf



Hedera helix
English Ivy



Wisteria floribunda
Japanese Wisteria



Wisteria sinensis
Chinese Wisteria



Aristolochia macrophylla
Dutchman's pipe



(10) Bicycle Parking Spots with
(1) Spot for Tandem Bikes

(10) Bicycle Parking
Spots

Bike Room**

P.L.

