

PUBLIC47ARCHITECTS

3825 BRIDGE WAY N

3024625
Northeast Design Review Board
Recommendation Meeting
Meeting Date: June 5, 2017



Table of Contents

4 : Living Building Challenge

5 : Sustainability + LBP Diagram

6 : Preliminary Energy Analysis

7 : Preliminary Water Analysis

8/9 : Urban Design Analysis

10/11 : Existing Topography and Site Conditions

12 : Zoning Information

13 : Existing Site Conditions - Architectural Site Plan

14 : Alternate Summary

15 : Preferred Massing (From EDG)

16 : EDG Response // Height, Mass, And Form

17 : EDG Response // Materials + Composition

18/19 : EDG Response // PV Array

20 - 22 : EDG Response // Ground Level + Streetscape

23 : EDG Response // Alley + Courtyard

24 : Landscape Plans

25 : Landscape Images

26 : Site Plan

27 - 29 : Floor Plans

30 : Materials

31 : Elevations // SouthWest + SouthEast

32 : Sections

33 : Elevations // NorthWest + NorthEast

34 - 39 : Renderings

40 : Exterior Lighting Plan

41 : Signage Concept

42 - 45 : Departures

46 - 60 : Appendix

Bridge Way Apartments

Design Review: Recommendation Meeting
Meeting Date: June 5, 2017

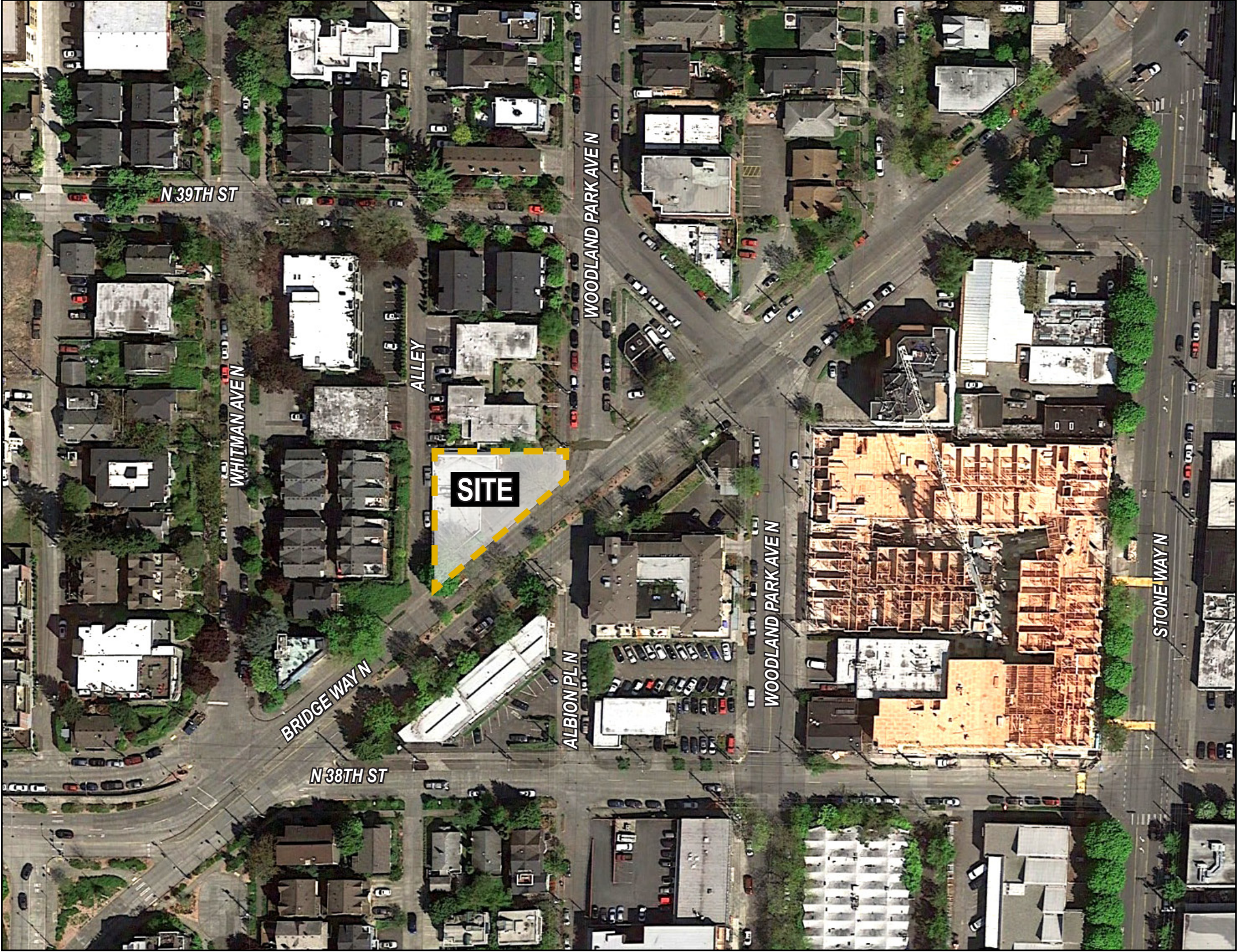
The proposed project will contain 42 apartment units. The project aspires to provide high-quality apartments and will be built to meet the Living Building Challenge Pilot serving as a demonstration and model for sustainable multifamily development in Seattle.

Zoning	LR3
Overlay	Fremont Hub Urban Village
Height Limit	40'-0" (Built Green 4-Star) 50'-0" (Living Building Pilot)
Parking Required	None
Number of Residential Units	42
Site Area	+/- 8,261 SF

Owner
Bridge Way Investors, LLC
2811 Fairview Ave E Ste 1002
Seattle, Wa 98102

Architect
Public47 Architects
820 John St. #204
Seattle, WA 98109

Landscape Architect
Karen Kiest Landscape Architects
111 W. John St, #706
Seattle, WA 98119



AERIAL PHOTOGRAPH - “9-BLOCK” CONTEXT

The proposed project locates a new 5-story apartment building along the Bridge Way side of the 8,261 sf triangular site. The new building will include the following:

- 42 Apartment Units
- Common courtyard
- Roof deck with views of Mt Rainier, Lake Union, and downtown
- Integrated bicycle storage
- Improvements to the adjacent streets including new sidewalks and extensive plantings.

The proposal is striving to set a new standard for sustainability and is seeking certification under the Living Building Pilot Petal Recognition Program, including producing 105% of the buildings energy using photovoltaics and energy conservation strategies.





DESCRIPTION

The Living Building Challenge is a green building certification program that defines the most advanced measure of sustainability for buildings and landscapes possible today. The Living Building Challenge acts to close the gap between current limits and ideal solutions.

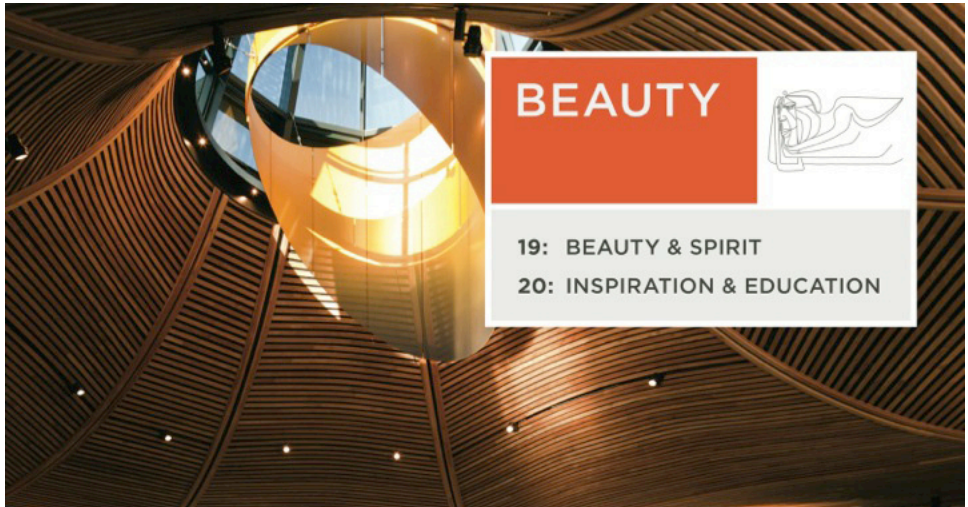
ELIGIBILITY

- Achieve Petal Recognition, including:
- Achieve at least three of the seven petals (place, water, energy, health, materials, equity, and beauty), including at least one of the following petals: energy, water, or materials and all of the following (Pending Legislation Finalization):
- Total building energy use is 75% or less of the energy use targets established in the 2012 Seattle Energy Code's Target Performance Path, Section C402.1.5; and
 - No potable water is used for nonpotable uses

DEVELOPMENT BENEFITS

- Height Limit increased 10'
- FAR increase of 15%

SELECTED PETALS FOR ILFI CERTIFICATION



PETAL IMPERATIVES

- 01 LIMITS TO GROWTH**
Projects may only be built on greyfields, brownfields, or previously developed sites.
- 02 URBAN AGRICULTURE**
Projects this size must integrate minimum 2% of site area for food production.
- 03 HABITAT EXCHANGE**
For each hectare of development and equal amount of land must be set aside in perpetuity. Minimum amount is 0.4 hectare.
- 04 HUMAN POWERED LIVING**
Projects should contribute toward the creation of walkable, pedestrian oriented communities that also encourage biking.

- 06 NET POSITIVE ENERGY**
105% of project's energy needs must be supplied by on-site renewable energy on a net annual basis without the use of on-site combustion. Projects must provide on site energy storage (10% of weekly lighting load) for resiliency.

- 19 BEAUTY + SPIRIT**
Project must meaningfully integrate public art and contain design features intended solely for human delight and the celebration of culture, spirit, and place appropriate to the project's function.
- 20 INSPIRATION + EDUCATION**
Educational materials about the operation and performance of the project must be provided to the public.

PROPOSED STRATEGY

Project site was previously developed

Project integrates fruit trees exceeding area requirement

TBD

Project engages site with two building entries and secure, weather-protected bike storage. Feature stair is daylit and proximate to entry to encourage use.

Project features 100kW array that will produce 104,330 kWh/yr, which exceeds 105% requirement.

Building form with radiussed corners and visible PV array celebrates unique site geometry and LBP. Any required public art TBD.

Lobby will feature energy dashboard, education component to be developed further



- ENERGY**
- 100 kW Photovoltaic Array Produces 104 kWh/yr (105% of annual energy use).

- WATER**
- Gray-water captured from residential showers is treated and stored for flushing toilets & irrigation

- INDOOR AIR QUALITY + LIVABILITY**
- Heat recovery ventilation provides filtered fresh air to residents.
 - Natural ventilation
 - Daylighting
 - Energy dashboard in lobby will provide feedback to residents, increasing visibility to usage and encouraging conservation

- HUMAN POWERED LIVING**
- Secure, weather protexted bike parking
 - Daylit feature stair used as primary vertical circulation route to encourage stair use over elevator

- HIGH PERFORMANCE BLDG ENVELOPE**
- Triple Pane glazing (U-value of 0.14)
 - Additional Insulation

- URBAN AGRICULTURE**
- 2% of site area for food production (~163 SF), proposed planting:
 - Fuyu Persimmon
 - Sunshine Blueberry
 - Pink Icing Blueberry
 - Hill Hardy Rosemary

PRELIMINARY ENERGY ANALYSIS | ENERGY MODEL - NET ZERO ENERGY

RESULTS SUMMARY

A preliminary energy study was completed to understand how the Bridge Way multi-family residential project could meet its Net Zero Energy target associated with the Living Building Pilot Program (LBPP) under the 2015 Seattle Energy Code (SEC).

The analysis was conducted on the entire building using IES energy modeling software and a full 8,760 hour annual thermal simulation to determine the anticipated energy consumption. The total energy use is shown in kBtu/SF/yr, or Energy Use Intensity (EUI), and can then be compared to the total energy production available from the Solar Photovoltaic (PV) array.

PROPOSED DESIGN

The proposed model includes high efficiency heat recovery ventilators (HRV) and electric unit heaters in the apartments. Domestic hot water will be provided by heat pump water heaters with electric backup.

Outside of the HVAC system, significant savings are shown in the Proposed case with improvements to plug loads and lighting design and controls. LED fixtures allow the design team to target a much lower lighting power density (LPD) of 0.5 W/SF in the units. Due to the high unit density of the project, plug loads are expected to be both the largest energy end use consumption and pose the highest risk of variability. A significant effort was undertaken to assess and reduce the expected plug load energy consumption in the building including: high efficiency energy star appliances, master off switches for outlets, and lease incentives for occupants to reduce usage.

MODEL ASSUMPTIONS

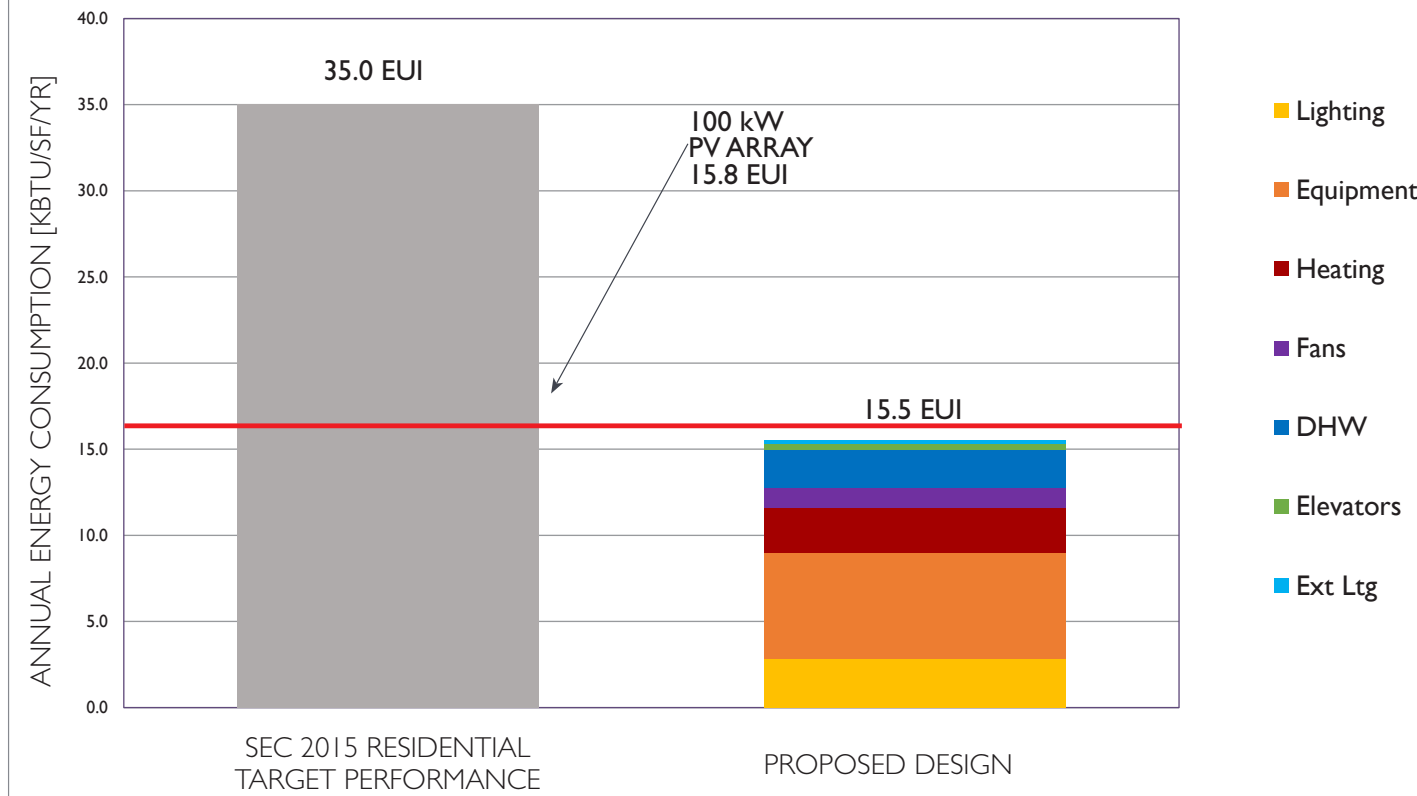
Key inputs used in the energy models are tabulated at the right. Generally the modelling approach and default values are based on National Renewable Energy Laboratory's Building America residential simulation protocols and the SEC section C407 guidelines.

PV ARRAY & NET ZERO

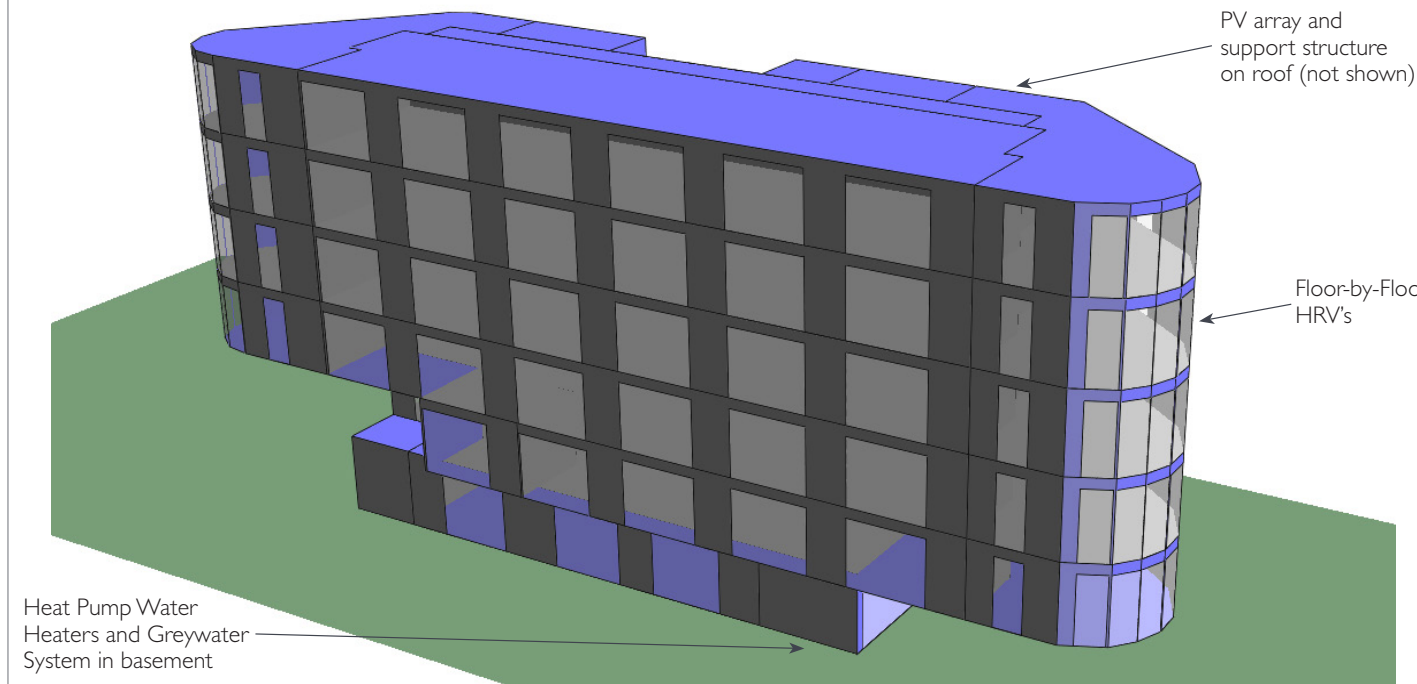
Based on the latest estimation the PV array can reach 100 kW using LG 395W Neon modules. Early analysis suggests that this size array can produce 104,000 kWh annual, which corresponds to a Net Zero EUI target of 15.8.

Ideally the model corresponding to the final design should insure that there is a 5% buffer for actual energy performance and PV production measured by the International Living Future Institute (IFI) for the LBPP.

ANNUAL ENERGY CONSUMPTION
ENERGY USE INTENSITY - KBTU/SF/YR



ENERGY MODEL - 3D VIEW



KEY ENERGY MODEL INPUTS

ENVELOPE	PROPOSED	2015 SEC
Roof	R-47 / U-0.020	U-0.026
Walls	Wood frame, U-0.057	Wood frame, U-0.057
Floors	U-0.029	U-0.029
Slab on grade	Unheated, F-0.520	Unheated, F-0.520
% Glazing	30%	30%
Glazing U-value	Fiberglass, U-0.14	Non-metal, U-0.30
Glazing SHGC	0.35	0.35

INTERNAL GAINS	PROPOSED	2015 SEC
Lighting [W/ft²]	Unit: 0.50 Corridor: 0.30 Lobby: 0.50 Elec/Mech: 0.1 Stairway: 0.3	Multifamily: 0.41 (Building Area Method)
Total Equipment [W/ft²]	Unit: 0.95	Same as Proposed
Density [person/unit]	1.3	Same as Proposed

HVAC SYSTEM	PROPOSED	2015 SEC
System type	HRV + Electric Heat	PTHP
Ventilation Type	HRV	Trickle Vent
Ventilation CFM	30 CFM/Unit	30 CFM/Unit
Heating	Electric Unit Heaters	Heat Pump
Cooling	-	DX
Energy recovery	80%	-
Thermostat	Programmable	-

OTHER END USES	PROPOSED	2015 SEC
Domestic hot water	HP Water Heater	Electric Resistance
Elevators	Regenerative Breaking	Non-Regenerative

PRELIMINARY WATER ANALYSIS | CONSUMPTION & WATER BALANCE

STUDY OVERVIEW

The purpose of this water study for the Bridge Way Residence is to evaluate how effective current design strategies are relative to the Living Building Pilot Program (LBPP) performance goals. Under the 2015 edition of the LBPP the building must use only non-potable water except where applicable laws requires the use of potable water. For this project, the end uses that law requires to be potable are showers, lavatories, and kitchen sinks. The end uses that will use non-potable water are water closets and irrigation. The study assess whether the non-potable supply is sufficient to meet these non-potable demands throughout the year.

WATER SAVINGS STRATEGY

The primary approach for this building, as designated by early design team meetings is to utilize a greywater reuse system. The system captures greywater from a portion of the residential showers, filters and sanitizes it, and uses the cleaned greywater for toilet flushing and irrigation. The size of the greywater system must be sufficient such that no municipal potable water is required for these non-potable uses.

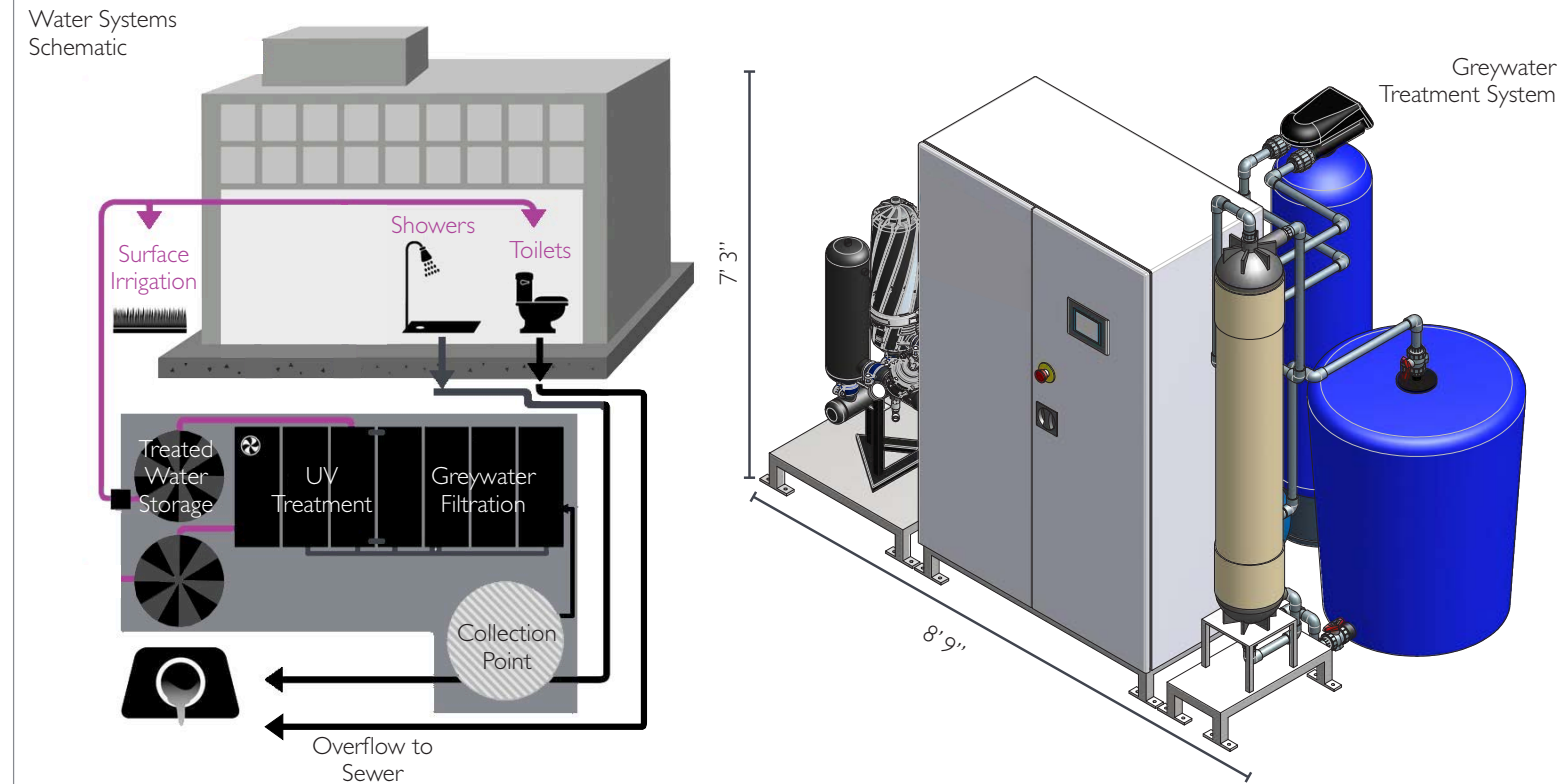
FLUSH FIXTURES

The non-potable water demand is driven largely by the water closet flush rate. The currently selected water closets use 0.8 gallons per flush (GPF) rate, which is about 50% of a conventional toilet. This greatly reduces the non-potable water demand and thereby the size of the greywater system required to meet the demand. It should be noted that some of these ultra low flow fixtures can be less effective at moving solids than more standard high efficiency units (1.28 - 1.1 GPF), and will continue to be evaluated carefully.

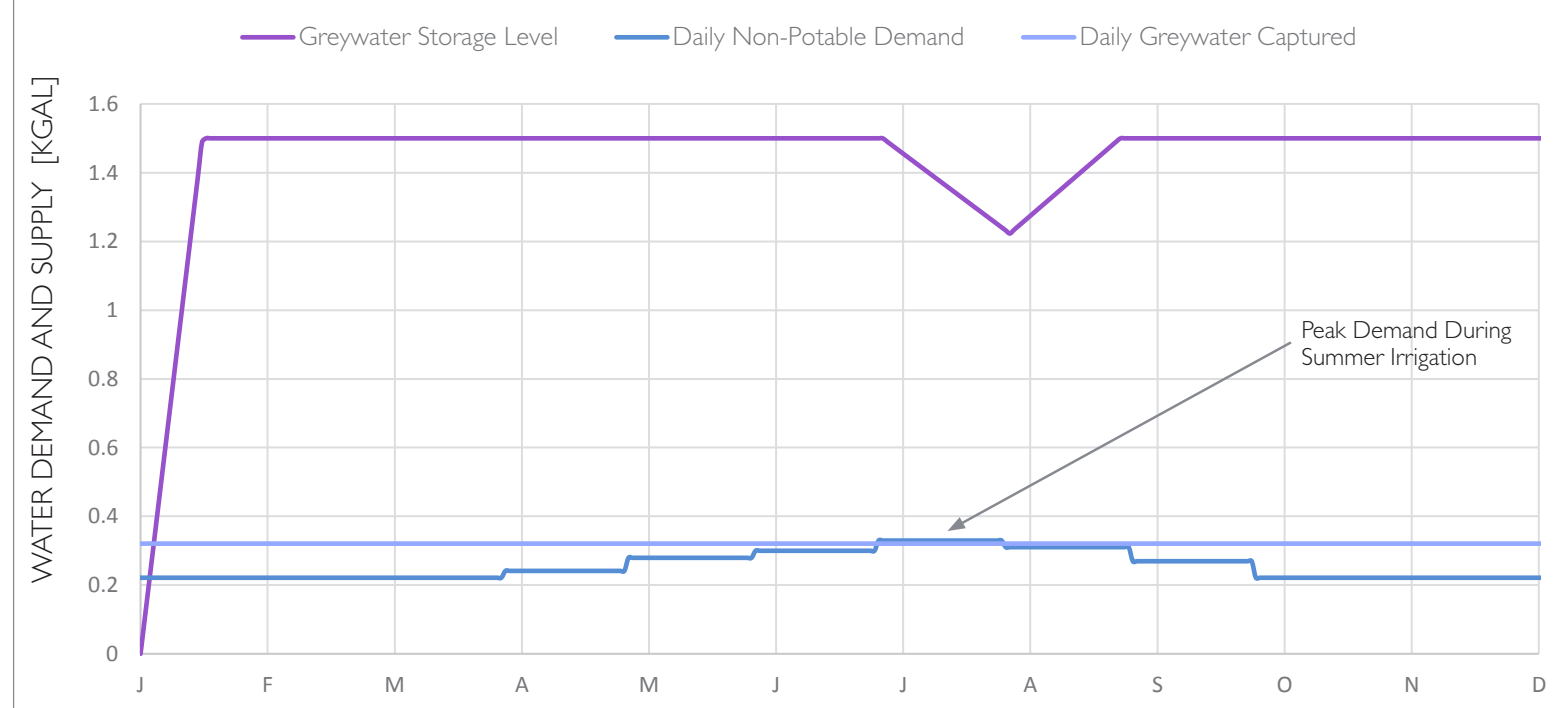
GREYwater SYSTEM SIZING

The primary focus of the water study is to correctly size the greywater system. The current project design includes connecting 20 of the 42 showers to the greywater system. This determines the amount of non-potable supply available. The other important factor is to have the treated water storage tank (or Day Tank) be appropriately sized. This tank serves as a buffer in case the supply decreases or the daily demand increases intermittently. The tank is currently 1,500 gal, which allows for approximately 3 days worth of greywater supply.

BUILDING WATER SYSTEMS



BUILDING WATER DEMAND

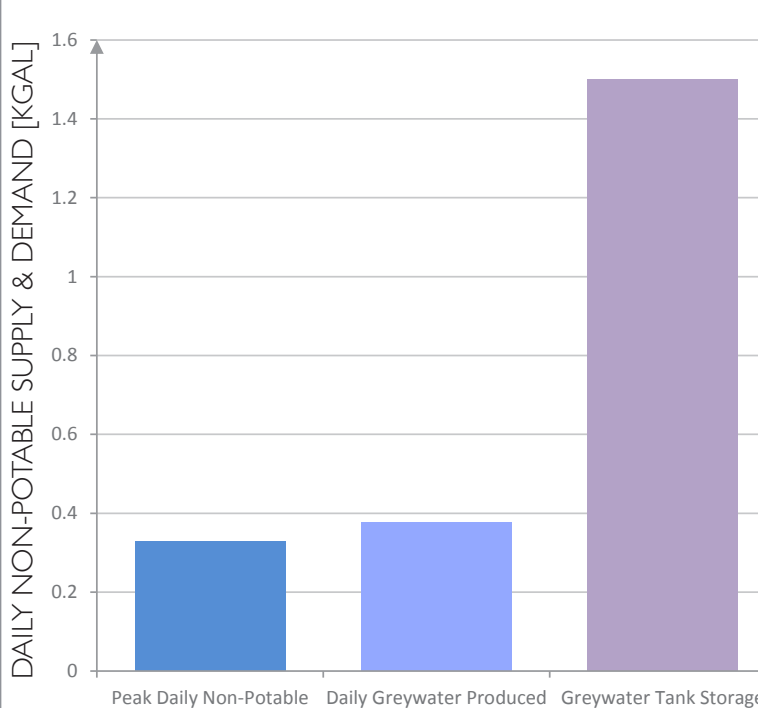


DESIGN ASSUMPTIONS

PARAMETER	PROPOSED DESIGN
Floor Area	22,600 SF
Occupants	55
Roof Collection Area	N/A
Water Closet	0.8 GPF (5 uses/d)
Urinals	N/A
Lavatory Faucet	0.5 GPM (5 uses/d)
Shower	1.8 GPM (8min/person/d)
Kitchen Sink	1.8 GPM (4min/person/d)
Irrigation	12.3 kGal/yr
TOTAL DEMAND (kGal/yr)	715
TOTAL NON-POTABLE DEMAND (kGal/yr)	97
TOTAL NON-POTABLE SUPPLY (kGal/yr)	149*

*Based on 20 units connected to GW. 305 kGal available.

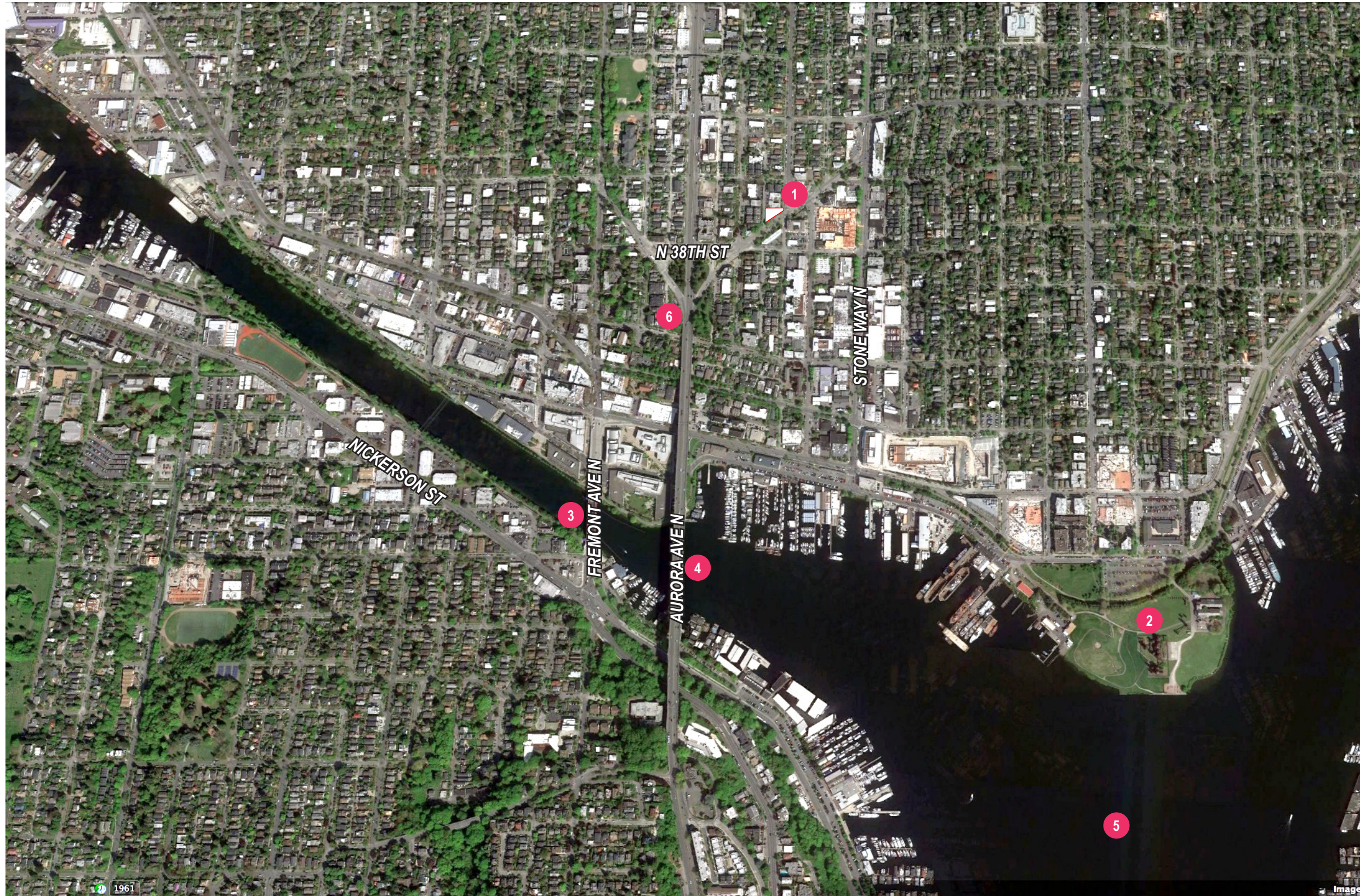
NON-POTABLE DEMAND & GREYwater SUPPLY



URBAN DESIGN ANALYSIS

Vicinity Context
Located in Fremont, the site is within the transitional buffer between the historically commercial/industrial zoning along the north edge of Lake Union and a residential neighborhood to the north. With the Adobe and Google Campuses located to the southwest, the demand for quality housing has risen dramatically in a neighborhood that is developing rapidly. To the east of the site is Stone Way, which is becoming a destination for Seattleites with restaurants, coffee shops, and boutique stores. Continuing south on Stone Way, the Burke-Gillman Trail connects the neighborhoods from Ballard and Fremont to the west to the University of Washington and beyond. Along this trail is also located the world-renowned Gas Works Park.

- 1 3825 (Subject Property)
- 2 Gas Works Park
- 3 Fremont Bridge
- 4 George Washington Memorial Bridge
- 5 Lake Union
- 6 Fremont Troll



AERIAL PHOTOGRAPH - VICINITY CONTEXT

URBAN DESIGN ANALYSIS

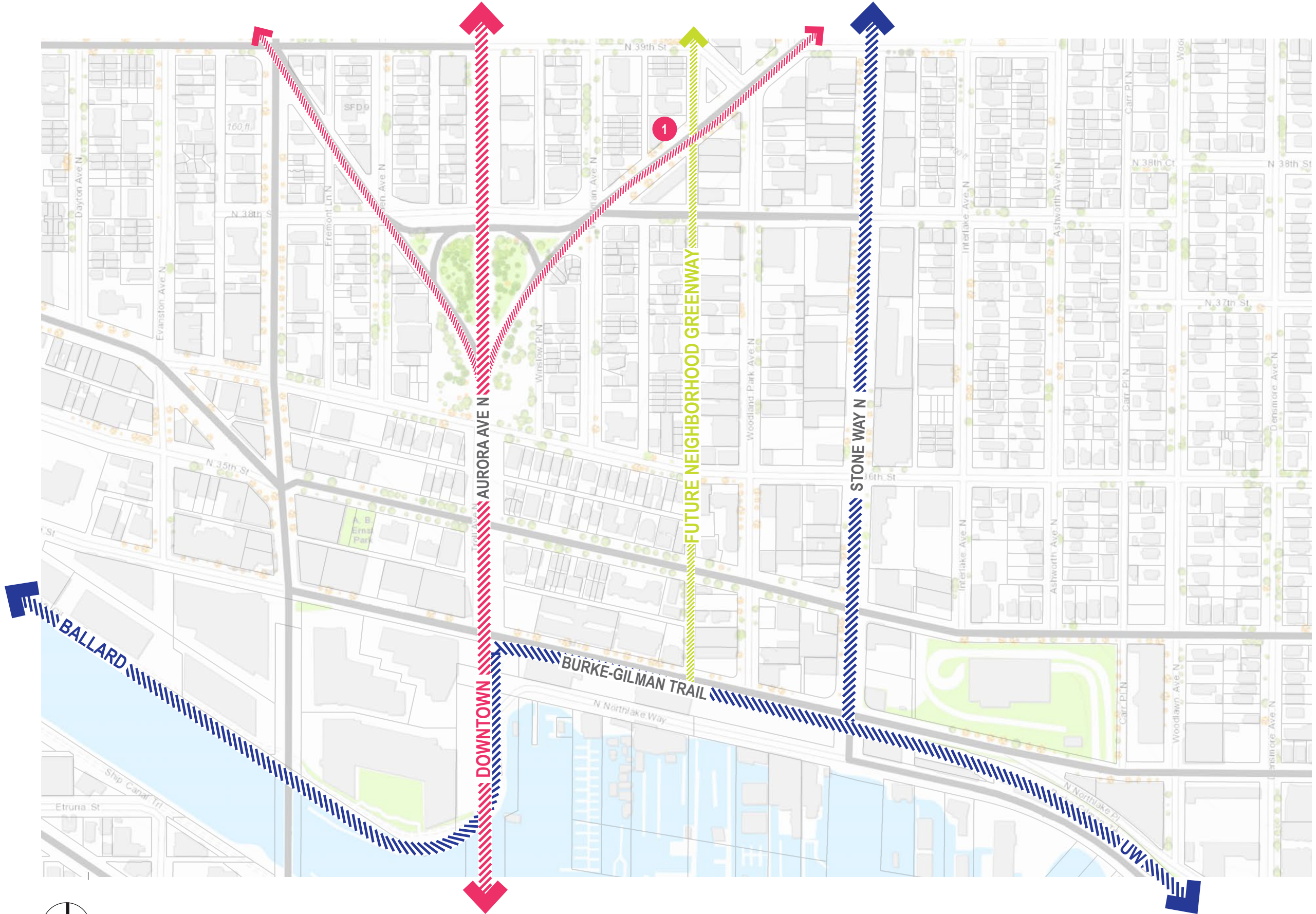
Transportation
The proximity to Aurora Ave and Stone Way allow for easy access to public transportation and connectivity to downtown. Stone Way also serves as a bicycle and pedestrian connector to nearby amenities and the Burke-Gillman Trail.

Planned Neighborhood Greenway
"Seattle is building a network of neighborhood greenways. Neighborhood greenways are safer, calm residential streets for you, your family and neighbors. On streets with low car volumes and speeds a greenway can:
• Improve safety
• Help people cross busy streets
• Discourage cars from using neighborhood streets to avoid main streets
• Protect the residential character of our neighborhoods
• Keep speeds low
• Get people to where they want to go like parks, schools, shops and restaurants"

Per <http://www.seattle.gov/transportation/greenways.htm>



- 1 Project Site
- Transportation Legend
- Public Transportation
 - Major Bicycle Route
 - Future Neighborhood Greenway



MODES OF TRANSPORTATION



SUBJECT PROPERTY - LOOKING NORTHWEST 1



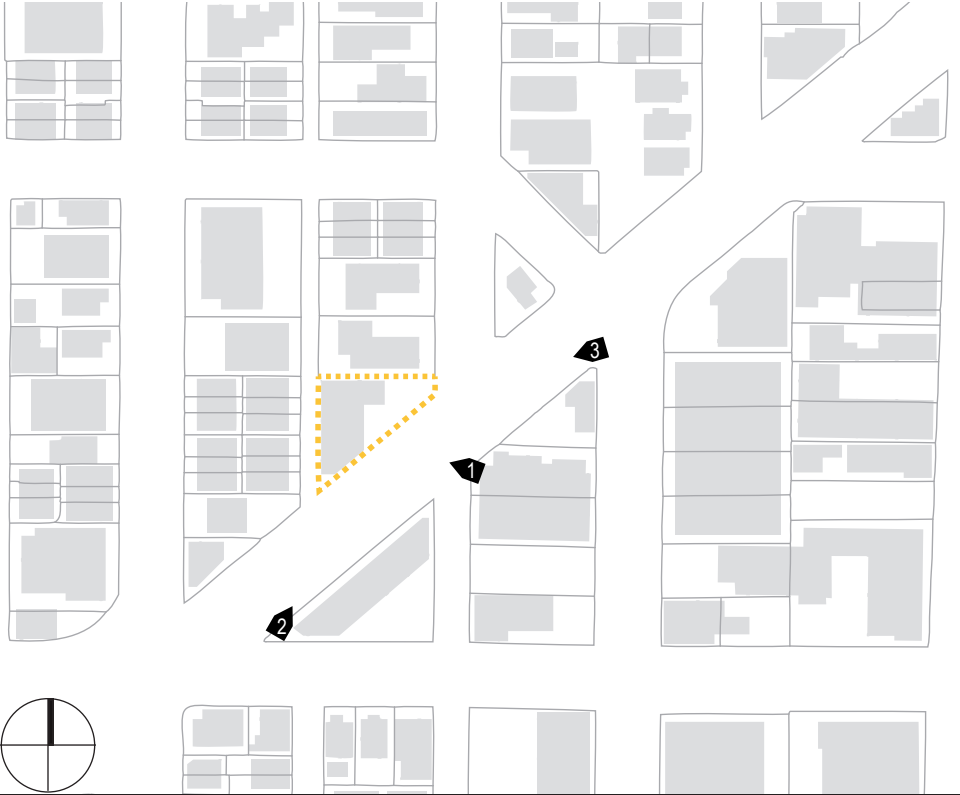
SUBJECT PROPERTY - LOOKING EAST 2



SUBJECT PROPERTY - AERIAL



SUBJECT PROPERTY - LOOKING WEST 3



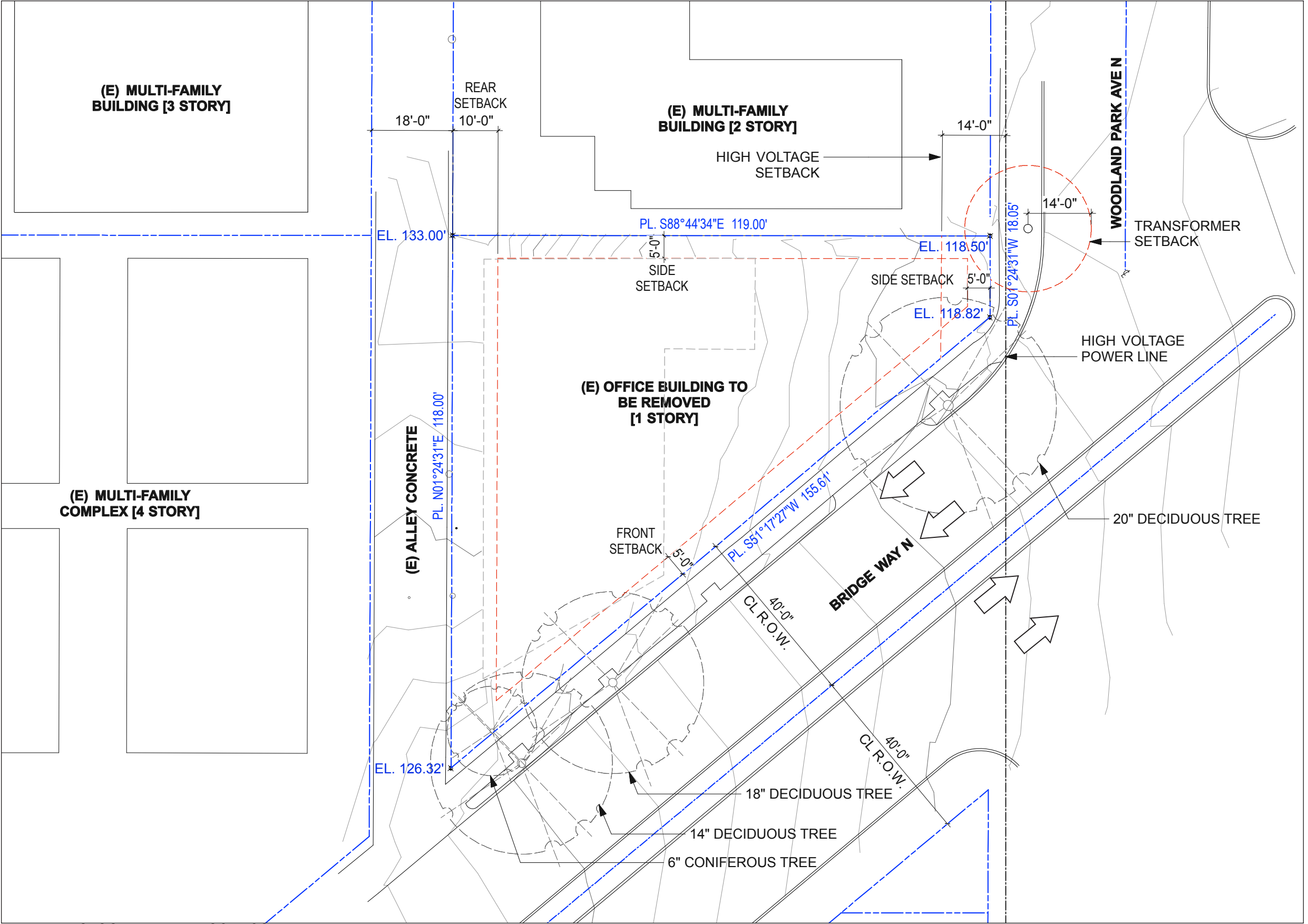
KEY

Building Use Legend

- Multifamily
- Single Family
- Commercial
- Mixed-Use



ZONING & USE MAP



AERIAL PHOTOGRAPH - "9-BLOCK" CONTEXT

Zoning Summary

Address	3825 Bridge Way N
Site Area	8,261 SF
Zoning	LR3
Overlay	Fremont Hub Urban village
FAR	1.5 or 2 = 16,109 SF 2.3 with Living Building Pilot
Amenity	25% of lot area, 50% of which on ground level (2,023.75 SF req)
Height	40'-0" (Built Green 4-star) 50'-0" (Living Building Pilot)
Green Factor	.6
Parking	Not Required

SITE PLAN



ALTERNATIVE 1 (CODE COMPLIANT SCHEME)

Description
Alternative 1 proposes a compact building within required setbacks.

- Program**
- Approximately 32 apartment units
 - Approximately 4 parking spaces
 - Rentable Storage
 - Bike Storage
 - Green Roof with Roof Deck

- Advantages**
- Code-compliant scheme does not require development standard departures
 - Efficient envelope to floor area ratio

- Challenges**
- Units facing alley and north, in close proximity to PL's
 - Difficult to provide adequate vehicle parking within structure
 - Inconsistent quality of views from units
 - Building massing seems bulky



ALTERNATIVE 2

Description
Alternative 2 proposes an L-scheme organized along the north and west property lines, creating an elevated shared courtyard and pulling the units back from Bridge Way. The scheme affords southern exposure and views from all units, with parking tucked under the western bar along the alley.

- Program**
- Approximately 31 apartment units
 - Approximately 7 vehicle parking spaces
 - Green Roof patio space
 - Rentable Storage

- Advantages**
- Large common green space provides buffer from Bridge Way N and offers amenity
 - Quality views and southern exposure for all units

- Challenges**
- Inefficient plan diagram, ratio of circulation to NRSF and envelope area
 - Building is tallest to west, potentially creating canyon in alley
 - Northern bar is in close proximity to neighbor



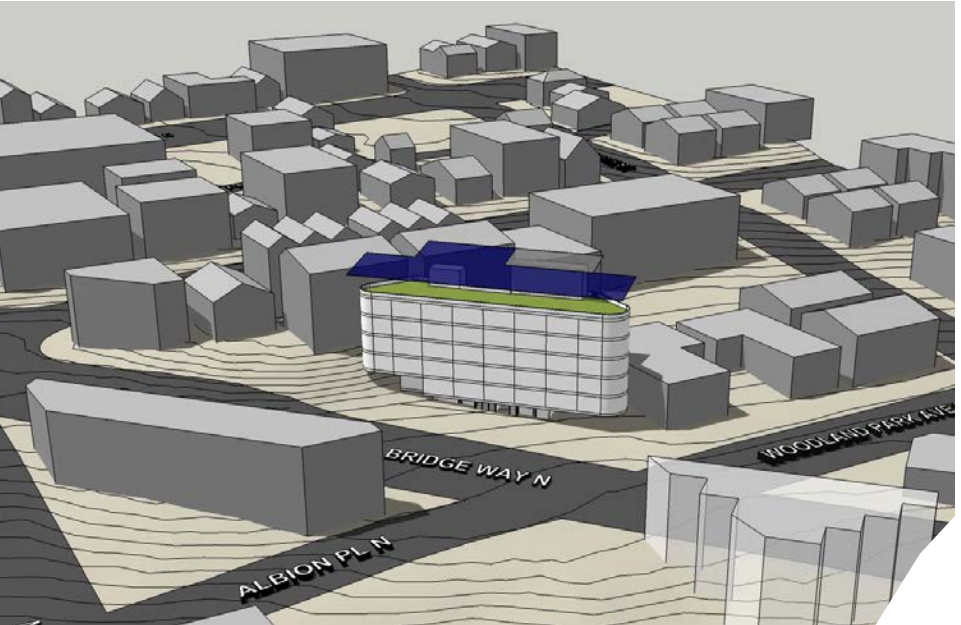
ALTERNATIVE 3 (PREFERRED OPTION - BUILT GREEN 4STAR)

Description (Built Green Preferred Scheme – non Living Building Pilot)
Alternative 3 organizes units along Bridge Way N, with a covered building entrance on the NW corner, at grade at the intersection of Woodlawn Ave and Bridge Way.

- Program**
- Approximately 34 apartment units
 - Below grade storage units and bicycle storage
 - Green Roof with Roof Deck

- Advantages**
- Strong definition of Bridge Way street wall
 - Compact building offers construction efficiencies
 - Quality views and southern exposure for all units
 - Configuration provides buffer space to neighboring buildings
 - Building form provides wholeness and continuity, while engaging the unique site geometry

- Challenges**
- Departure required for rear setback along alley
 - Unit proximity to Bridge Way requires acoustic considerations



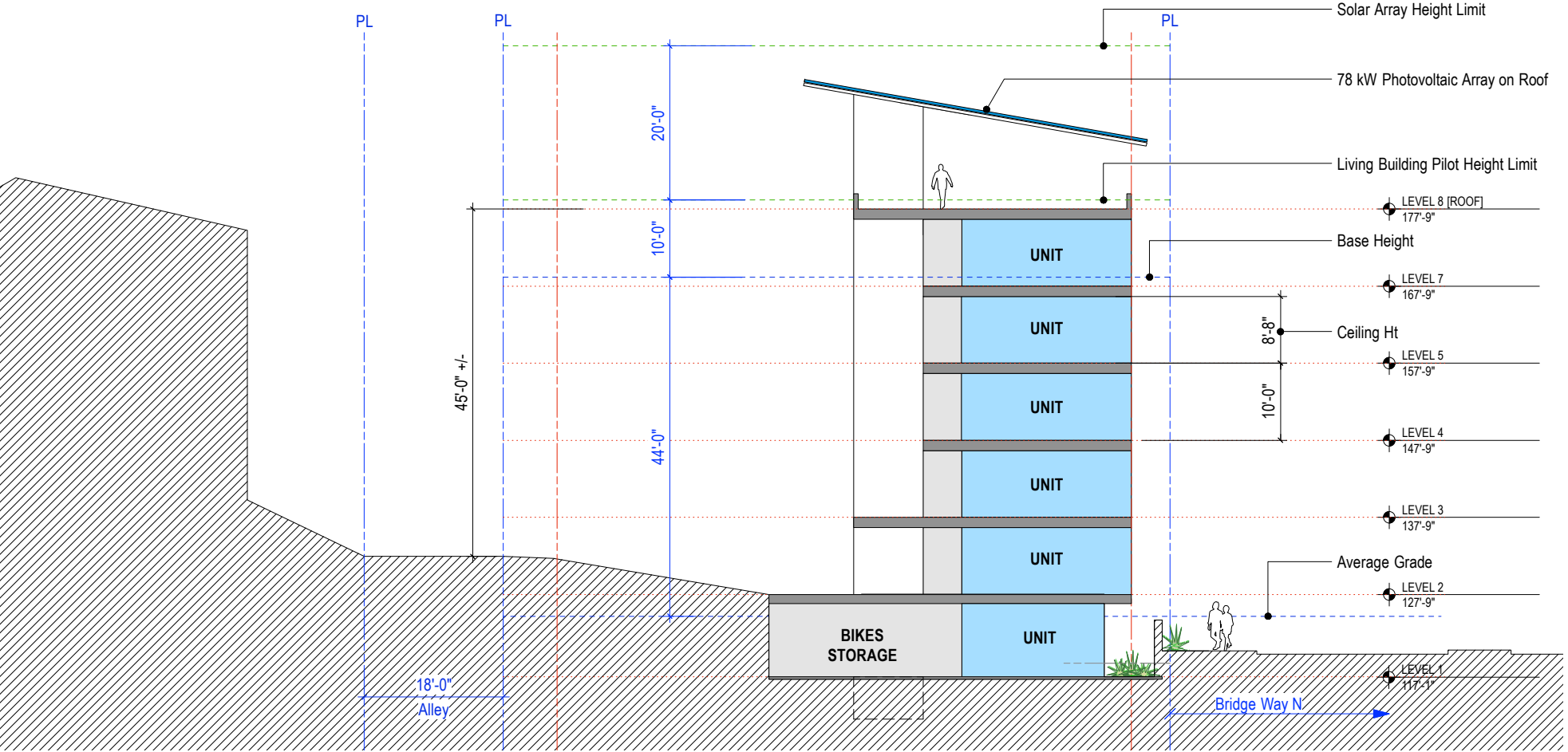
ALTERNATIVE 4 (PREFERRED OPTION- IF LBP)

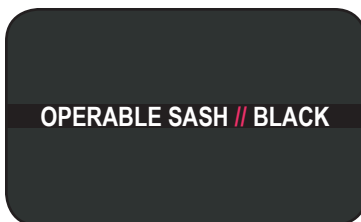
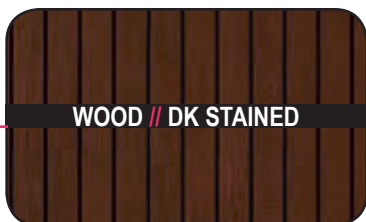
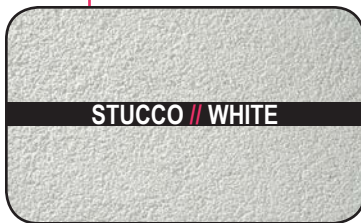
Description (Living Building Pilot Preferred Scheme)
Alternative 4 builds upon the massing of Alternate 3, but utilizes the increase in maximum height and additional FAR from the Living Building Pilot. With this additional height, an additional floor could be added and two separate entries created at the two corners. The western entry on the uphill side would become the primary pedestrian building entry, while the eastern entry could be developed as a more utilitarian bicycle-focused entry with convenient access to Stone Way and the new Greenway.

- Program**
- Approximately 40 apartment units
 - Below grade storage units and bicycle storage
 - Large, integrated PV array to meet requirements for energy production on site

- Advantages**
- Two entries engage site corners and take advantage of topography and access points
 - Strong definition of Bridge Way street wall
 - Compact building with additional floor, offers construction efficiencies
 - Quality views and southern exposure for all units
 - Configuration provides buffer space to neighboring buildings
 - Building form provides wholeness and continuity, while engaging the unique site geometry
 - Distinct bike entrance and storage offers functional and generous accommodation of program element

- Challenges**
- Departure required for rear setback along alley
 - Unit proximity to Bridge Way requires acoustic considerations
 - Small site presents challenges for integrating required sustainability features such as PV array





EDG #1a: Massing + Materials
a. The Board discussed the four massing alternatives and agreed the “bar form” shown in preferred Options 3 and 4 creates a gateway and strong form defining the diagonal street, but that singular form requires more modulation study, and also a level of premium materials and detailing [similar to pg 37] to be successful. (CS2-A; DC2-C; DC4-A)

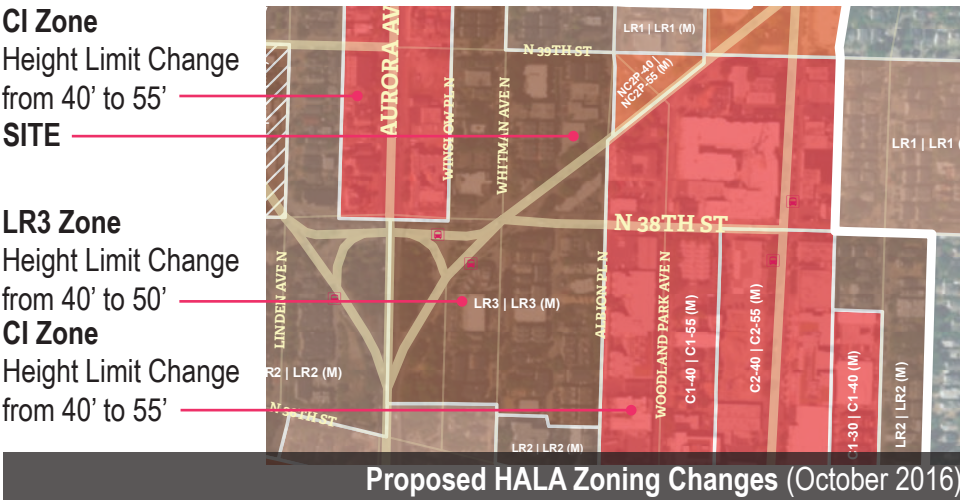
DESIGN RESPONSE:
The bar scheme has been developed, and the building has been positioned along Bridge Way to define the Bridge Way street wall and provide buffer space to the alley and neighboring properties to the north, as advised by the EDG board. The primary building entry is highlighted in the proposed massing, treated as a volumetric carve from the floating form, while the balconies act as secondary façade elements, staggered to animate the elevation.
The primary materials for the building are high-quality and consistent with what was presented in the EDG packet. These materials are able to gracefully form a smooth radius at the corners while also being durable and timeless. The composition emphasizes the horizontal, which is reinforced by the staggered balconies, which interlock with subtle patterning and relief in the brick. Further, and distinct from the LBP scheme presented at EDG, the PV array has been reorganized into a lower array to the south along Bridge Way, and an upper array to the north. This combination of the horizontal emphasis of the composition, and the lowering of the PV array, reduce the perceived scale of the building significantly in response to the EDG comments.

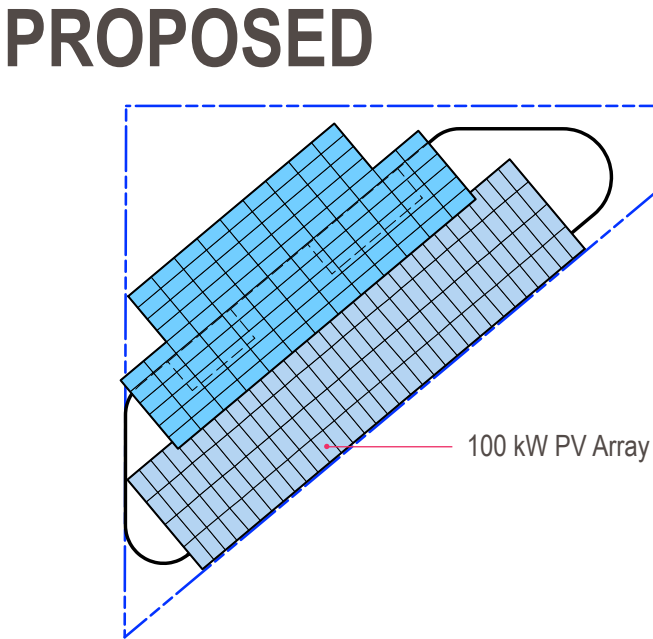
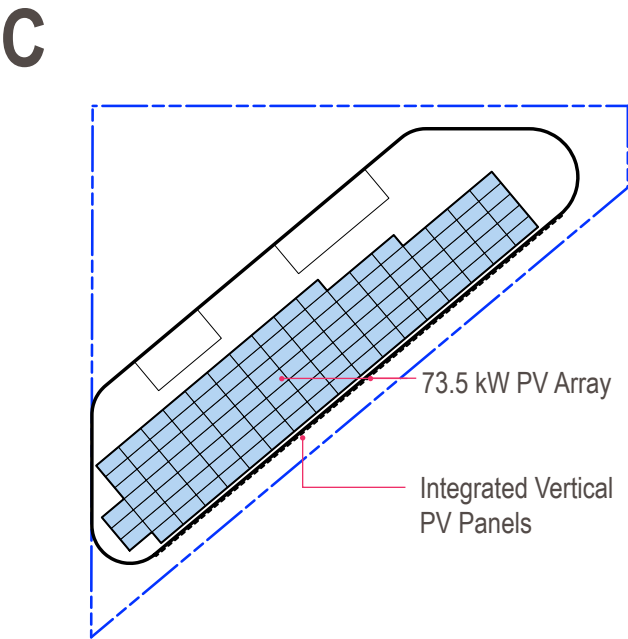
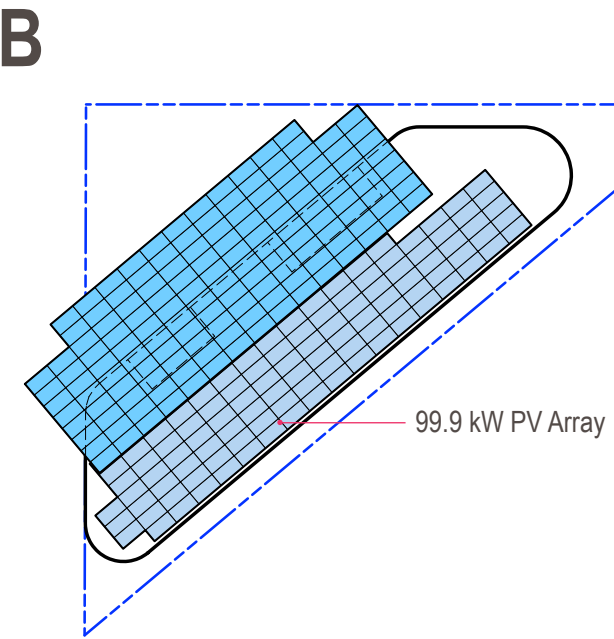
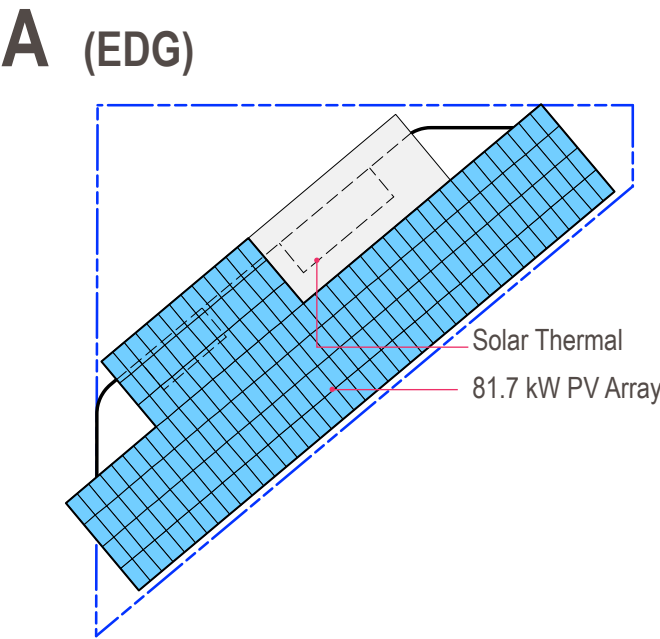
EDG #1: Massing + Form
b. In addition to the scale and shadows afforded by proposed balconies shown on pg 38/upper, the Board encouraged study of larger modulating notches in the form such as shown on pg 37/lower right. (DC2-B&C)

c. The Board agreed the pure “bar form” of Option 3 was at the comfortable limit of height for this site and along Bridge Way, and they agreed an additional floor of the provisional LBP Option 4 makes a form noticeably taller in the context. (CS2-D)

d. Agreeing with public comment concern about a 5 story form, the Board stated that any taller LBP form should basically stay close to the Bridge Way frontage, rather than the taller forms abutting the lowrise zones north and west. The Board agreed the LBP form may require more assertive refinements to ensure the taller form remains compatible with the zoning of the Low-rise zoning context. (CS2-D; DC2-A2)

DESIGN RESPONSE
The board discussion of massing alternatives focused primarily on two of the three massing strategies, “The L” (Alternative 2) and “The Bar” (Alternatives 3 and 4). The Bar was preferred by the board, with added support for Alternative 4 which features two entrances - at both the NE and SW corners - and was preferred over the other “Bar” scheme, Alternative 3 because of the unique way Alternative 4 engages and potentially activates the two corner conditions of the site. The board focused on Alternatives 3 and 4 without mention of concern for the height of either Alternative, remarking that because of the topography and adjacent zoning, these alternatives were not taller than the adjacent buildings across the alley. There was no discussion of “stepback” or “changed materials” as mentioned above. Further, board members commented that the potential zoning changes in the area will lead to taller buildings in the neighborhood, making the additional story allowed by the Living Building Pilot, as shown in Alternative 4, and as proposed here in the MUP and DRB submittal, compatible with the context. The below diagram shows the proposed height limit zoning changes surrounding the site, where 50 - 55’ is proposed to be the new baseline.





Photovoltaic Array Alternatives Summary

The project team has studied numerous configurations for the Photovoltaic Array in an effort to reduce the perceived massing of the building, generate sufficient power to meet the LBP goals, and to develop a coherent and aesthetically pleasing integration of the required panels. These pages summarize the studies, and the proposed array which achieves the project goals while furthering Design Guidelines CS1-A, CS2-D-5, DC2-A, B, C, and DC4-A.xxx

ALT-A (EDG Stage)
81.7 kW Array produces 84.8 kWh/yr
Considerations

- Does not meet updated energy production requirements.
- Increases perceived height of building from Bridge Way.

ALT-B
99.9 kW Array produces 103.9 kWh/yr
Considerations

- Energy production meets target.
- Array is not very visible from Bridge Way.
- Large cantilever over to rear and alley is potentially imposing.
- Large cantilever creates structural challenges.

ALT-C
73.53 kW Array produces 67.4 kWh/yr
Considerations

- Energy production significantly below target.
- Perceived building height reduced.
- Vertical PV panels are not efficient for energy production (-30%)
- Vertical PV panels on South side diminish from building wholeness and disrupt horizontality.

PROPOSED
100 kW Array produces 104kWh/yr
Considerations

- Energy production meets 105% target.
- Small portion of array visible from Bridge Way provides solar shading and communicates the buildings sustainability features to public.
- Limited encroachment into alley and setbacks.
- Structurally efficient.

EDG #2: Bridge Way Ground Level & Streetscape:

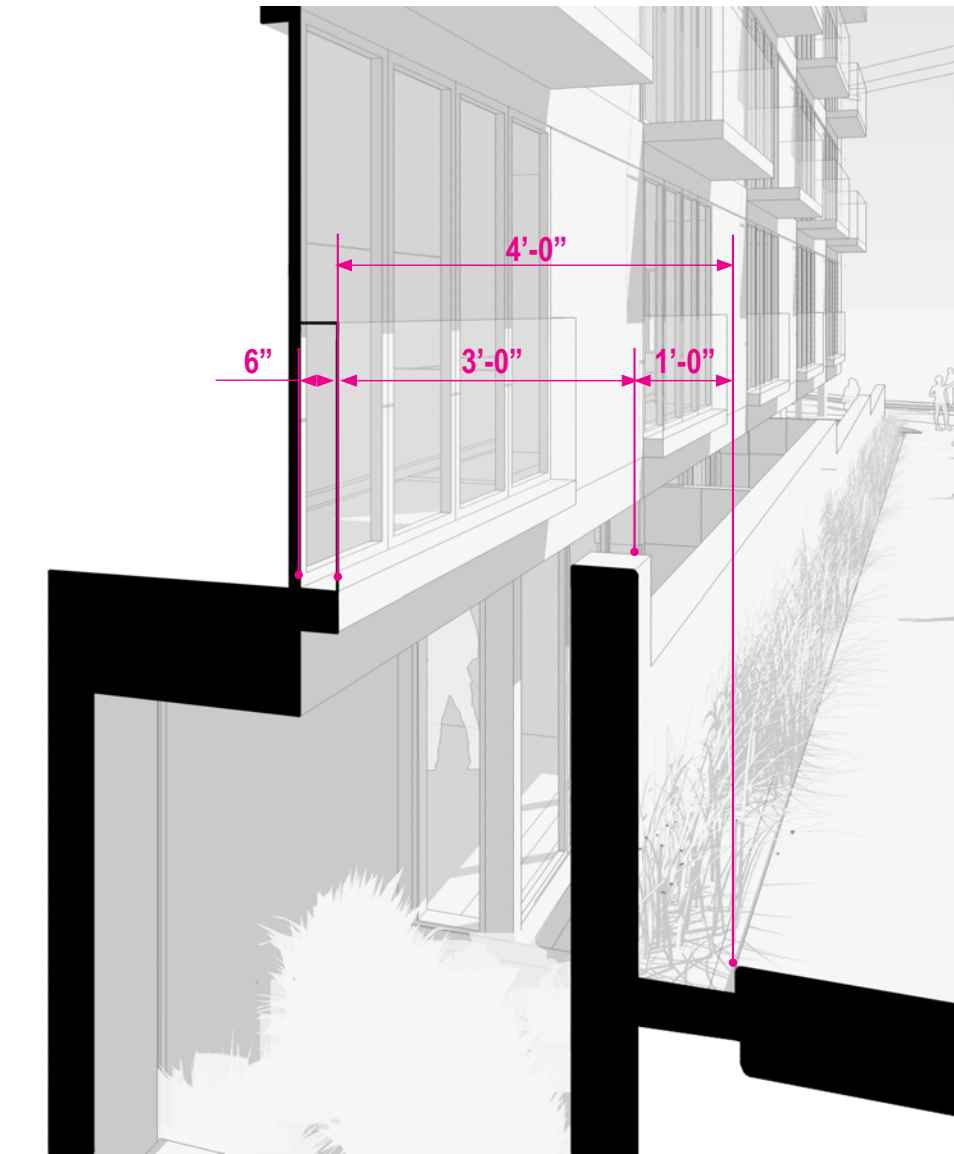
- a. The Board supported the setback ground level along Bridge Way, to create a floating bar above, but unanimously agreed that residential ground level should be interactive with the sidewalk and not include sunken moat units [31/lower left], or a tall continuous wall along the sidewalk (both shown pg 38/41). (PL3-B)
- b. The Board supported the primary residential entry and lobby at the west end [39] and that covered entry plaza being a stepped or cut-away corner [38/ lower right] for visibility and pedestrian safety at the alley. (PL3-A; PL4-A)
- c. The Board agreed the bar form should step with the sloping grade along the street, in particular at the west end, not hitting grade as shown on 31/upper right. (CS1-C)
- d. The Board agreed that regardless of upper level massing, they supported the two ground level entrances at the northeast and southwest corners, as shown on page 33, and agreed they should be integrated into the design. The Board indicated receptivity to departures in order to accomplish these two entryways. (PL3-A)

DESIGN RESPONSE:
The building has integrated two entrances at the corners, as supported by the EDG board. The eastern entrance is more utilitarian and serves as the primary bicycle entrance while the western entrance has been developed as the project's front door, with a small residential lobby and integrated ADA ramp. This lobby is perched above the street, and is accessed under the upper mass, creating a weather-protected, gracious, and welcoming space to Bridge Way pedestrians and the general public (see FIG B).

The ground level units have been modified further to allow for a better streetscape design. As one of the board members noted during EDG, these units are required in order to make the project pencil out and so we have set the retaining wall back further from the PL, so that there is now a 3'-3" planting zone between the edge of the sidewalk (which is also the property line) and the edge of the wall. The concept is similar to that of an English basement, where these units provide a partially below-grade, low-cost housing option in a desirable location, in a desirable building. Conceptually, the units and sliding doors and guards on Level 2, which vary from about 3'-6" to 7'-6" above the sidewalk, will provide the primary interaction with the sidewalk as the 3' wide sliding doors can open and the activity of the street and units allowed to blend and interact. The primary design motive for the required lower units is to screen them with generous landscaping and have them recede in the composition.



EDG Images (For Reference)



EDG View

Precedent Examples: Basement Units at Street



Landscaped Buffer



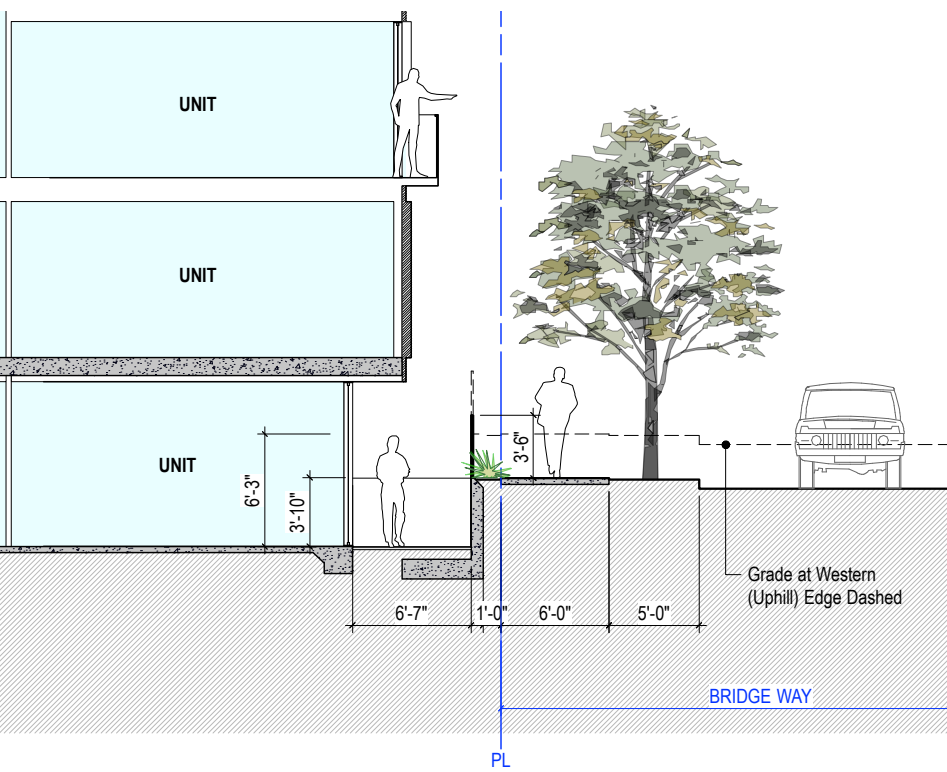
Abrupt Edge at Sidewalk



6 - 10 ft of Grade Change from Sidewalk to Units

STUDY A: Open Guard in lieu of Wall

- Advantages**
- Removal of wall allows more light to units
- Challenges**
- Abrupt "fence" edge along sidewalk



A: Interior View



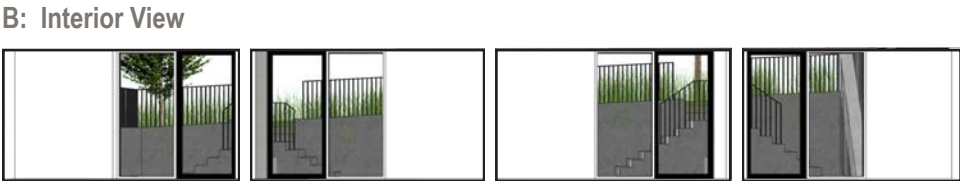
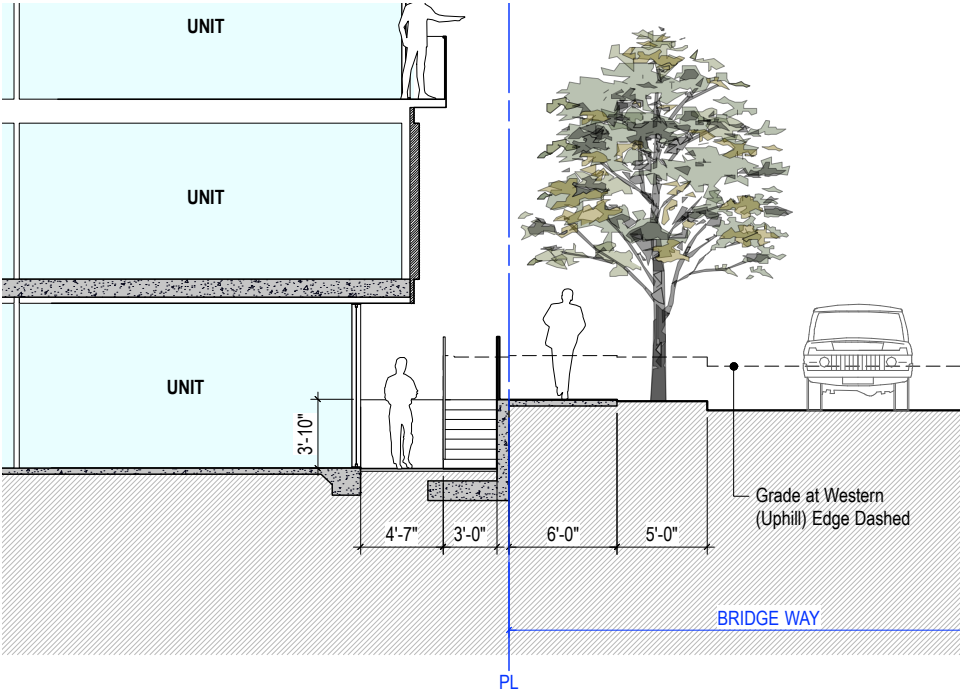
A: View along Bridge Way



STUDY B: Entries on Bridge Way

- Advantages**
- Welcoming Private Entries to Units off Bridge Way

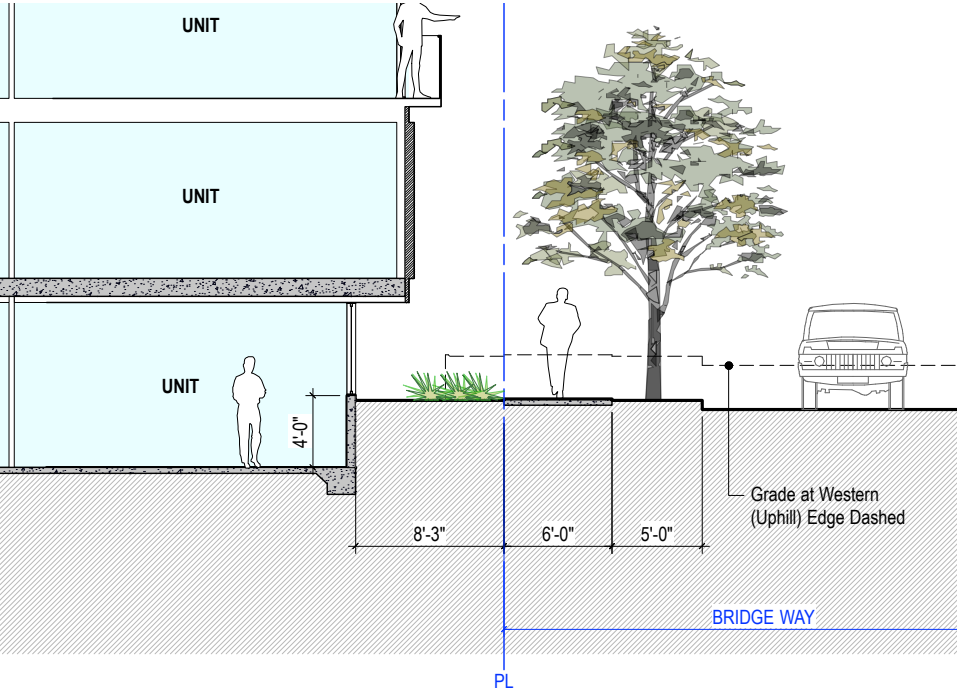
- Challenges**
- Units very open to busy Bridge Way and lack of landscaping along PL
 - Perceived Security of Units
 - Diminishes importance of primary bldg entrance
 - Primary Unit Entries not ADA Accessible



STUDY C: Remove Patios

- Advantages**
- Lower Level distinct from upper volume
 - Saves \$ by eliminating temporary shoring along Bridge Way
 - Large landscaped area at PL

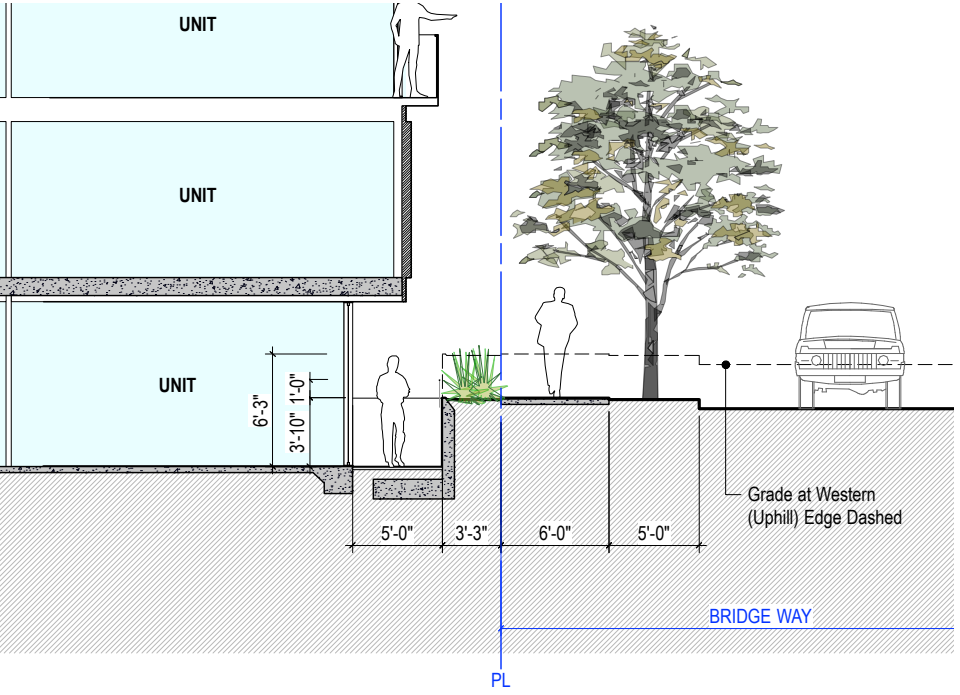
- Challenges**
- Units lose semi-private exterior spaces and liveability



STUDY D: Landscaped Buffer (PROPOSED)

- Advantages**
- Generous 3'-3" landscaped buffer along sidewalk benefits ROW and separates units from Bridge Way traffic
 - Diminished presence of Lower Units in overall composition allows upper volume to be distinct.

- Challenges**
- Balancing needs of units with appropriate improvement of adjacent public space



EDG #3: Alley Edge & Courtyard:

a. The Board agreed the Option 3 north courtyard [31] requires careful study to maximize sunlight penetration, plant viability, and to be a usable amenity during short winter days. The Board encouraged possible stepping of the north form to lift the levels to the sun, and recover units possibly impacted by the recommended notching of the south bar (see guidance 1b above). (CS1-B2; DC3; PL1-C)

b. The Board agreed there should be a carefully designed fence, planter and/or buffer along the alley, and consider the courtyard shown on pg 39 to multi-function as a move-in/out staging space, since no loading or parking is proposed. (DC1-C4)

DESIGN RESPONSE:

The courtyard has been developed as a flexible, shared, common outdoor space. A row of fruit trees, meeting the requirement for urban agriculture under the LBP, and contributing to green factor, define the north edge of the space, which has pervious paving surface that can accommodate vehicular traffic for trash pickup and move-in, while also allowing for resident activity. There is a fence (see page 30 for additional information) proposed along the alley and landscaping has been integrated into the design. The Photovoltaic array also cantilevers out over a portion of this space, providing some weather protection but also allowing this sustainability feature to be part of the experience of the building. Lastly, the project is proposing what we intend to be an "irresistible stair," a glass-walled, well-detailed stair (Stair #1) that opens up visually to the courtyard and is intended as the primary means of vertical circulation in the building. The motivation is both to discourage elevator use (which requires significant energy), thereby encouraging human-powered living, and to further activate and engage the courtyard and alley with visible vertical movement.



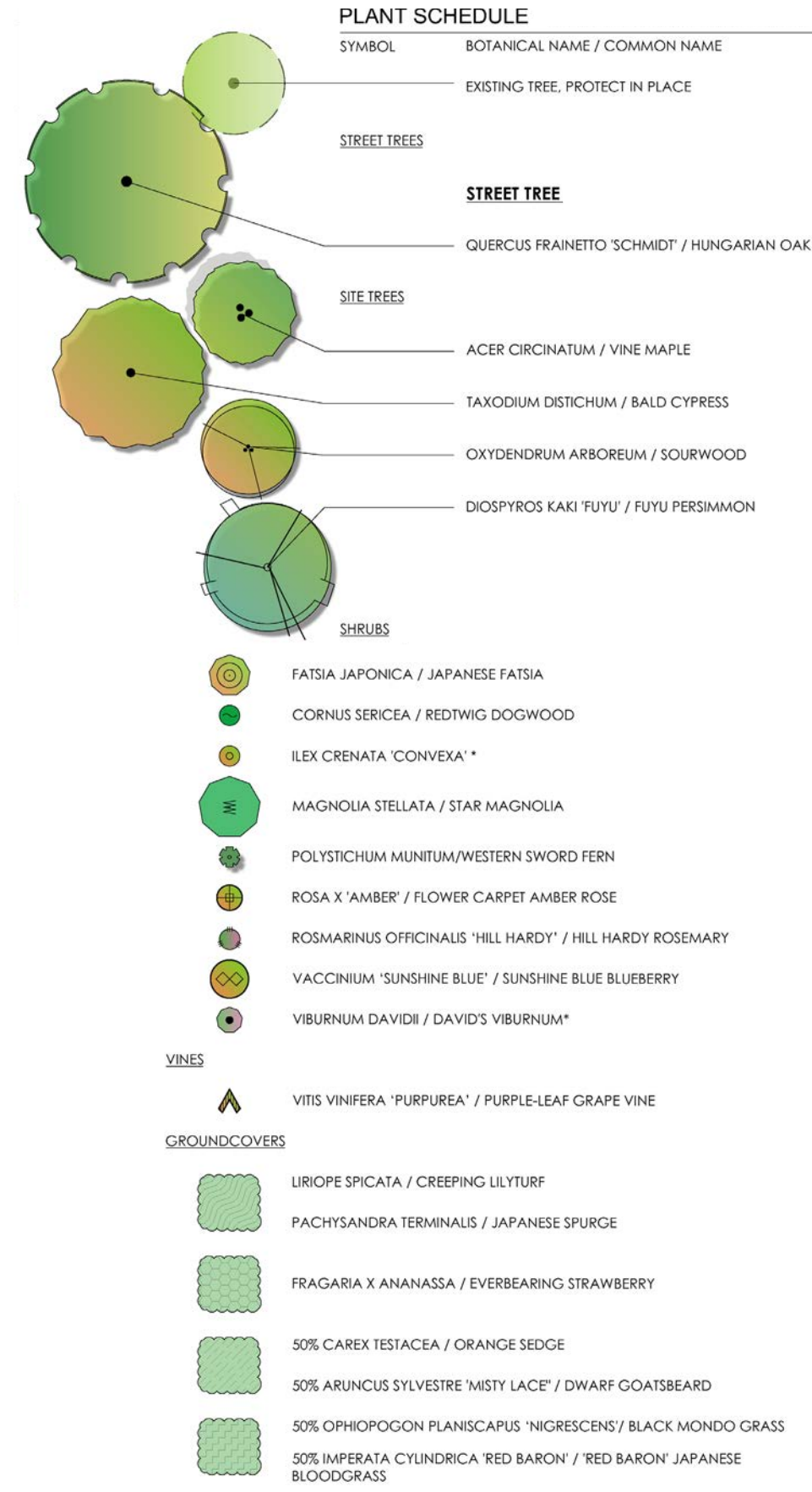
View Looking South down Alley



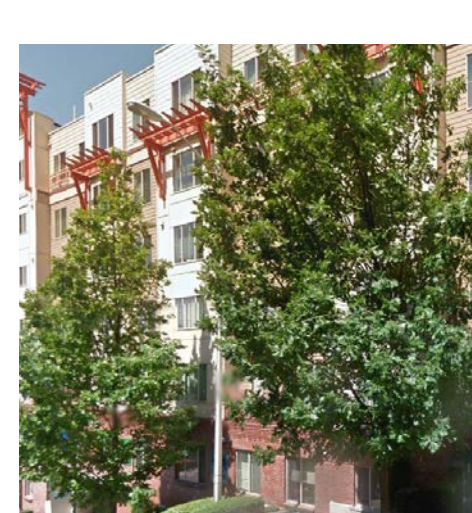
courtyard gathering



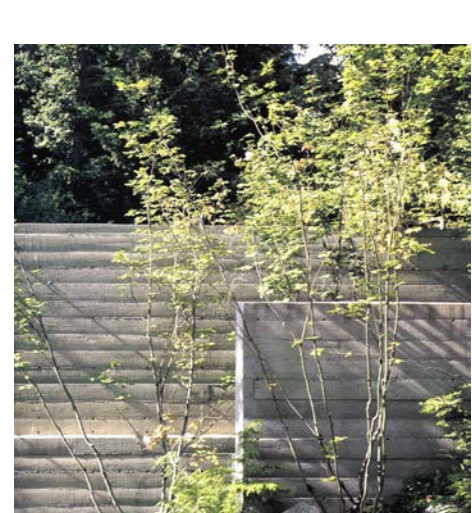
pervious pavers



TREES



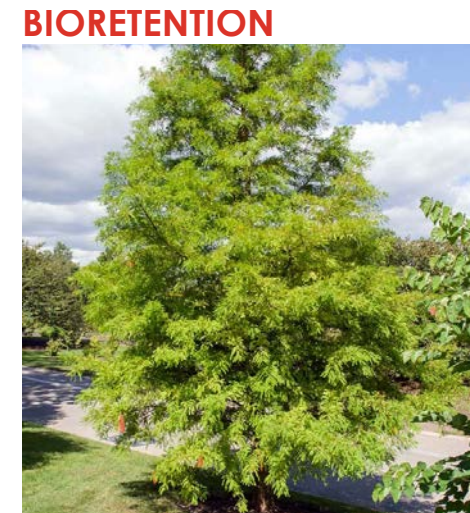
Quercus frainetto 'Schmidt'
Hungarian Oak



Acer circinatum
Vine maple



Diospyros kaki 'Fuyu'
Fuyu persimmon



Taxodium distichum
Bald cypress

SHRUBS



Ilex crenata 'Convexa'



Fatsia japonica
Japanese Fatsia



Vaccinium 'Sunshine Blue'
Sunshine Blue Blueberry



Cornus sericea
Redtwig Dogwood



Rosa 'Amber'
Amber Groundcover Rose



Viburnum davidii
David's Viburnum



Rosmarinus officinalis 'Hill Hardy'
Hill Hardy Rosemary



Aruncus 'Misty Lace'
Dwarf Goatsbeard

GROUNDCOVERS



Pachysandra terminalis
Japanese Spurge



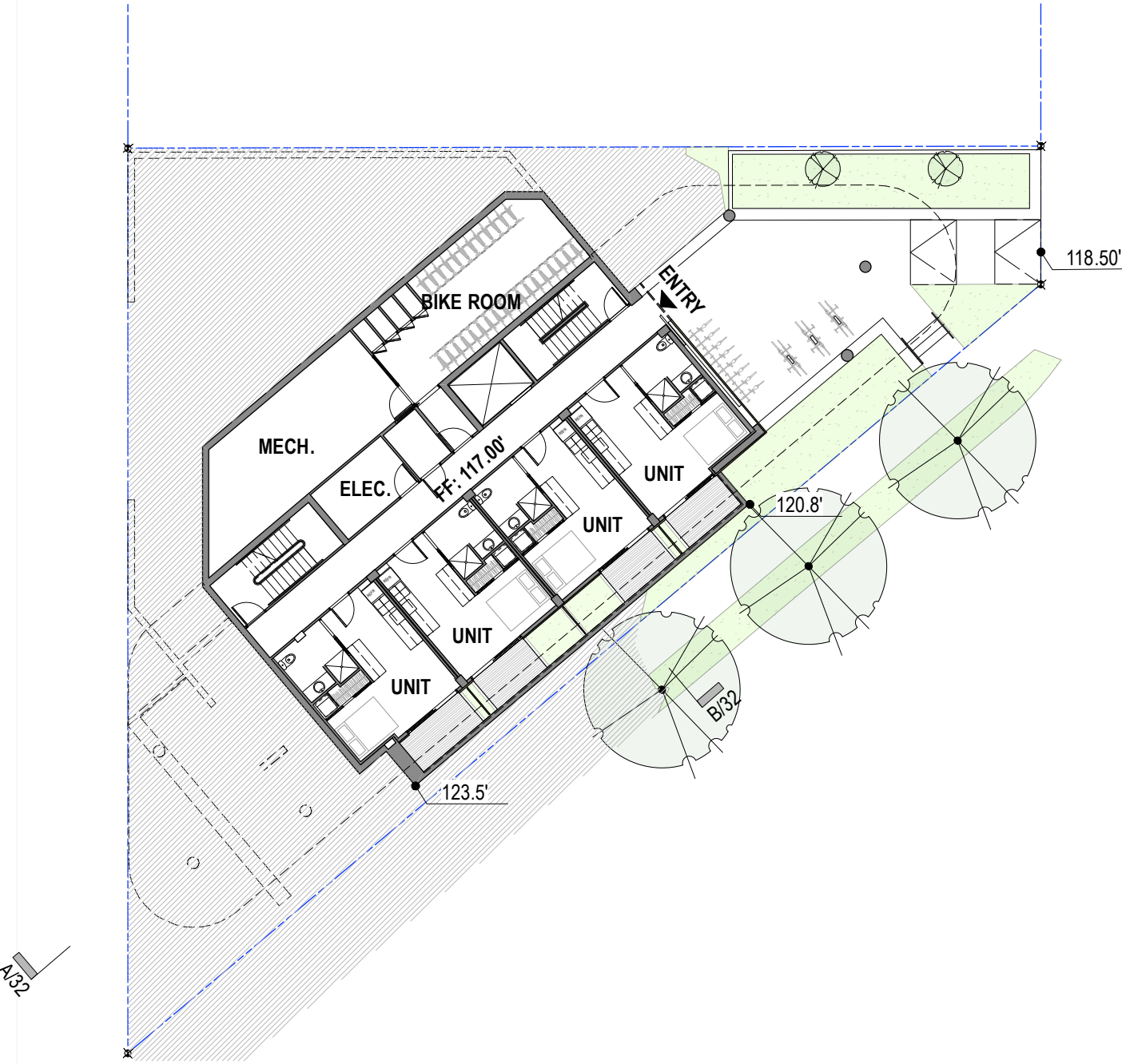
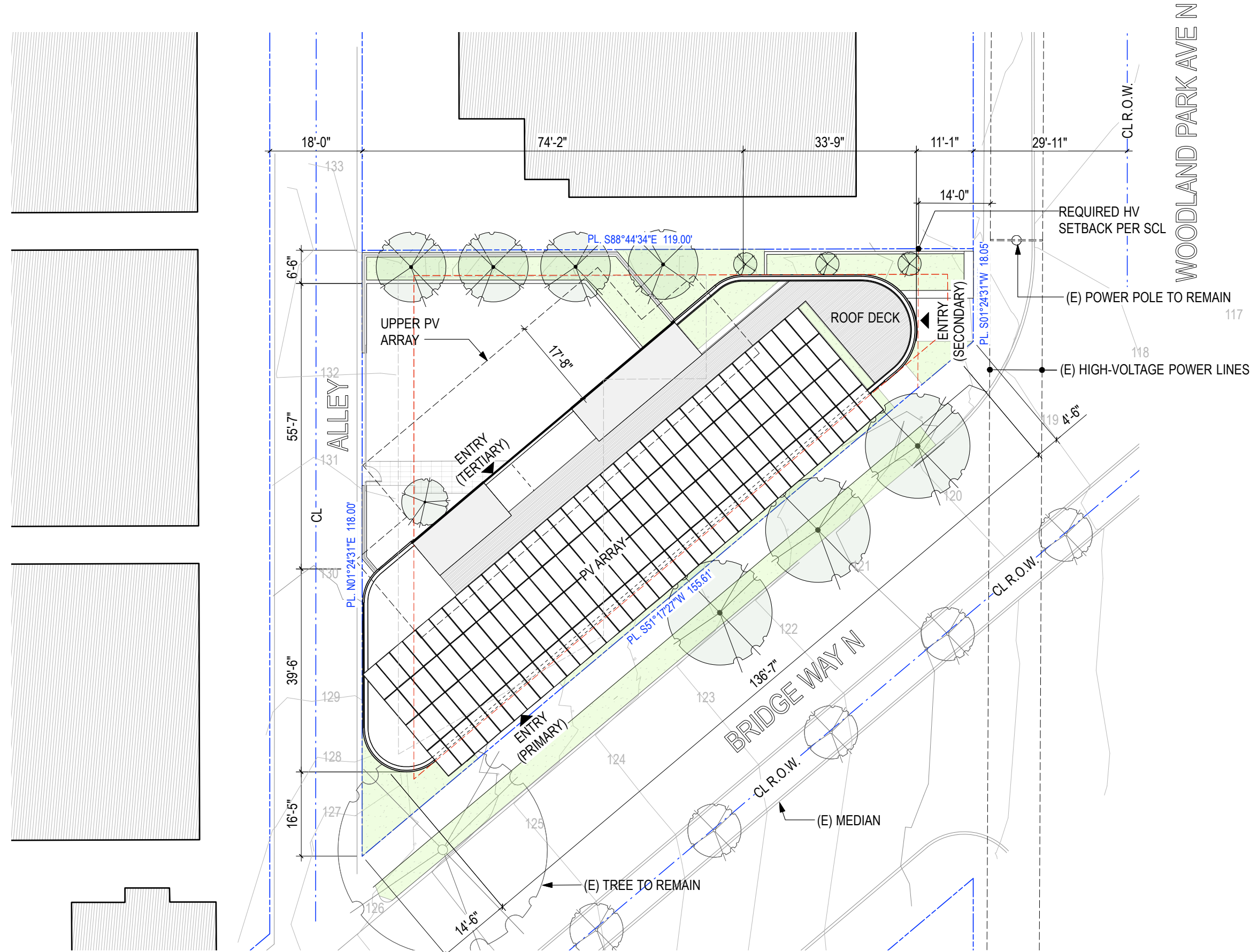
Liriope spicata
Creeping Lilyturf



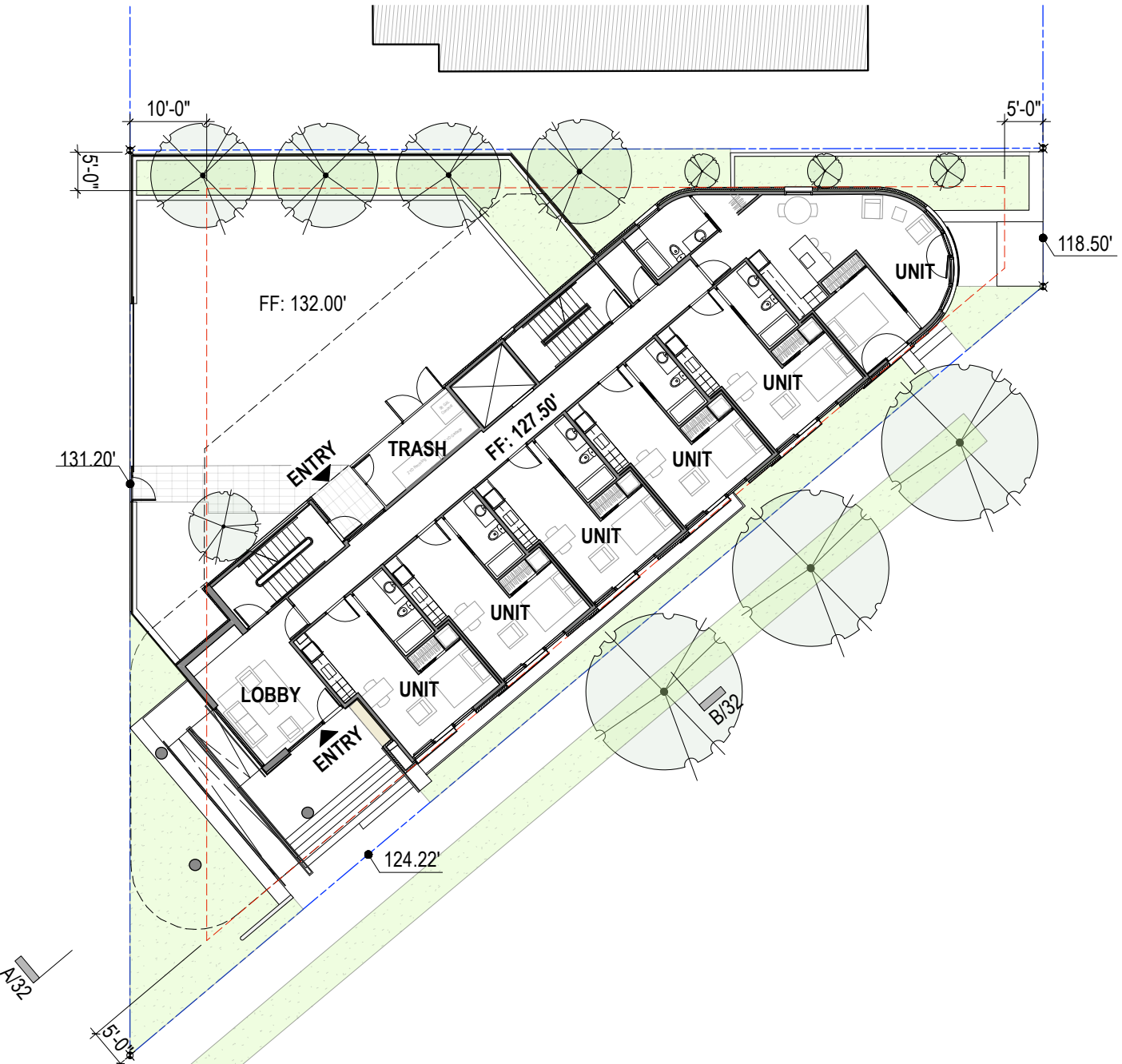
Fragaria x ananassa
Everbearing strawberries



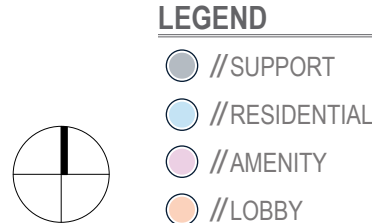
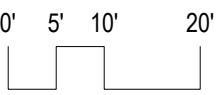
Polystichum munitum
Sword Fern

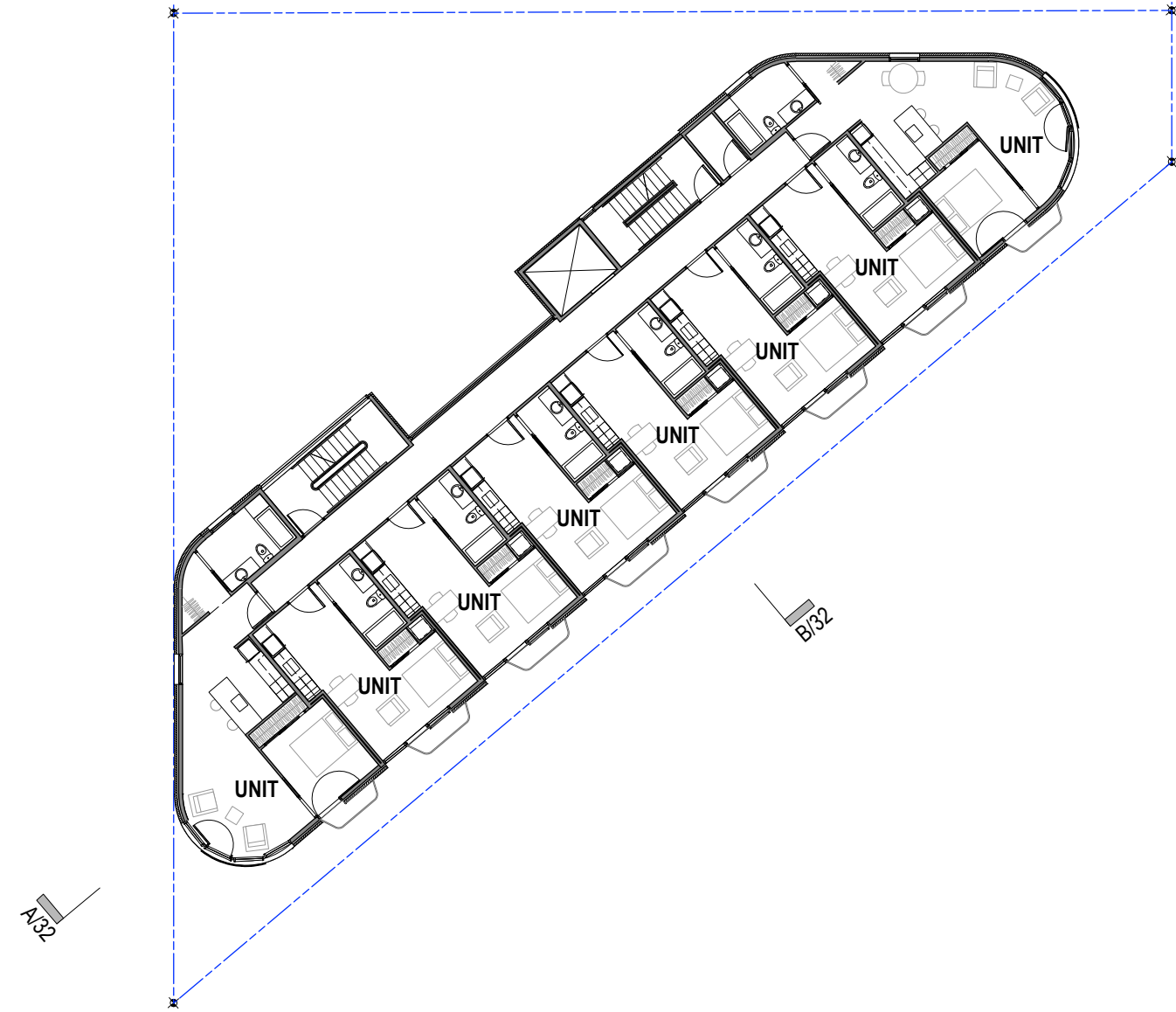


FIRST FLOOR PLAN

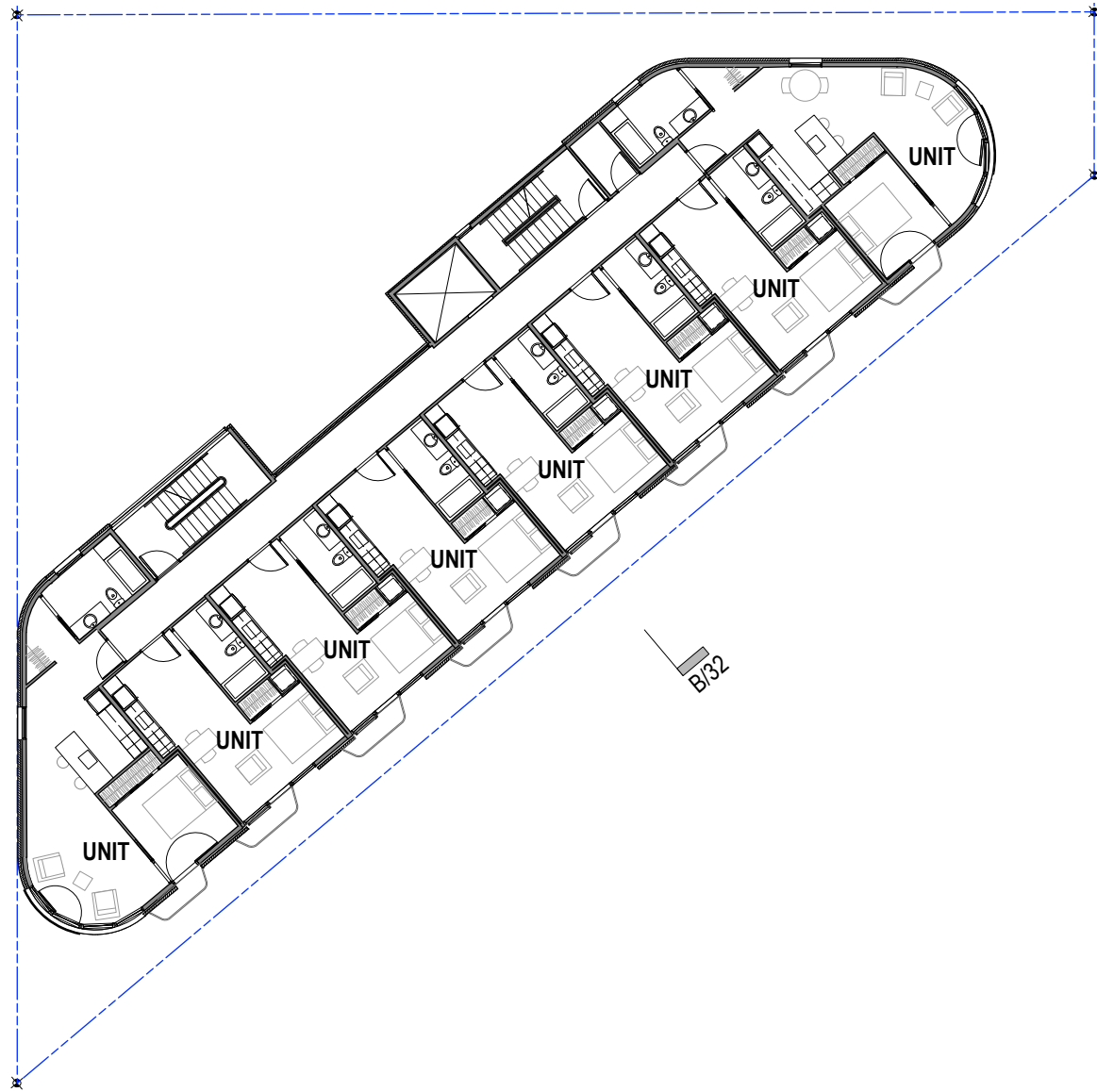


SECOND FLOOR PLAN

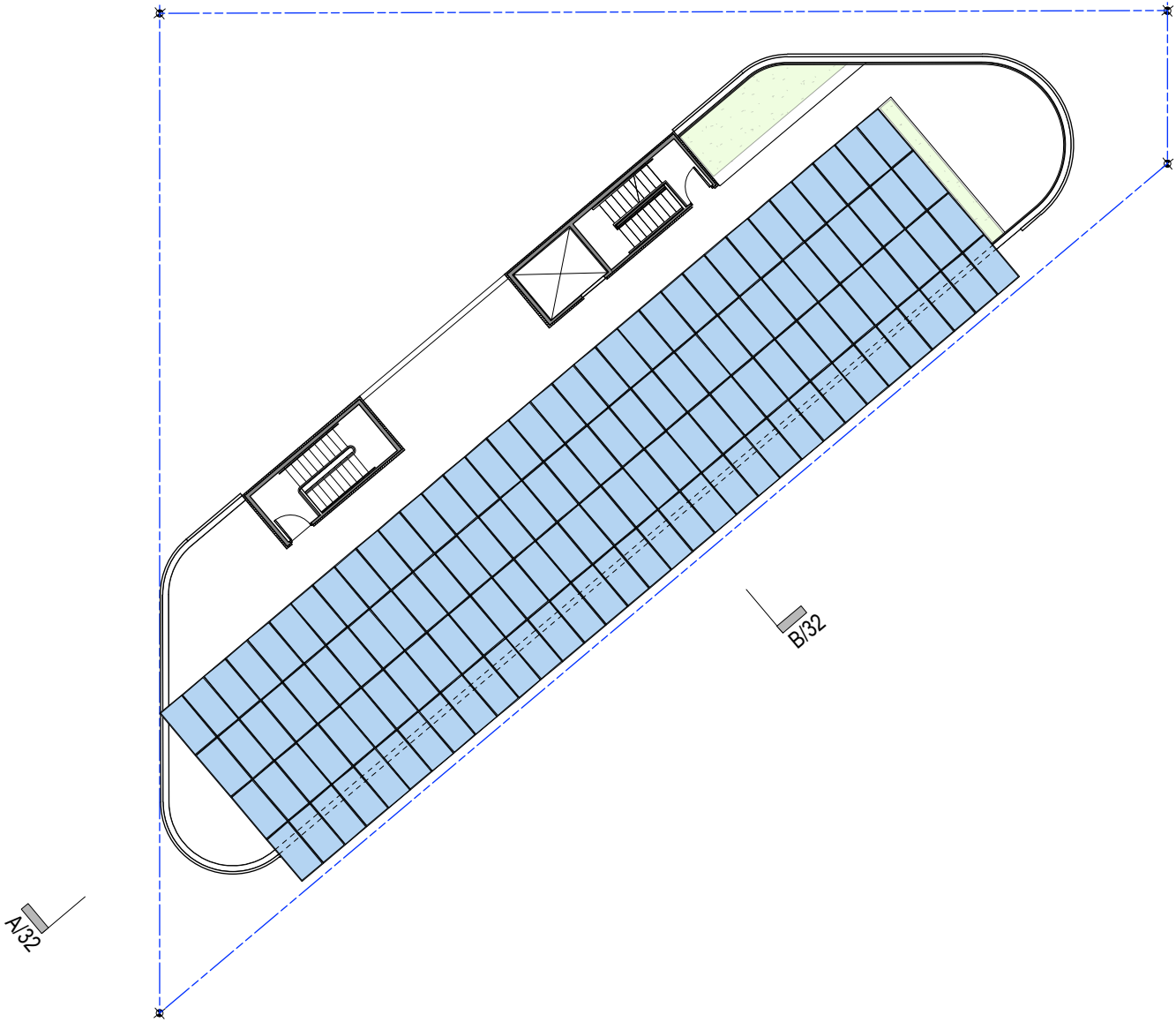




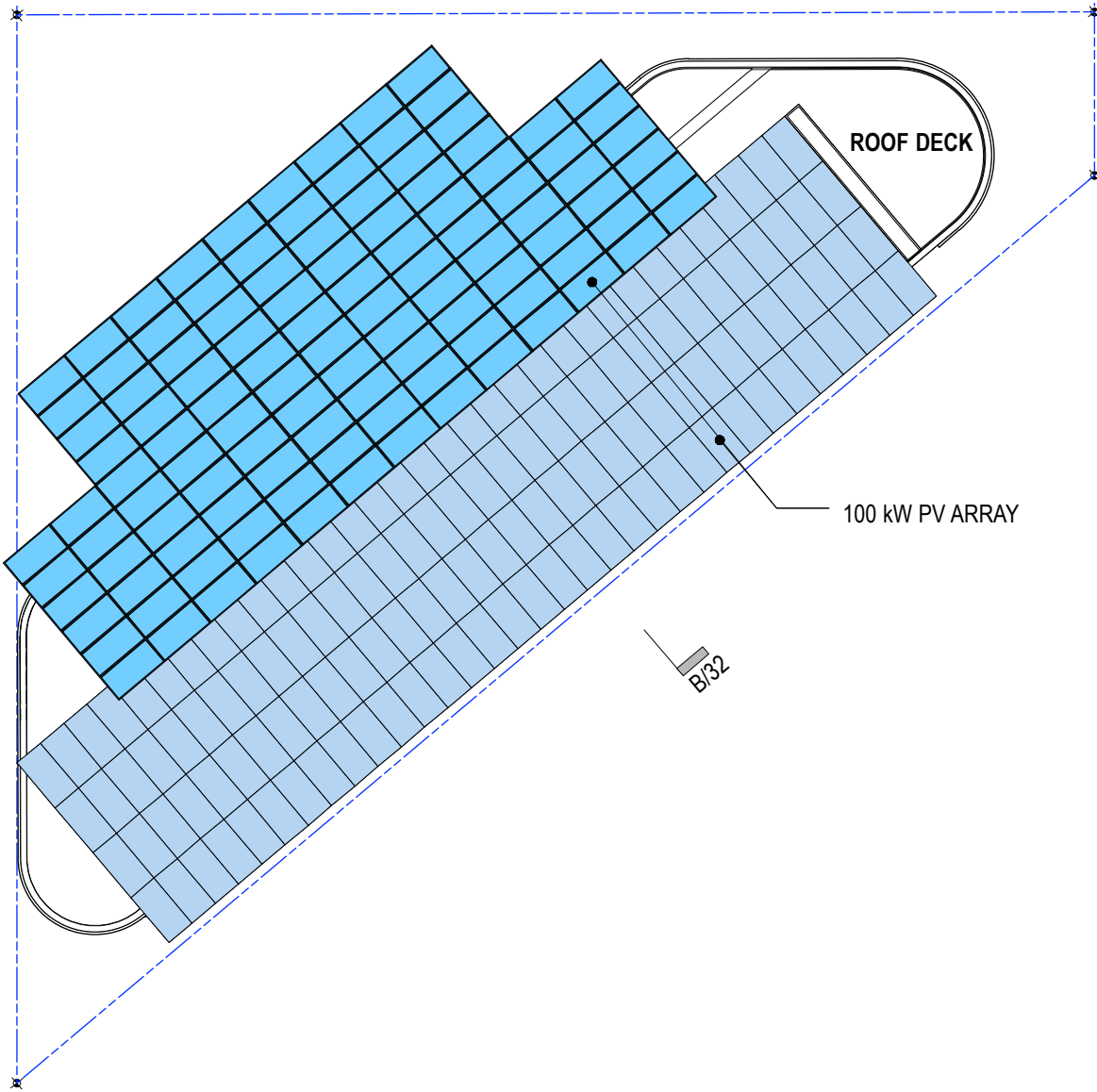
THIRD + FIFTH FLOOR PLAN



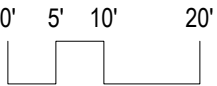
FOURTH + SIXTH FLOOR PLAN



ROOF PLAN



ARRAY PLAN



LEGEND

- //SUPPORT
- //RESIDENTIAL
- //AMENITY
- //LOBBY



1 BRICK // DARK IRONSPOT



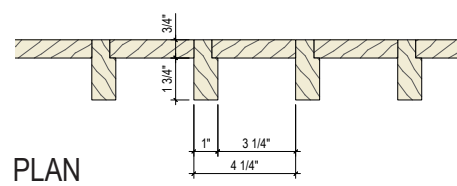
2 STUCCO // WHITE // FINE TEXTURE



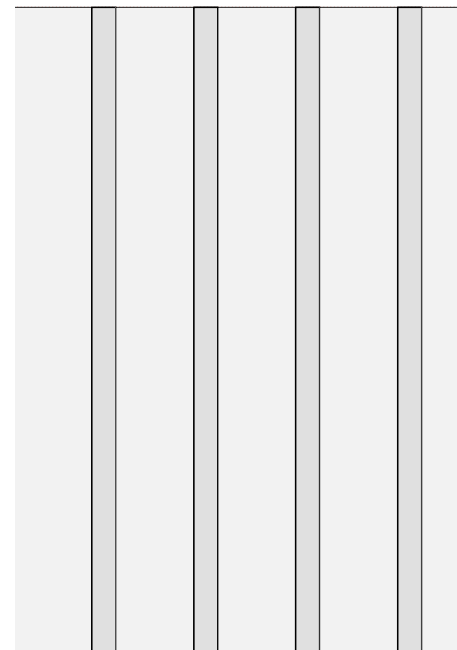
6 WINDOW FRAME // BLACK OPERABLE SASH // GRAY FRAME



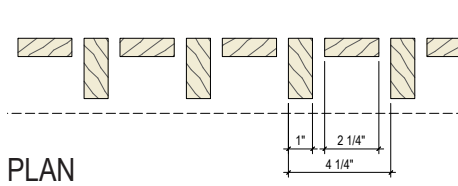
5 PHOTOVOLTAIC PANELS



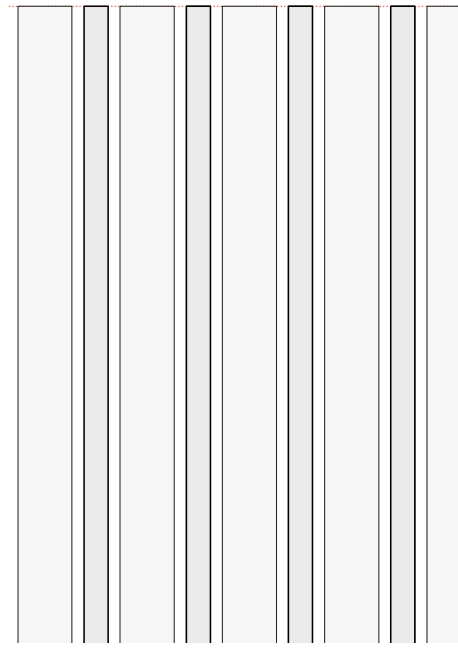
PLAN



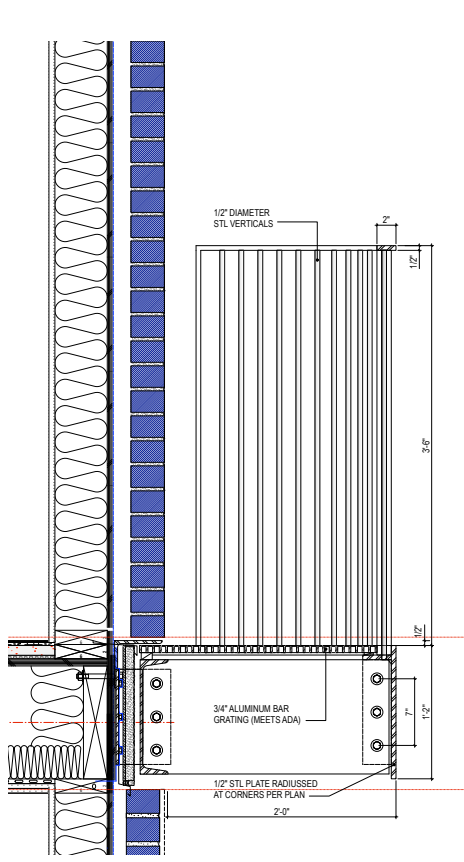
CLADDING ELEVATION



PLAN



FENCE ELEVATION



BALCONY SECTION



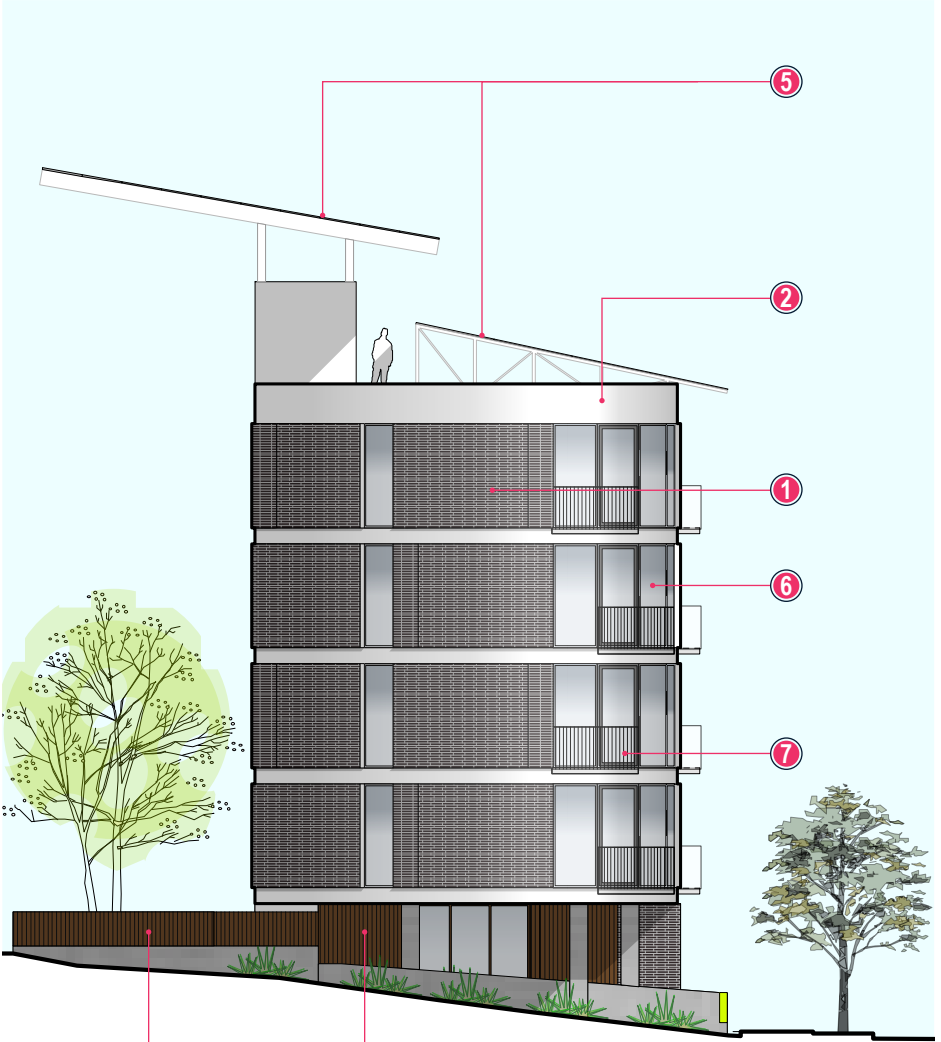
3 WOOD // DARK STAINED



4 WOOD // WHITE STAINED



7 BALCONY // WHITE P. COAT MTL



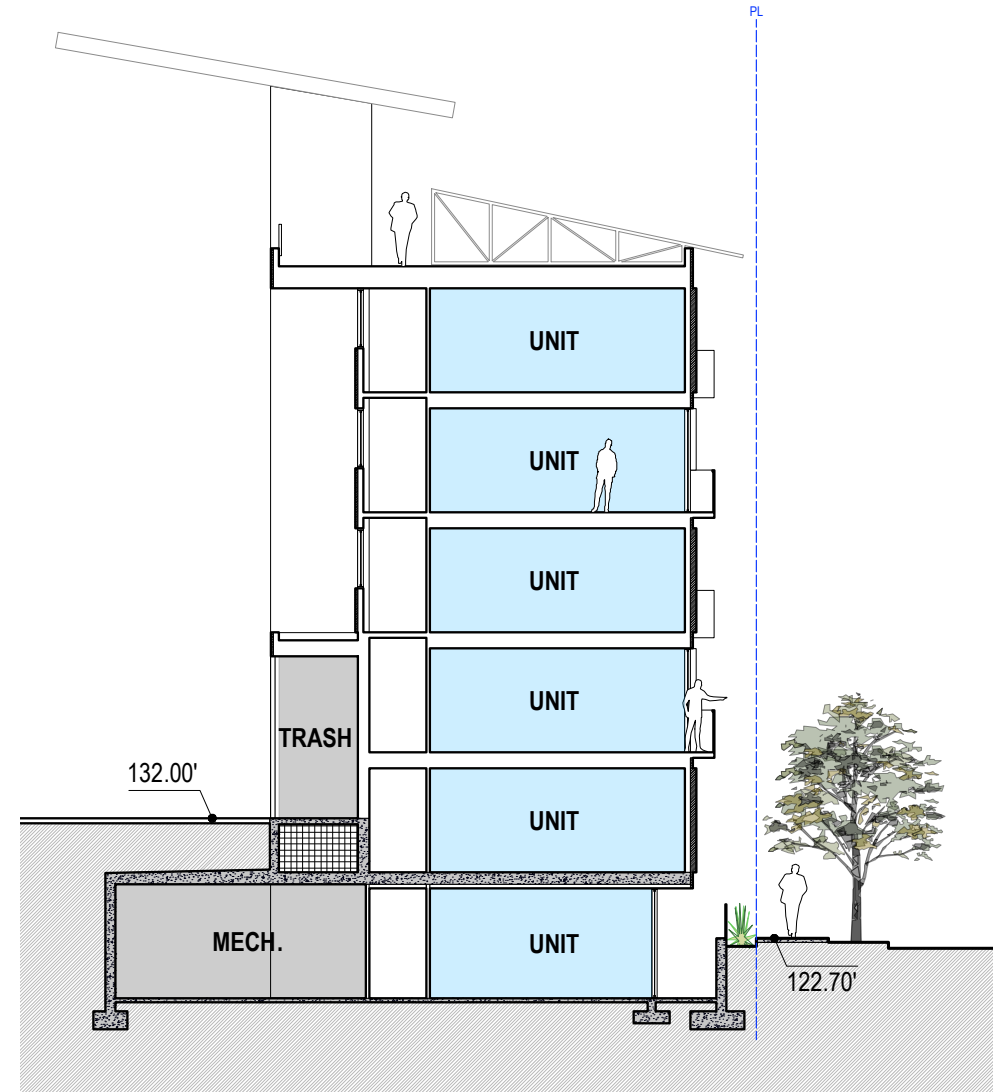
B // NORTH EAST ELEVATION



A // NORTH WEST ELEVATION

LEGEND

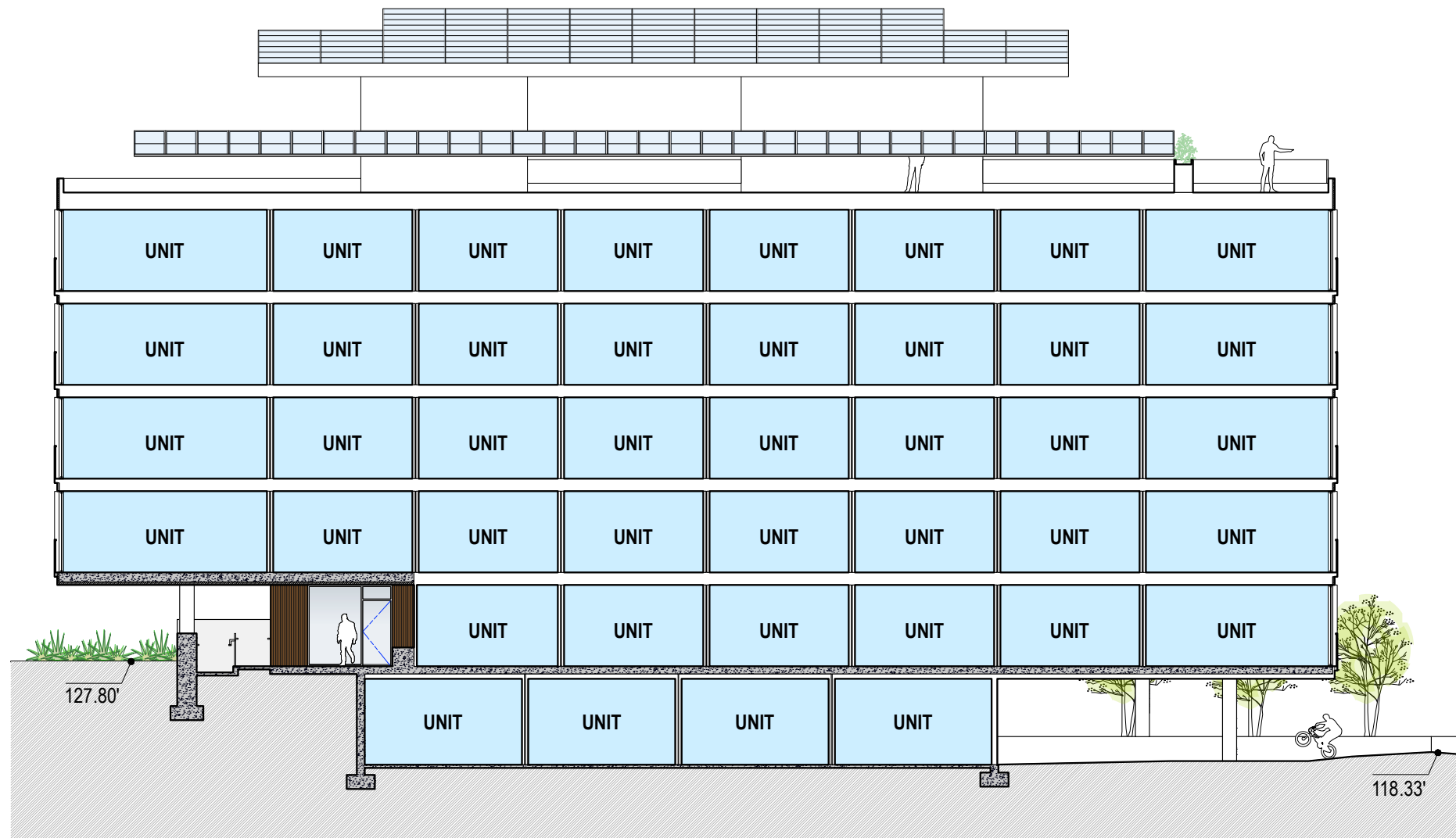
- 1 // BRICK
- 2 // STUCCO
- 3 // WOOD // DARK
- 4 // WOOD // WHITE
- 5 // PV PANELS
- 6 // WINDOWS
- 7 // BALCONIES



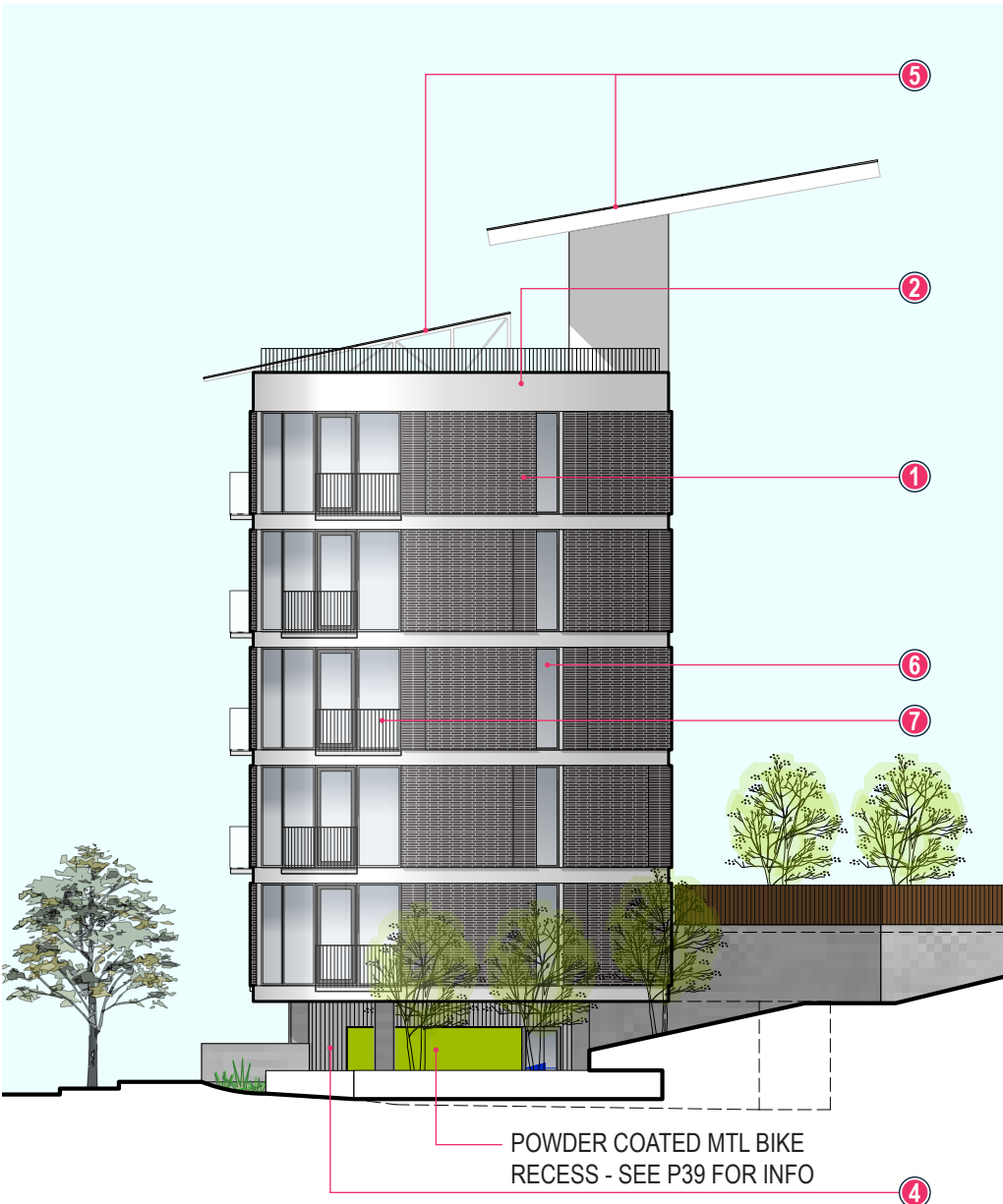
B // SECTION

LEGEND

- // SUPPORT
- // RESIDENTIAL
- // AMENITY
- // LOBBY



A // SECTION



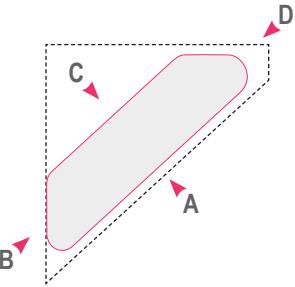
D // NORTH EAST ELEVATION



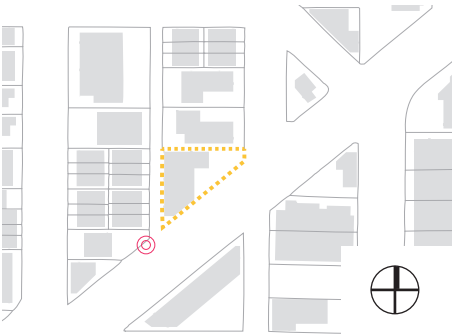
C // NORTH WEST ELEVATION

LEGEND

- ① // BRICK
- ② // STUCCO
- ③ // WOOD // DARK
- ④ // WOOD // WHITE
- ⑤ // PV PANELS
- ⑥ // WINDOWS
- ⑦ // BALCONIES



VIEW LOOKING NE FROM BRIDGEWAY



VIEW LOOKING WEST ON BRIDGE WAY



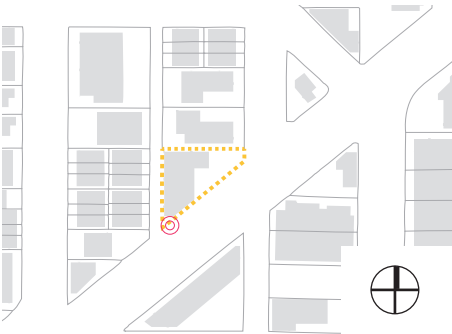
VIEWS LOOKING NW FROM BRIDGE WAY



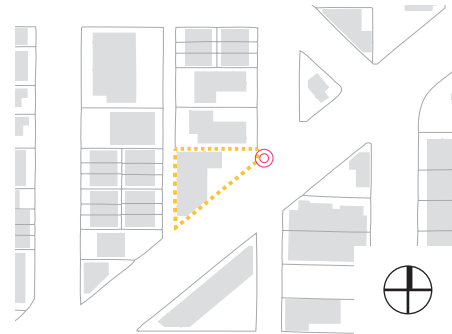
VIEW OF COURTYARD



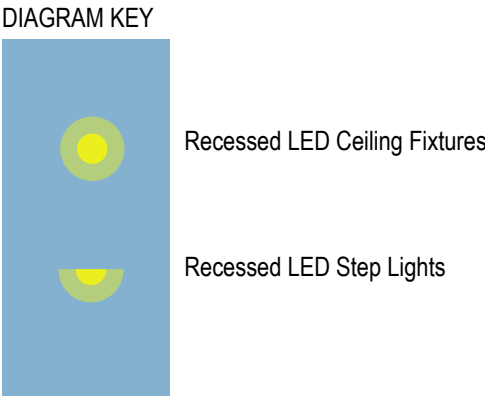
MAIN ENTRY



SECONDARY ENTRY



EXTERIOR LIGHTING PLAN

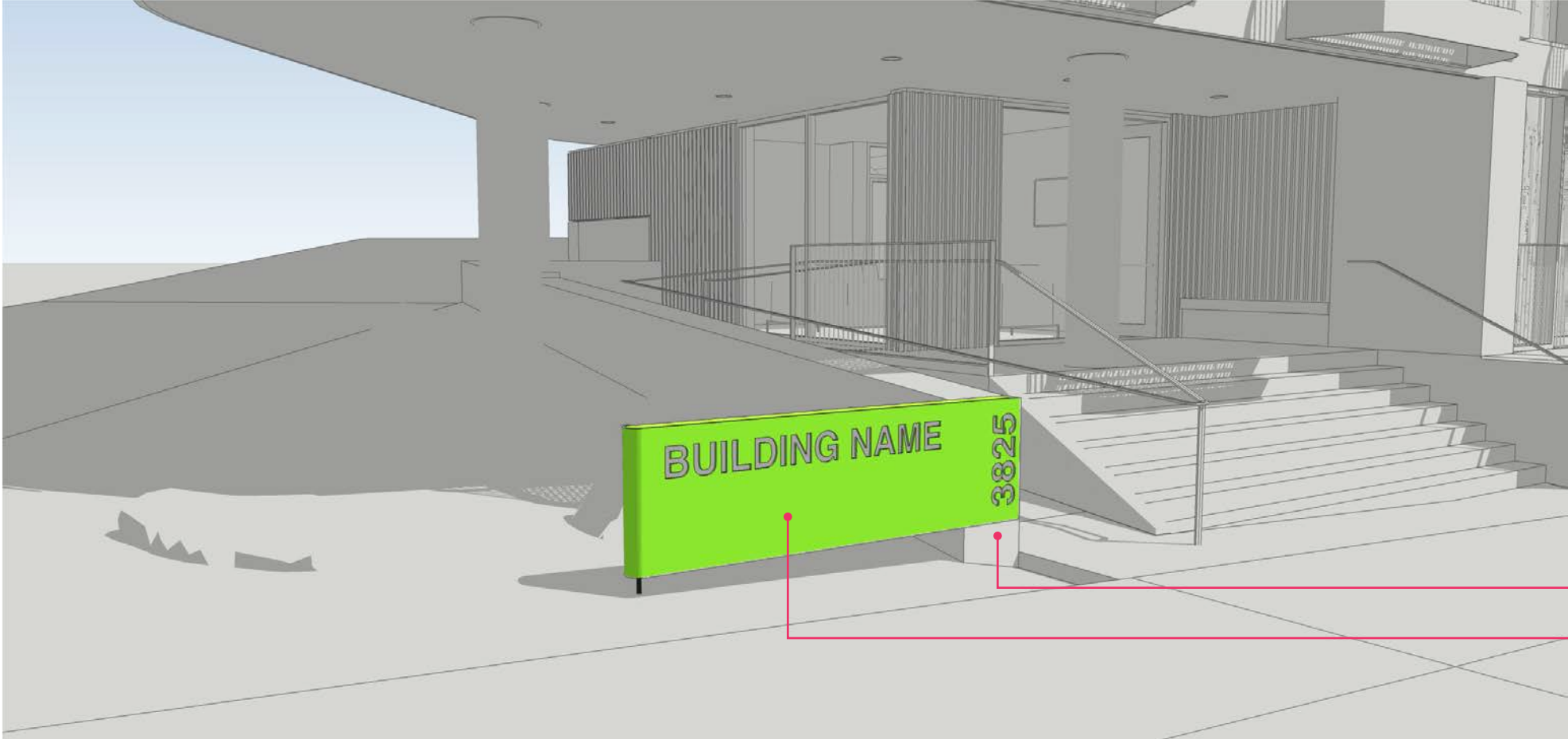
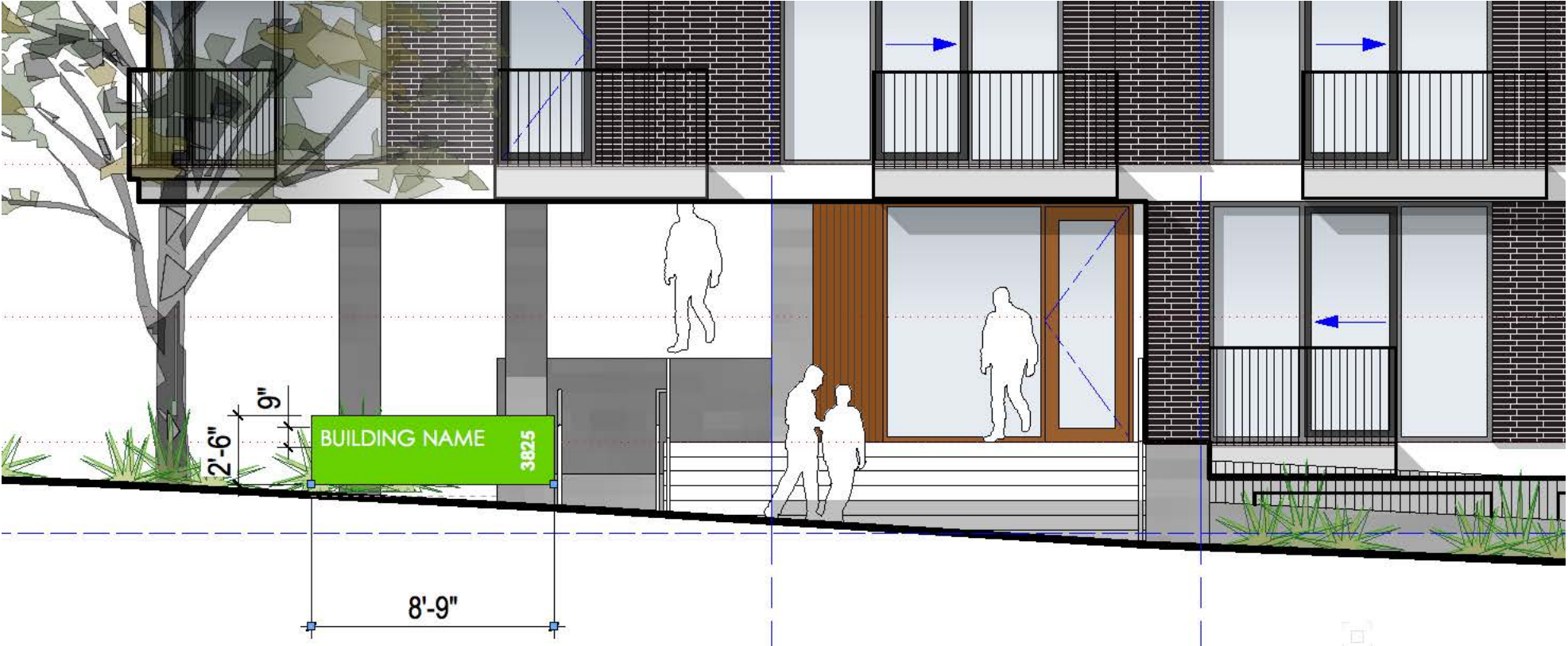


PROPOSED PRIMARY BUILDING SIGN CONCEPT

The sign is located adjacent to the primary building entrance on the western, uphill side of Bridge Way and is integrated with the building base, getting support and power from the concrete site wall it interlocks with while allowing the upper building volume to retain its legibility and form.

pear green	[28] 2028-40
tequila lime	[P-700] [38] 2028-30
douglas fir	[P-700] [48] 2028-20

Proposed Color Range



Sign Precedent Example

Concrete Site Wall Notched for Sign Face to be Flush with Concrete

Cut Out Letters in Painted + Radiused Aluminum Plate (6" Deep) - letters backlit with LED at night

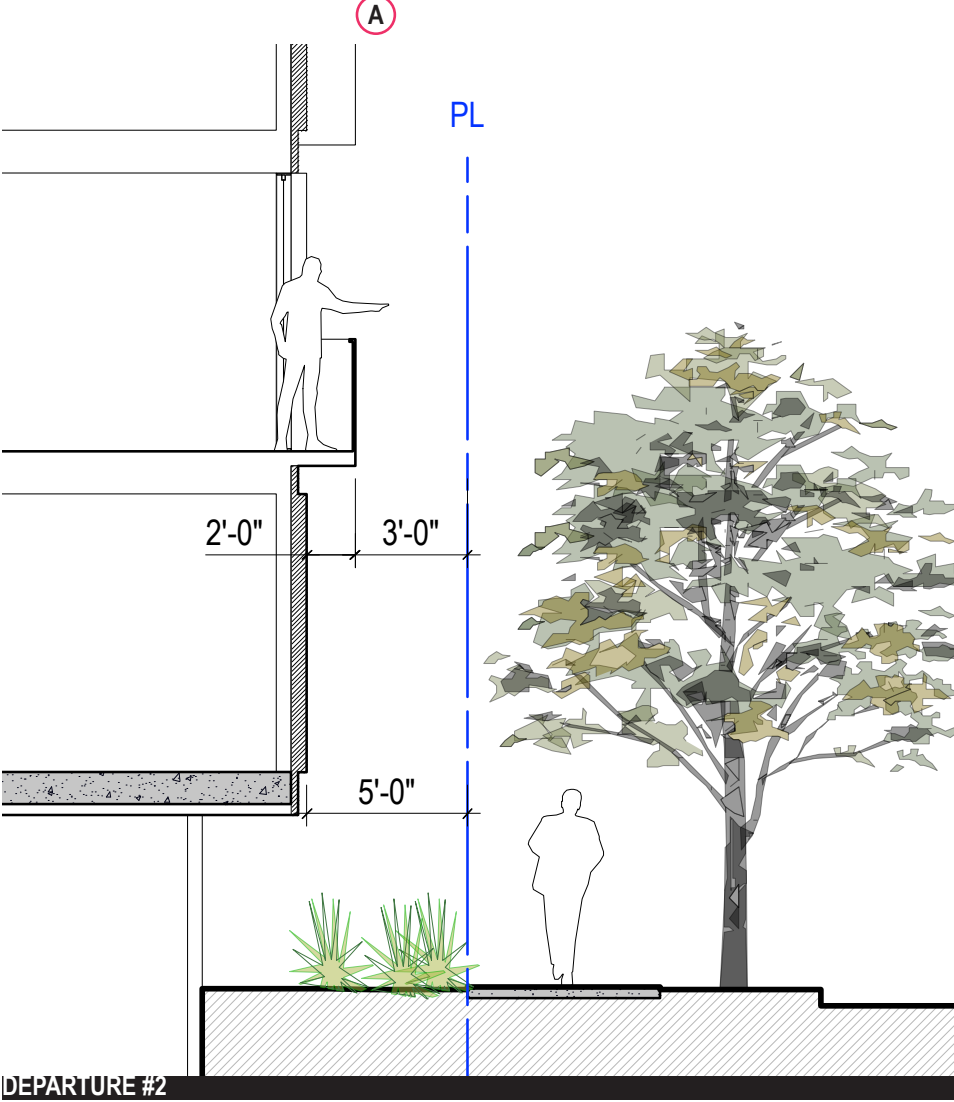
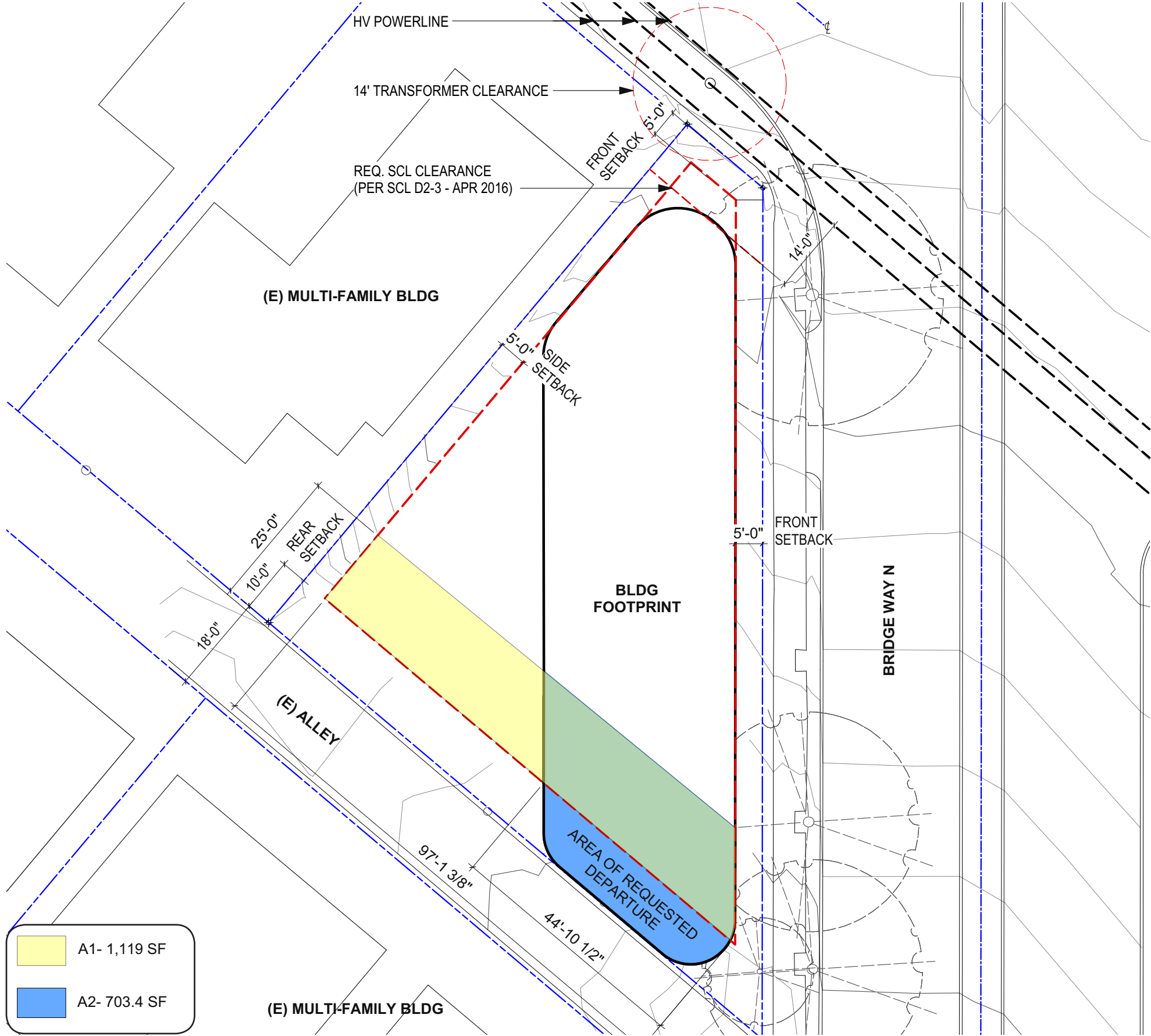
DEPARTURES

Departure Request #1: 23.45.518 Rear Setback

Standard:
Apartments in LR Zones with an alley are required to have a 10' rear setback.

Proposed:
Allow building to extend into the rear setback for a portion of the site at the SE corner.

Rationale:
The alley behind the subject property is 18' wide, exceeding the code minimum width of 16'. While the proposed configuration extends into the rear setback for approximately 45' at the SE corner, the preferred scheme provides open space for the remaining 53' of the rear setback line as the diagram indicates. Further, within 25' of the rear property line, the proposed scheme footprint is 703.4 sf, while a strictly code-compliant scheme (see ALT 1) would have 59% more area (1,119 sf) within 25' of the rear property line. The proposal provides significantly greater relief along the alley and better meets Design Guidelines CS2, Urban Pattern and Form by defining the SE corner and providing a stronger street edge along Bridge Way. The preferred scheme and departure also allow for the primary pedestrian entrance at the SE corner to be more generous, which furthers PL3 Street Level Interaction, and PL4 Access to Public Transit. and PL3.

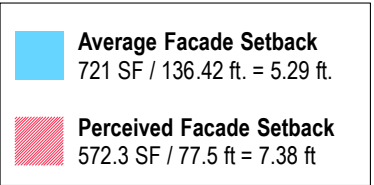


Departure Request #2: 23.45.518.I Projections in Required Setbacks

Standard:
Unenclosed decks and balconies may project a maximum of 4 feet into required setbacks if each one is:
1. No closer than 5 feet to any lot line;
2. No more than 20 feet wide; and
3. Separated from other decks and balconies on the same facade of the structure by a distance equal to at least 1/2 the width of the projection.

Proposed:
Projecting decks will meet the criteria #2 and #3, and be below the maximum projection dimension. The proposed decks will be 2' deep and will be 3' to the lot line, requiring a departure for criteria #1, distance to lot line.

Rationale:
The decks animate the building elevation as secondary elements and provide opportunities for interaction between the public and the residents, which will be a benefit to the neighborhood and furthers the following three Design Guidelines: Connectivity (PL1), Walkability (PL2), and Street-Level Interaction (PL3). The decks will also provide solar shading on the south side, and thereby reduce solar heat-gain.



DEPARTURE #3

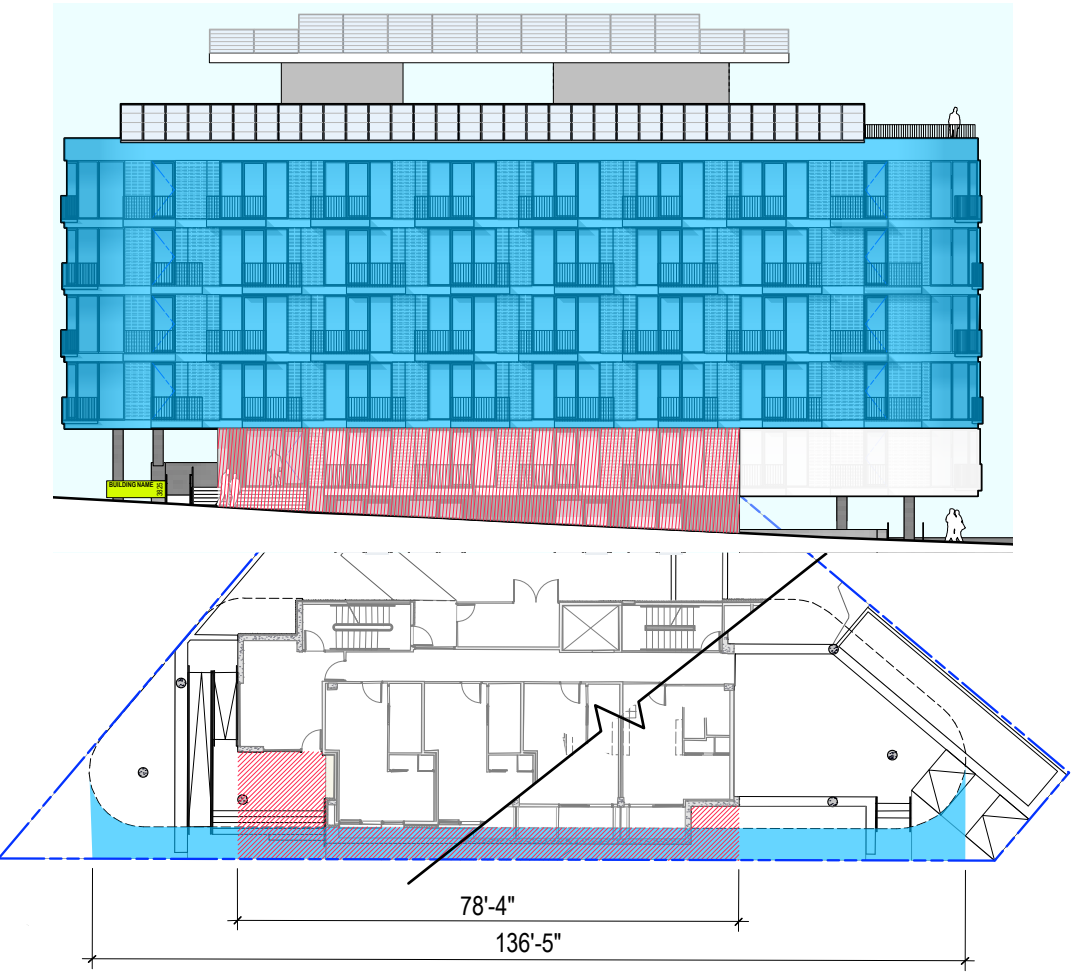
DEPARTURES

Departure Request #3: 23.45.518.B.1 Average Side Setback

Standard:
Side setbacks for facades greater than 40 in length to be 5' min, 7' average.

Proposed:
Proposed structure to meet minimum 5' setback requirement but not 7' average.

Rationale:
Bridge Way is technically a side setback, per Land Use Code. However, it is experientially the front of the building, therefore it is important to hold the street edge and the proposal meets the front setback requirement of 5', therefore meeting the intent of the code. Further, at street level, with the building notches, the perceived setback at street level is 7.38 ft, exceeding the 7' average.

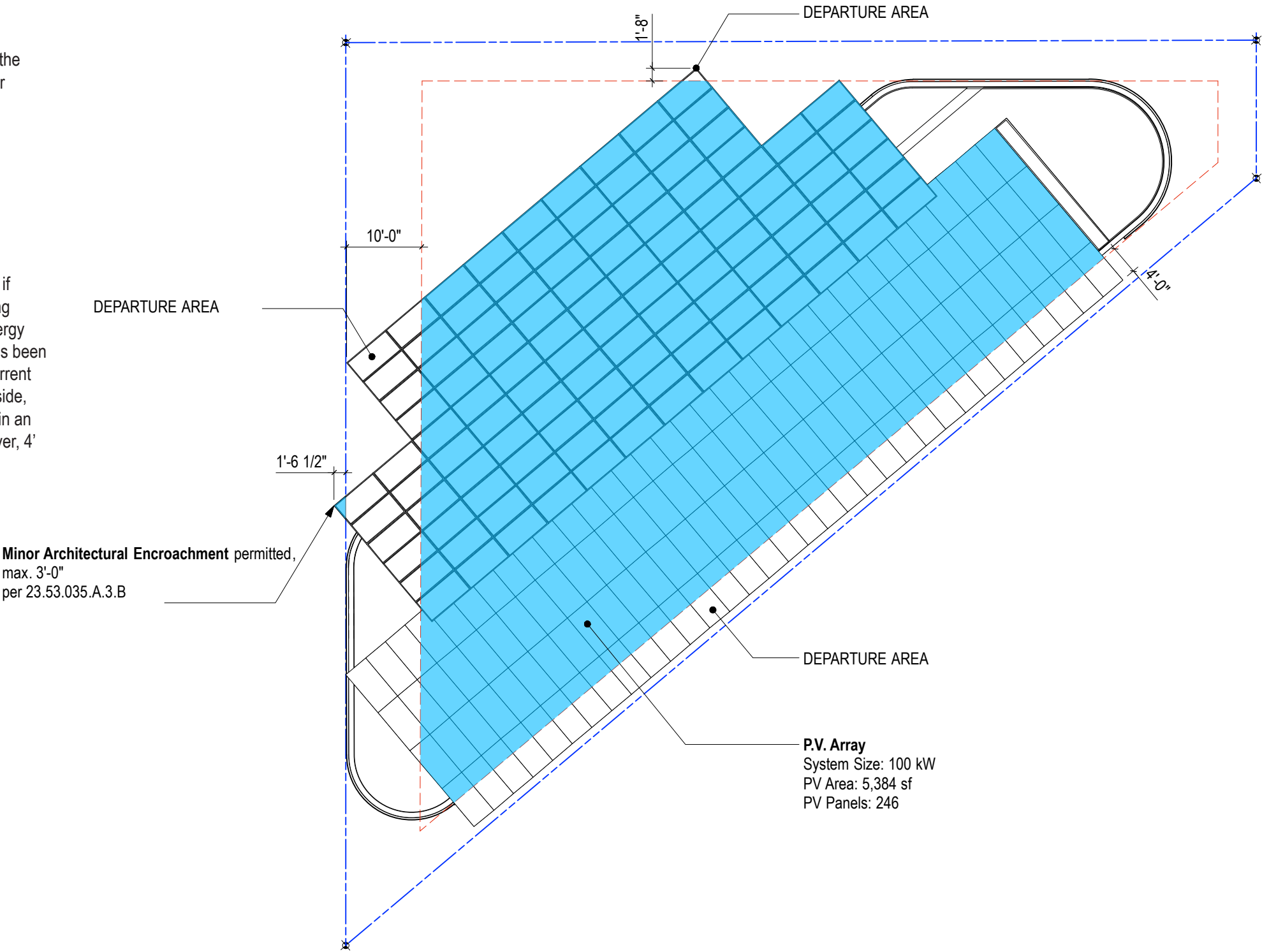


Departure Request #4: 23.45.518.J.5 Rooftop Solar in Required Setbacks

Standard:
Solar collectors may be permitted in required setbacks or separations, pursuant to the provisions of Section 23.45.545. Section 23.45.545 does not address rooftop solar collectors in setbacks.

Proposed:
Rooftop solar collectors to extend into side, front, and rear setbacks as indicated on diagram. Rooftop solar collectors to also extend over ROW, as permitted per 23.53.035.A.3.b, as Minor Architectural Encroachment.

Rationale:
Per 23.41.012. D, Departures for the Living Building Pilot Program may be allowed if the departure would result in a development that better meets the goals of the Living Building Pilot Program. In order for the project to meet the requirements of the Energy Petal, the building is required to produce 105% of the energy used on site. This has been calculated at approximately 104,000 kWh/yr, requiring a 100 kW PV array. With current and projected photovoltaic technology, this will require panels to extend into front, side, and rear setbacks in order to achieve the necessary energy production and maintain an efficient and rational form for the PV Array. The encroachments are minimal however, 4' into the setback along Bridge Way, less than 2' into the alley and side setbacks.

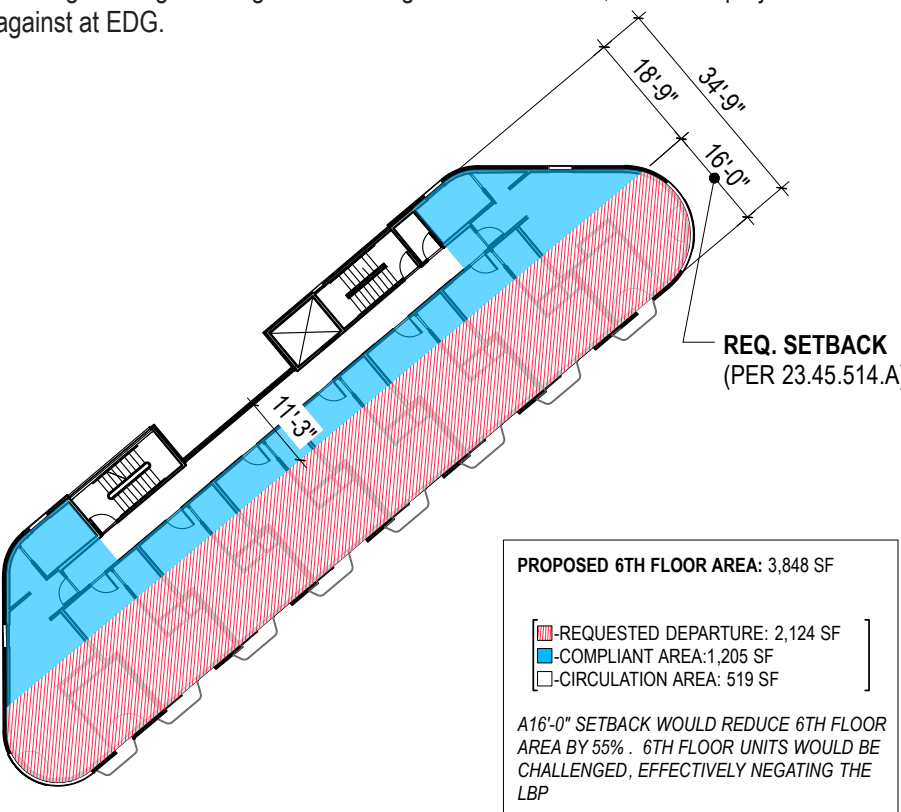


Departure Request #5: 23.45.518.L2 Upper Level Setback

Standard:
In LR zones, a minimum upper-level setback from all street lot lines is required in addition to any required ground-level setback, as follows:
2. For structures with a 40 foot height limit according to Table A for 23.45.514, the upper-level setback requirement is 16 feet above a height of 44 feet.
3. The minimum upper-level setback shall be provided at all points along the length of the street property line as measured from finished grade.

Proposed:
Project proposes to maintain consistent 5' setback along Bridge Way N. and a consistent 11'-1" setback along Woodland Park Ave N.

Rationale:
The proposed building is designed to be a unified whole that contributes to a strong definition of Bridge Way N, celebrating the unique diagonal per Design Guideline: Massing (DC2) and an upper level setback would significantly detract from that urban design response. It would also make the support of the PV array more challenging and a setback would compete formally with the radiussed building form (bar) that was supported at EDG. This code section impacts the additional story afforded by the LBP and does not recognize the unique aspects of the LBP legislation, which allow for a 50' height limit (40' + 10'). In order to meet the development imperatives and finance the LBP, on this small site with irregular geometry, an upper level setback would significantly challenge the viability of the project pursuing the pilot, result in a loss of units and rentable area and pushing building massing closer to neighbors to the north, which the project was advised against at EDG.

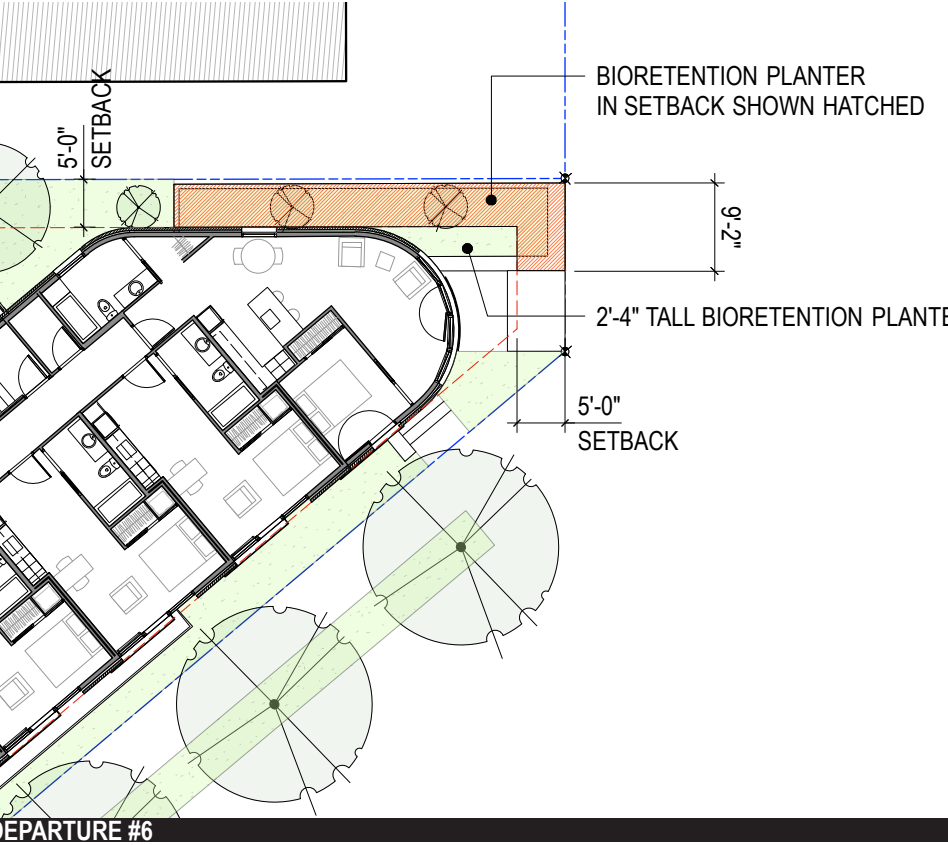


Departure Request #6: 23.45.518.J10 Structures in Required Setbacks (GSI)

Standard:
Above-grade green stormwater infrastructure (GSI) features are allowed without setback or separation restrictions if:
a. Each above-grade GSI feature is less than 4.5 feet tall, excluding piping;
b. Each above-grade GSI feature is less than 4 feet wide; and
c. The total storage capacity of all above-grade GSI features is no greater than 600 gallons.

Proposed:
Project proposes Bioretention Planter (GSI) that is 2'-4" high, and has capacity < 600 gallons, thereby meeting criteria a and c. However the planter is 9'-2" wide, exceeding criteria b.

Rationale:
Required capacity of Bioretention planter is dictating width on the small site. Planter meets other criteria for height and size, has been carefully integrated into the streetscape and entry per Design Guidelines: Connectivity (PL1), Walkability (PL2), and Street-Level Interaction (PL3) serving as an edge and seat wall along the ROW and entrance ramps. Landscape has also been integrated into planter to enhance the site experience and provide a buffer to the property to the north.



APPENDIX

CONTEXT AND SITE

CS1 Natural Systems and Features: *Use natural systems and features of the site and its surroundings as a starting point for project design.*

RESPONSE: In pursuit of the Living Building Pilot certification, the alternatives will need to facilitate solar energy collection for generating electricity and heating water, while also maximizing the potential for daylighting the units to help reduce energy consumption. The building will likely have a graywater treatment system that dramatically reduces the quantity of potable water used on site and will employ high-efficiency building systems such as heat exchangers and heat pumps, all of which take advantage of natural systems. If the Living Building Pilot is pursued, the project would produce 105% of its own energy through Photovoltaics.

CS2 Urban Pattern and Form: *Strengthen the most desirable forms, characteristics and patterns of the streets, block faces and open spaces in the surrounding area.*

RESPONSE: Bridge Way North, the diagonal street that cuts across the rectilinear grid, currently lacks a strong street wall and definition. The project seeks to emphasize the unique geometry of the site and primary street (Bridge Way N) by creating a strong edge along the Bridge Way property boundary. The massing should have a strong contextual relationship to the pattern of these triangular blocks while transitioning from Commercial zones to the South and multi-family and single family housing to the North.

CS3 Architectural Context and Character: *Contribute to the architectural character of the neighborhood.*

RESPONSE: As a rapidly developing area, the design seeks to provide a timeless addition to the neighborhood, while serving as an example for sustainable multifamily development in the region.



Design Cue: CS2 - Lack of Street Edge along Bridge Way N



Design Cue: PL4 - Active Transportation



Design Cue: CS3 - Elegant Infrastructure



Design Cue: CS3 - Public Art

PUBLIC LIFE

PL1 Connectivity: *Complement and contribute to the network of open spaces around the site and the connections among them.*

RESPONSE: The site offers an excellent ability to connect to existing infrastructure and open spaces in the area. To the West, Aurora Avenue offers rapid transit access to the city. The alley provides utilitarian access to the project for trash and recycling, while to the East, a new Neighborhood Greenway is being developed on Woodland Park Ave, and Stone Way provides excellent bike and pedestrian access to restaurants, cafes, UW, and the waterfront and Greenlake. The project strives promote these connections.

PL2 Walkability: *Create a safe and comfortable walking environment that is easy to navigate and well connected to existing pedestrian walkways and features.*

RESPONSE: The project endeavors to improve the pedestrian experience on Bridge Way North.

PL3 Street-Level Interaction: *Encourage human interaction and activity at the street-level with clear connections to building entries and edges.*

RESPONSE: The project will present clear entries that are inviting, secure, and clear.

PL4 Active Transportation: *Incorporate design features that facilitate active forms of transportation such as walking, bicycling and use of transit.*

RESPONSE: The project seeks to advance the Living Building Challenge Imperative for promoting Human Powered Living. Bicycle infrastructure, including covered, secure, and ample bike parking has been prioritized over vehicle parking, which can be provided off site if desired by tenants. The proximity to rapid transit, and building access to pedestrian routes to public transportation will enhance non-vehicular transportation use.



Design Cue: PL2 + PL3 - Inviting and Secure Building Entry



Design Cue: CS2 + DC2 - Building Wholeness and Site Geometry



Design Cue: DC2 - Corner Treatment

DESIGN CONCEPT

DC1 Project Use and Activities: *Optimize the arrangement of uses and activities on the site.*

RESPONSE: The project seeks to take advantage of downtown, lake, and mountain views in both the positioning and orientation of apartment units and the building common spaces.

DC2 Architectural Concept: *Develop an architectural concept that will result in a unified and functional design that fits well on the site and within its surroundings.*

RESPONSE: Given the fragmented nature of the immediate Bridge Way context, and the large scale recent multifamily development in the neighborhood, this site offers an opportunity for a smaller scale building that can start to define Bridge Way North through its massing, wholeness, and careful integration of sustainability strategies. The project endeavors to take advantage of the unique site geometry and topography to produce a functional and elegant addition to the neighborhood.

DC3 Open Space Concept: *Integrate open space design with the design of the building so that each complements the other.*

RESPONSE: The project seeks to have useful and attractive open spaces such as a common roof deck with a view of the downtown and lake, and the integration of Urban Agriculture to meet the requirements of the Living Building Pilot Program.

DC4 Exterior Elements and Finishes: *Use appropriate and high quality elements and finishes for the building and its open space.*

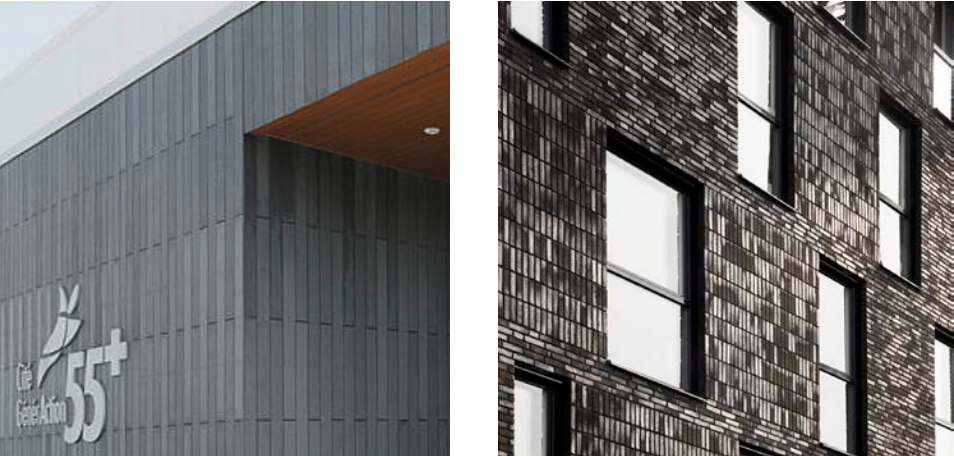
RESPONSE: The exterior materials have not yet been selected, however we are exploring several durable, high-quality materials such as brick, GFRP panels, metal, and wood cladding that would provide an appropriate scale, texture and timelessness. In addition, if the project pursues the Living Building Pilot, photovoltaic panels would become a feature that is integrated into the composition and final palette.



Design Cue: DC1 + DC3 - PV Array fro



Design Cue: DC4 - Exterior Materials (Metal, Wood, GFRP, Brick)

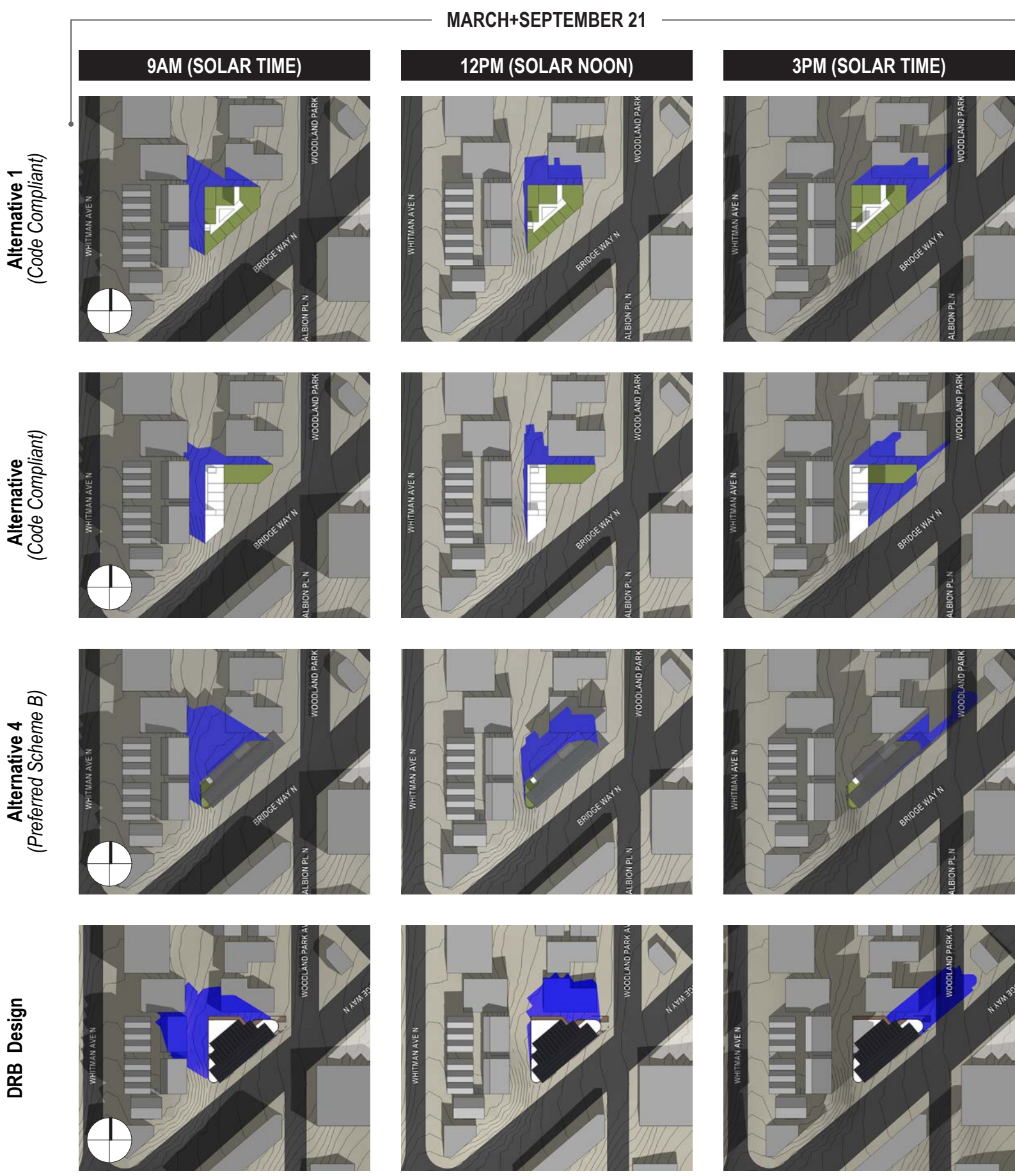


Design Cue: CS1 + DC4 - Integrated PV Array

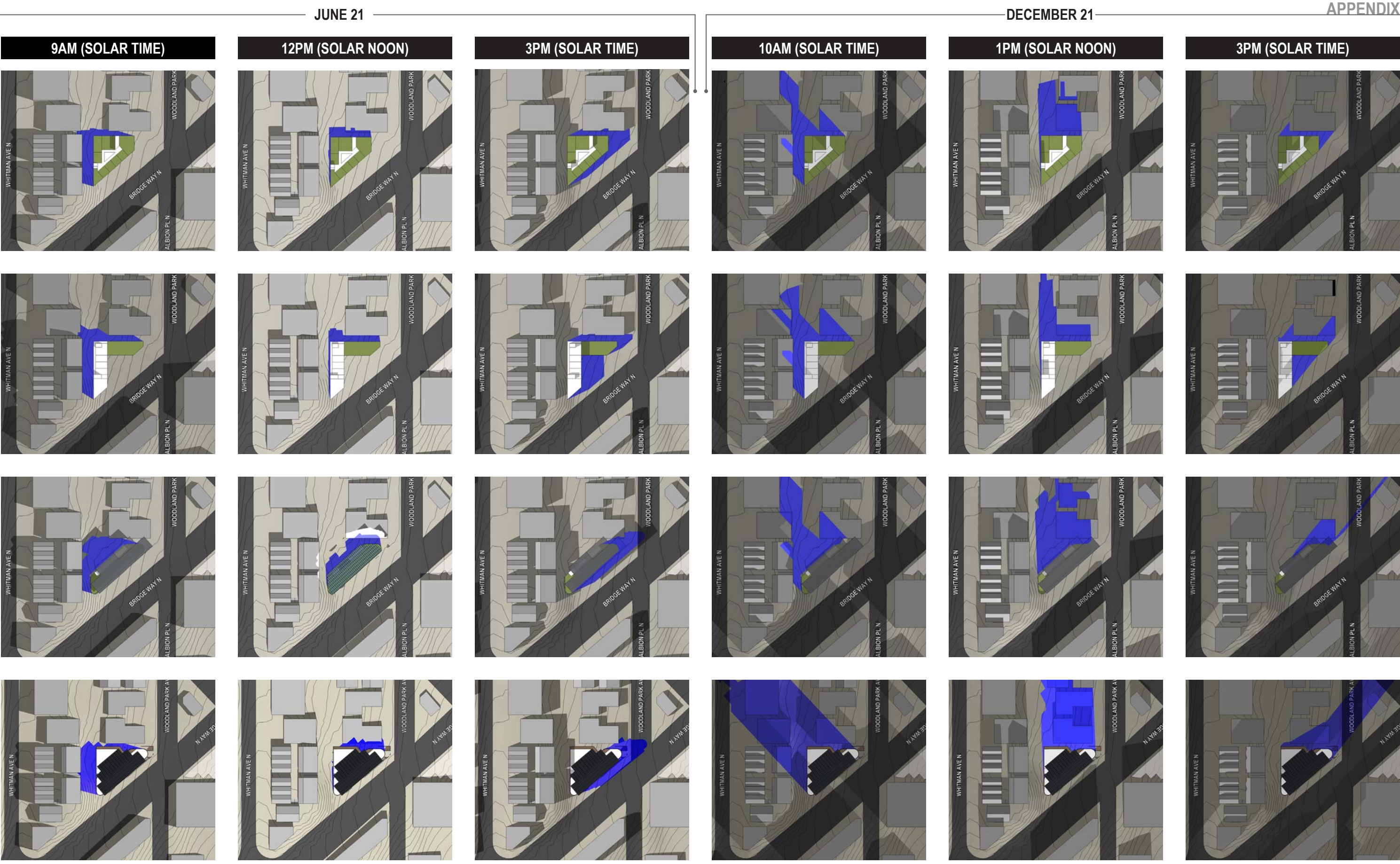
APPENDIX

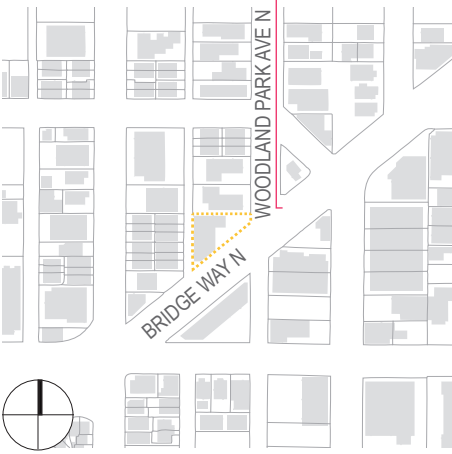
Shading Studies
The sun analysis diagrams show that the schemes have a minimal shading impact on adjacent properties and ROW's. At 3pm on the equinoxes, the two preferred schemes (Alternatives 3 and 4) shade the north neighbor the least, which is also true of afternoons during the Winter Solstice. However, due to Alternative 4 being a story taller, it casts the largest shadow. This is mediated by it's narrow footprint and presence on site, which is positioned away from the neighbors as much as possible. The preferred schemes also do not cast any shadows on the neighbor to the west, and generally provide more light to the adjacent alley.

Blue shadow is differentiating between existing shadows from the neighborhood and new shadows from the proposed.



APPENDIX





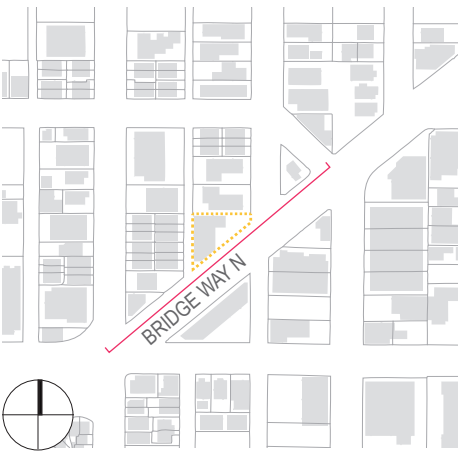
Woodland Park Ave N Single Family Single Family Single Family Single Family Single Family Commercial Building Commercial Building N 39th St Commercial Building Bridge Way N Apartment Building Albion Pl N

WOODLAND PARK AVE N PHOTO-MONTAGE LOOKING EAST



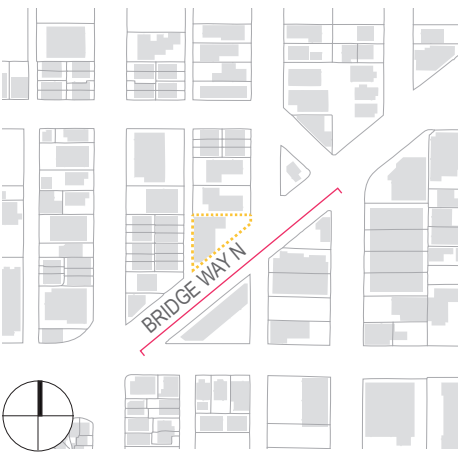
Albion Pl N Apartment Building 3825 Bridge Way N Apartment Building TownHomes 39th St N Apartment Building Apartment Building Single Family Apartment Building Single Family Single Family Apartment Building Woodland Park Ave N

WOODLAND PARK AVE N PHOTO-MONTAGE LOOKING WEST



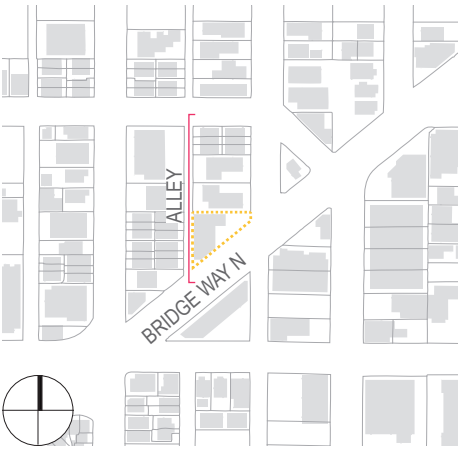
BRIDGE WAY N PHOTO-MONTAGE LOOKING NORTH

Bridge Way N Apartment Building Apartment Building 3825 Bridge Way N (South) Woodland Park Ave N Commercial Building Bridge Way N



BRIDGE WAY N PHOTO-MONTAGE LOOKING SOUTH

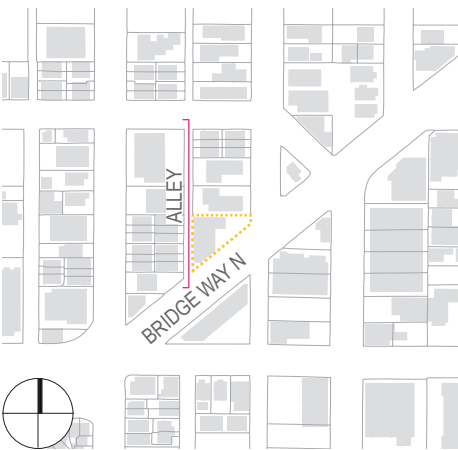
Bridge Way N Commercial building Apartments (Albion PL N) Bridgewood Apartments Bridge Way N



N 39th St
ALLEY PHOTO-MONTAGE LOOKING EAST



TownHomes
Apartments
3825 Bridge Way N (West)
Bridge Way N



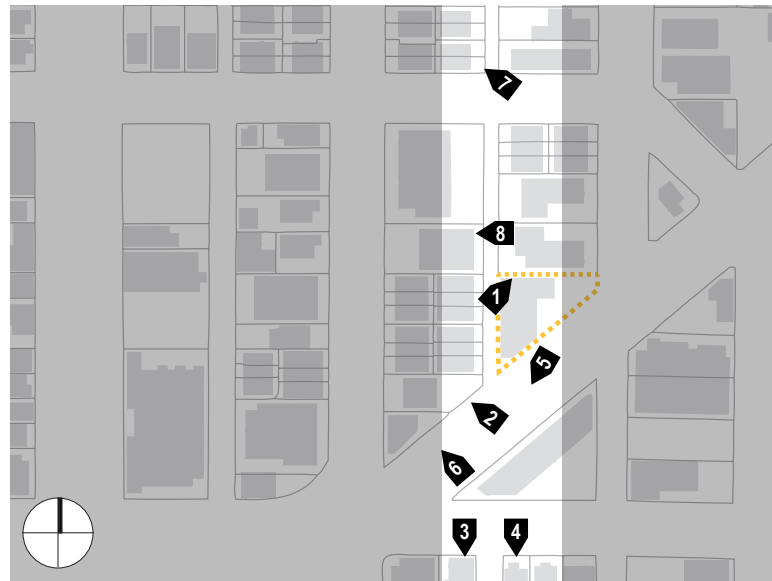
Bridge Way N
ALLEY PHOTO-MONTAGE LOOKING WEST



Apartment Building
Apartment Building
Apartment Building
39th Ave N

APPENDIX

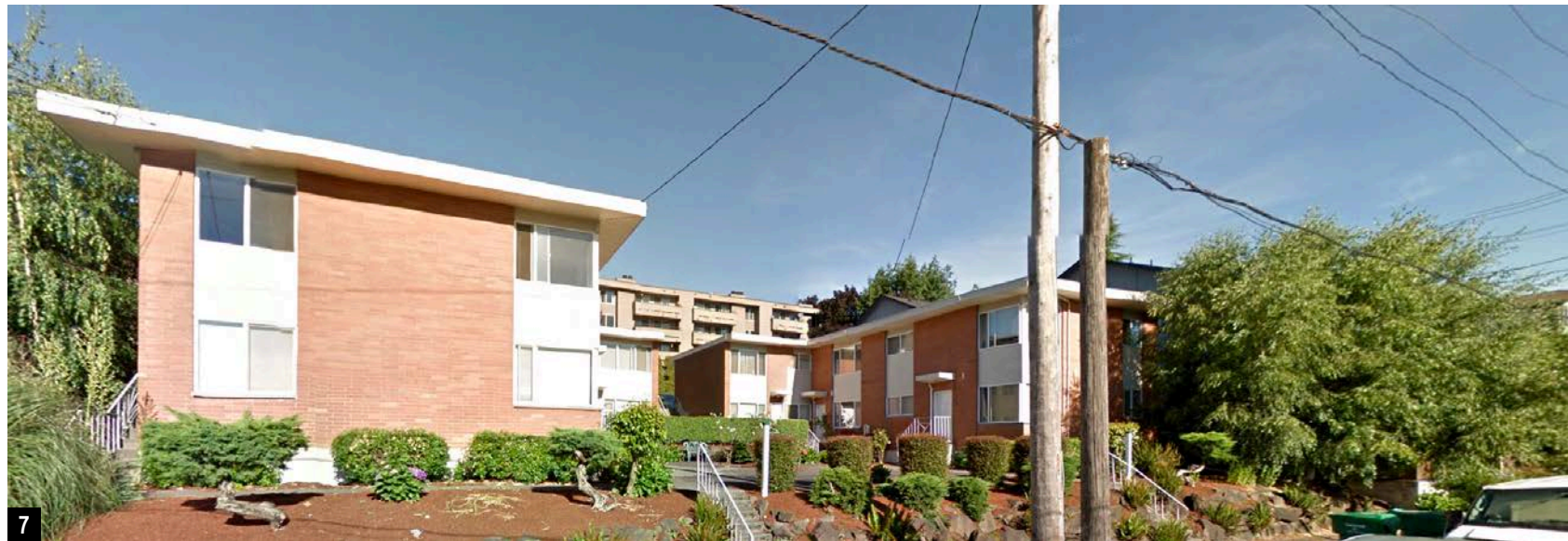
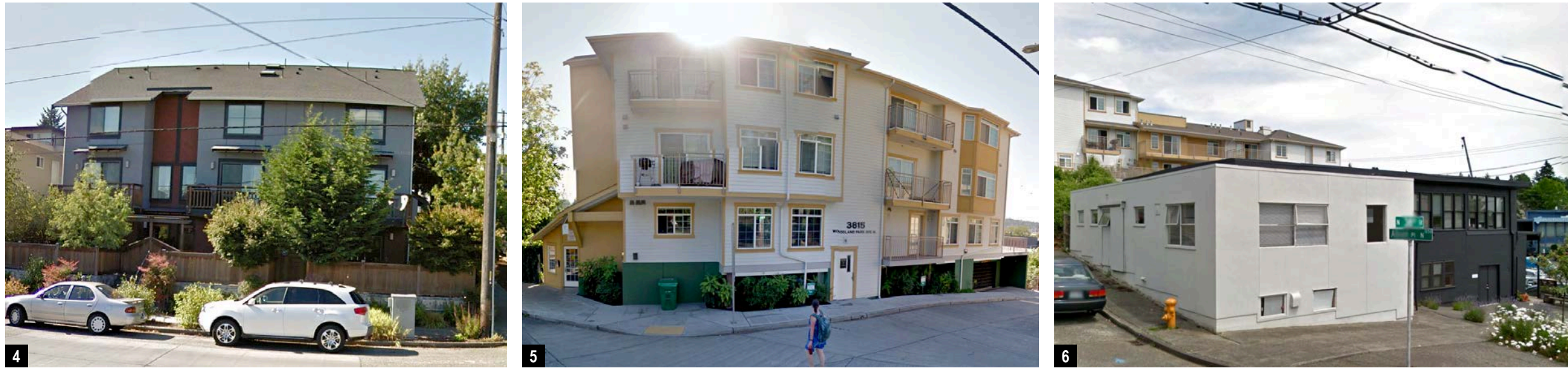
Alley (West side of Site)
The Site slopes up to the north and west, with predominantly multifamily buildings and a few single-family homes. There are a wide variety of styles and scales in this neighborhood, as summarized in the photos to the right.



- 1 Neighbor Property to North
- 2 Bridge Way N & Alley looking NW
- 3 N 38th Street - Single Family
- 4 N 38th Street - Single Family
- 5 Bridge Way N Road Median
- 6 Bridge Way N - Multi Family
- 7 N 39th Street - Multi Familuy
- 8 Alley - Multi Family

APPENDIX

Woodland Ave N (East side of Site)
To the east of the Site, there is a similar mix of multifamily buildings with few patterns or consistency in scale and style.



- 1 Woodland Park Ave N - Nalanda West
- 2 Woodland Park Ave N - Multi-Family
- 3 Subject Property
- 4 Woodland Park Ave N - Multi-Family
- 5 Bridge Way N - Multi Family
- 6 Albion Place N - Commercial
- 7 Woodland Park N - Multi Family

APPENDIX

Industrial and Residential Character

A unique aspect of the subject property is the ability to draw from both the residential and industrial context while developing a timeless and high-quality addition to the neighborhood.

Neighborhood Character

Materials

A combination of building materials, colors, and textures exist in the surrounding area with little consistency or commonality between buildings. The primary exterior building materials are painted fiber cement (panels and lap siding), wood (horizontal lap siding, shingles, and vertical wood siding), masonry (brick and cmu), and metal cladding.



- 1 Residential: Multi-Family Context
- 2 Residential: Single-Family Home
- 3 Neighborhood: Fremont Troll
- 4 Residential: Multi-Family Context
- 5 Residential: Single-Family Context
- 6 Commercial: Stone Way
- 7 Mixed-Use: Multi-Family Context
- 8 Neighborhood: Bridge
- 9 Mixed-Use: Stone Way
- 10 Neighborhood: Mural

APPENDIX: EXAMPLES OF PAST WORK

Anhalt Apartment Renovation and Addition
Seattle, WA



- 2016 NW & Pacific Region AIA Merit Award
- 2015 Seattle AIA Honor Award
- 2015 People's Choice Urban Design Awards, Second Place
- 2015 Historic Seattle Preserving Neighborhood Character Award



SCCA Patient House
Seattle, WA



- 2011 Seattle AIA, Merit Award
- 2011 Pacific + NW Region, Honor Award
- 2011 Seattle AIA, Future Shack Award
- 2011 RADA Award



APPENDIX: EXAMPLES OF PAST WORK

Bradner Gardens
Seattle, WA



Kenmore City Hall
Kenmore, WA

