

# Carnegie Mellon University



## 5TH AND CLYDE RESIDENCE HALL

PLANNING COMMISSION - BRIEFING  
NOVEMBER 5, 2019

### SUSTAINABILITY + LEED

evolveEA  
6020 Broad Street  
Pittsburg, PA 15206  
www.evolveea.com  
t. 412.362.2100

### ACOUSTICS

THE SEXTANT GROUP  
700 Waterfront Dr., Suite 200  
Pittsburgh, PA 15222  
www.thesextantgroup.com  
t. 412.323.8580

### LIGHTING DESIGN

LUMEN ARCHITECTURE  
108 E 16th Street, 6th Floor  
New York, NY 10003  
www.lumenarch.com  
t. 212.564.6469

### LANDSCAPE ARCHITECTURE

MERRIT CHASE  
166 46th Street  
Pittsburgh, PA 15201  
www.merritchase.com  
t. 954.881.4204

### CIVIL ENGINEER

LANGAN  
2400 Ansys Drive, Suite 403  
Canonsburg, PA 15317  
www.langan.com  
t. 724.514.5100

### MEP-FP-IT ENGINEERS

ME ENGINEERS  
29 W 38th Street  
New York, NY 10018  
me-engineers.com  
t. 212.447.6770

### STRUCTURAL ENGINEER

SILMAN  
32 Old Slip, 10th Floor  
New York, NY 10005  
www.silman.com  
t. 212.620.7970

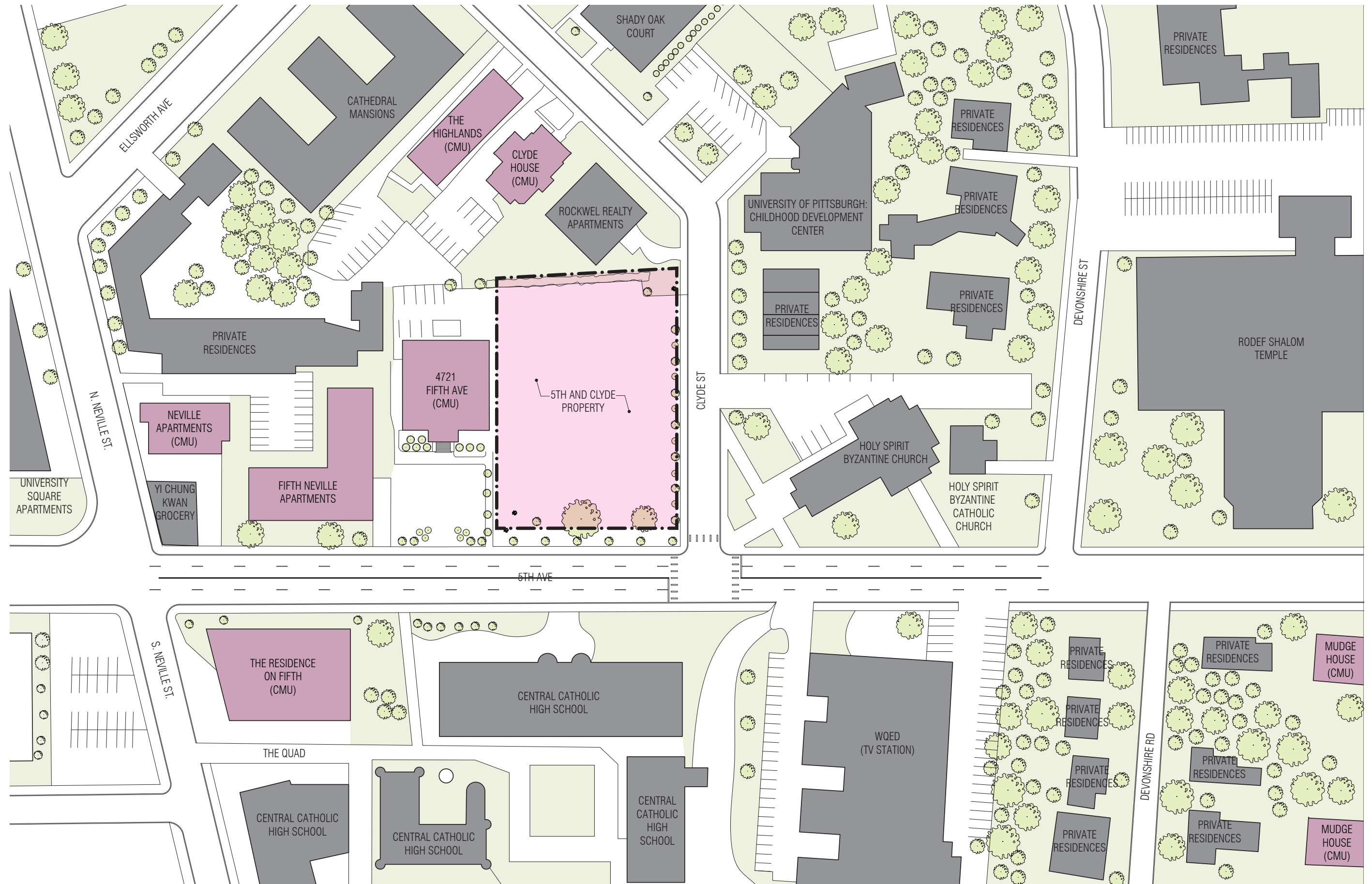


EXECUTIVE ARCHITECT  
408 Boulevard of the Allies  
Pittsburgh, PA 15219  
pwwgarch.com  
t. 412.391.2884

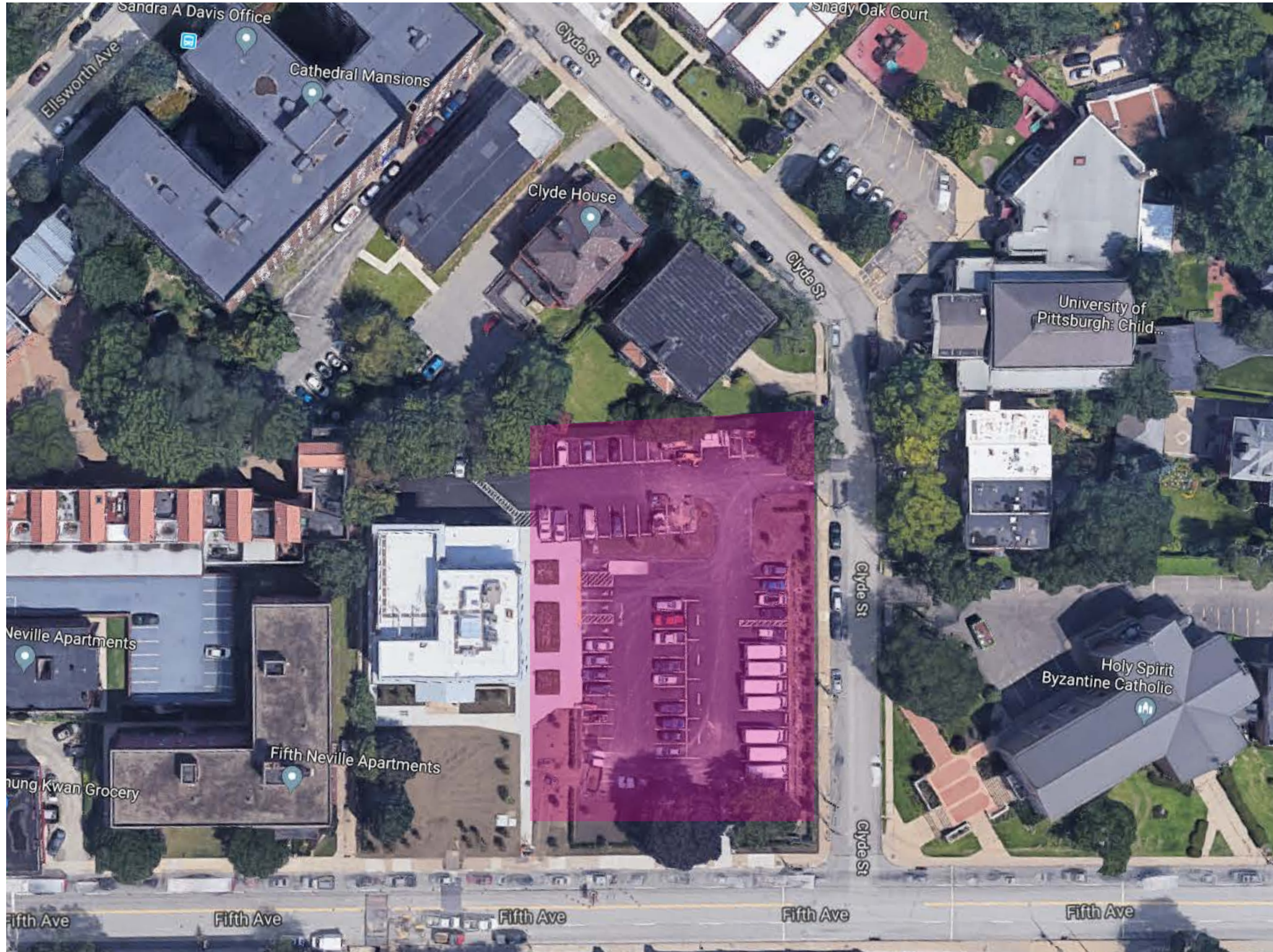


DESIGN ARCHITECT  
227 W 29th 7th Floor  
New York, NY 10001  
www.ltlarchitects.com  
t. 212.505.5955

5TH AND CLYDE SITE



# 5TH AND CLYDE EXISTING CONDITIONS

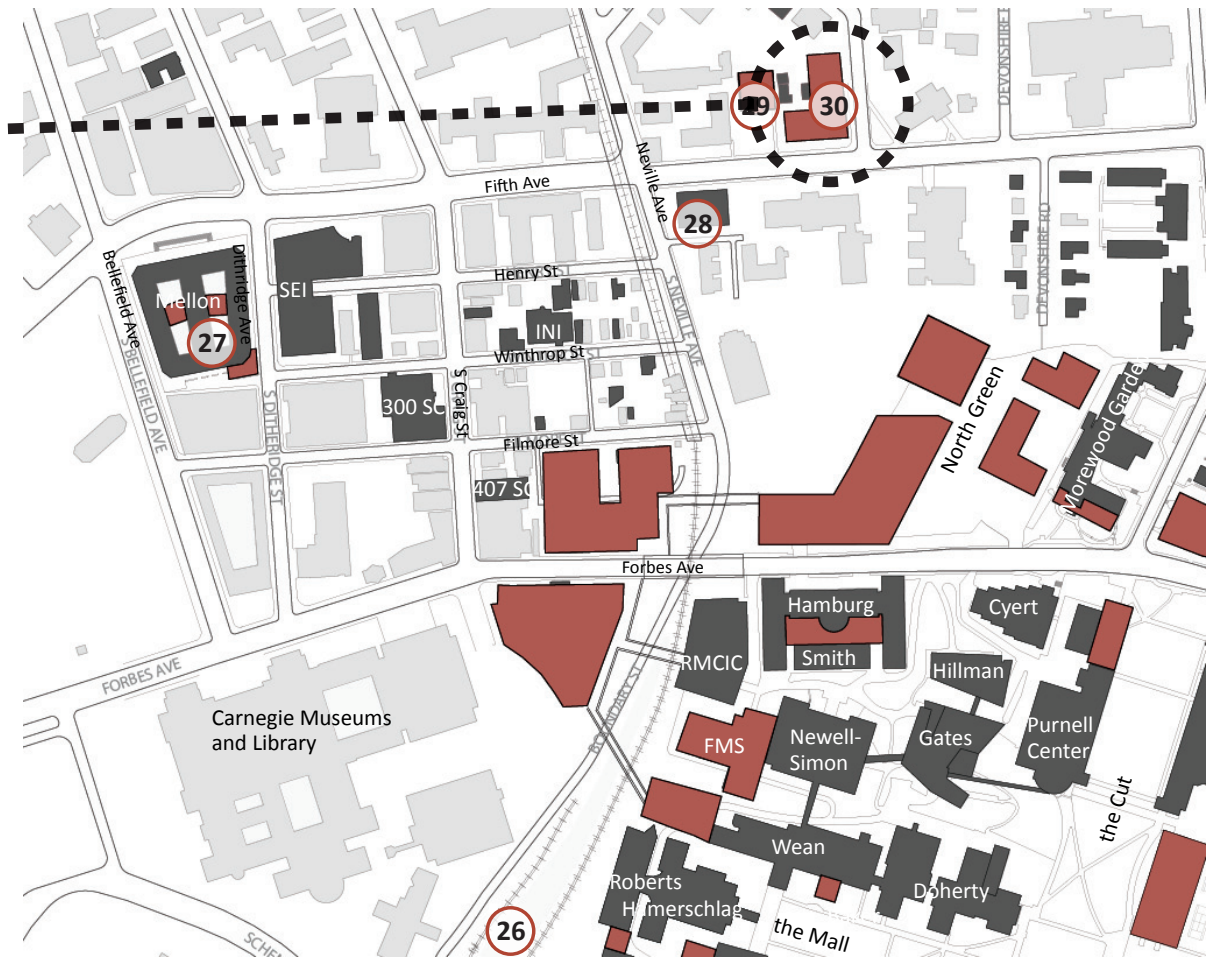




Institutional Master Plan, 2015

### 3.5 10-YEAR DEVELOPMENT ENVELOPE BY PRECINCT

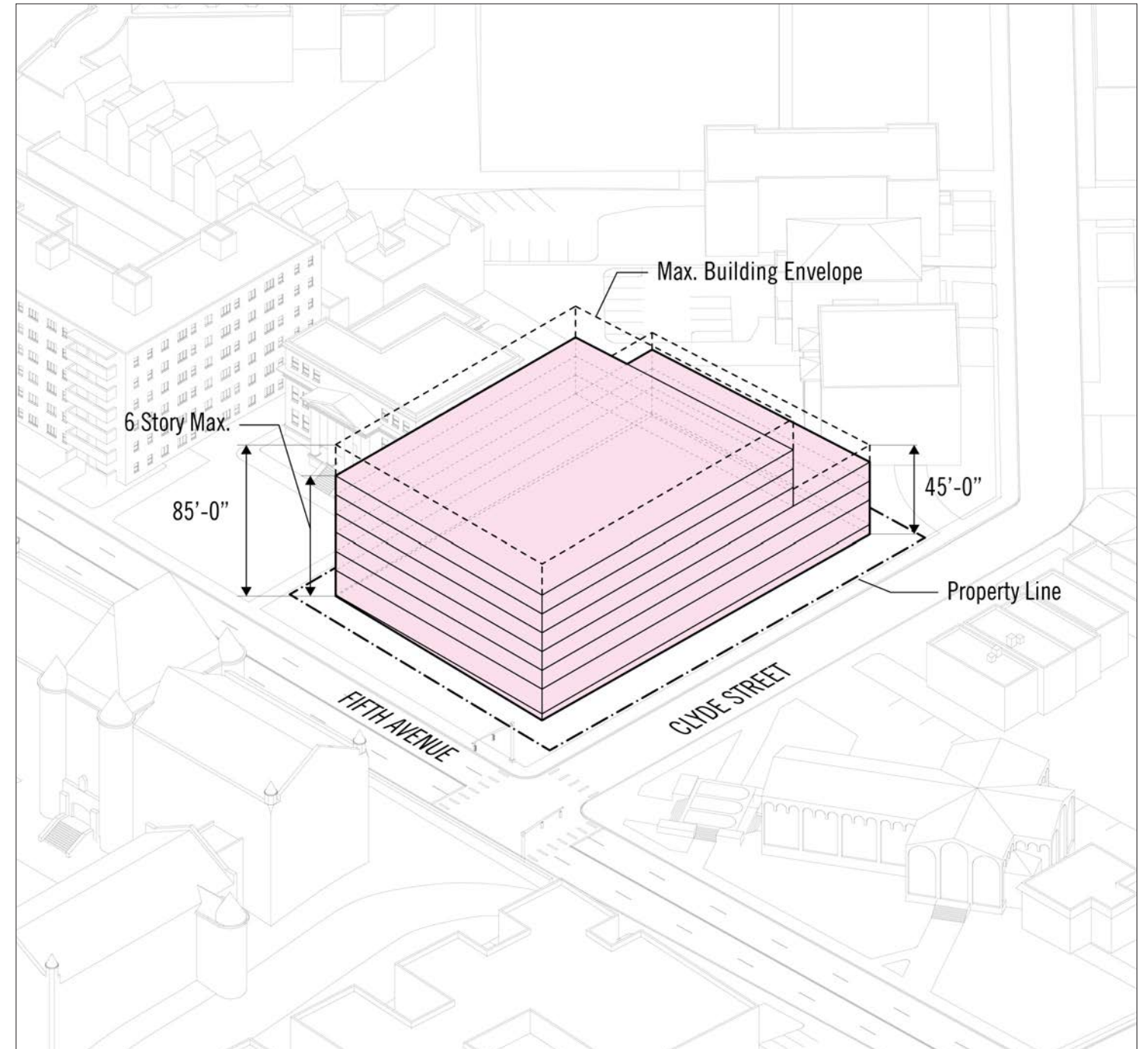
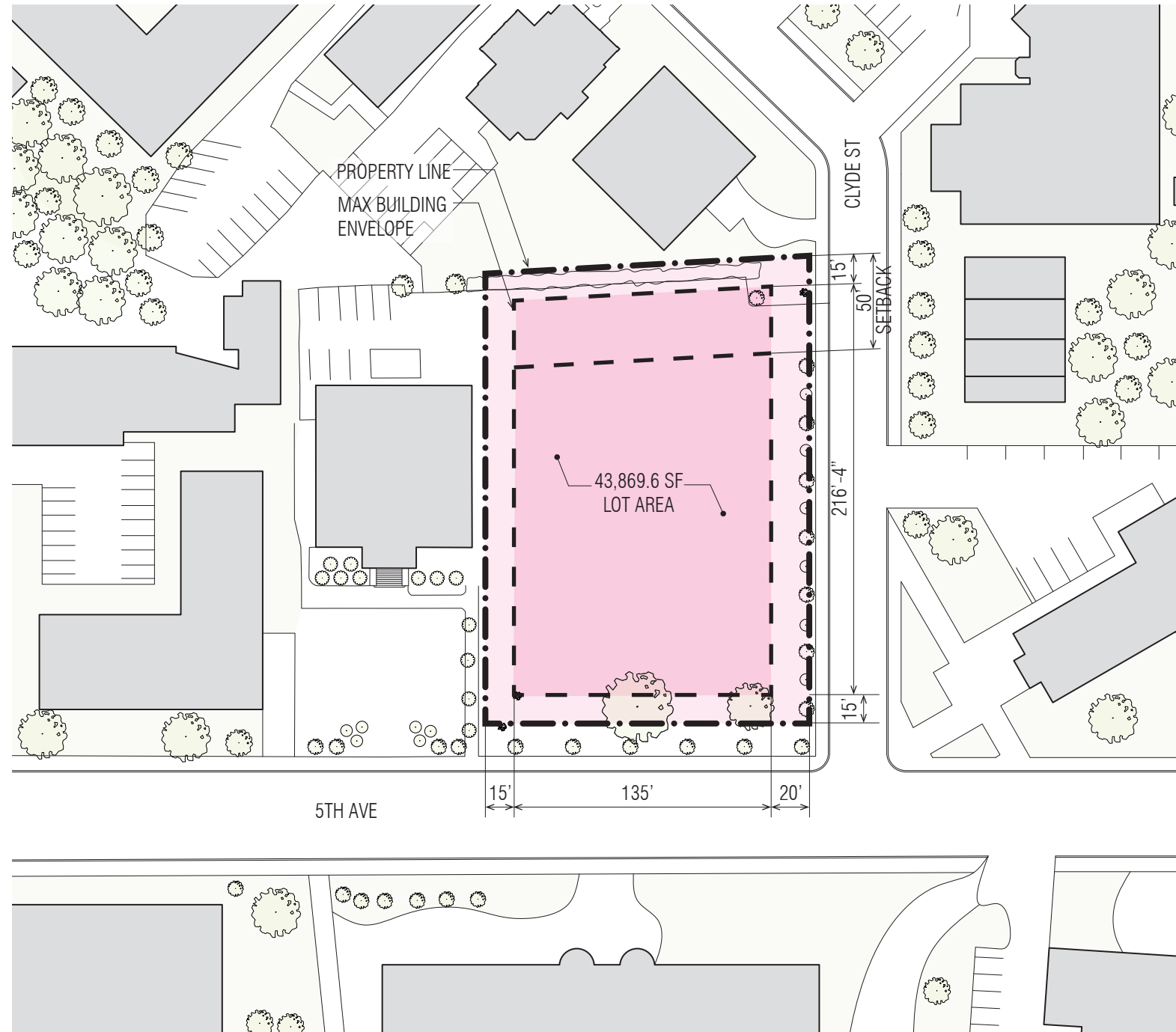
#### 3.5.8 Campus Neighborhood



#### Campus Neighborhood Projects

- 26** S Neville Support Building & Parking
  - 27** Mellon Institute Entry & Infill
  - 28** Residence on Fifth Dining Facility
  - 29** Renovated Mixed Use Building
  - 30** New Mixed Use Building
- New Developments
  - CMU Buildings

# INSTITUTIONAL MASTER PLAN AND SITE METRICS



## SITE PLAN

### 30. North of Fifth New Multi-Use Building

DESCRIPTION	New mixed use building with up to 150 surface and structured parking spaces
USES	Academic, research, residential, conference, administrative, support, surface & structure parking
SQUARE FEET	120,000 gsf (building)
HEIGHT	3 stories (45 ft) at north end for first 50 ft 6 stories (85 ft) beyond setback
SETBACK	North: 15ft from property line South: 15 ft from Fifth Ave East: 20 ft from Clyde St West: 15 ft from site 29

Note: Residential Compatibility Standards apply

From Carnegie Mellon University IMP (rev.2015)  
describing zoning for site

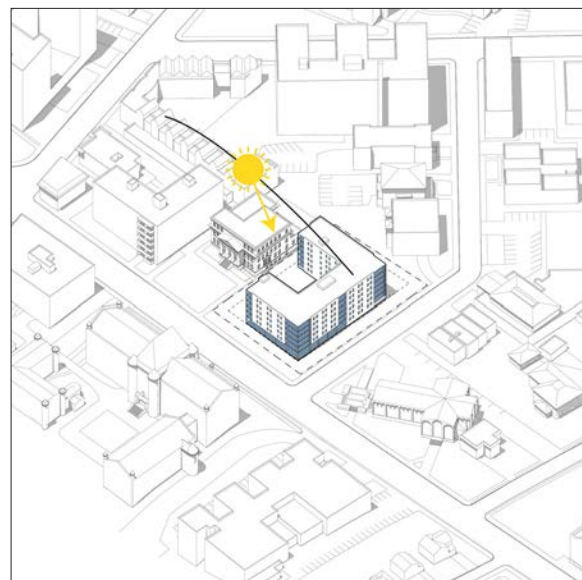
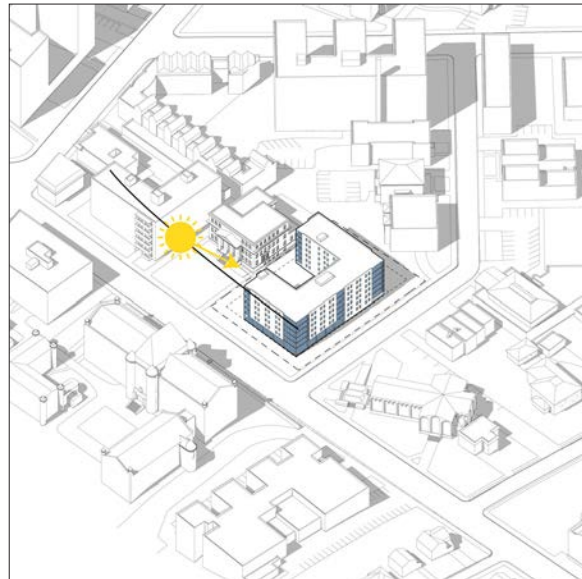
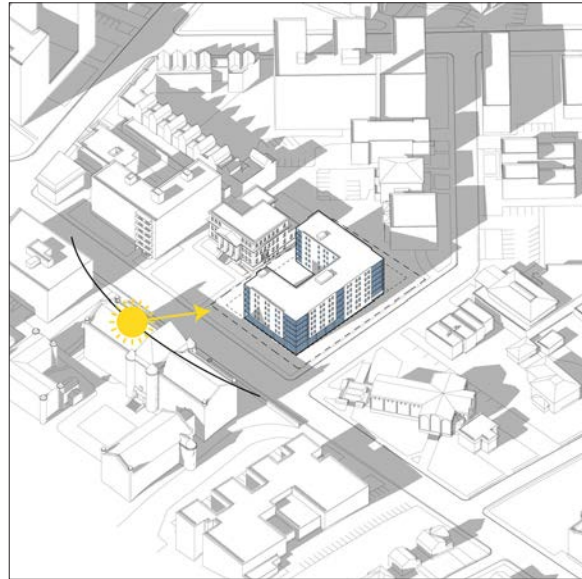
## AXONOMETRIC VIEW

## GROSS SQUARE FEET

Floor 1 (ground)	28,448 sf
Floor 2	28,448 sf
Floor 3	28,448 sf
Floor 4	21,688 sf
Floor 5	21,688 sf
Floor 6	21,688 sf
<b>Total</b>	<b>150,408 sf*</b>

\*120,000 gsf maximum prescribed by IMP

## SUSTAINABLE STRATEGIES



### Targeting LEED v4 Gold

#### SUSTAINABLE SITE STRATEGIES

- Building replaces existing paved parking lot
- Adjacent to Carnegie Mellon University campus and the Fifth Avenue business, institution and residence district
- Access to public transportation and the forthcoming Bus Rapid Transit system
- Accommodations for bicycle storage for both visitors and residents

#### MATERIALS STRATEGIES

- The construction team is anticipating that over 75% of construction waste will be recycled per LEED requirements
- The building will actively recycle waste generated by occupants per the City's recycling guidelines for materials such as glass, metal, plastic, paper and cardboard
- Materials with recycled content and from our region will be prioritized as feasible on this project

#### WATER EFFICIENCY STRATEGIES

- The building is designed with low flow fixtures and anticipates water use reduction of over 30% as compared to conventional buildings
- Site plantings are native, hardy and drought-tolerant species with no irrigation necessary
- Diversion of rainwater to landscaped areas to reduce stormwater runoff

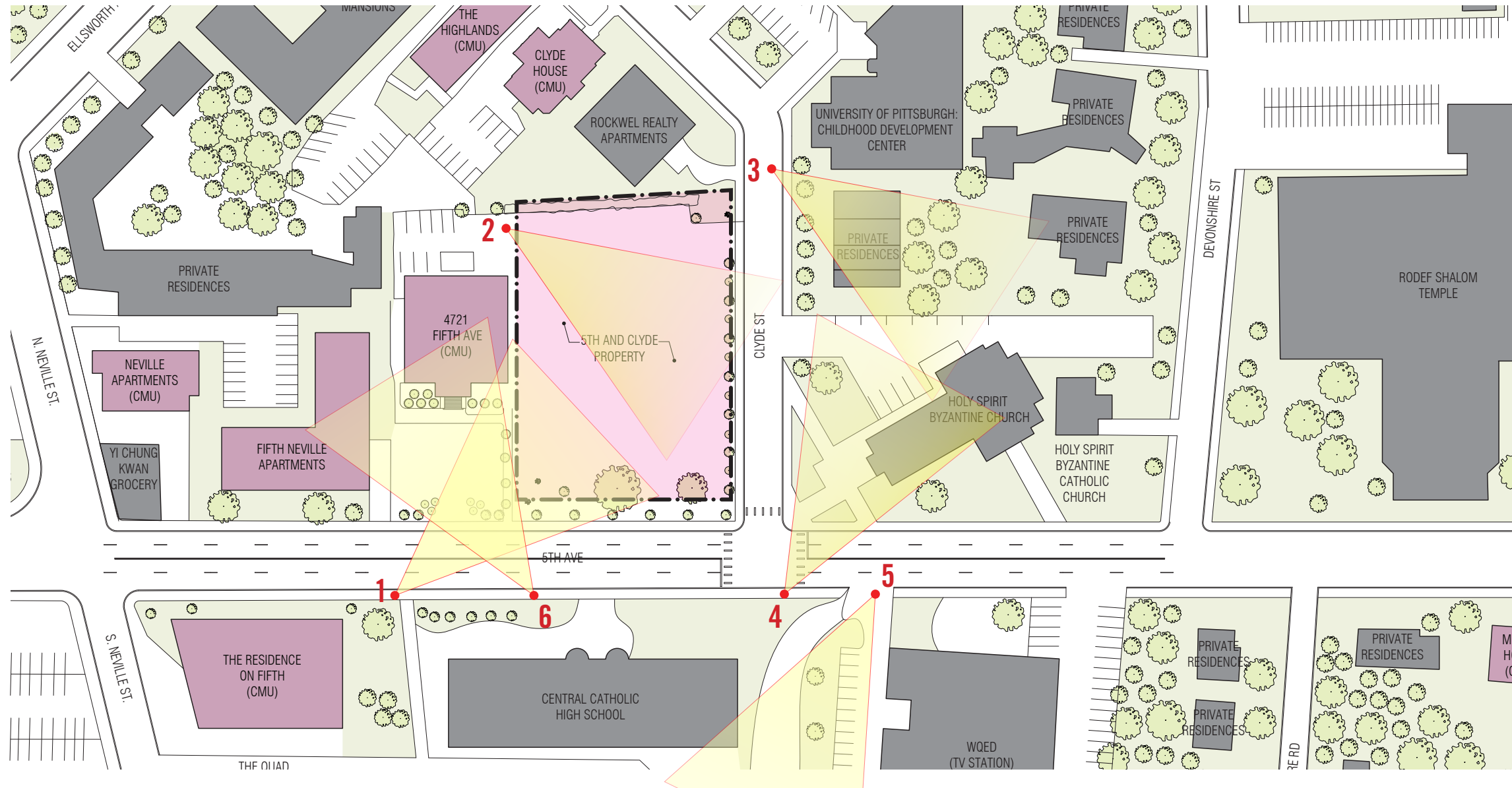
#### ENERGY EFFICIENCY STRATEGIES

- Energy Modeling has been utilized in the design phases with a goal of at least 25% savings greater than a conventional building
- The urban heat island will be minimized with Energy Star roofing and reflective paving materials
- Building commissioning will be utilized for building systems and envelope
- LED lighting is used throughout all of the buildings spaces
- High performance glazing units within a thermally broken curtain wall system contribute to an improved envelope
- Carnegie Mellon University purchases 100% renewable electricity

#### HEALTHY INTERIOR STRATEGIES (IEQ)

- Ample daylight and views in student rooms and social spaces
- Each student room, social space and office has at least one operable window
- All spaces are designed to maintain healthy humidity and temperature levels
- LED lighting throughout the building is designed for occupants to maintain a high level of environmental control
- Low emitting materials and enhanced ventilation will create better indoor air quality

# 5TH AND CLYDE CONTEXT



1 - View of Site from across Fifth Ave



2 - View of interior of Site (from behind 4721 Fifth Ave)



6 - View of 4721 Fifth Ave and Fifth Neville Apartments



5 - View of parking lot between WQED and Central Catholic High School

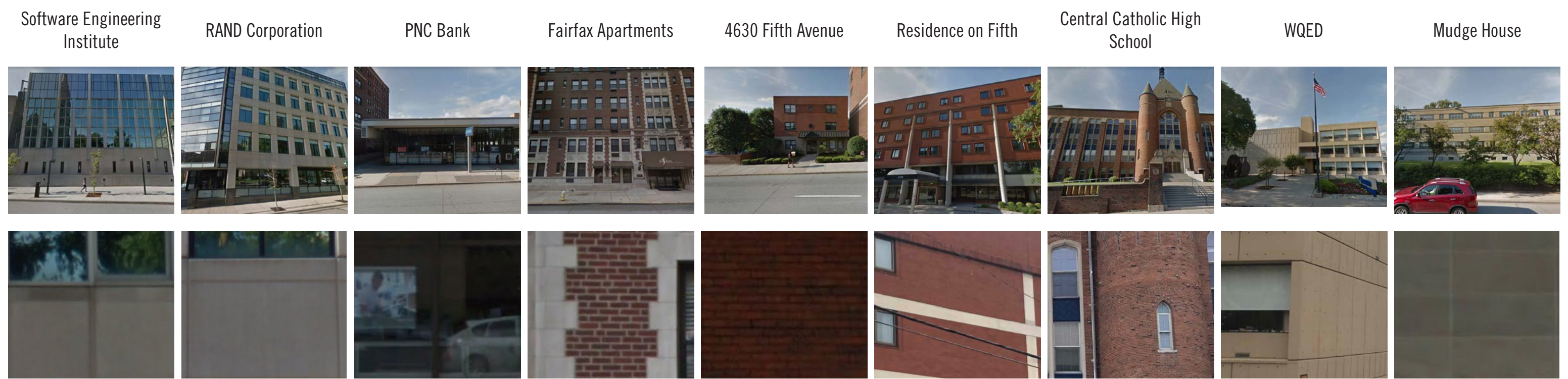
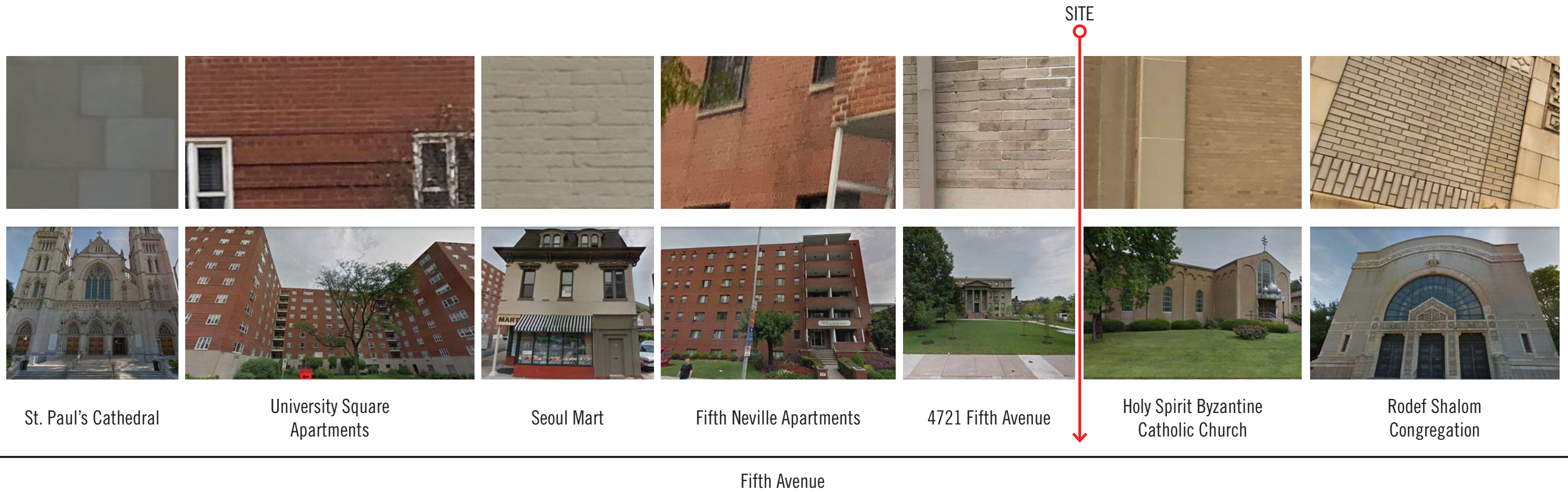


4 - View of Holy Spirit Byzantine Church



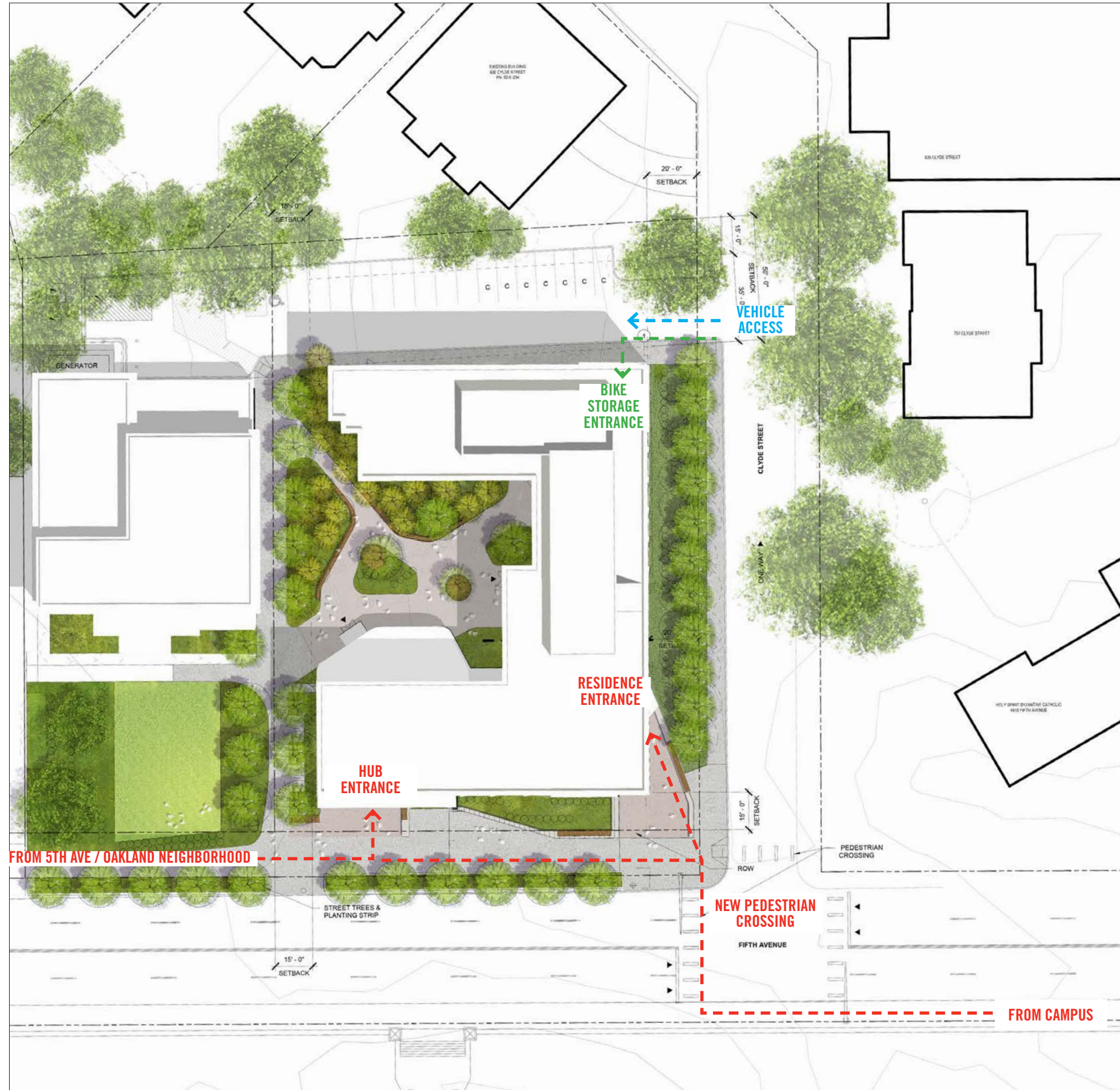
3 - View of 707 Clyde Street private residences

5TH AND CLYDE CONTEXT

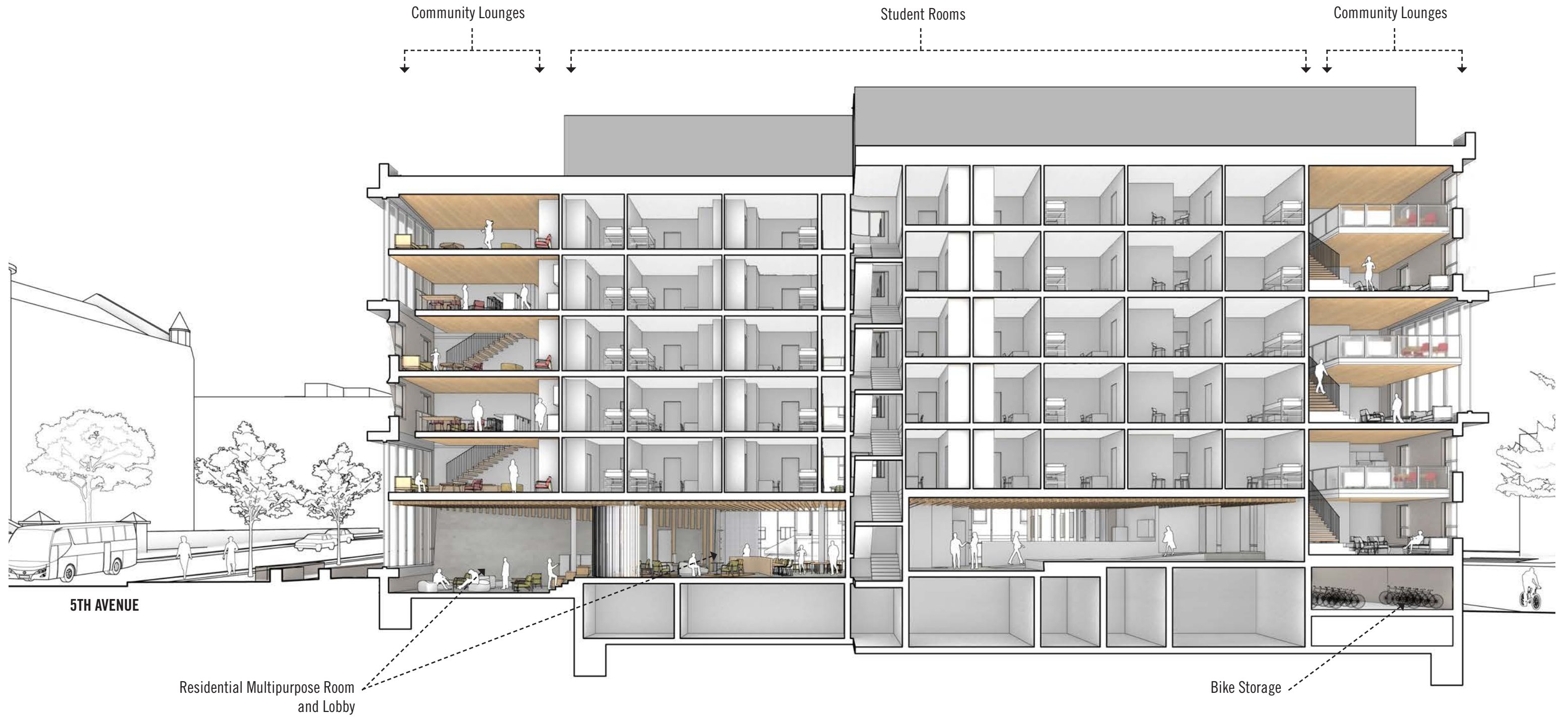




# ILLUSTRATED SITE PLAN - SITE CIRCULATION



# SECTION PERSPECTIVE - PROGRAM DISTRIBUTION



RENDERING - X-RAY OF COMMUNITY LOUNGES



**RENDERING - AERIAL LOOKING NORTHEAST**



RENDERING - SOUTHEAST CORNER OF 5TH AND CLYDE



RENDERING - SOUTHEAST CORNER OF 5TH AND CLYDE



CLARIFICATION OF CORNICE OVERHANG  
REQUESTED BY CDAP

RENDERING - 5TH AVE LOOKING EAST



**RENDERING - 5TH AVE LOOKING EAST INTO COURTYARD**





**RENDERING - ENTERING COURTYARD FROM 5TH AVE**



RENDERING - FROM CLYDE STREET, NEIGHBOR CONSIDERATIONS



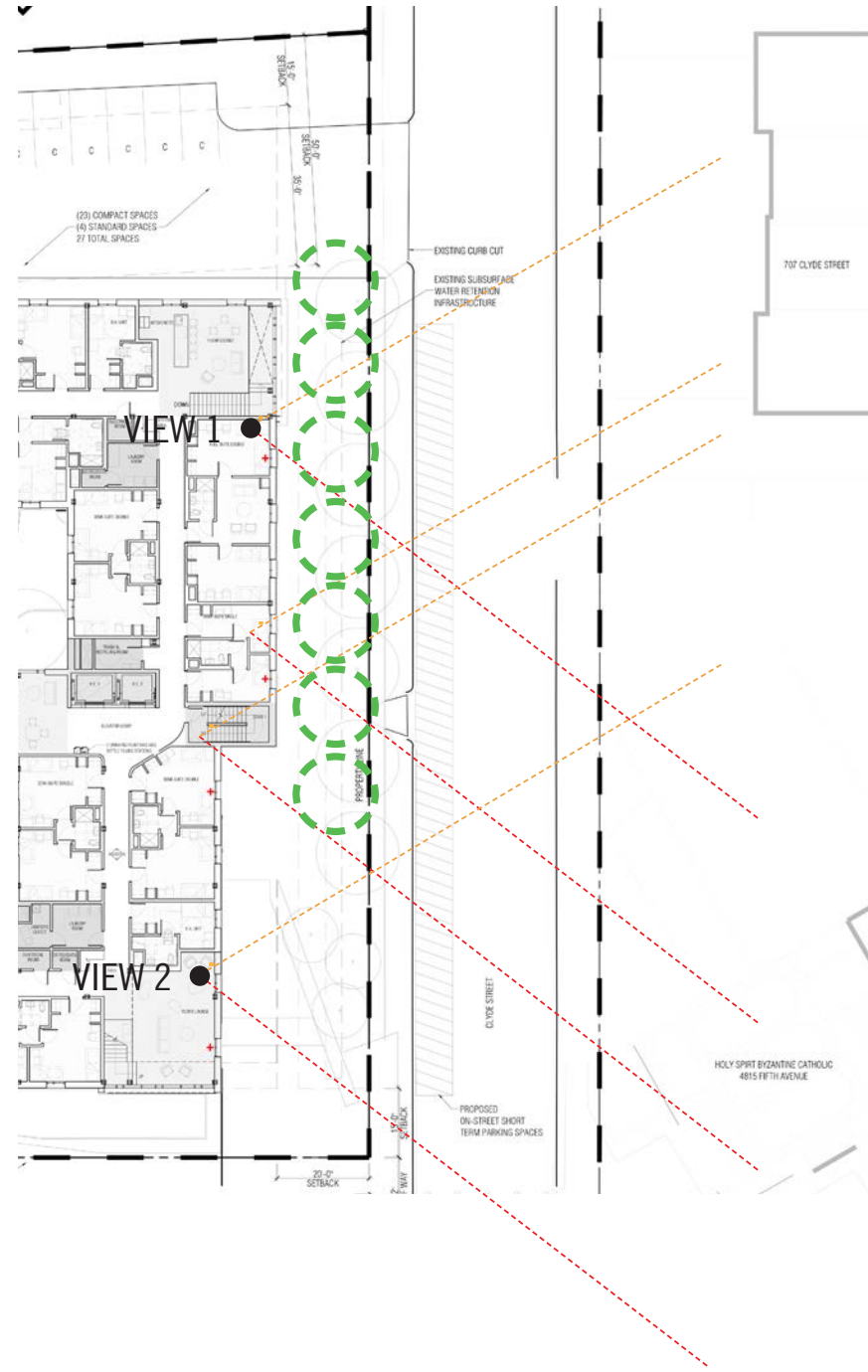
Community spaces  
at corner of building

Vertical fin on  
unit windows to  
obstruct view

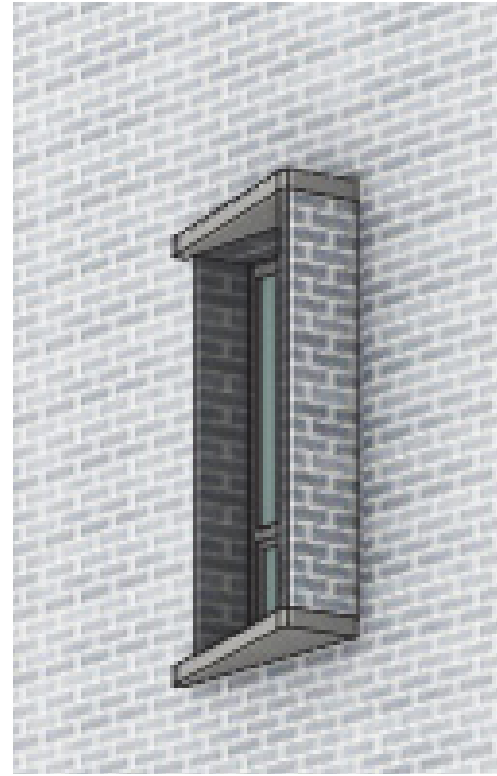
Landscaping that  
enhances privacy

No entry on  
Clyde Street

# WINDOW ARTICULATION - NEIGHBOR CONSIDERATIONS



WEST FACADE VIEWS



WINDOW FIN ON WEST FACADE



VIEW WITH FIN - View 1



VIEW WITH FIN - View 2

# SOUTH ELEVATION



**EAST ELEVATION**



# NORTH ELEVATION



PENTHOUSE ROOF  
179' - 4"

07 ROOF  
167' - 4"

06 SIXTH FLOOR  
155' - 0"

05 FIFTH FLOOR  
144' - 9"

04 FOURTH FLOOR  
134' - 6"

03 THIRD FLOOR  
124' - 3"

02 SECOND FLOOR  
114' - 0"

01 FIRST FLOOR  
100' - 0"

# WEST ELEVATION

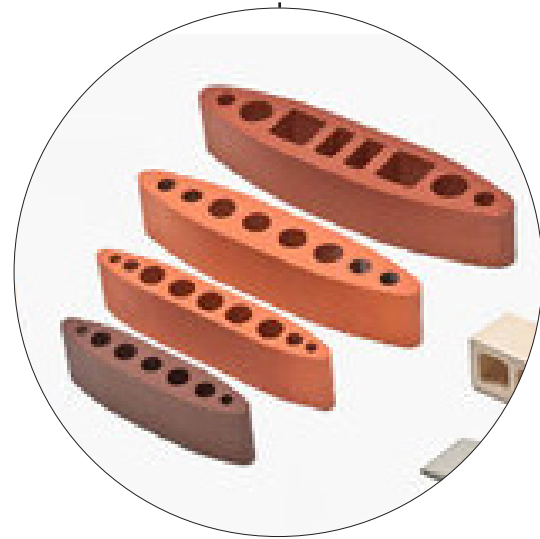


- PENTHOUSE ROOF  
179' - 4"
- 07 ROOF  
167' - 4"
- 06 SIXTH FLOOR  
155' - 0"
- 05 FIFTH FLOOR  
144' - 9"
- 04 FOURTH FLOOR  
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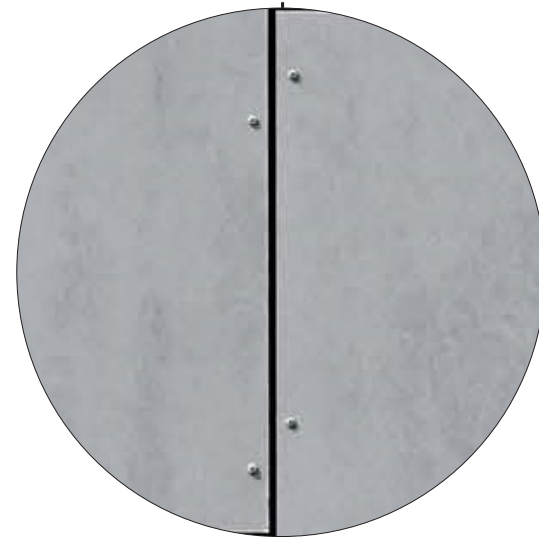
**EXTERIOR MATERIAL PALETTE**



POZZOTIVO BRICK  
CUSTOM BLEND OF 3 GRAYS



TERRACOTA SOLAR SHADING FINES



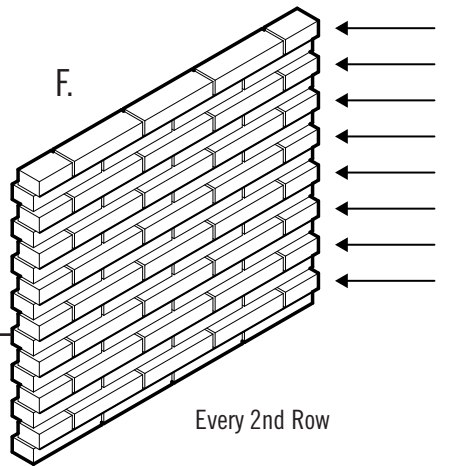
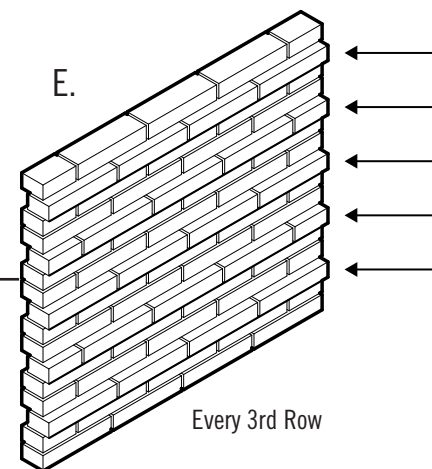
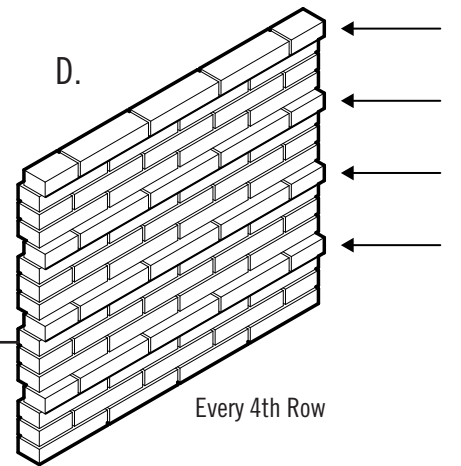
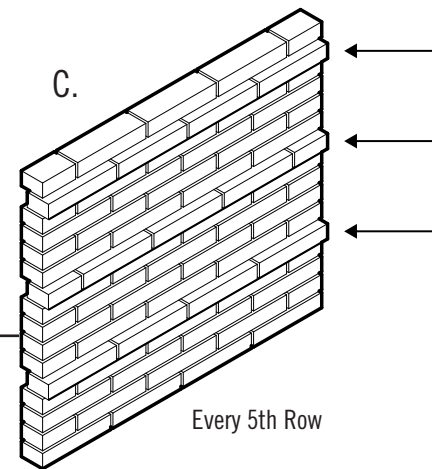
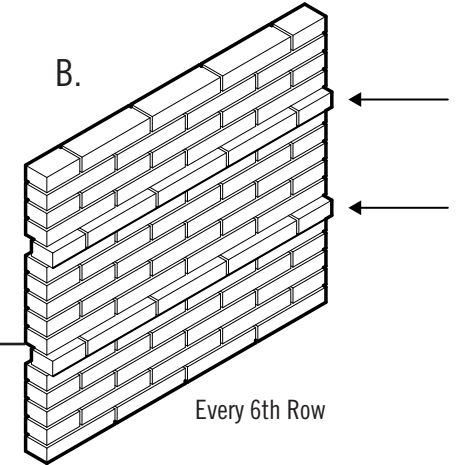
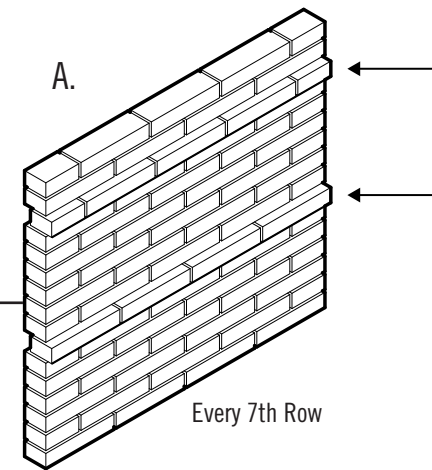
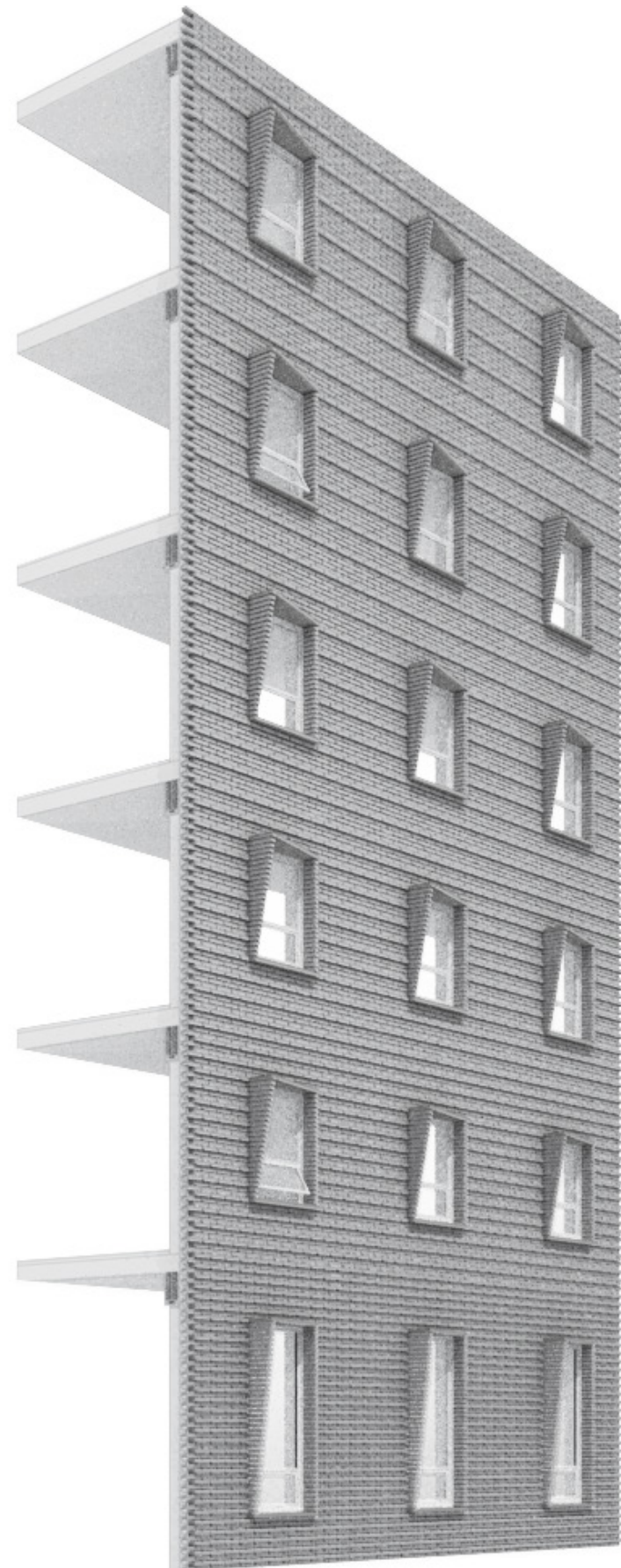
FIBER CEMENT BOARD



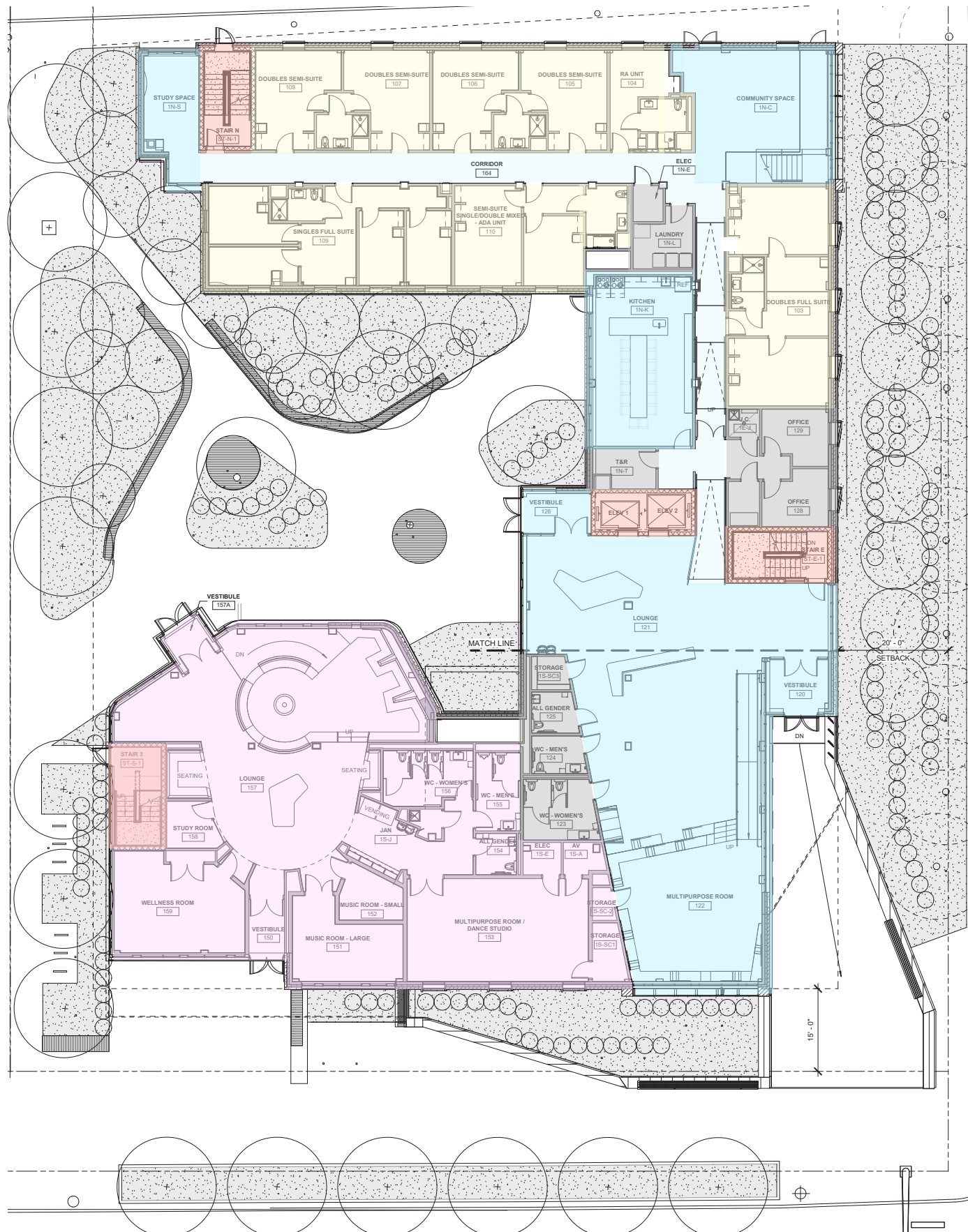
STANDING SEAM METAL



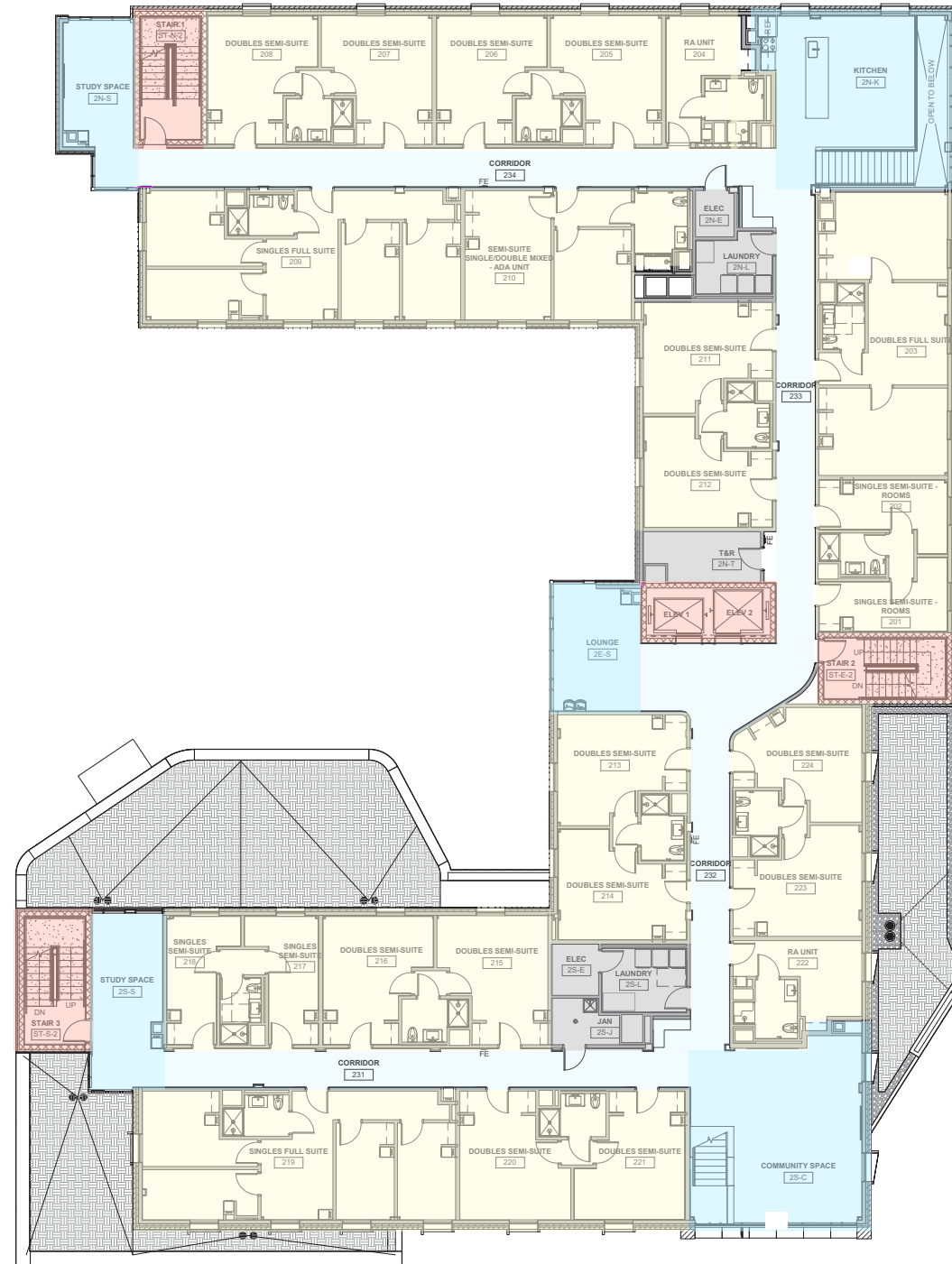
**EXTERIOR MATERIAL PALETTE -  
BRICK COURSING AND WINDOW SURROUNDS**



# FLOOR PLANS



Floor 1



Floors 2-6

RESIDENTIAL AREAS - SUITES			
	SUITE QTY	TOTAL NSF	TOTAL BEDS
<b>FULL SUITES</b>			
4 BEDROOM: SINGLE	11	8,668	44
2 BEDROOM: DOUBLE	6	4,284	24
<b>SEMI-SUITES</b>			
2 BEDROOM: SINGLE	10	3,780	20
2 BEDROOM: DOUBLE	37	20,979	148
<b>ADA SUITE</b>			
3 BEDROOM: SEMI-SINGLE & DOUBLE MIX	6	3,012	18
<b>RA SINGLE ROOMS</b>			
1 BEDROOM: RA UNIT or ADA SINGLE	11	2,310	11
<b>RESIDENTIAL SPACES SUB-TOTALS</b>		<b>43,033</b>	<b>265</b>
<b>TOTAL SUITE/DWELLING UNITS</b>		<b>81</b>	
<b>COMMUNITY SPACES - RESI. FLOORS</b>			

RESIDENCE HALL + HUB (BY FLOOR)			
	GSF		
BASEMENT	10,382		
FIRST FLOOR	15,850		
SECOND FLOOR	14,460		
THIRD FLOOR	14,460		
FOURTH FLOOR	14,460		
FIFTH FLOOR	14,460		
SIXTH FLOOR	14,460		
<b>TOTAL PROJECT GSF</b>	<b>98,532</b>		

# HARDSCAPE PALLETE



Concrete Paving

+



Concrete Paving with Exposed Aggregate

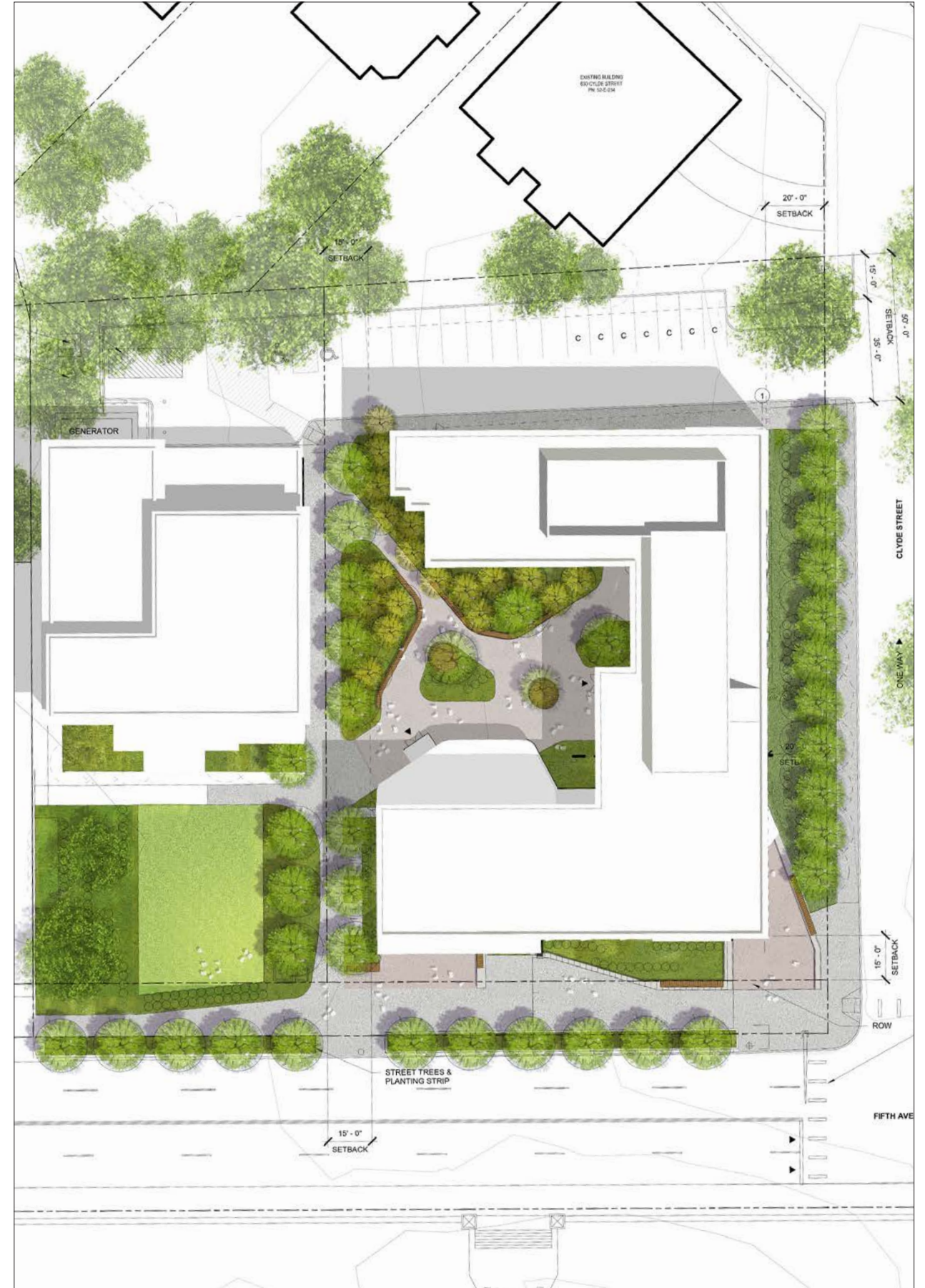
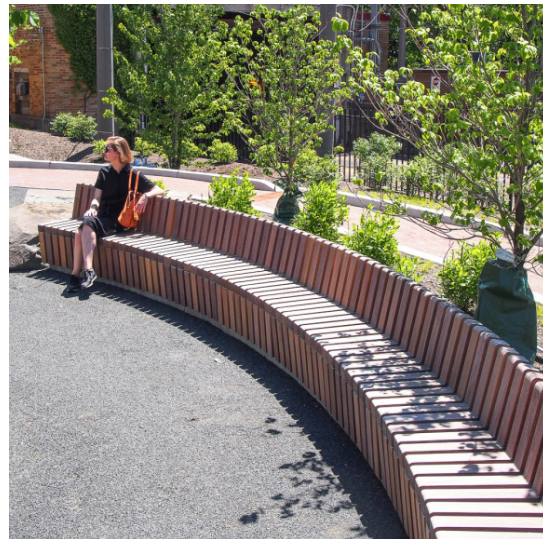


Solid Podium Discs

+



Solid Skirt Top Seats



# LANDSCAPE PALLETTE

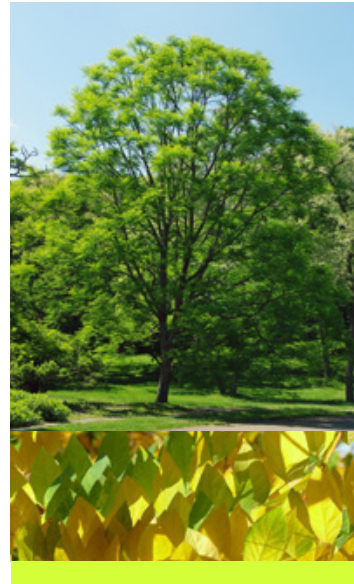
Carnegie Mellon University 5th + Clyde Hub and Residence Hall  
 PLANTING PALETTE - CANOPY TREES



*Acer rubrum*  
Red Maple



*Gleditsia triacanthos 'Inermis'*  
Thornless Honeylocust



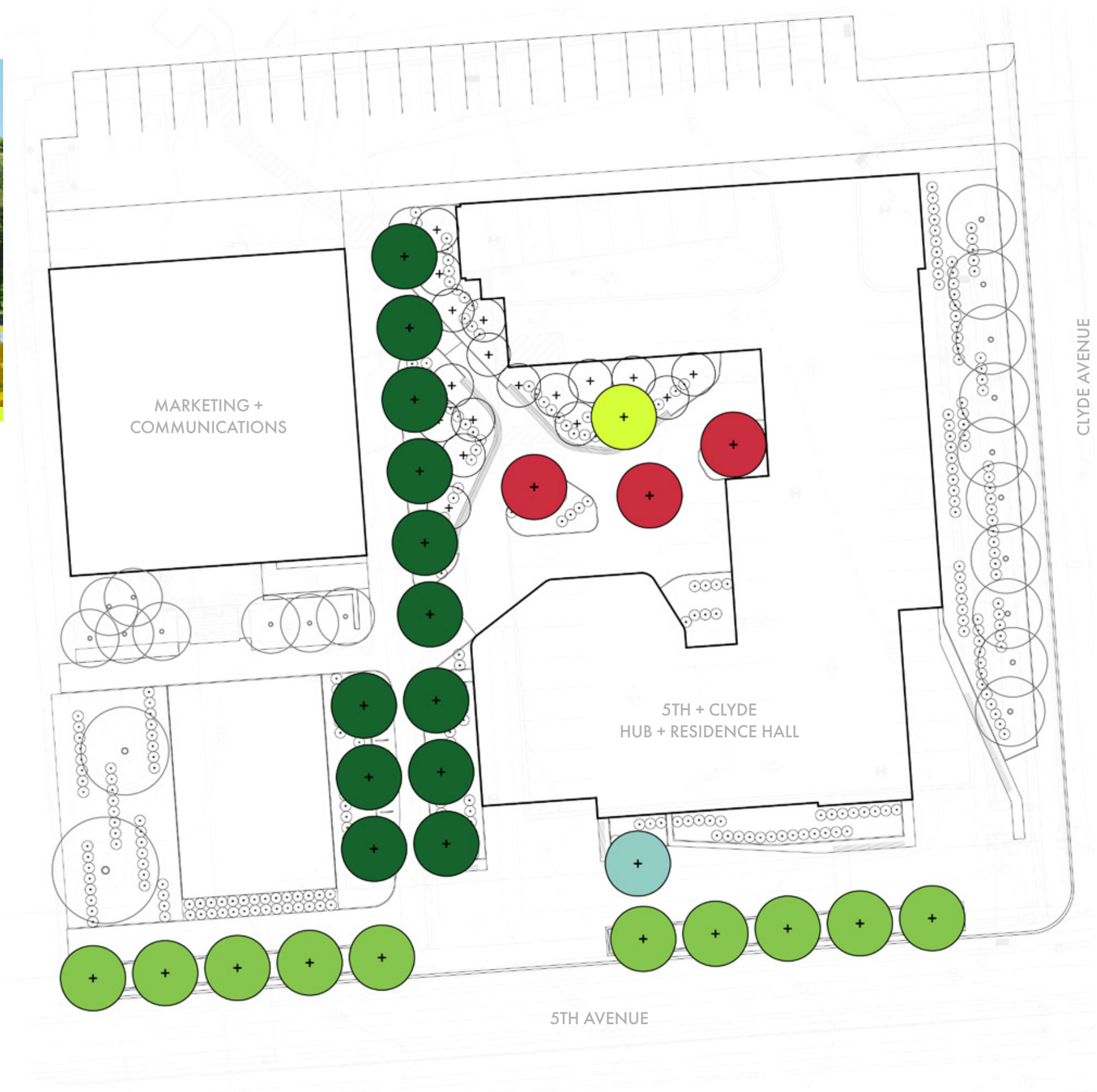
*Gymnocladus dioica*  
Kentucky Coffeetree



*Liriodendron tulipifera*  
Tulip Tree



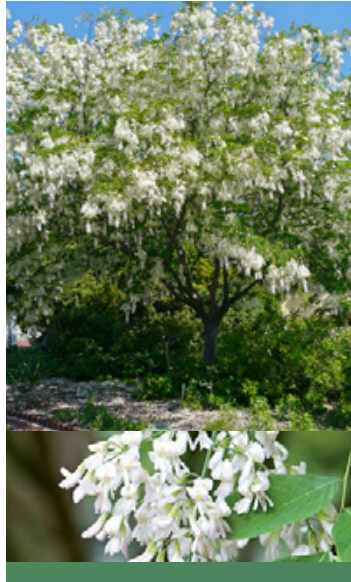
*Quercus bicolor*  
Swamp White Oak



# LANDSCAPE PALLETTE

Carnegie Mellon University 5th + Clyde Hub and Residence Hall

## PLANTING PALETTE - UNDERSTORY + FLOWERING TREES



*Cladrastis kentuckea*  
American Yellowwood



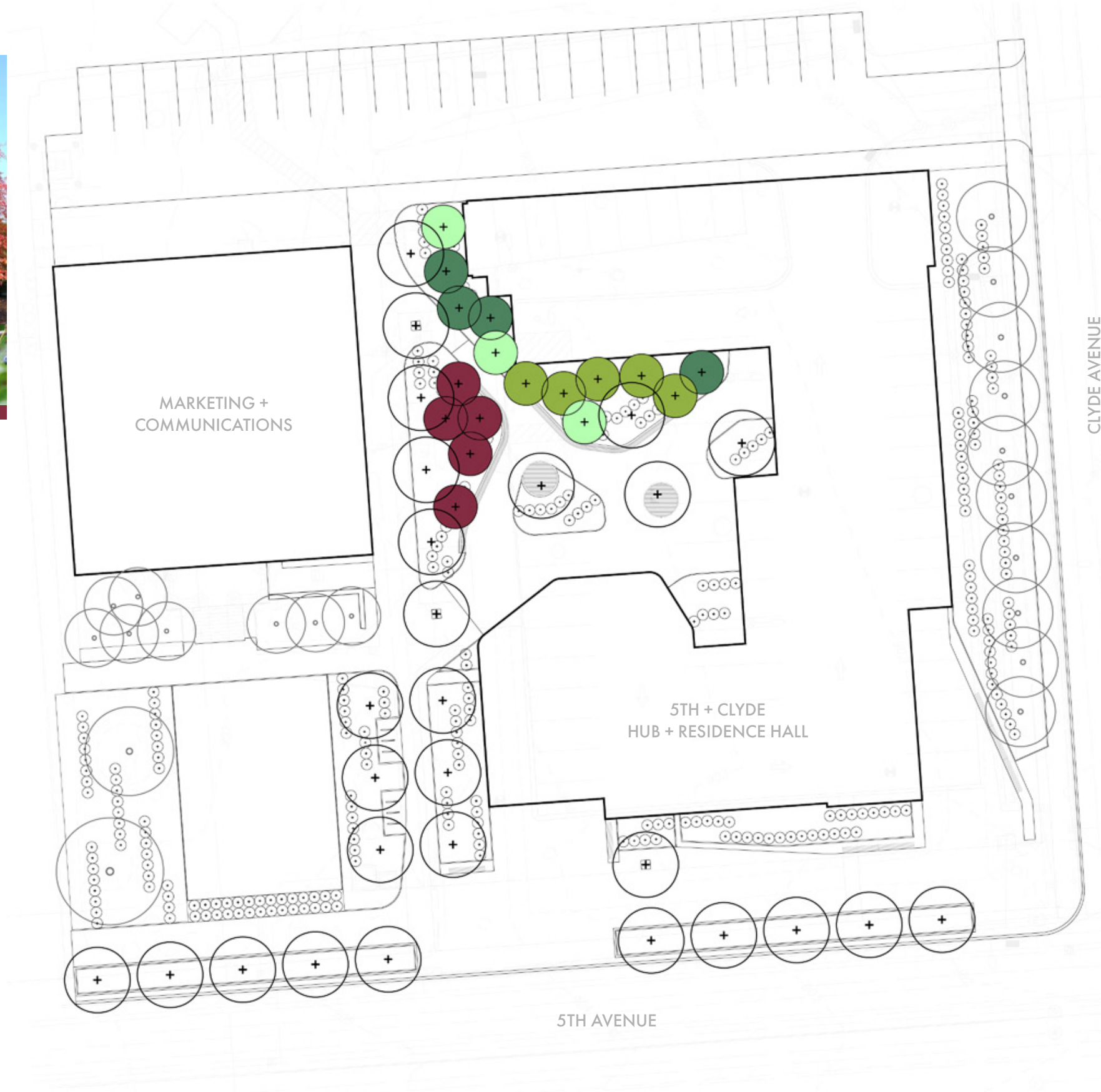
*Cornus florida*  
Flowering Dogwood



*Nyssa sylvatica*  
Black Gum



*Stewartia pseudocamellia*  
Stewartia

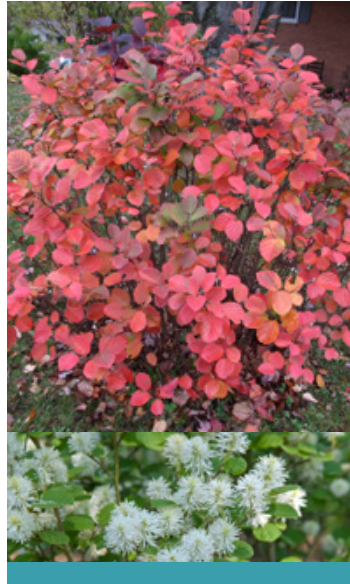


# LANDSCAPE PALLETE

Carnegie Mellon University 5th + Clyde Hub and Residence Hall  
PLANTING PALETTE - SHRUBS



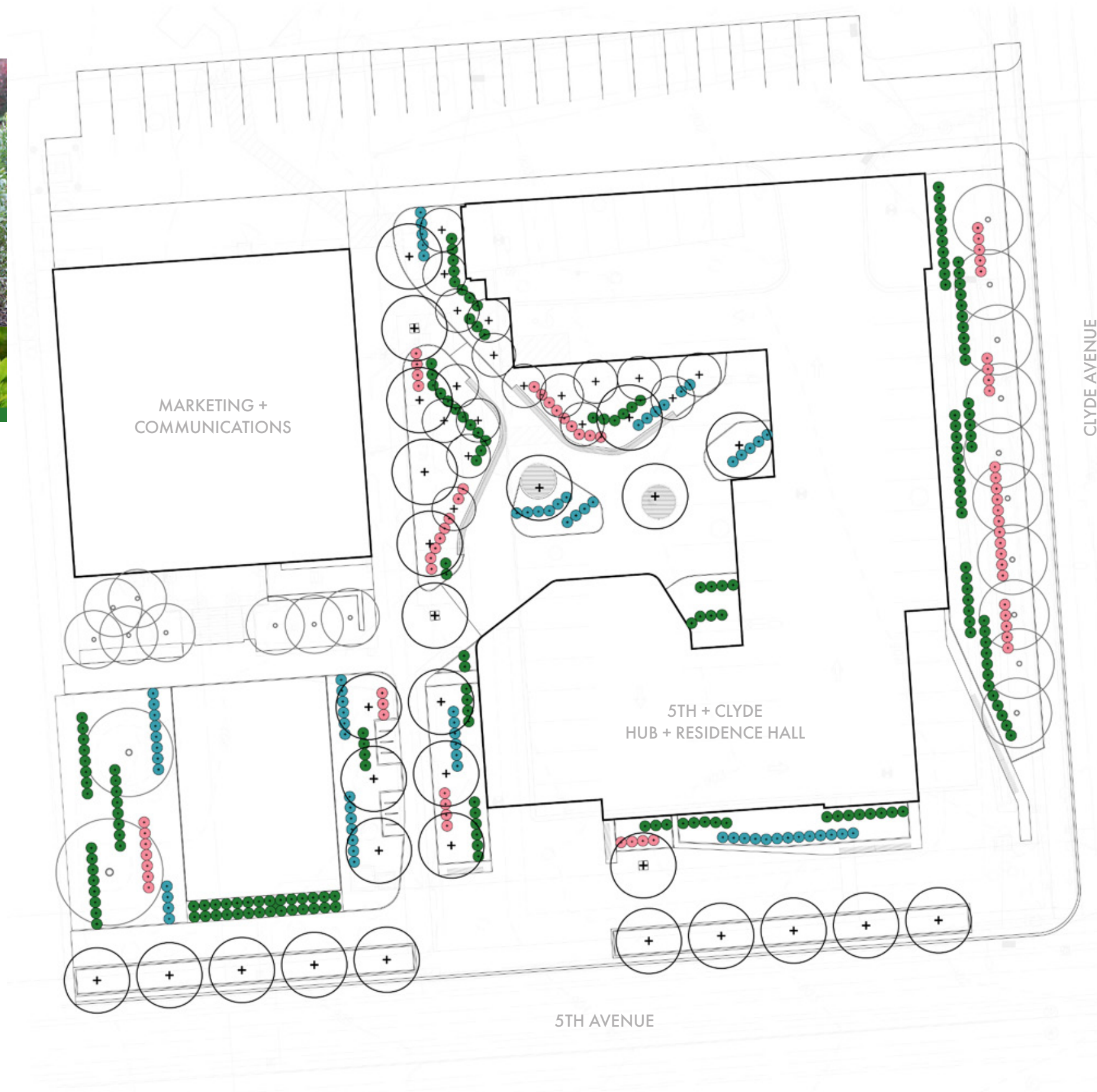
*Clethra alnifolia*  
Summersweet



*Fothergilla gardenii*  
Fothergilla



*Ilex glabra* 'Shamrock'  
Shamrock Inkberry



# LANDSCAPE PALLETTE

Carnegie Mellon University 5th + Clyde Hub and Residence Hall  
 PLANTING PALETTE - PERENNIALS + GRASSES



*Amsonia hubrichtii*  
Arkansas Bluestar



*Andropogon gerardii*  
Big Bluestem



*Asclepias incarnata* 'Ice Ballet'  
Ice Ballet Swamp Milkweed



*Carex pensylvanica*  
Pennsylvania Sedge



*Deschamphia cespitosa*  
Tufted Hairgrass



*Salvia nemorosa* 'Snow Hill'  
Snow Hill Garden Sage



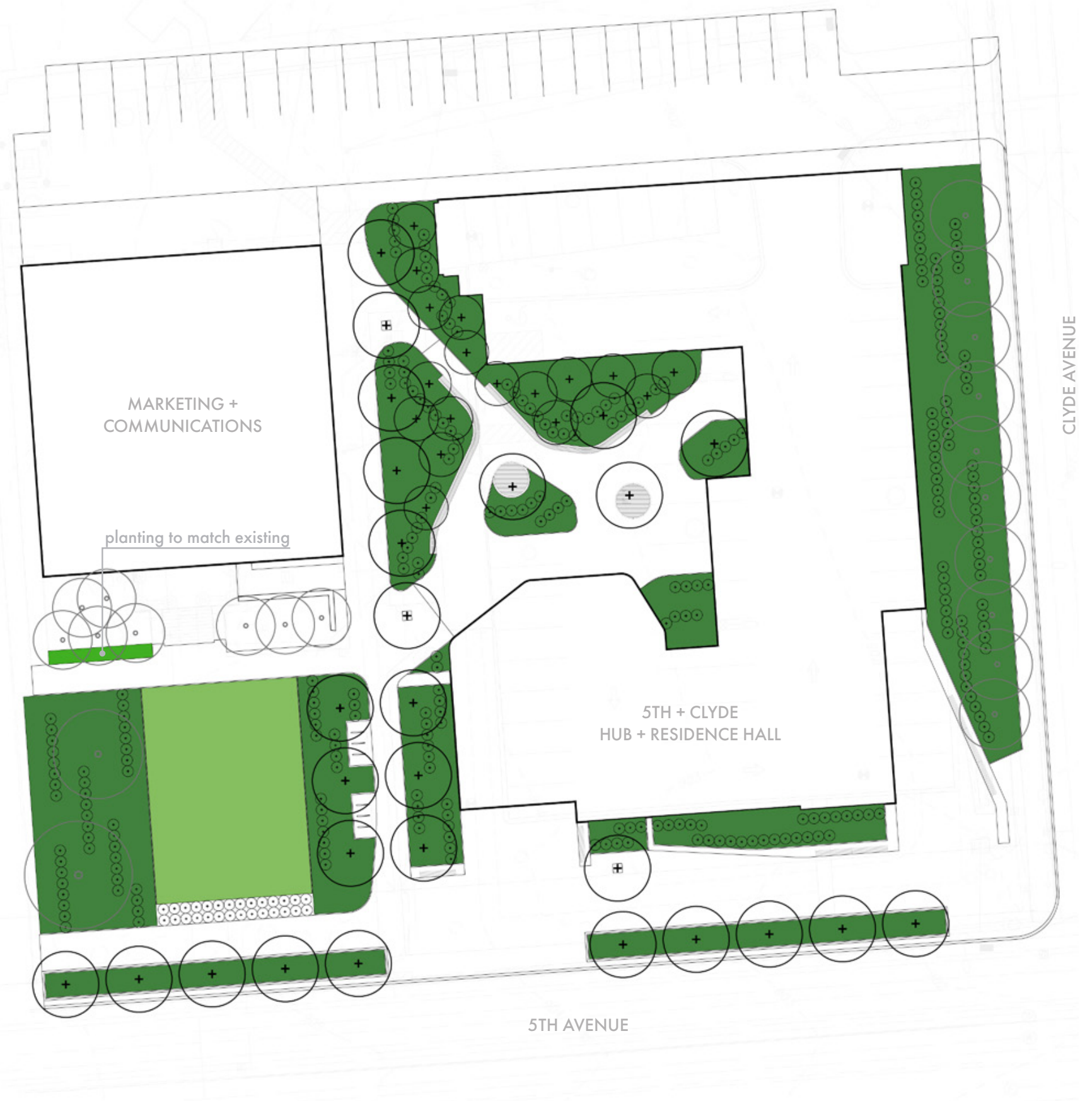
*Sporobolus heterolepis*  
Prairie Dropseed



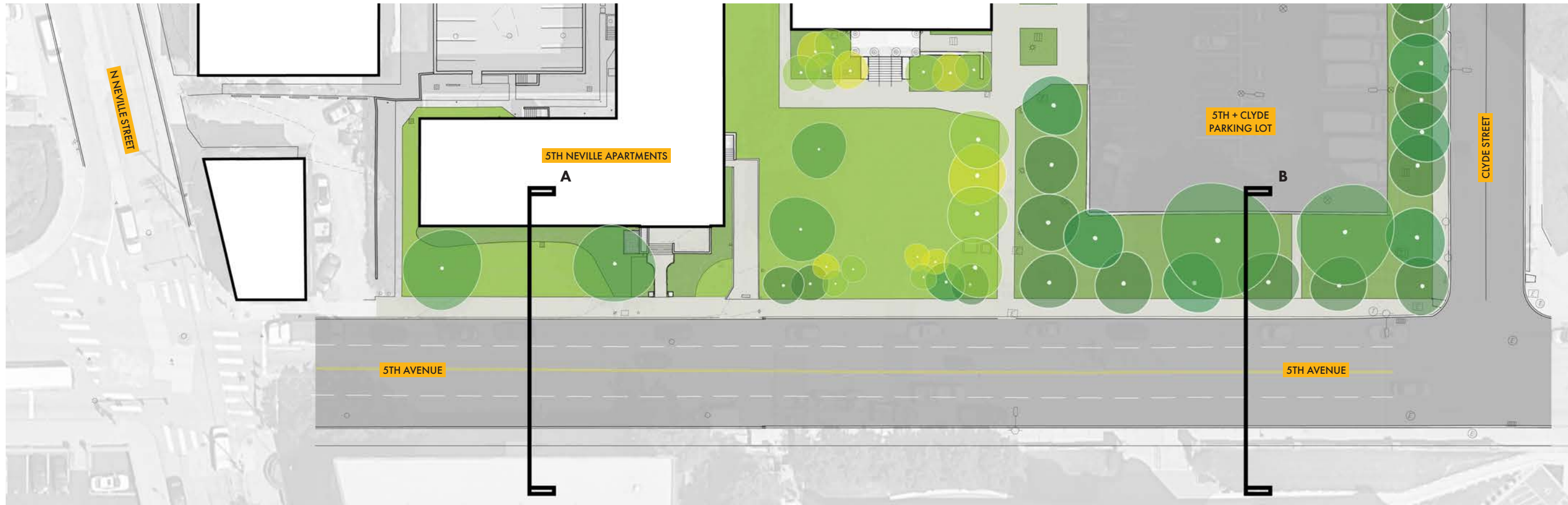
Lawn  
Kentucky Bluegrass



*Panicum virgatum*  
Switchgrass

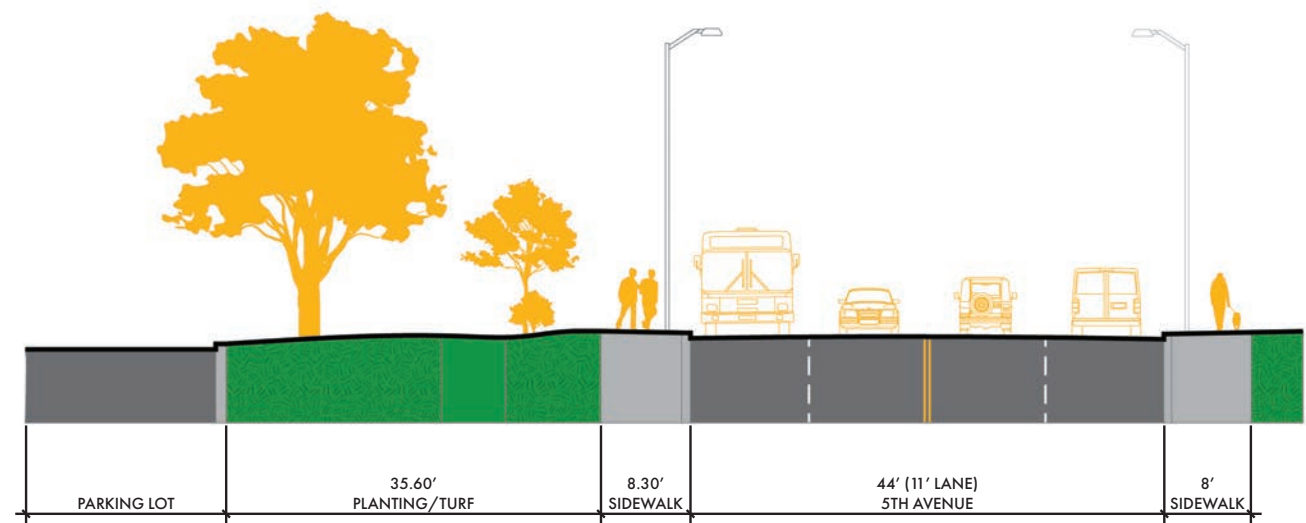
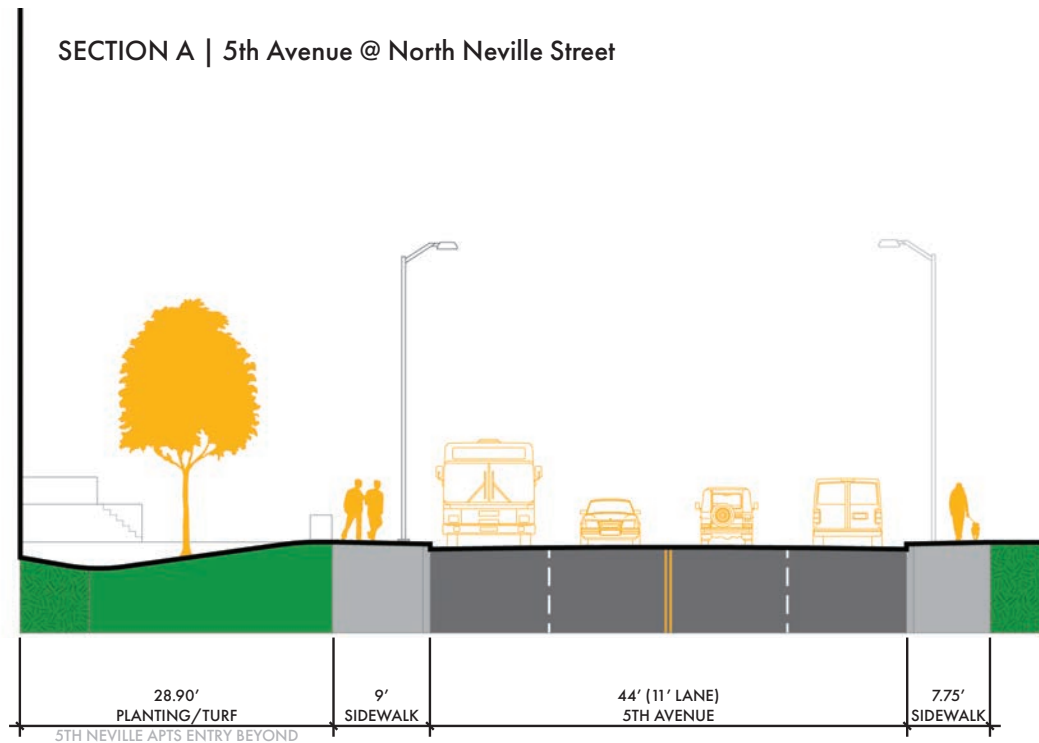


EXISTING SITE SECTIONS



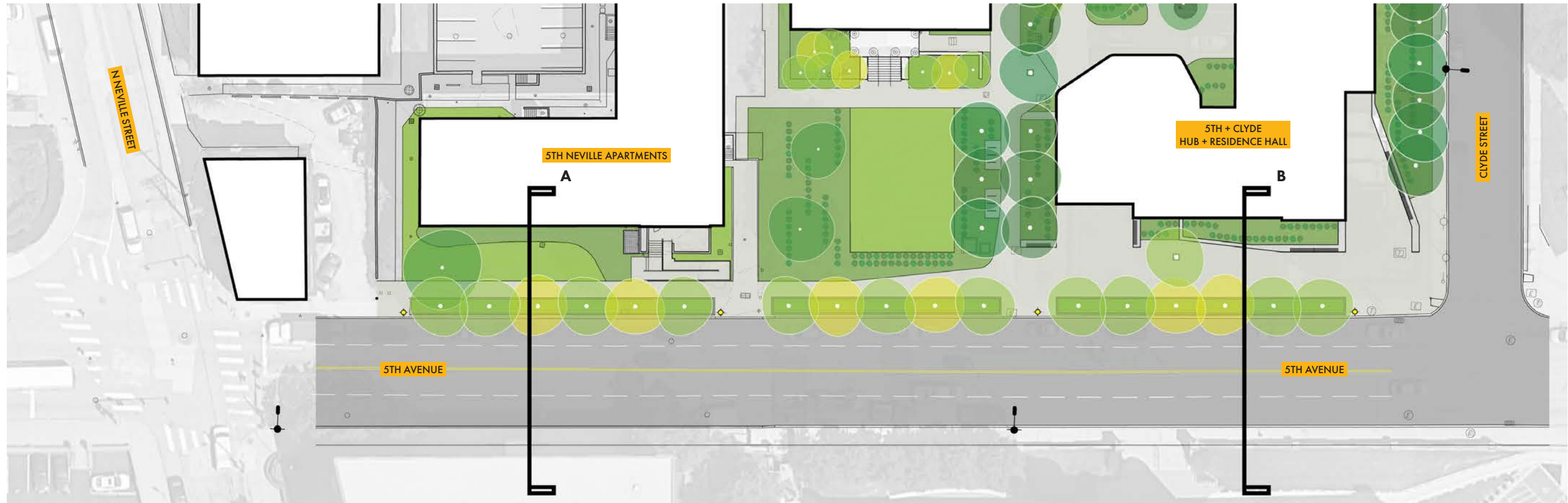
SECTION A | 5th Avenue @ North Neville Street

SECTION B | 5th Avenue @ Clyde Street

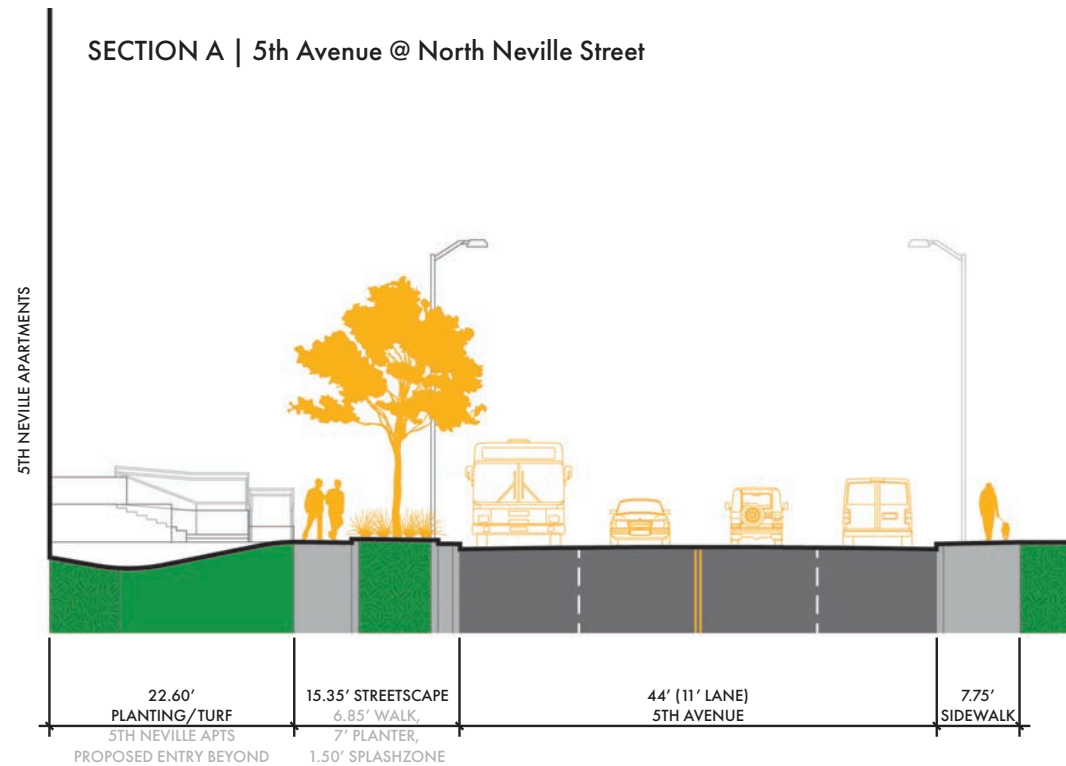




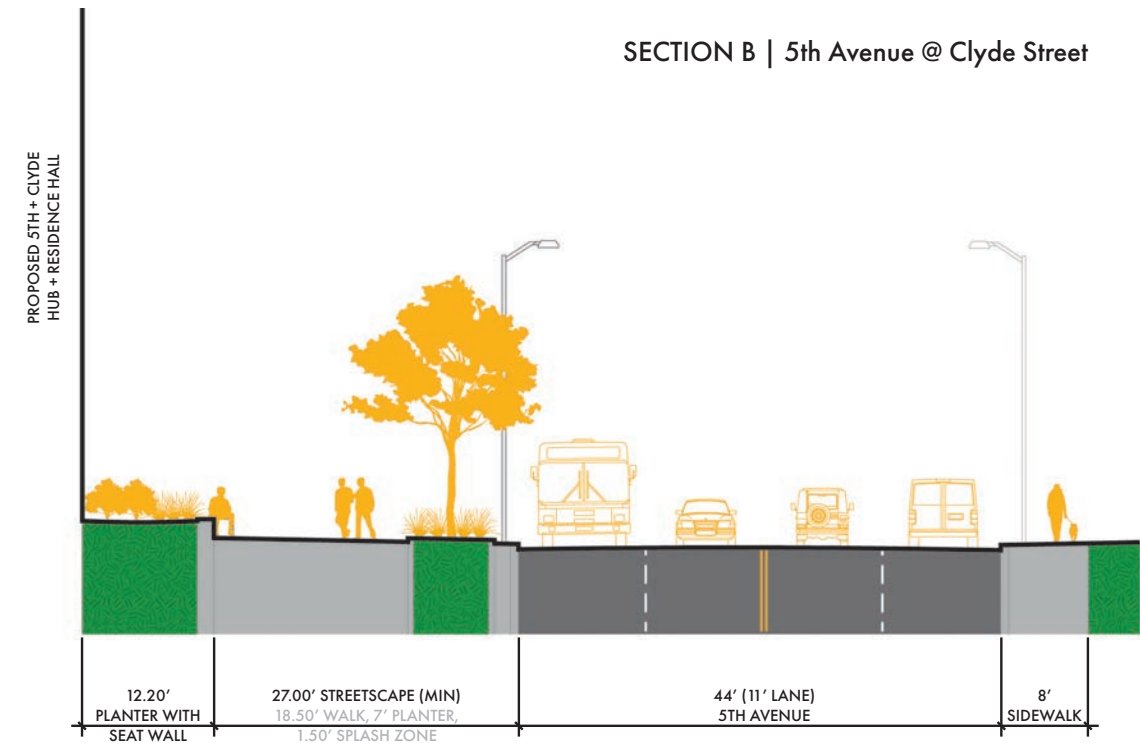
PROPOSED SITE SECTIONS



SECTION A | 5th Avenue @ North Neville Street



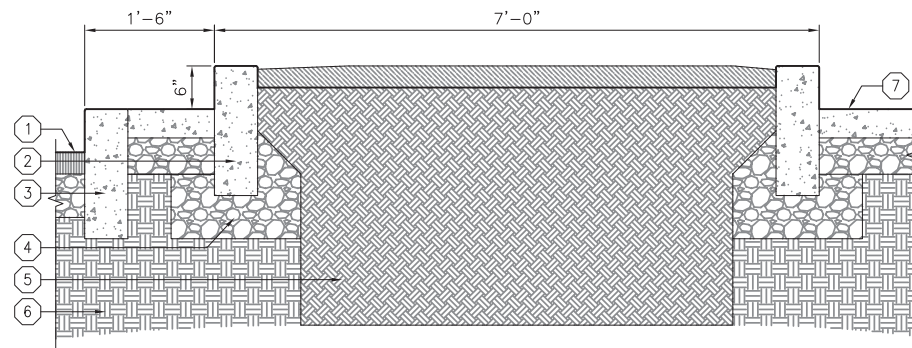
SECTION B | 5th Avenue @ Clyde Street



Carnegie Mellon University 5th Avenue Streetscape Site Design Options  
**STREETSCAPE PLANTER DESIGN**

LEGEND

1. EXISTING 5TH AVENUE PAVING
2. CIP CONCRETE CURB
3. EXISTING 5TH AVENUE CURB, TO REMAIN
4. COMPACTED AGGREGATE BASE
5. PLANTING SOIL
6. EXISTING SUBGRADE
7. CIP CONCRETE PAVING

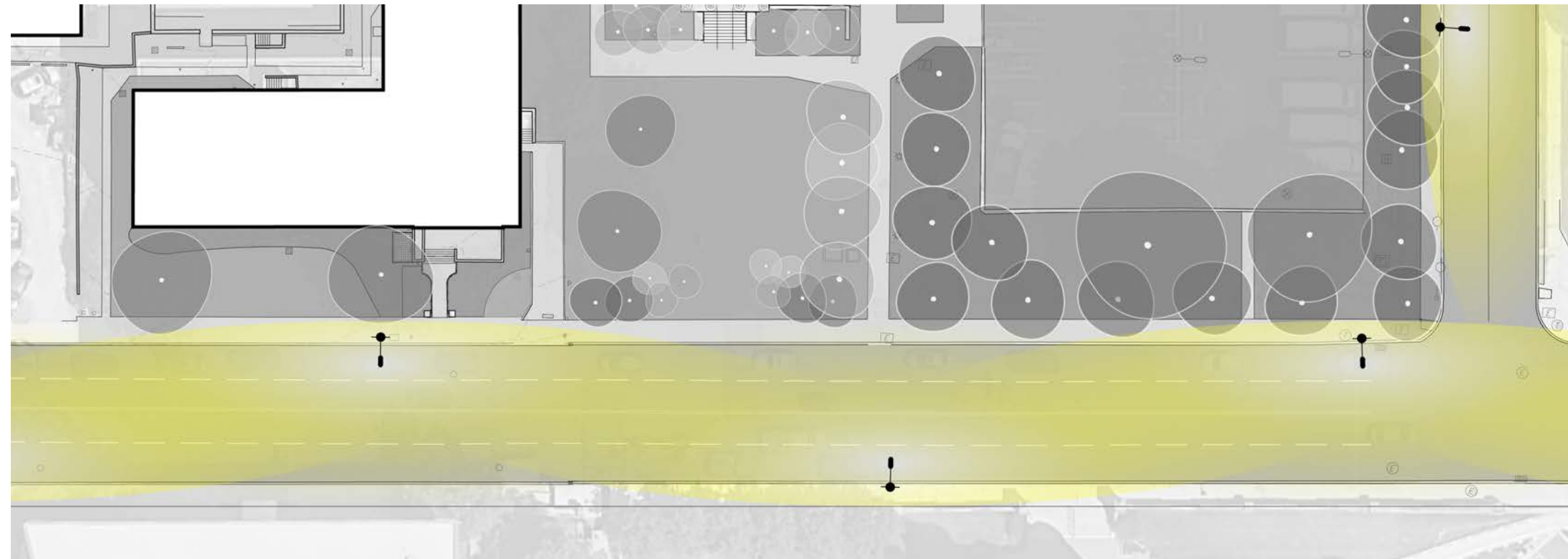


① CIP CONCRETE CURB AT 5th AVENUE

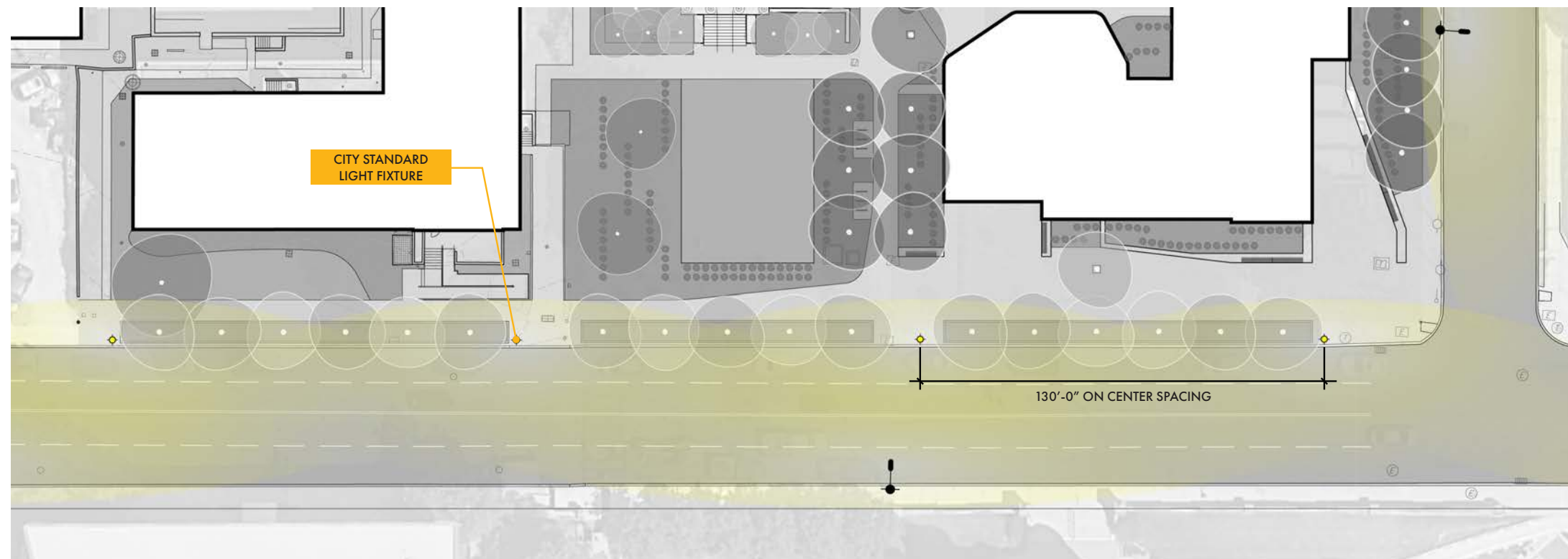


CARNEGIE MELLON UNIVERSITY  
 TEPPER SCHOOL OF BUSINESS

### STREETSCAPE LIGHTING STRATEGY



**LIGHTING STRATEGY**  
EXISTING 5TH AVENUE



**LIGHTING STRATEGY**  
PROPOSED 5TH AVENUE

