

# Denny Substation Urban Design Merit

with the

Seattle  
**design**  
Commission

November 7, 2013



## **Denny Substation Project**

*Powering Seattle through the 21st century*



Denny Substation  
Urban Design Merit:  
MACRO SITE CONTEXT

November 7, 2013



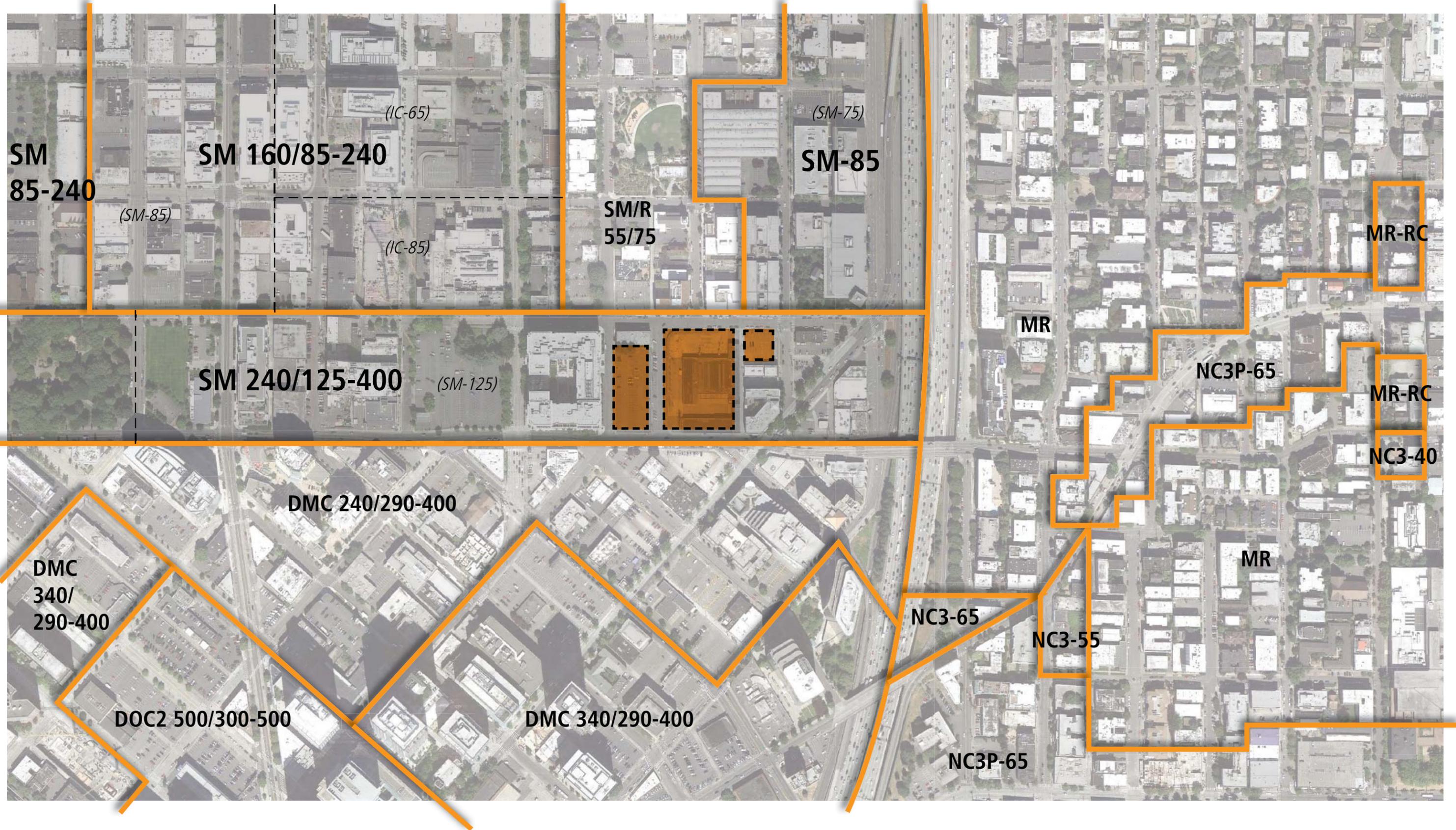
AERIAL VIEW FROM DENNY WAY



SITE PLAN



STREET VIEW ALONG DENNY WAY LOOKING NORTH



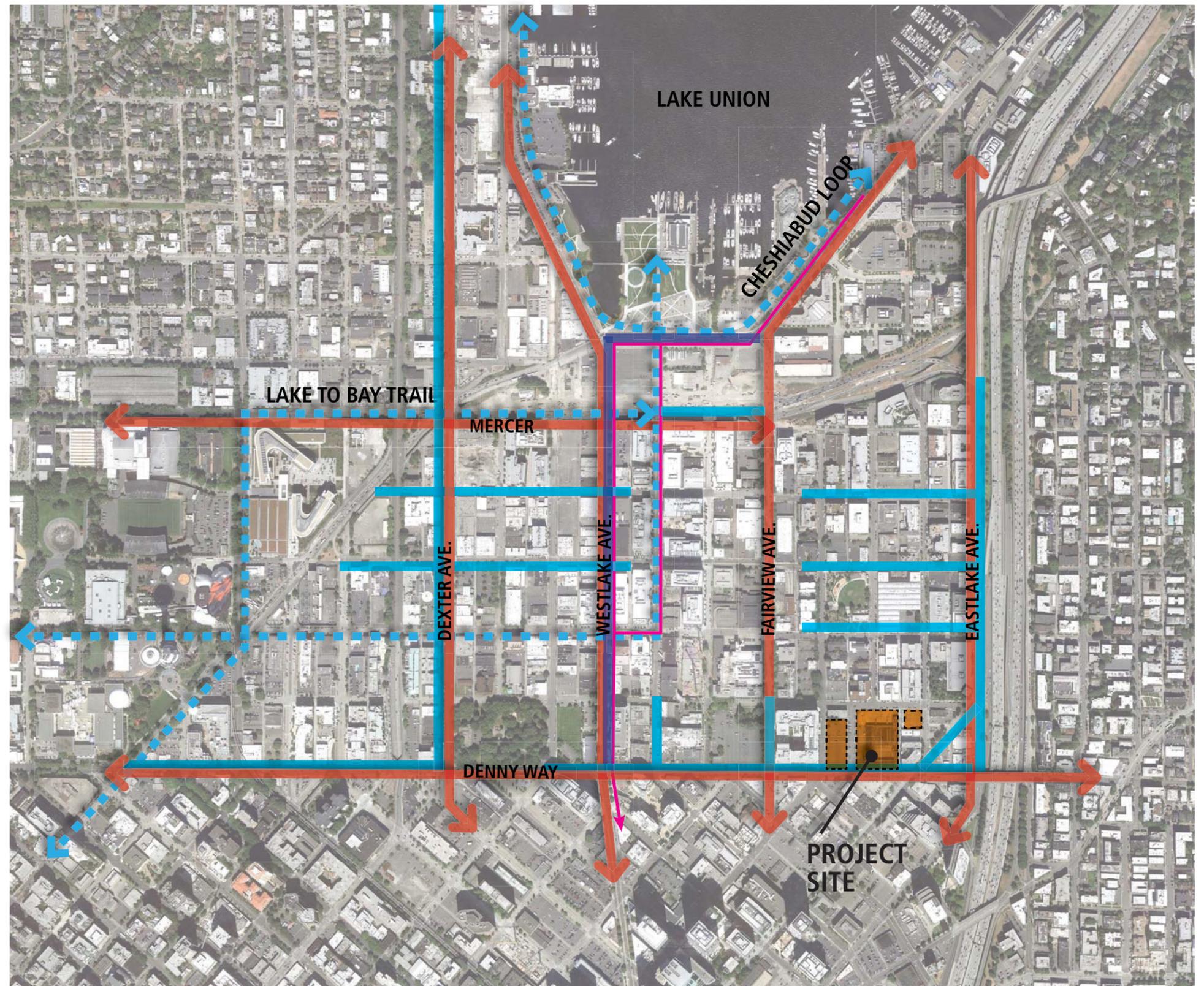
***RELATIONSHIP TO  
SIGNIFICANT NODES***



# TRANSPORTATION

- CLASS 1 PEDESTRIAN STREETS
- CLASS 2 PEDESTRIAN STREETS
- URBAN TRAIL
- STREETCAR
- BOULEVARD/GREAT STREET

\*On Valley Street, all Class 1 Pedestrian Streets requirements apply only to lots abutting on the south side of the street.



# GREEN SPACES

- GREEN SPACES
- GREEN STREETS



## RELATIONSHIP TO SIGNIFICANT NODES



# GREEN SPACES

**PUBLIC**  
CASCADE PARK and PEA  
PATCH

**PRIVATE**  
REI TRAIL SYSTEM

**PRIVATE**  
SEATTLE TIMES BLDG.  
POCKET PARK



*USE TYPE*

- COMMUNITY
- COMMERCIAL
- RESIDENTIAL



**USE TYPE**

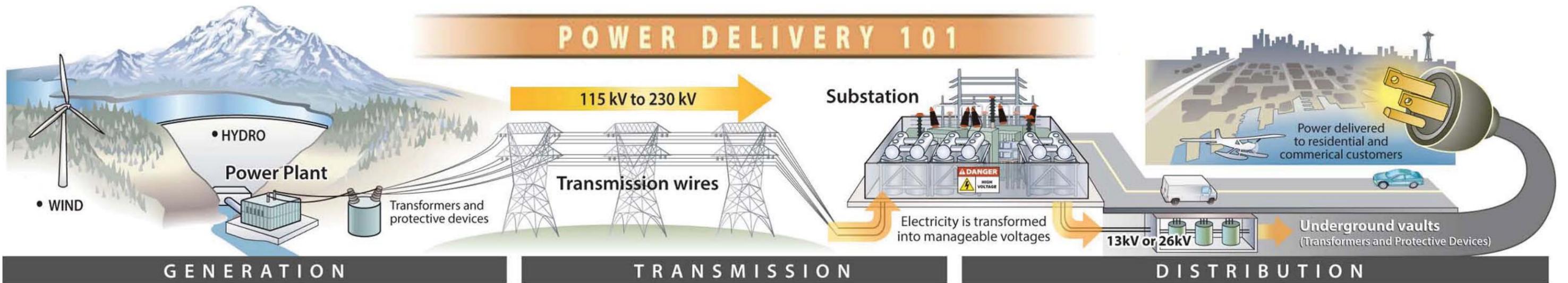
-  COMMUNITY
-  COMMERCIAL
-  RESIDENTIAL
-  FUTURE COMMERCIAL
-  FUTURE RESIDENTIAL
-  FUTURE MIXED USE



# Denny Substation Urban Design Merit: SITE & UTILITY OPERATIONS

November 7, 2013

# SUBSTATION FOOTPRINT and EQUIPMENT LAYOUT



# UTILITY MISSION

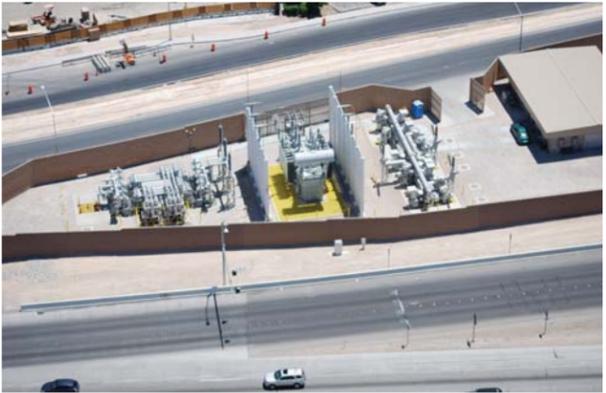
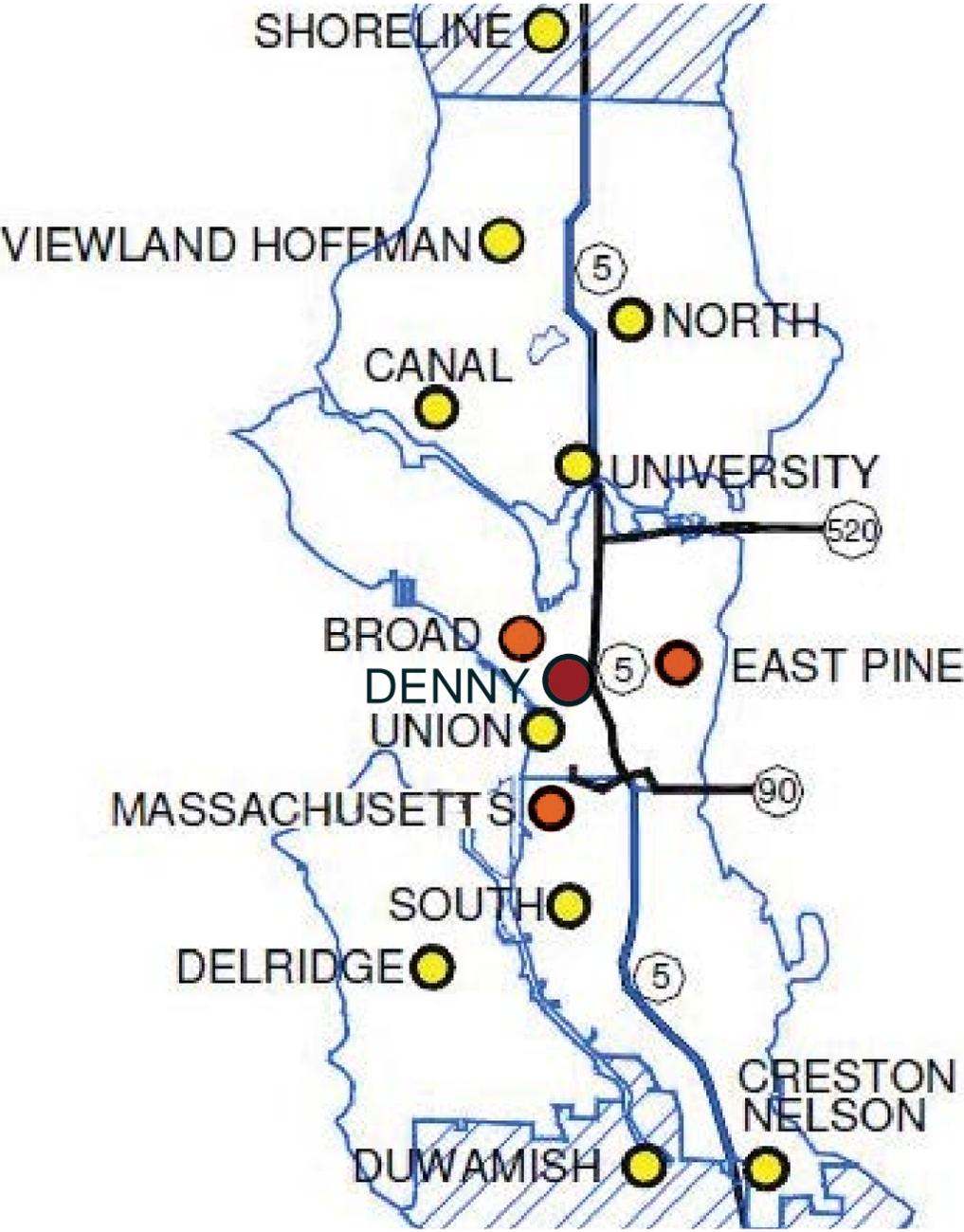


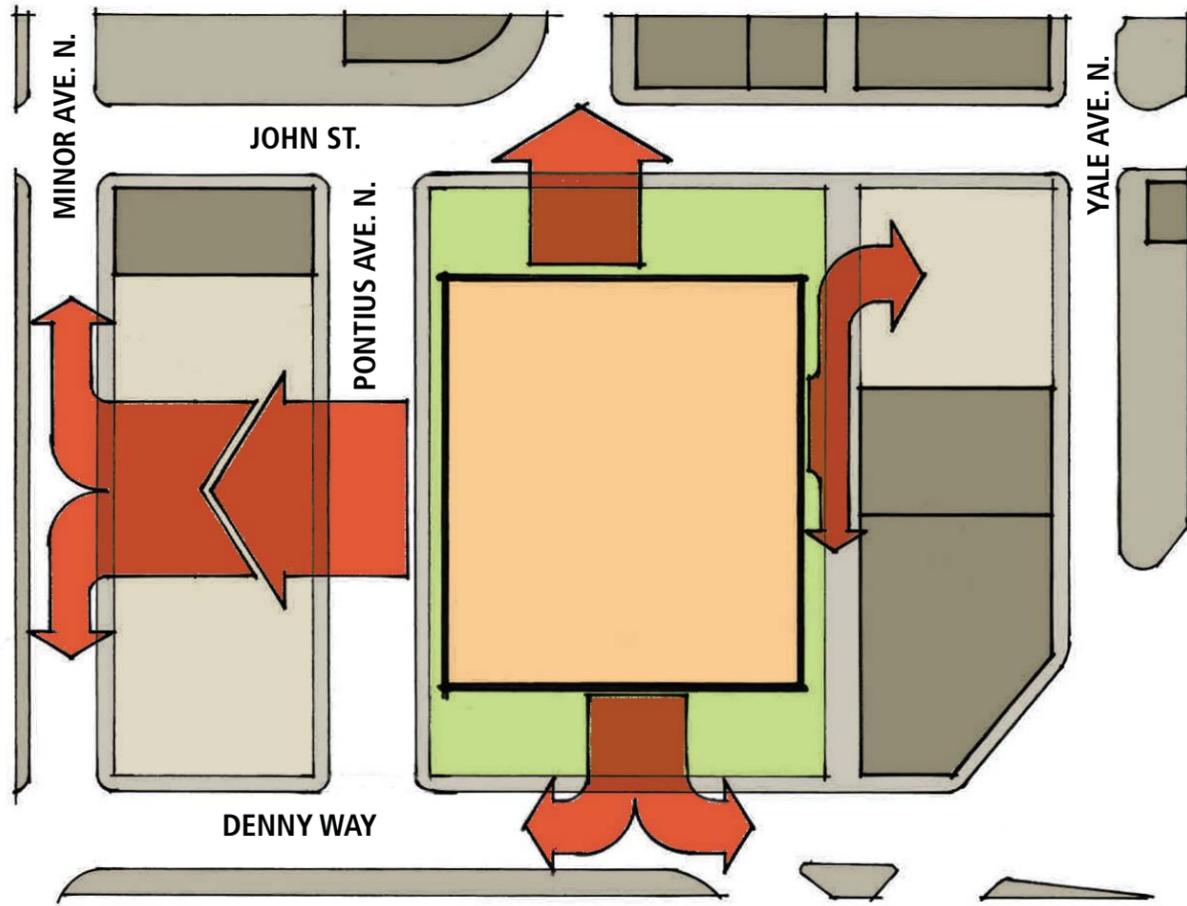


Image representative of Transformer

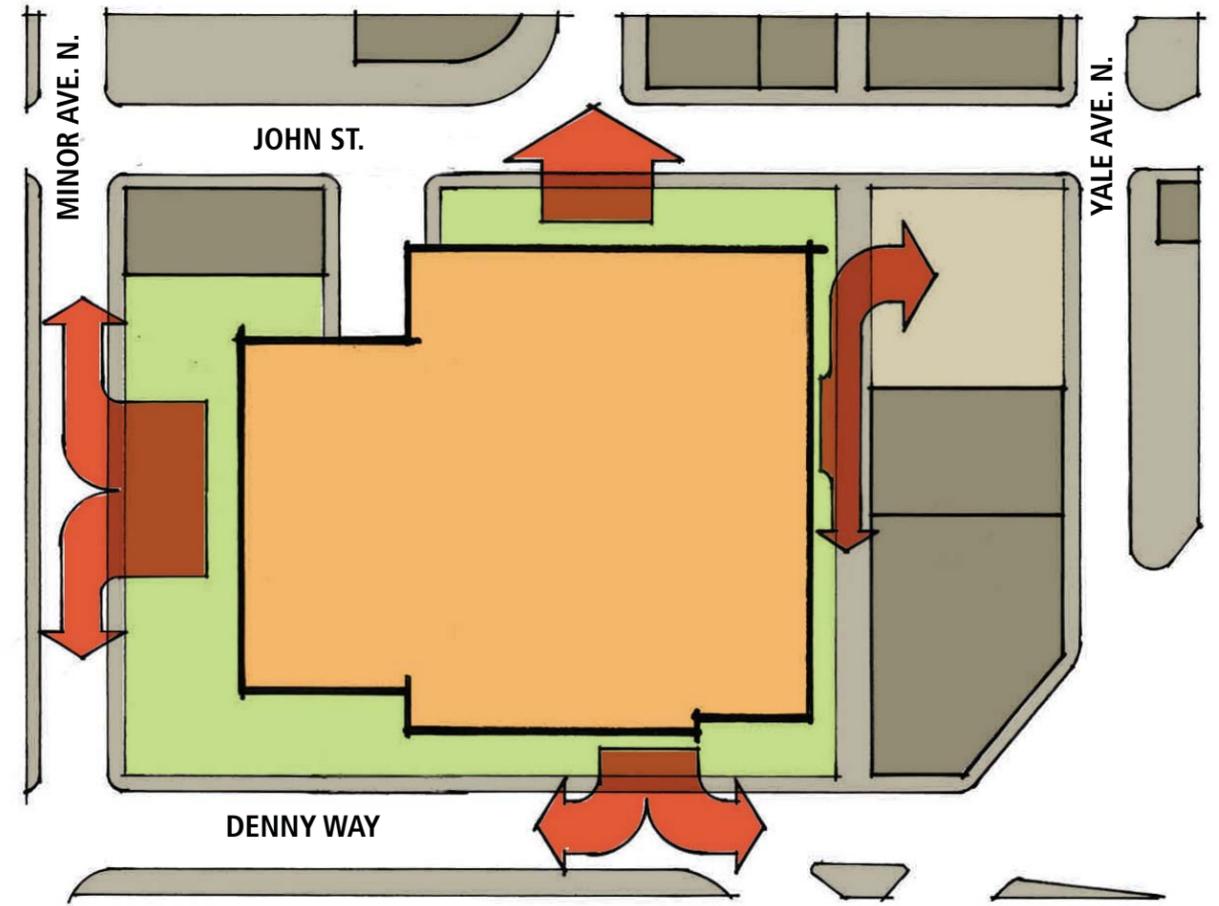


Images representative of Switchgear

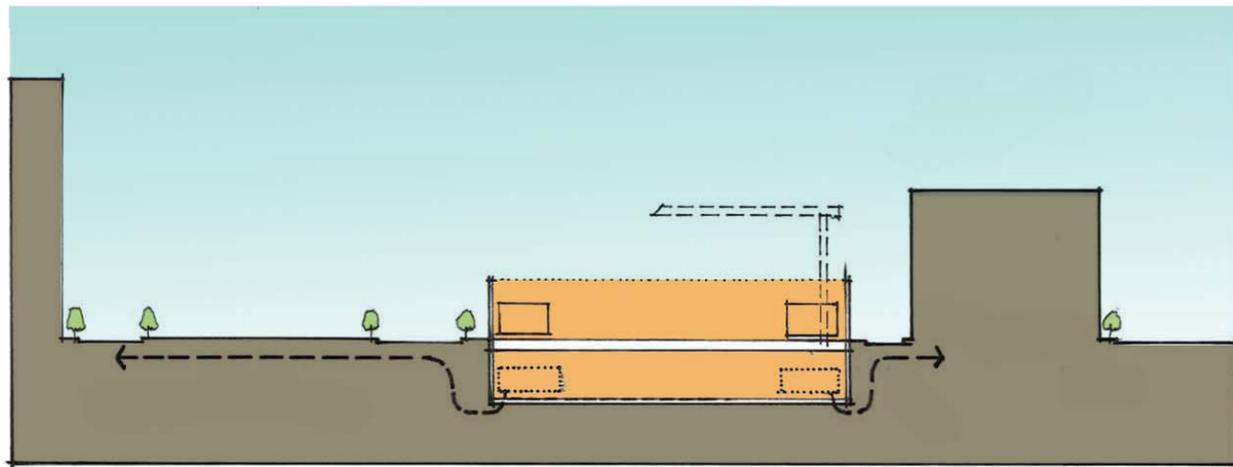
\*Transmission lines and Distribution duct banks will be below grade



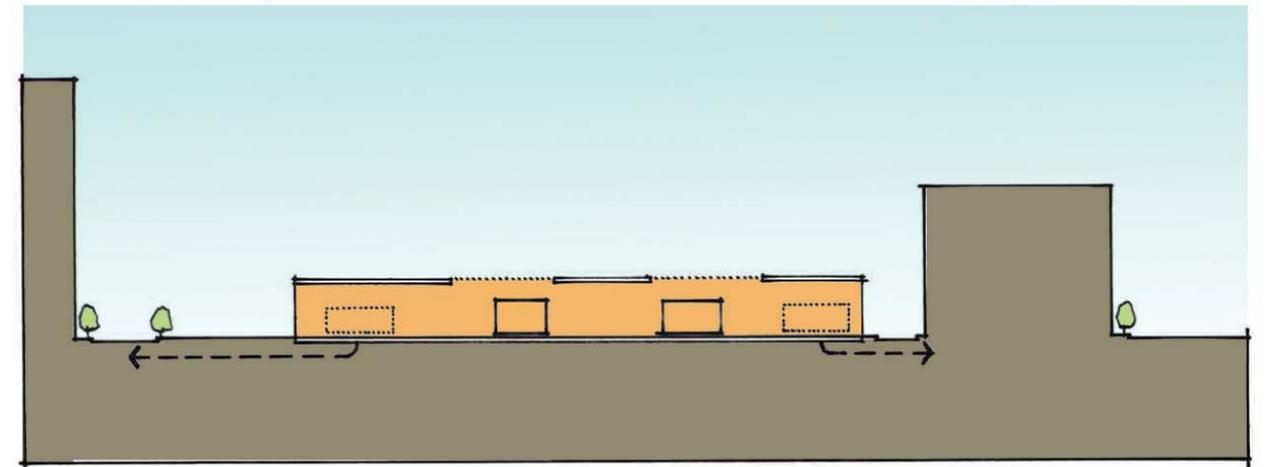
NO VACATION OF PONTIUS: DISTRIBUTION ROUTING



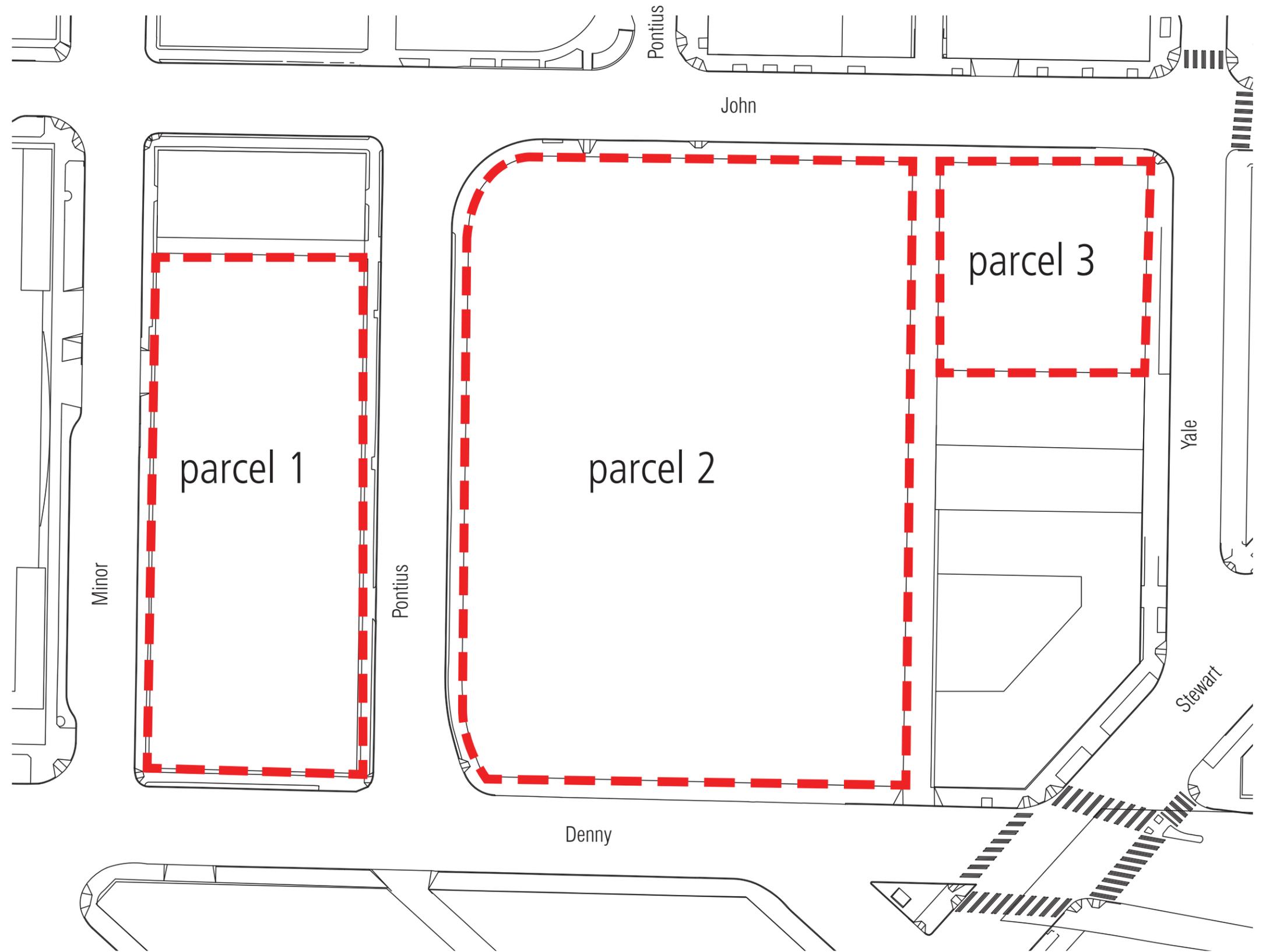
VACATION OF PONTIUS: DISTRIBUTION ROUTING

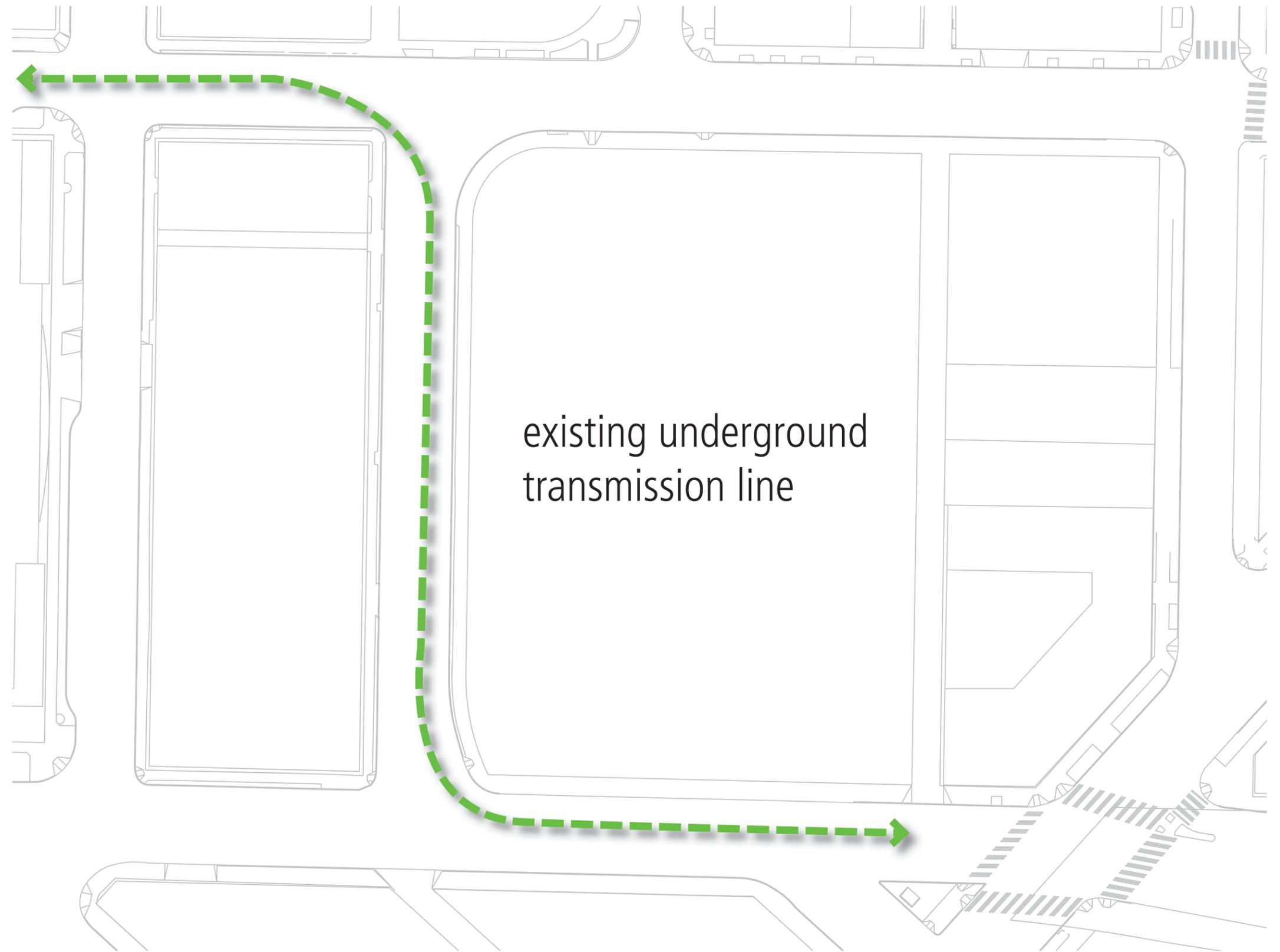


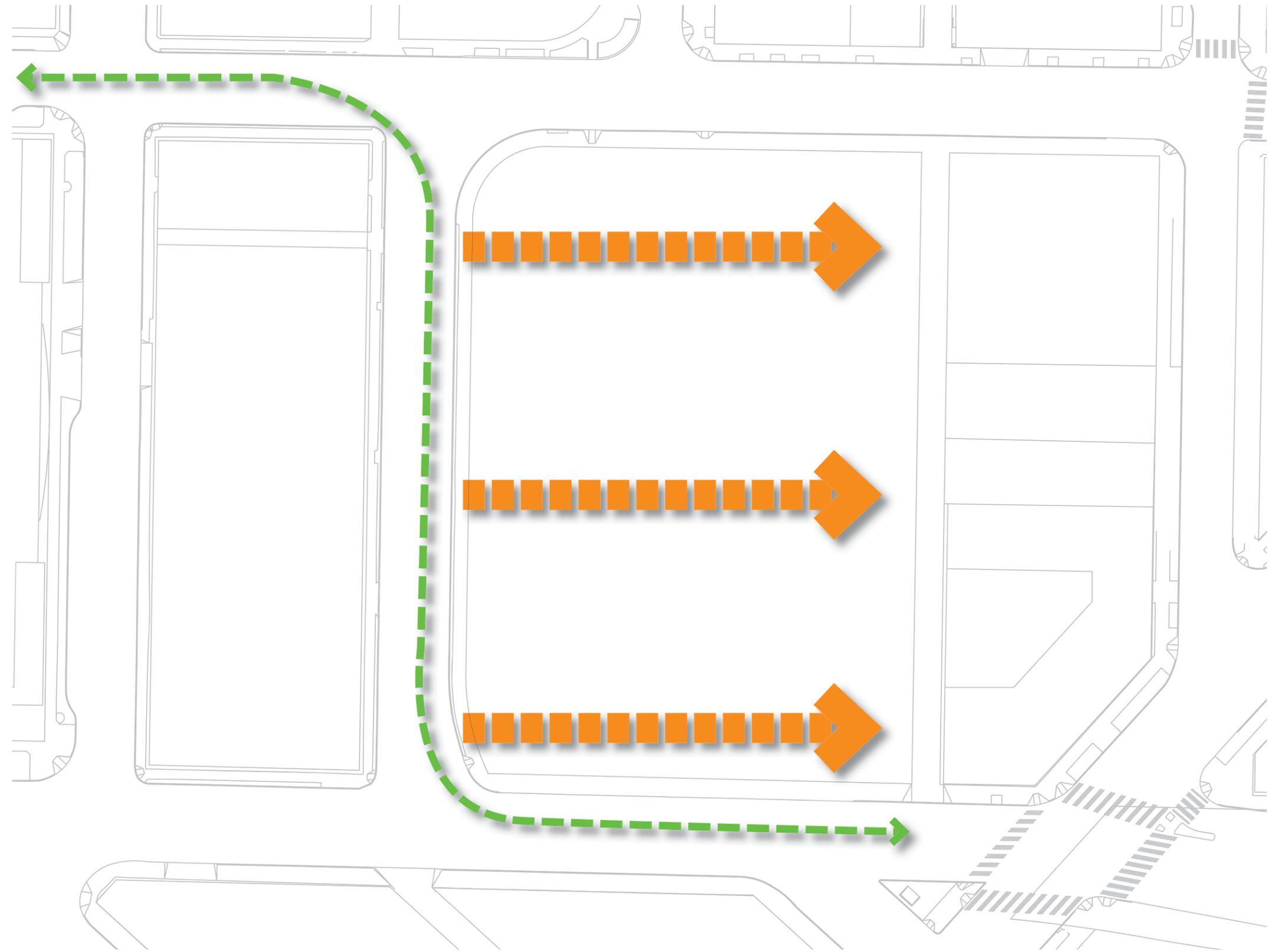
NO VACATION OF PONTIUS: TWO LEVELS

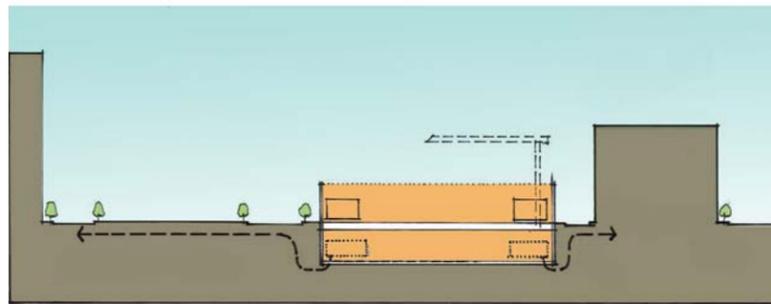
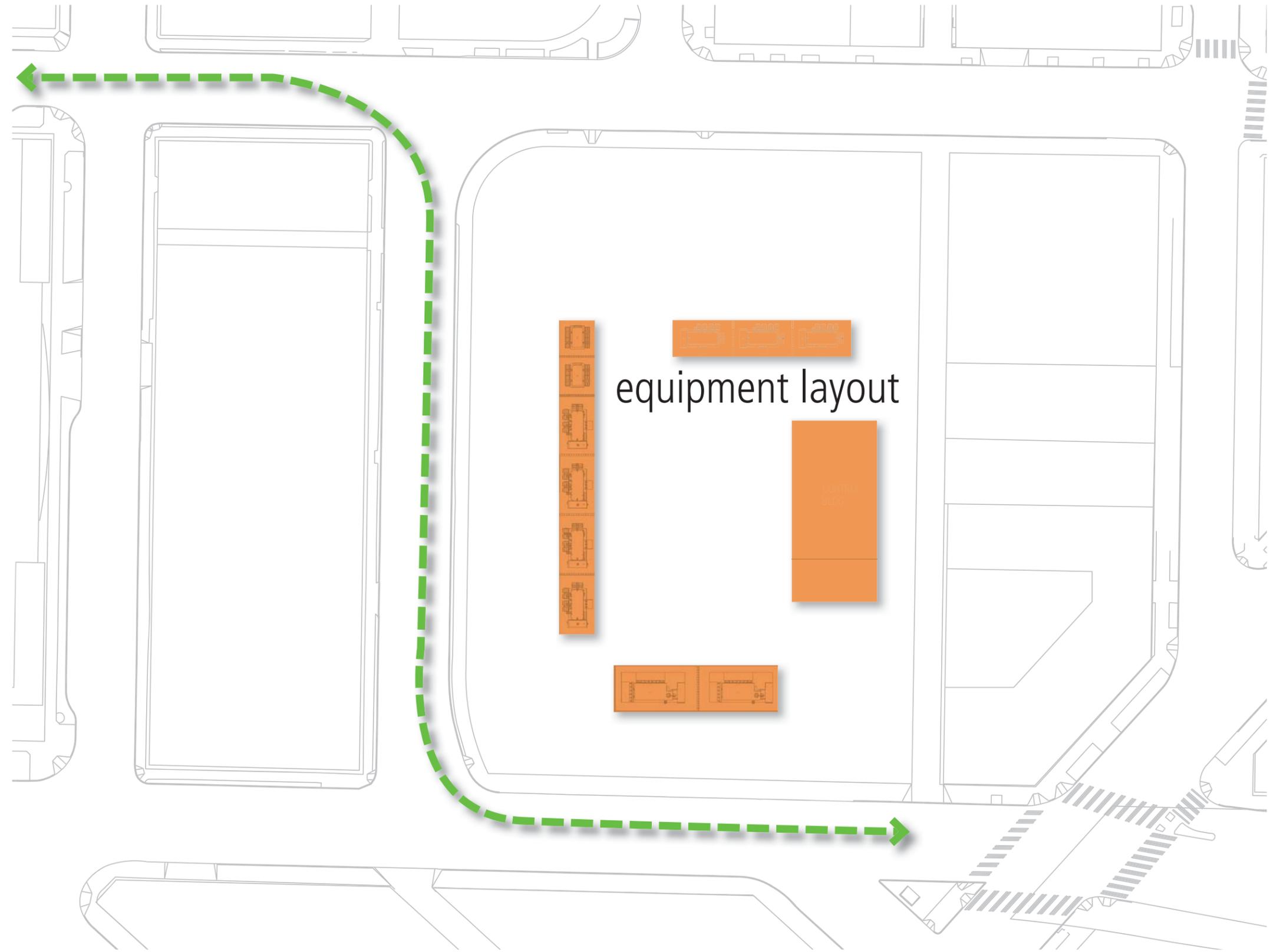


VACATION OF PONTIUS: ONE LEVEL

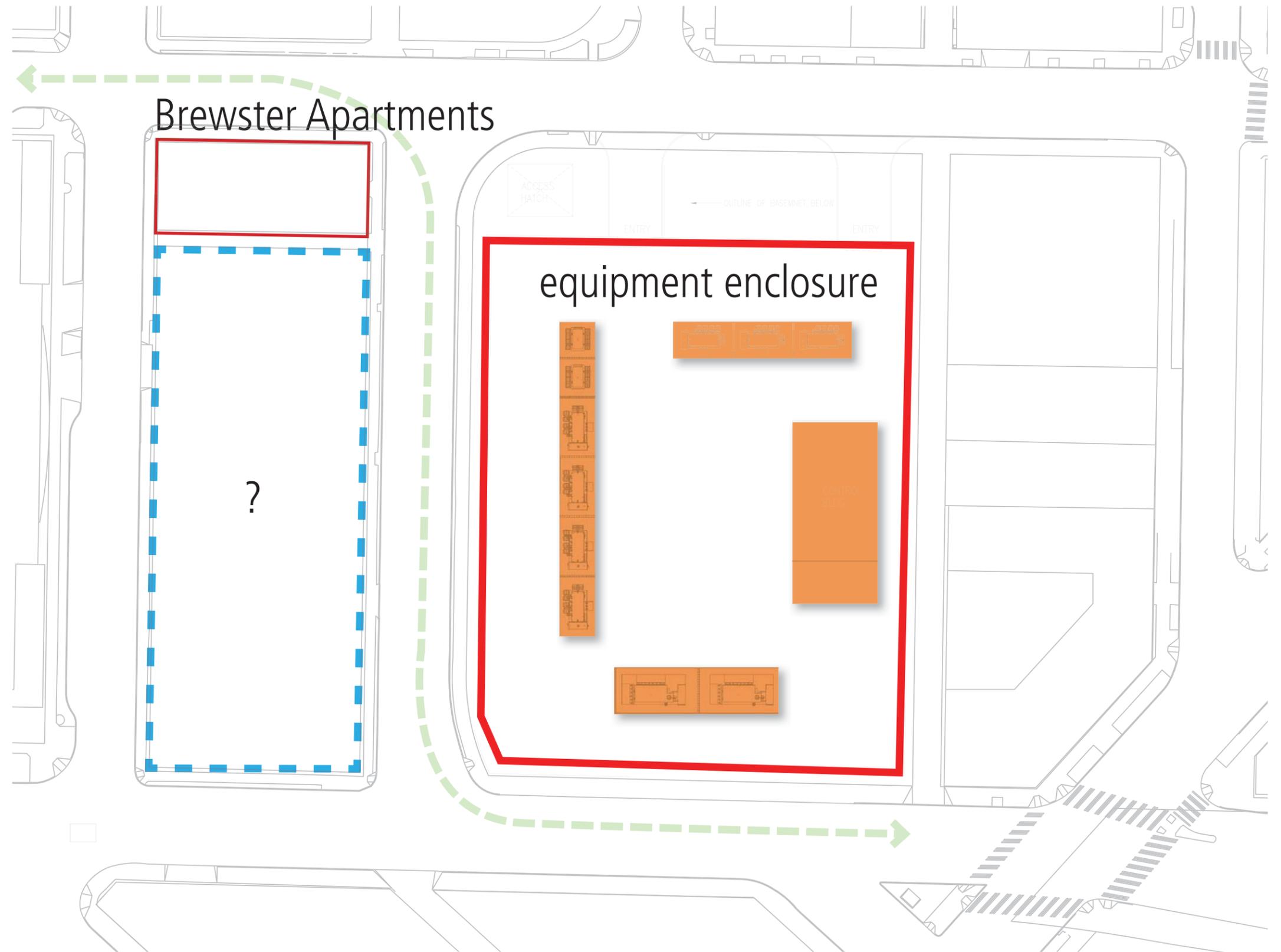


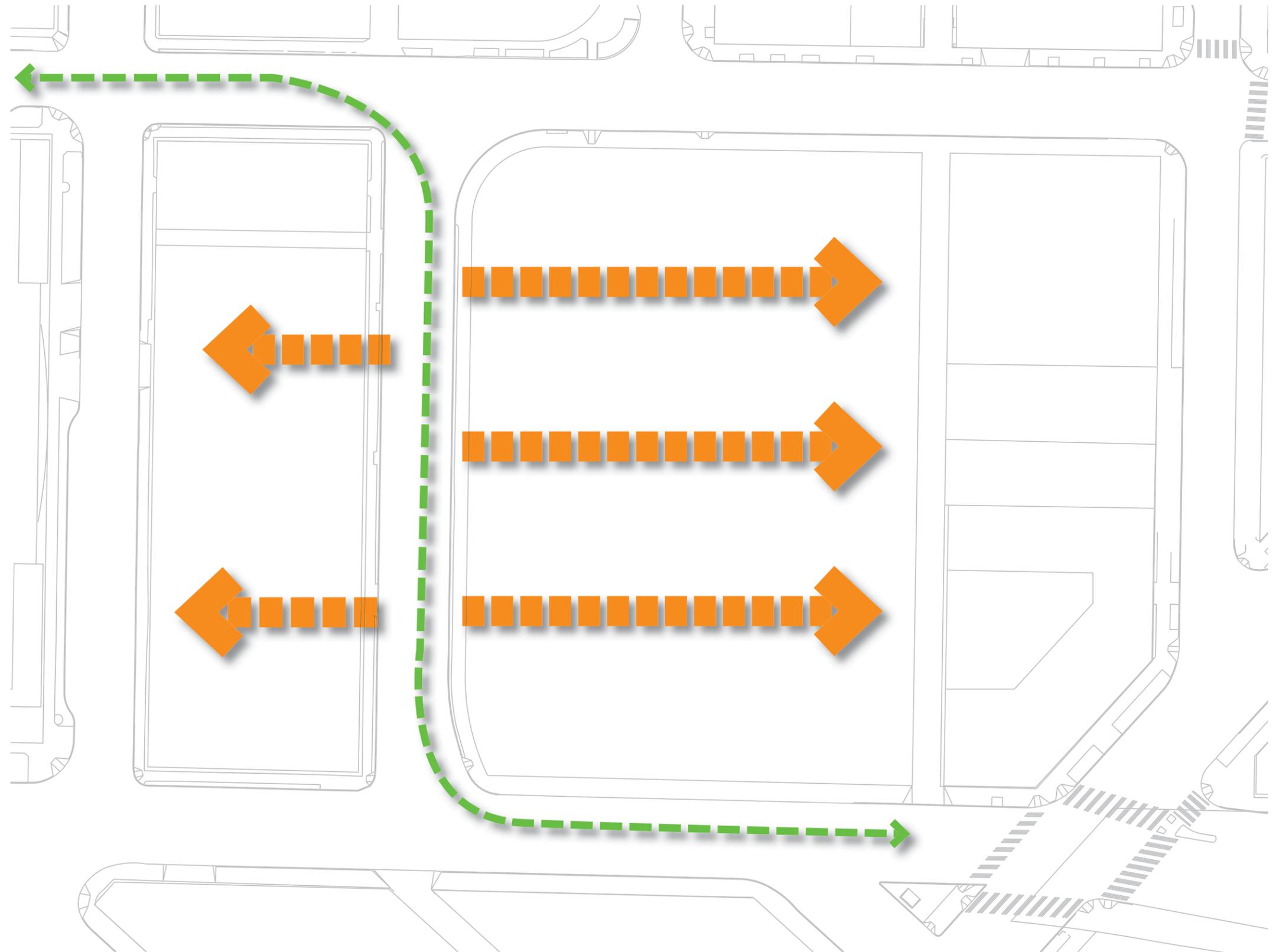


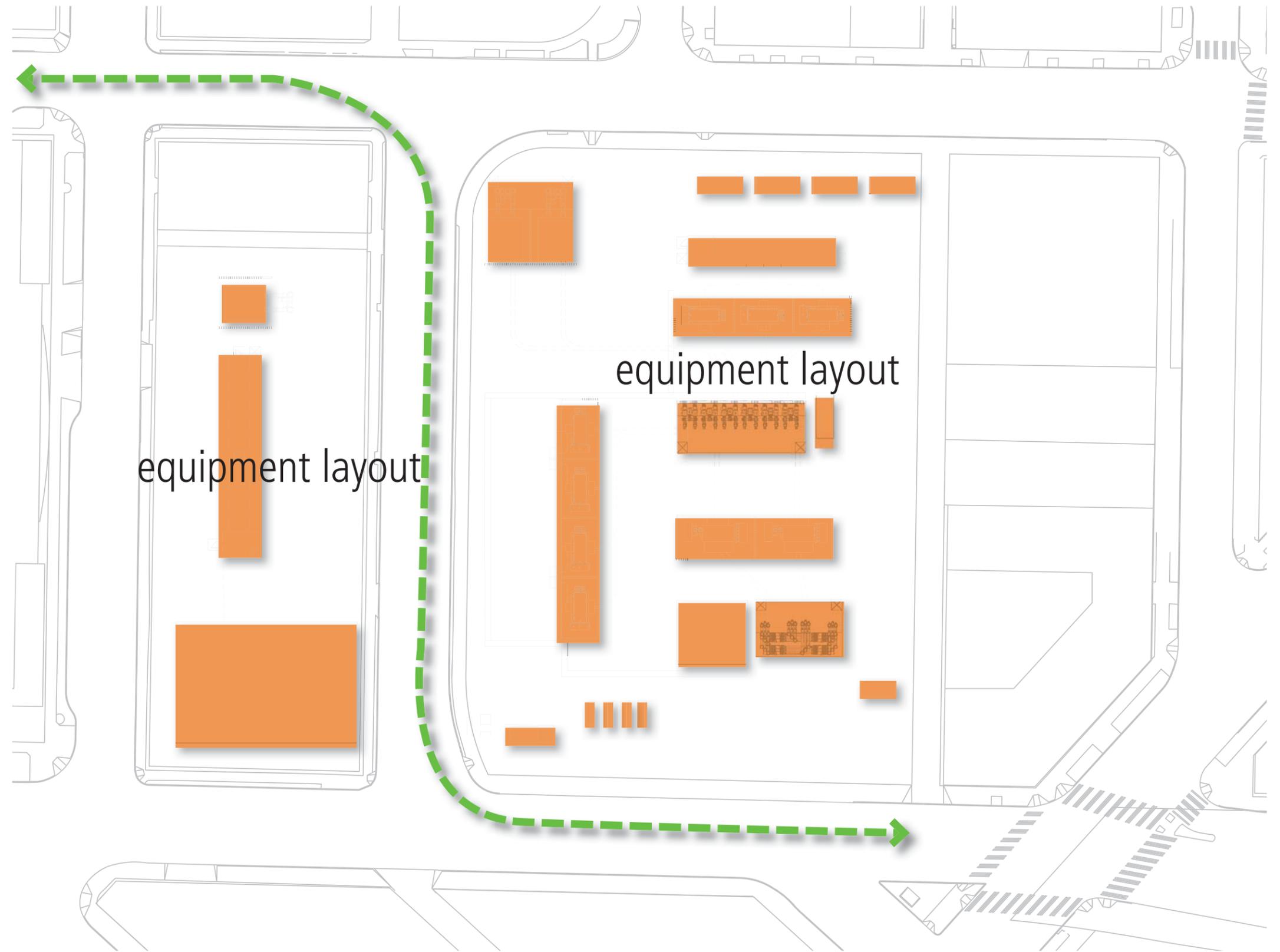




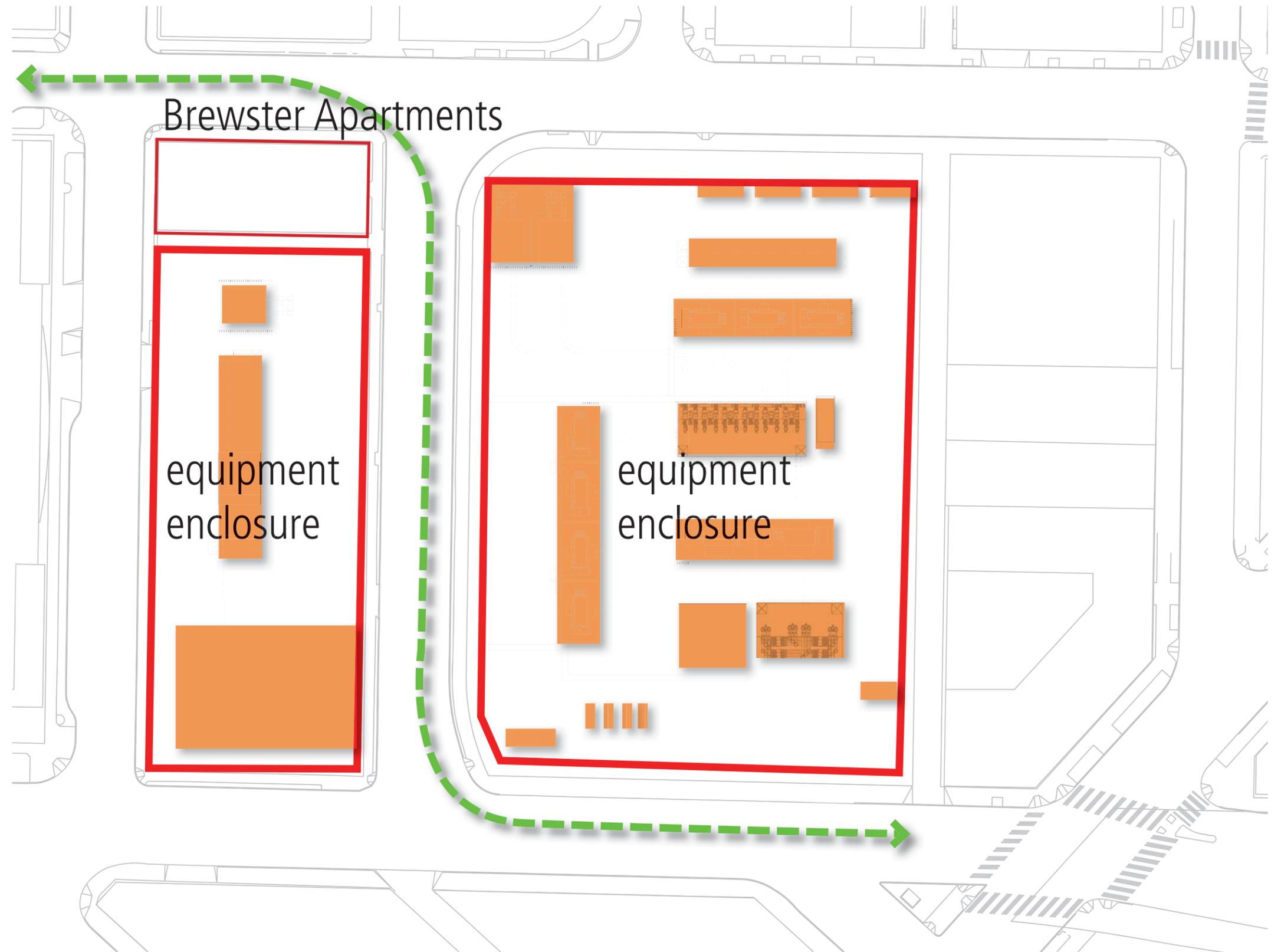
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- Requires an above and below grade substation design
- Stacked layout complicates accessibility, maintenance, and safety
- Distribution lines routing occurs further below grade than desirable
- No opportunity for prominent urban amenities at the perimeter
- Higher capital cost (\$37M higher cost than Vacation of Pontius option)

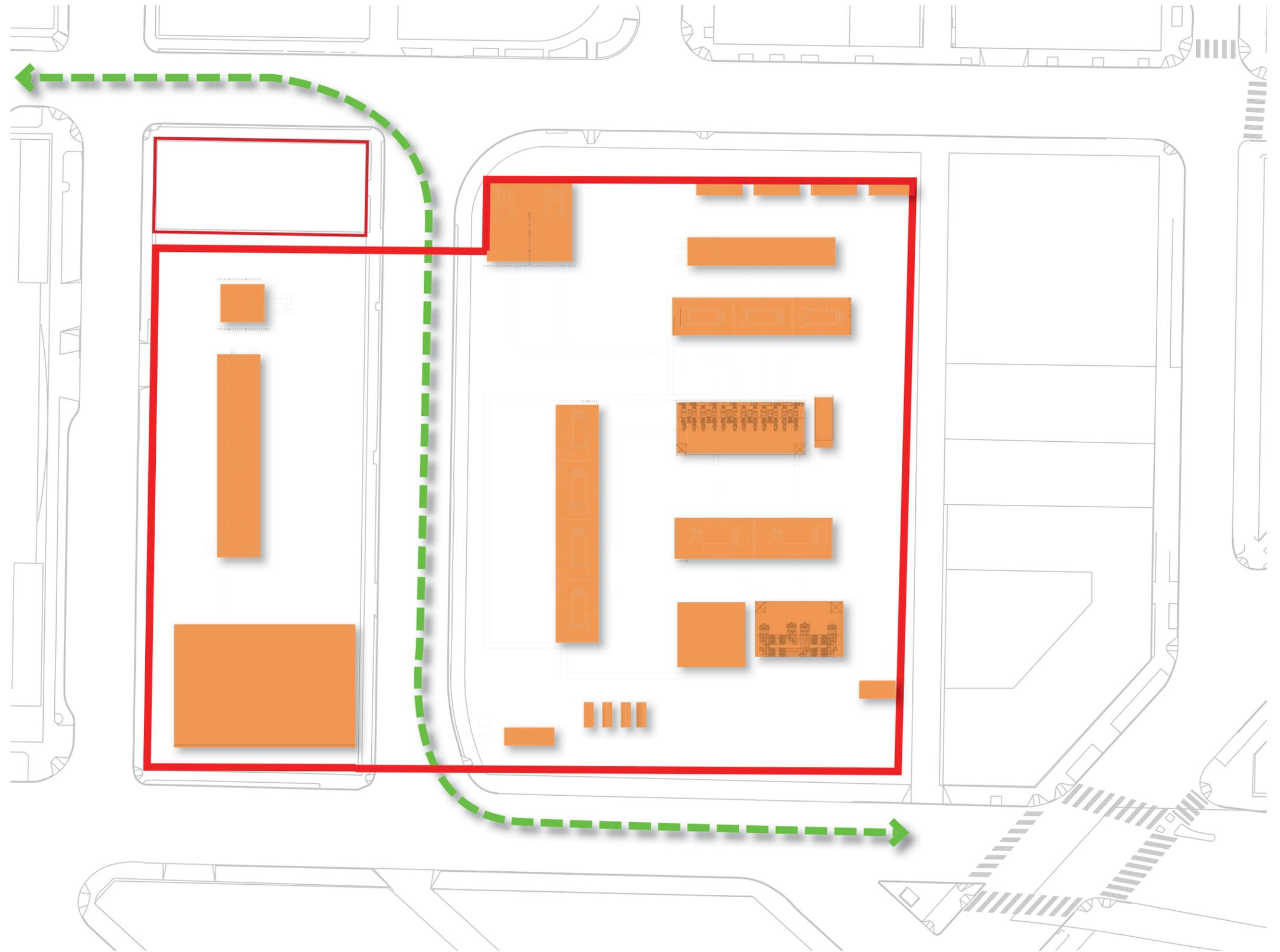


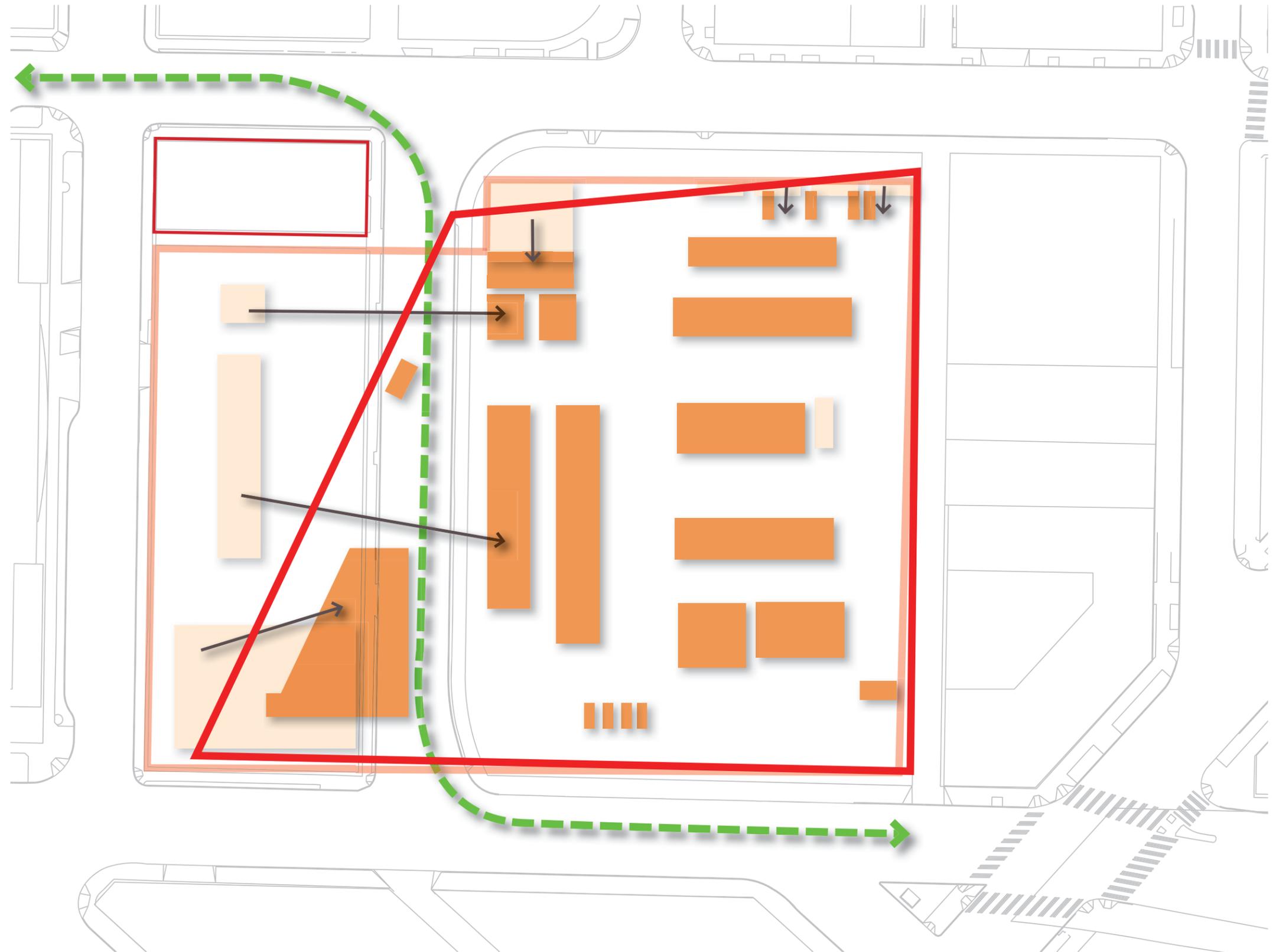


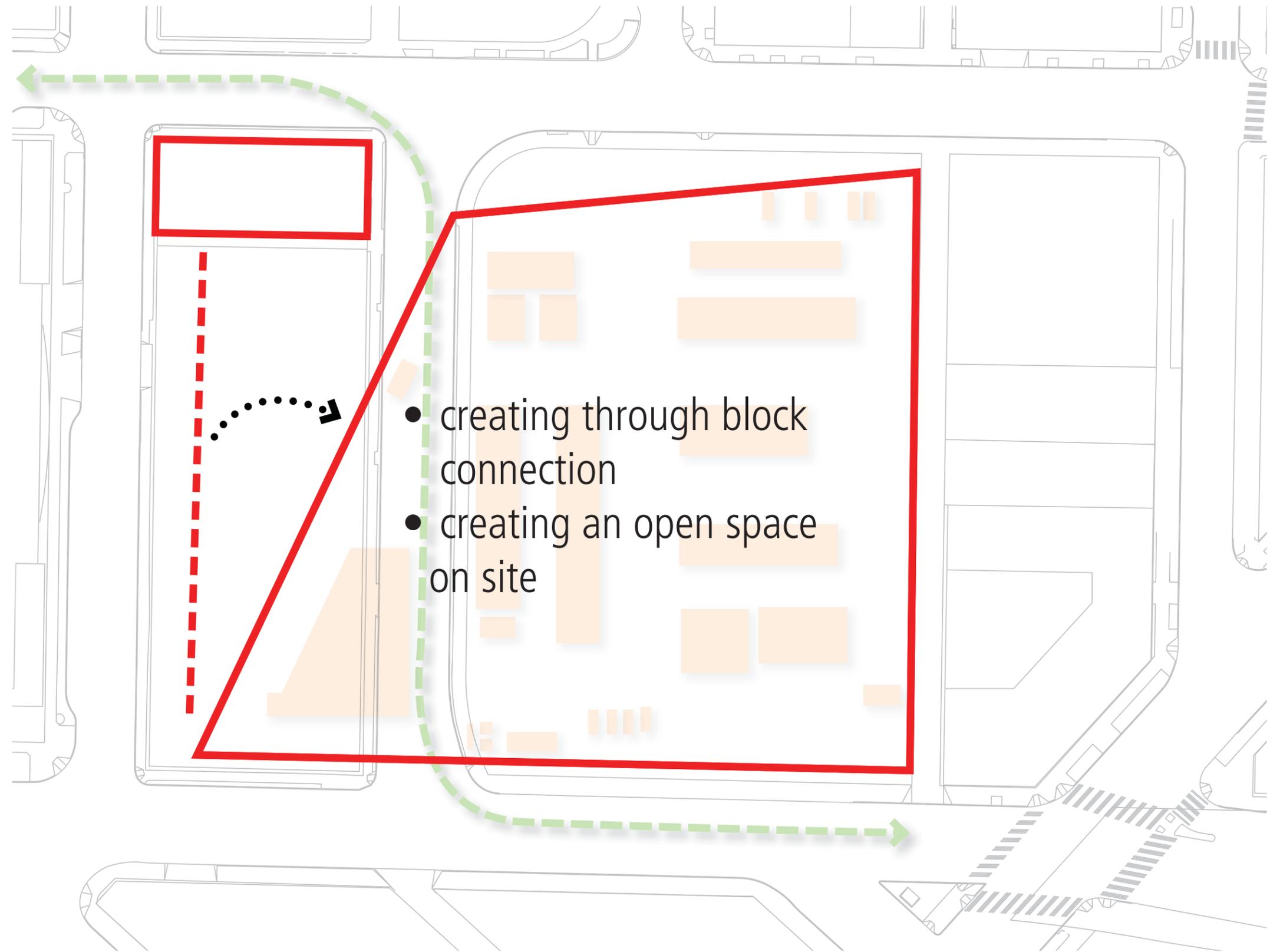


- Equipment layout dispersed on discontinuous parcels and not optimal for daily operations
- Increased operational difficulty in emergency and non-normal operational situations.
- Complexity of security management is increased
- Safety risk for crews and public beyond conventional substation construction approach
- Increased maintenance and capital improvement costs
- Road and sidewalk closure for maintenance and capital improvements will be required
- Visual acuity between sides is challenging for operation
- Requires below street level vacation
- More vulnerable to destructive external attack than conventional substation design
- Higher cost of initial construction





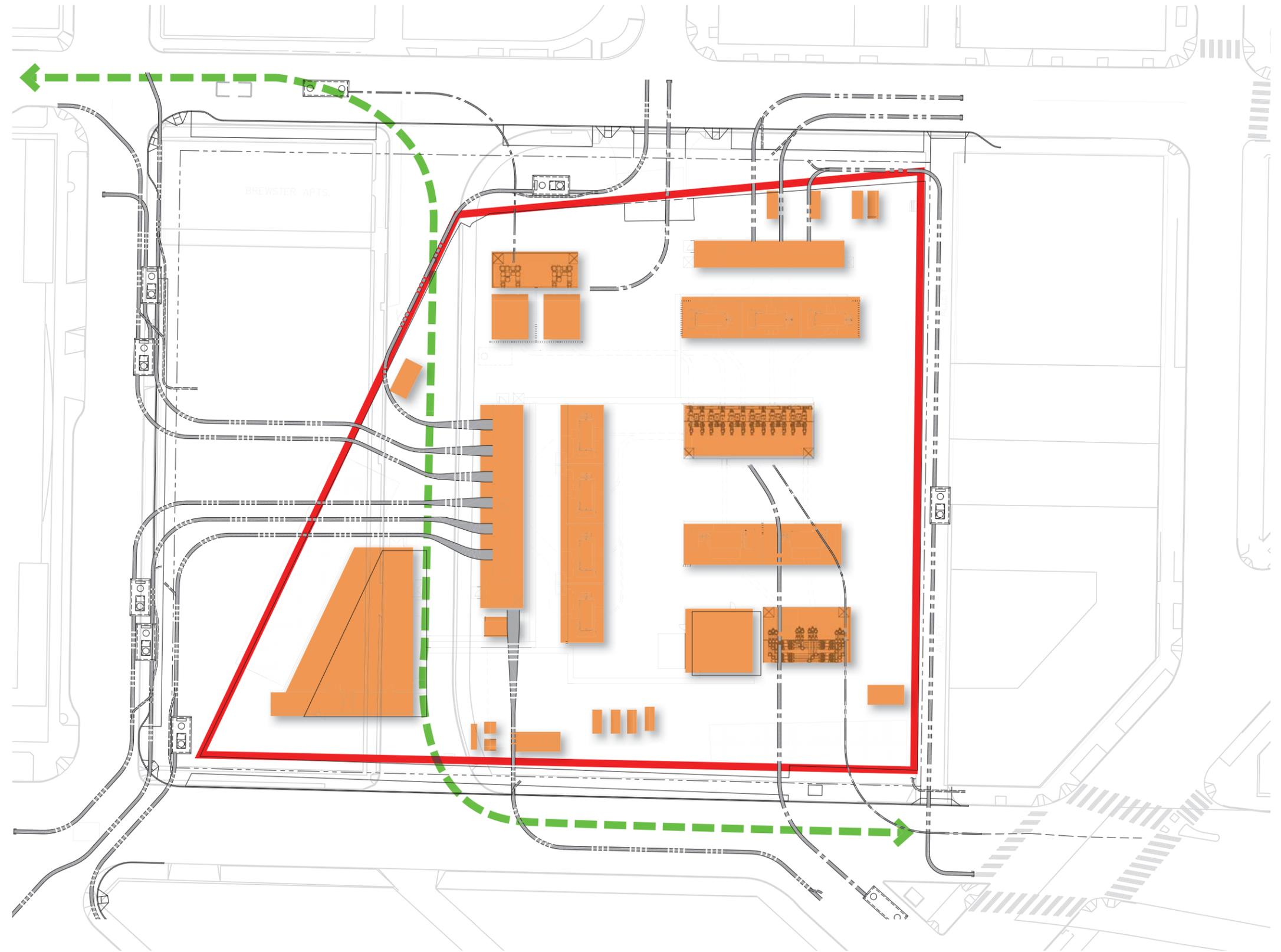




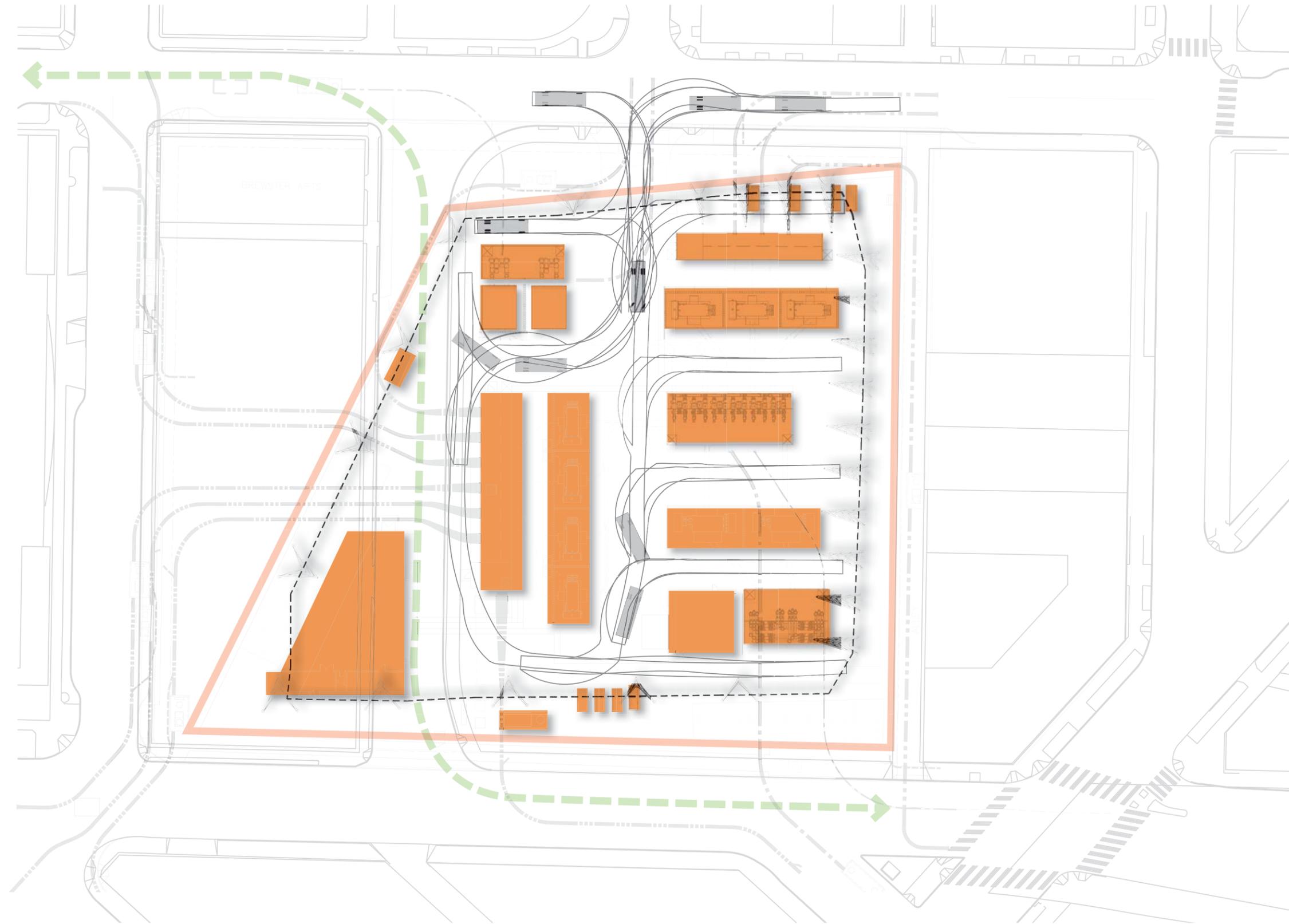
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- Distribution lines occur slightly below grade as per standard for ease of access, maintenance, and lower cost.
- Unassigned open space affords opportunities for potential public amenities.
- Creates a unique condition for experiencing the neighborhood, art, and the substation
- Serves as a prominent landmark for the city and the neighborhood
- Current costs are aligned with anticipated baseline project cost



***EQUIPMENT LAYOUT,  
POWER DISTRIBUTION, AND  
TRANSMISSION ROUTING***



***STRUCTURE LAYOUT AND  
TRUCK ACCESS ROUTES***



# Denny Substation Urban Design Merit:

## VACATE PONTIUS ALTERNATIVE VEHICULAR TRANSPORTATION IMPACTS

November 7, 2013

# EXISTING STREET NETWORK



# EXISTING TRAFFIC VOLUMES P.M. PEAK HOUR

-  PONTIUS AVE. N  
105 VEHICLES
-  JOHN STREET  
290 VEHICLES
-  MINOR AVE. N  
140 VEHICLES
-  THOMAS ST.  
240 VEHICLES
-  DENNY WAY  
1800 VEHICLES



# TRANSIT

 BUS ROUTES

 BUS NUMBER

 ZIP CARS

 BUS STOPS

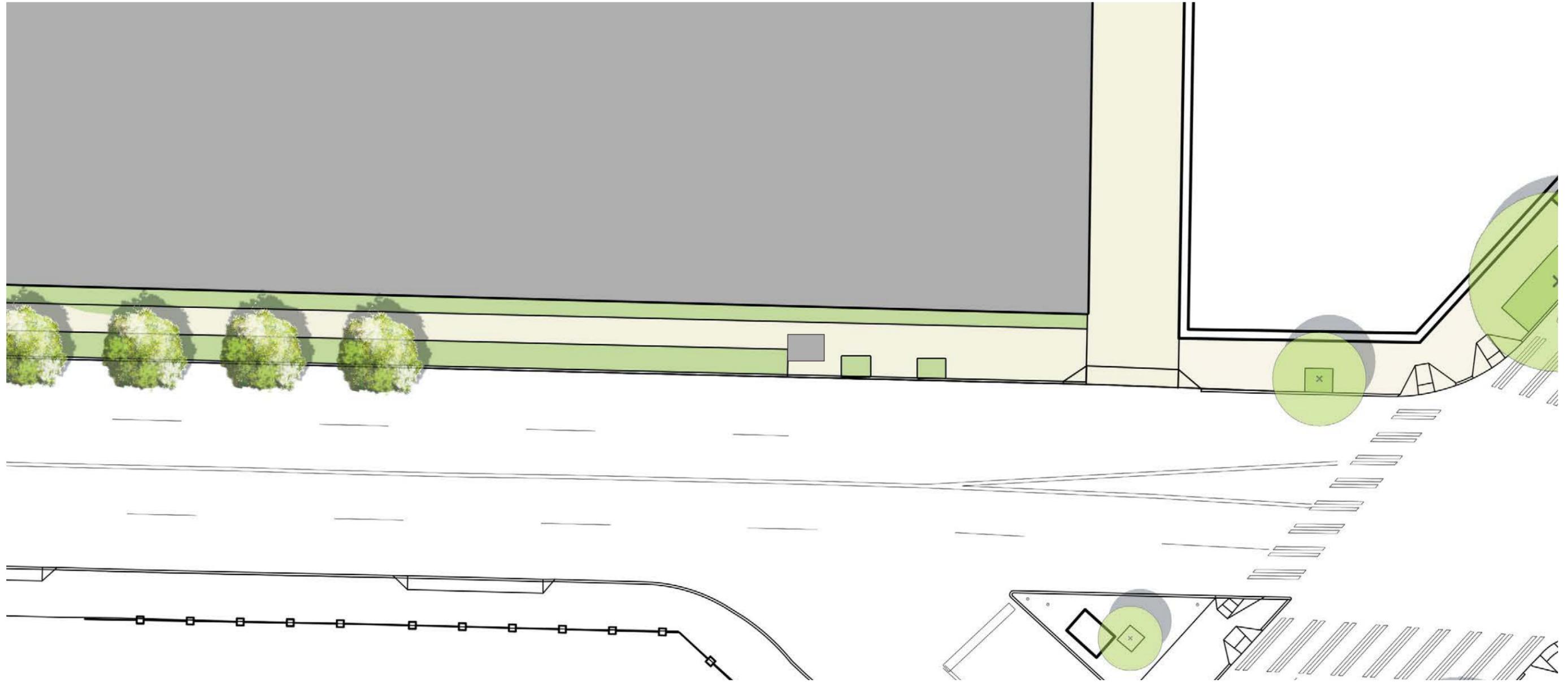
## TOTAL # OF RIDERS PER DAY

 300 RIDERS ON; 100 RIDERS OFF

 360 RIDERS ON; 150 RIDERS OFF

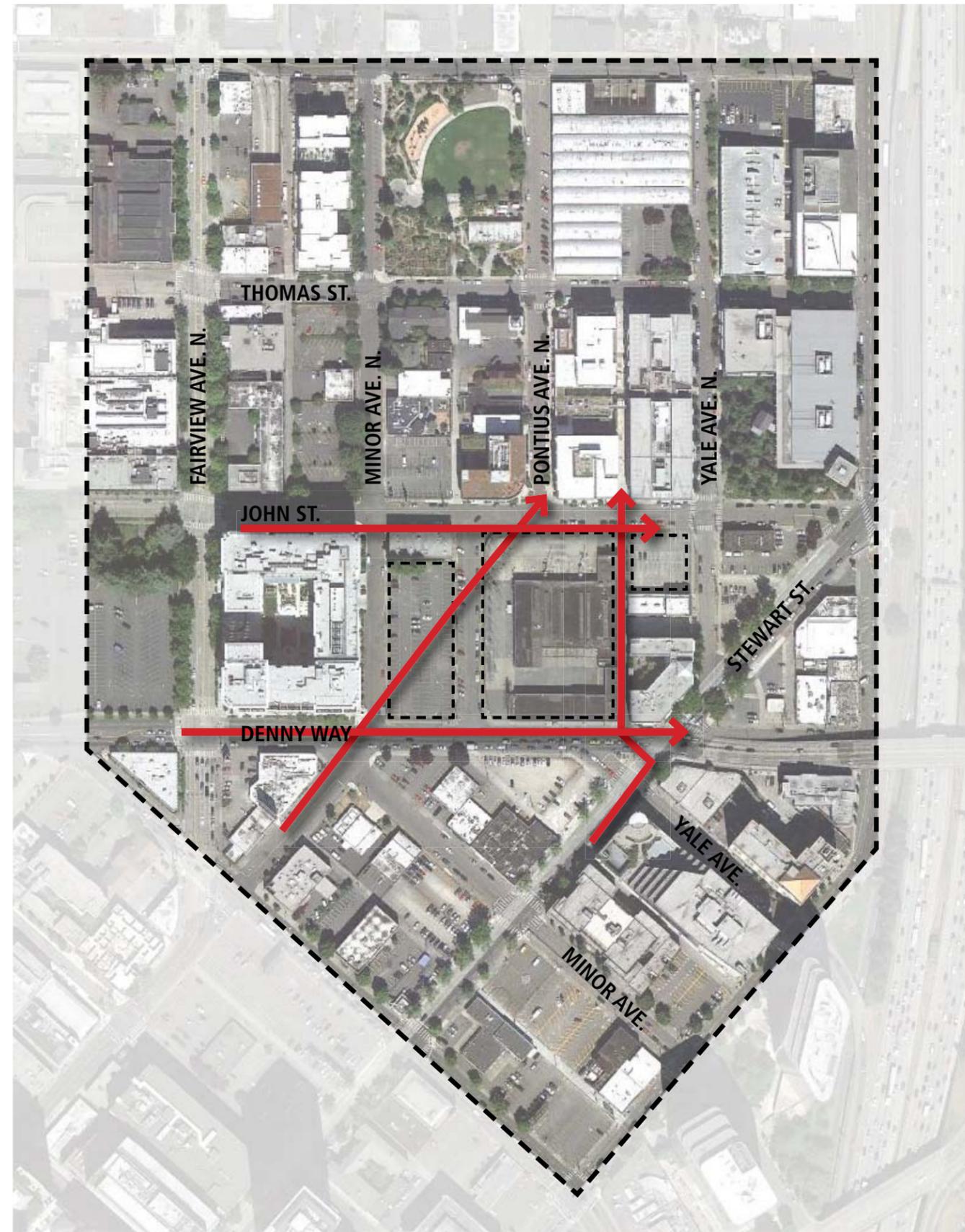
 600 RIDERS ON; 2,100 RIDERS OFF







# PEDESTRIAN AND BICYCLE ROUTES



***ACCESS AND SERVICE  
EXISTING***

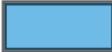
 WASTE/RECYCLING ZONE

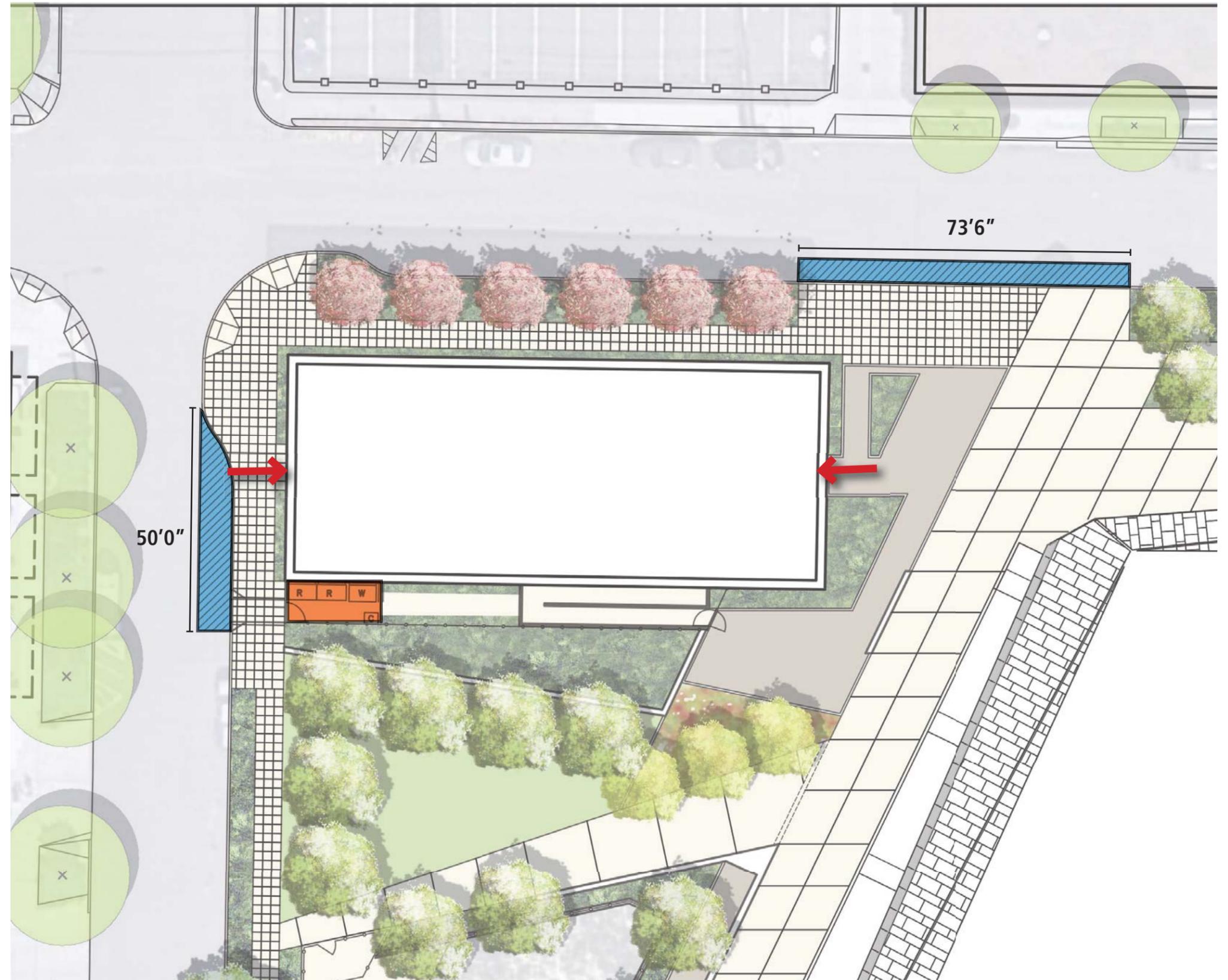
 LOADING ZONES

 ENTRANCE



# ACCESS AND SERVICE PROPOSED

-  WASTE/RECYCLING ZONE
-  LOADING ZONES
-  ENTRANCE



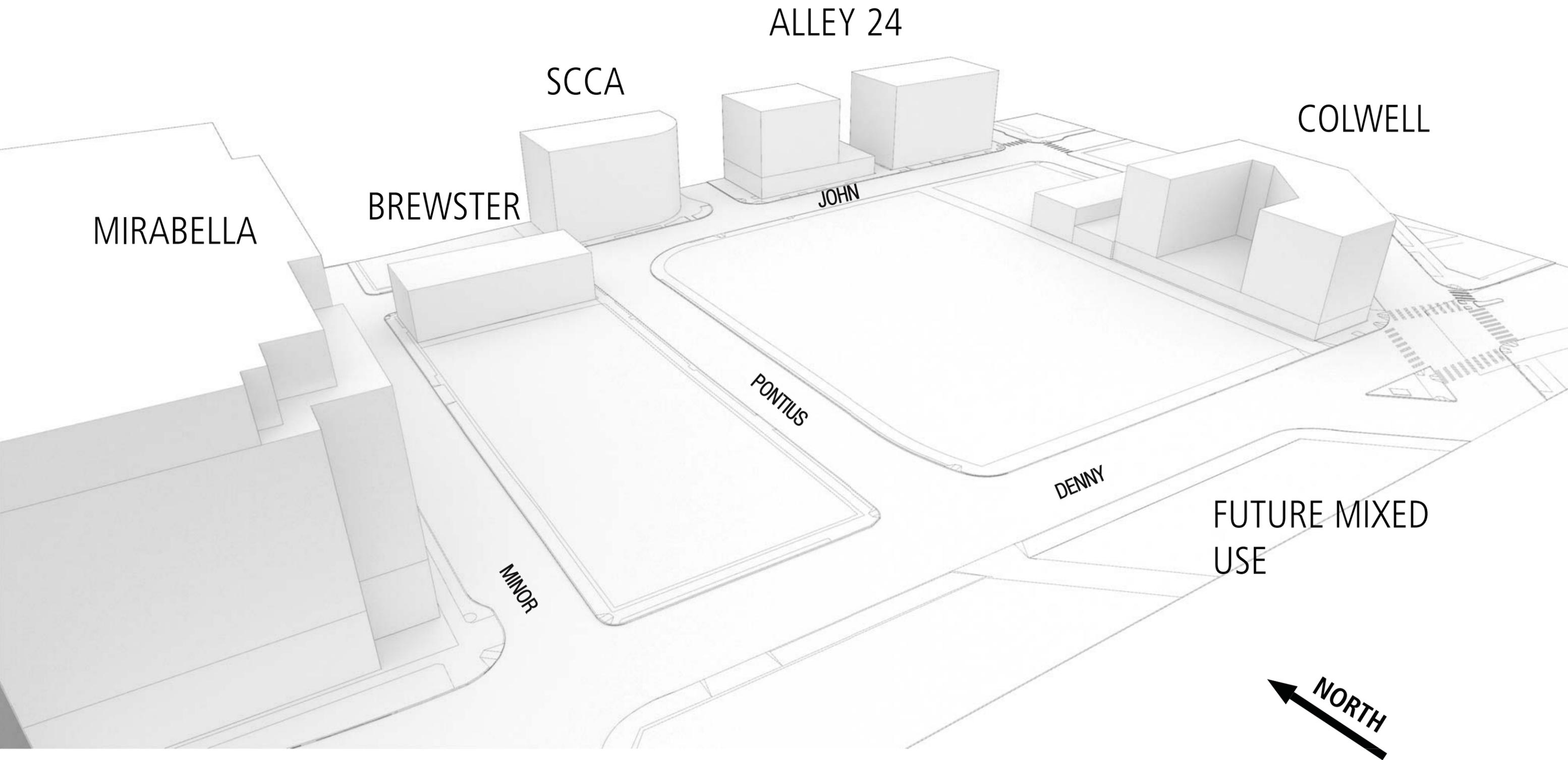
# Denny Substation Urban Design Merit:

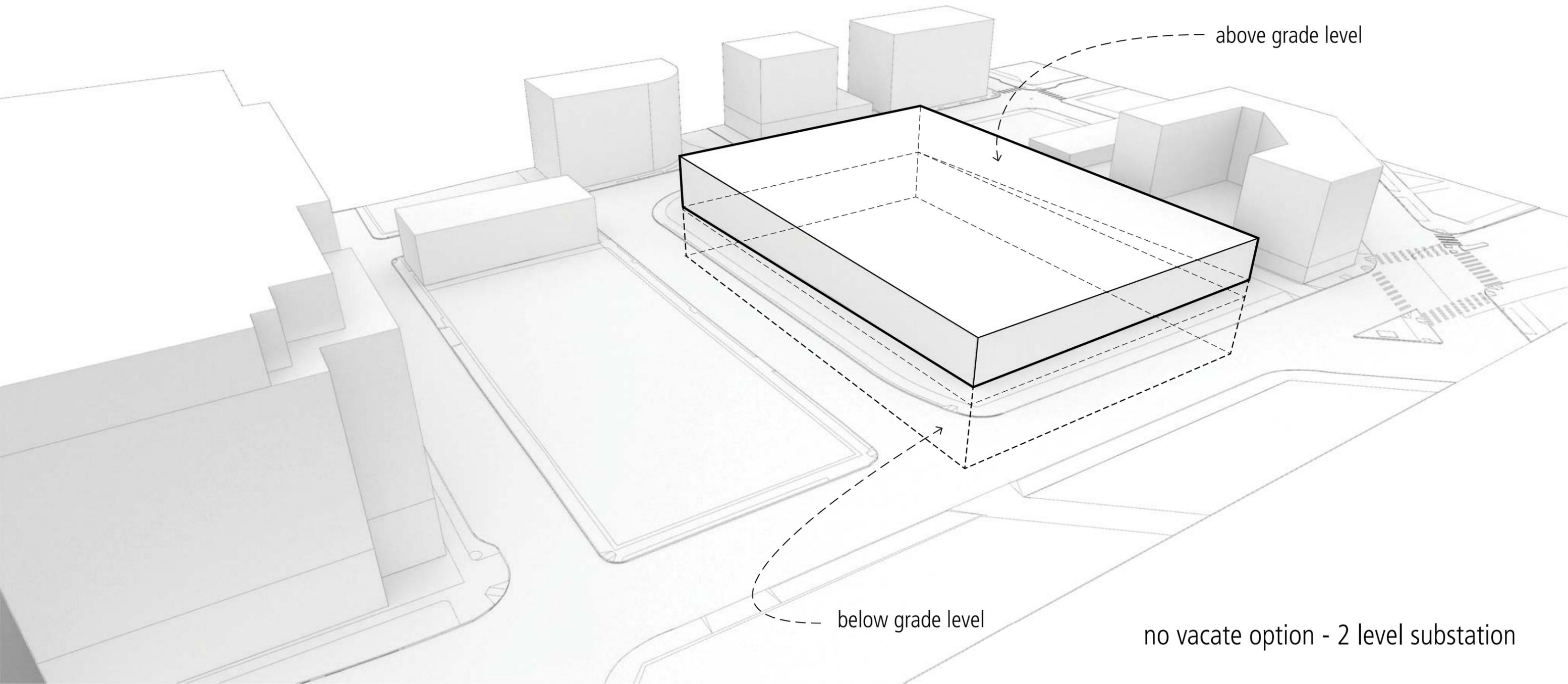
## MASSING ALTERNATIVES:

1. NO VACATION OF PONTIUS
2. VACATION OF PONTIUS

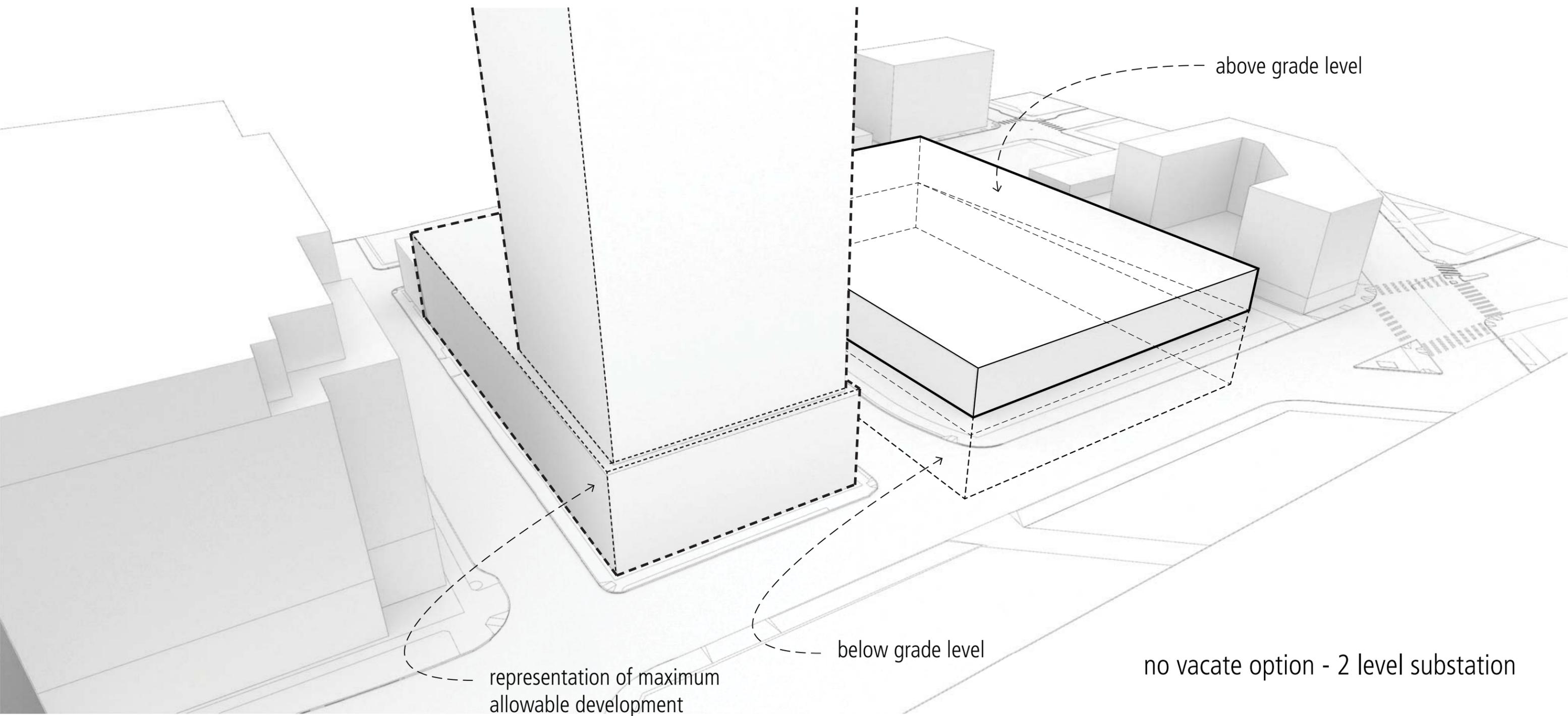
November 7, 2013

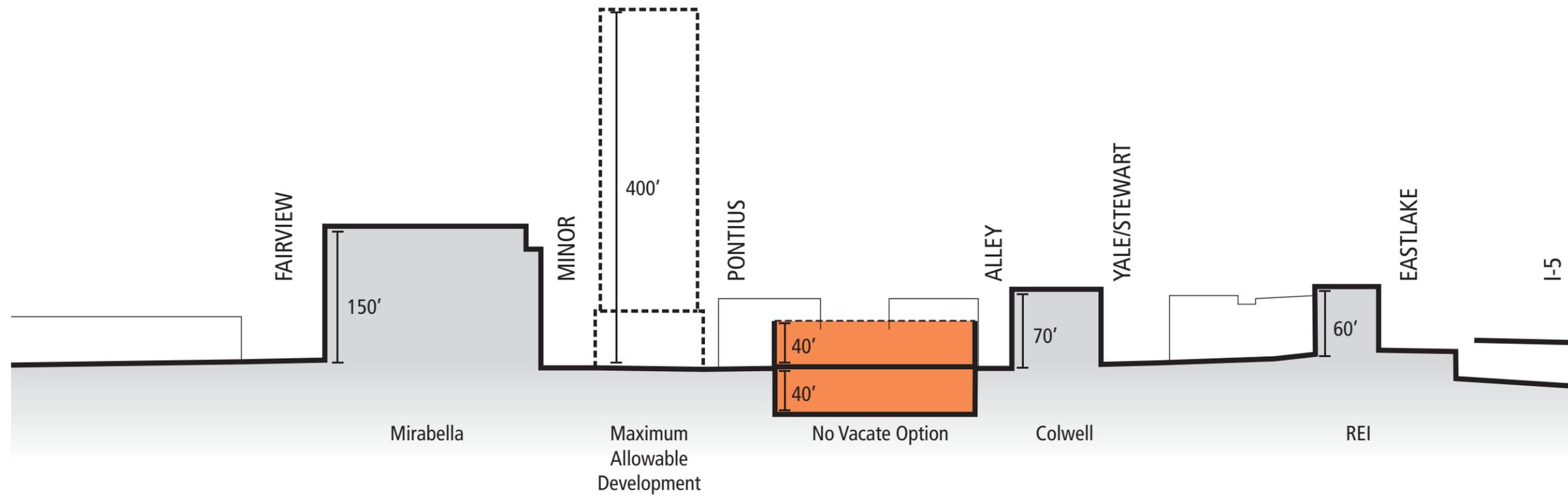
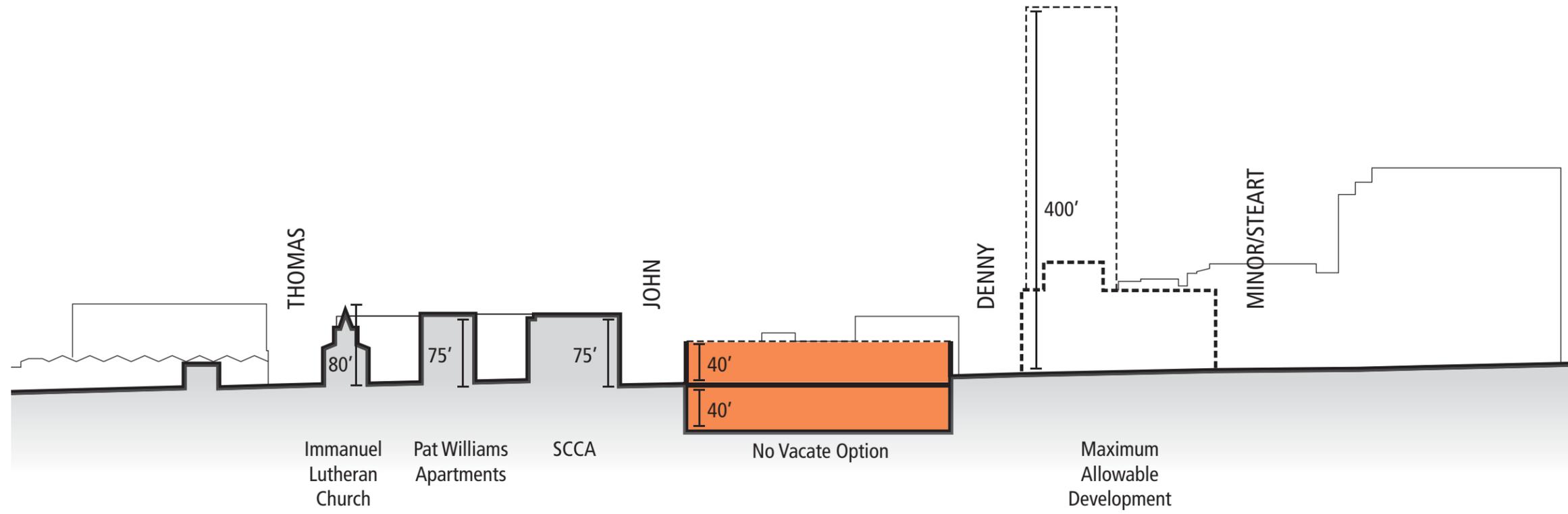
# CONTEXTUAL CONNECTION

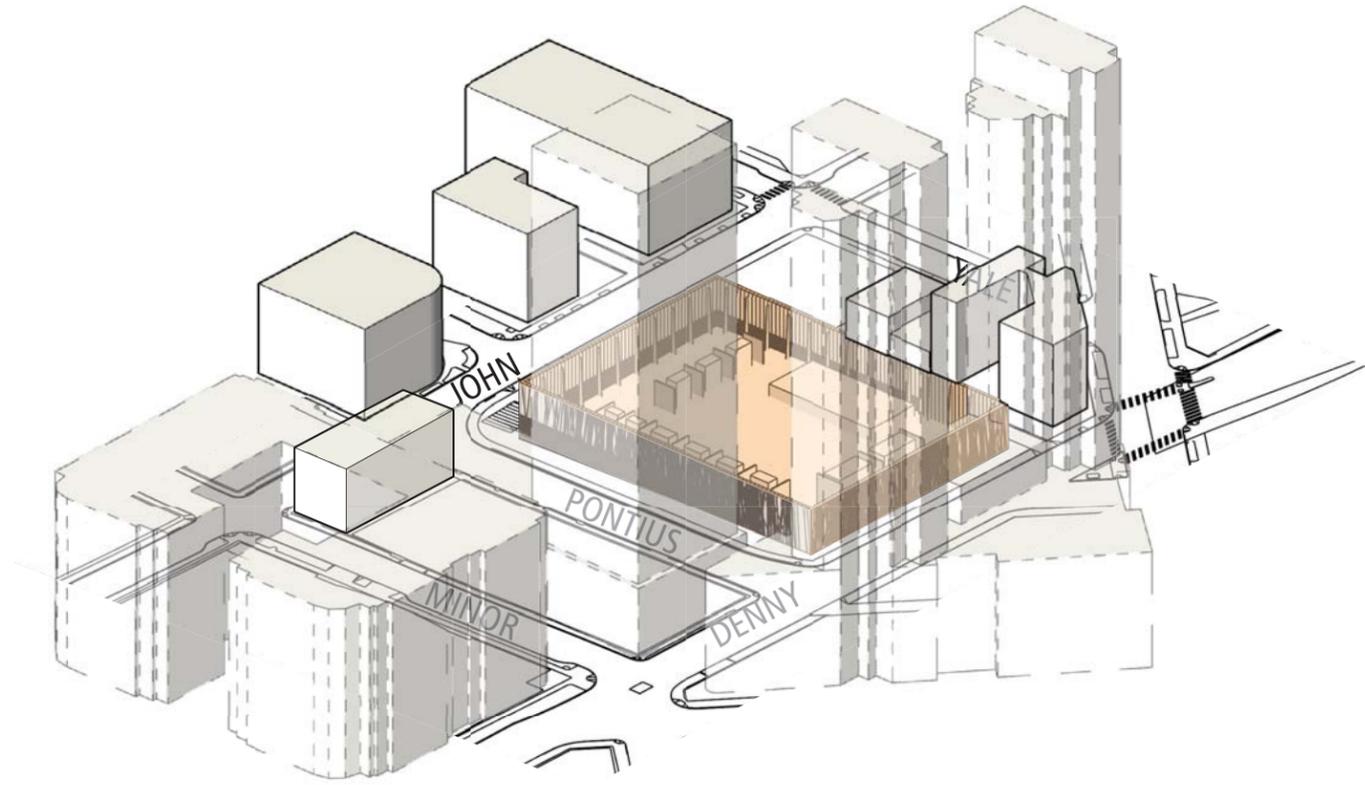




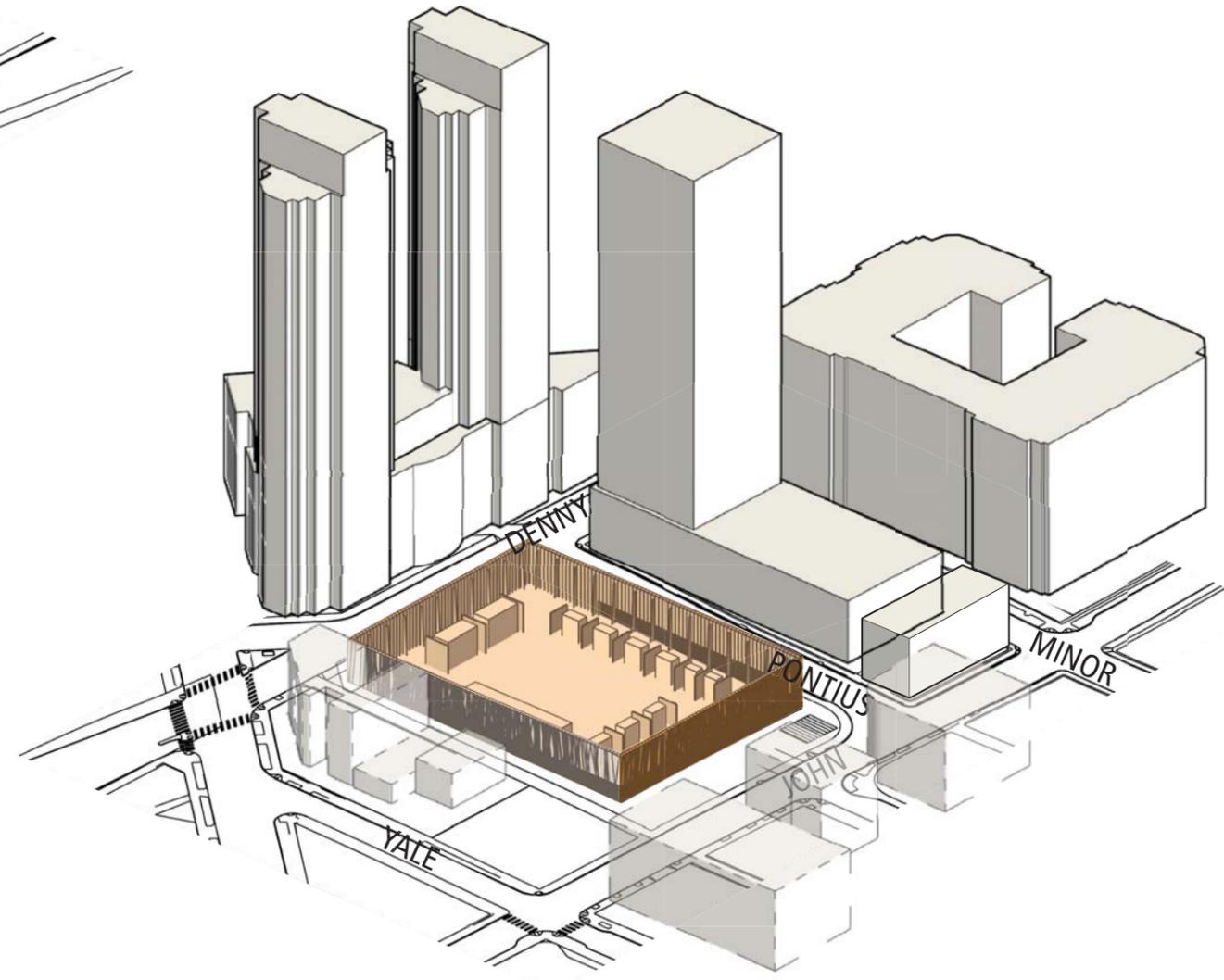
no vacate option - 2 level substation



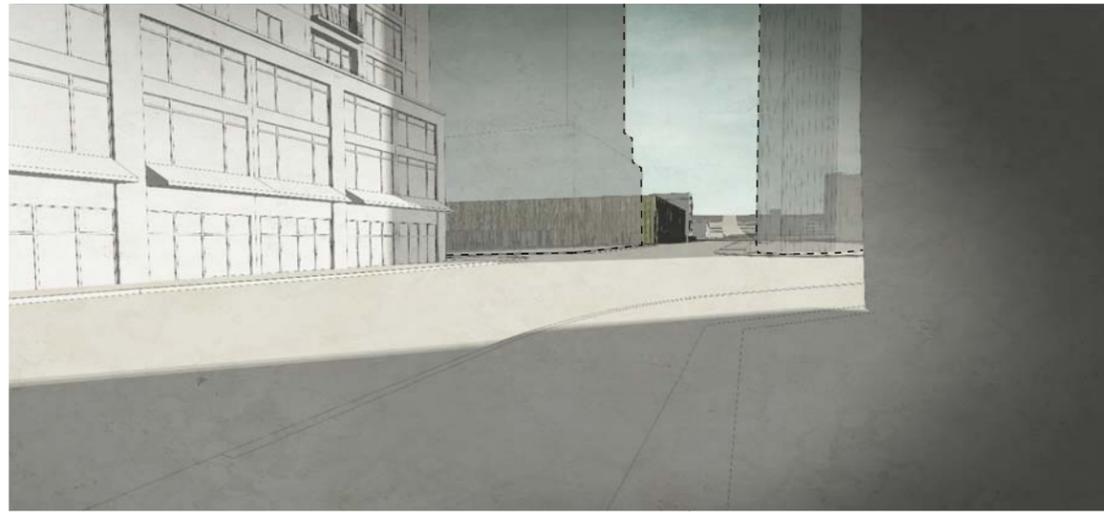
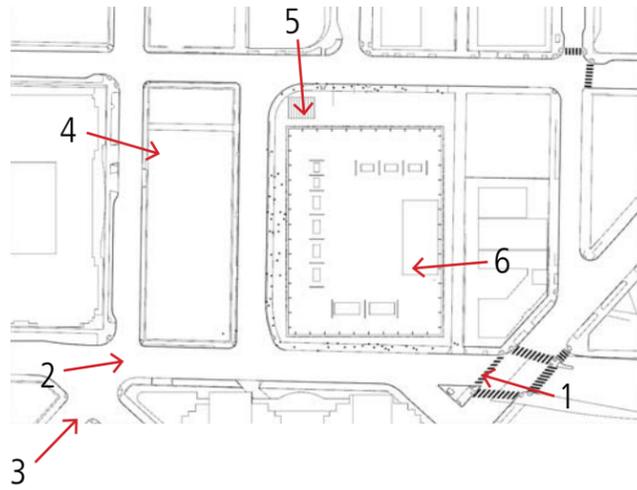




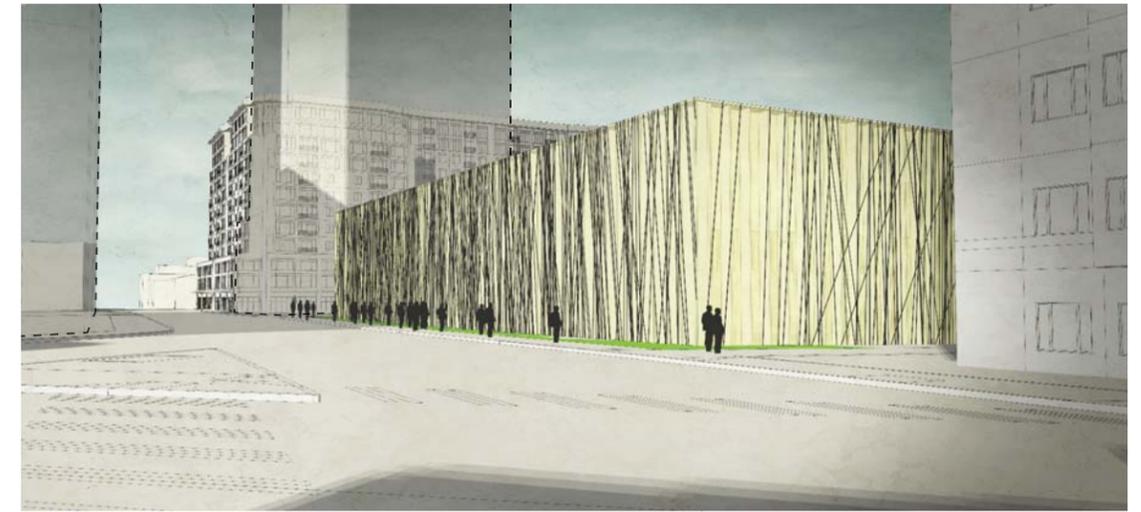
BIRD'S EYE VIEW FROM SOUTHWEST



BIRD'S EYE VIEW FROM NORTHEAST



1. Looking East on Denny



2. Looking West on Denny



3. View from Virginia



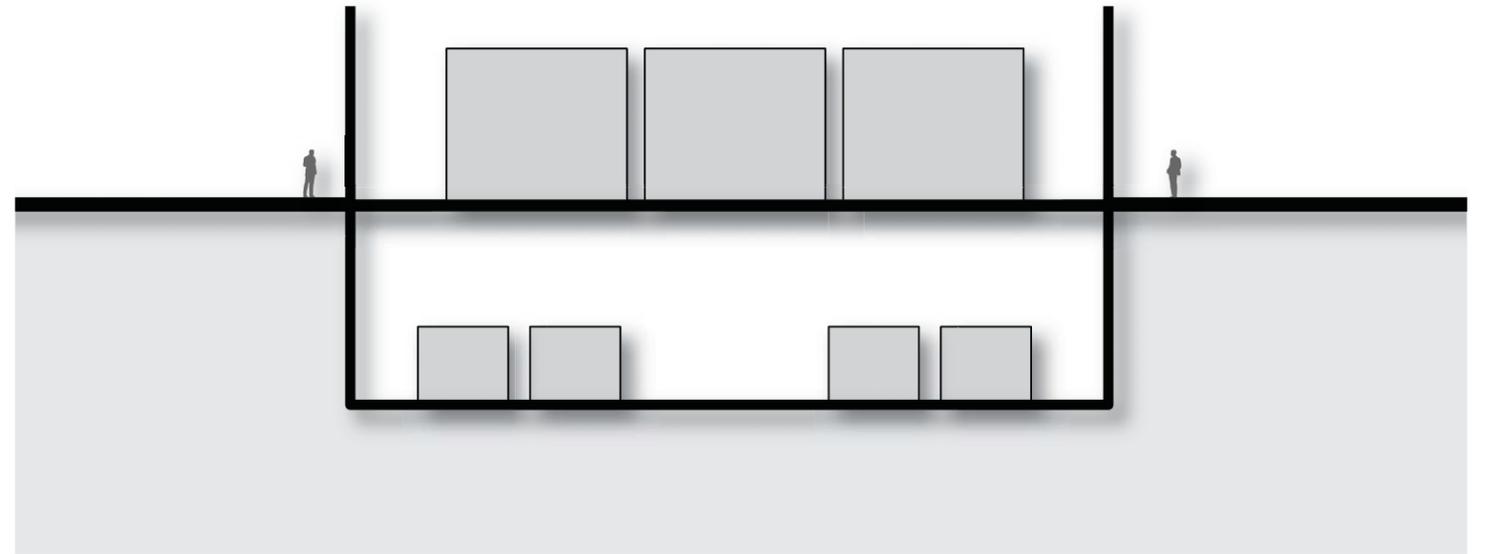
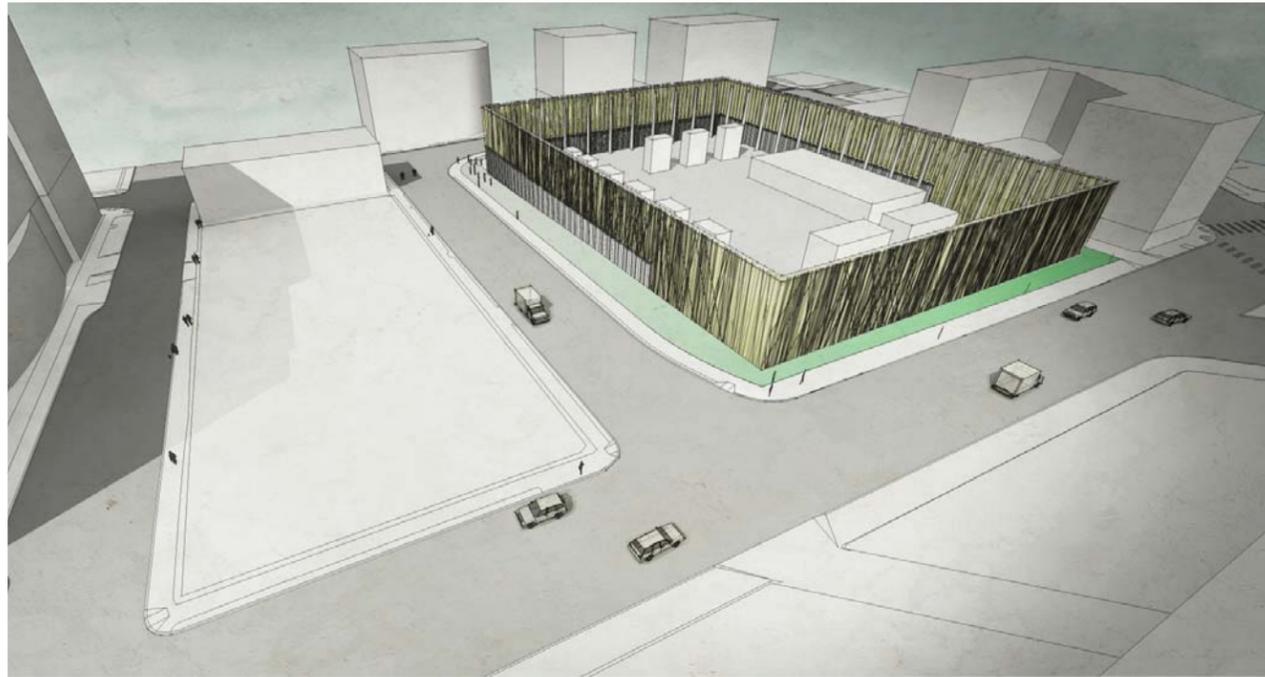
4. View from Mirabella

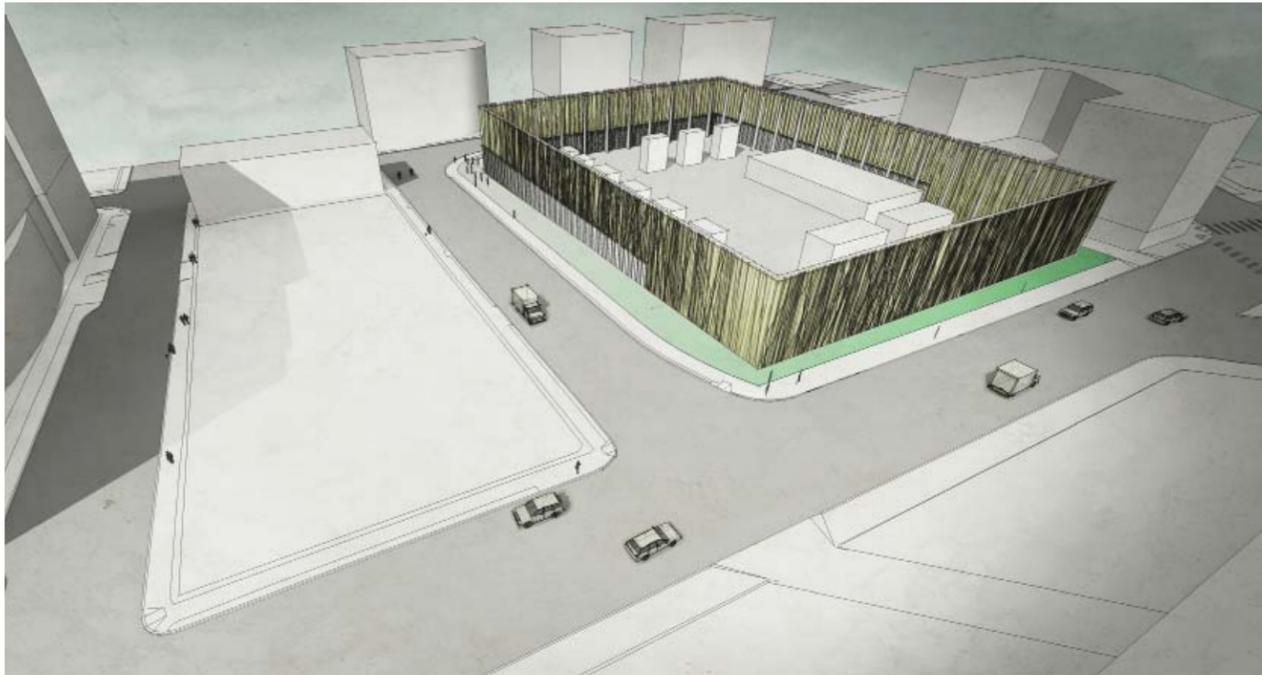


5. View from SCCA

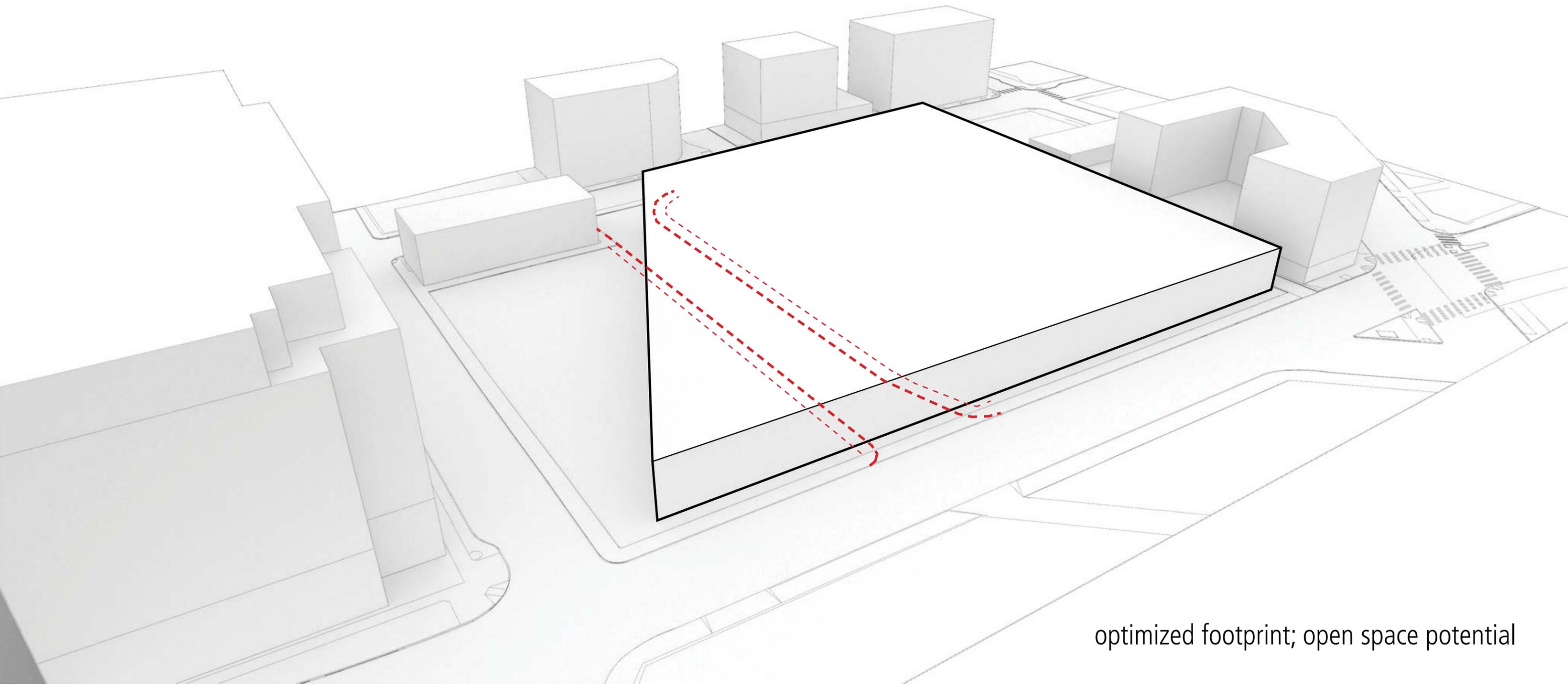


6. View from Colwell Building

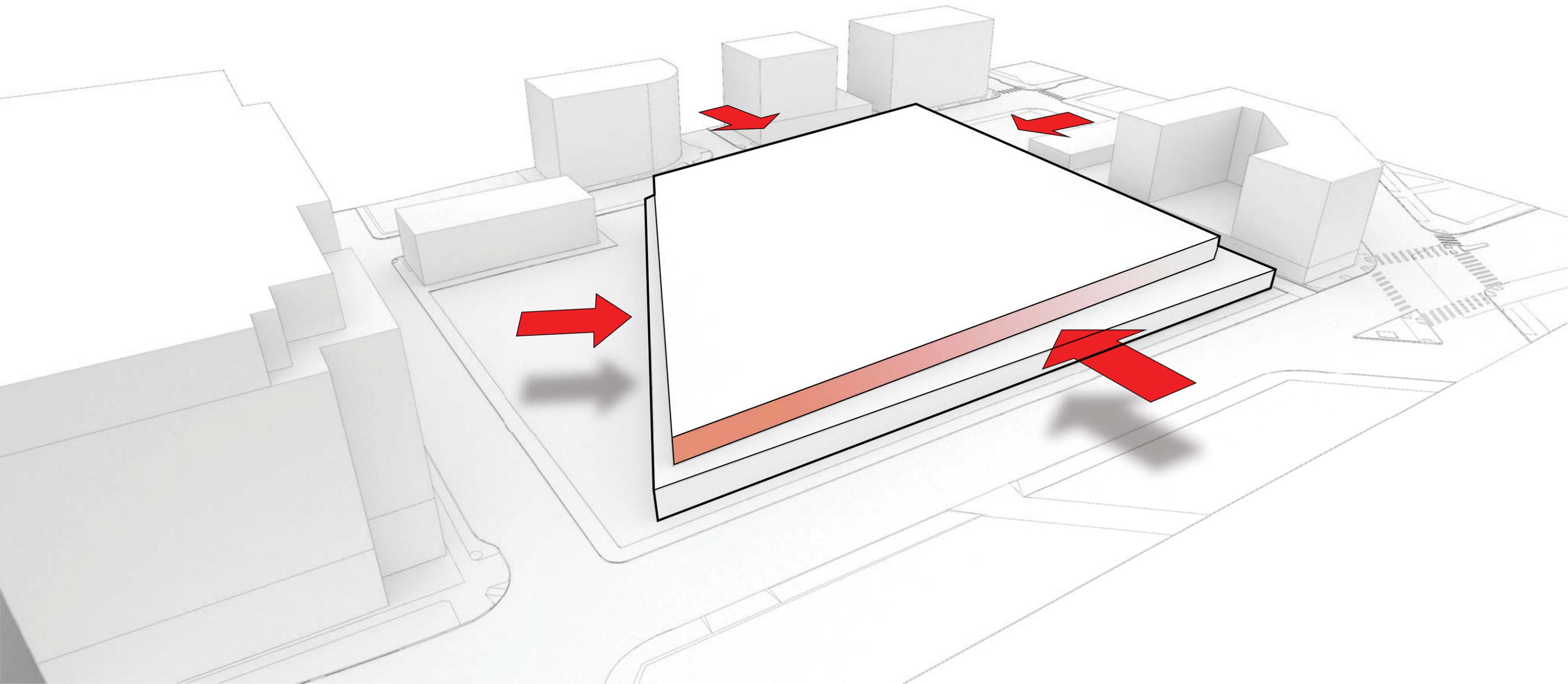


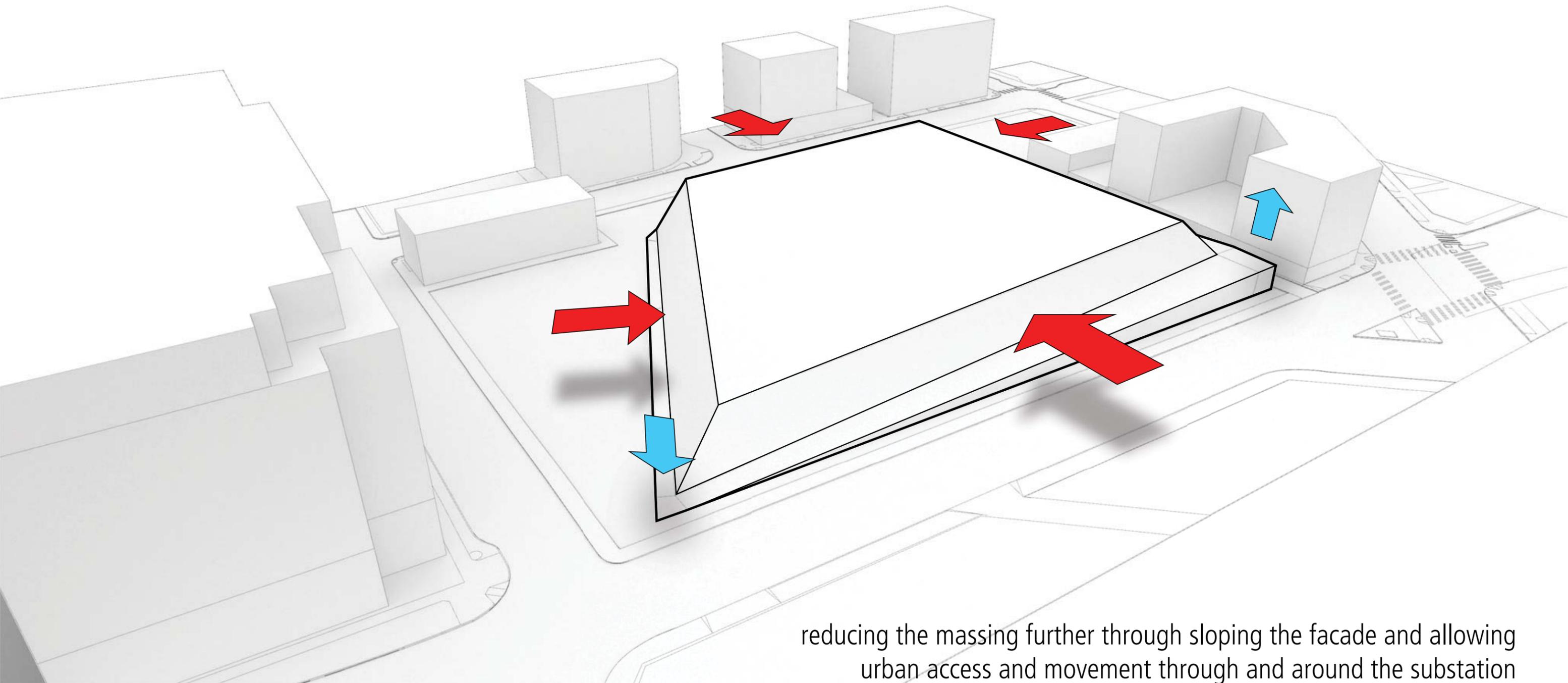


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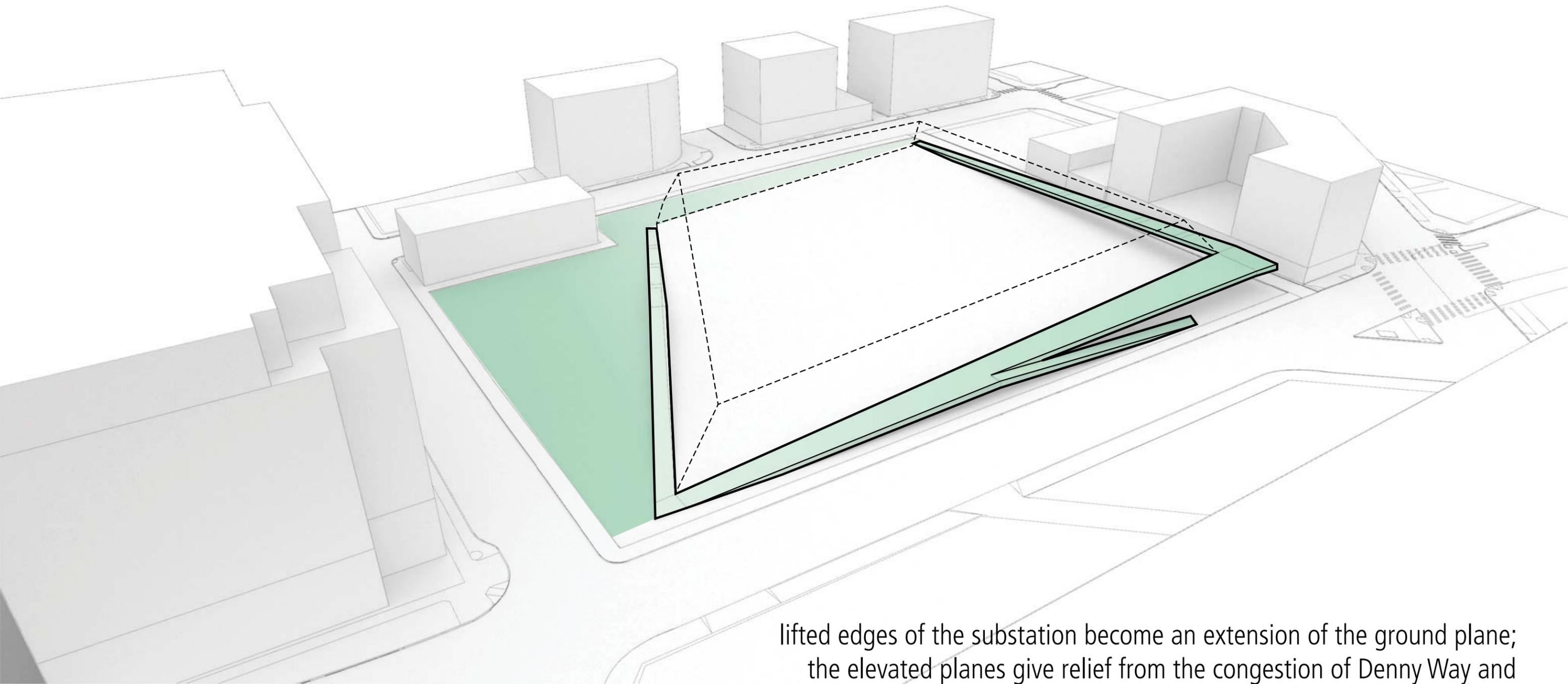


optimized footprint; open space potential

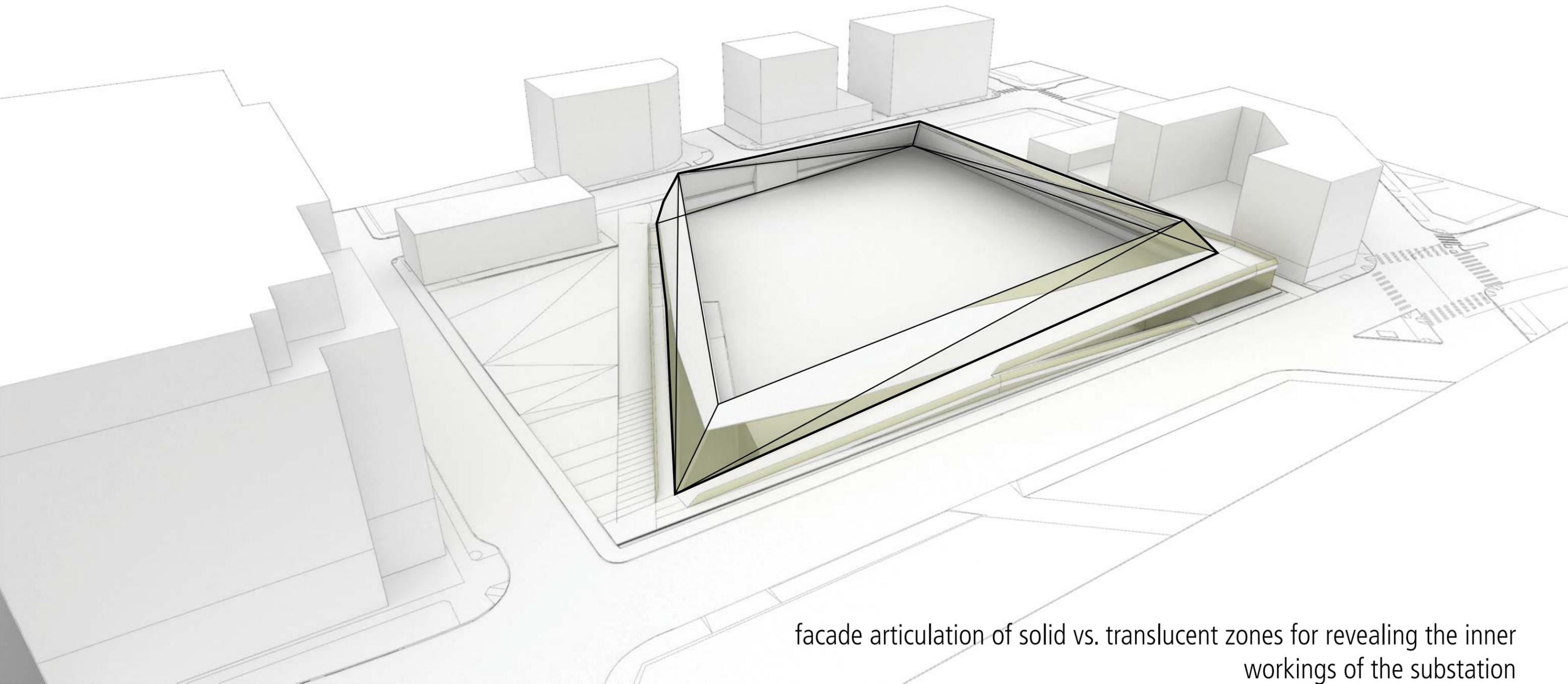




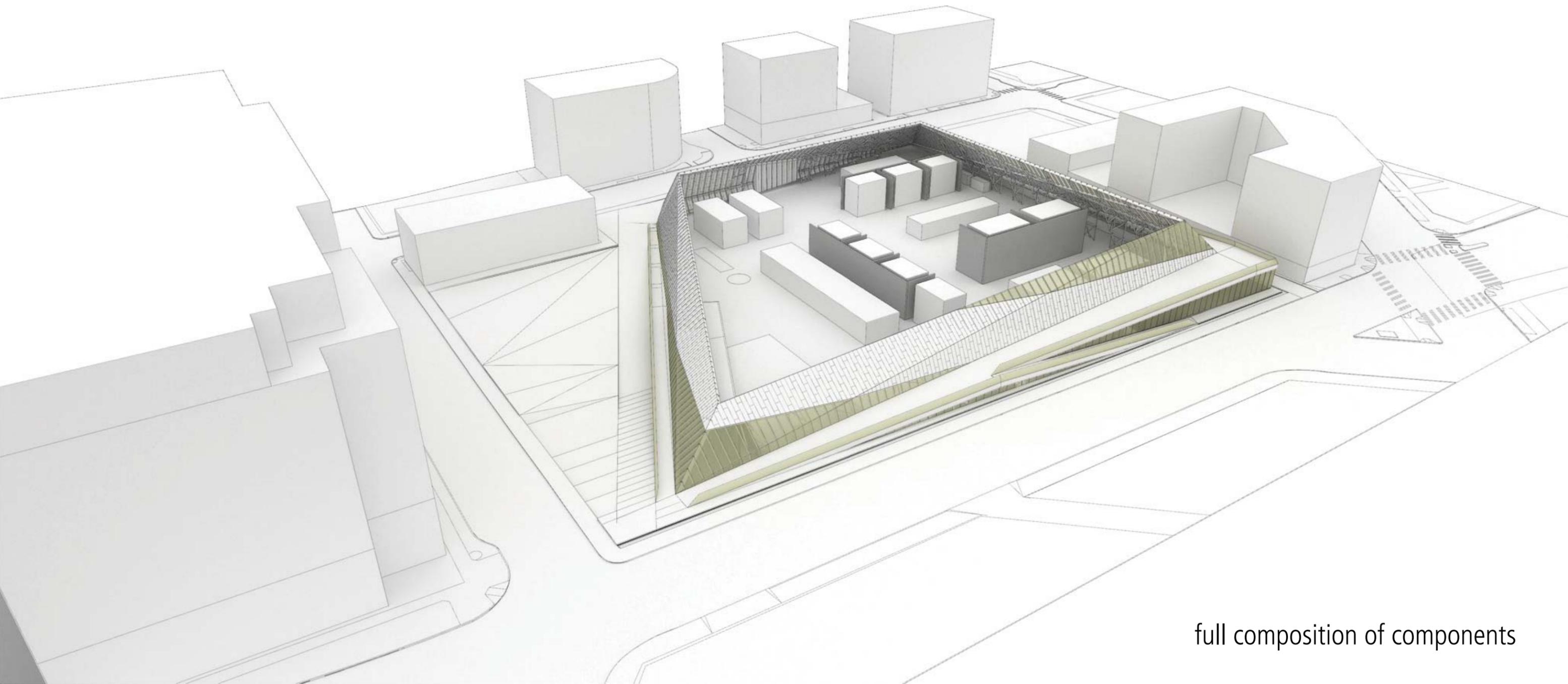
reducing the massing further through sloping the facade and allowing urban access and movement through and around the substation



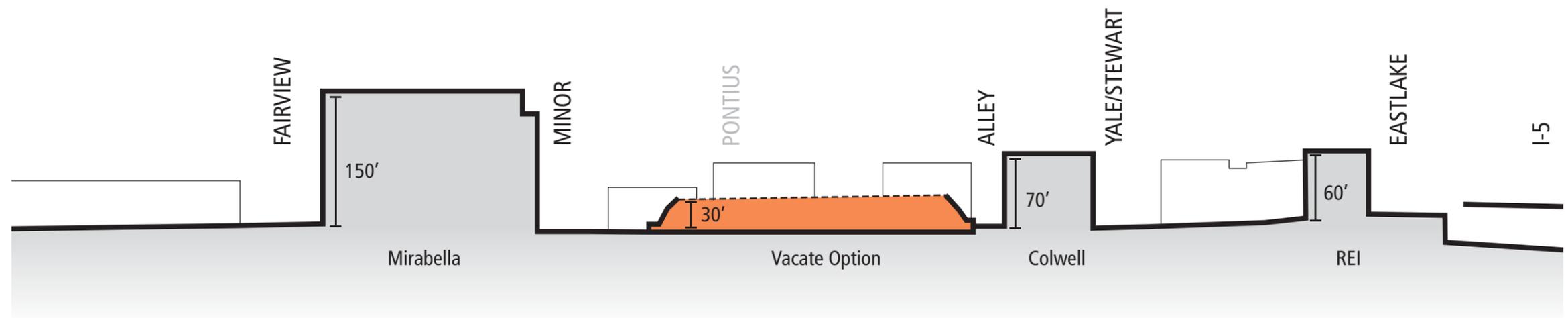
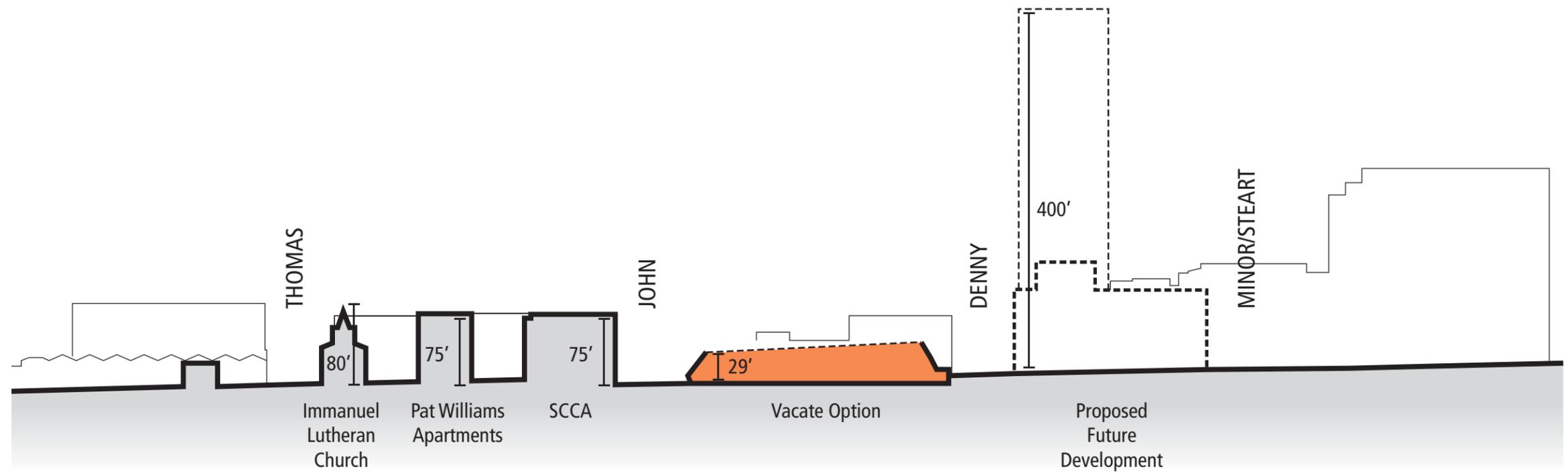
lifted edges of the substation become an extension of the ground plane;  
the elevated planes give relief from the congestion of Denny Way and  
provide unique views and experience of the city

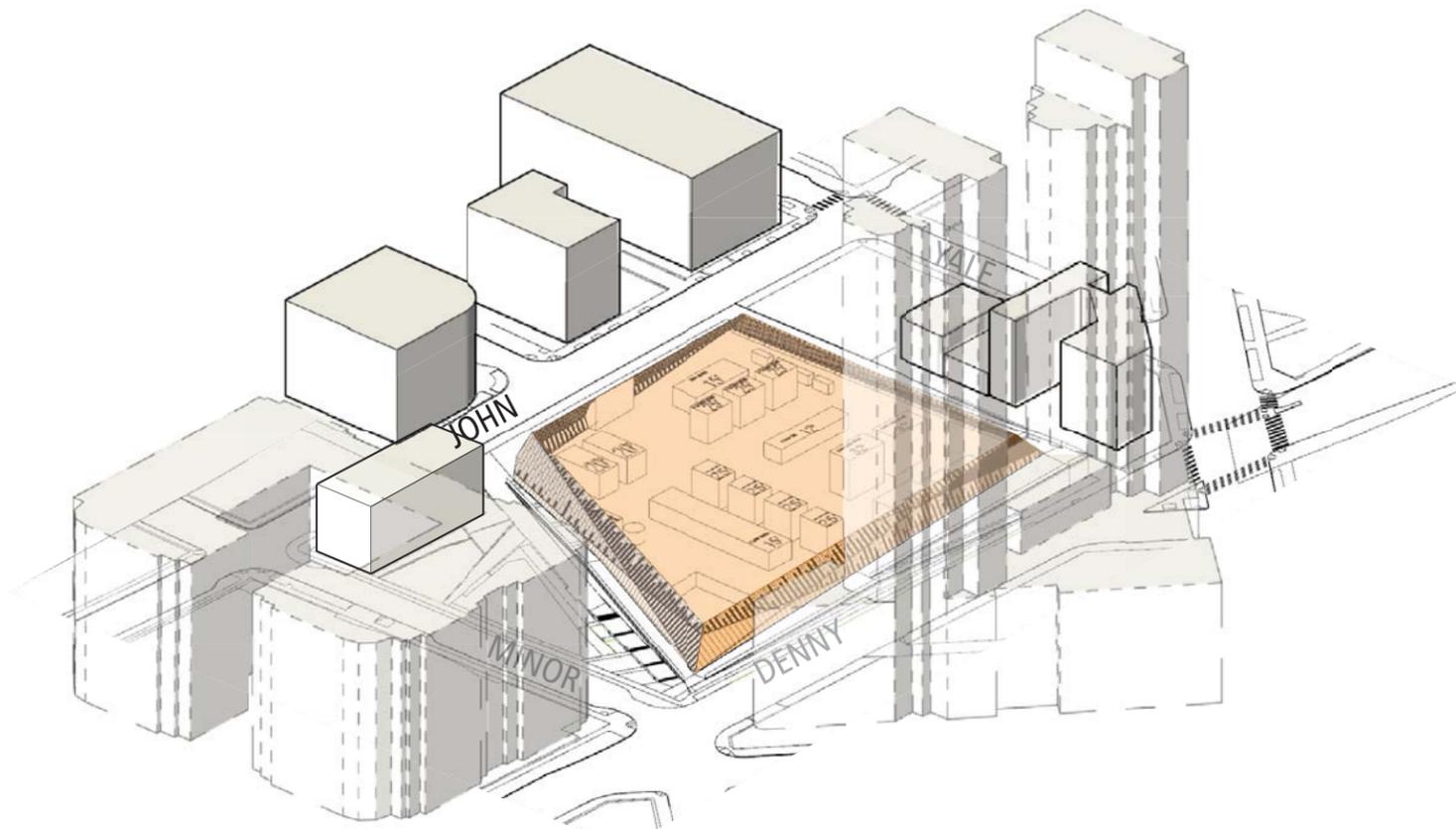


facade articulation of solid vs. translucent zones for revealing the inner workings of the substation

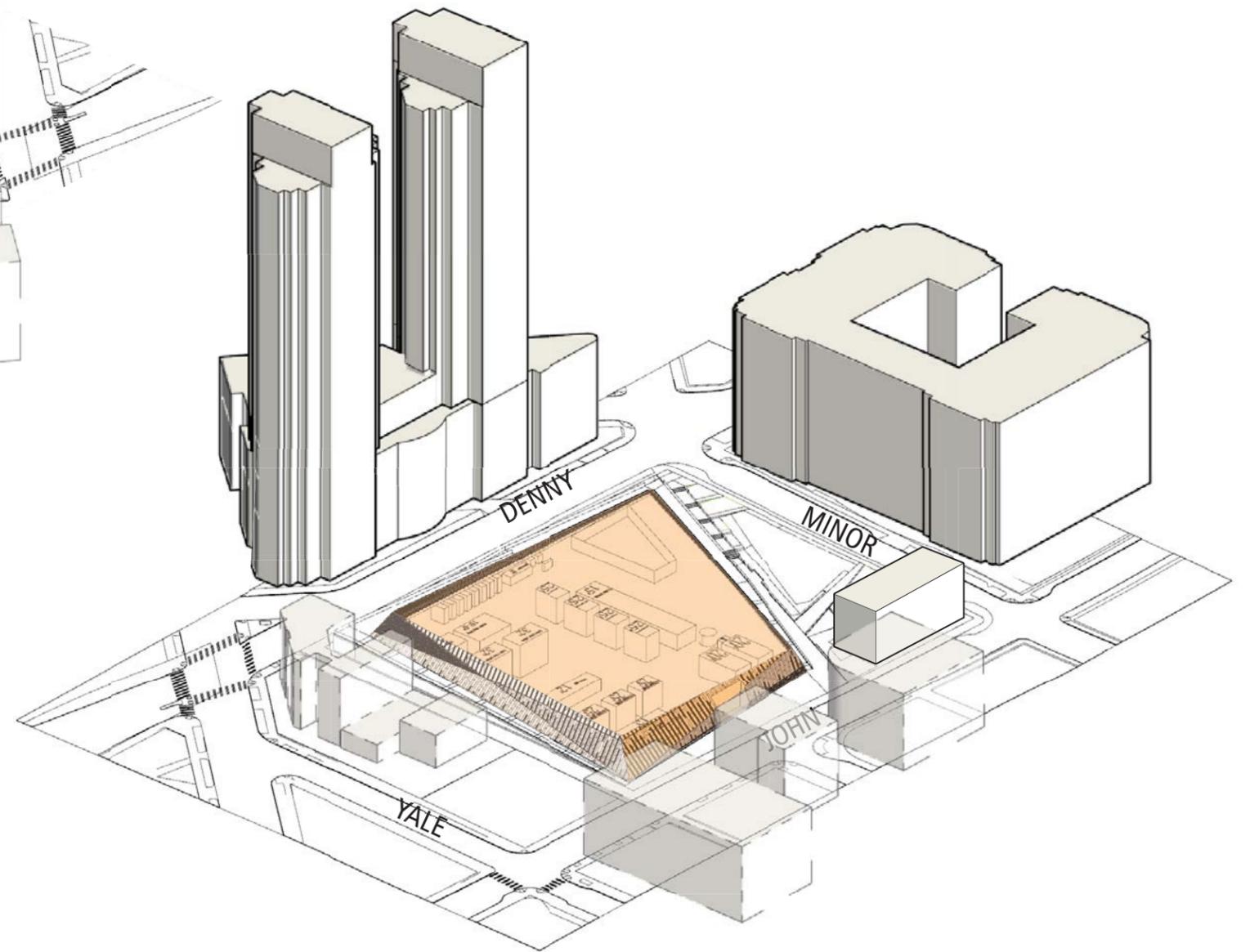


full composition of components

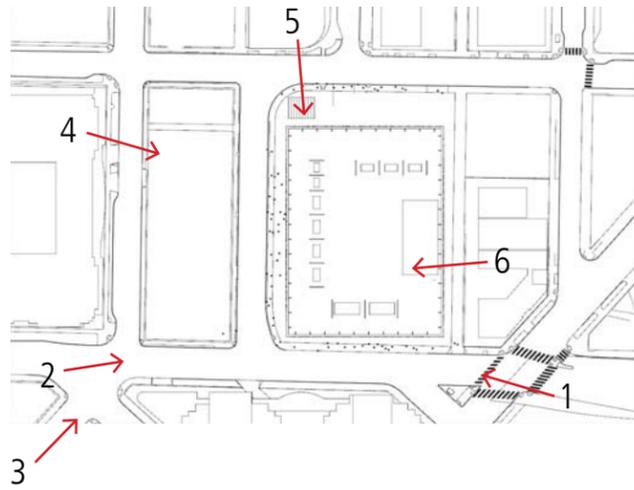




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BIRD'S EYE VIEW FROM NORTHEAST



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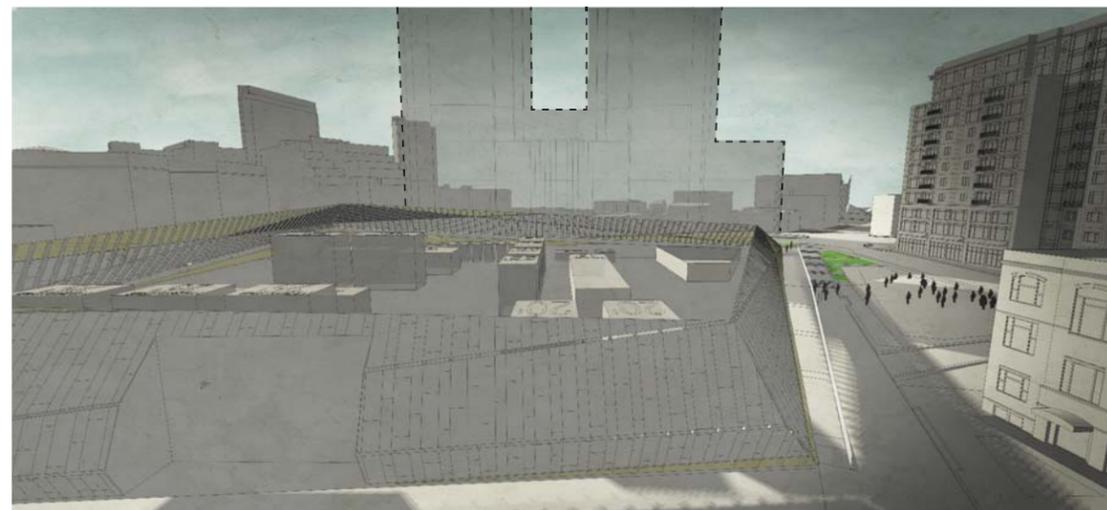
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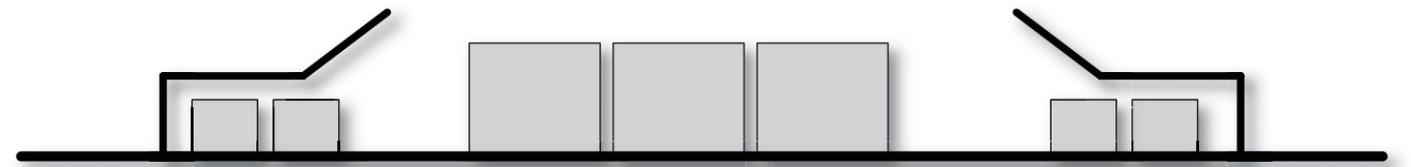
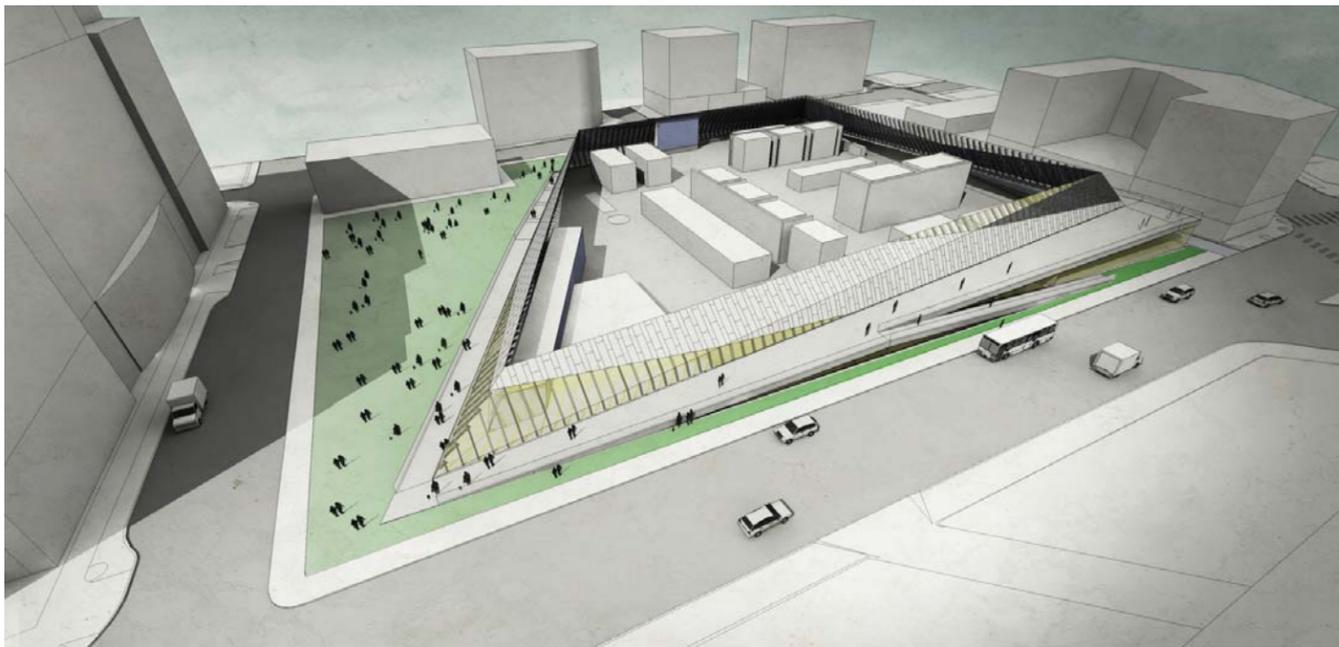
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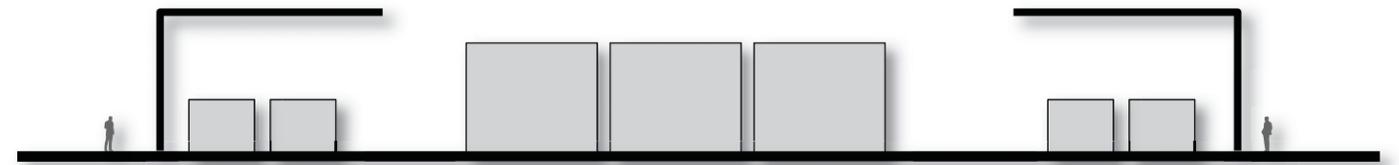
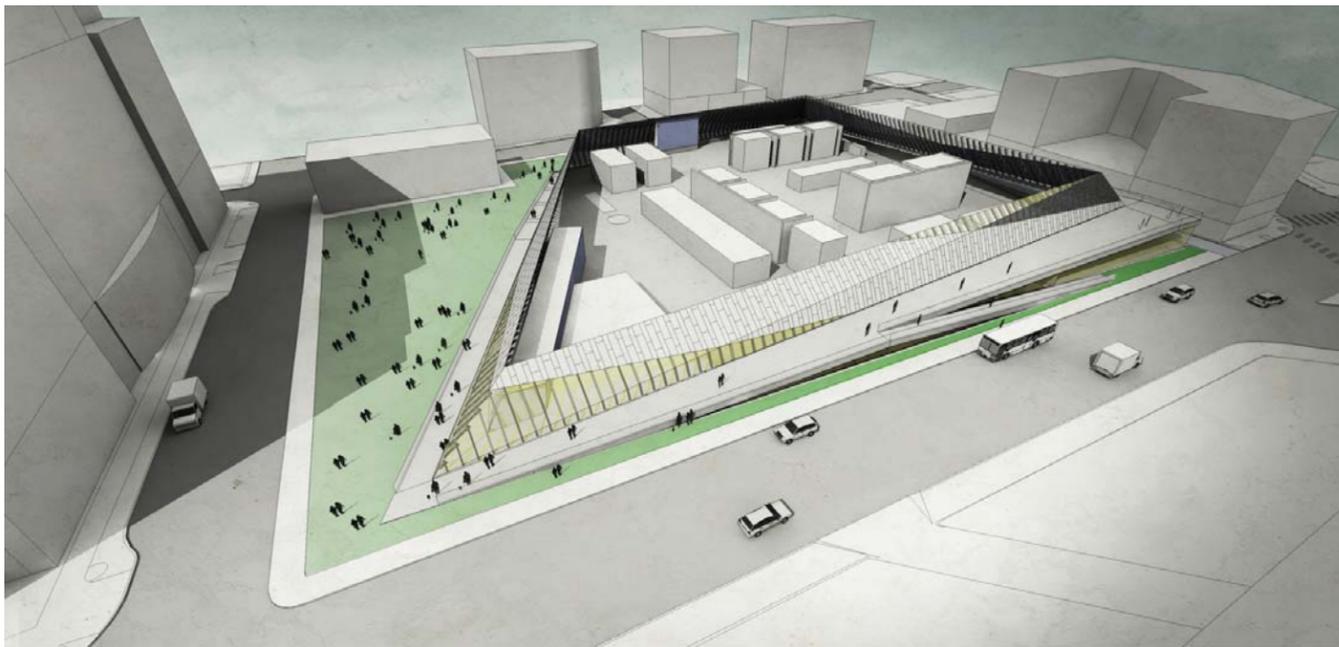


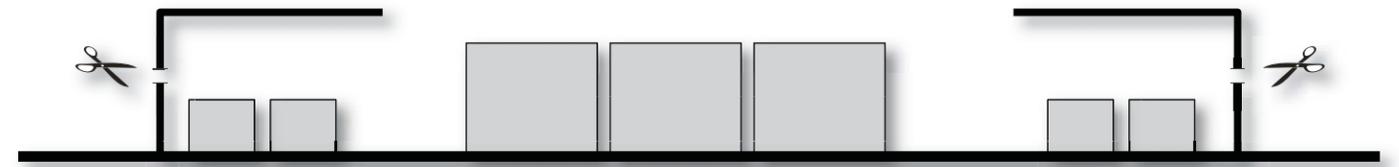
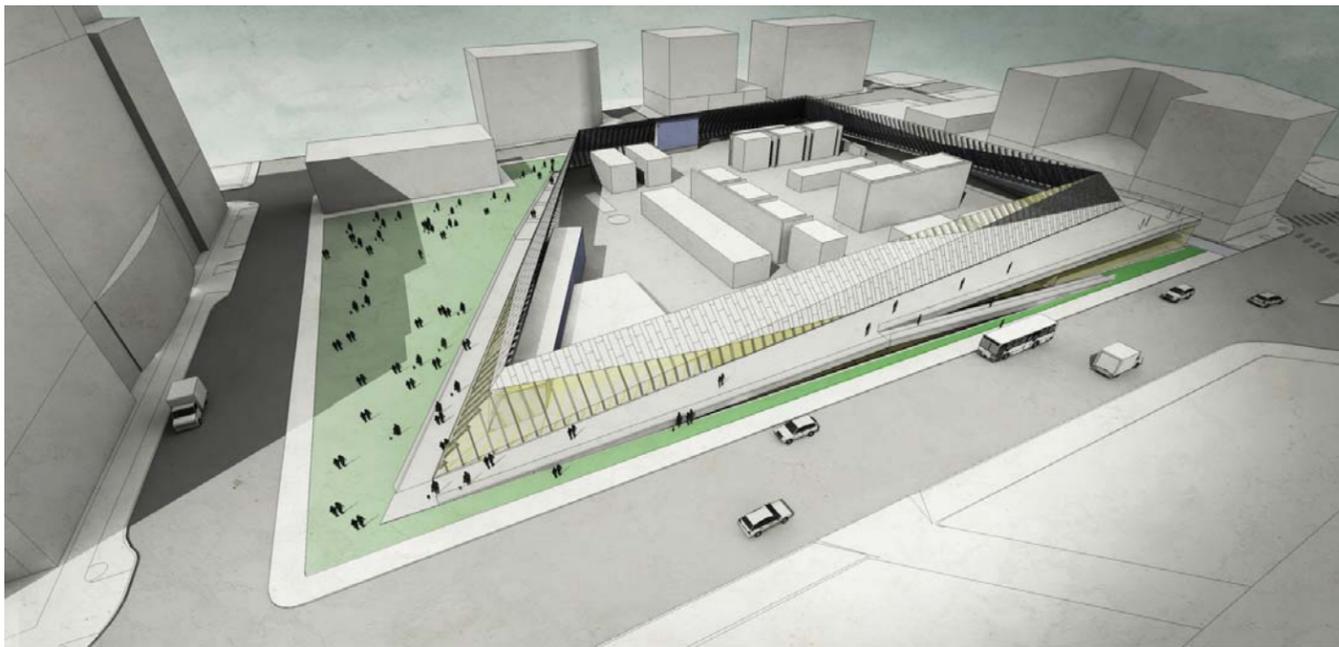
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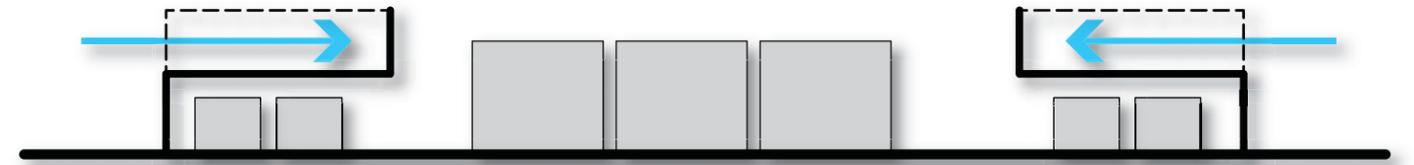
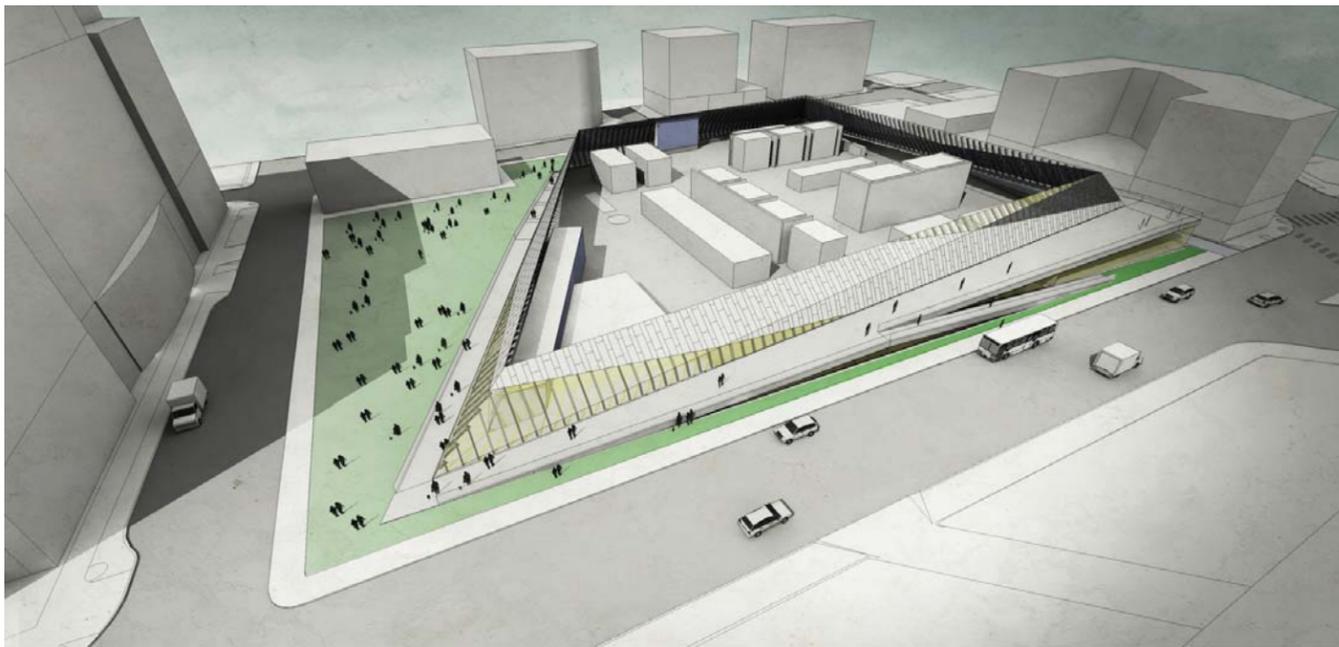


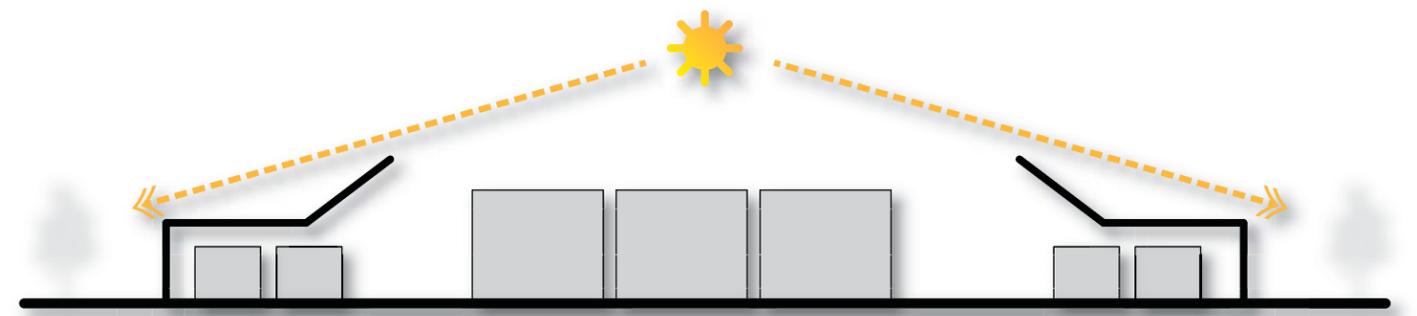
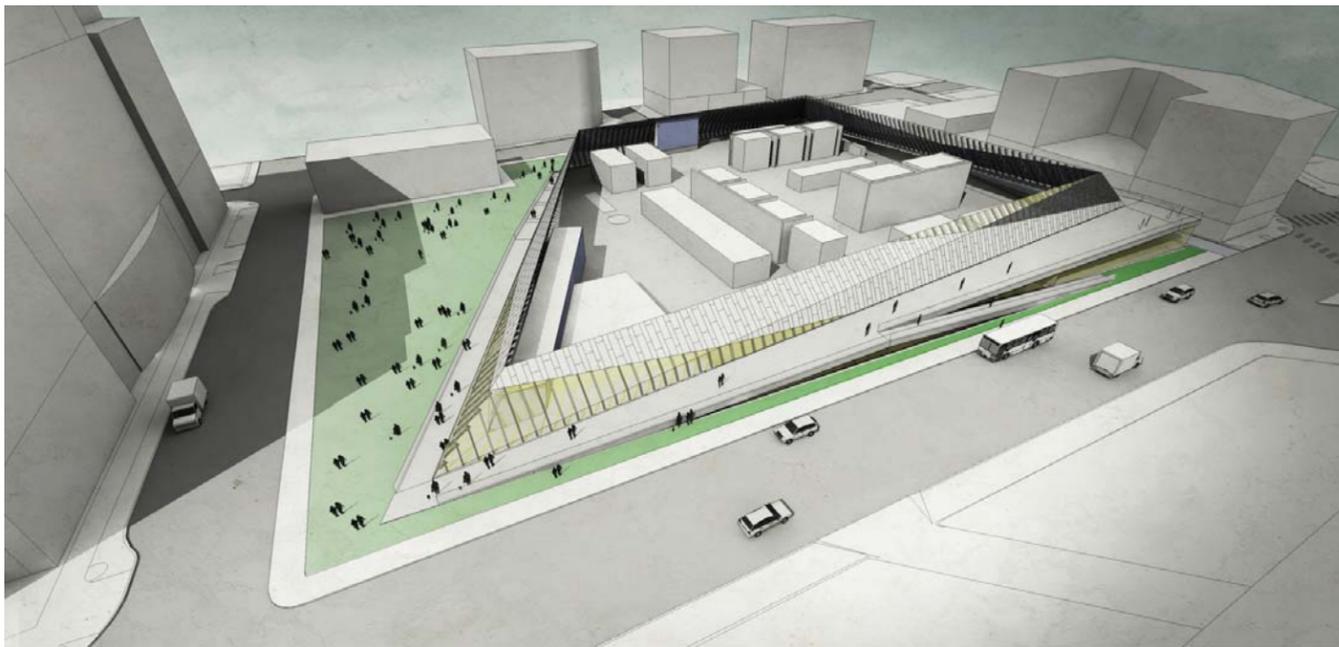
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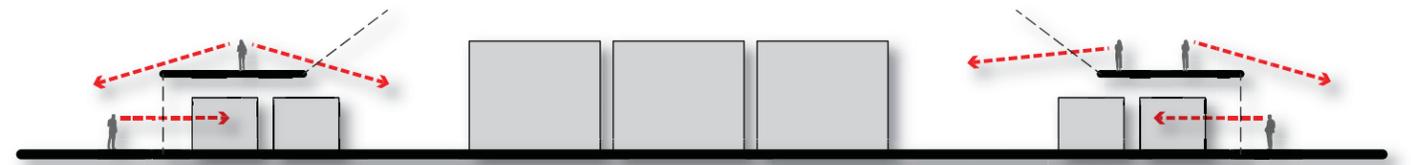
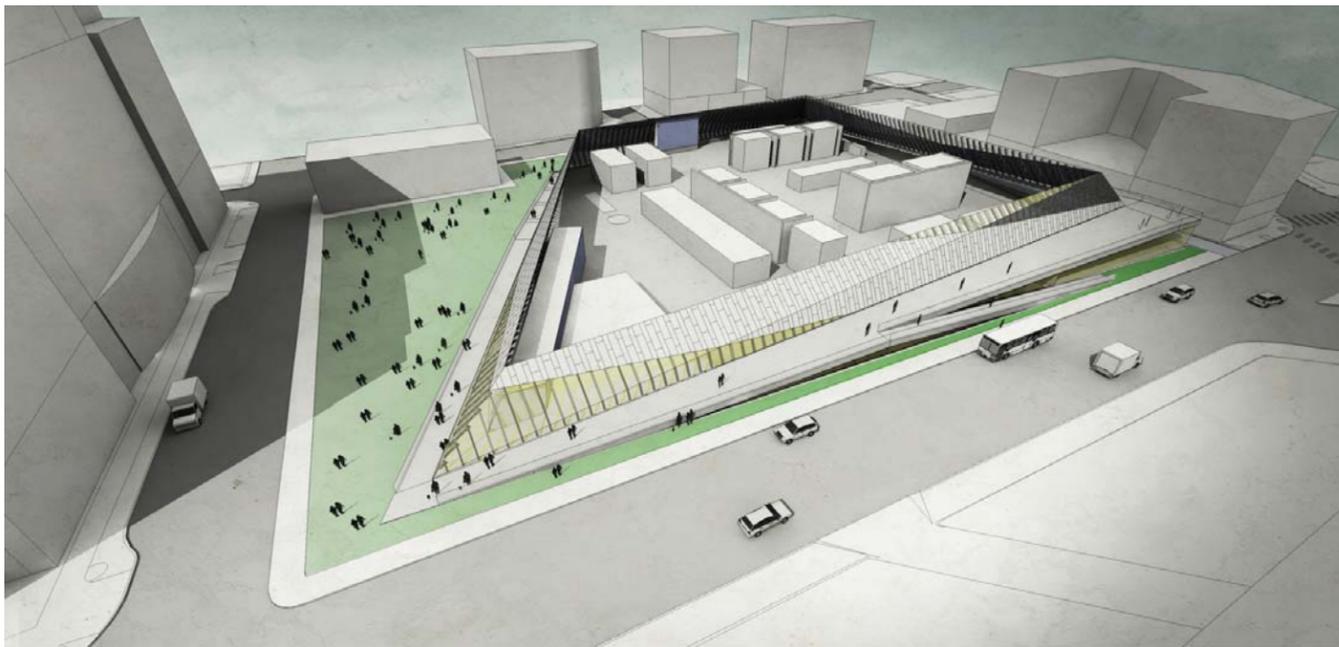


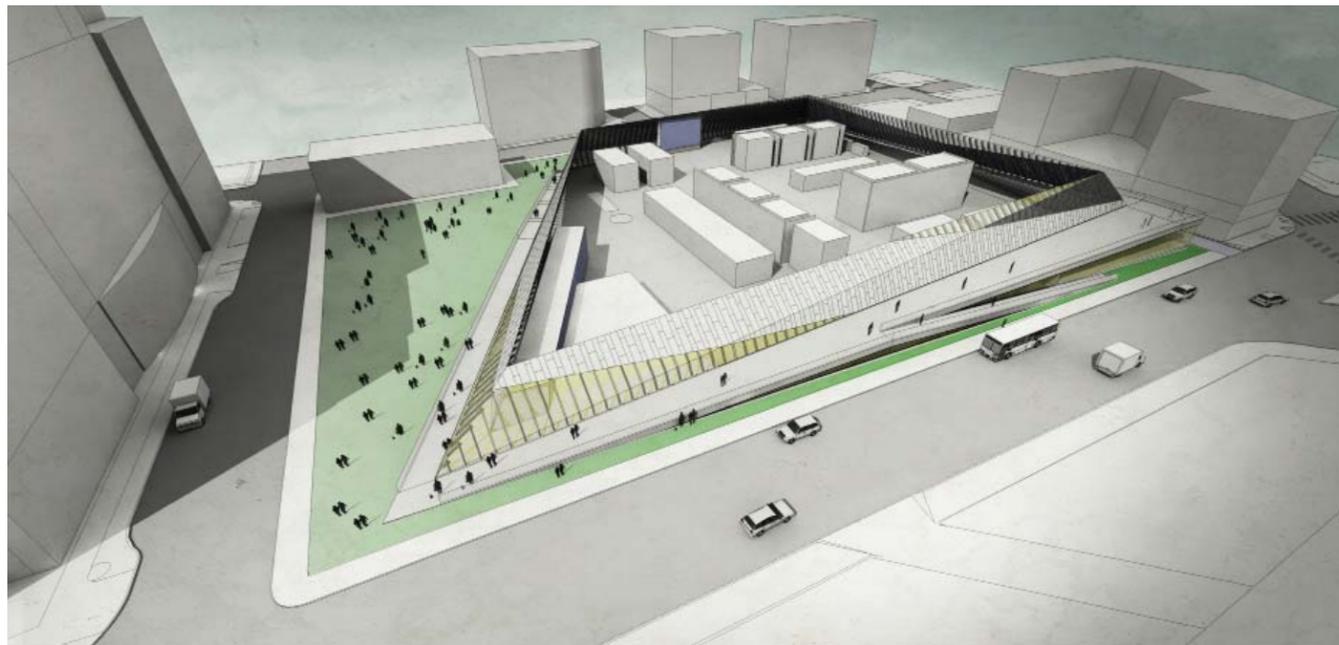




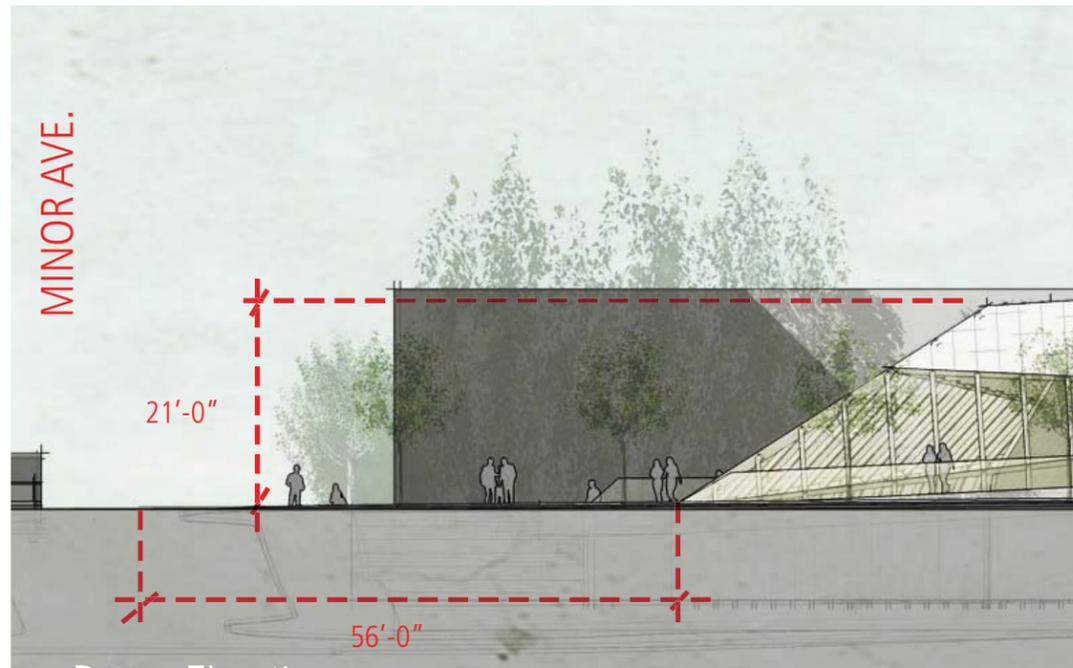




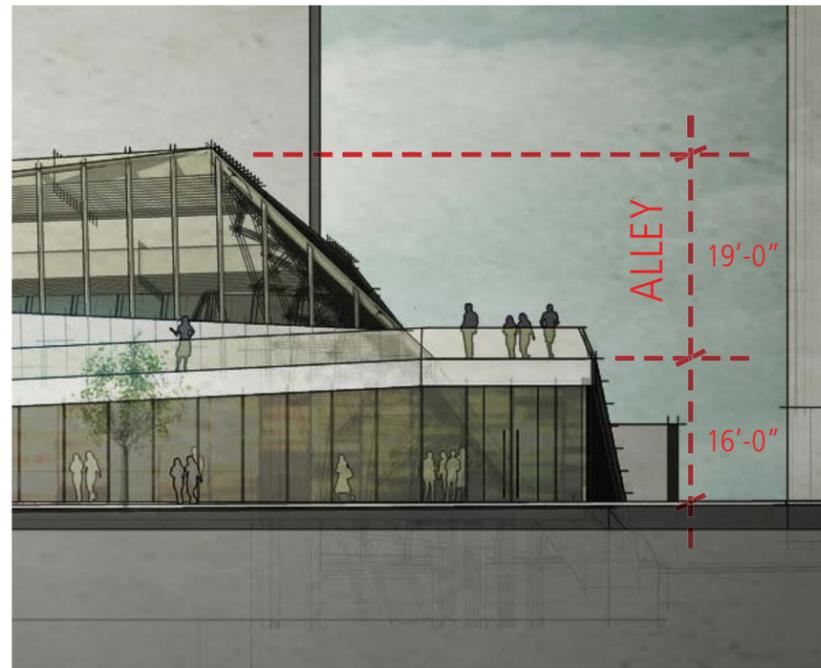




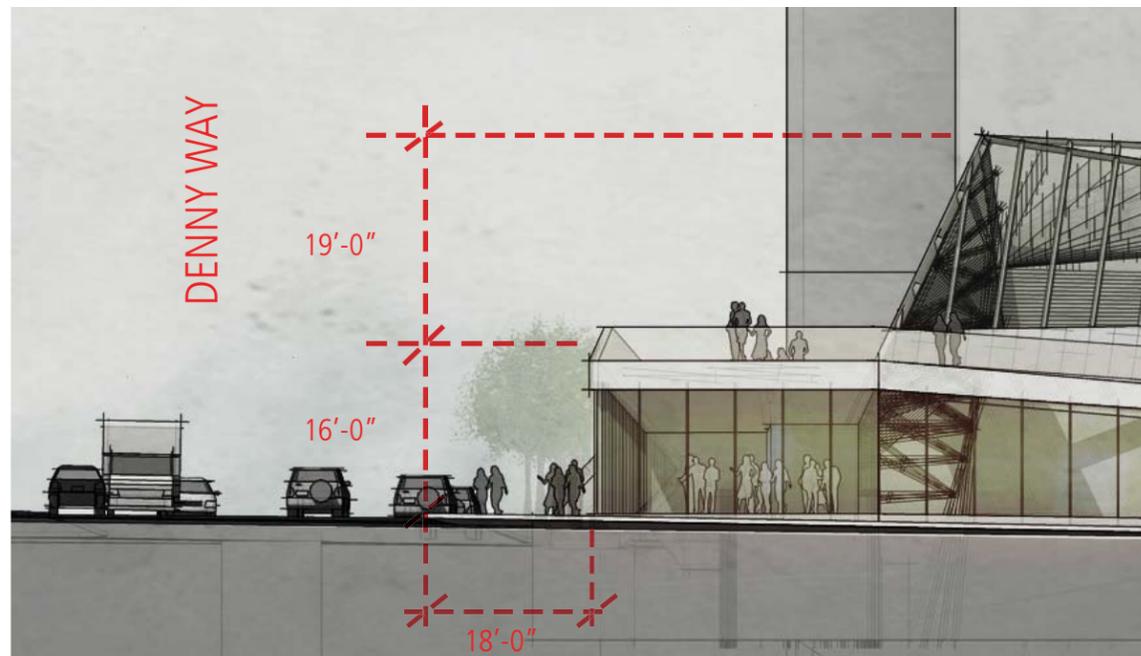
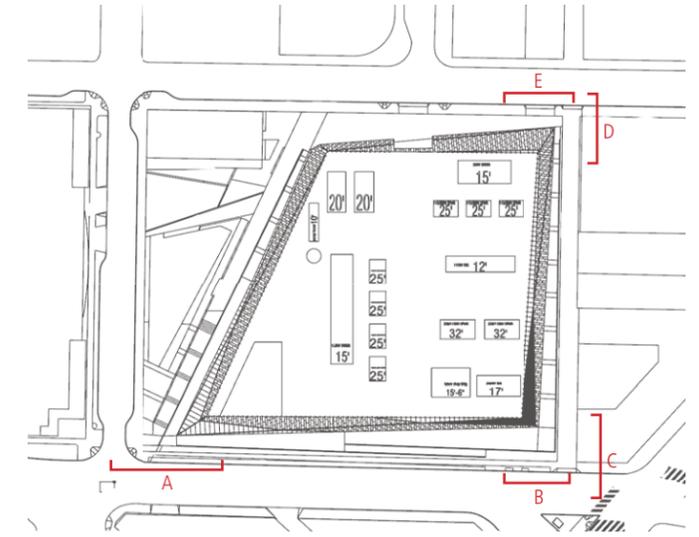
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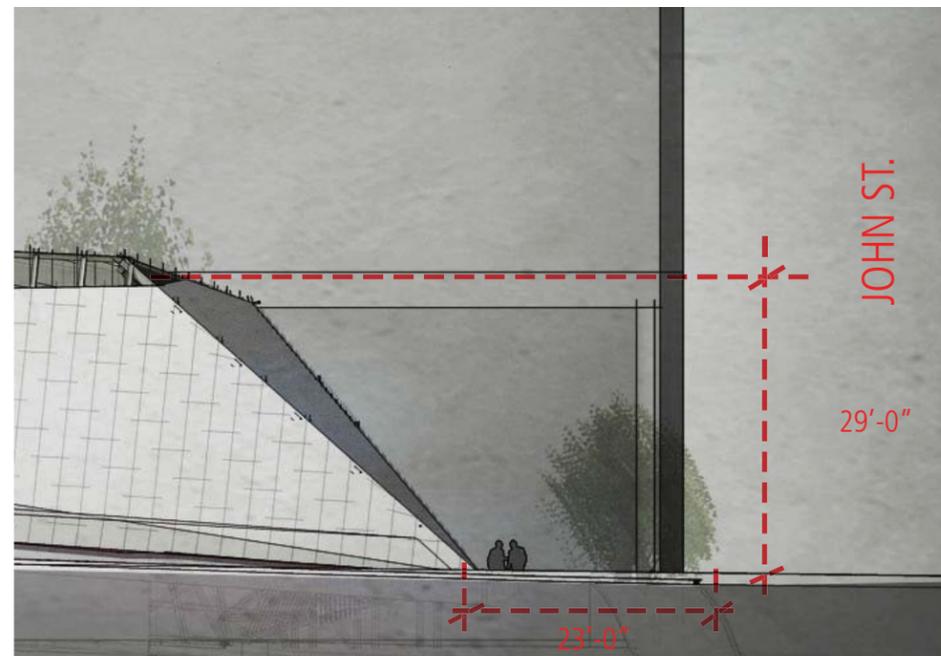
A



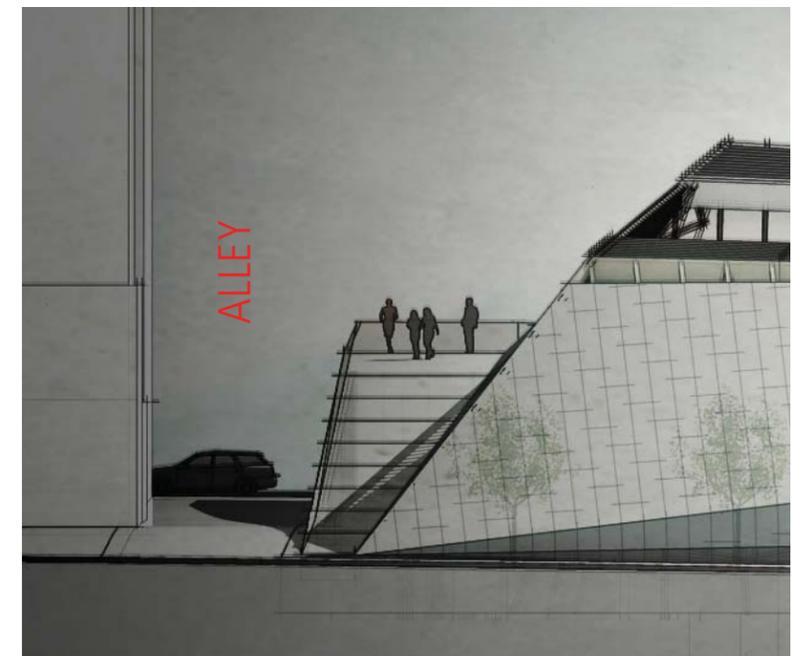
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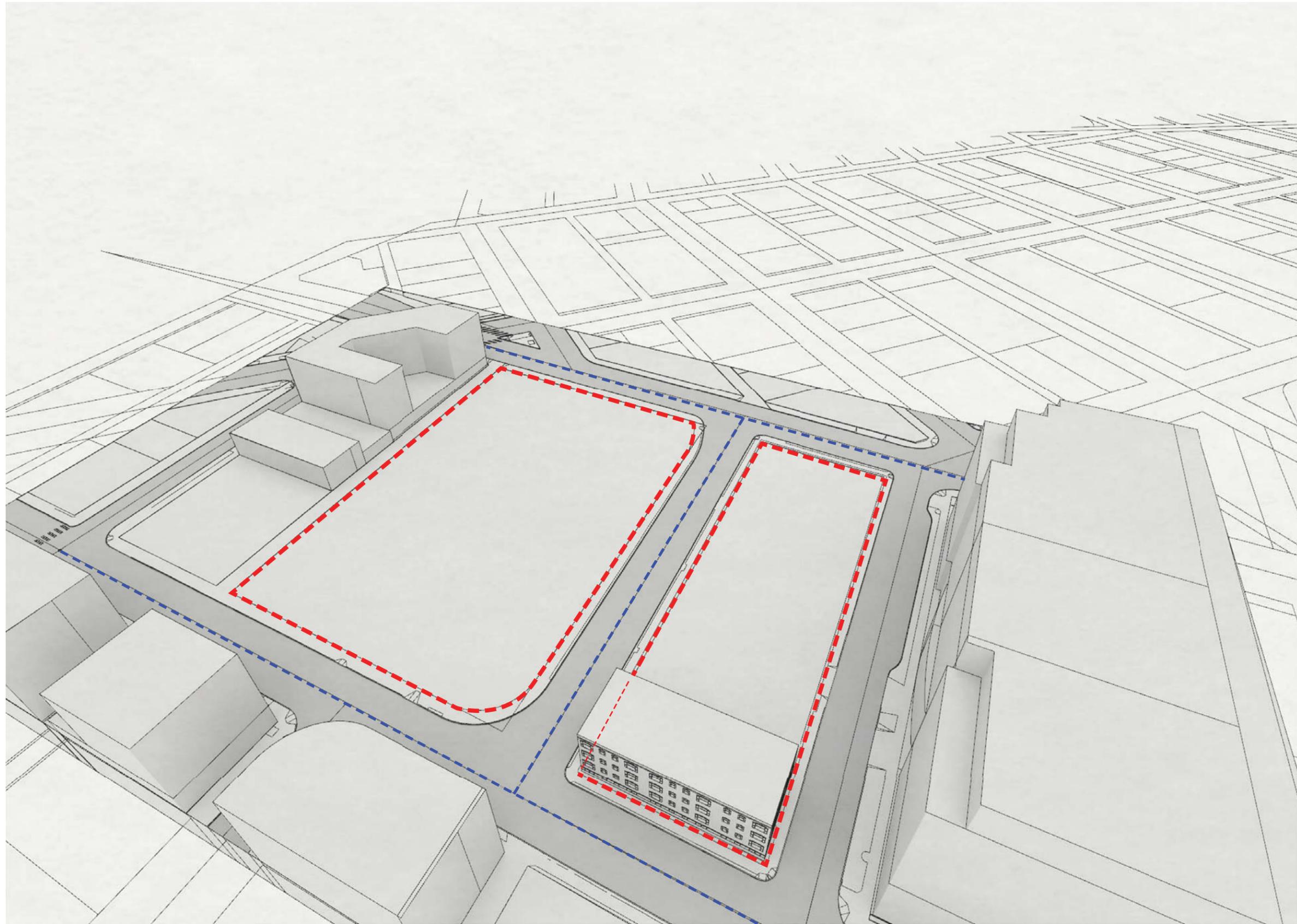
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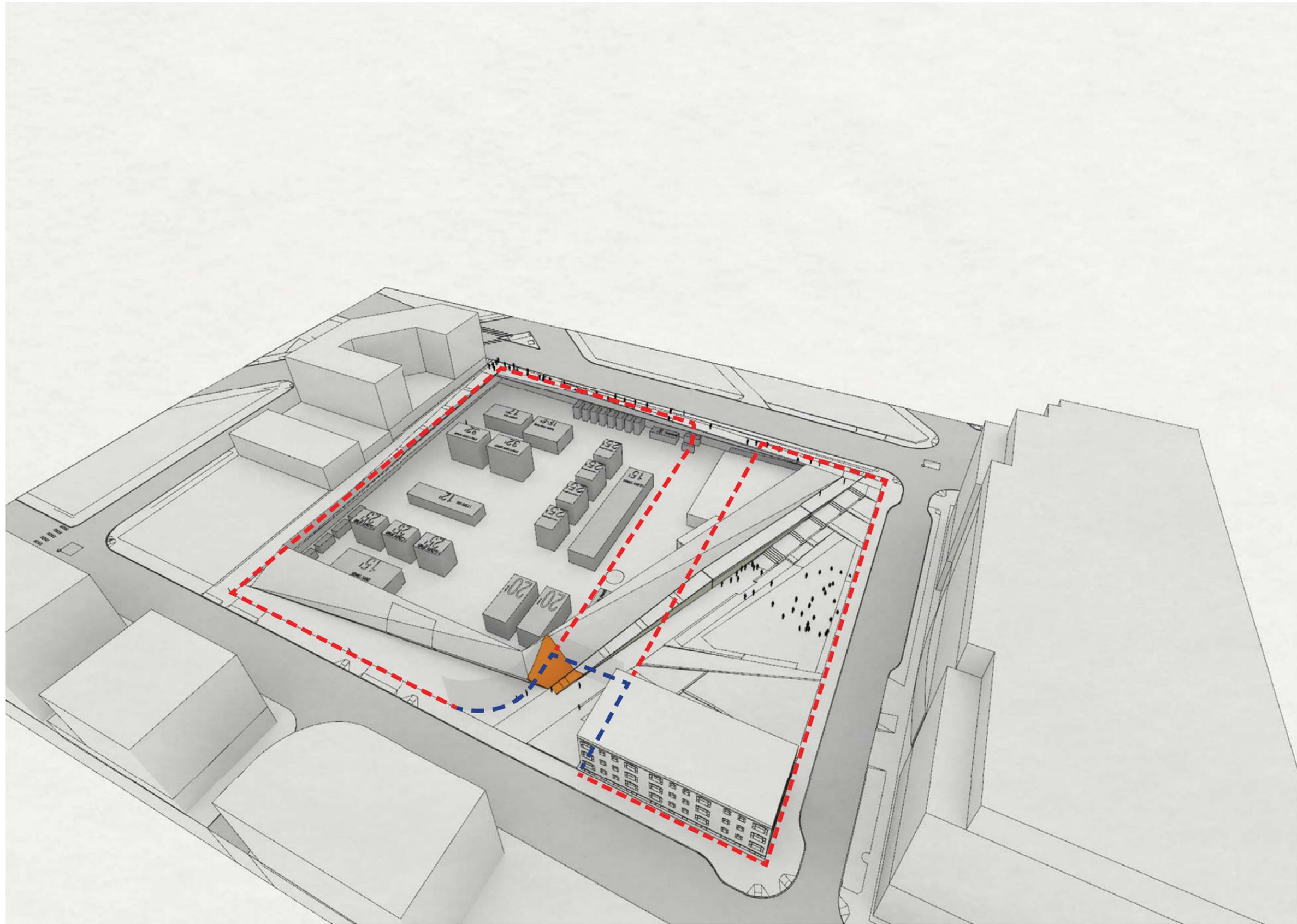


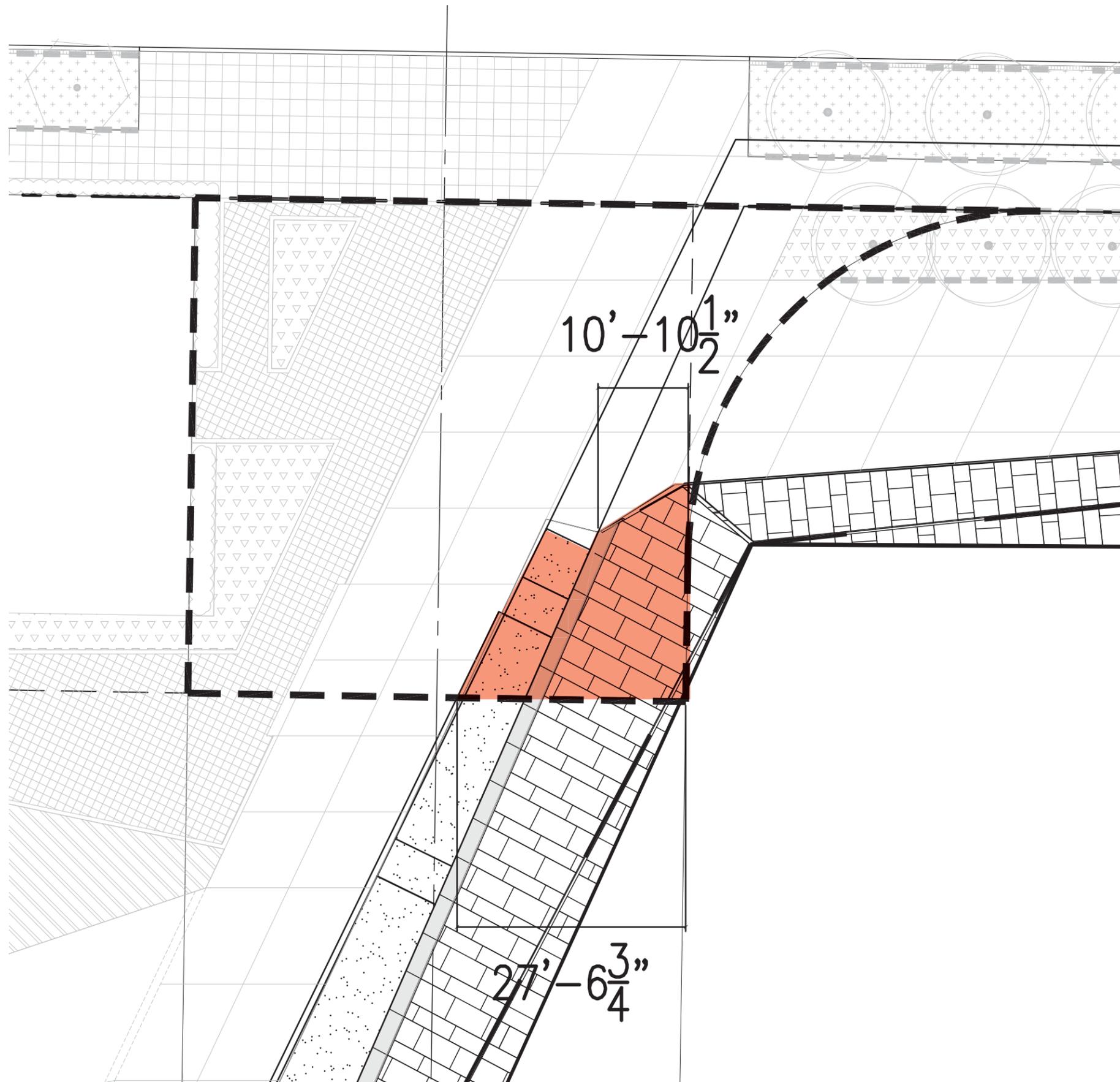
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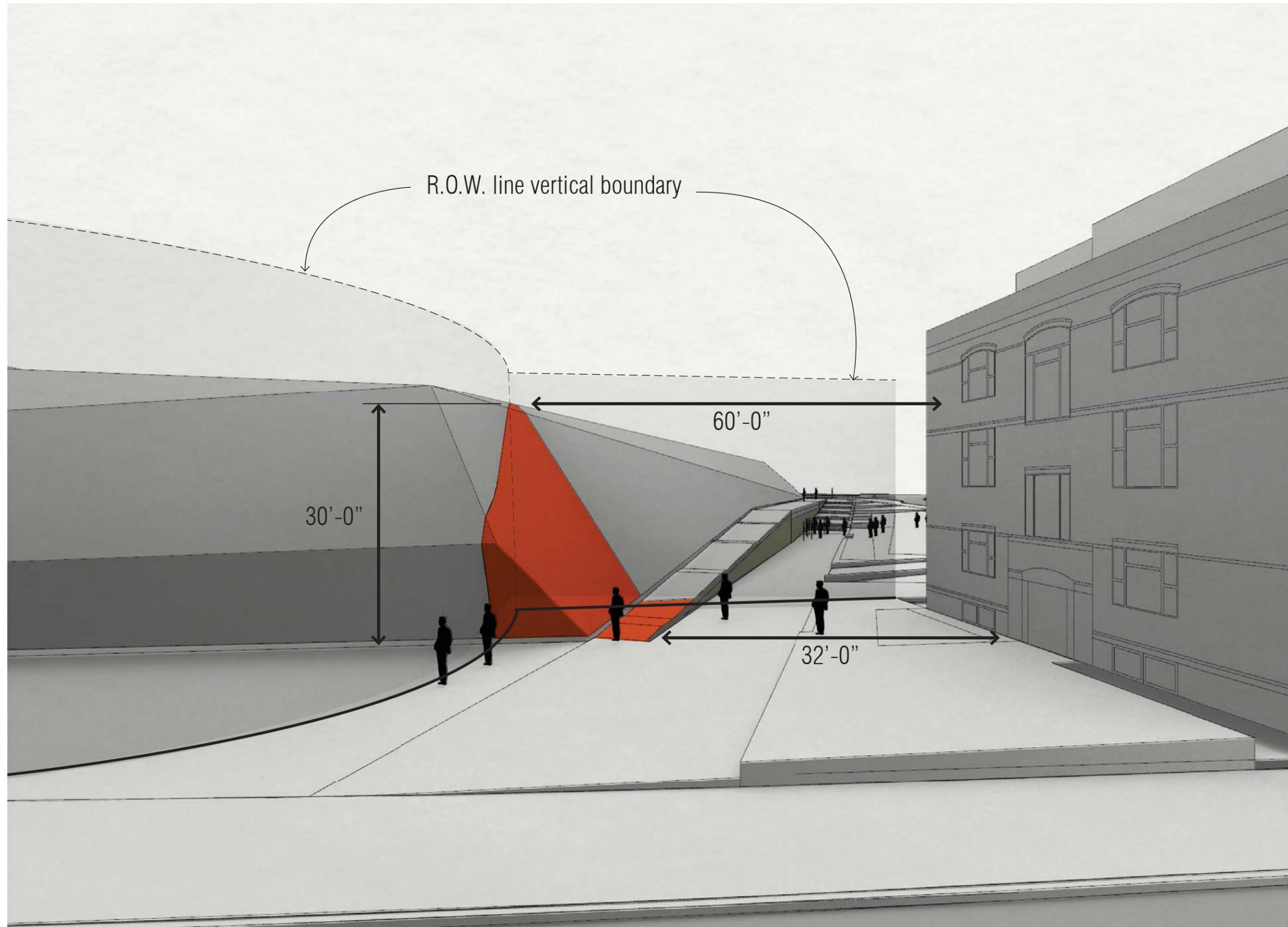


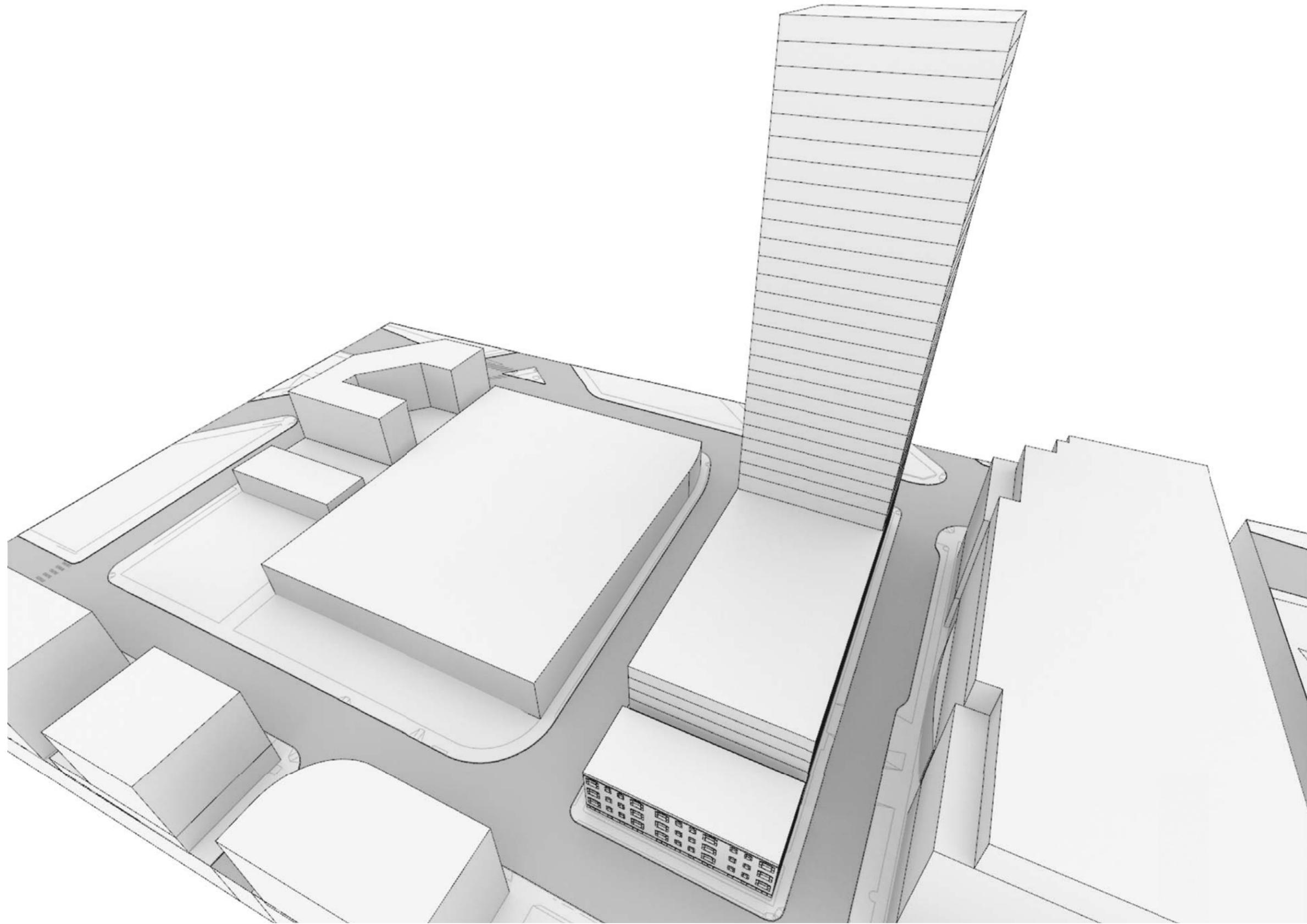
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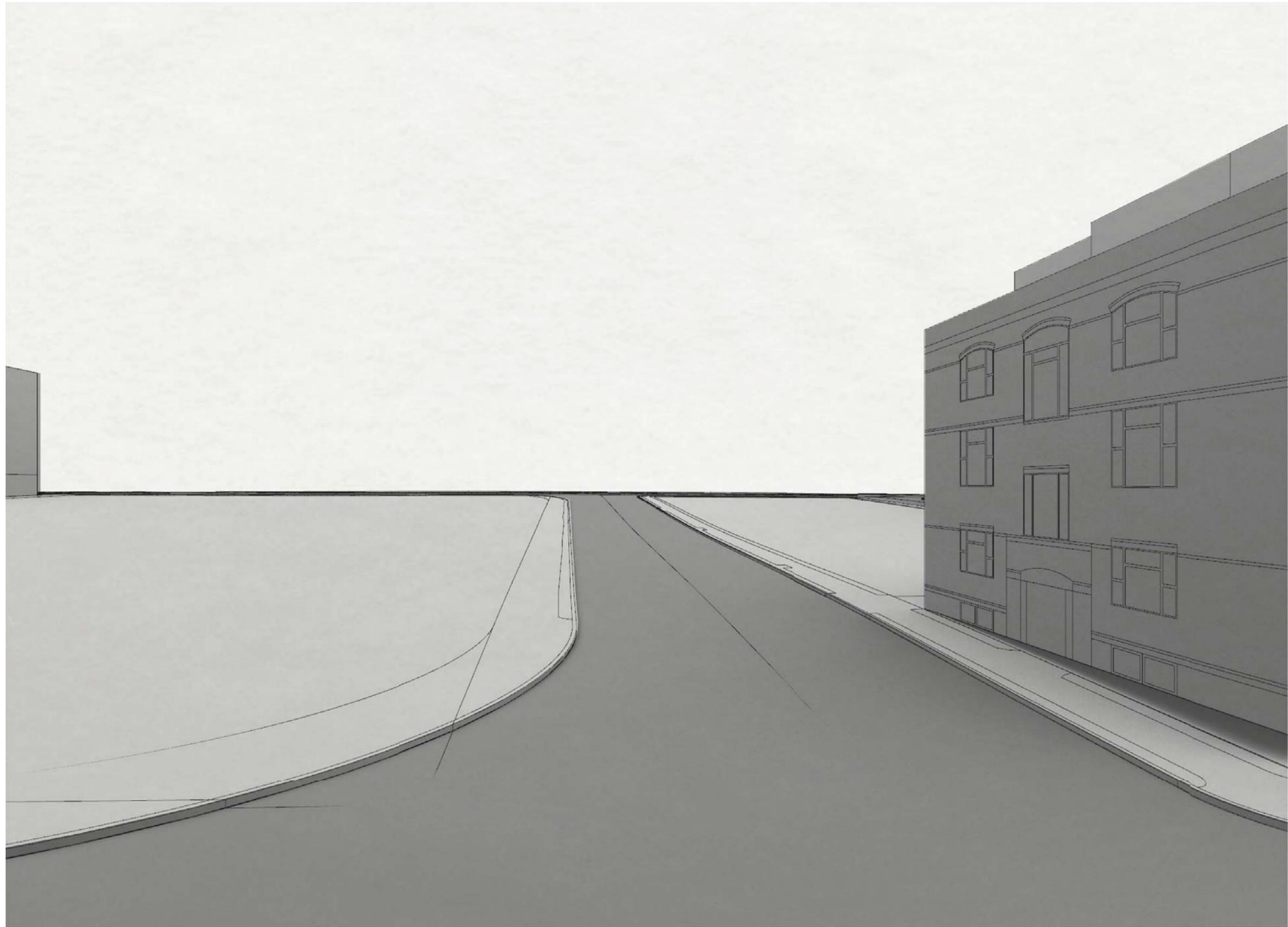


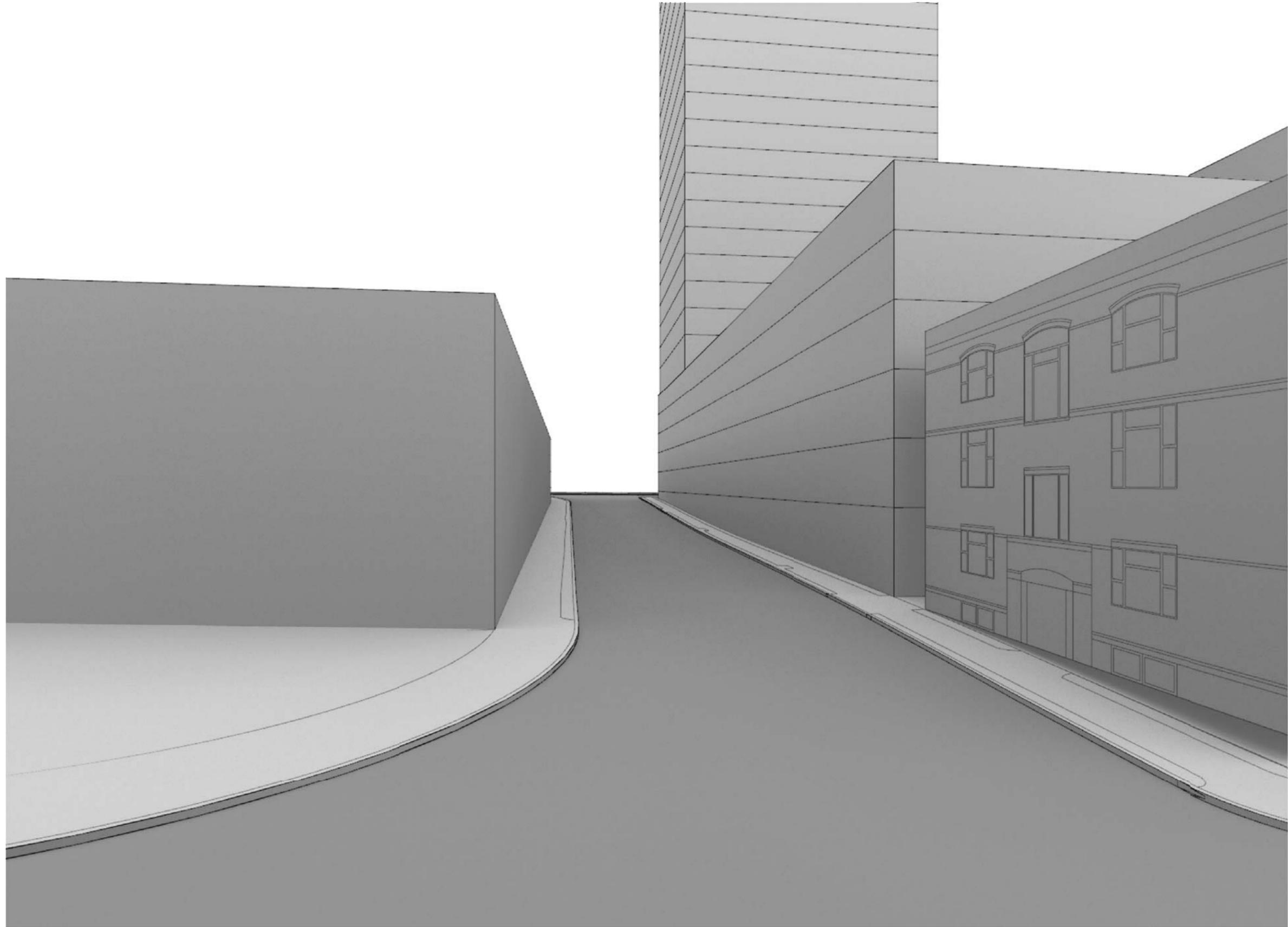


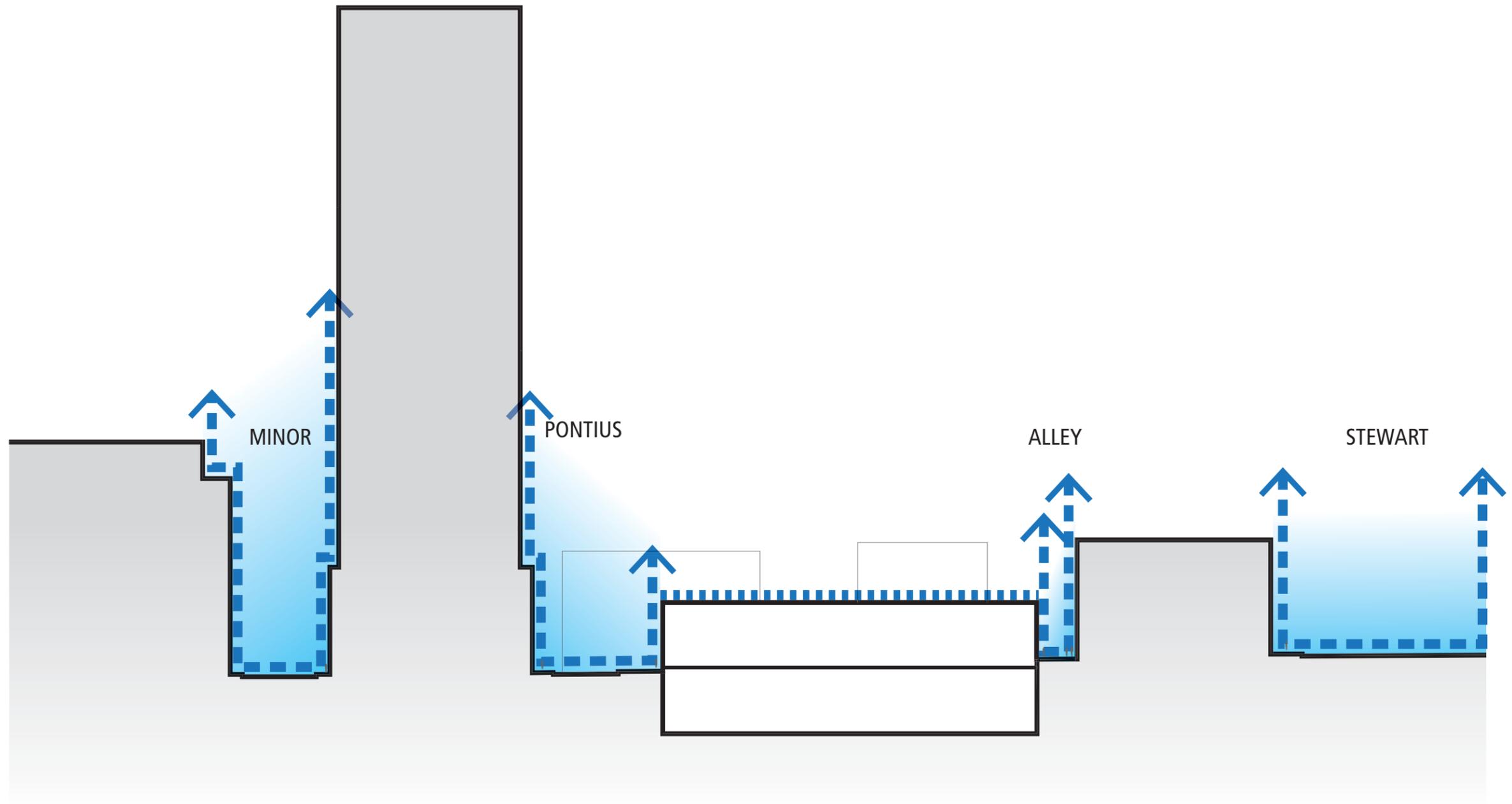


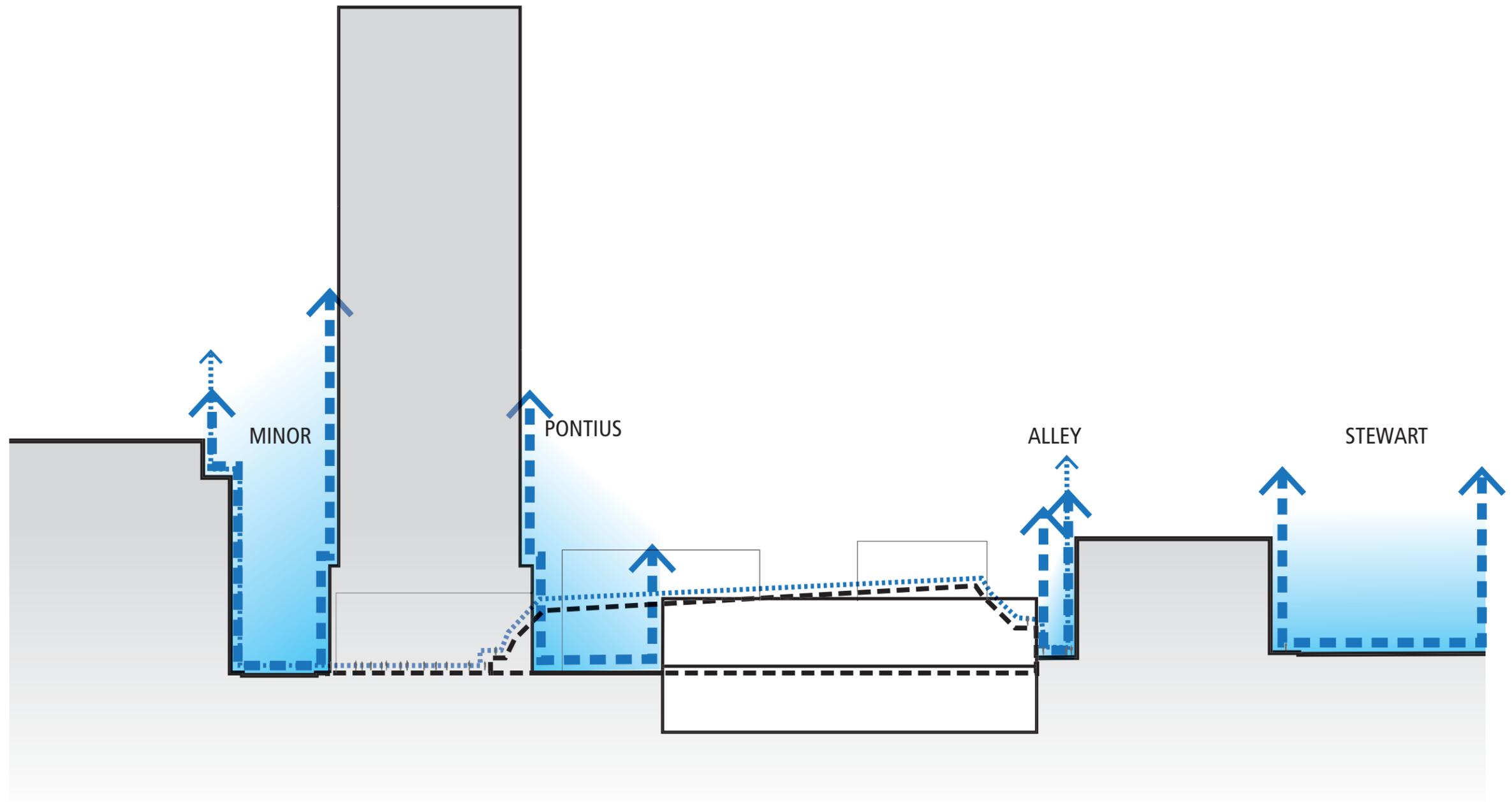


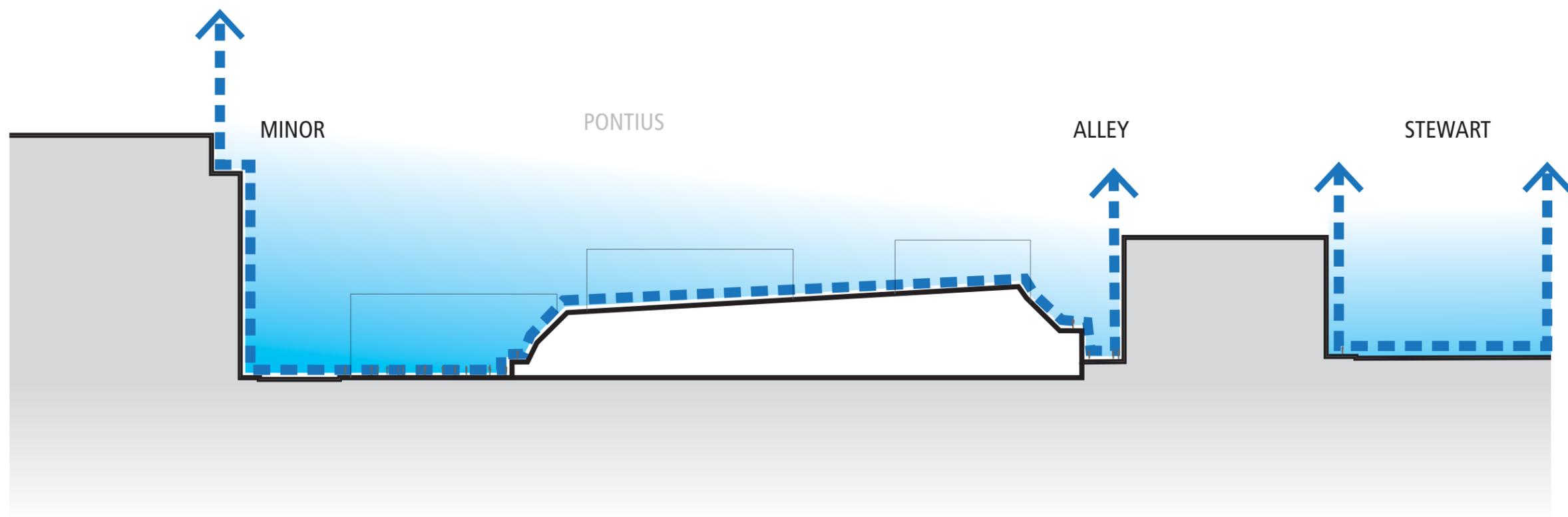












# Denny Substation Urban Design Merit:

## VACATE PONTIUS ALTERNATIVE WITH OPEN SPACE AMENITY

November 7, 2013

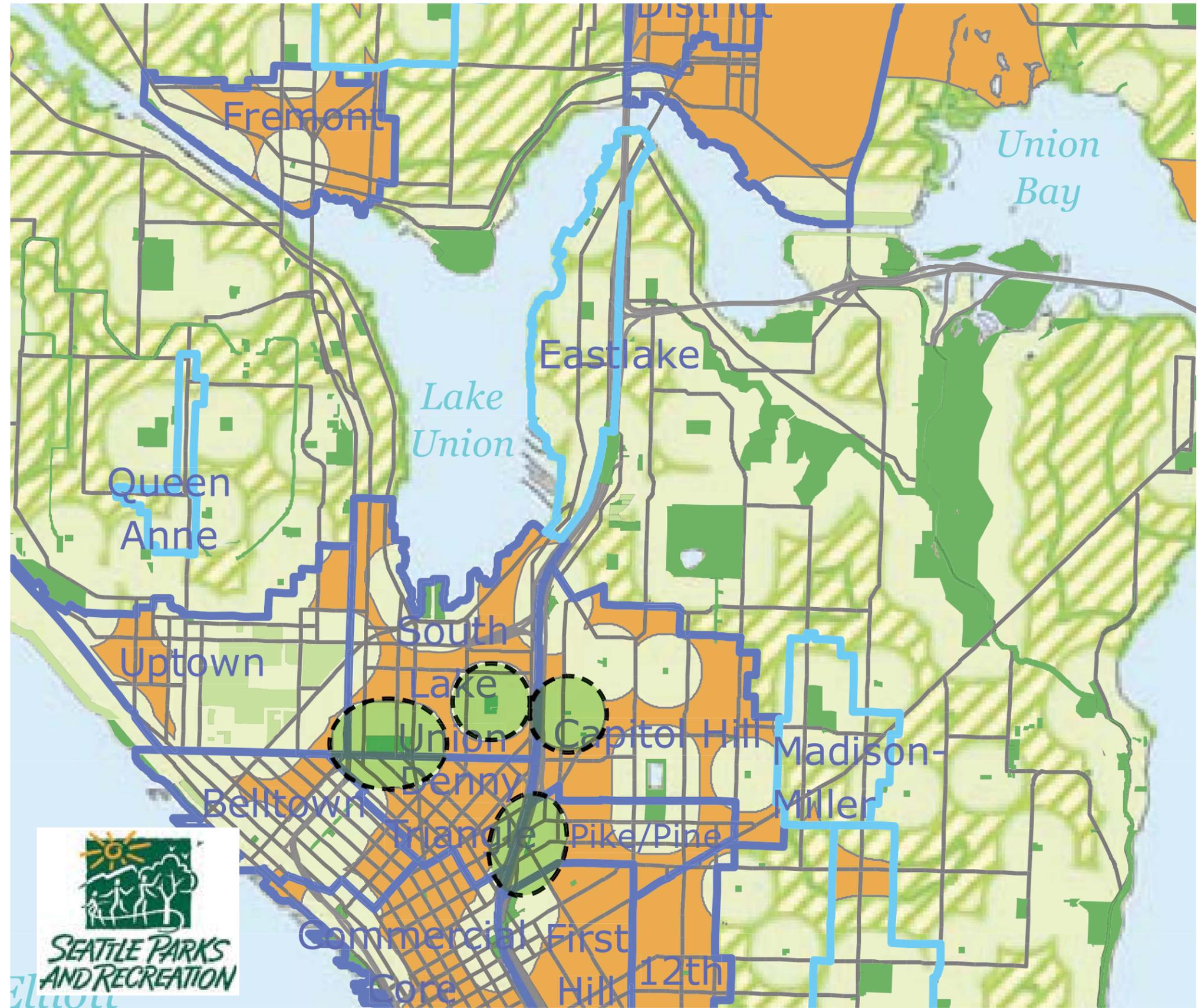
# GAPS IN USABLE OPEN SPACE

AN ASSESSMENT OF GAPS IN SEATTLE'S OPEN SPACE NETWORK: THE 2011 GAP REPORT UPDATE

May 13, 2011

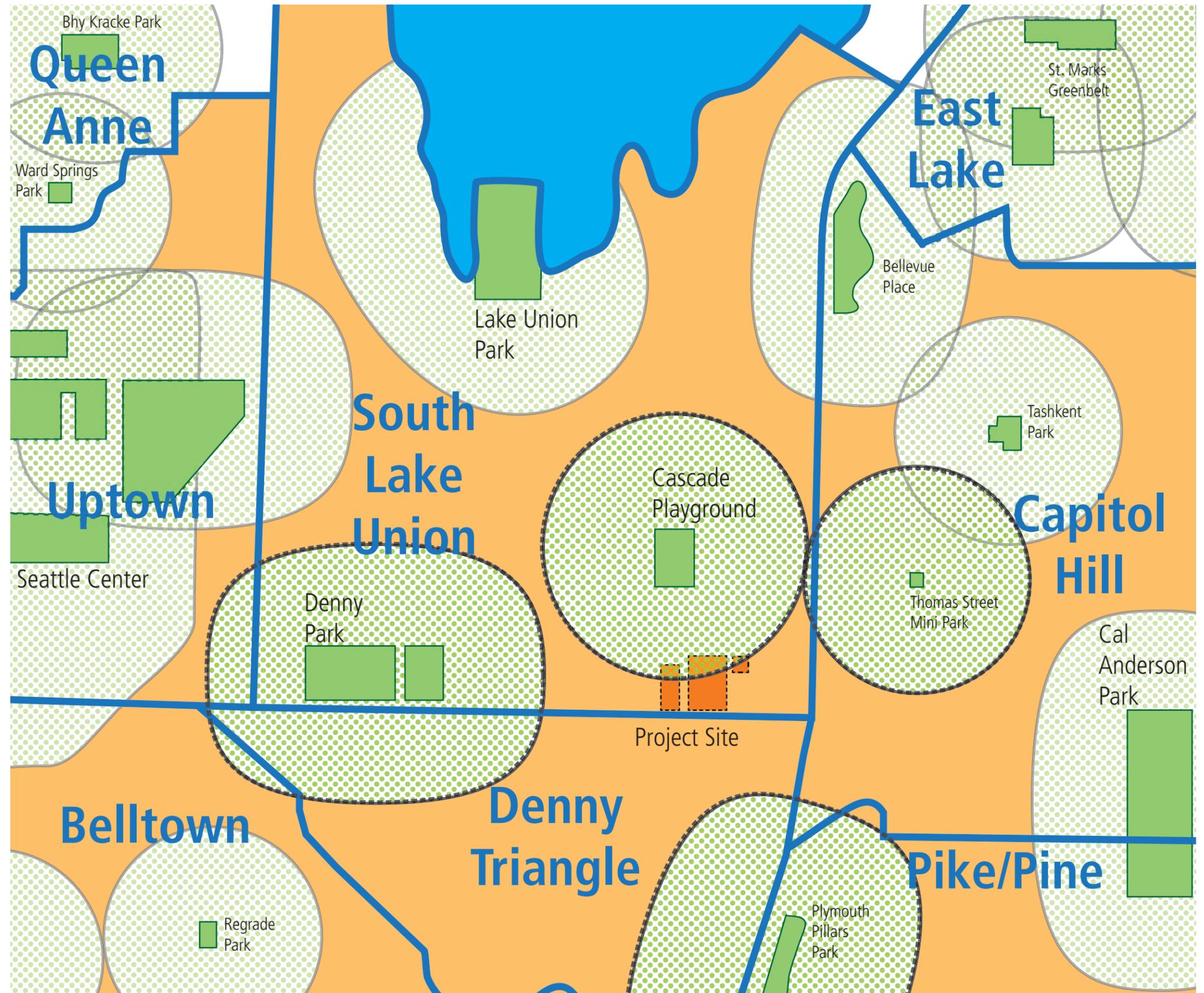
<http://www.seattle.gov/parks/publications/gapreport.htm>

-  City of Seattle Parks
-  Non-City Park/Open Space
-  Residential Urban Villages
-  Urban Center Villages & Hub Urban Villages
-  Gaps in Usable Open Space
-  1/8 Mile Service Area of Usable Open Space over 10,000 SF
-  1/4 Mile Service Area of Usable Open Space over 10,000 SF
-  1/2 Mile Service Area of Usable Open Space over 1/2 Acre



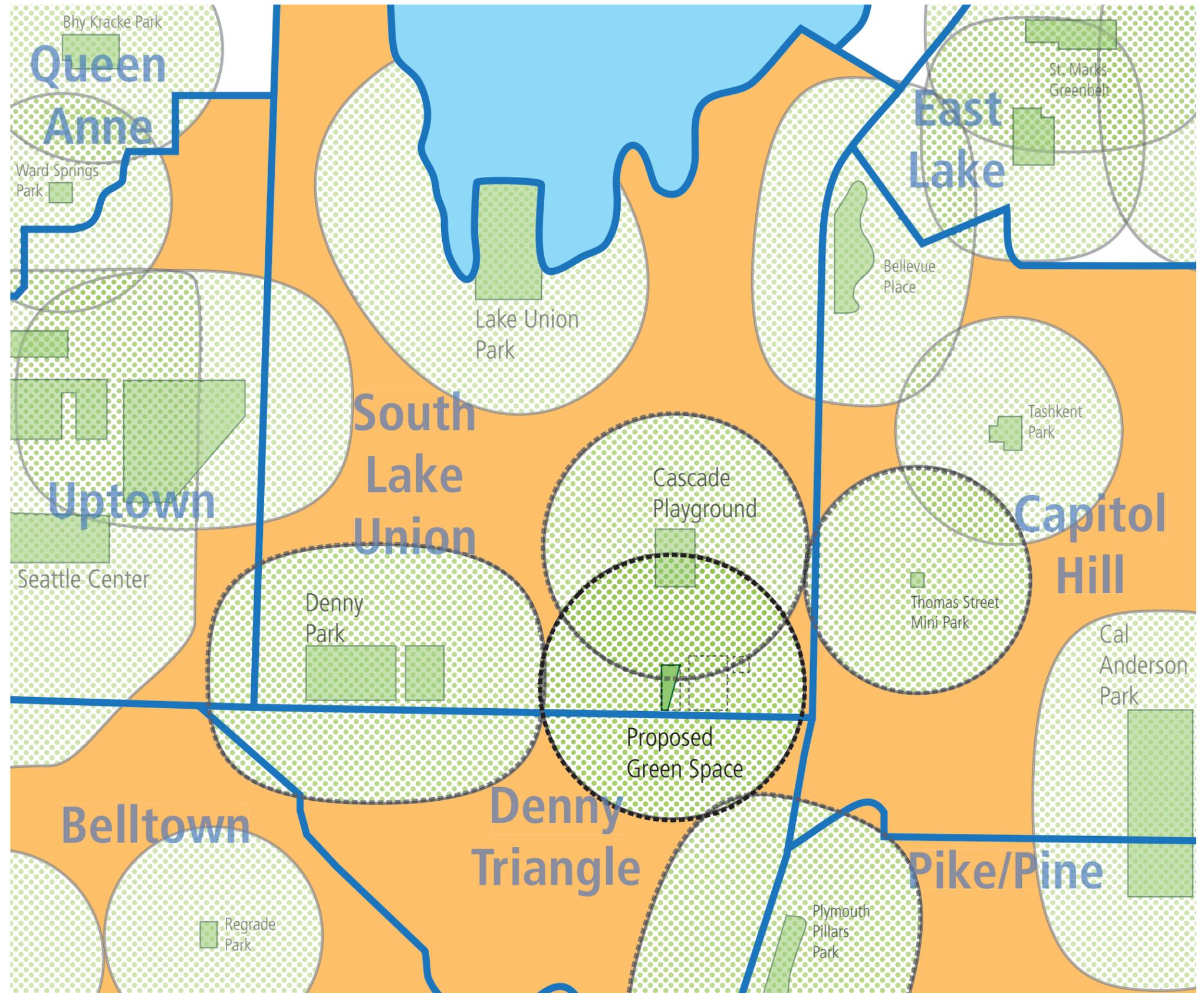
***GAPS IN USABLE  
OPEN SPACE  
EXISTING***

-  OPEN SPACE
-  NEIGHBORHOOD
-  1/8 MILE SERVICE AREA
-  GAPS IN USABLE OPEN SPACE

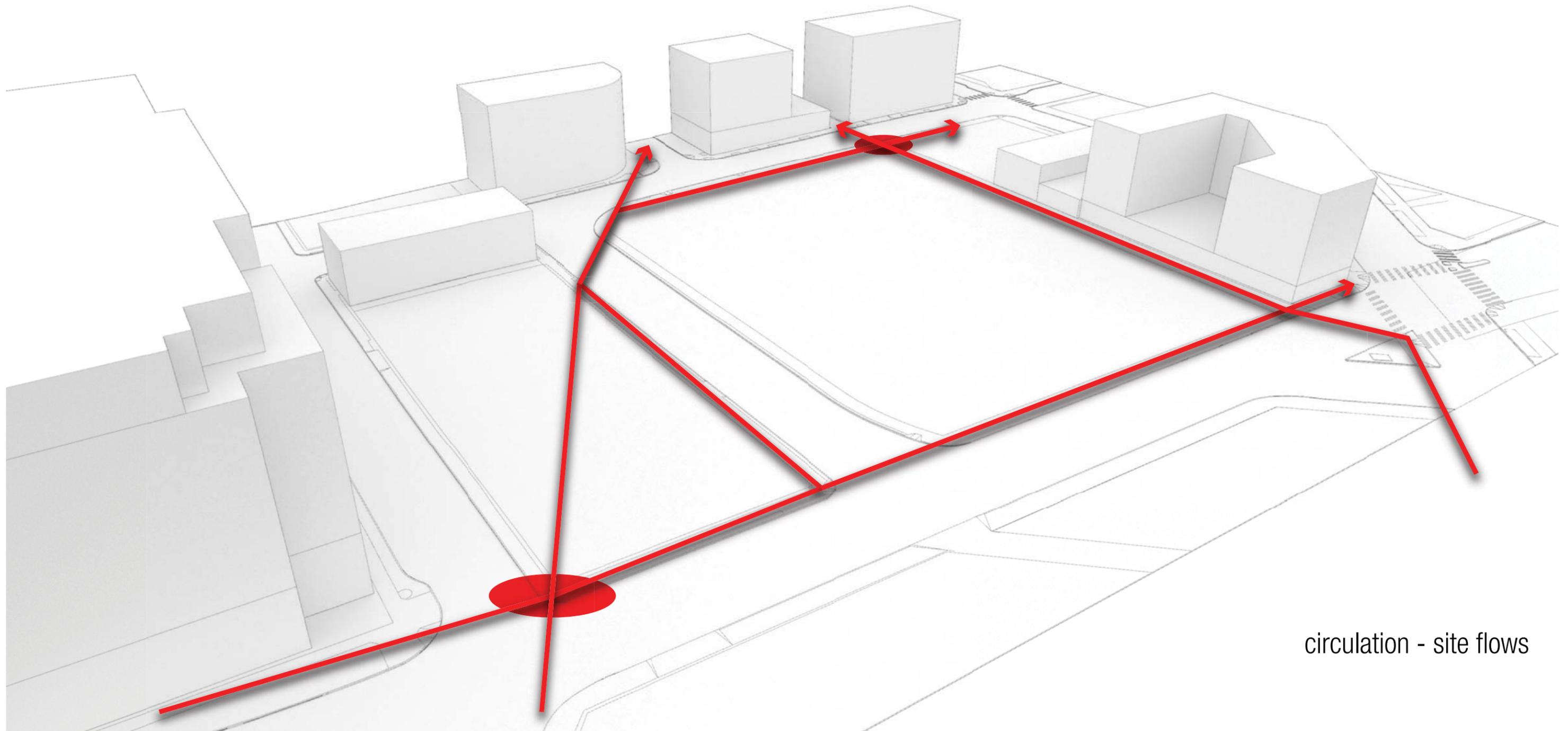


***GAPS IN USABLE  
OPEN SPACE  
PROPOSED***

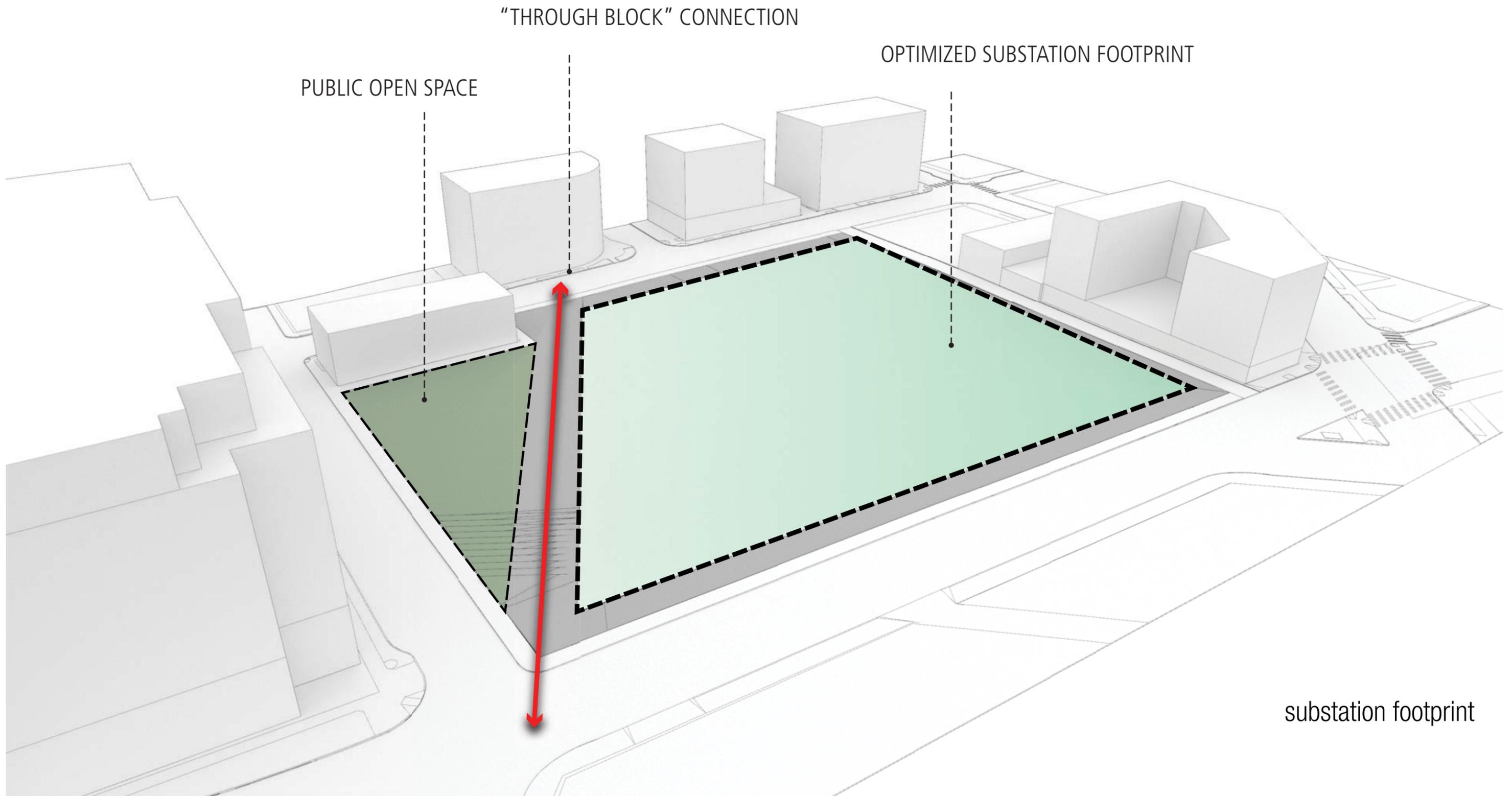
-  OPEN SPACE
-  NEIGHBORHOOD
-  1/8 MILE SERVICE AREA
-  GAPS IN USABLE OPEN SPACE

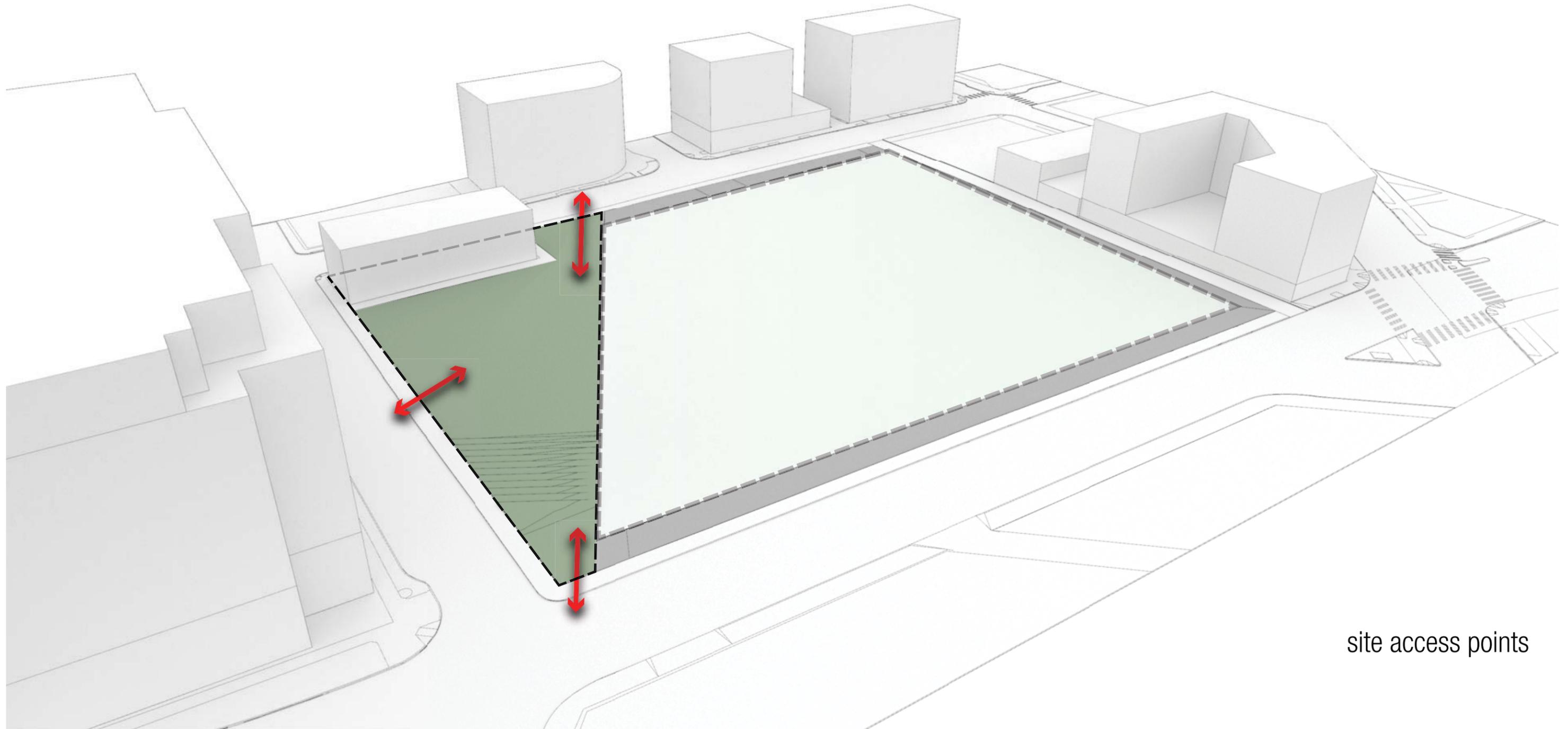




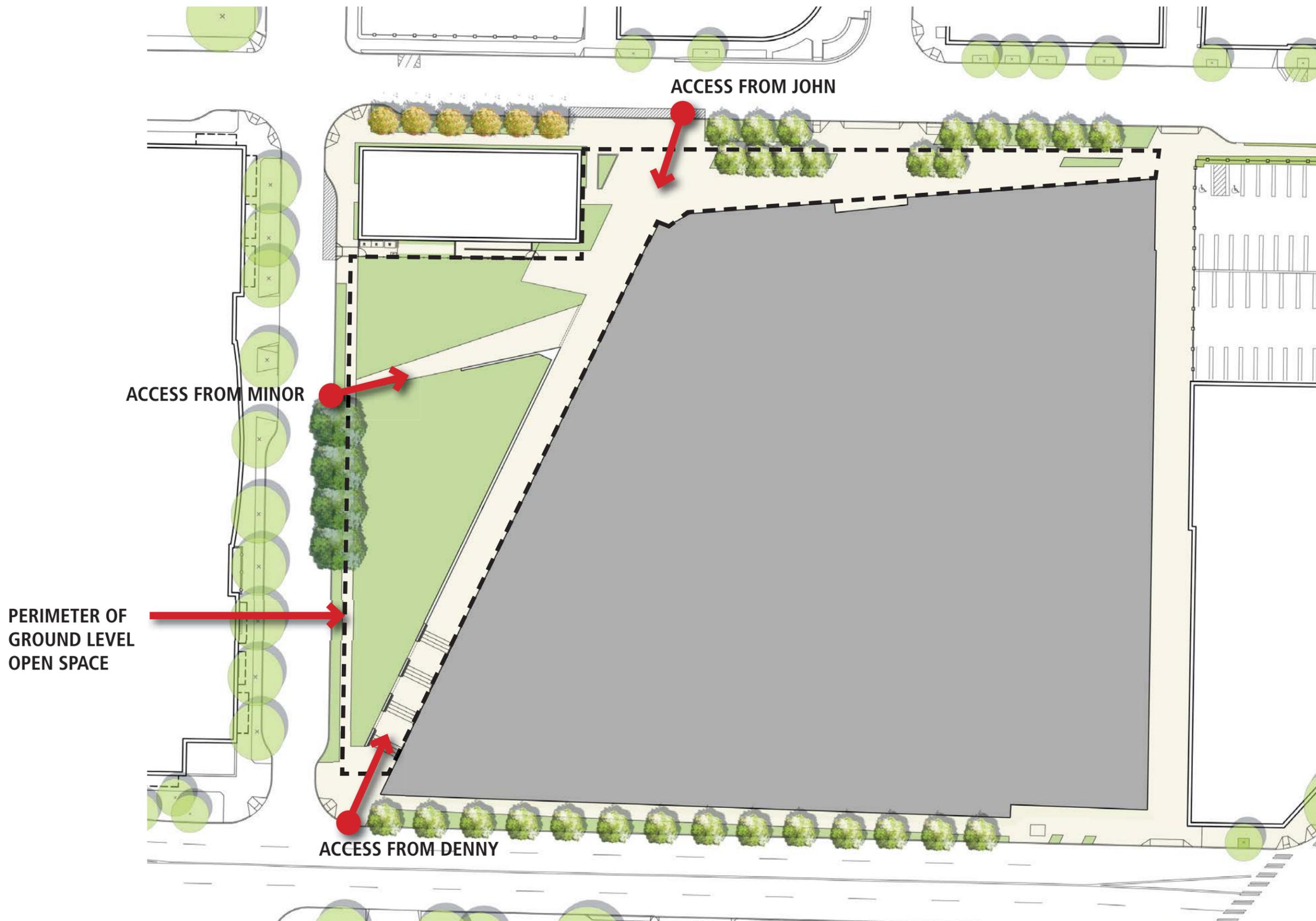


circulation - site flows



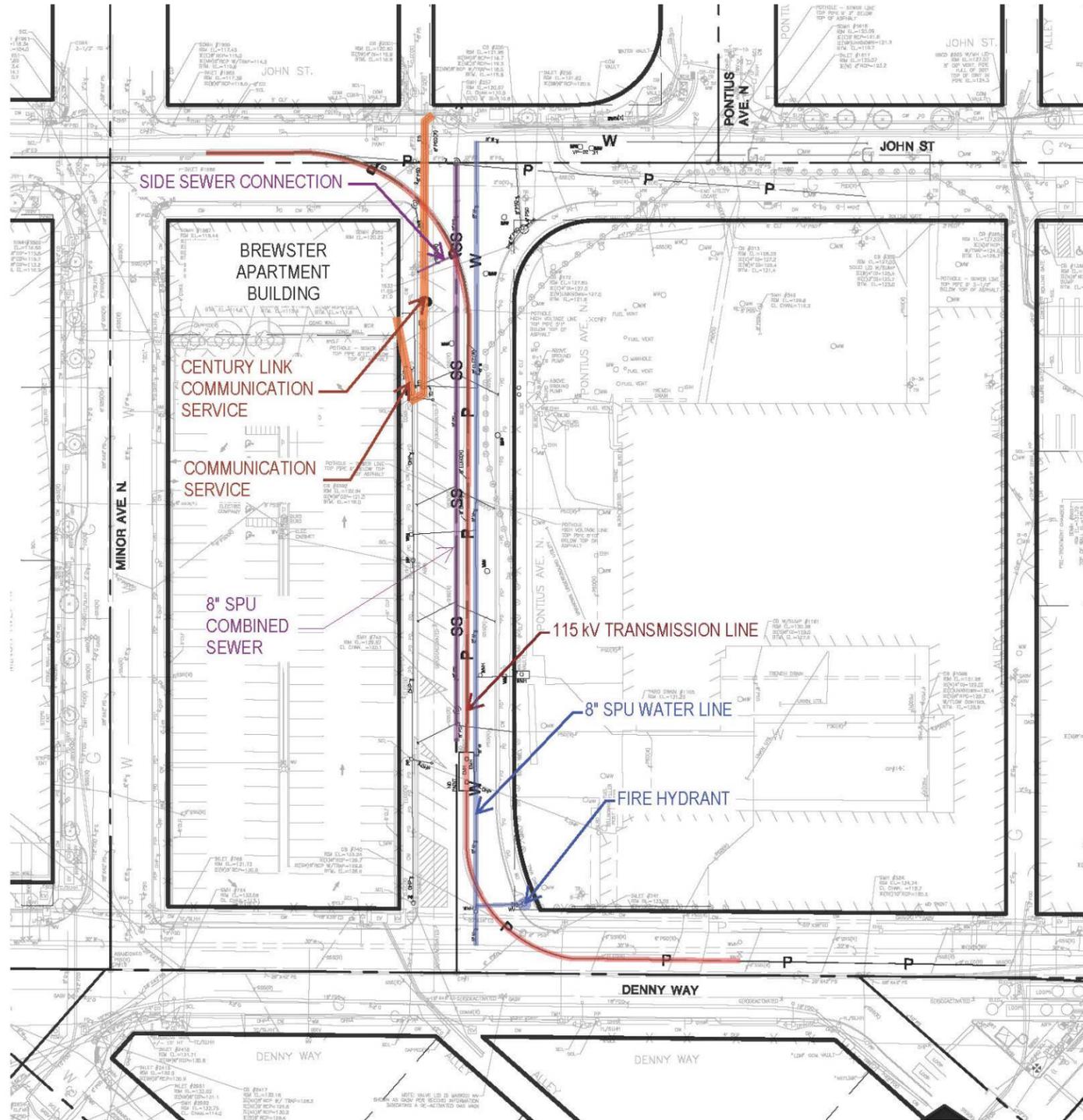


site access points

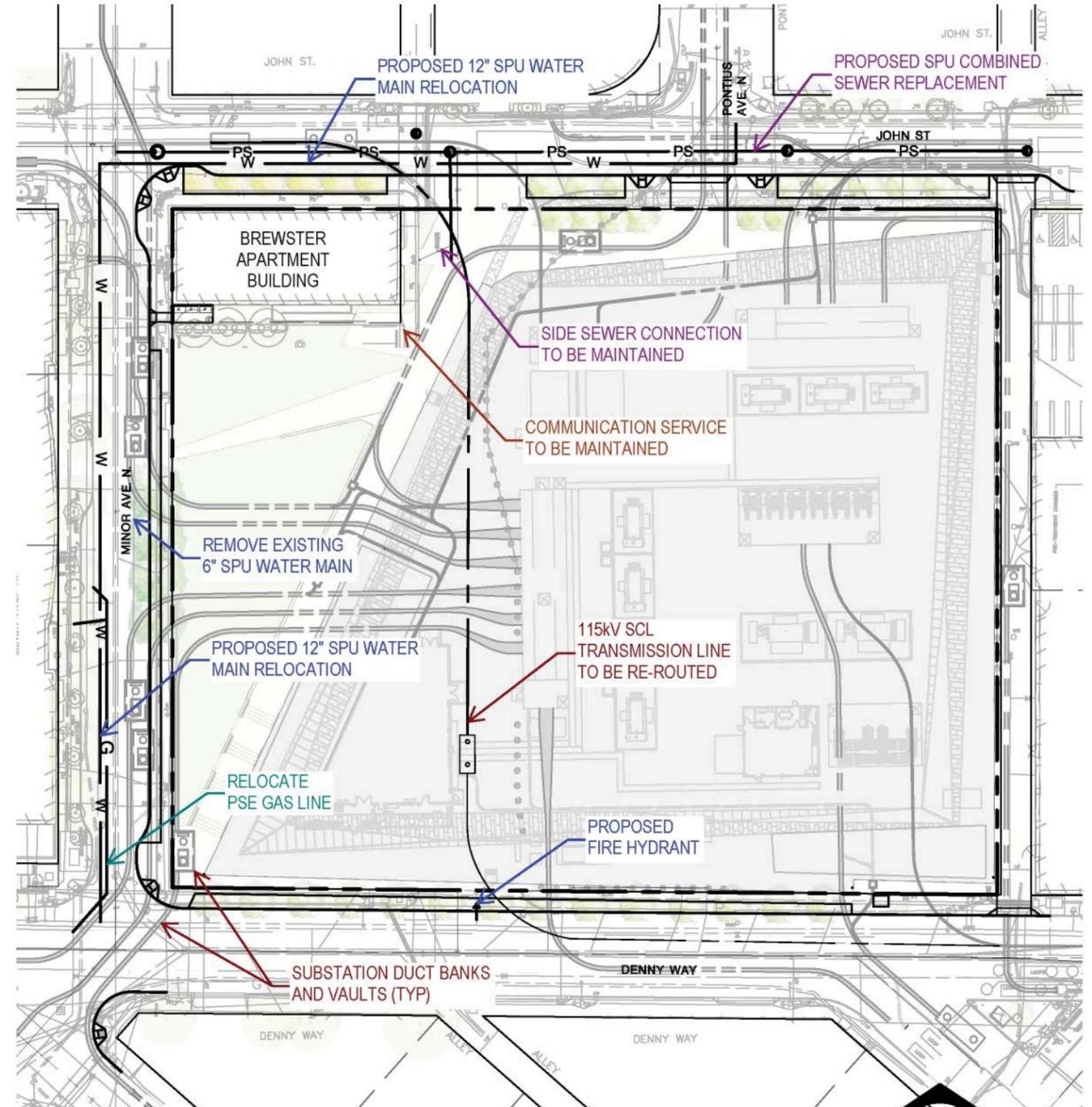


# Denny Substation Urban Design Merit: SITE UTILITIES

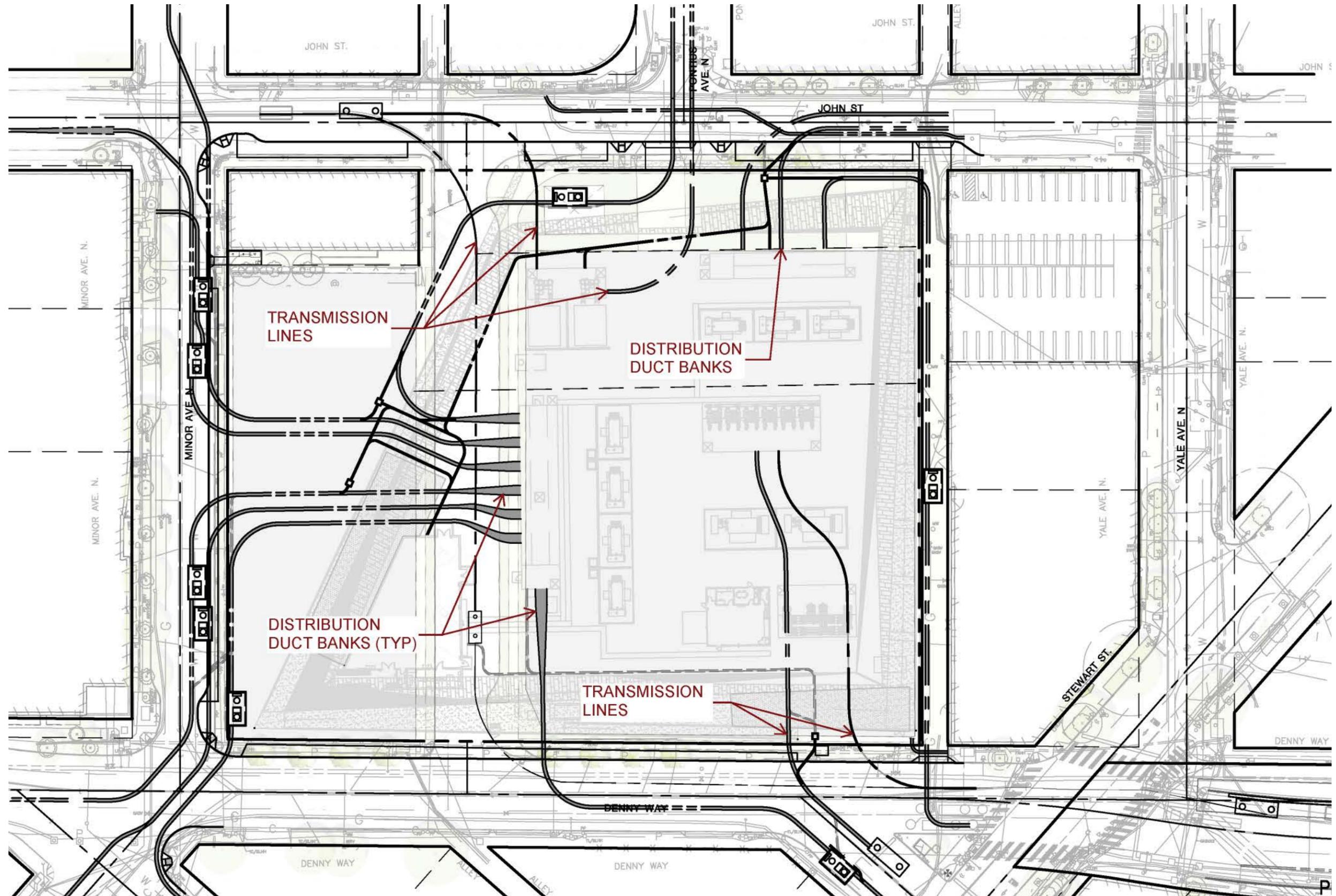
November 7, 2013



EXISTING UTILITIES



RELOCATED UTILITIES

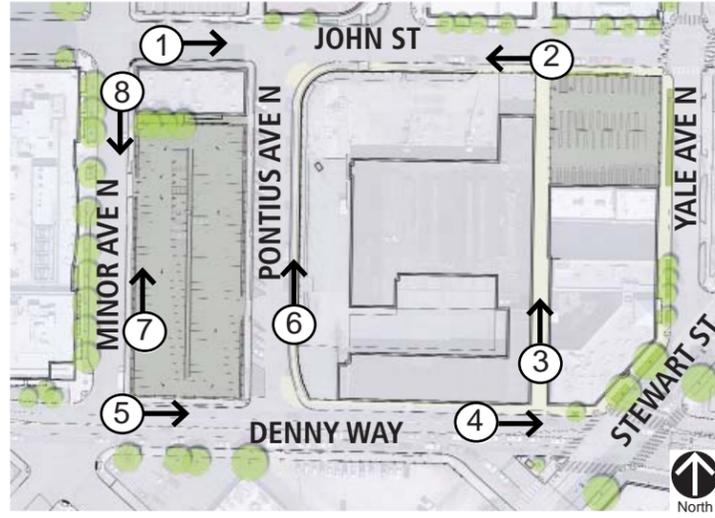


# Denny Substation Urban Design Merit:

PEDESTRIAN EDGE FOR VACATION  
OF PONTIUS ALTERNATE AND NON  
VACATION OF PONTIUS

November 7, 2013

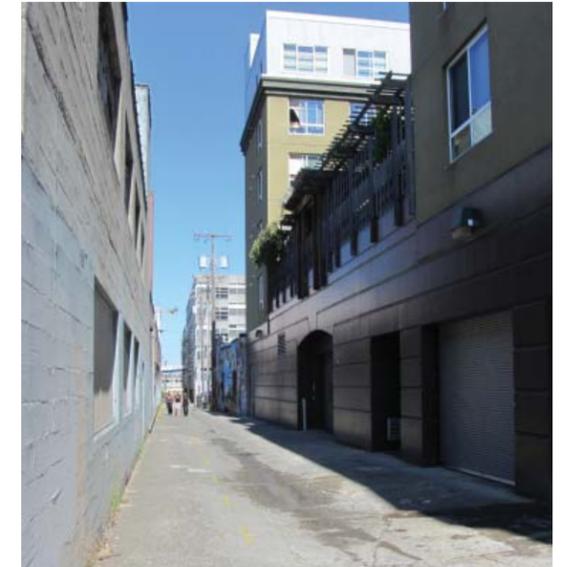
# EXISTING CONDITIONS



JOHN ST AT THE BREWSTER ①



JOHN ST AT THE ALLEY ②



THE ALLEY AT DENNY WAY ③



DENNY WAY AT BUS STOP ④



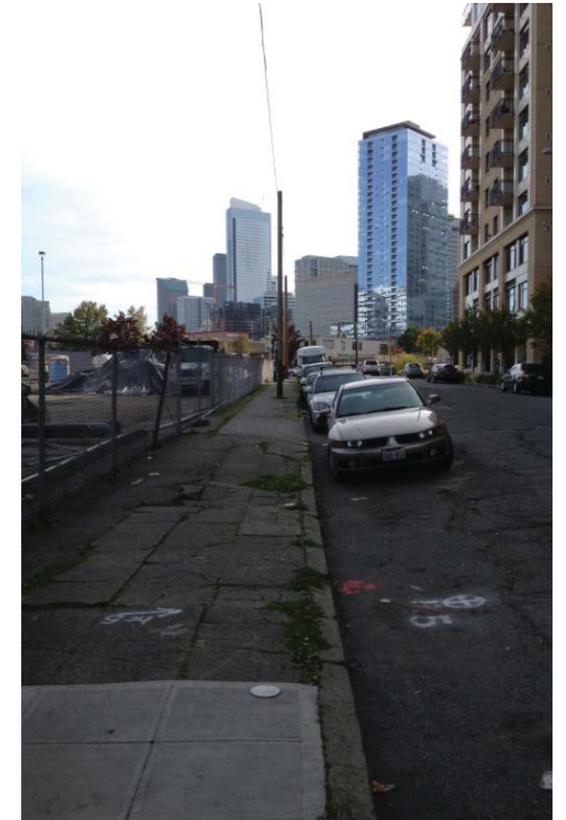
DENNY WAY LOOKING EAST ⑤



PONTIUS AVE N LOOKING NORTH ⑥

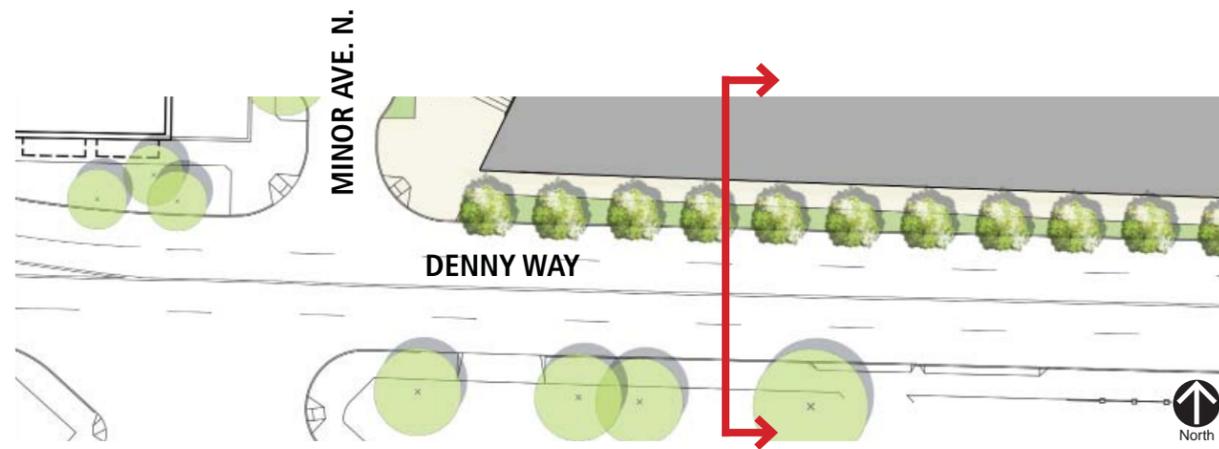
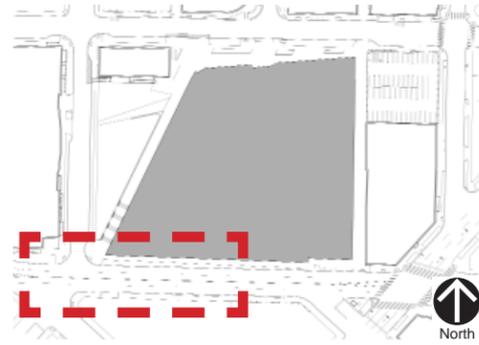


MINOR AVE N LOOKING NORTH ⑦

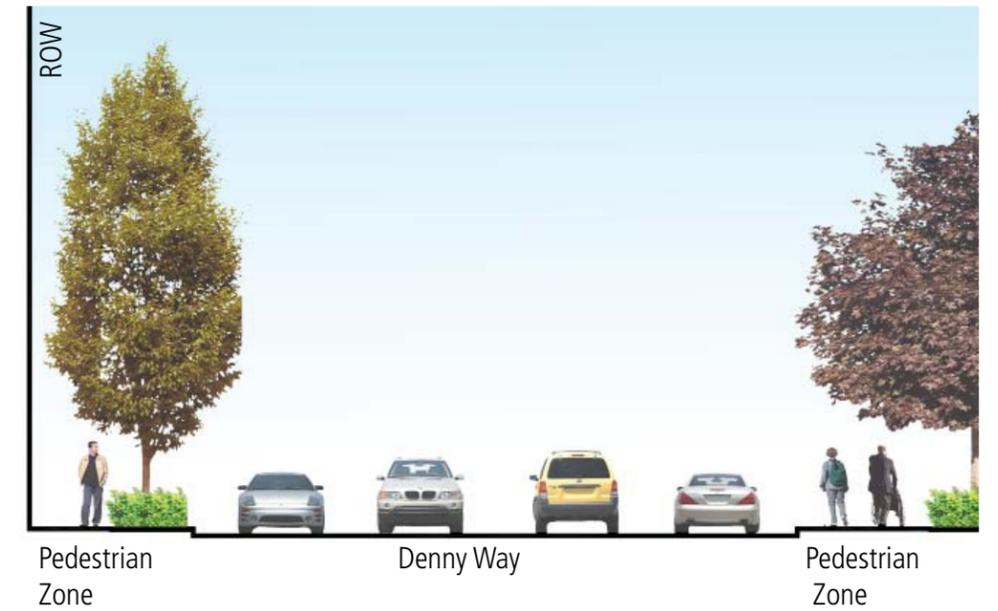
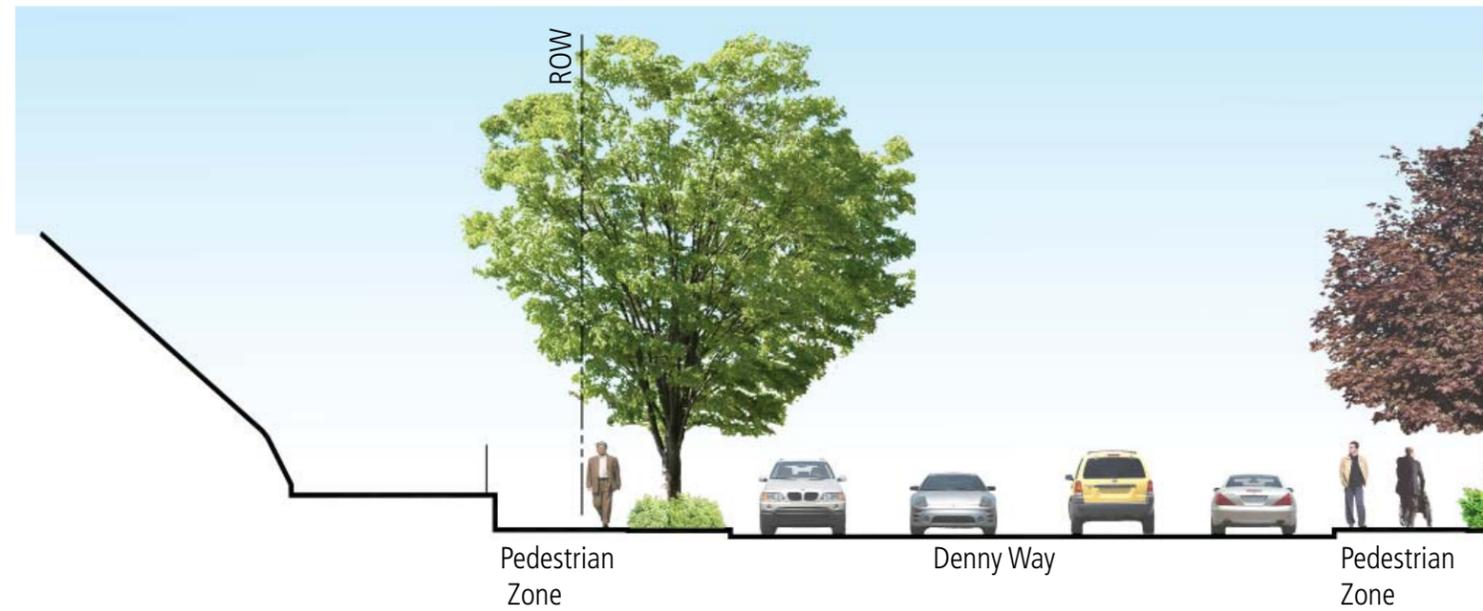
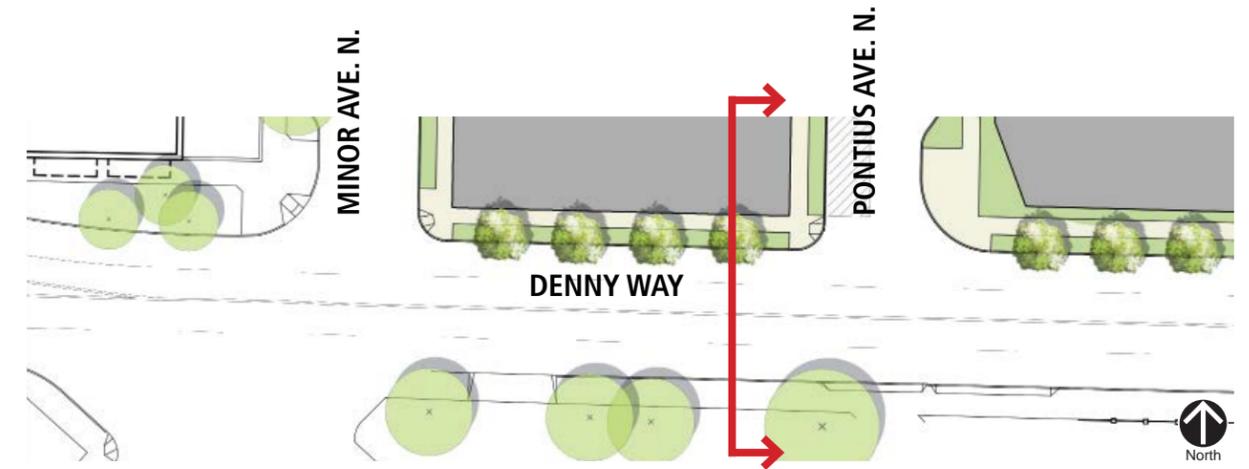


MINOR AVE N LOOKING SOUTH ⑧

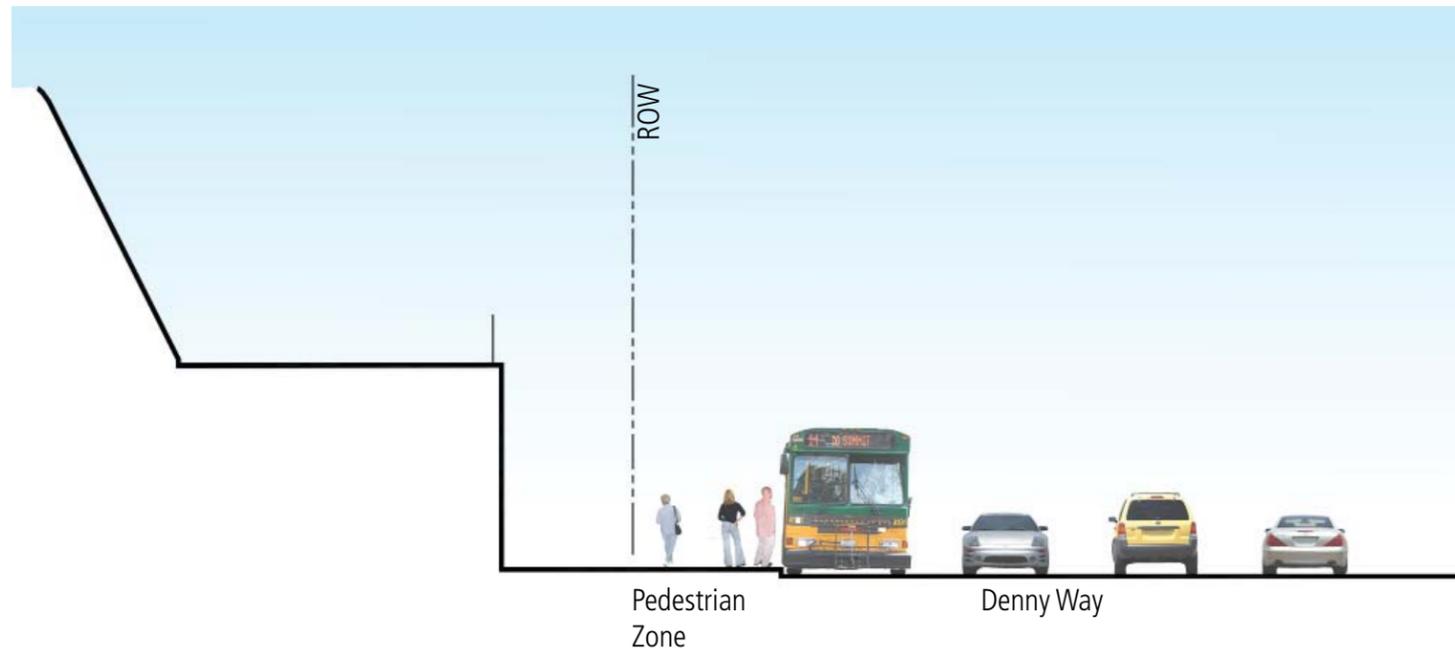
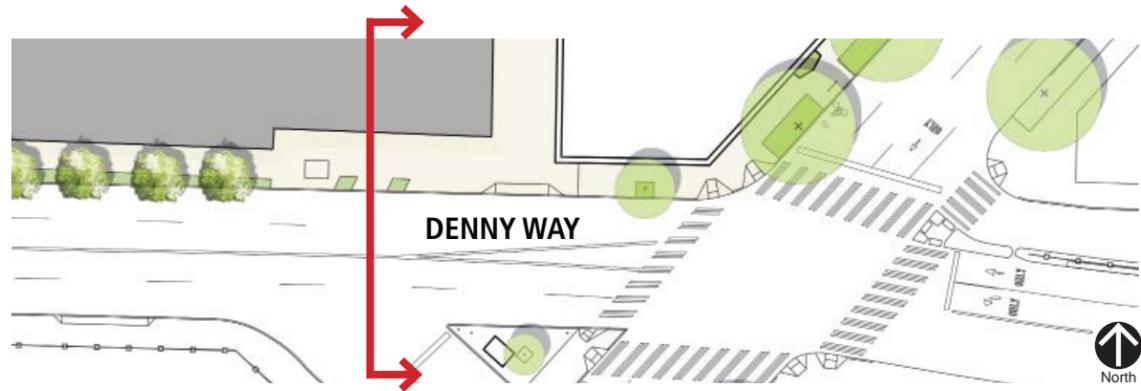
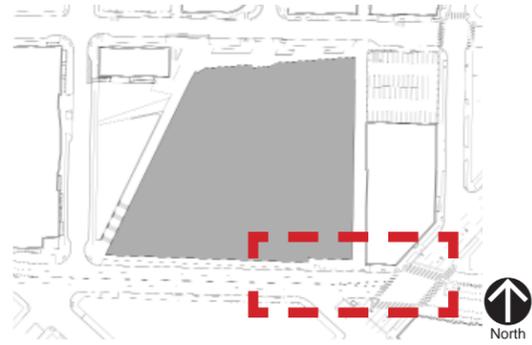
# VACATION OF PONTIUS



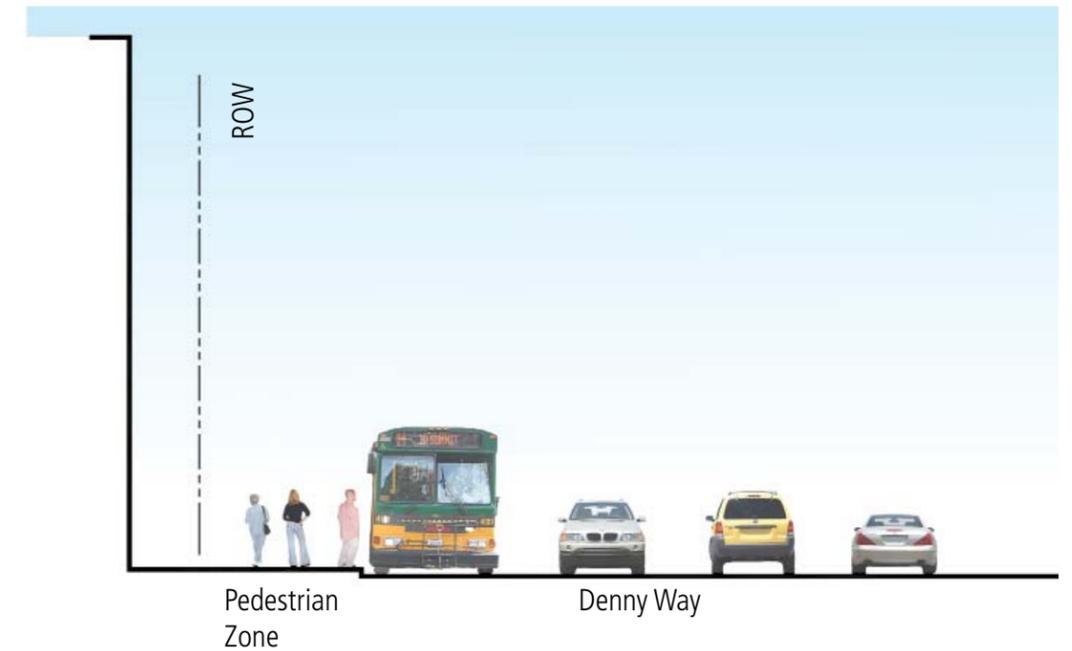
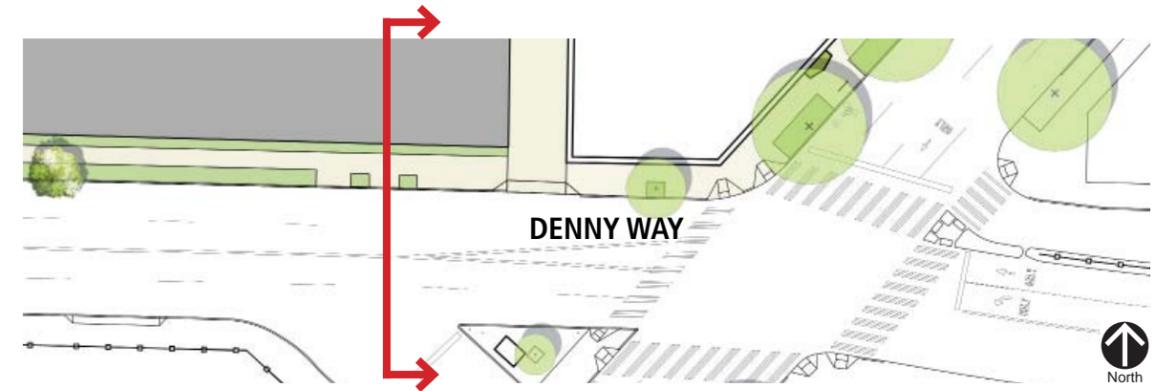
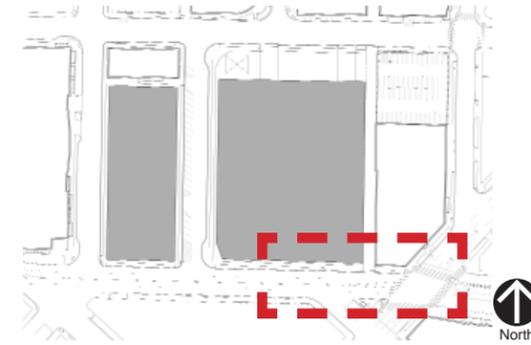
# NO VACATION OF PONTIUS



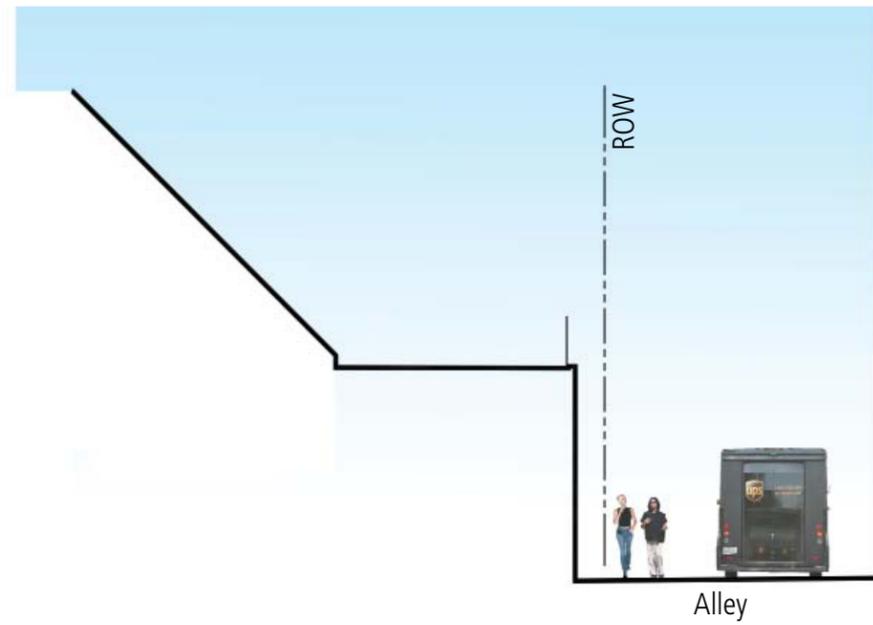
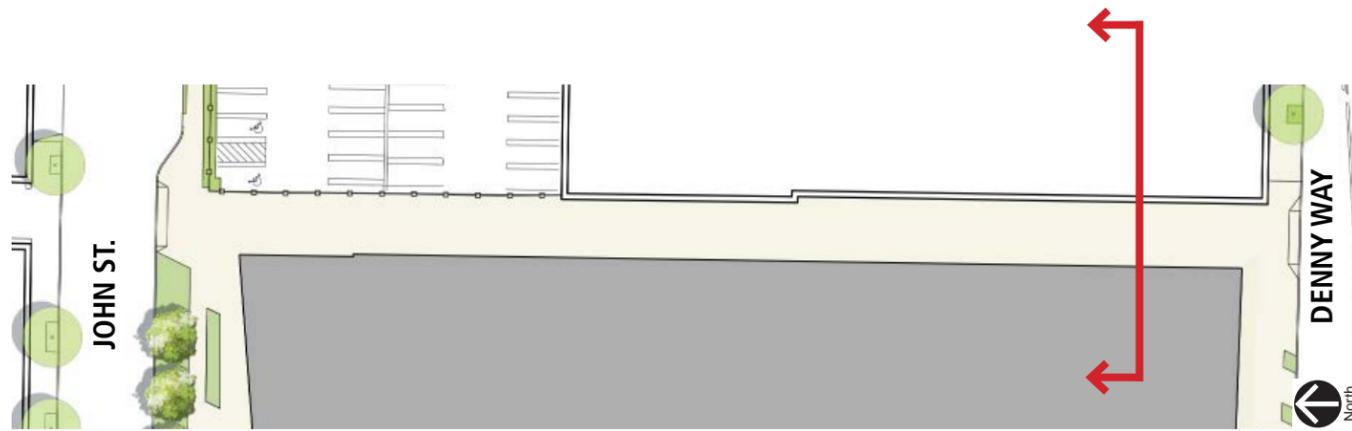
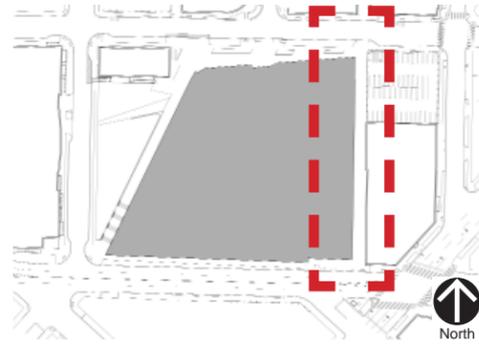
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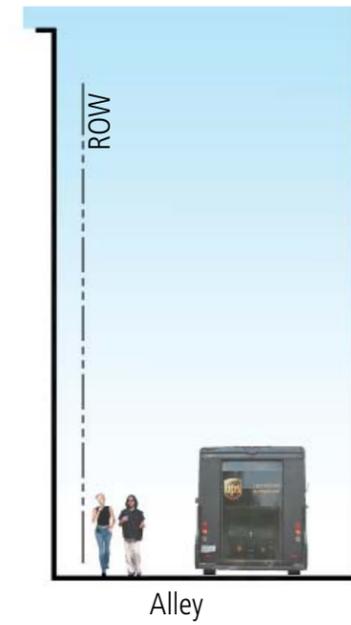
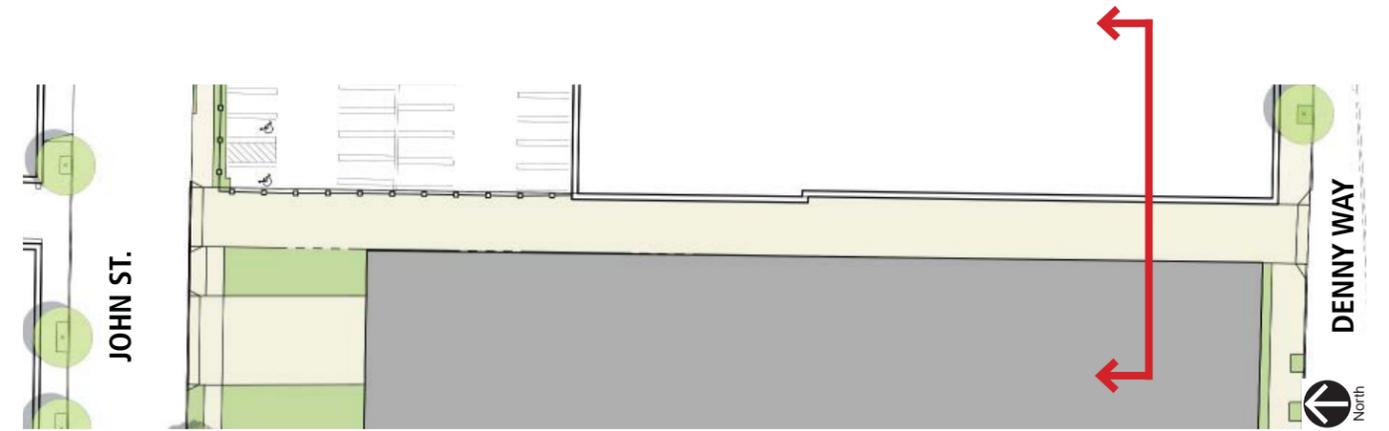
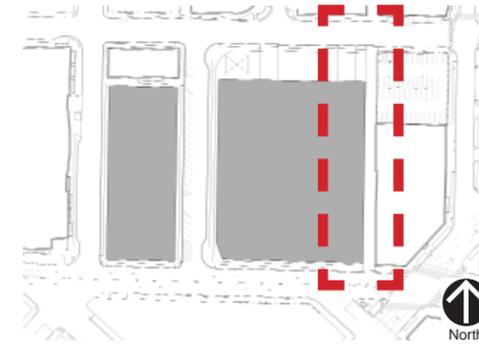
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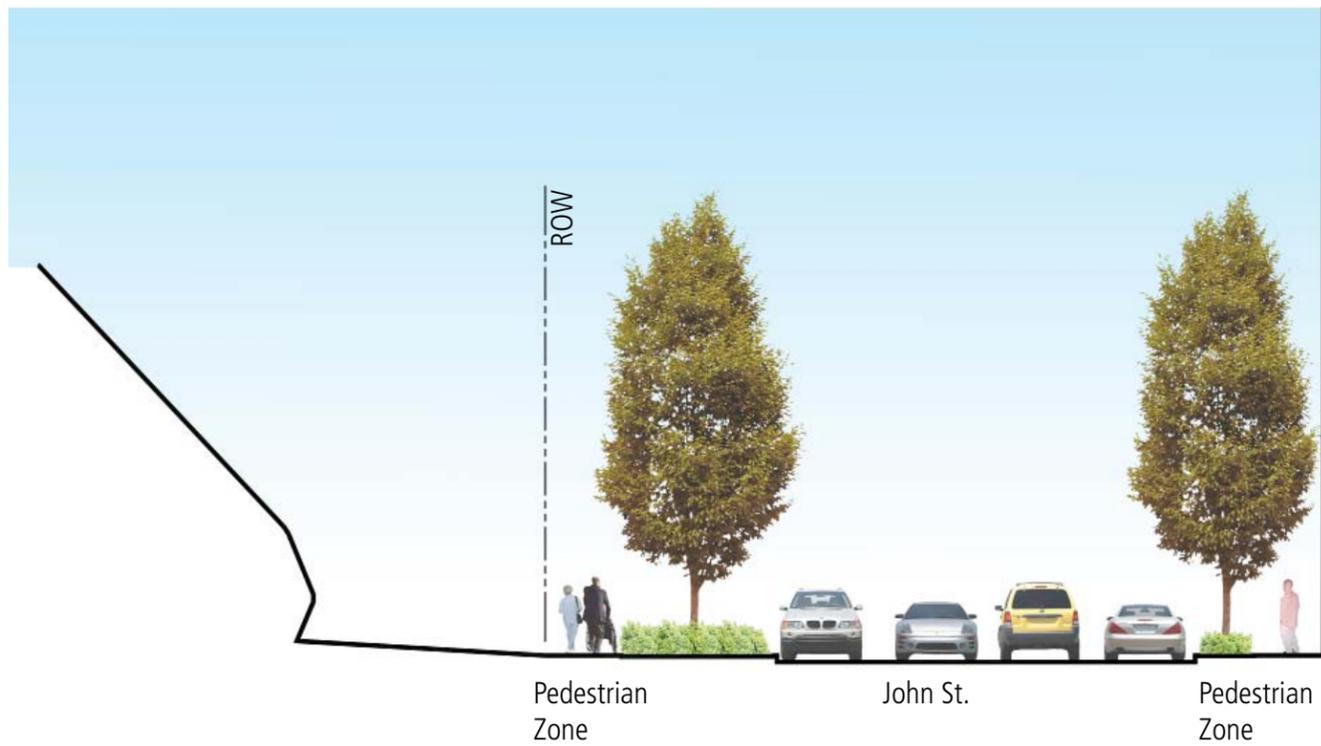
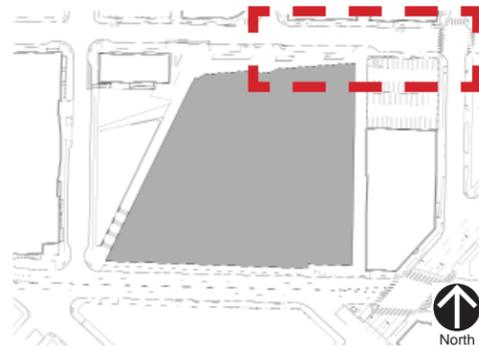
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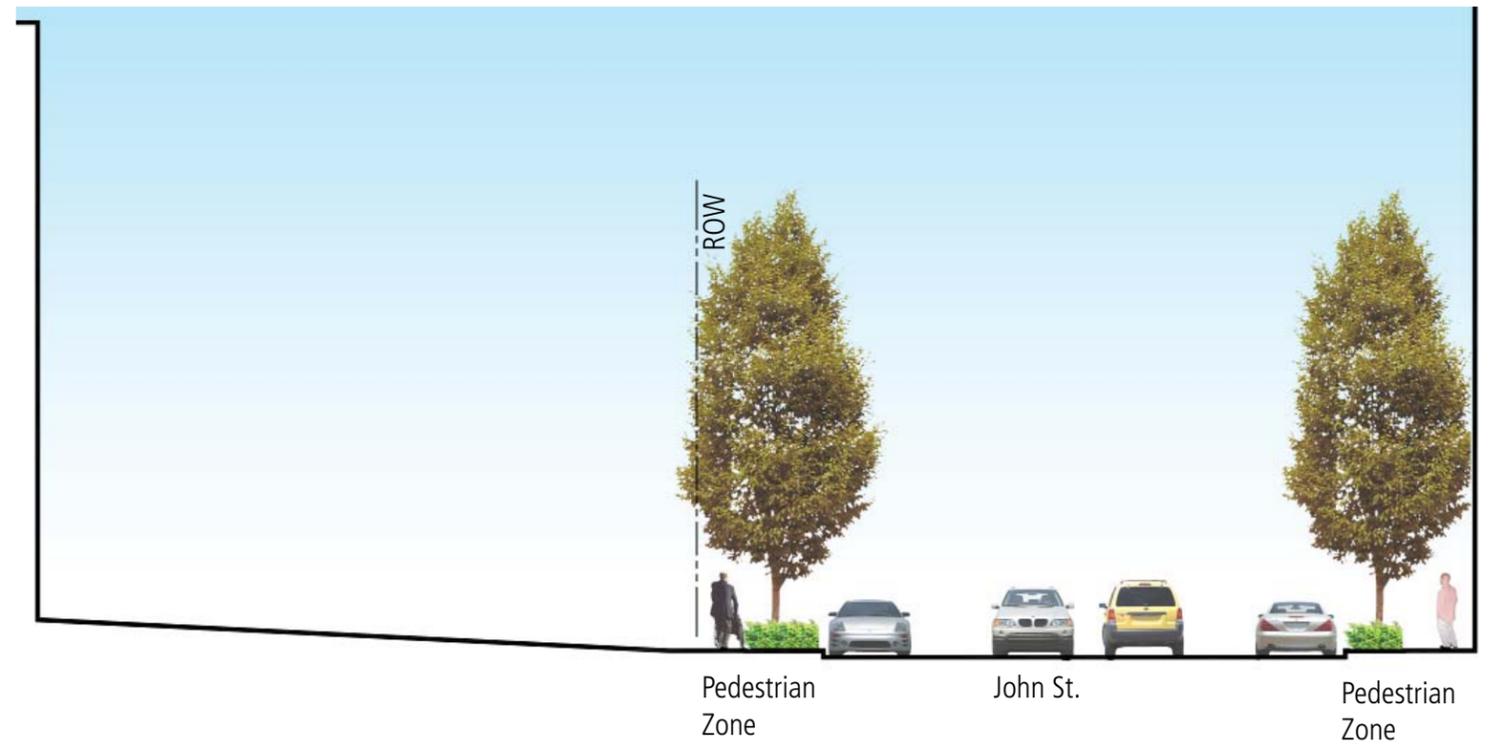
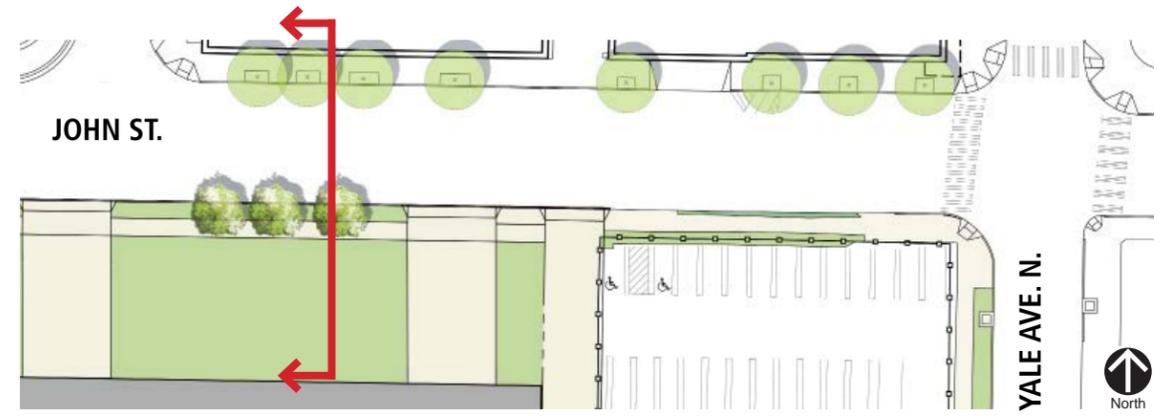
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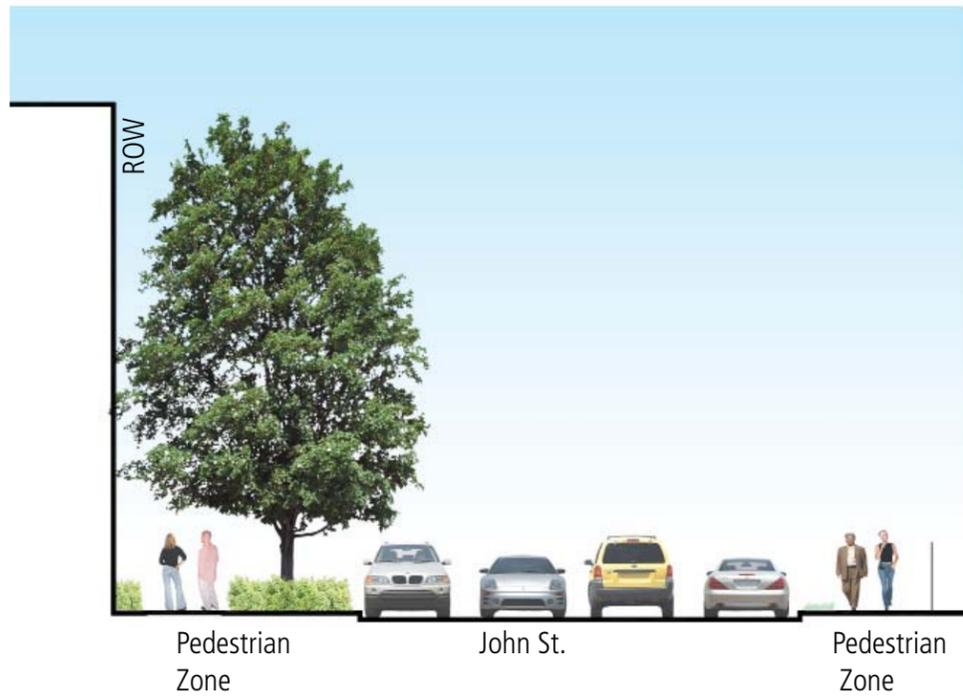
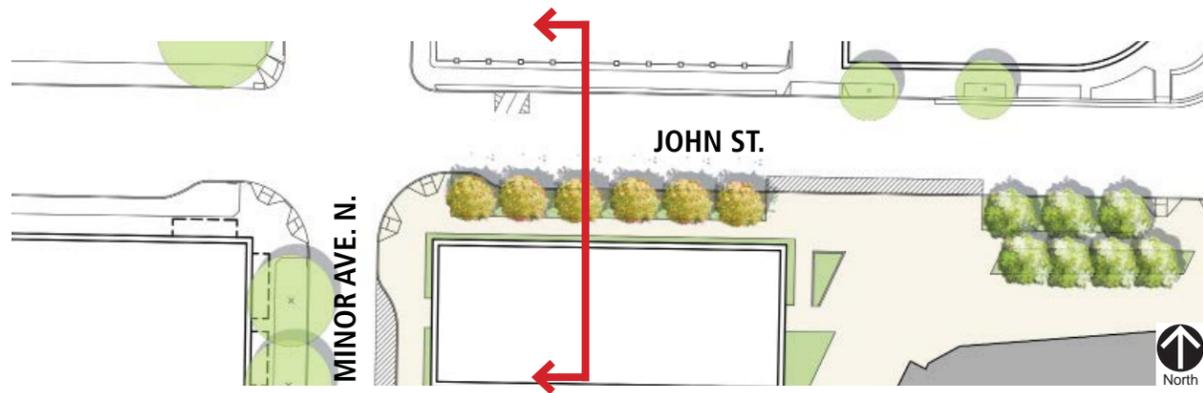
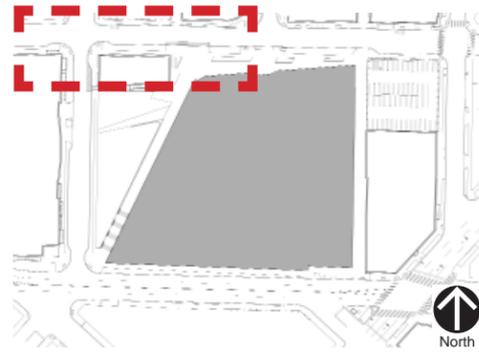
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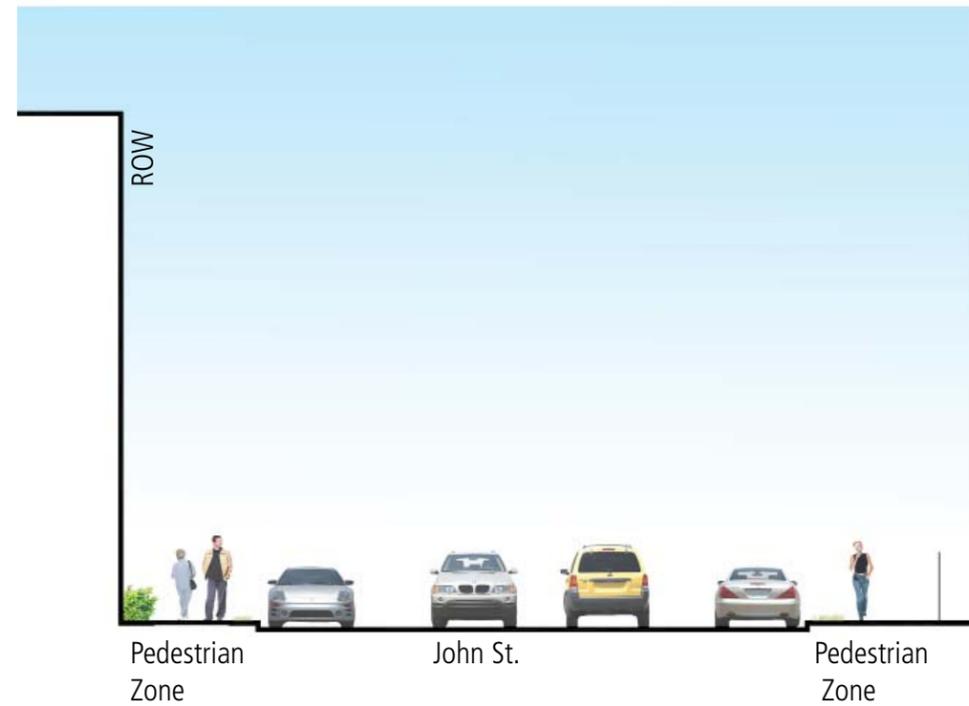
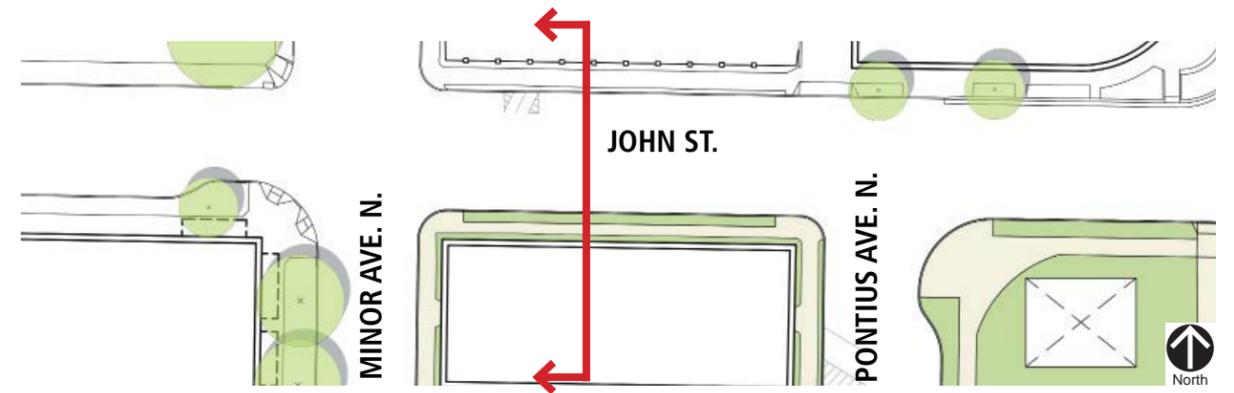
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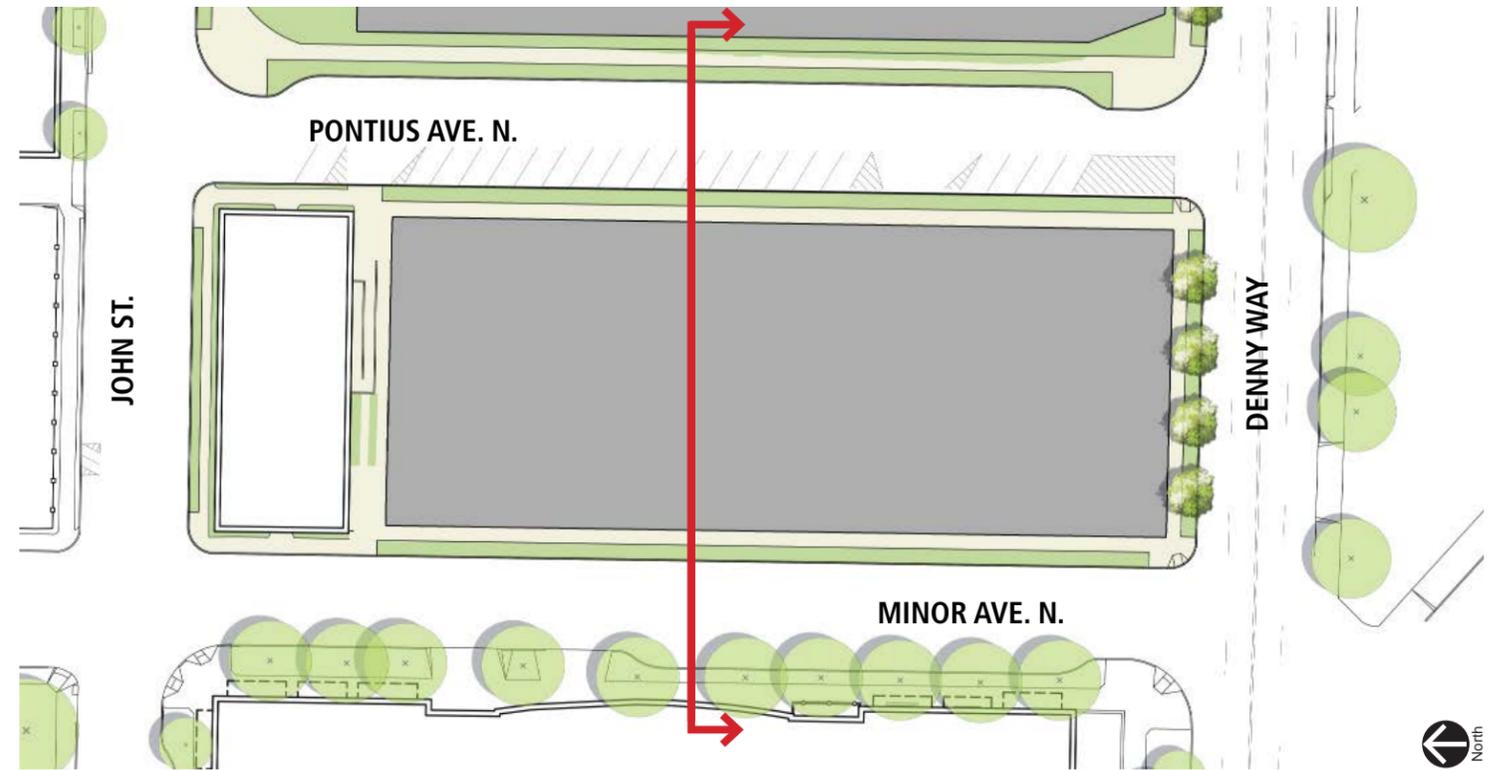
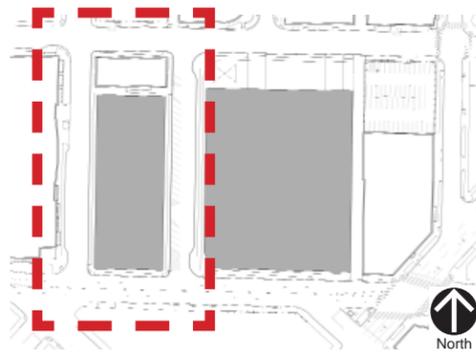
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# NO VACATION OF PONTIUS



# NO VACATION OF PONTIUS



# VACATION OF PONTIUS

