## SOUTH BATTERY PARK CITY RESILIENCY

**CB1 UPDATE** 

APRIL 19, 2021 rev 1

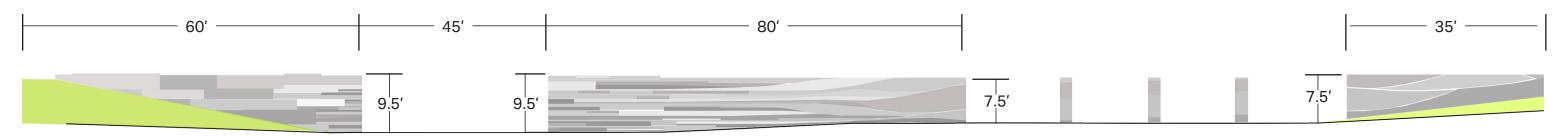


## **AGENDA**

- 1. FLOODWALL UPDATE
- 2. PAVILION UPDATE
- 3. PAVILION DESIGN STUDIES + ACCESSIBILITY
- 4. PAVILION SUSTAINABILITY UPDATE



## EXPOSED FLOODWALL | PRELIMINARY PDC SUBMISSION DESIGN



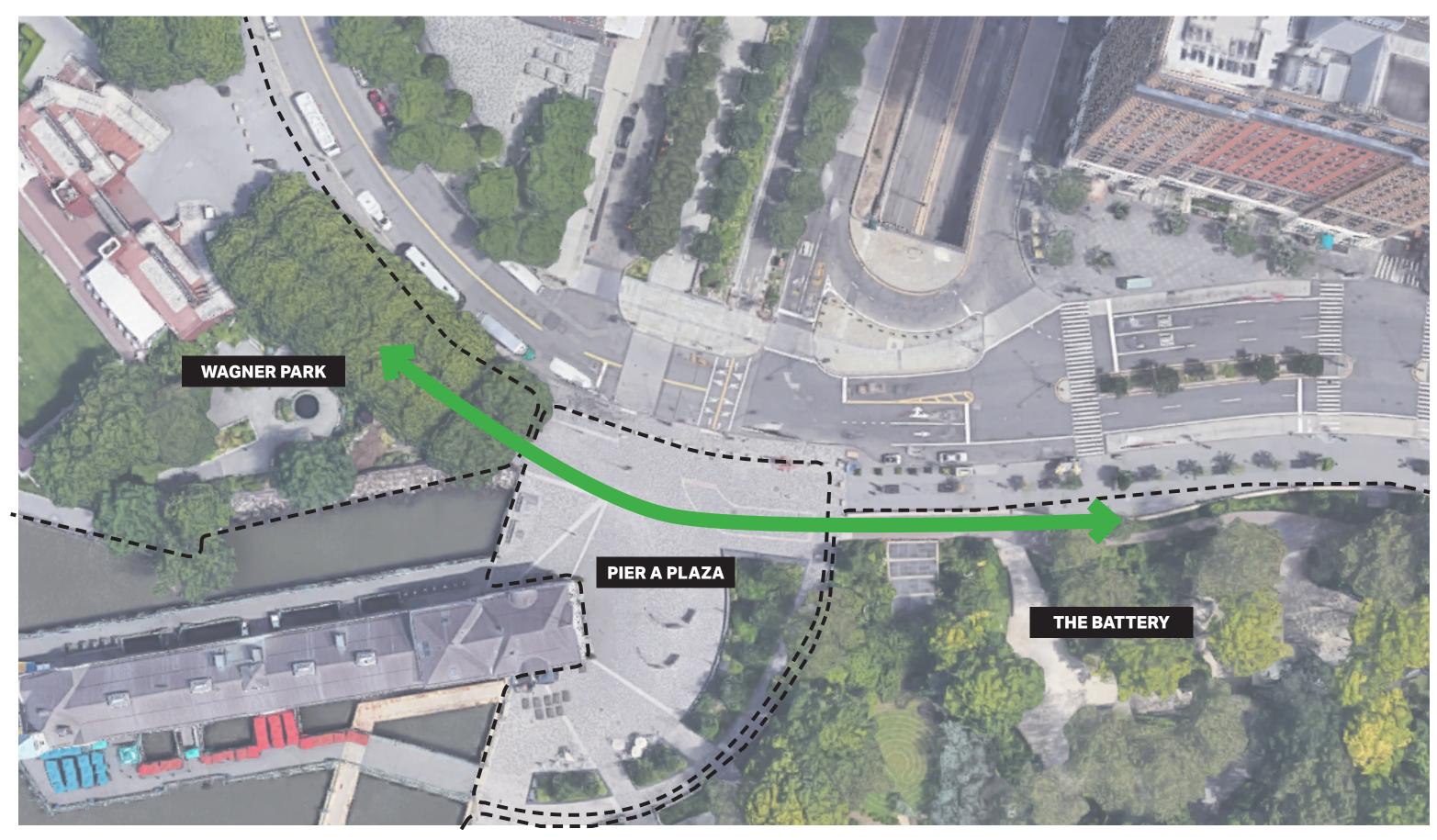
THE BATTERY

PIER A PLAZA

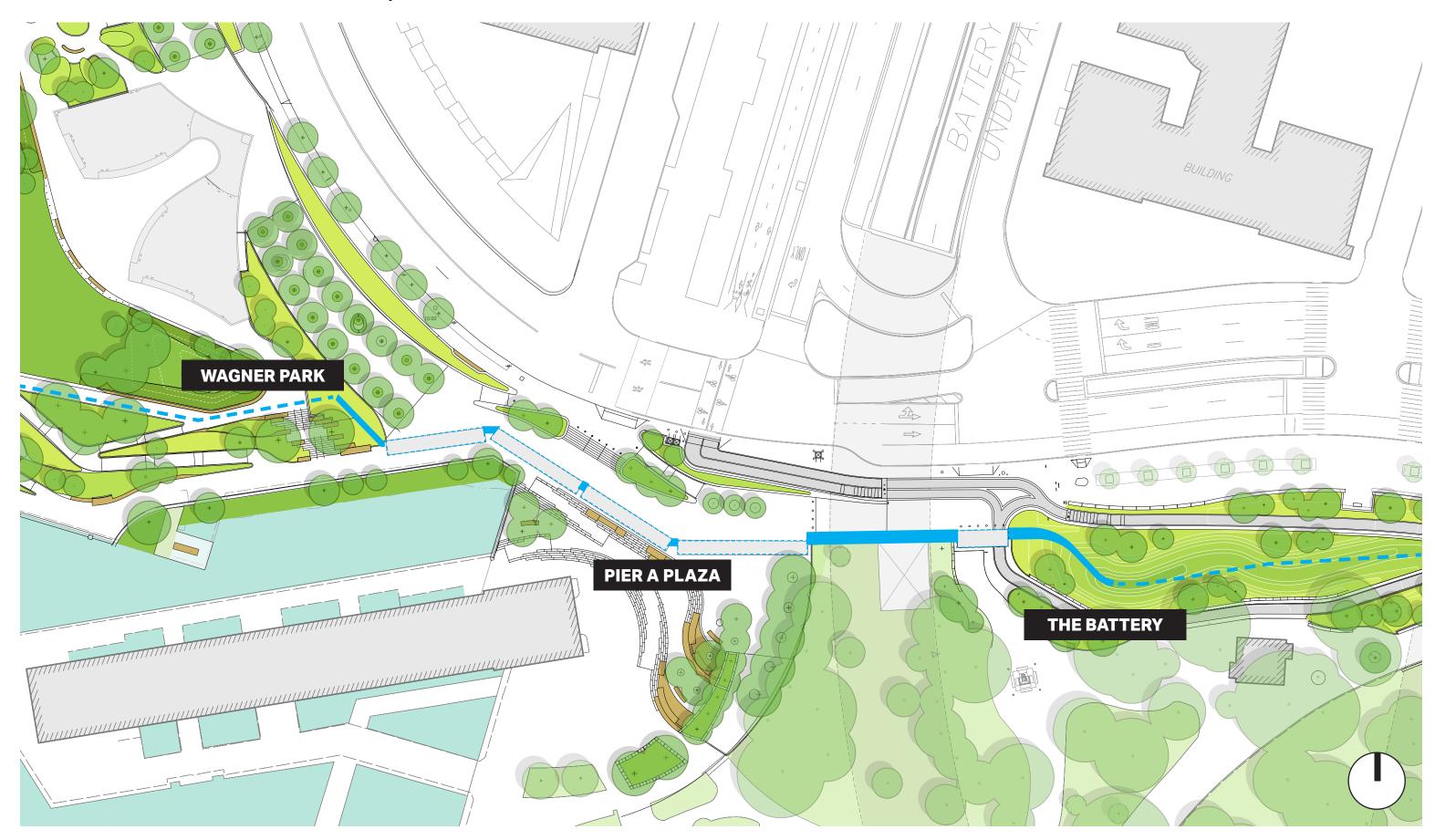
\*DIAGRAM NOT TO SCALE. X AND Y AXIS HAS BEEN DISTORTED FOR CLARITY



## **EXPOSED FLOODWALL | CONNECTING THE SPACES**



## EXPOSED FLOODWALL | FLOOD ALIGNMENT



## **EXPOSED FLOODWALL | MATERIAL CONNECTION + TRANSITION**

WARM + SATURATED COOL + LIGHT

#### **STONY CREEK**





- Pink base color
- Black and grey speckles
- Used in The Battery

#### **SAINT SEBASTIAN (NEWLY PROPOSED)**





- Warm grey base color
- Fine black and grey speckles
- Complementary to other stones

#### **STANSTEAD GREY**





- Cool grey base color
- Fine black and grey speckles
- Quartz sparkles in sunlight

#### **PEARL GREY**



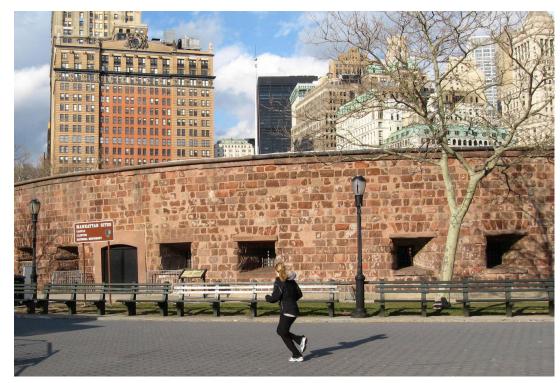


- Light grey/white base color
- Distinctive linear veining pattern
- Quartz sparkles in sunlight



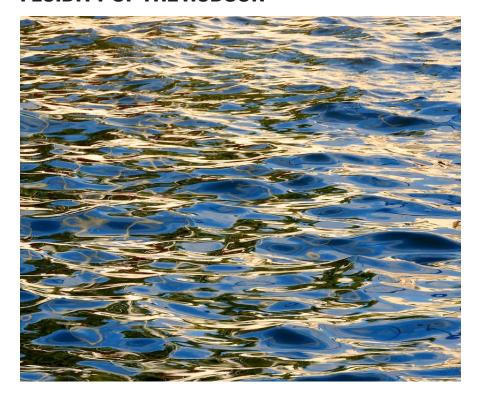
## **CONCEPT 1** INSPIRATION

#### STACKED WALLS OF THE BATTERY



**CASTLE CLINTON** 

#### **FLUIDITY OF THE HUDSON**







## CONCEPT 1 | CONCEPT

#### STACKED WALLS OF THE BATTERY

#### **FLUIDITY OF THE HUDSON**



## CONCEPT 1 | CONCEPT

#### STACKED STONE

**STONEY CREEK** 





**HUDSON** 

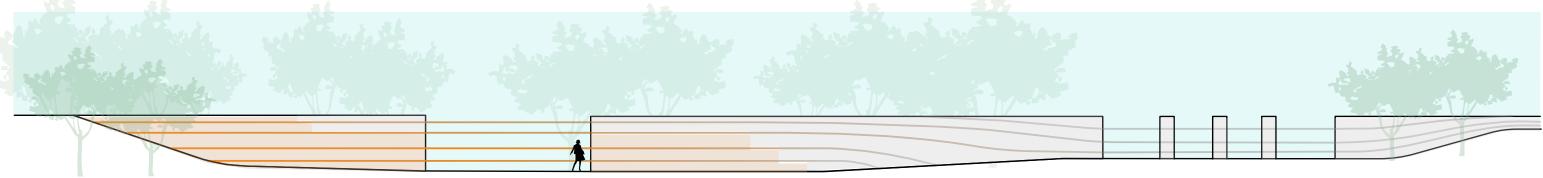












WARM + NUETRAL

**COOL + LIGHT** 

**ROUGH TEXTURE** 

**SMOOTH TEXTURE** 



## EXPOSED FLOODWALL | THE BATTERY + PIER A PLAZA + WAGNER PARK

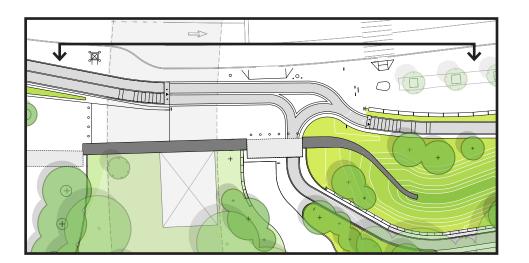


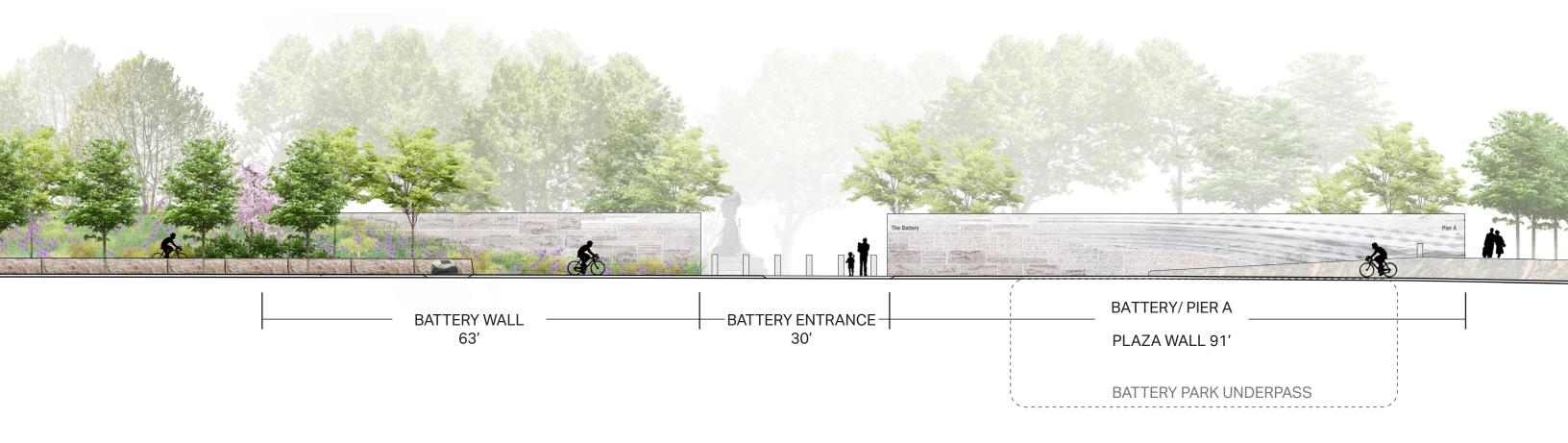
BATTERY BERM BATTERY ENTRANCE SLOPE TO PIER A PLAZA RAISED PLAZA PIER A PLAZA ENTRANCE WAGNER PARK



## CONCEPT 1 | THE BATTERY + PIER A PLAZA

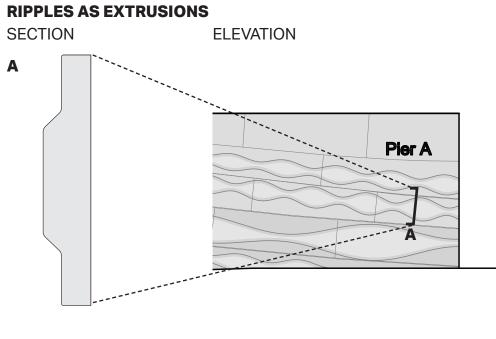
THIS CONCEPT STRENGTHENS THE RELATIONSHIP WITH THE ADJACENT STONY CREEK BLOCKS BY USING THE STONE SAINT SEBASTIAN, WHICH BRINGS A SUBTLE WARMTH TO THE WALL.



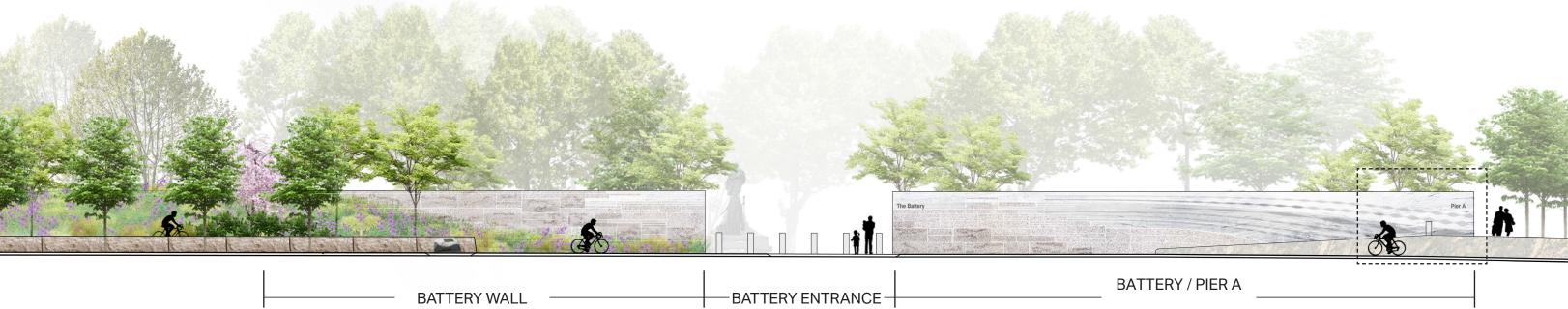


## CONCEPT 1 | THE BATTERY + PIER A PLAZA

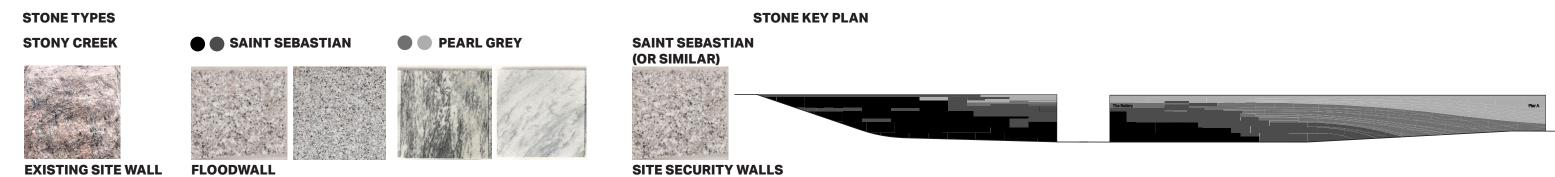
**BATTERY WALL** 63'



PLAZA WALL 91'



30'

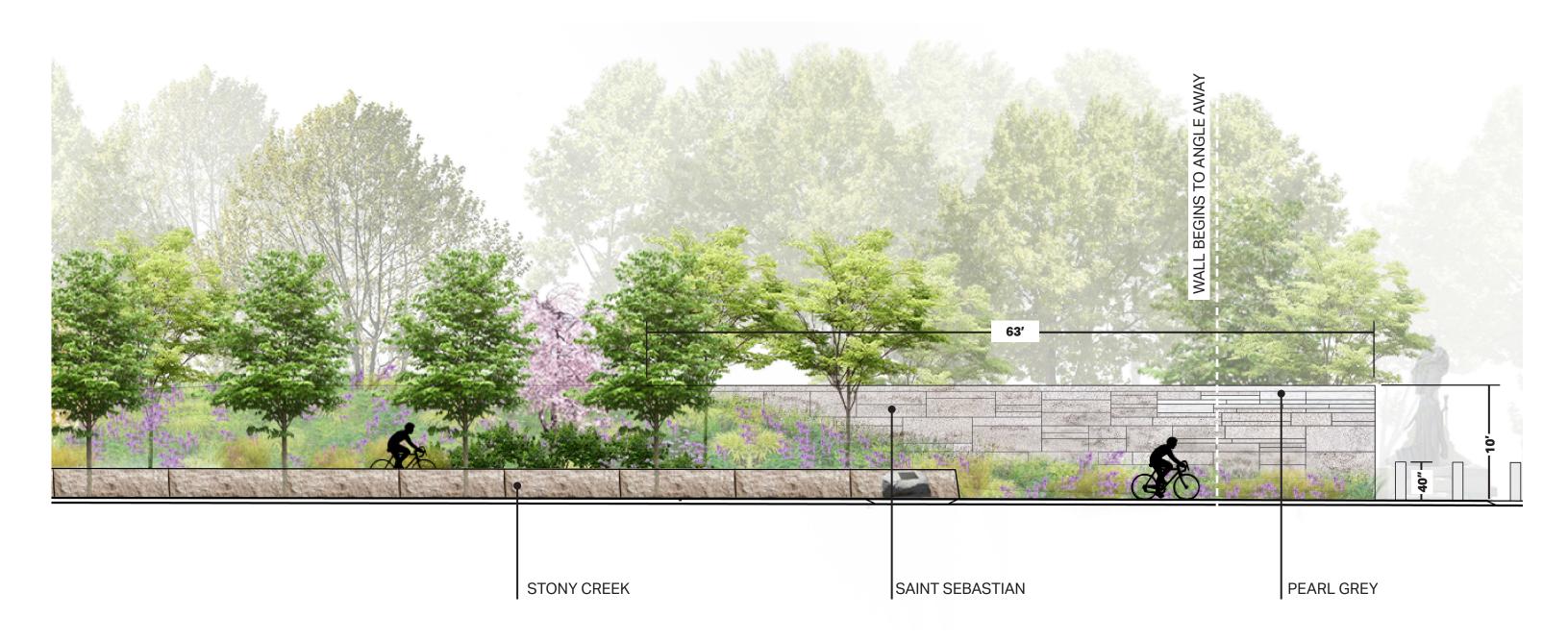


NEW YORK
STATE OF
OPPORTUNITY.

Battery Park
City Authority

**AECOM** 

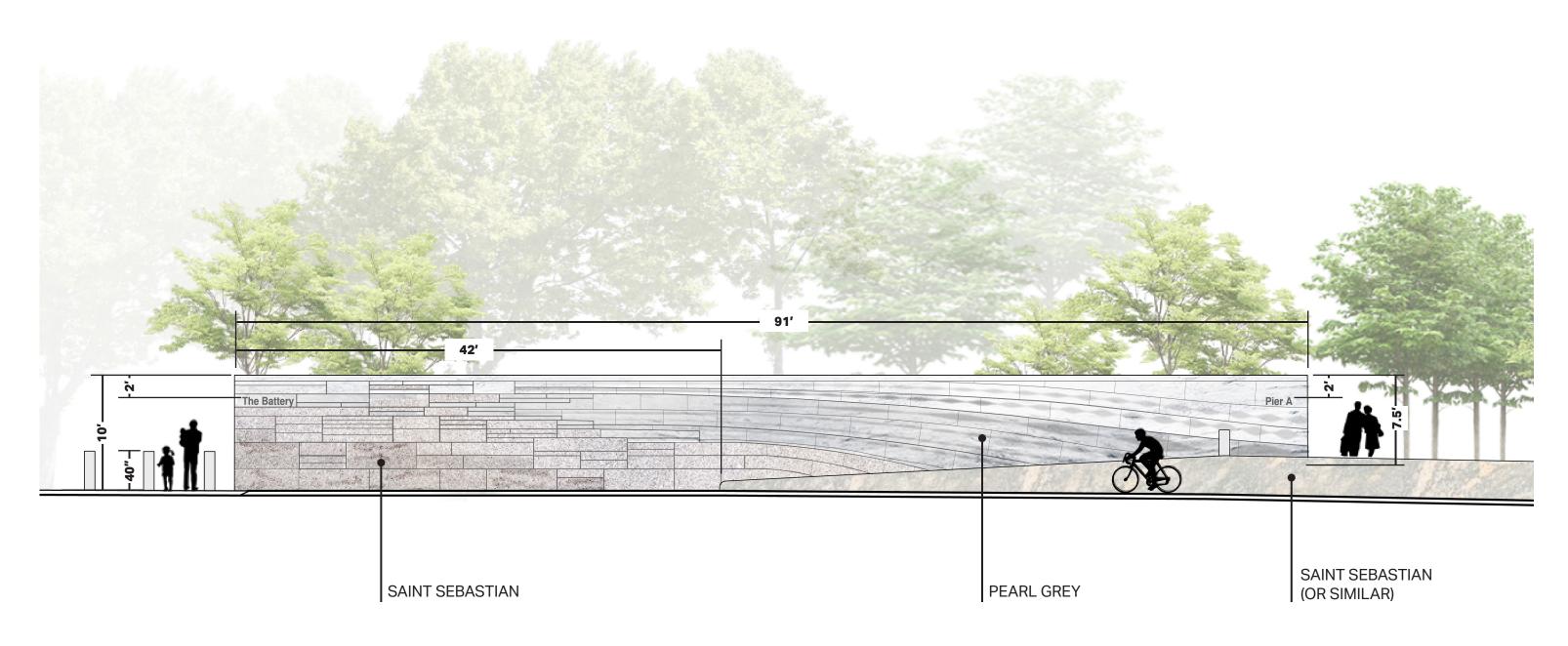
## **CONCEPT 1** THE BATTERY ENLARGEMENT



**SCALE: 1" = 8'** 



## **CONCEPT 1** | PIER A PLAZA ENLARGEMENT



**SCALE: 1" = 8'** 





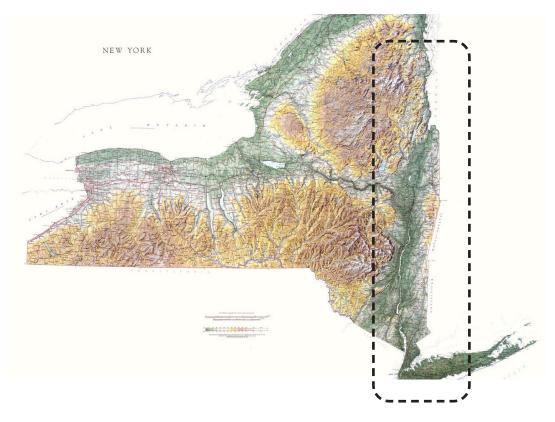






## **CONCEPT 2 | INSPIRATION**

#### **HUDSON RIVER VALLEY TOPOGRAPHY**



#### THE HUDSON BECOMING THE NEW YORK HARBOR



#### **FLUIDITY OF THE HUDSON**



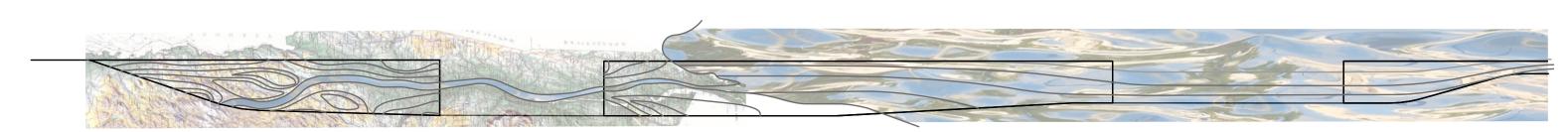


## CONCEPT 2 | CONCEPT



THE HUDSON BECOMING THE NEW YORK HARBOR

**FLUIDITY OF THE HUDSON** 





**AECOM** 

## CONCEPT 2 | CONCEPT

#### **TOPOGRAPHY**

**STONY CREEK** 



**SAINT SEBASTIAN** 



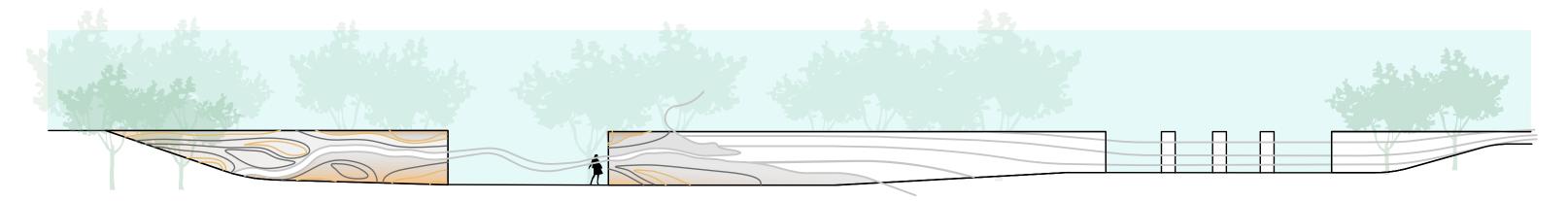
**PEARL GREY** 



#### **HUDSON**

#### **PEARL GREY**



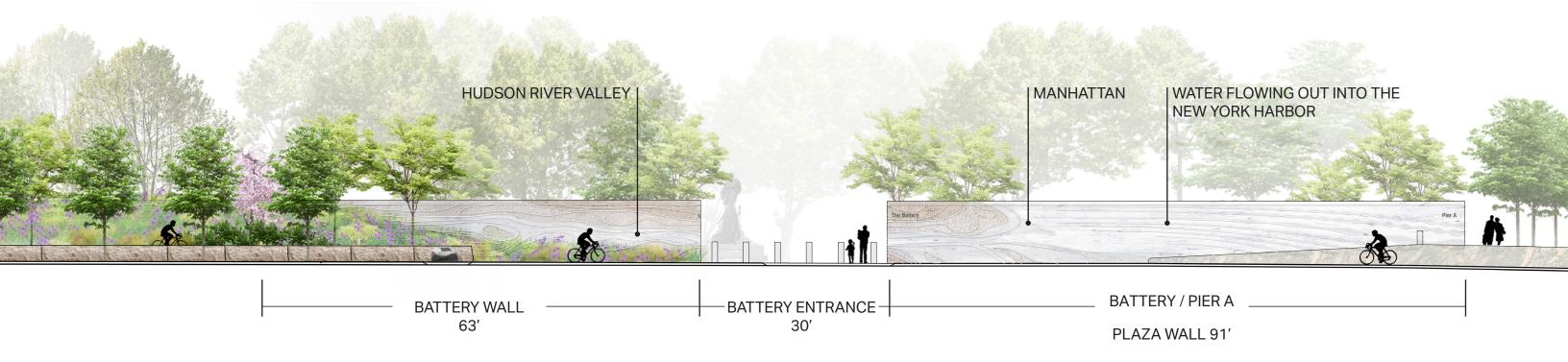


WARM + LIGHT COOL + LIGHT

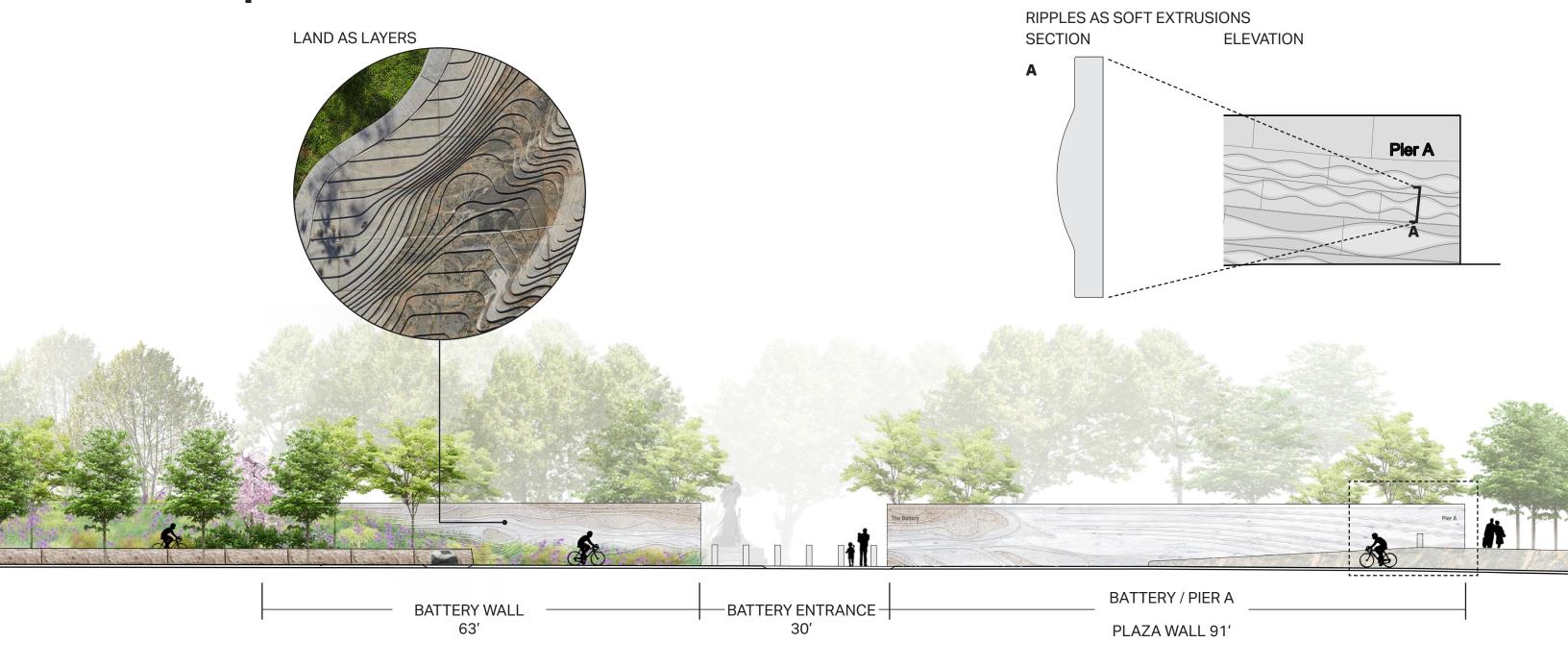
ROUGH TEXTURE SMOOTH TEXTURE

## CONCEPT 2 | THE BATTERY + PIER A PLAZA

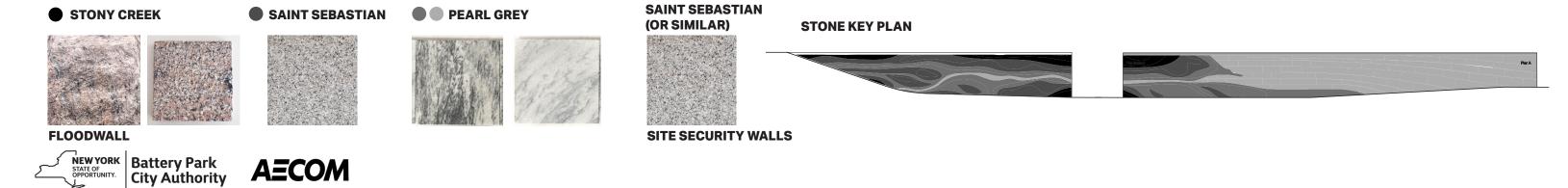
THIS PROPOSAL STRENGTHENS THE RELATIONSHIP WITH THE ADJACENT STONY CREEK BLOCKS BY TRANSITIONING FROM WARMER, MORE TEXTURED FINISHES IN THE BATTERY, TO LIGHTER FINISHES IN PIER A AND WAGNER PARK.



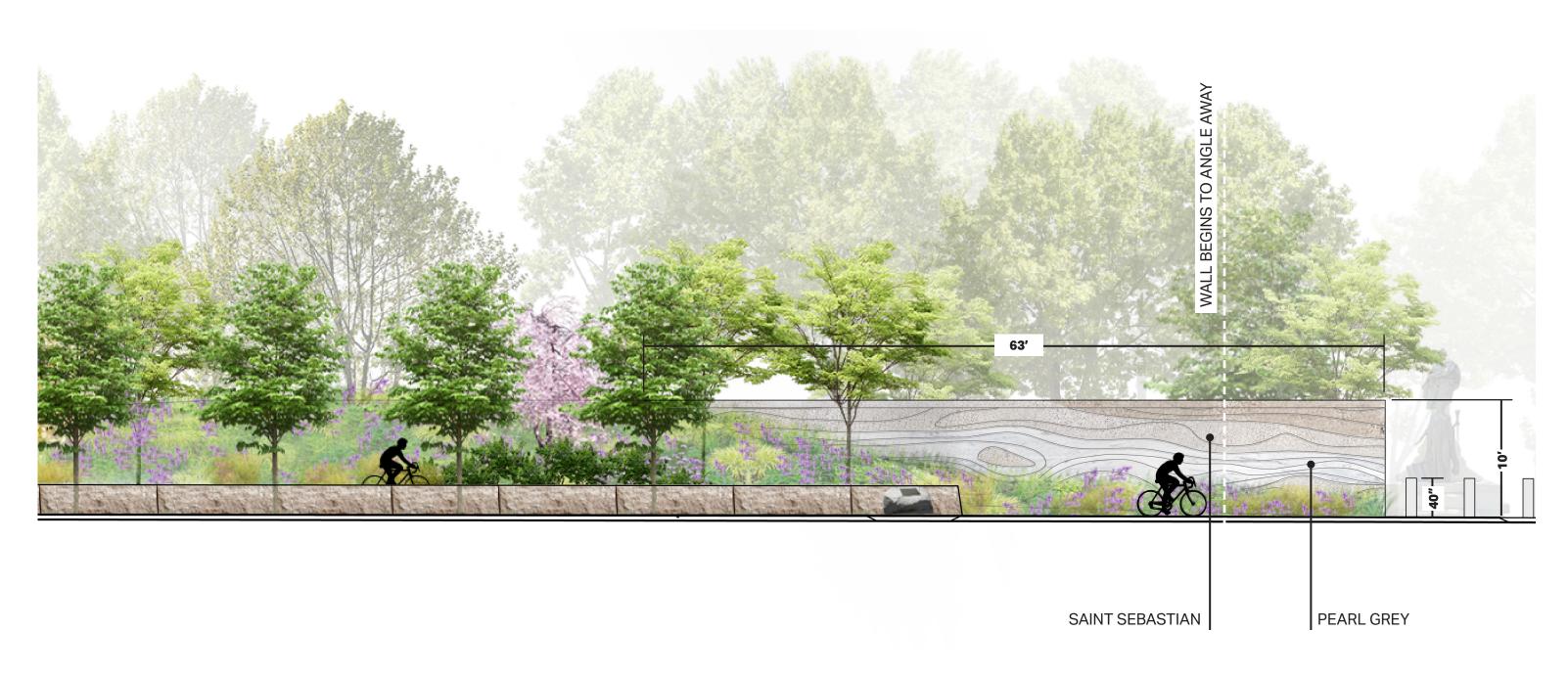
## CONCEPT 2 | THE BATTERY + PIER A PLAZA



#### **STONE TYPES**



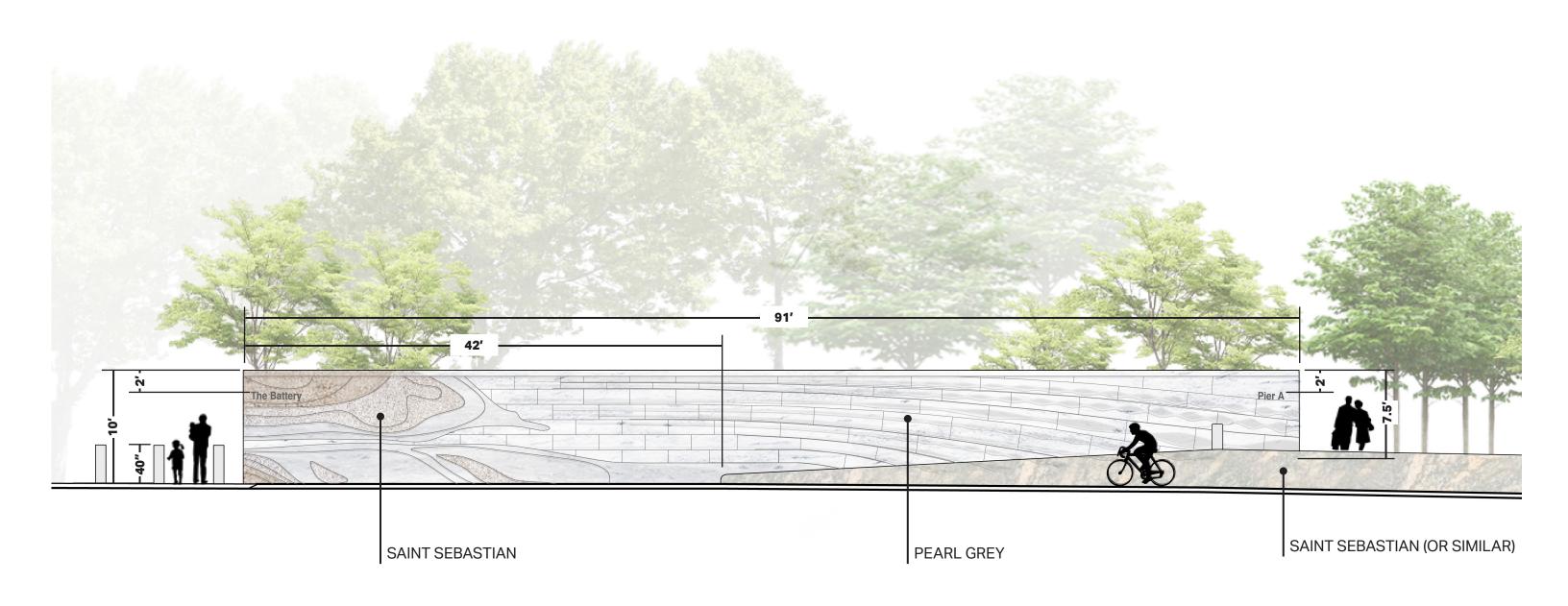
## CONCEPT 2 | THE BATTERY ENLARGEMENT



**SCALE: 1" = 8'** 

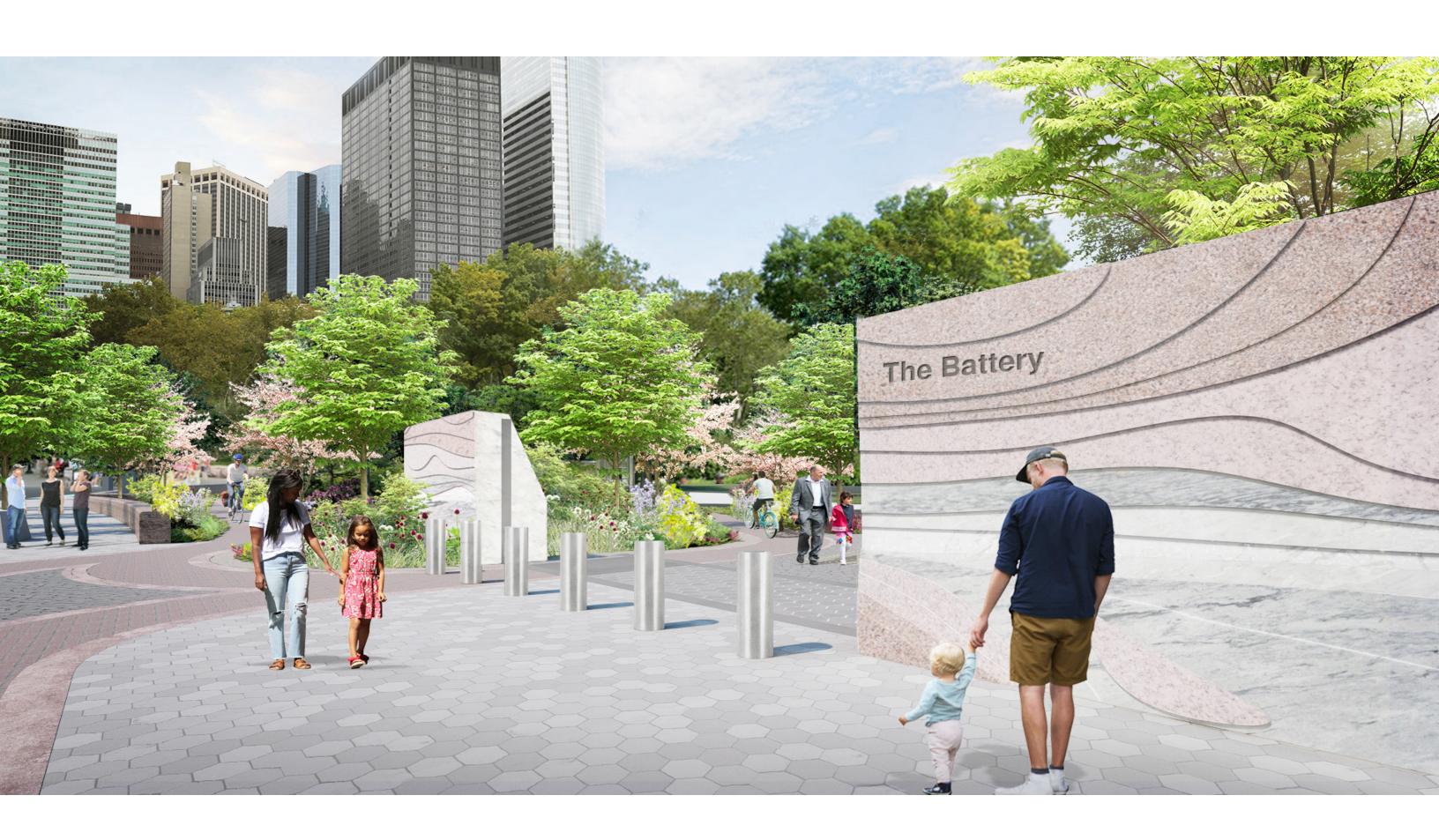


## CONCEPT 2 | PIER A PLAZA ENLARGEMENT



**SCALE: 1" = 8'** 





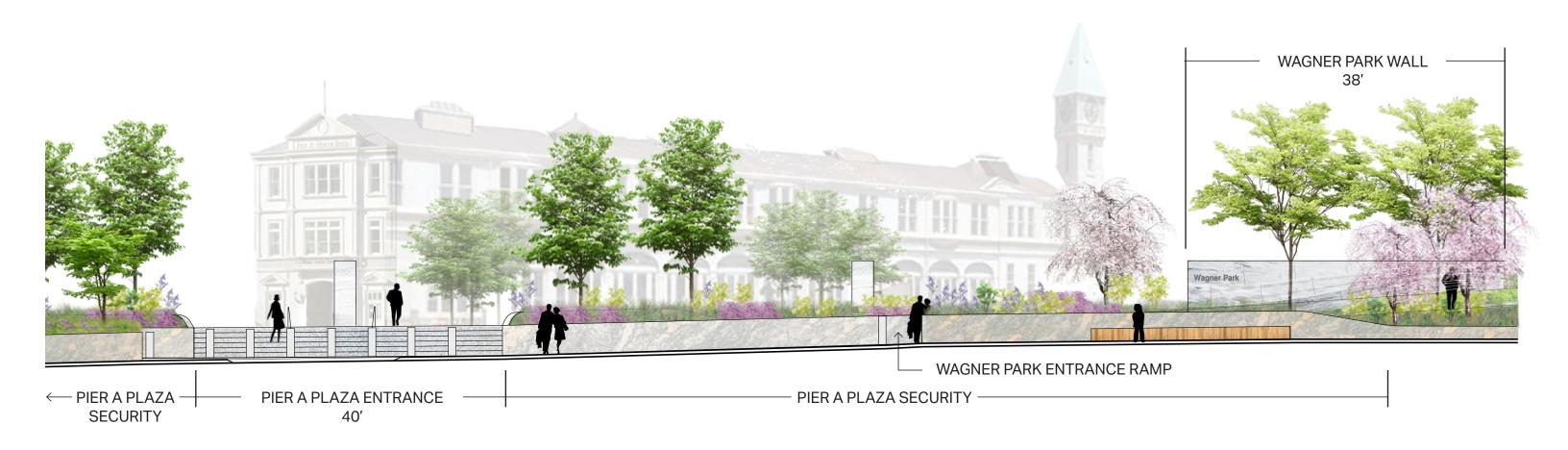




## EXPOSED FLOODWALL | THE BATTERY + PIER A PLAZA



## EXPOSED FLOODWALL | PIER A PLAZA + WAGNER PARK



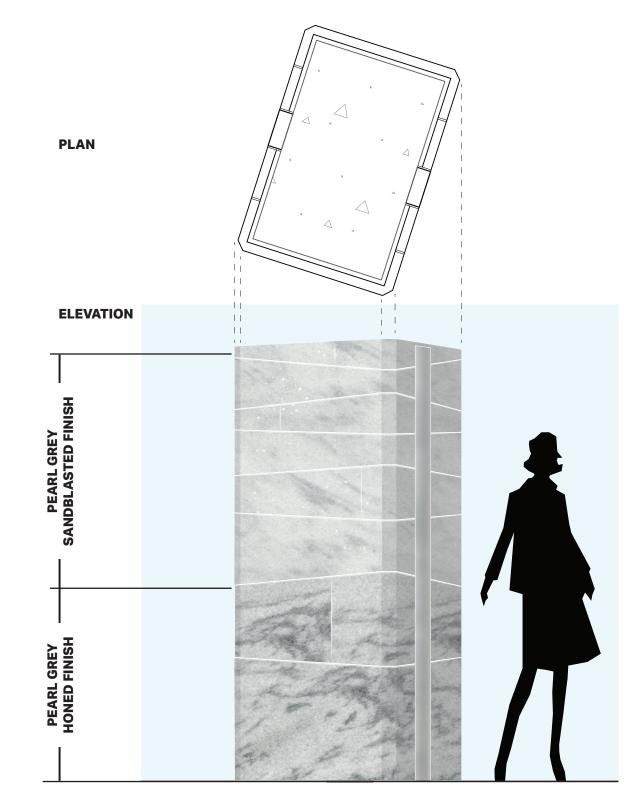


**STONE KEY PLAN** 



## EXPOSED FLOODWALL | COLUMNS









SITE SECURITY WALLS



**COLUMNS** 









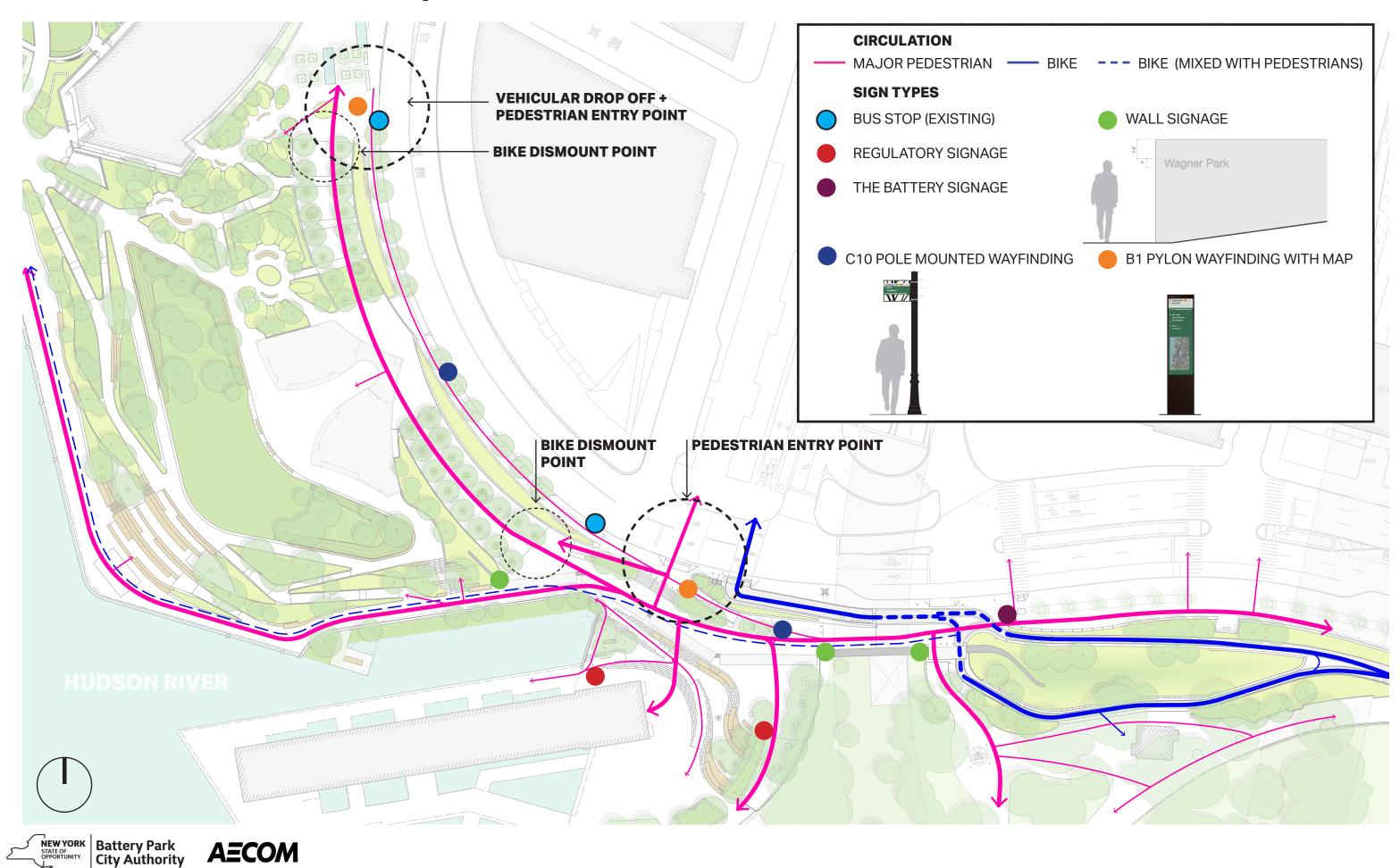


# WAGNER PARK PAVILION BUILDING UPDATE



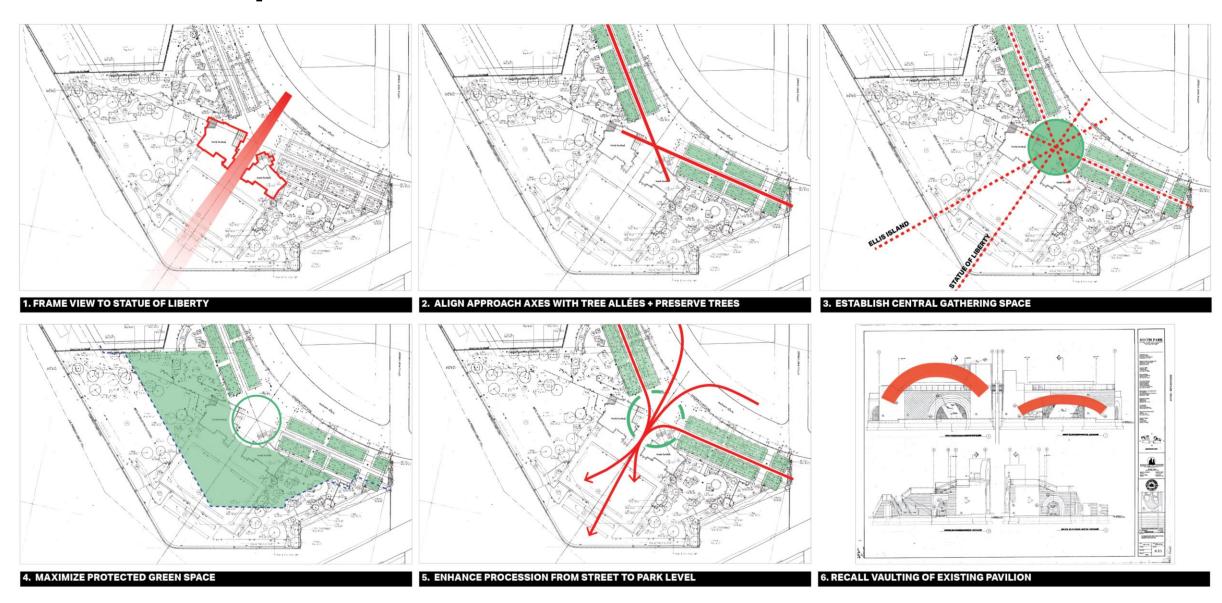


## PIER A PLAZA + BATTERY PL | CIRCULATION + WAYFINDING





## **DESIGN LEGACY |** PAVILION CORE VALUES











## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE



## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE



## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE





## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE



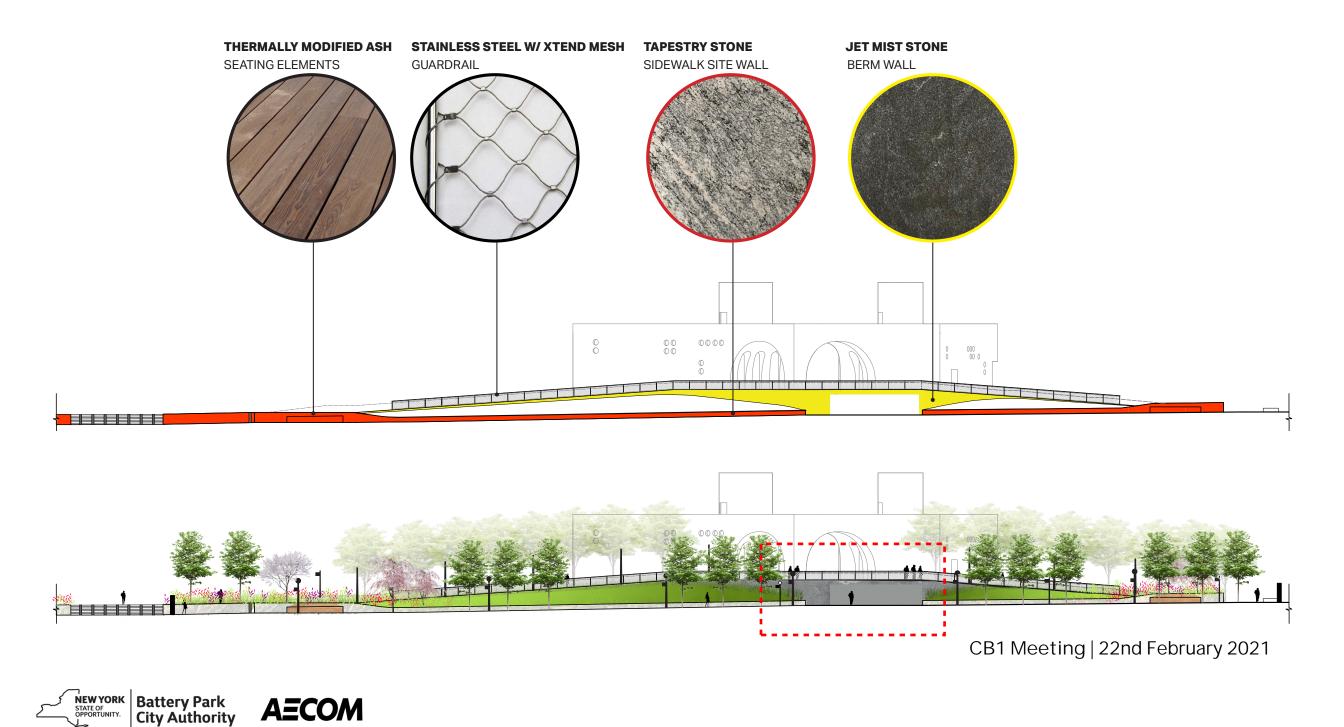


CB1 Meeting | 22nd February 2021

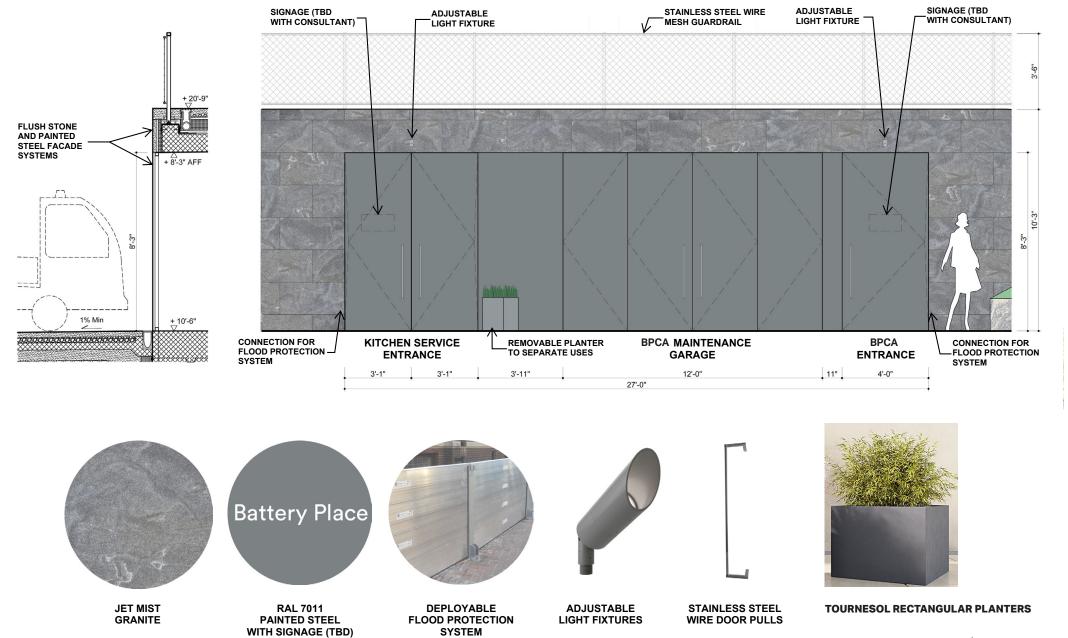


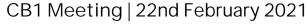


## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE



## BATTERY PLACE ELEVATION STUDY | CB1 UPDATE





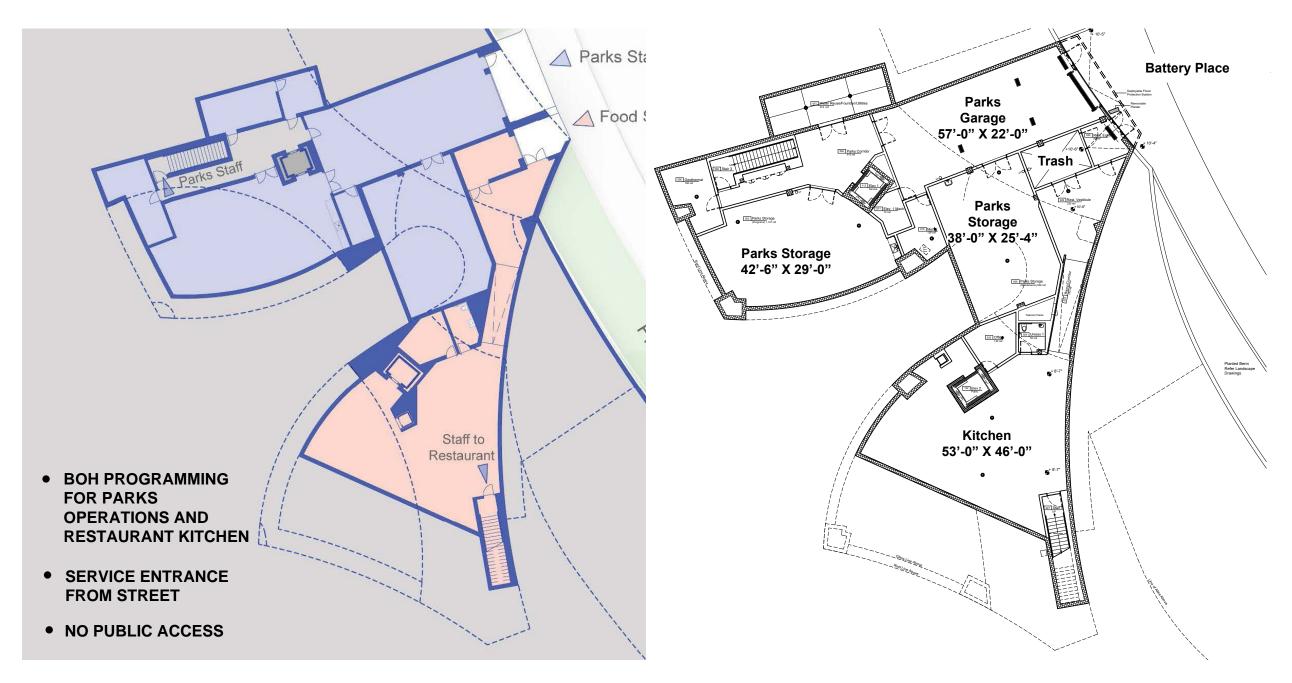








## BATTERY PLACE LEVEL PLAN



Public Presentation | January 15th 2020



#### PARK LEVEL PLAN



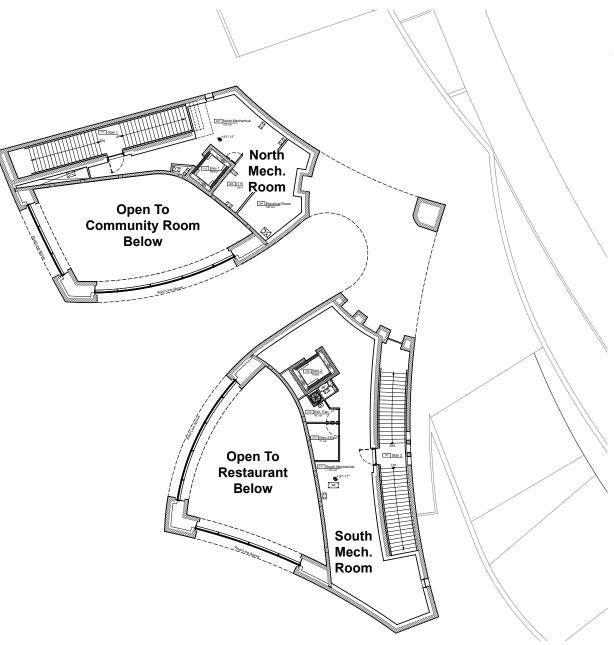
Public Presentation | January 15th 2020

95% Construction Documents | March 12th 2021



## MECHANICAL LEVEL PLAN





Public Presentation | January 15th 2020

95% Construction Documents | March 12th 2021





## **ROOF LEVEL PLAN**





Public Presentation | January 15th 2020

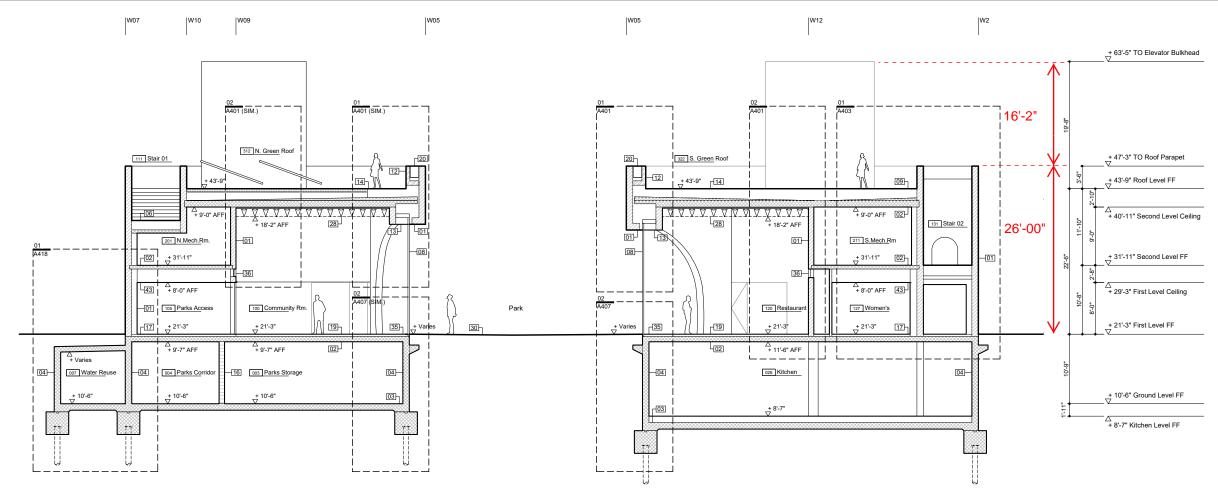
95% Construction Documents | March 12th 2021





#### **SECTIONS**

#### Design Development | March 12th 2021



**Section Through Community Room** 

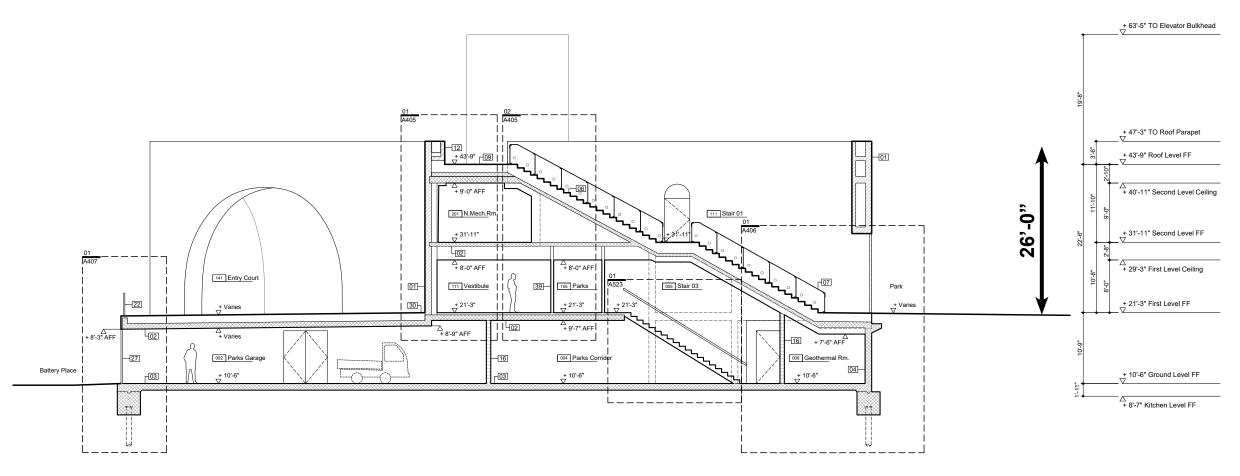
**Section Through Restaurant** 







## **SECTIONS**



#### **Section Through North Stair**



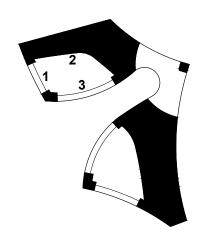


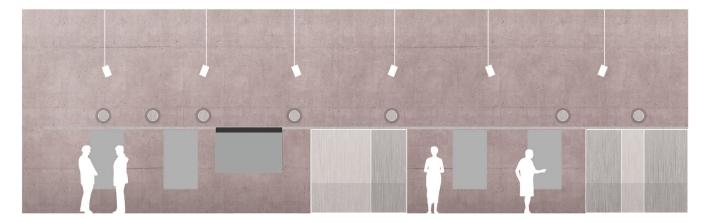


## COMMUNITY ROOM | INTERIOR ELEVATIONS

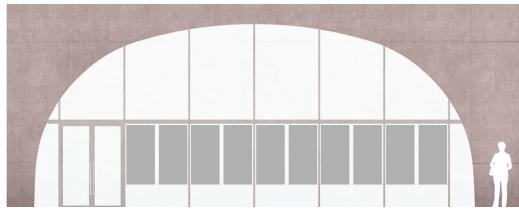


**Elevation 01** 



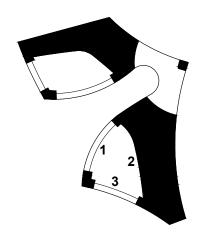


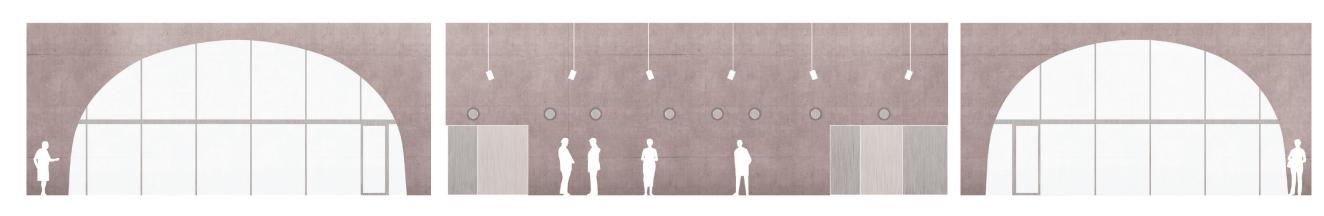
**Elevation 02** 



**Elevation 03** 

## RESTAURANT | INTERIOR ELEVATIONS





Elevation 01 Elevation 02 Elevation 03



# WAGNER PARK PAVILION DESIGN STUDIES + ACCESSIBILITY



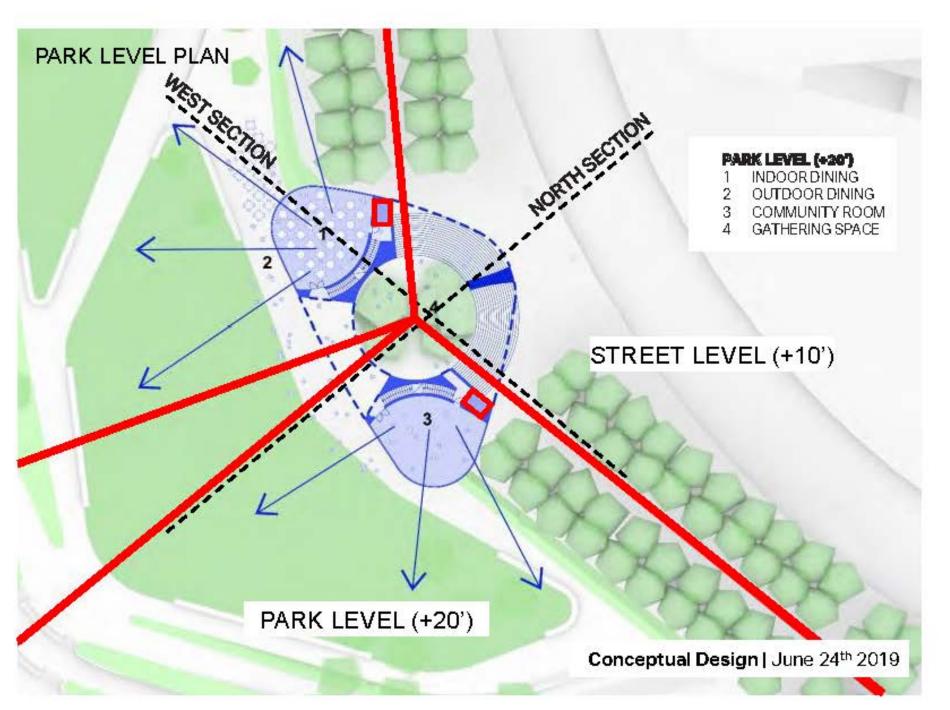


#### **PLANNING**

- The Pavilion is surrounded by public spaces, therefore there is no 'rear elevation'
- Back-Of-House functions for both BPCA Parks and Restaurant require service access from the street
- The raising of the park created an opportunity to naturally separate out the service areas from the public areas
- The street level program is BOH only, the lawn level program is public
- The Pavilion is a stand alone structure which can be experienced from all sides at lawn level



## CONCEPTUAL DESIGN | PUBLIC MEETING 3



#### **JUNE 2019 CONCEPT DESIGN**

#### **CONSIDERATIONS:**

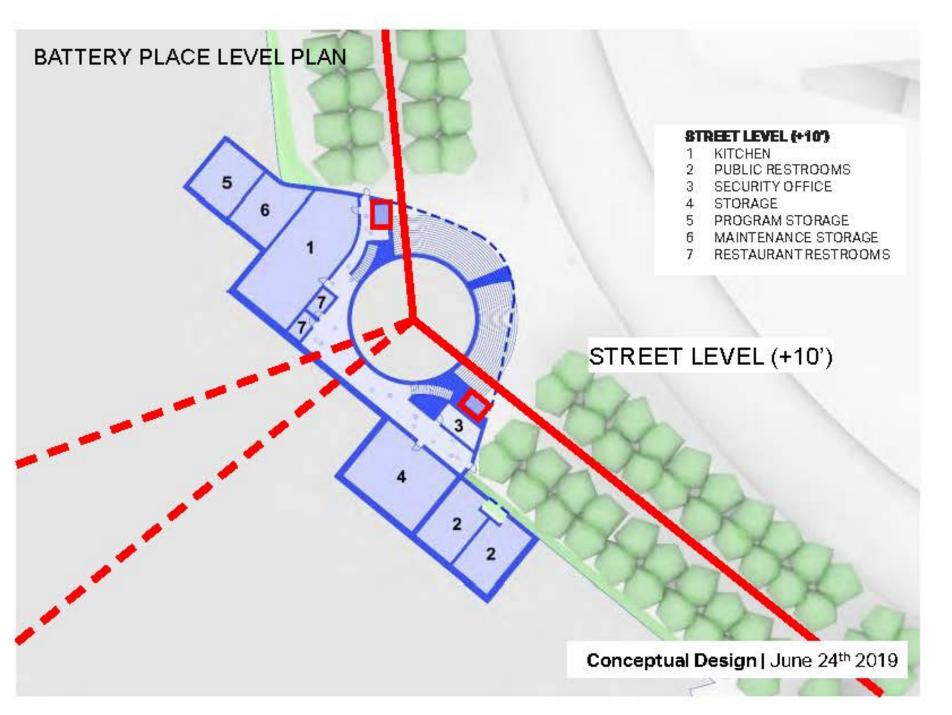
- Site planning commemorates original planning axis along allees with courtyard at junction at street level
- Original allee trees
- Grand Stair from Street level up to Park level
- Elevator included for ADA access

#### **FEEDBACK:**

- Adjust for universal access
- Maintenance concerns with elevators
- Ramp preferred in addition to an elevator



## CONCEPTUAL DESIGN | PUBLIC MEETING 3



#### **JUNE 2019 CONCEPT DESIGN**

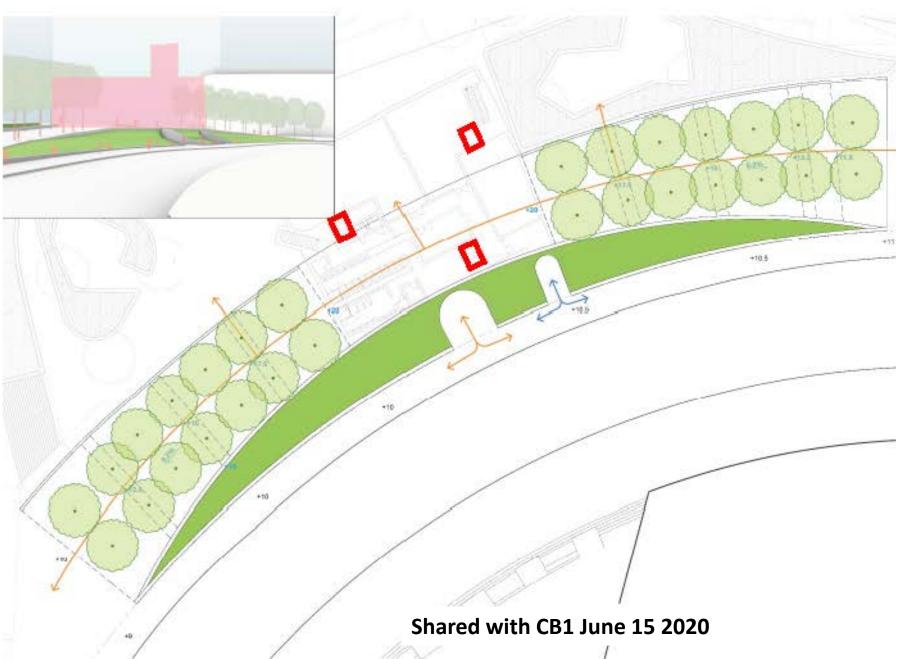
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- Adjust for universal access
- Maintenance concerns with elevators
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#### **RAMP ACCESS STUDIES**



#### CONSIDERATIONS

- Primary site arrival always considered as through allees
- Allee trees identified as at end of life
- Ramp integrated into new allees for universal access and to respect the original arrival sequence
- Separate elevators identified as required for public and BPCA operations
- Public elevator lobby located at street level adjacent to footpath and public toilets
- Safety concern at lobby afterhours and with interaction between public and BPCA carts
- Cost of maintaining 3 elevators

Added height and mass of elevator at street edge (total height including overrun 57')

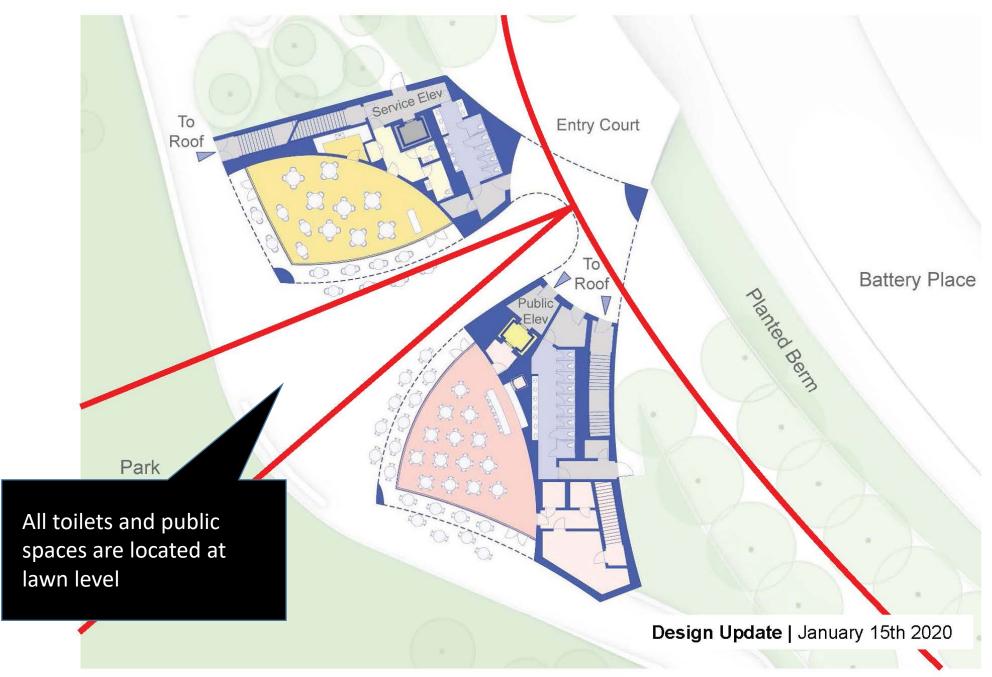


#### **RAMP ACCESS STUDIES**



- Concern with difficulty accessing public toilets at street from the park level during a large programming event (ie Swedish festival)
- Potential for stair and ramp access from centrally located point along Battery Place studied.
- Ultimately rejected due to lack of significant advantage over allee ramp and concern with overcrowding at street level.

## **DESIGN UPDATE | PUBLIC MEETING 4**

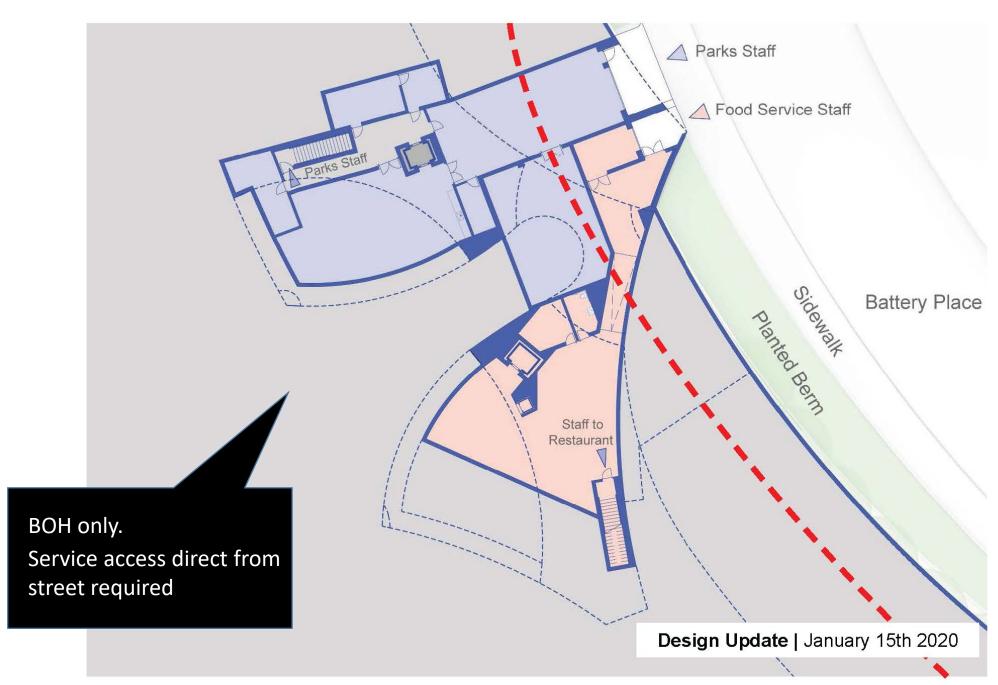


- All toilets and public spaces relocated to lawn level to service the public
- Only Back-Of-House program now at Battery Place Level
- Eliminated isolated elevator for safety reasons. Also eliminates added maintenance
- Reviewed Universal Access with Mayor's Office for People with Disabilities (MOPD)
- MOPD determined elevator is not required with ramped allees
- Complied with ADA in letter and spirit
- Section 103 Equivalent Facilitation.
- Section 206.3 accessible routes coincide with general circulation paths.

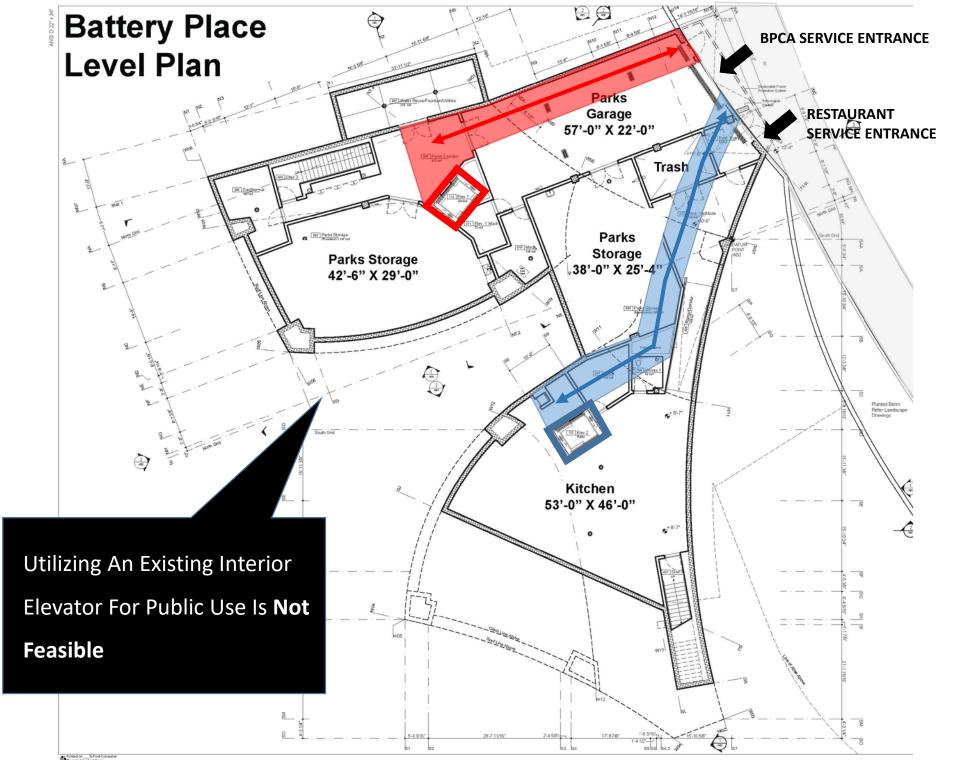




## **DESIGN UPDATE | PUBLIC MEETING 4**



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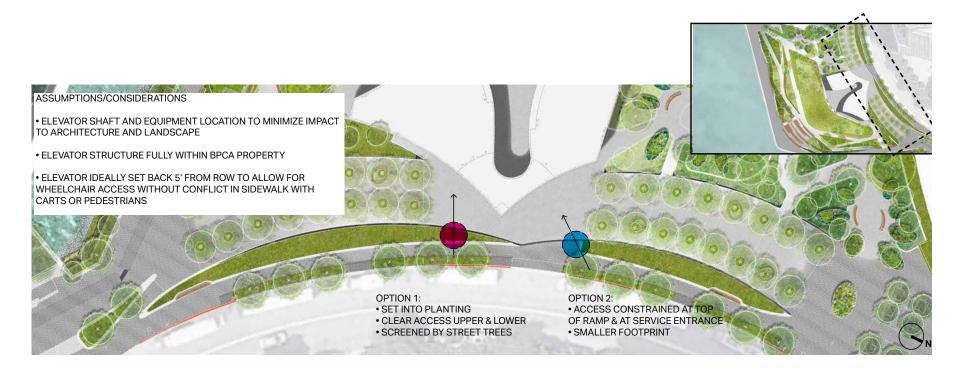
- Existing elevators located in areas not accessible to public.
- If including dedicated public access corridors, would introduce long travel distances (70+') from street.
- Safety and security concerns in long public corridors
- Inconvenient and unintuitive wayfinding.
- Likely no access after BPCA staff hours which wouldn't accommodate late evening access.
- Large impacts to required program and square footage of BPCA and/or restaurant BOH areas.

#### **SOUTH BATTERY PARK RESILIENCY PROJECT** AUTOTURN MOVEMENTS THROUGH PROPOSED SITE ET-3000 **MOVEMENT INTO B1 PAVILION GARAGE** Elimination of Public Access At Street Level Prevents 10.92 BATTERY PLACE Conflict Between People & **BPCA Parks Electric Carts** $\bigcirc$ 3.00 3.58 4.25 TD ET-3000 feet Truck Width : 4.83 Truck Track : 4.25 Lock to Lock Time : 6.0 Steering Angle : 20.6 **LEGEND** CENTERLINE OF VEHICLE PATH VEHICLE BODY FRONT TIRES **REAR TIRES** TRAVELED VEHICLE AREA **PROPOSED** PAVILION, LEVEL B1

INTERNAL COORDINATION **AECOM** 

3/29/2021

## **INTERNAL DESIGN STUDY | MARCH 2021**





Design Study | March 19th 2021

- Highly visible on Battery Place
- Undesirable massing and aesthitec impact
- Placement doesn't align with braoder wayfinding strategies
- Circulation impact with BPCA electric carts at service entrance
- Additional project cost
- Redesign efforts and additional construction scope
- Increased operation and maintenance





# WAGNER PARK PAVILION SUSTAINABILITY UPDATE





## SUSTAINABILITY | CERTIFICATIONS



**ZERO** 

WEDG

**CARBON** 

CERTIFICATION

Waterfront Edge Design Guidelines

#### **SUSTAINABILITY | MEASURES**



#### **SITE STRATEGIES:**

- Flood resilient, elevated park design
- · Enhanced visual and physical access to water
- Increased waterfront pathway and greenway connectivity
- Stormwater management using infiltration and underground cistern
- Reduction of water consumption through subsurface irrigation at the lawn areas
- Upland riparian zone habitat and pollinator support
- · Lowland and in-water habitat support at Pier A inlet
- 85% Native Planting
- Urban heat island mitigation average pavement SRI above 29
- Environmentally-responsible construction
- Solar lighting for resilient energy sources
- Low carbon concrete
- Site salvage (plants and materials)
- Educational programing
- Community engagement + site assessments

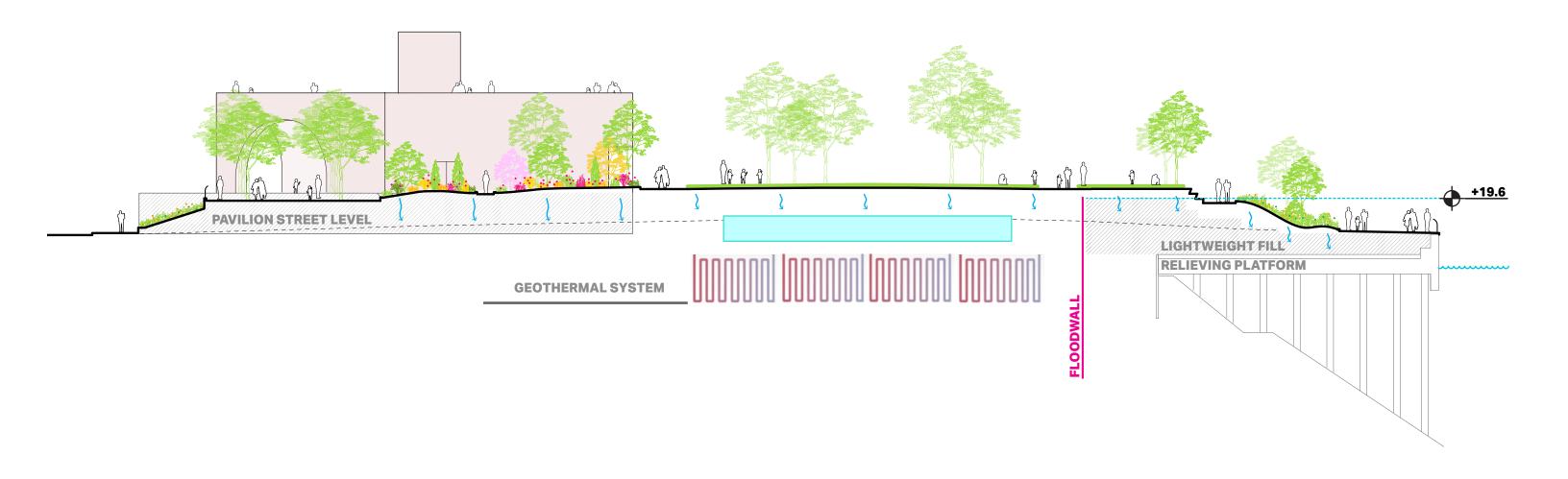
#### **BUILDING STRATEGIES:**

- Bird collision deterrence
- Geothermal
- Rooftop solar thermal panels
- Green roof
- Triple pane, low e-glazing
- High reflectance pavement
- Low carbon concrete and interior materials
- Healthy and low-emitting materials
- Rainwater collection + reuse
- Efficient potable water fixtures
- Energy efficient lighting
- Highly insulated building envelope
- Energy recovery ventilation
- Ground source heat pump technology significantly increases building energy efficiency
- Energy efficiency building systems include energy recovery ventilation, demand control ventilation, and variable speed supply fans
- All-electric building, including restaurant and kitchen equipment





## SUSTAINABILITY | WAGNER SECTION







## ILFI ZERO CARBON CERTIFICATION | REQUIREMENTS

## FIRST PERFORMANCE-BASED CARBON STANDARD ADDRESSING **BOTH EMBODIED AND OPERATIONAL CARBON.**



#### **OPERATIONAL CARBON:**

- Net zero energy including onsite & offsite measures
- No combustion
- Achieve 25% EUI REDUCTION from ASHRAE equivalent building
- Offset all energy use with renewable energy

#### **CURRENT DESIGN:**

• Exceeding target, anticipating 38% EUI REDUCTION.

#### **EMBODIED CARBON:**

- Embodied carbon of primary foundation, structure and enclosure must be reduced by 10%
- Project total embodied carbon should be <500 kg CO2e/m2</li>
- Disclose and offset the remainder of embodied carbon

#### CURRENT DESIGN:

Exceeding target, anticipating 37% REDUCTION.

# REDUCTION **EMBODIED CARBON OFFSET**

#### Table 1. Applicable Building Materials

T			
	PRIMARY MATERIAL ASSEMBLIES	Foundation	Footings Retaining Walls
		Structure	Framing Walls
		Structure	Reinforcement
			Slabs + Decking
		Enclosure	Cladding
			Fenestration
			Insulation
			Roofing
	INTERIOR MATERIAL ASSEMBLIES	Finishes	Ceilings
			Floors
			Walls + Partitions
		Partitions	Fenestration
			Framing
			Insulation
		Interior Furnishings	Equipment
			Fixtures
			Furniture
	ADDITIONAL ASSEMBLIES	Building Systems	Electrical
	(OPTIONAL TO INCLUDE)		Mechanical
			Plumbing + Fire Protection
		Site Work	Excavation
			Exterior Paving
			Shoring + Formwork
			<del></del>



## ILFI ZERO CARBON CERTIFICATION | LIFE CYCLE ASSESSMENT

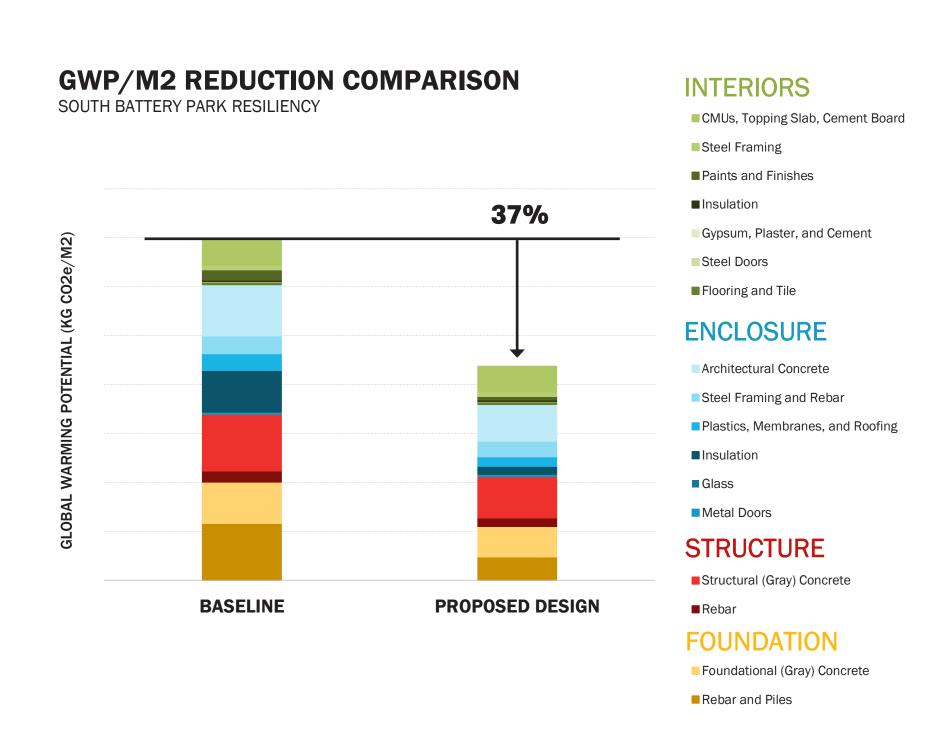
#### **EMBODIED CARBON:**

THE SUM OF ALL GREENHOUSE GAS EMISSIONS RESULTING FROM THE MINING, HARVESTING, PROCESSING, MANUFACTURING, TRANSPORTATION, AND INSTALLATION OF BUILDING MATERIALS.

- The project is completing a Whole Building Life
   Cycle Assessment to quantify the embodied carbon associated with the building's materials and construction
- Currently targeting a 37% REDUCTION in embodied carbon of building materials
- The remainder of embodied carbon will be offset.

#### **KEY STRATEGIES:**

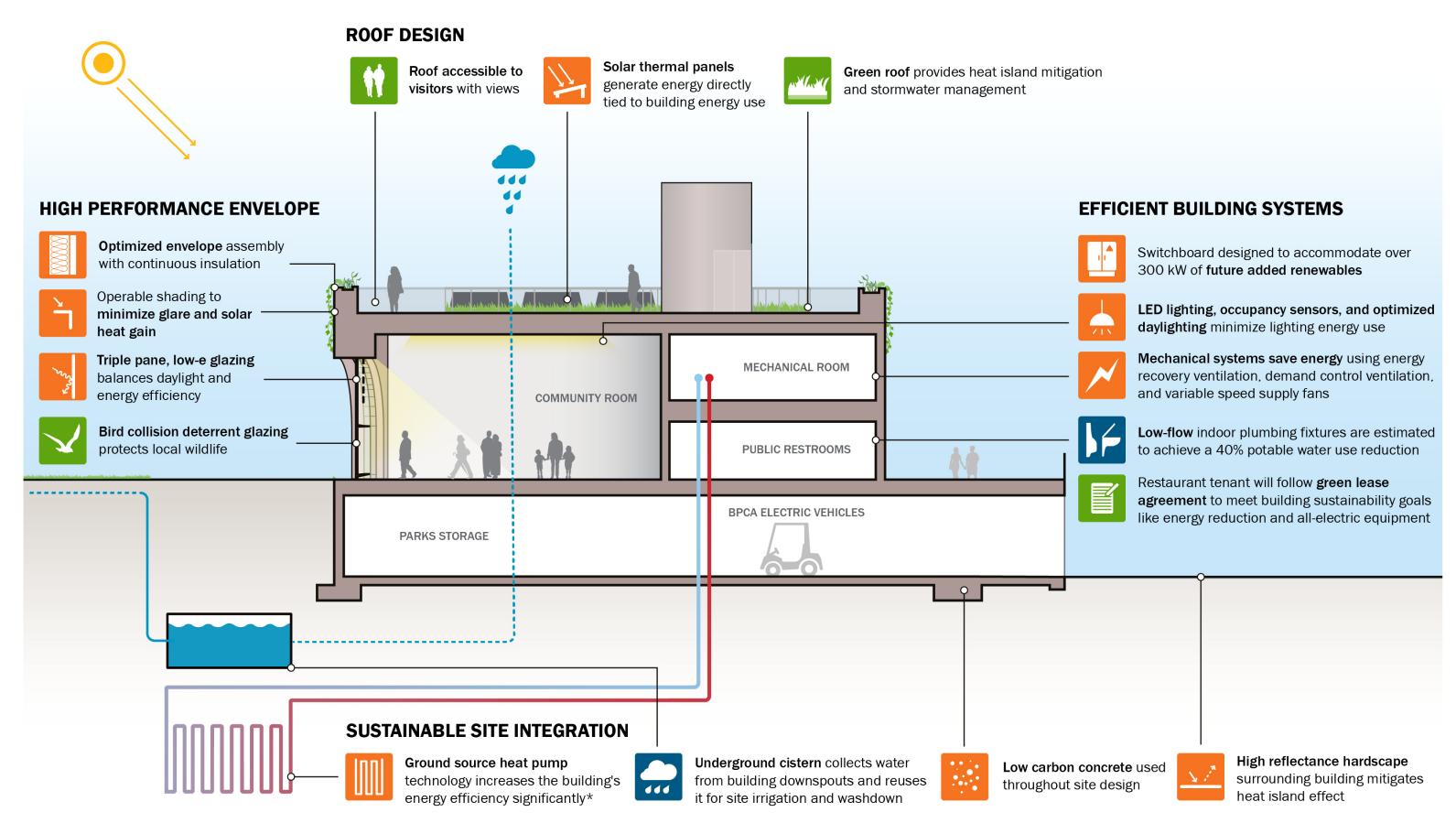
- Cement replacement in concrete applications
- Exploration of low carbon concrete technologies
- High recycled content in structural steel and rebar
- Low impact insulation substitution
- Low carbon interior finishes







## SUSTAINABILITY | PAVILION



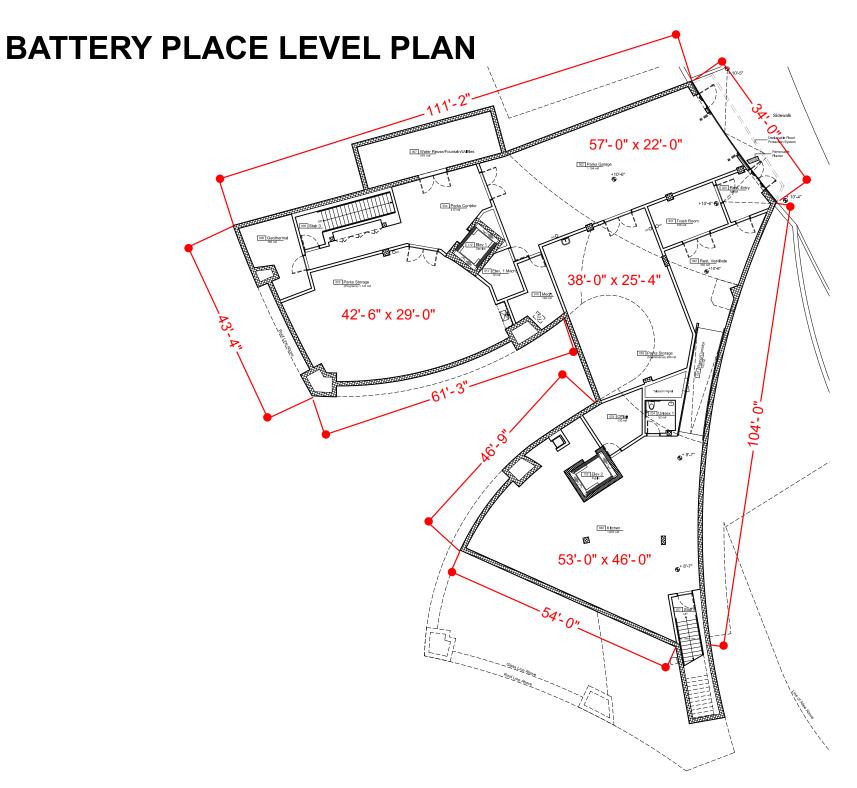


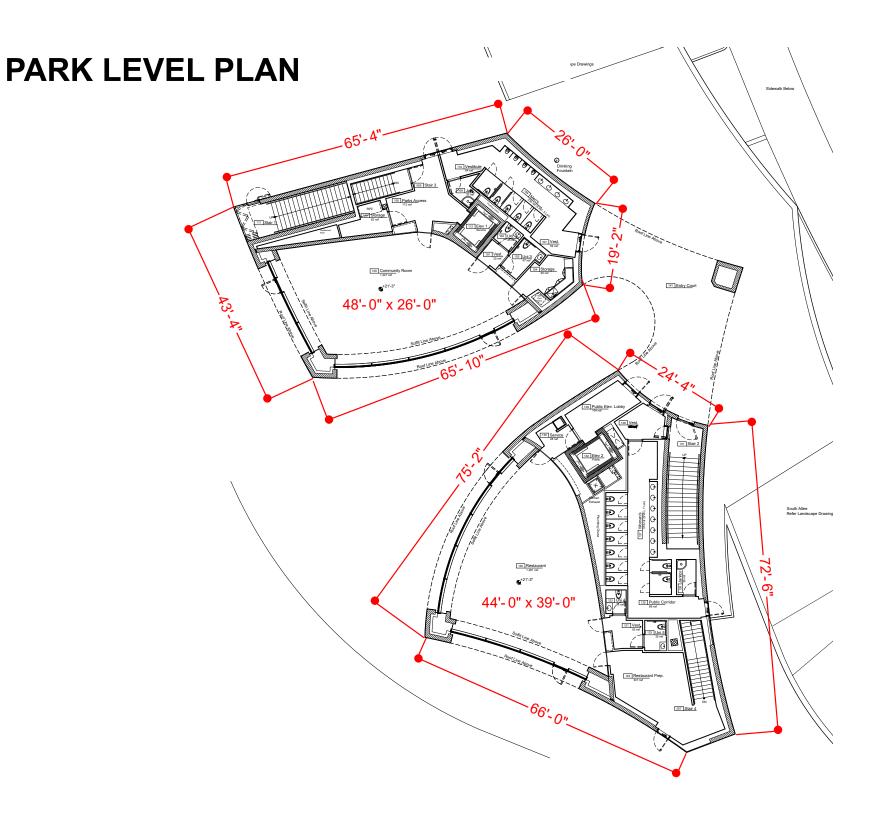


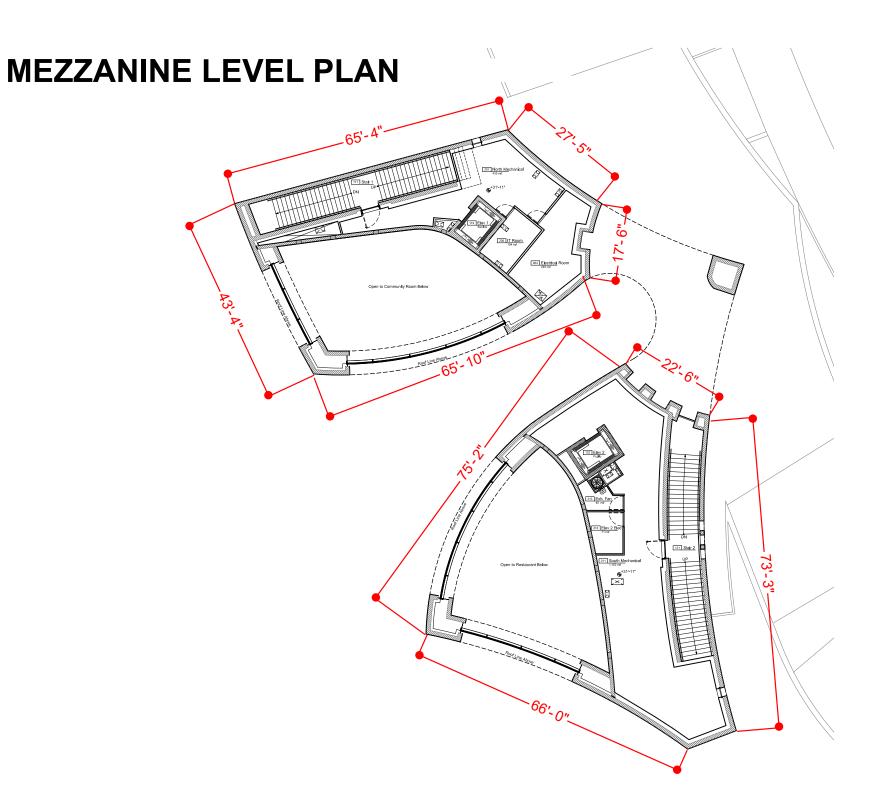
## **APPENDIX**











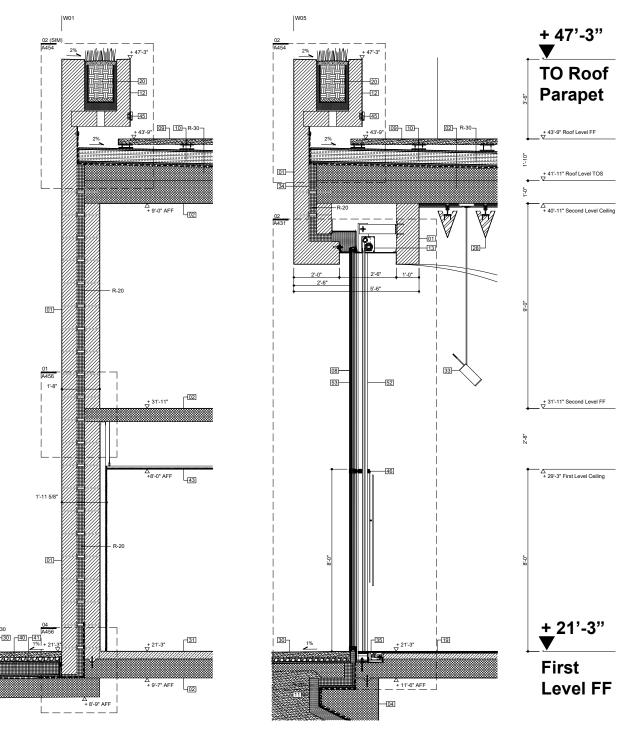
# **ROOF LEVEL PLAN** 39'- 0" x 32'- 0" 311 North Roof Deck South Roof Deck 43'-6" x 25'-0"

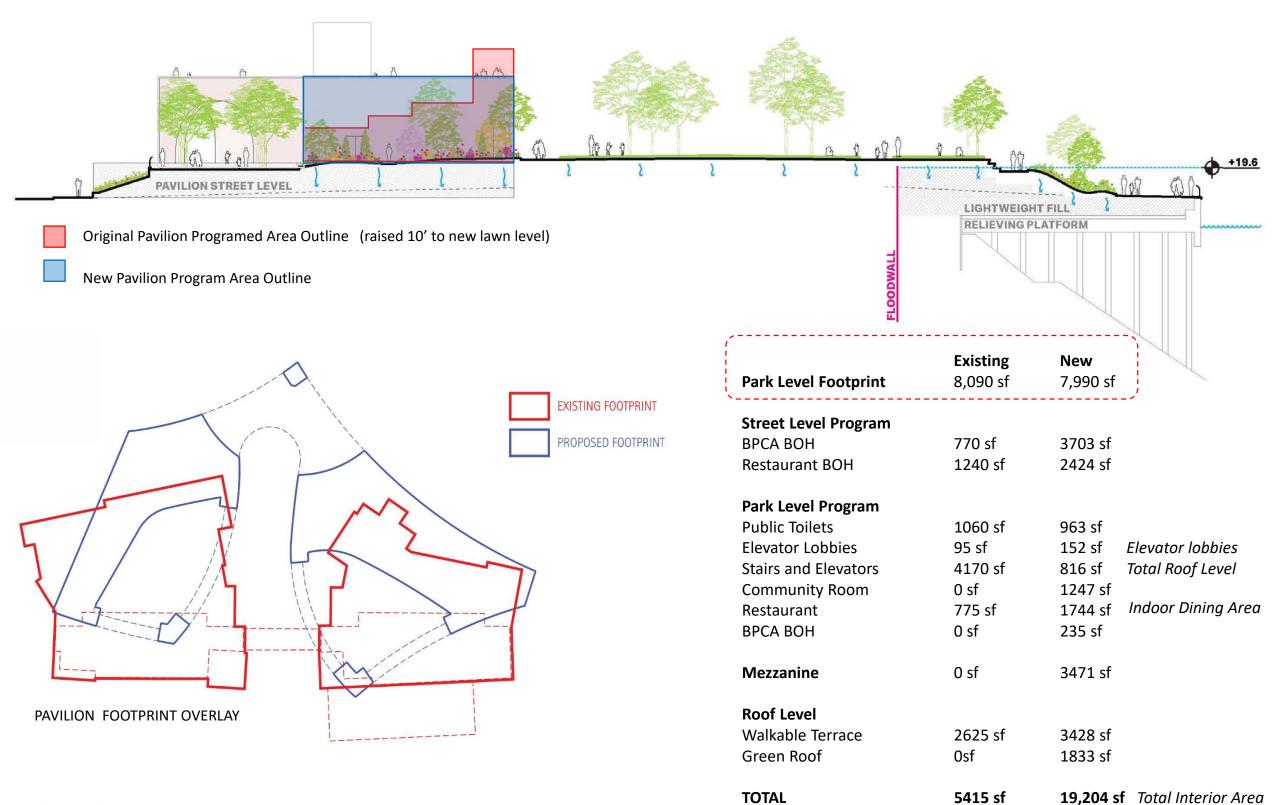
## **CONSTRUCTION DETAILS**



**Thermomass System CIP** 











## WEDG CERTIFICATION | KEY STRATEGIES

## ENHANCING PUBLIC BENEFIT OF WATERFRONT DEVELOPMENTS THROUGH A FOCUS ON RESILIENCE, ECOLOGY, AND ACCESS.

#### **KEY STRATEGIES:**

## Site Assessment & Planning

- MULTI-DISCIPLINARY DESIGN TEAM
- SITE-WIDE VULNERABILITY AND ECOLOGICAL CON-TEXT ASSESSMENTS
- EQUITABLE COMMUNITY ENGAGEMENT

## Responsible Siting & Coastal Risk Reduction

- FLOOD-RESILIENT DESIGN ELEMENTS
- RESPONSIBLE SITING OF DESIGN STRUCTURES
- IMPROVED SENSORY CONNECTIONS TO WATER

## **Community Access & Connections**

- QUALITY PUBLIC ACCESS AREAS
- DIVERSE PROGRAMMING AND EDUCATIONAL FEATURES
- INCREASED WATERFRONT PATHWAY AND GREENWAY CON-NECTIVITY

## **Edge Resilience**

- WATERFRONT EDGE SOFTENING
- NATURAL SHORELINE AT PIER A INLET

## **Natural Resources**

- SUSTAINABLE SITE FILL AND SOIL MANAGEMENT
- ENVIRONMENTALLY-RESPONSIBLE CONSTRUCTION PRACTICES
- SIGNIFICANT STORMWATER MANAGEMENT IN QUANTITY AND QUALITY
- REDUCED WATER USAGE
- URBAN HEAT ISLAND MITIGATION



## THE SITE | FLOOD RISK MEASURES + DFE FLIP UP DEPLOYABLES GLASS TOPPED FLOODWALL RAISED PARK W/ BURIED FLOOD WALL BERMED FLOODWALL FLIP UP DEPLOYABLES EXPOSED FLOODWALL +18.5 - EXPOSED FLOOD WALL - - RAISED PARK FLOOD ALIGNMENT - PROPERTY LINES



## **PIER A PLAZA**

