

Market Landing Park Expansion

Ad Hoc Committee Meeting
June 29th, 2022

City of Newburyport, Massachusetts
Mayor Sean R. Reardon
Newburyport City Council
Department of Planning and Development

SASAKI

Agenda

PRESENTATION

- Overview of Park Design Refinements
- Visitors Center + Restroom Design Refinements
- Phasing + Budget

Goals

- Provide updates on park and architecture design refinements
- Review resiliency strategies and answer questions on design team recommendations
- Present phasing, interim conditions, and budget to understand the City's priorities and expectations for 100% CD documentation

Market Landing Park Design Process: Next Steps

SITE INVENTORY
(TASKS 1,2 & 3)
APRIL-MAY 2021

CONCEPT + SCHEMATIC DESIGN
(TASKS 4,5 & 6)
JUNE - SEPT 2021

CURRENT WORK: FALL 2022 COMPLETION

ARCHITECTURE SCHEMATIC DESIGN
(TASKS 7)
2022

ARCHITECTURE + LANDSCAPE DESIGN DOCUMENTATION
(TASKS 7)
2022

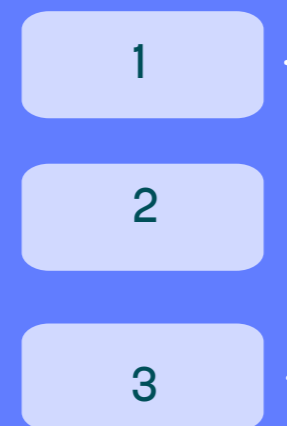
FUTURE WORK

BIDDING
(TASKS 8)
WINTER 2023

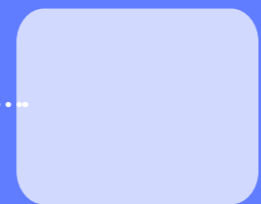
CONSTRUCTION
(TASKS 9)
SPRING 2023 THROUGH 2024

- Inventory existing documents
- Conduct site survey
- Gather stakeholder input

Concept Alternatives



Refined Conceptual Plan



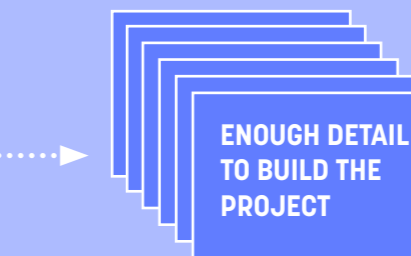
Visitors Center:
Concept Development

Concept Alternatives
Refined Concept

Design Development



Construction Documentation

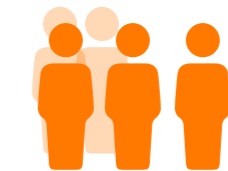


Ad-Hoc Committee Meetings (Public):

4 meetings were held during Task 1-6



75% Review



100% Review

We are here!

Proposed Plan



Somersby Sculpture Plaza

Drop Off Area

Indigenous Peoples Plaza

Embayment

West Embayment Plaza

Stage Newburyport Waterfront Trust Property
Existing to remain

Ferry Wharf Plaza

Shared Use Path

Harbormaster Entry Drive

Harbormaster

West Lot

East Lot

Visitors Center + Restrooms

Deliveries + Dumpster Enclosure

Custom House

Fire House

Somersby Way

Central Wharf Way

Upper Railroad Way

Lower Railroad Way

Ferry Wharf Way

Custom House Way

0 25 50 100 ft



Design Refinements



Harbormaster Entry Drive + Hammock and Picnic Grove

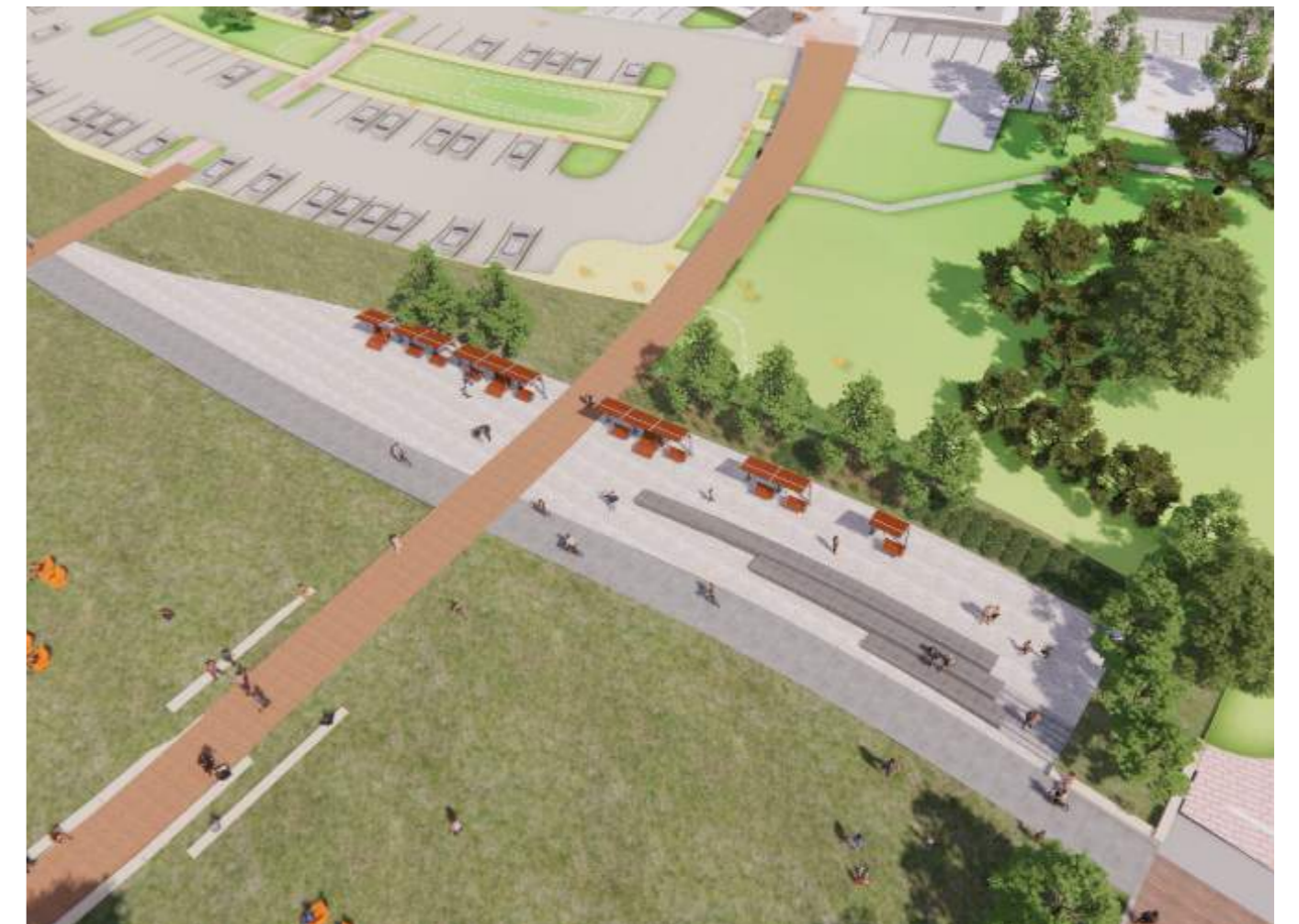
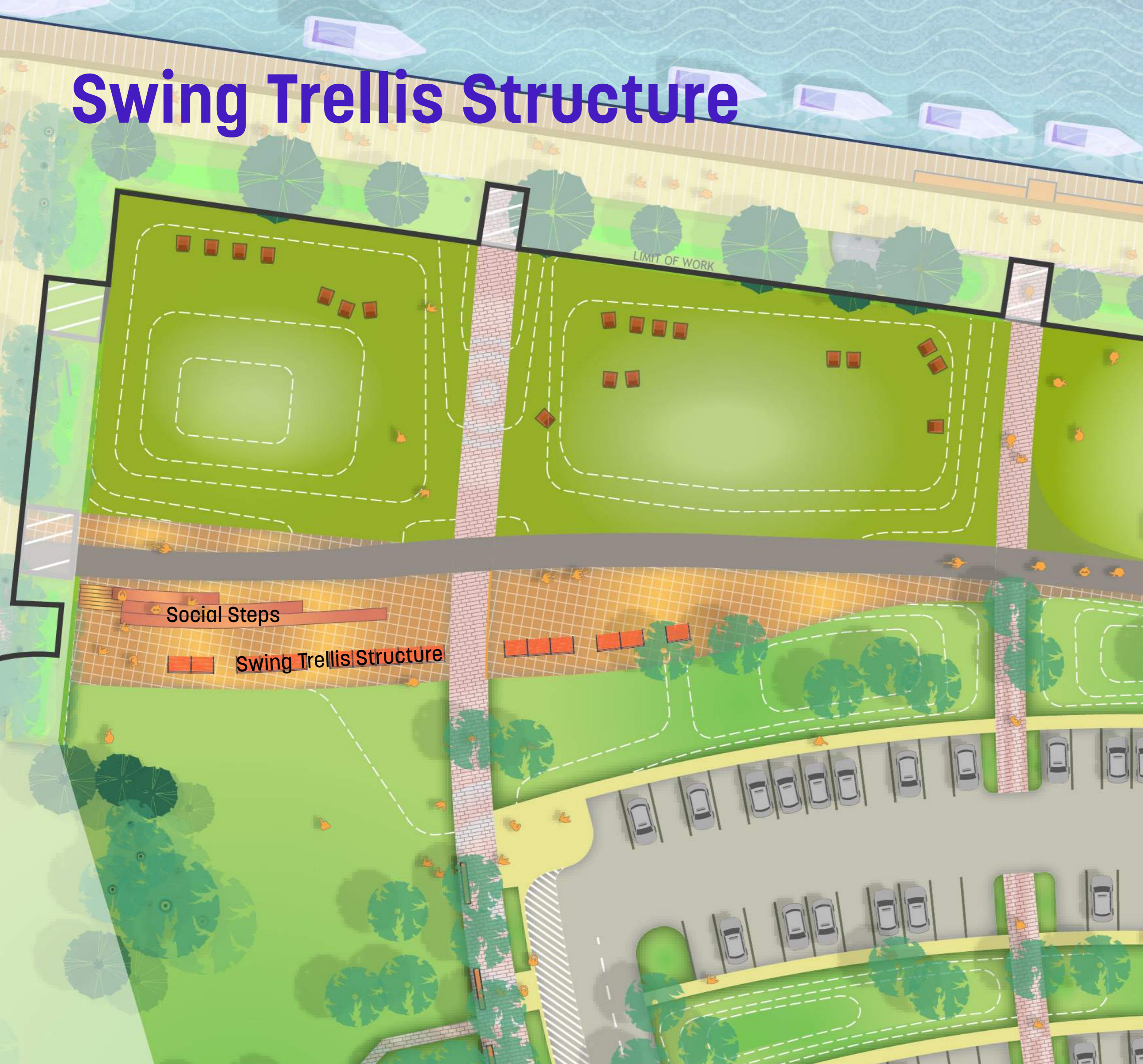


Picnic area

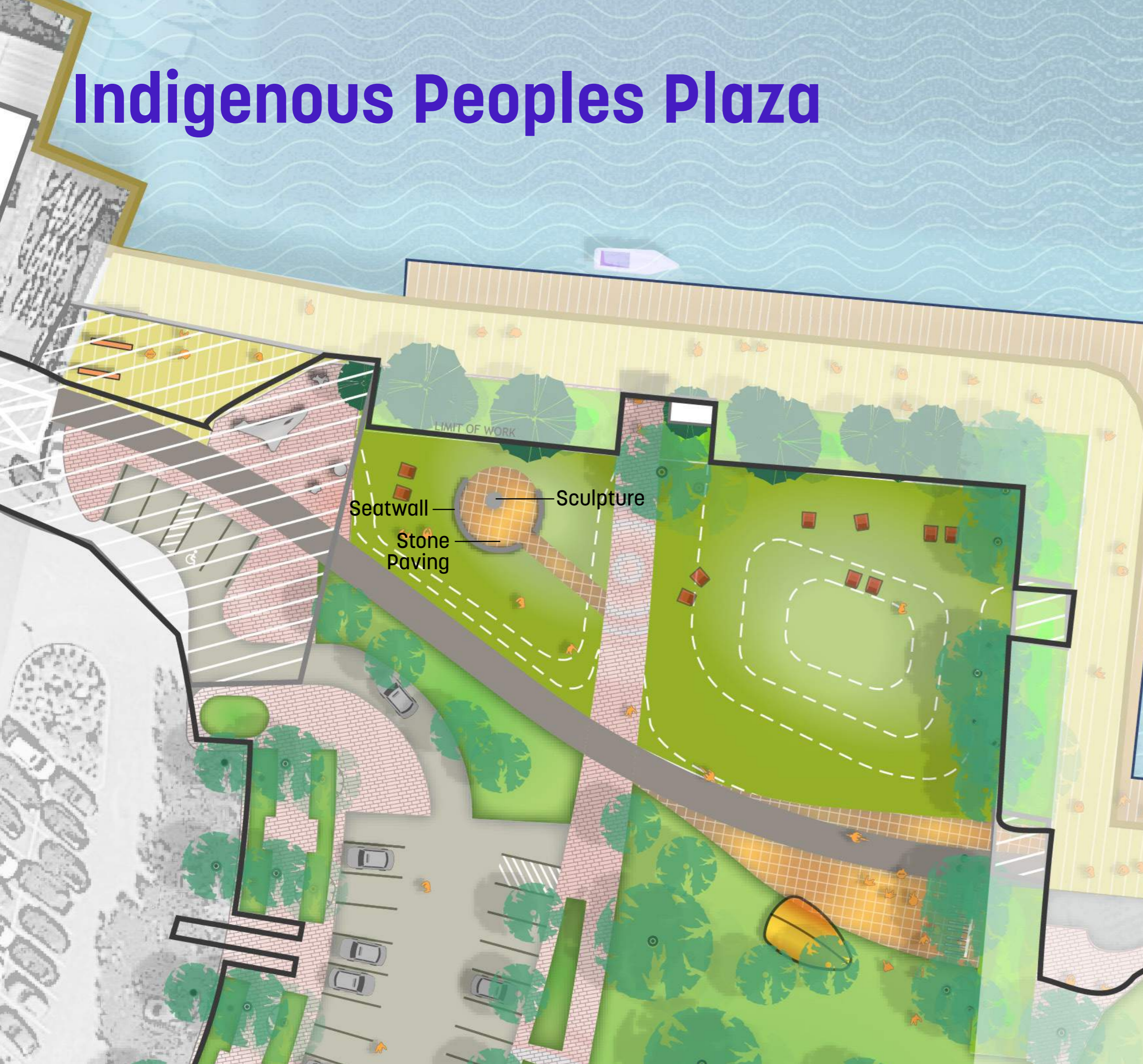


Hammocks

Swing Trellis Structure



Indigenous Peoples Plaza



Deliveries + Dumpster Enclosure



Accessible
Path

Buffer
Planting

Delivery
Parking

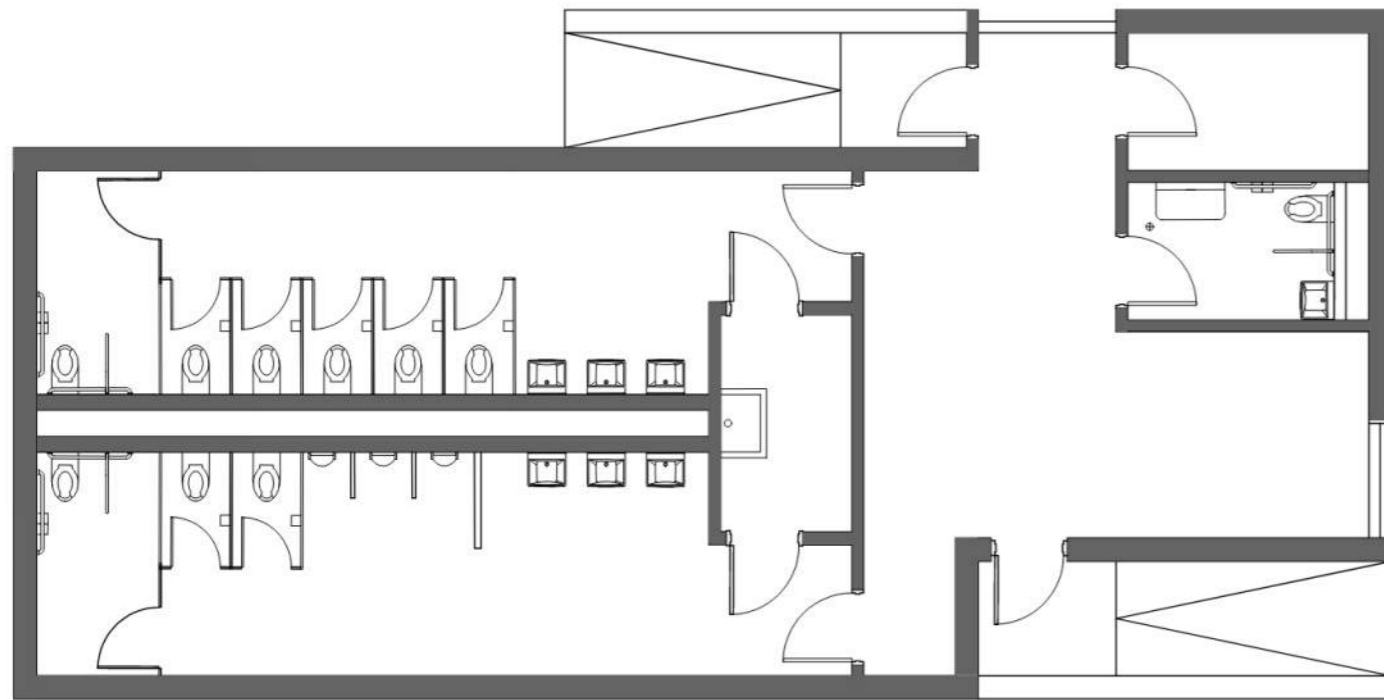
Dumpster
Enclosure

The background is a detailed architectural line drawing of a city block, rendered in a light blue color. It shows various building footprints, streets, and a central plaza area with trees and a fountain. The drawing is semi-transparent, allowing the white text to stand out.

Visitors Center, Restroom Facility + Plaza

- Building + Landscape Design Refinements
- Resiliency: Building FFE + Adaptability
- Interim Conditions

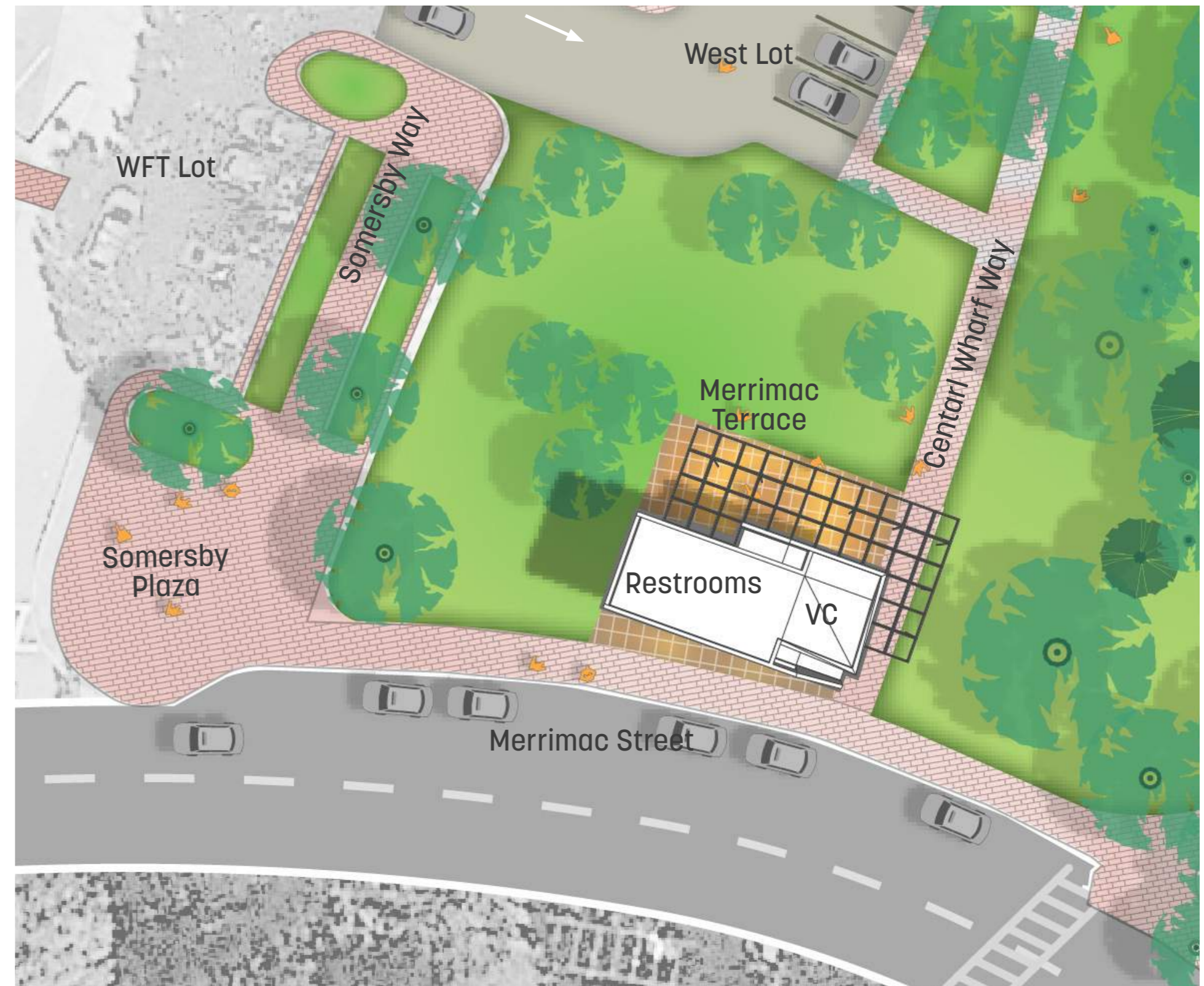
Visitors Center at Schematic Design



1445 GSF

PREVIOUS PROPOSED BUILDING

- 6 Toilets, 3 Sinks for Women
- 3 Toilets, 3 Urinals, 3 Sinks for Men
- Janitor's Closet
- Mechanical Room
- 1 Family Restroom
- 100 sq ft Visitor Center
- Brick exterior cladding
- Estimated Cost: \$1.2 mil in 2021

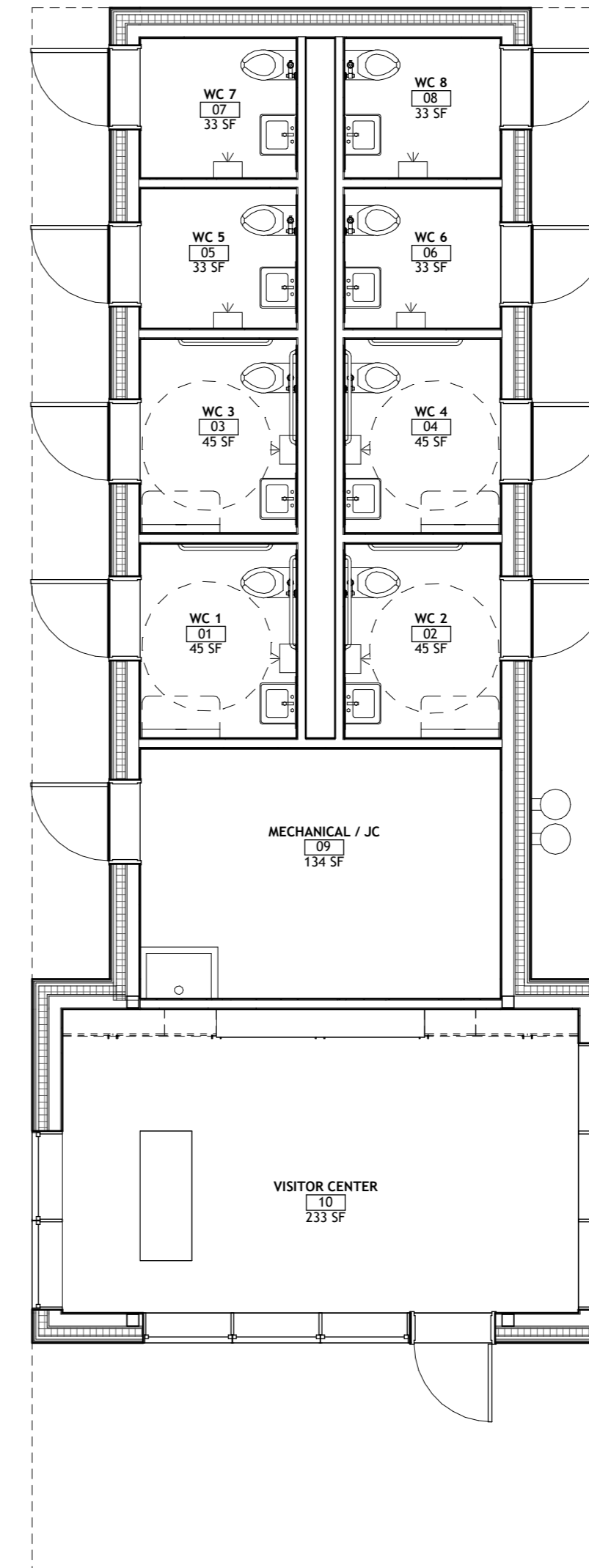


Visitors Center at 75% CD

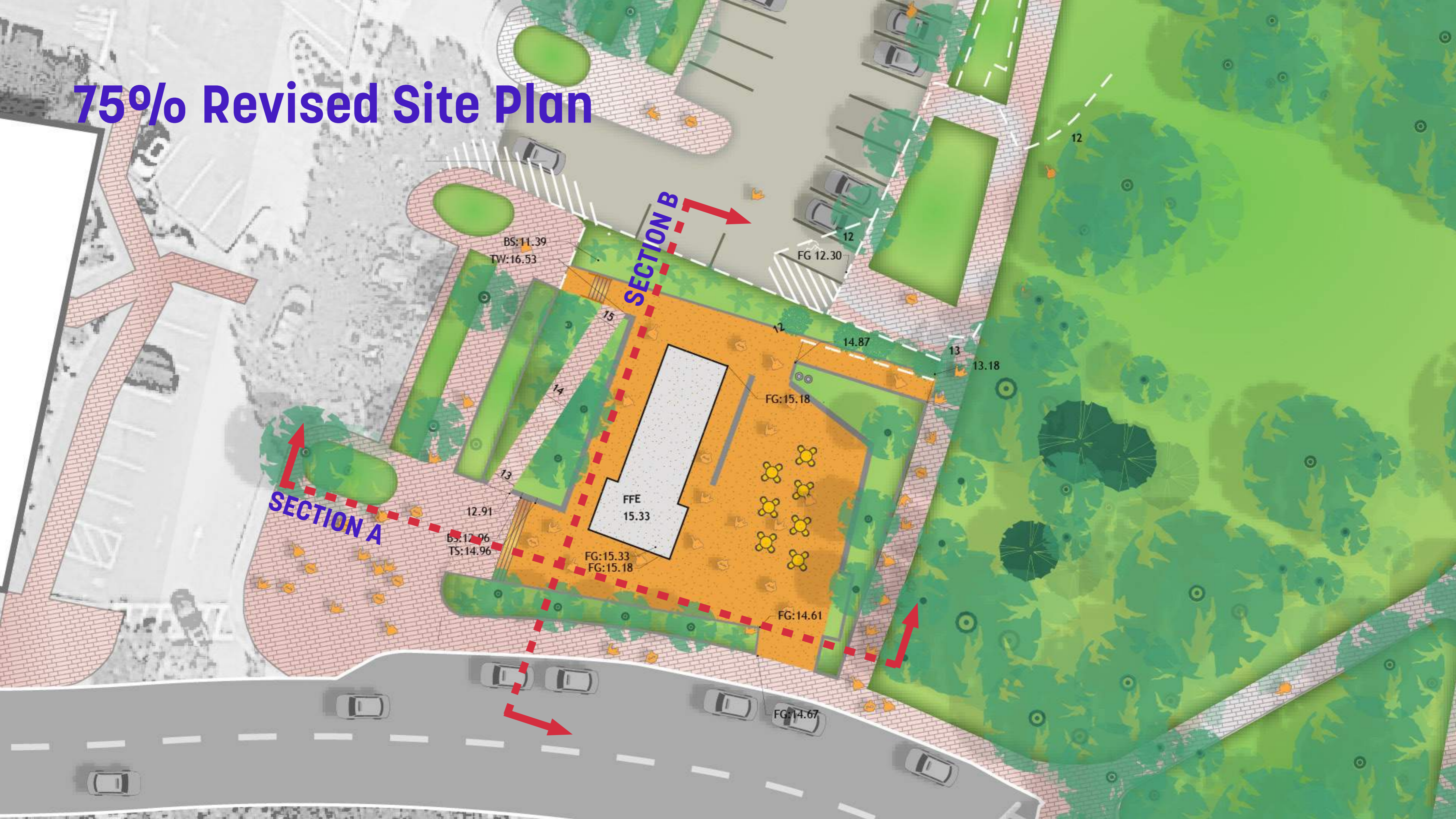
922 GSF

PROPOSED BUILDING

- 8 Toilets, 8 Sinks for all
- 4 rooms are ADA accessible and have changing tables
- 233 sq ft Visitor Center
- Mechanical Room and Janitor Closet
- Exterior water fountain and bottle filler
- 2 toilet rooms and visitor center will be available during winter
- Wood clapboard exterior cladding
- Net-zero energy building
- Estimated Cost: \$1.3 mil in 2024



75% Revised Site Plan



Site Sections at Visitors Center

SECTION A



SECTION B



View from Merrimac Street

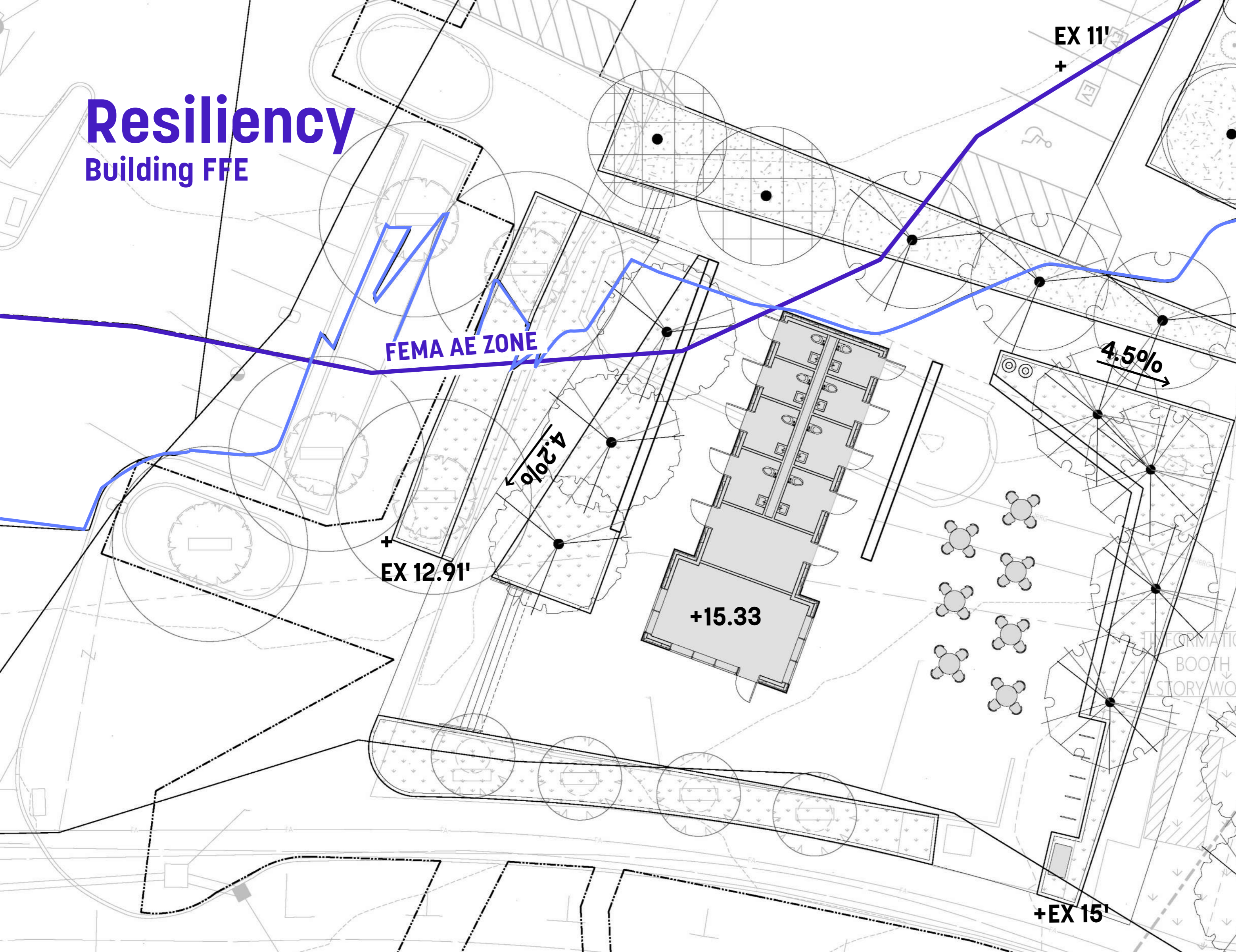




View from Merrimac Street

Resiliency

Building FFE

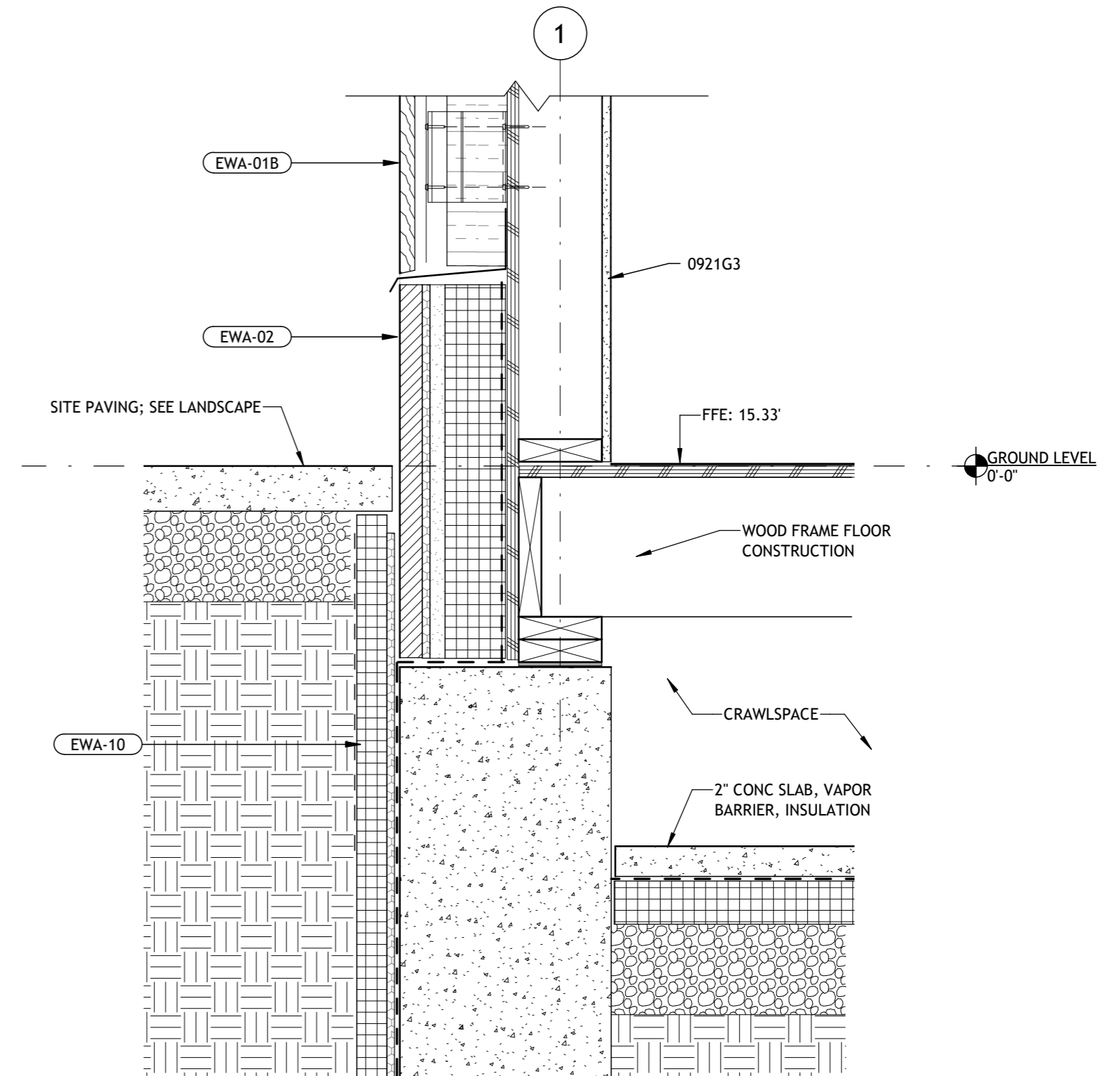
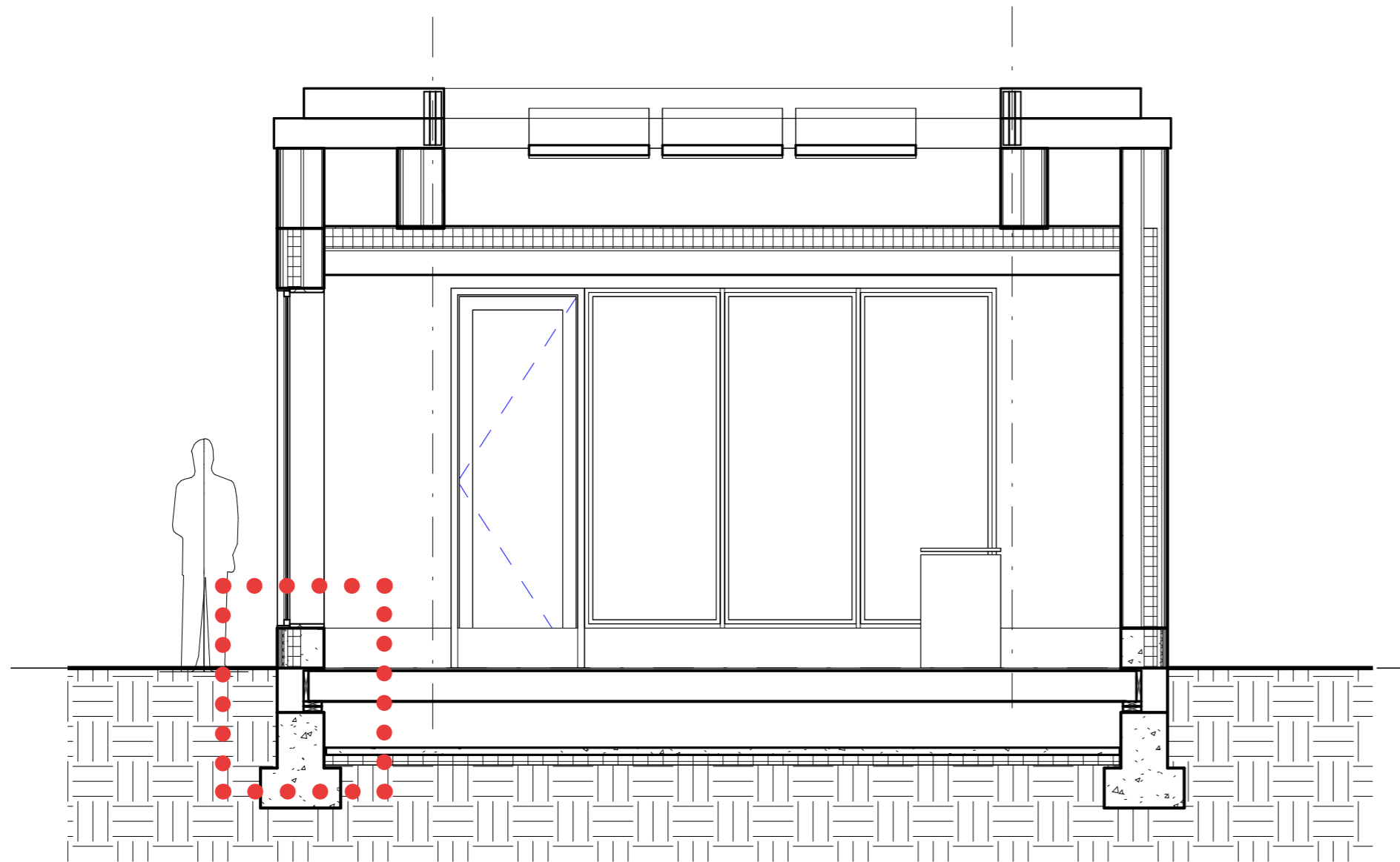


Considerations

- Building located outside of the FEMA flood zone and the LSCSF
- FFE set to 15.33' in order to provides full protection from a 2070 1% flood event (12' + 40")
- Original location was on the east side of the side adjacent to Central Wharf Way, but was later moved to the west side of the site adjacent to Somersby Way to maximize views to the water.
- To meet the desired FFE of 15.33' the grading for the steps and ramp push the building to the east.

Resiliency

Adapting for the Future



Considerations

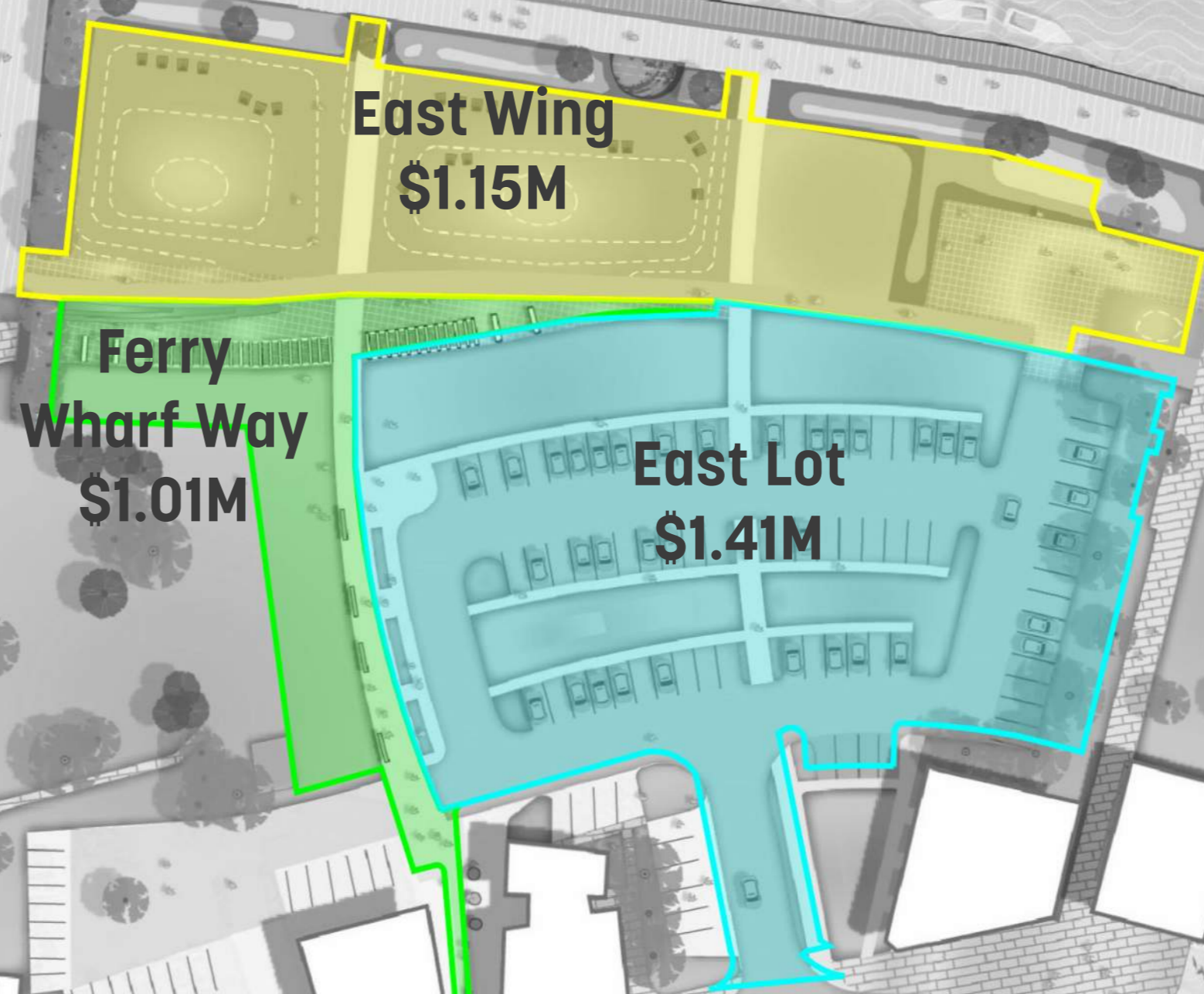
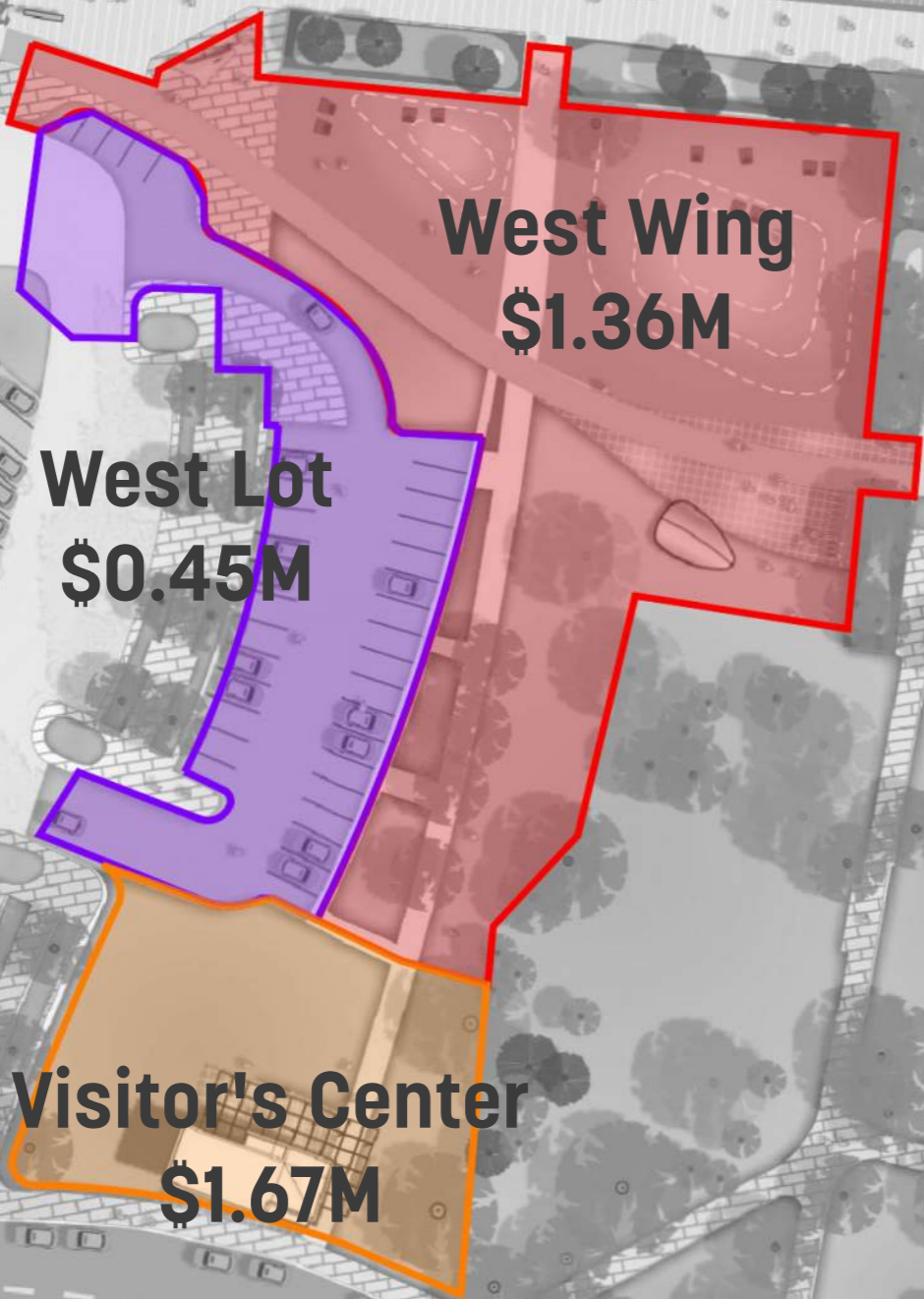
- If the building is designed to be raised in the future, instead of traditional slab-on-grade construction, the building could be designed with a wood floor diaphragm that is attached to the walls and elevated above a crawl space. This would add about \$24,000 to the project.
- In keeping with the net-zero design, continuous insulation would be below the crawl space creating a "conditioned" space below the building

Phasing + Budget

Understanding Project Costs and Implementation



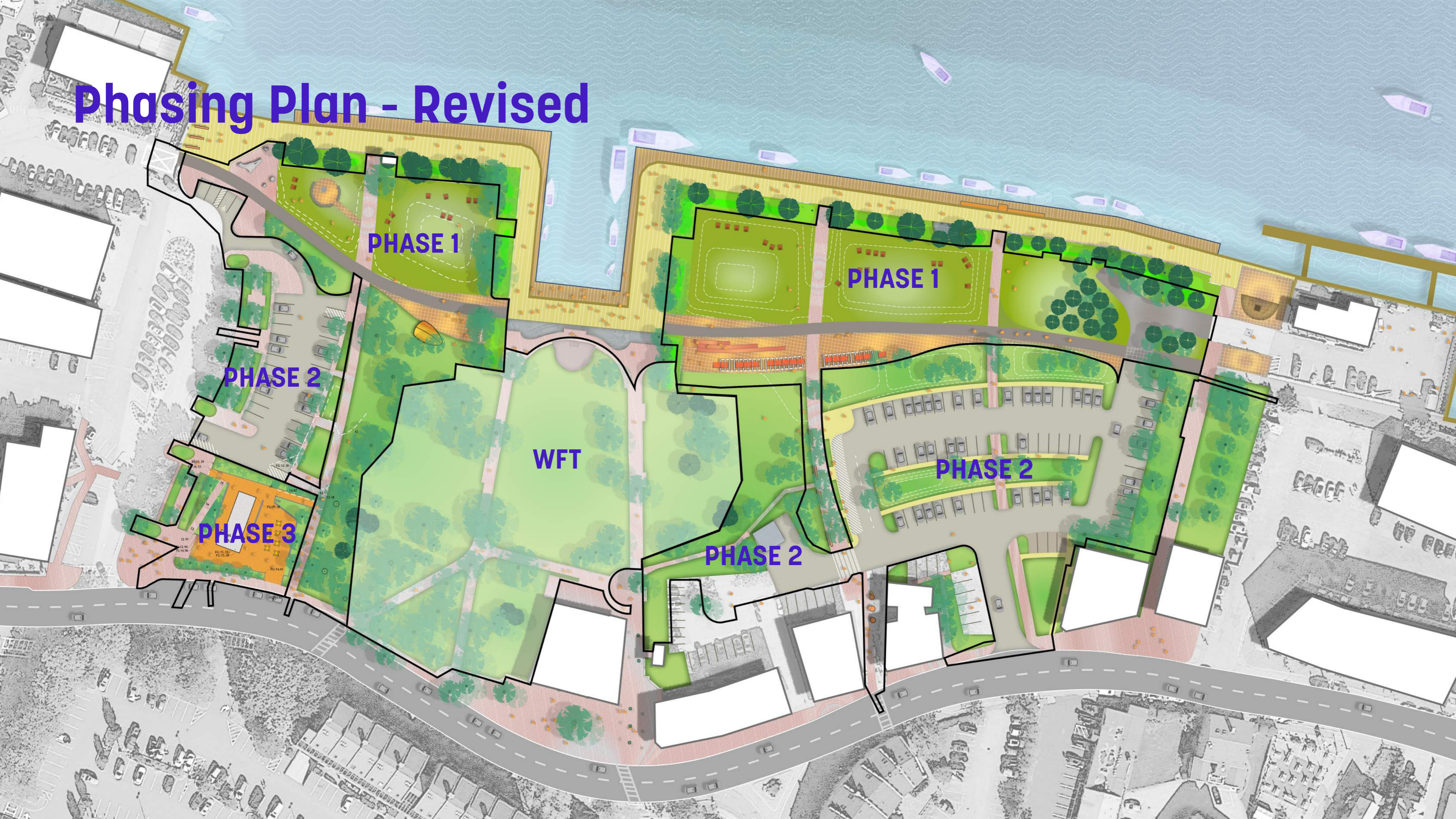
Schematic Cost By Park Area



Phasing Plan - Overview



Phasing Plan - Revised



Phase 1



Phase 1 + 2



Phase 1, 2 +3



Cost Estimate Summary for Phases 1-3

Construction Cost	Phase 1: Path+ Plazas	Phase 2: Parking Lots	Phase1+2	Phase 3: Visitor Center & Plaza	Total Cost
Site Preparation & Demo	\$ 664,243	\$ 258,664	\$ 922,907	\$ 73,481	\$ 1,031,831
Earthwork	\$ 477,777	\$ 17,000	\$ 494,777	\$ 81,557	\$ 824,254
Utilities & Infrastructure	\$ 907,773	N/A	\$ 907,773	\$ 23,382	\$ 1,237,648
Hardscape and Surface Finishings	\$ 1,065,904	\$ 747,668	\$ 1,813,572	\$ 349,756	\$ 2,219,779
Site Walls	\$ 247,590	N/A	\$ 247,590	\$ 114,926	\$ 362,516
Site Furnishings	\$ 931,278	\$ 63,944	\$ 995,222	\$ 44,674	\$ 1,039,897
Site Stairs and Handrails	\$ 9,068	N/A	\$ 9,068	\$ 30,595	\$ 39,663
Landscaping	\$ 265,926	\$ 157,622	\$ 423,548	\$ 50,932	\$ 474,480
Lighting	\$ 175,881	\$ 103,873	\$ 279,754	\$ 10,939	\$ 290,693
Special Elements	\$ 147,840	N/A	\$ 147,840	N/A	\$ 147,840
Visitor Center	N/A	N/A	N/A	\$ 969,147	\$ 969,147
BASE BID TOTAL	\$ 4,893,279	\$ 1,348,771	\$ 6,242,049	\$ 1,749,389	\$ 7,991,439
General Conditions/Gen Req's (8%)	\$ 391,462	\$ 107,902	\$ 499,364	\$ 139,951	\$ 691,020
Insurance + Bond (2%)	\$ 97,866	\$ 26,975	\$ 124,841	\$ 34,988	\$ 172,755
Design + Pricing Contingency (5%)	\$ 244,664	\$ 67,439	\$ 312,102	\$ 87,469	\$ 431,887
Construction Contingency (7.5%)	\$ 366,996	\$ 101,158	\$ 468,154	\$ 131,204	\$ 647,831
Escalation Contingency (4%)	\$ 195,731	\$ 53,951	\$ 249,682	\$ 185,435	\$ 460,970
Construction Administration (2%)	\$ 97,866	\$ 26,975	\$ 124,841	\$ 34,988	\$ 172,755
Markup Total	\$ 1,394,584	\$ 384,400	\$ 1,778,984	\$ 614,036	\$ 2,577,217
TOTAL Mark-Up Costs + BASE BID	\$ 6,287,863	\$ 1,733,170	\$ 8,021,033	\$ 2,363,425	\$ 10,568,656
Schematic Cost Estimate			\$ 5,100,000	\$ 1,670,000	\$ 6,770,000

Phase 1 Cost Increases

Construction Cost	Phase 1: Path+ Plazas	Notes
Site Preparation & Demo	\$ 664,243	Assumed \$25,000 mobilization cost included in SD estimate, now \$289,000 (+\$264,000) with phasing + more detailed design
Earthwork	\$ 477,777	Add 156,00 due to landfill disposal and ground improvements
Utilities & Infrastructure	\$ 907,773	Irrigation increased by \$40,000 for added area and for increased costs Site electric increased by \$120,000 with additional scope requested by City and more detailed design
Hardscape and Surface Finishings	\$ 1,065,904	Unit price increase due to market fluctuation
Site Walls	\$ 247,590	
Site Furnishings	\$ 931,278	Swing trellis unit price increase due to market fluctuation and ground improvements required per geotechnical recommendations
Site Stairs and Handrails	\$ 9,068	
Landscaping	\$ 265,926	
Lighting	\$ 175,881	
Special Elements	\$ 147,840	
BASE BID TOTAL	\$ 4,893,279	
Proposed Reduction	\$ 1,293,818	
Revised Phase 1	\$ 3,599,460	
General Conditions/Gen Req's (8%)	\$ 391,462	
Insurance + Bond (2%)	\$ 97,866	
Design + Pricing Contingency (5%)	\$ 244,664	
Construction Contingency (7.5%)	\$ 366,996	
Escalation Contingency (4%)	\$ 195,731	
Construction Administration (2%)	\$ 97,866	
Markup Total	\$ 1,394,584	

Phase 1 Potential Cost Savings



Note: Does not include mark ups

Potential Donor Items



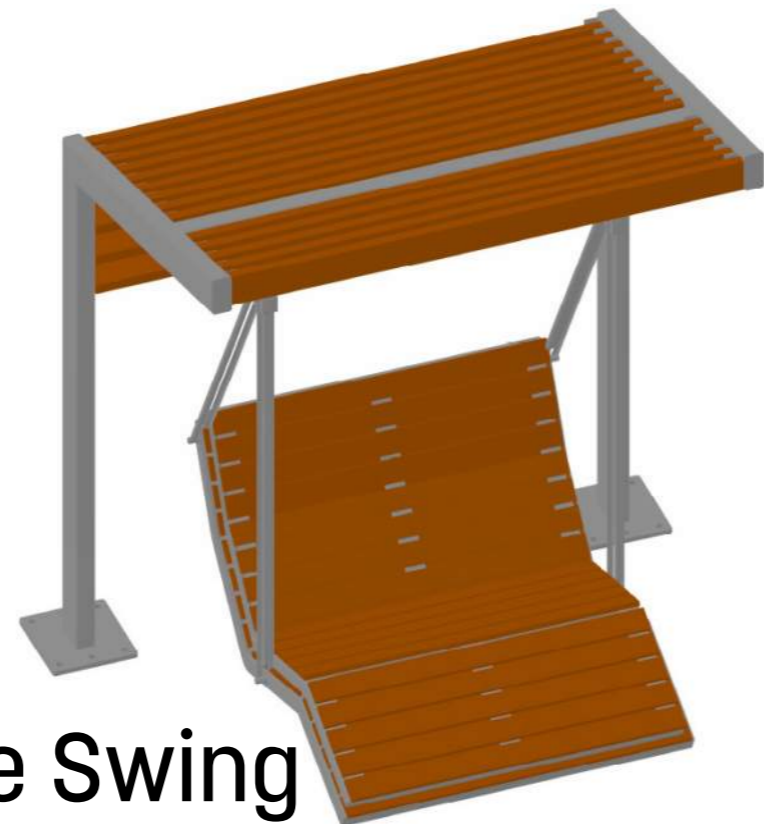
Picnic Table and benches



Hammocks



Benches



Lounge Swing



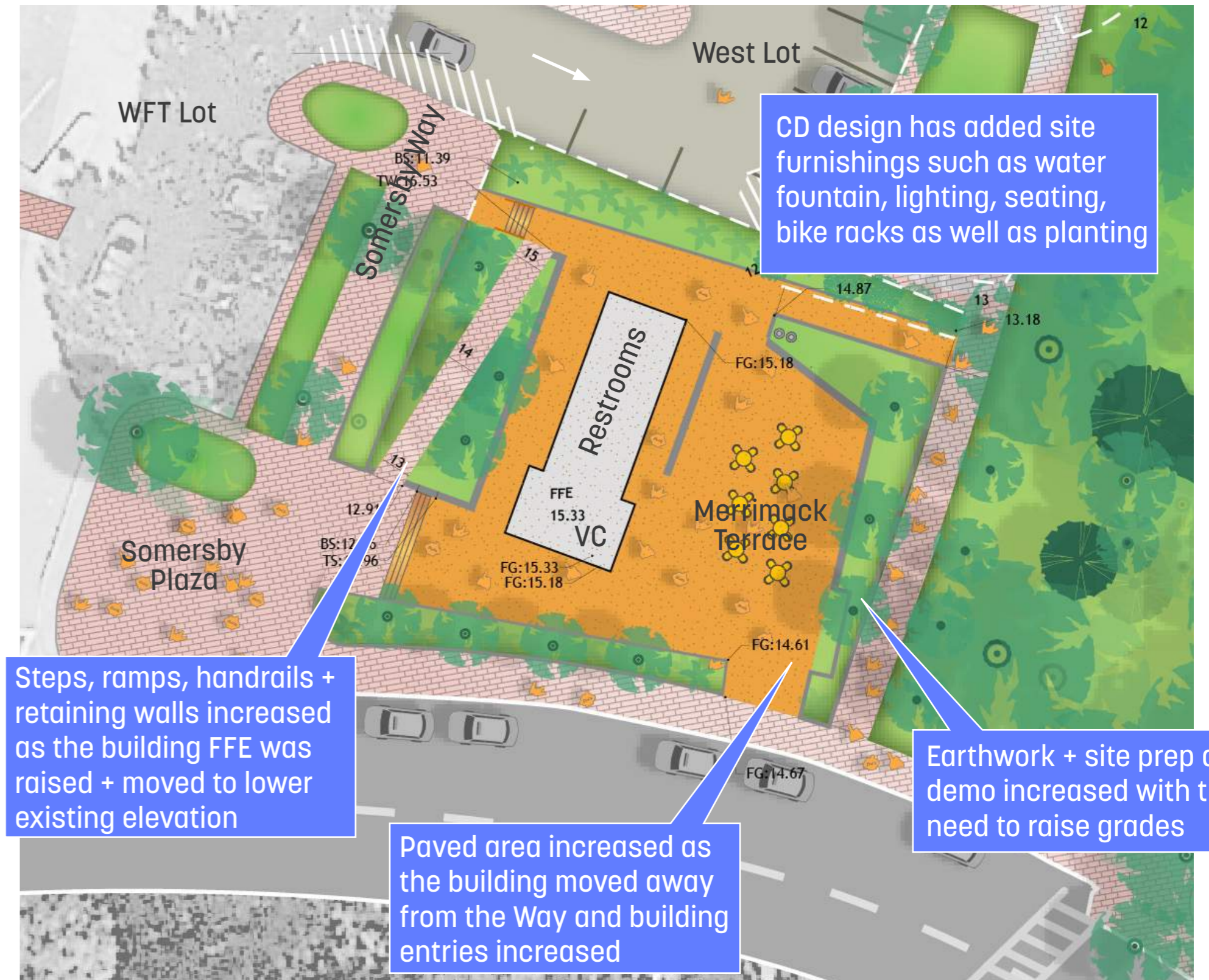
Seat Swing

Value Engineering Recommendations for Phase 1

Construction Cost	Phase 1: Path+ Plazas	Phase 1: After Deduction	Notes
Site Preparation & Demo	\$ 664,243	\$ 657,267	Reduced boundary of Phase 1
Earthwork	\$ 477,777	\$ 412,672	Reduced boundary of Phase 1
Utilities & Infrastructure	\$ 907,773	\$ 788,071	Moved part of scope to Phase 2
Hardscape and Surface Finishings	\$ 1,065,904	\$ 1,065,904	
Site Walls	\$ 247,590	\$ 247,590	
Site Furnishings	\$ 931,278	\$ 554,292	Picnic Tables + Hammocks identified as donor item, added later; reduced swing trellis from 16 to 12, swings have been identified as donor item
Site Stairs and Handrails	\$ 9,068	\$ 9,068	
Site Walls	\$ 247,590	\$ 247,590	
Lighting	\$ 175,881	\$ 175,881	
Ways + Surrounding Landscape	\$ 723,734	\$ 395,024	Moved part of scope to Phase 2
Indigenous Peoples Plaza	\$ 113,676	\$ 0	Donor item + added later
Sculpture at West Embayment Plaza	\$ 50,000	\$ 0	Donor item + added later
Restroom Trailer Relocation	\$ 118,100	\$ 17,300	Restroom trailer will be demolished and replaced with porta potties in the interim (cost for porta potties has not been included)
BASE BID TOTAL	\$ 4,893,279	\$ 3,599,461	Reduction Total: \$1,293,818
General Conditions/Gen Req's (8%)	\$ 391,462	\$ 287,957	
Insurance + Bond (2%)	\$ 97,866	\$ 71,989	
Design + Pricing Contingency (5%)	\$ 244,664	\$ 179,973	
Construction Contingency (7.5%)	\$ 366,996	\$ 269,960	
Escalation Contingency (4%)	\$ 195,731	\$ 143,978	
Construction Administration (2%)	\$ 97,866	\$ 71,989	
Markup Total	\$ 1,394,584	\$ 1,025,846	
TOTAL Mark-Up Costs + BASE BID	\$ 6,287,863	\$ 4,625,307	Reduction Total: \$1,662,555
BUDGET	\$ 4,650,000	\$ 4,650,000	
DELTA	\$ 1,637,863	\$ (24,693)	

Note: Some reductions fall within multiple categories. Sasaki will provide 1 revised cost estimate once value engineering items have been finalized with a complete breakdown.

Phases 3 SD vs CD Design Changes



Summary for Additional Work

Construction Cost	Drainage Improvements	Waterfront Trust Area
Site Preparation & Demo	\$ 20,415	\$ 15,029
Earthwork	\$ 247,920	\$ -
Utilities & Infrastructure	\$ 185,350	\$ 121,143
Hardscape and Surface Finishings	\$ 56,451	N/A
BASE BID TOTAL	\$ 510,136	\$ 136,172
General Conditions/Gen Req's (8%)	\$ 40,811	\$ 10,894
Insurance + Bond (2%)	\$ 10,203	\$ 2,723
Design + Pricing Contingency (5%)	\$ 25,507	\$ 6,809
Construction Contingency (7.5%)	\$ 38,260	\$ 10,213
Escalation Contingency (4%)	\$ 20,405	\$ 5,447
Construction Administration (2%)	\$ 10,203	\$ 2,723
Markup Total	\$ 145,389	\$ 38,809
TOTAL Mark-Up Costs + BASE BID	\$ 655,524	\$ 174,981

Next Steps

City would like to pursue gap funding through donations

Design Team to incorporate feedback + finalize 100% construction documentation | Fall 2022

Permitting | Meetings + submissions July 5-Sept 7 2022 (includes ConCom, Planning Board, CH 91)

Final Detail Design (Shovel Ready) | Fall 2022

Construction Implementation | Beginning Spring 2023

Thank you!

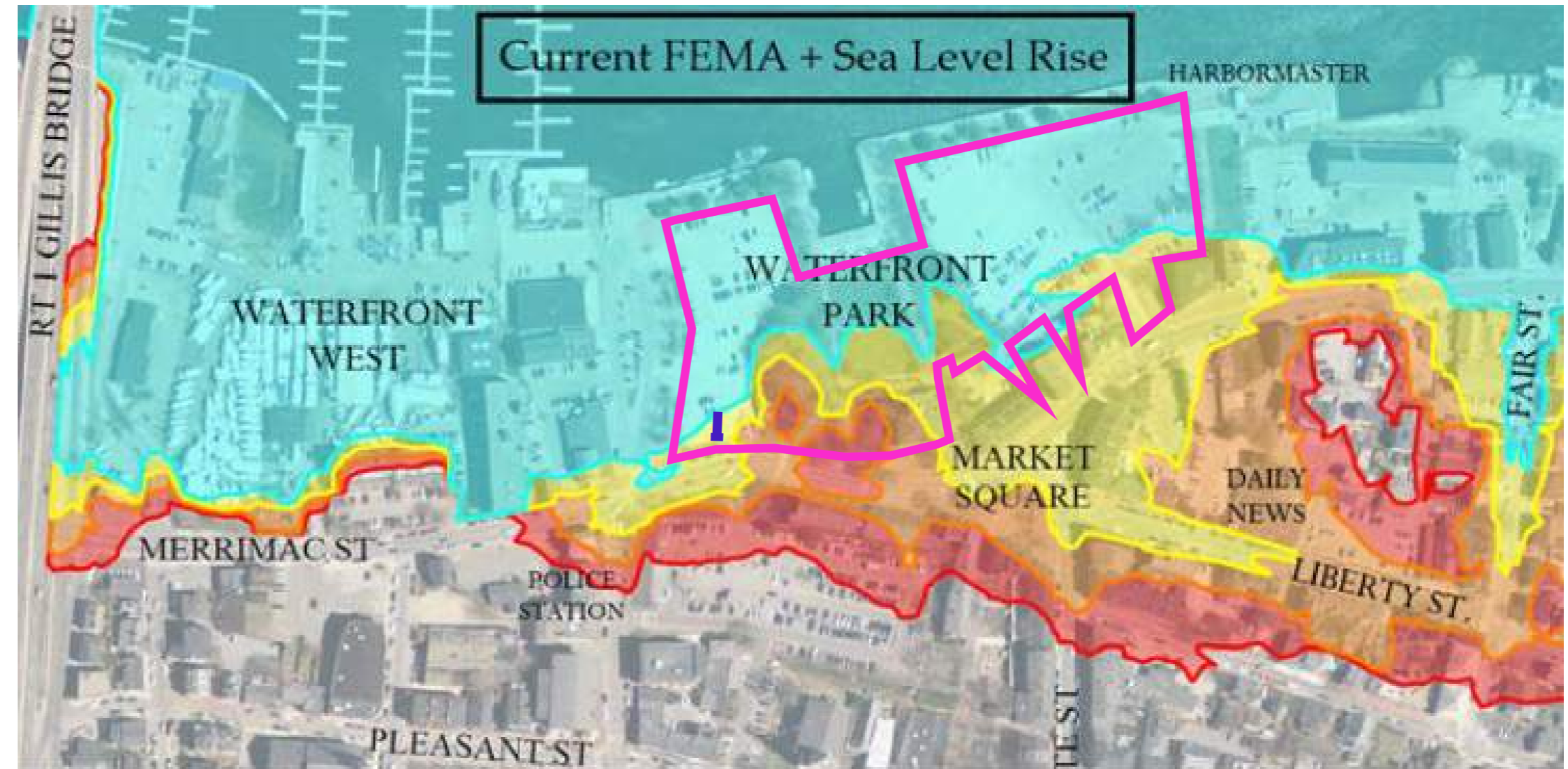


Appendix



Resilience – Bathtub Model

- FEMA 1% Annual Chance Floodplain
 - BFE = 12-13' NAVD88
- FEMA BFE + 36" SLR
 - Newburyport Climate Resiliency Plan map
- BH-FRM = 40" SLR by 2070
 - Basis of Newburyport Wetlands Regulations



LEGEND

FEMA +0'	Current Day
FEMA +2'	2050
FEMA +3'	2070
FEMA +6'	2100
CITY BOUNDARY	---

NOTE:

1. FEMA = 100 YEAR BASE FLOOD ELEVATION (BFE)
2. BFE'S ARE IN FEMA AE ZONES, UNLESS NOTED OTHERWISE.

PREPARED BY:
CITY OF NEWBURYPORT
ENGINEERING DIVISION
DATE: AUG 2019



DATA SOURCES:
MassGIS 2013/14 ORTHOMOSAIC and 2011 TOPOGRAPHIC DATA SETS
FEMA F.L.R.M'S JULY 3, 2012 and JULY 16th, 2014
DATUM: NAVD88

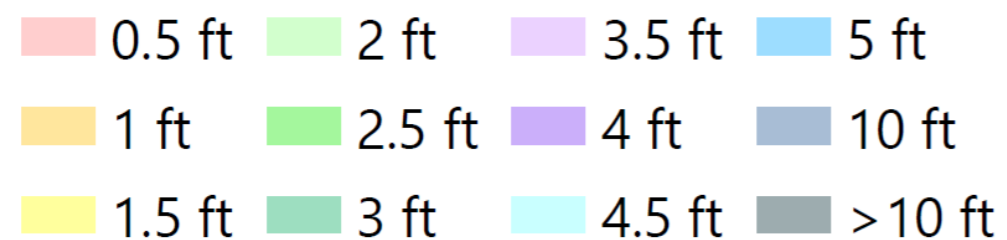
Resilience - Dynamic Model

- MC-FRM = Present Day
 - Accounts for coastal flood processes
 - Provides flood depths, not elevations
 - Shows smaller flood extent than FEMA + SLR



Resilience - Dynamic Model

- MC-FRM = 50" SLR by 2070
 - Accounts for coastal flood processes
 - Provides flood depths, not elevations
 - Includes Antarctic ice sheet melt
 - Shows smaller flood extent than FEMA + SLR








Resilience – Regulations & Policies

- Massachusetts Building Code
 - Build in accordance with flood-related portions of code
 - Applicable to extent of FEMA floodplain, BFE 12' NAVD88
- Newburyport Wetlands Regulations
 - Consider 40" of SLR by 2070
 - Applicable to the extent of LSCSF, Existing Ground Elevation 12' NAVD88
- Visitor Center is **OUTSIDE** of both areas


Schematic Cost By Construction Type

CONSTRUCTION COSTS	PARK	ARCHITECTURE
Site Preparation & Demo	\$322,948	
Earthwork	\$364,924	
Utilities & Infrastructure	\$528,186	\$18,000
Hardscape	\$2,292,936	\$35,678
Site Furnishings	\$604,538	
Lighting	\$150,000	
Landscaping	\$410,294	
Special Elements	\$150,000	
Visitor Center		\$1,200,000
Sub-Total	\$4,824,289	\$1,253,678
General Conditions/Gen Req's (8%)	\$385,943	\$100,294
Insurance + Bond (2%)	\$96,486	\$25,074
Design + Pricing Contingency (10%)	\$482,429	\$125,368
Construction Contingency (7.5%)	\$361,822	\$94,025
Escalation Contingency (4%)	\$192,972	\$50,147
Construction Administration (2%)	\$96,486	\$25,074
Markup Total	\$1,616,137	\$419,982
CONSTRUCTION TOTAL	\$6,440,426	\$1,673,660

.....> **PARK HARDSCAPE**

	ASPHALT PAVING	\$866,925
	GRANITE WALLS	\$473,550
	BRICK PAVING	\$468,952
	UNIT PAVERS	\$428,461
	CONCRETE PAVING	\$55,048

VISITOR CENTER HARDSCAPE

	CONCRETE PAVERS	\$35,678
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Potential Donor Items

DONOR ITEMS	PHASE	QUANTITY	UNIT PRICE	TOTAL
Indigenous Peoples Plaza	Phase 1	LS	\$113,676	\$113,676
Sculpture at West Embayment Plaza	Phase 1	1	\$50,000	\$50,000
Picnic Tables	Phase 1	4	\$10,925	\$43,700
Hammocks	Phase 1	3	\$1,954	\$5,862
Swing (lounge style)	Phase 1	3	\$20,493	\$61,479
Swing (seat style)	Phase 1	9	\$17,109	\$153,977
Benches	Phase 1	10	\$4,015	\$40,150
Phase 1 Subtotal				\$486,843
Adirondack Chairs	Phase 2	30	\$1,150	\$17,109
Benches	Phase 2	2	\$4,015	\$8,030
Visitors Center	Phase 3	LS	\$967,766	\$967,766
Phase 2+3 Subtotal				\$992,905
Total				\$1,461,749

Interim Conditions

Restroom Alternatives

Relocating the existing trailer:

- Relocation Cost: \$118,100
- Better location for an extended period between Phase 1 and Phase 3 construction
- Will be out of commission during Phase 3 construction

Alternatives:

- Leave trailer in current location until Phase 3 is complete
- Bring in porta potties during construction of all phases of construction + demo trailer in Phase 1
- Demo Cost: \$17,300



Interim location of restroom trailer

Existing building to be demolished

Existing restroom trailer to be relocated