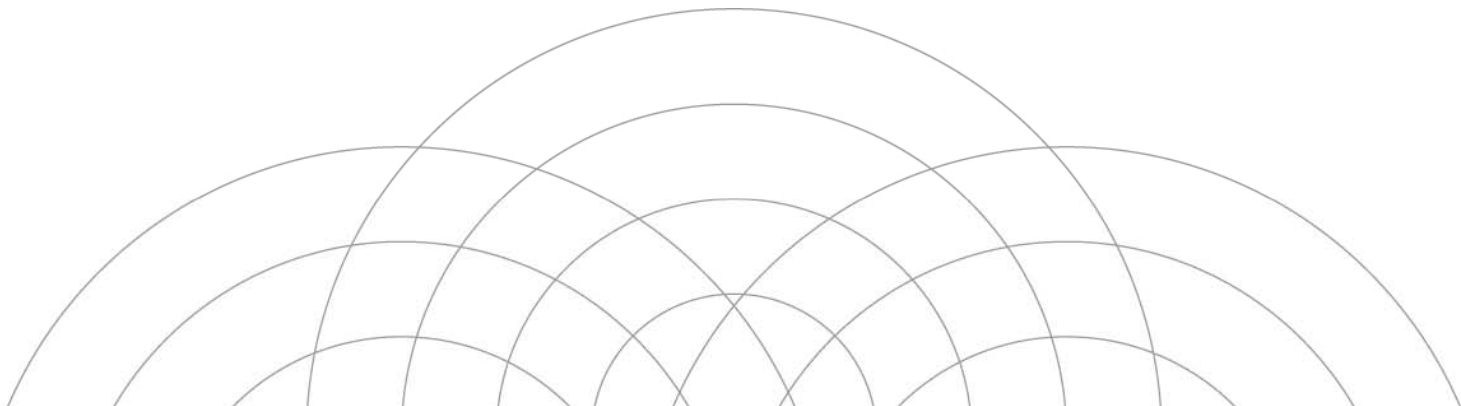


# COCHECO WATERFRONT

*Preliminary Site Concepts*

January 19, 2016





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*Real Estate Advisory Services*

Barry M. Abramson

Financial Analysis

PROJECT TEAM

COCHECO WATERFRONT

*Project Team Introductions*

*Project Process*

*Site Issues*

Projected Sea Rise/Shoreline Stabilization

Site Grading/Bluff Excavation

Contaminated Soil and Tannery Waste Remediation

Waterfront Park and Program

Boathouse/Dock Design

Street Layout/Site Connections

*Preliminary Site Concepts*

*Next Steps*

AGENDA

COCHECO WATERFRONT

### *Conceptual Design*

Task 1: Pre-Design

Task 2: Preliminary Site Concepts

Task 3: Draft Concept Plans

### *Fast-Tracked Engineering*

Task 4: Soil Remediation Plans and Permitting

Task 5: Dock Design and Permitting

### *Future Tasks (Phase 2)*

Soil Remediation Oversight

Dock Construction Oversight

Detailed Site Planning/Engineering

Developer RFP Assistance



*Project Team Introductions*

*Project Process*

***Site Issues***

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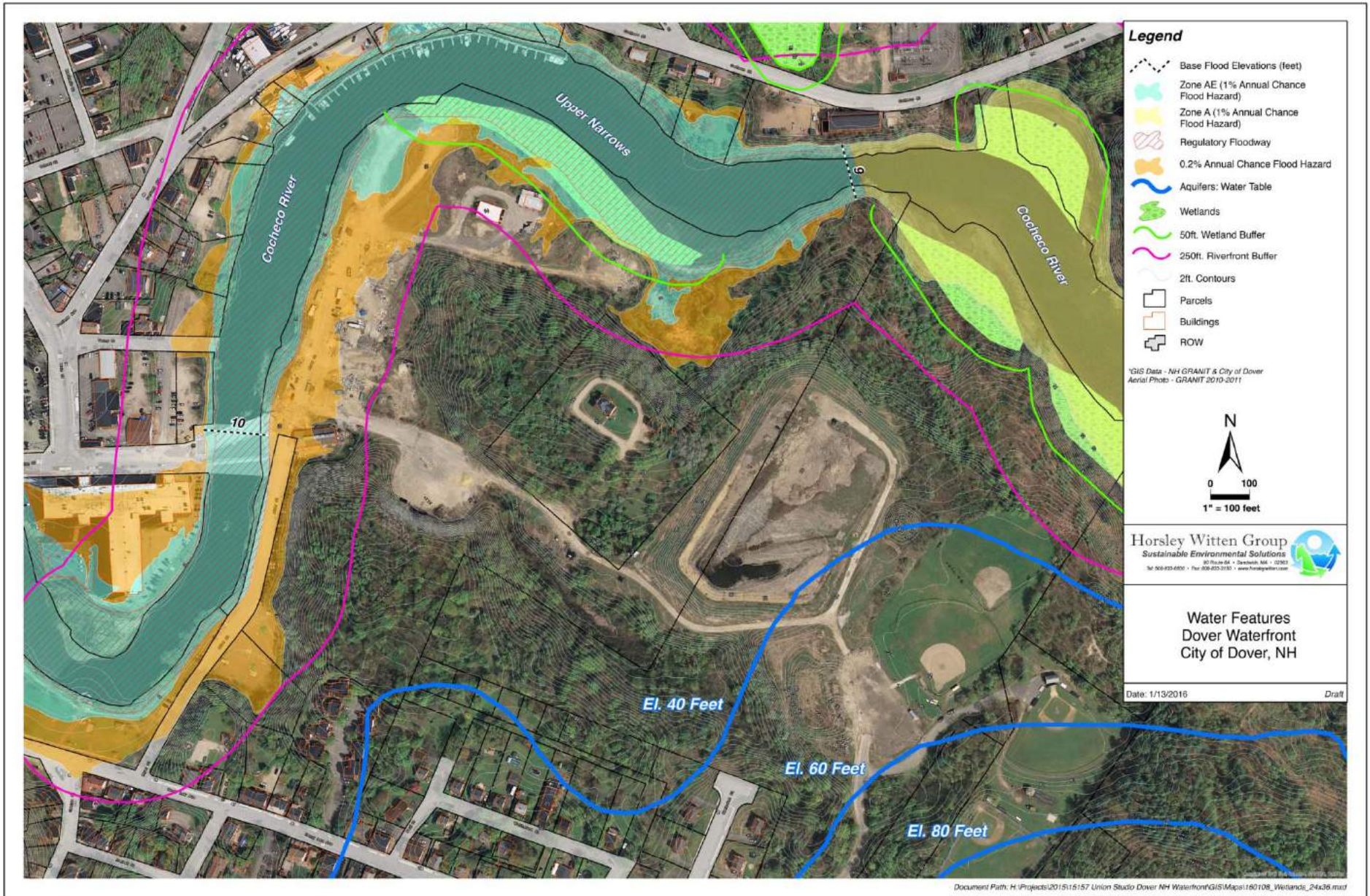
*Next Steps*



SEA RISE

COCHECO WATERFRONT

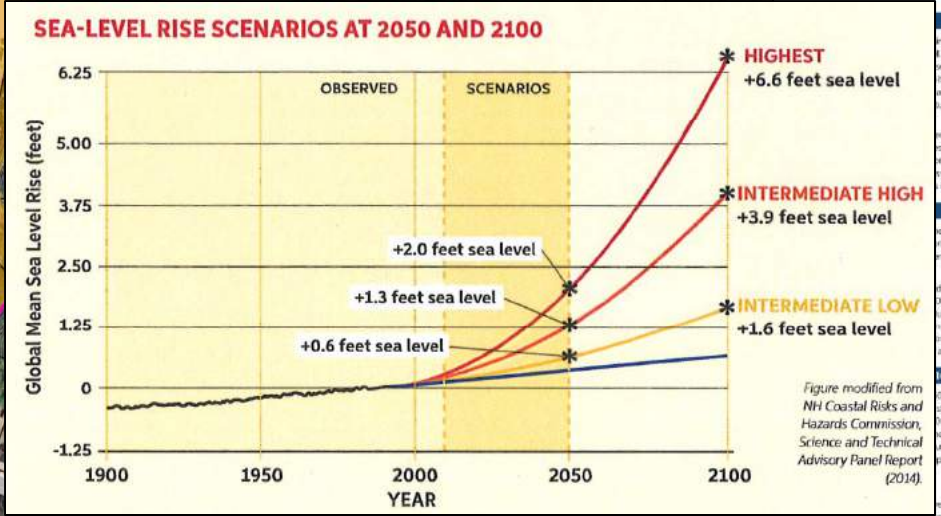
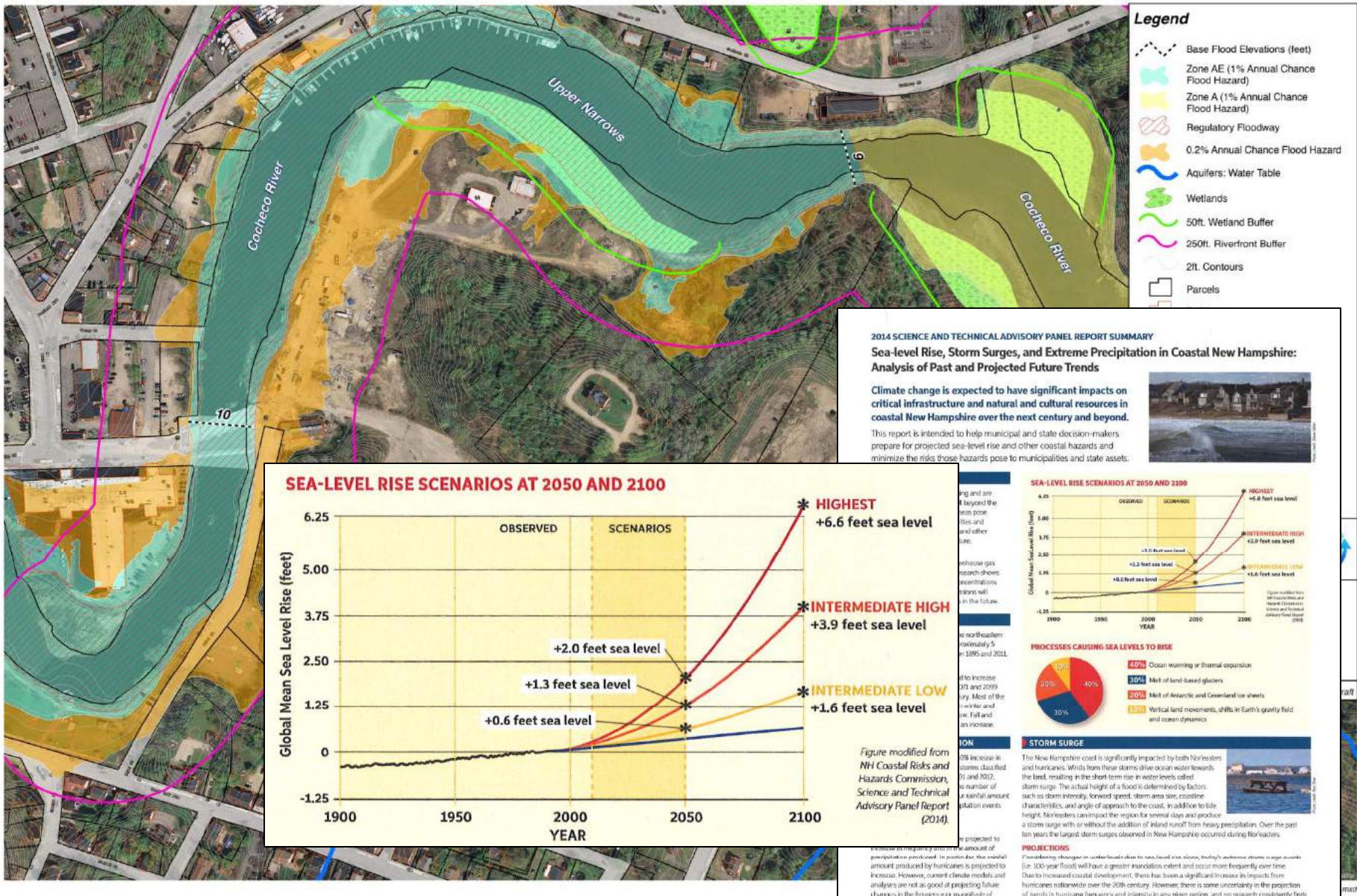




SEA RISE

COCHECO WATERFRONT





### STORM SURGE

The New Hampshire coast is significantly impacted by both Nor'easters and hurricanes. Winds from these storms drive ocean water towards the land, resulting in the short term rise in water levels called storm surge. The actual height of a flood is determined by factors such as storm intensity, forward speed, storm area size, coastline characteristics, and angle of approach to the coast. In addition to tide height, Nor'easters can impact the region for several days and produce a storm surge with or without the addition of inland runoff from heavy precipitation. Over the past ten years the largest storm surges observed in New Hampshire occurred during Nor'easters.

### PROJECTIONS

Continuing changes in water levels show the most rapid rise during today's autumn storms in surge events (i.e. 100-year flood) will have a greater inundation extent and occur more frequently over time. Due to increased coastal development, there has been a significant increase in impacts from hurricanes nationwide over the 20th century. However, there is some uncertainty in the projection of trends in hurricane frequency and intensity in any given region, and no research conclusively finds a trend in the frequency and intensity of Nor'easters.

SEA RISE

COCHECO WATERFRONT





SEA RISE

COCHECO WATERFRONT





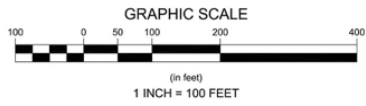
SEA RISE

COCHECO WATERFRONT



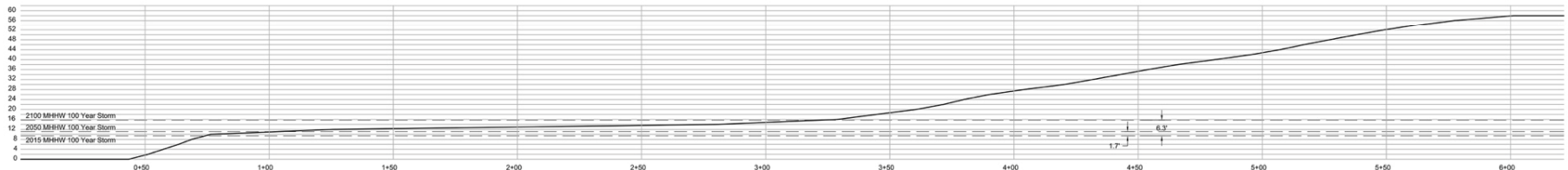
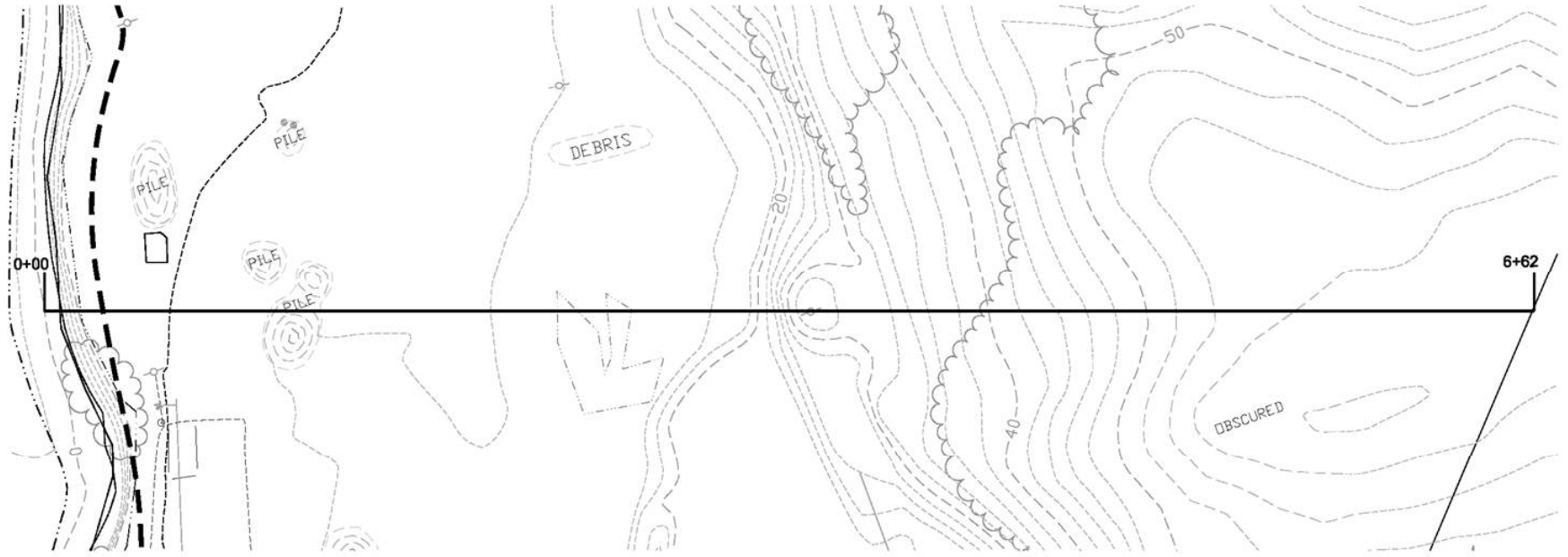


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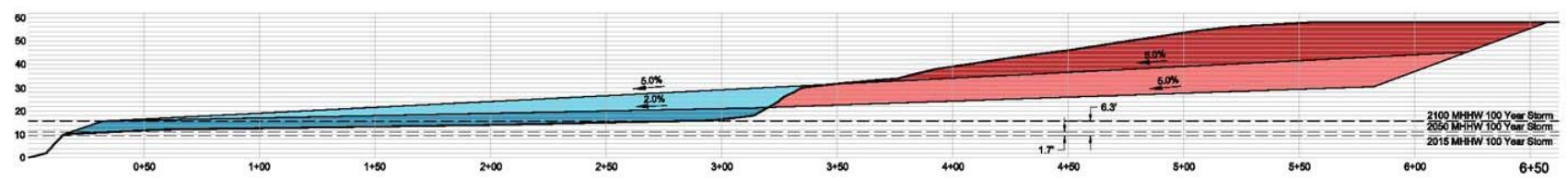


SITE GRADING

COCHECO WATERFRONT



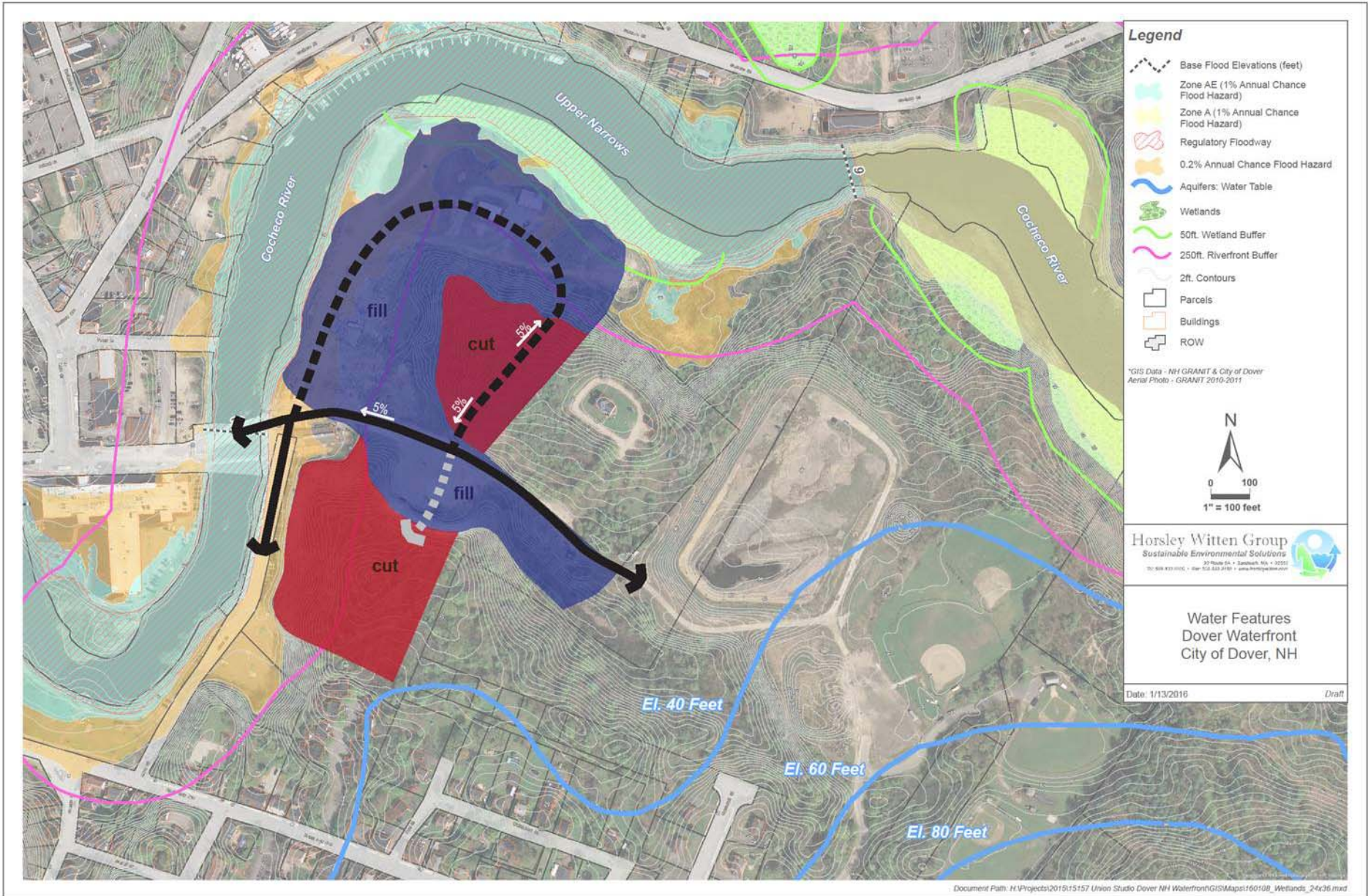
*Cut material from high areas to fill low areas to address sea rise and create buildable land*



SITE GRADING

COCHECO WATERFRONT

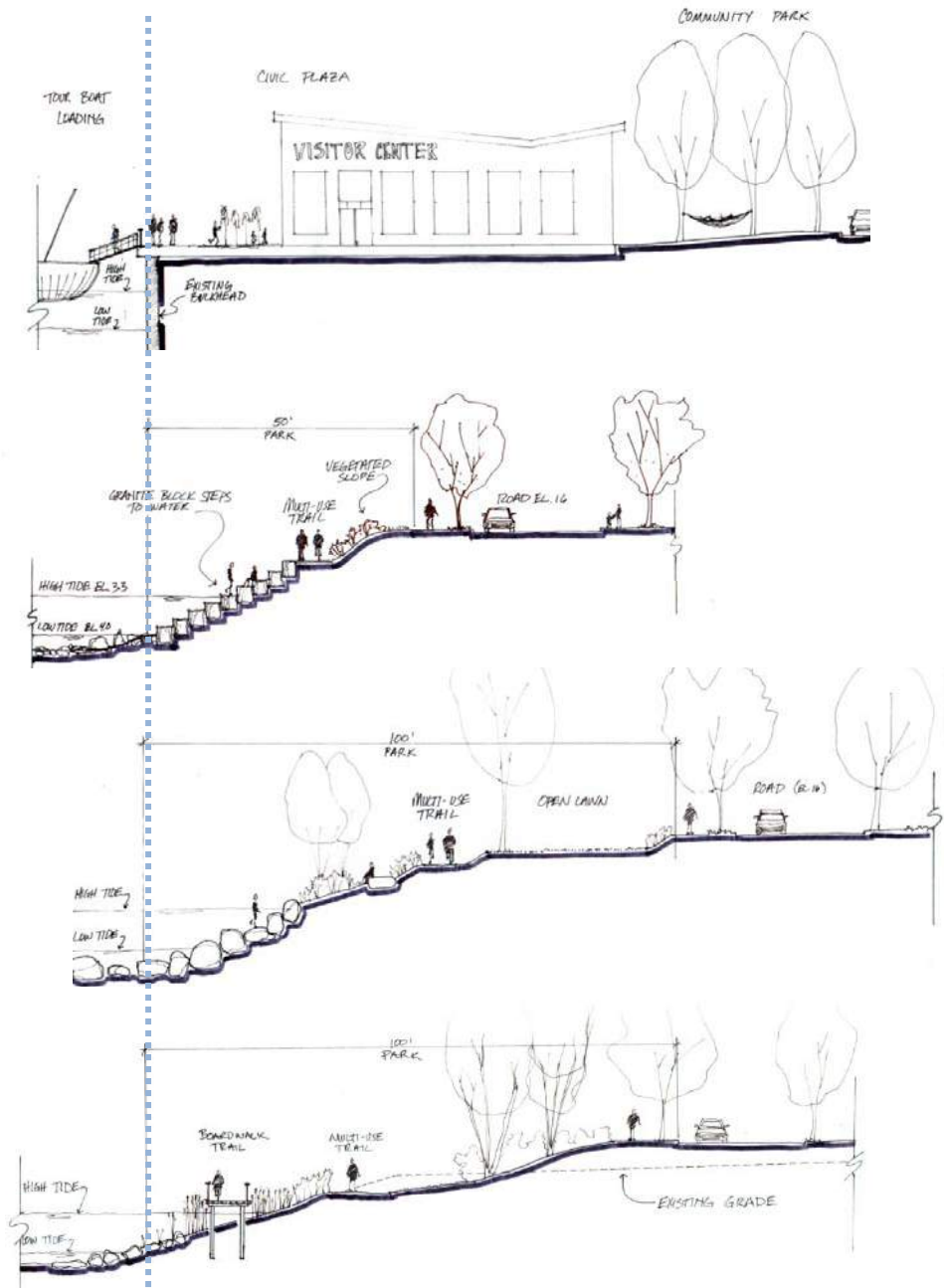




SITE GRADING

COCHECO WATERFRONT





SITE GRADING

COCHECO WATERFRONT

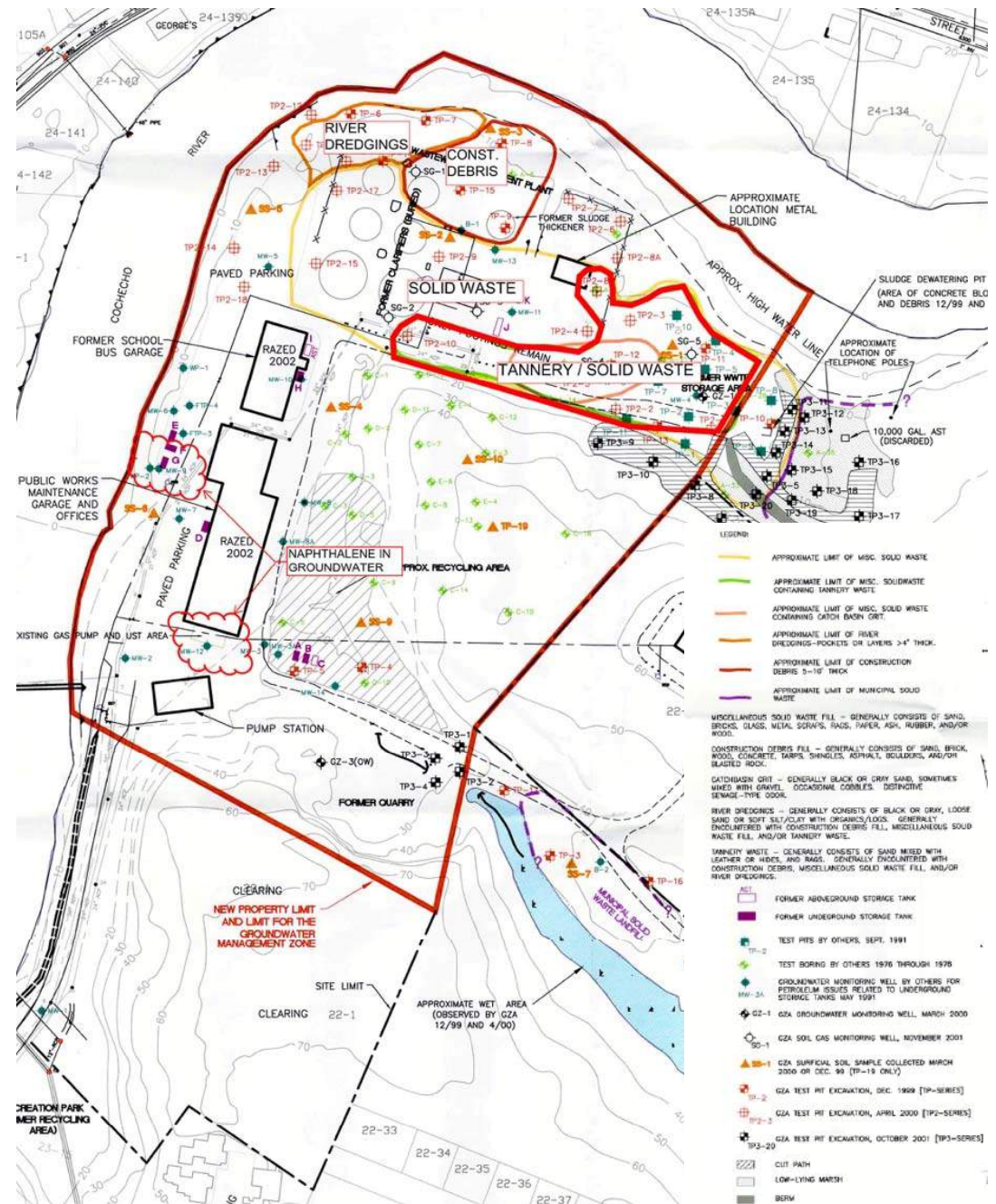
Groundwater Management Zone – limited petroleum and arsenic/manganese impacts

Soils at north end impacted by tannery wastes, solid waste, construction debris, river dredgings, elevated methane gas & VOCs – buildings may need vapor intrusion barriers

NHDES requiring an updated Remedial Action Plan (RAP):

- Possible additional soil sampling
- Updated soil gas survey
- Plan for waste removal
- Capping of waste to remain
- Activity and Use Restriction
- Restrict excavation in impacted areas
- Soil and groundwater management plan

RAP can be developed once Preferred Concept is approved and site grades have been established (Phase 2)



## SOIL REMEDIATION

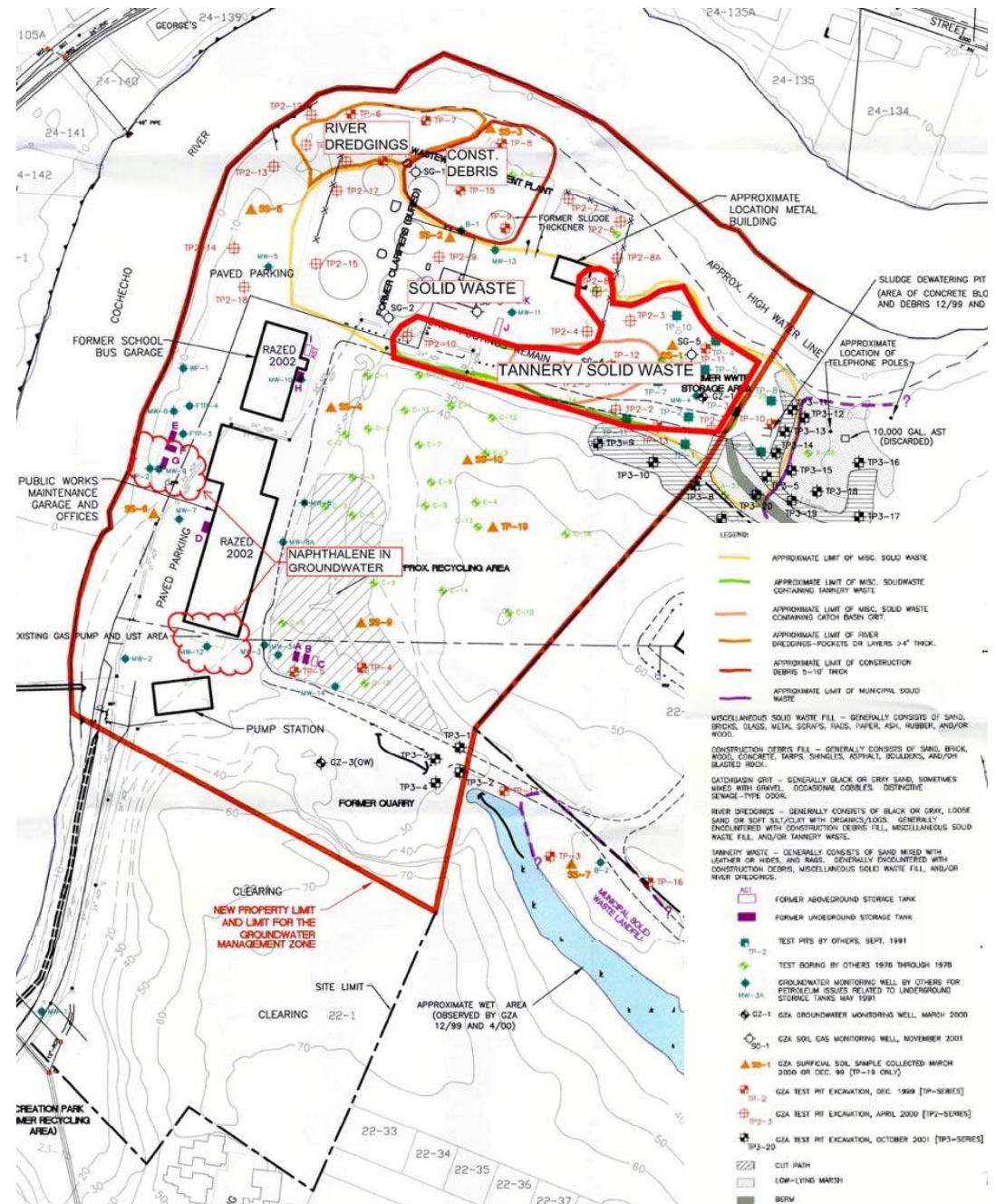
## COCHECO WATERFRONT



## Next Steps

Meet with NHDES to discuss integrated permitting approach to the site (wetlands, petroleum, solid waste/brownfields, alteration of terrain, etc.)

- Petroleum-impacted areas may be eligible for funding assistance from NHDES
- Removal of tannery wastes will be proposed to NHDES as an interim step (limited source removal action) so that the tannery wastes can be removed from the site and disposed of in the adjacent dredge cell and the dredge cell can then be closed.
- Assuming tannery waste removal is approved in advance of full RAP submission, bid documents for waste removal can then be prepared
- State may require more waste be removed to limit source impacts to groundwater including solid waste



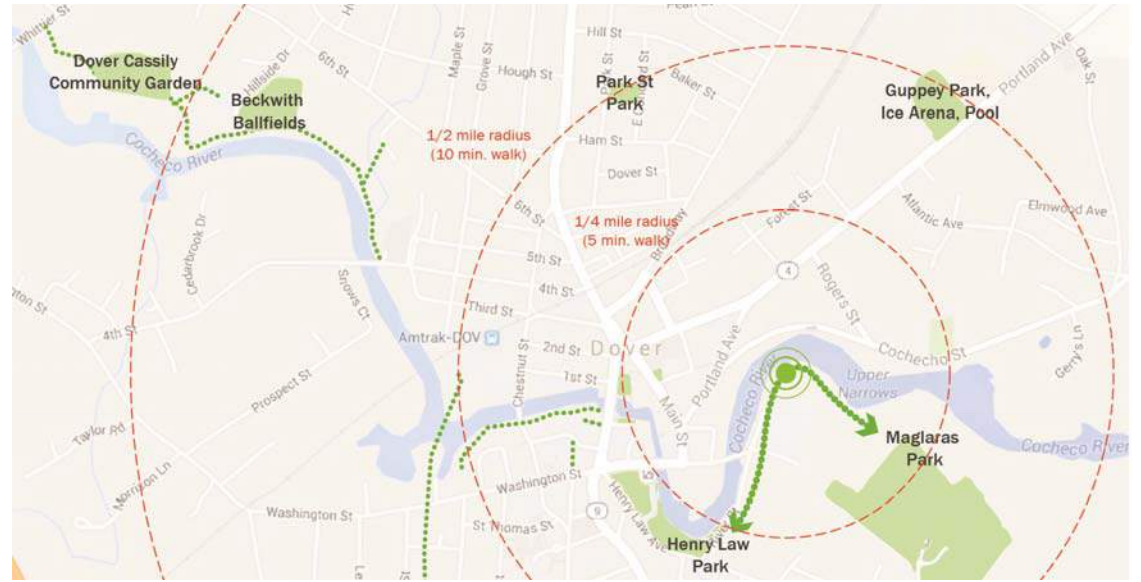
SOIL REMEDIATION

COCHECO WATERFRONT



## *Preliminary Waterfront Park Goals*

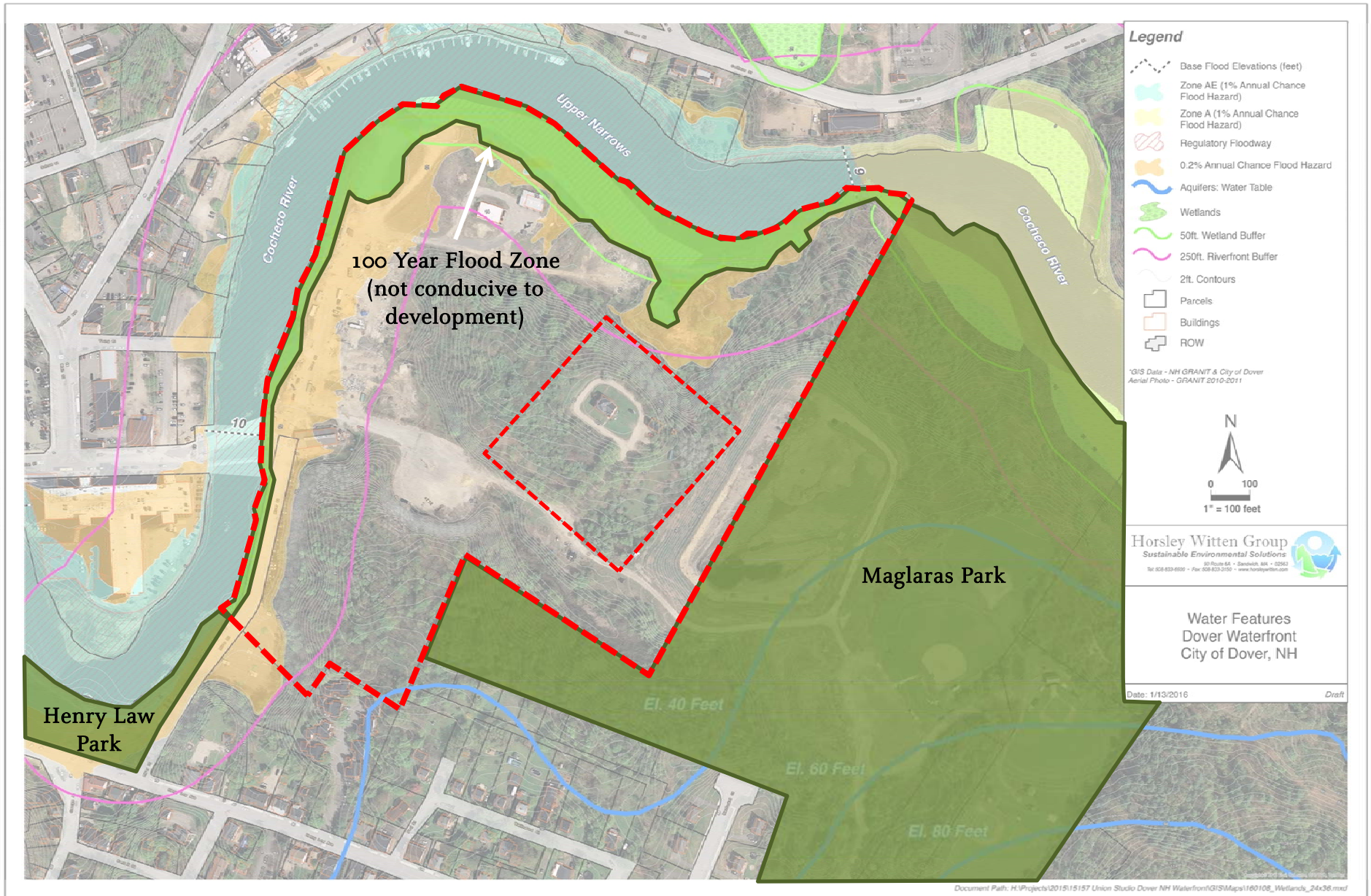
1. Community Park that is both connection and destination
2. Home to ADA accessible public non-motorized boat dock (\$150,000 LWCF Grant)
3. Designed for year-round activity and vibrancy
4. Accommodate overflow/expansion of City festivals and events
5. Built to withstand flooding, both current and projected.



WATERFRONT PARK

COCHECO WATERFRONT

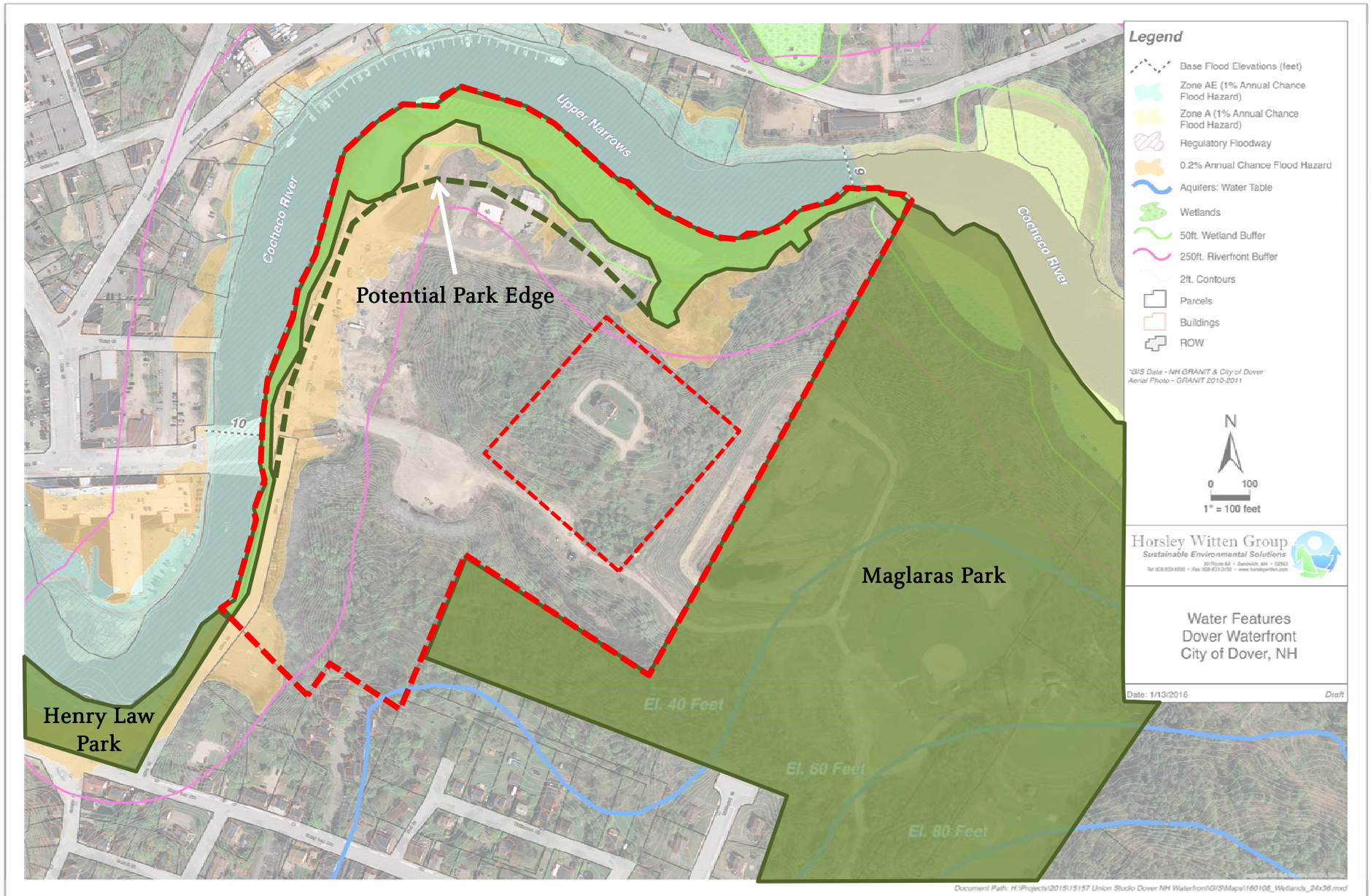




WATERFRONT PARK

COCHECO WATERFRONT

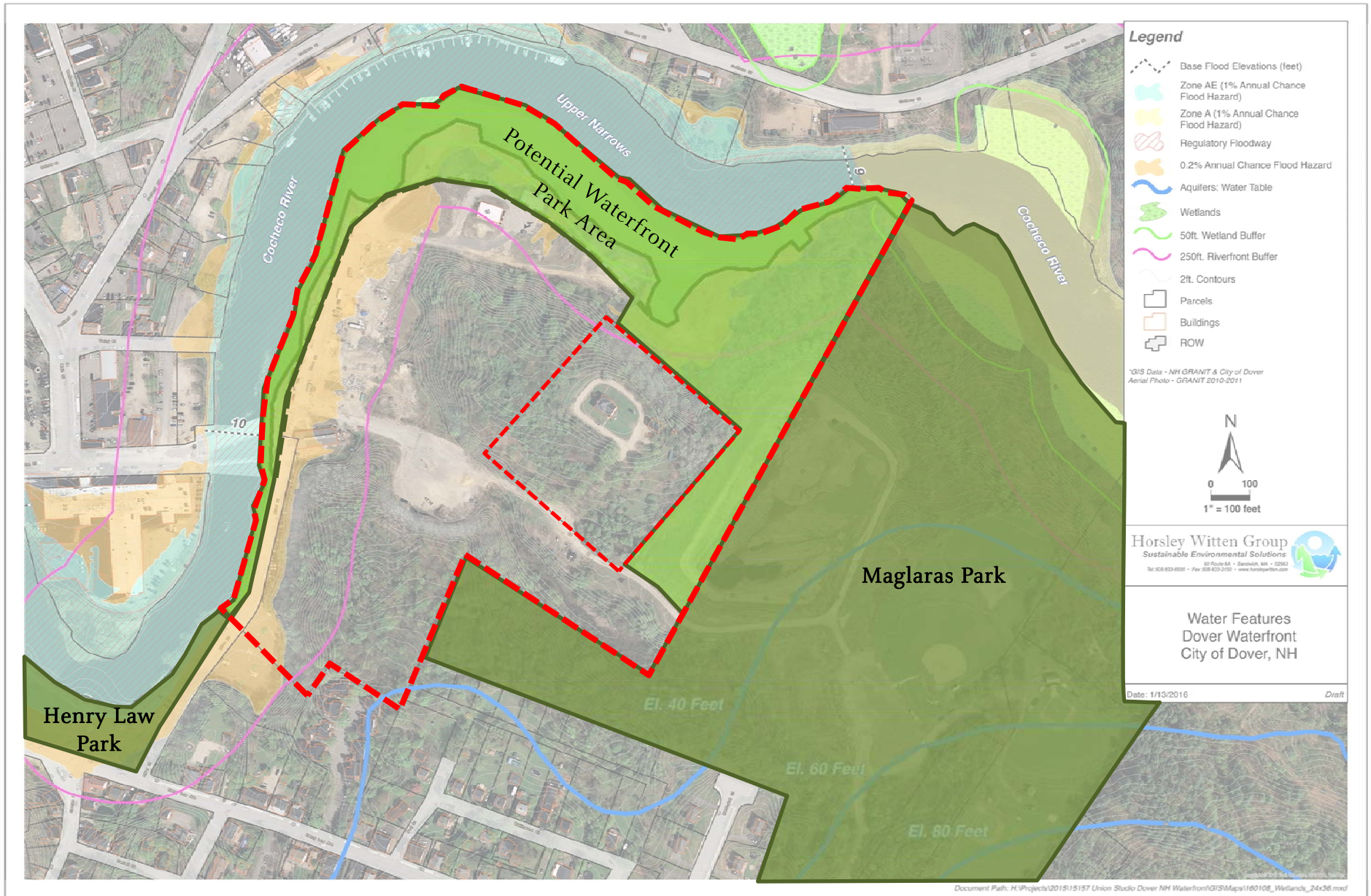




WATERFRONT PARK

COCHECO WATERFRONT





WATERFRONT PARK

COCHECO WATERFRONT



*Waterfront Park Programming*

*Water-Based Recreation*

(paddle launch, boathouse, dock)

12,000 sf – 34,000 sf



*Civic Space*

(multi-use plaza, visitor's center)

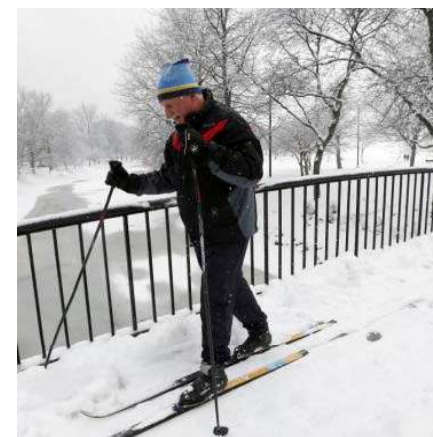
25,000 sf – 40,000 sf



*Community Recreation*

(trails, parklands, play areas)

37,000 sf – 69,000 sf

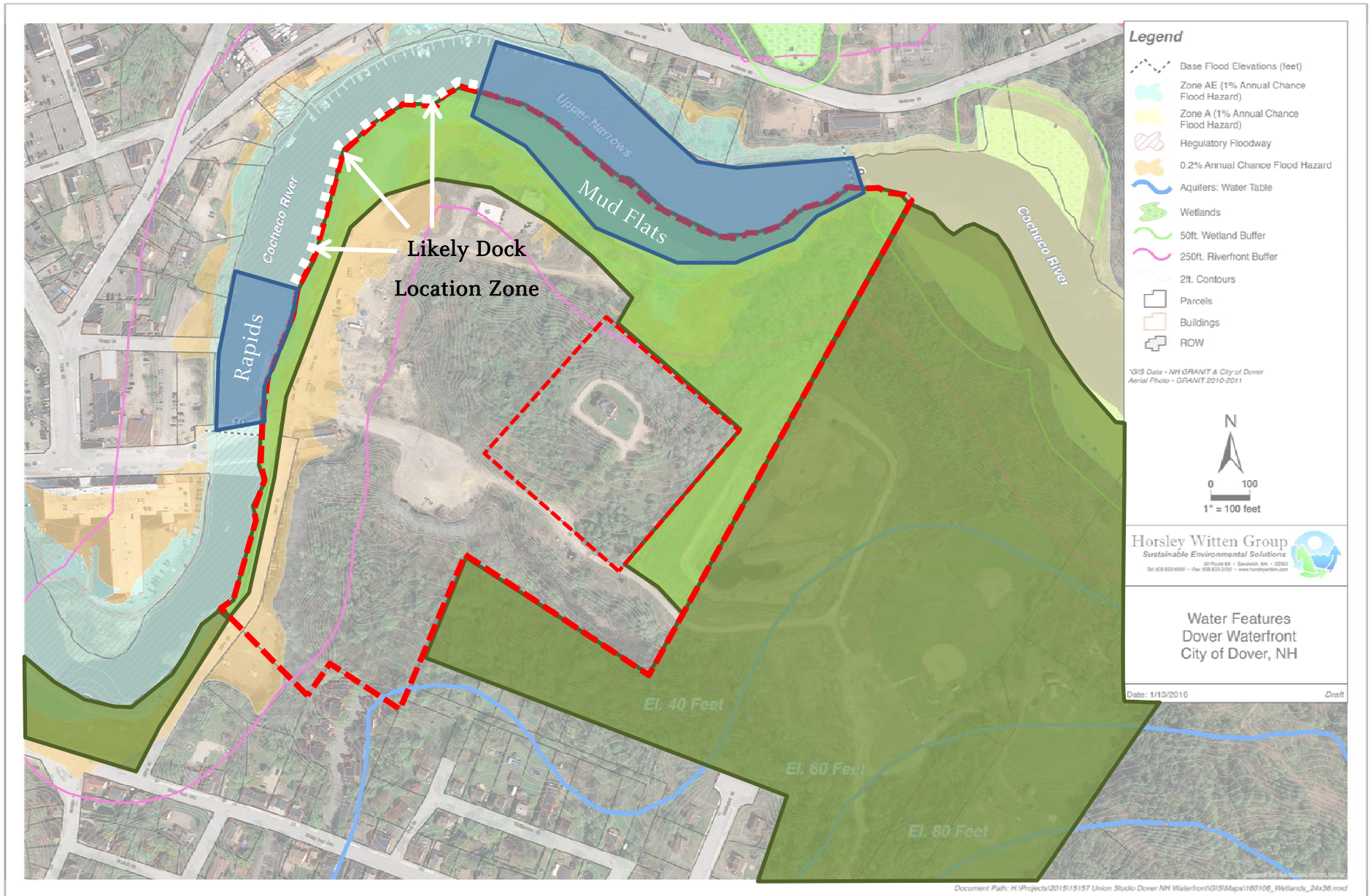


**Total 74,000sf – 143,000 sf**  
(1.7 acres – 3.3 acres)

WATERFRONT PARK

COCHECO WATERFRONT

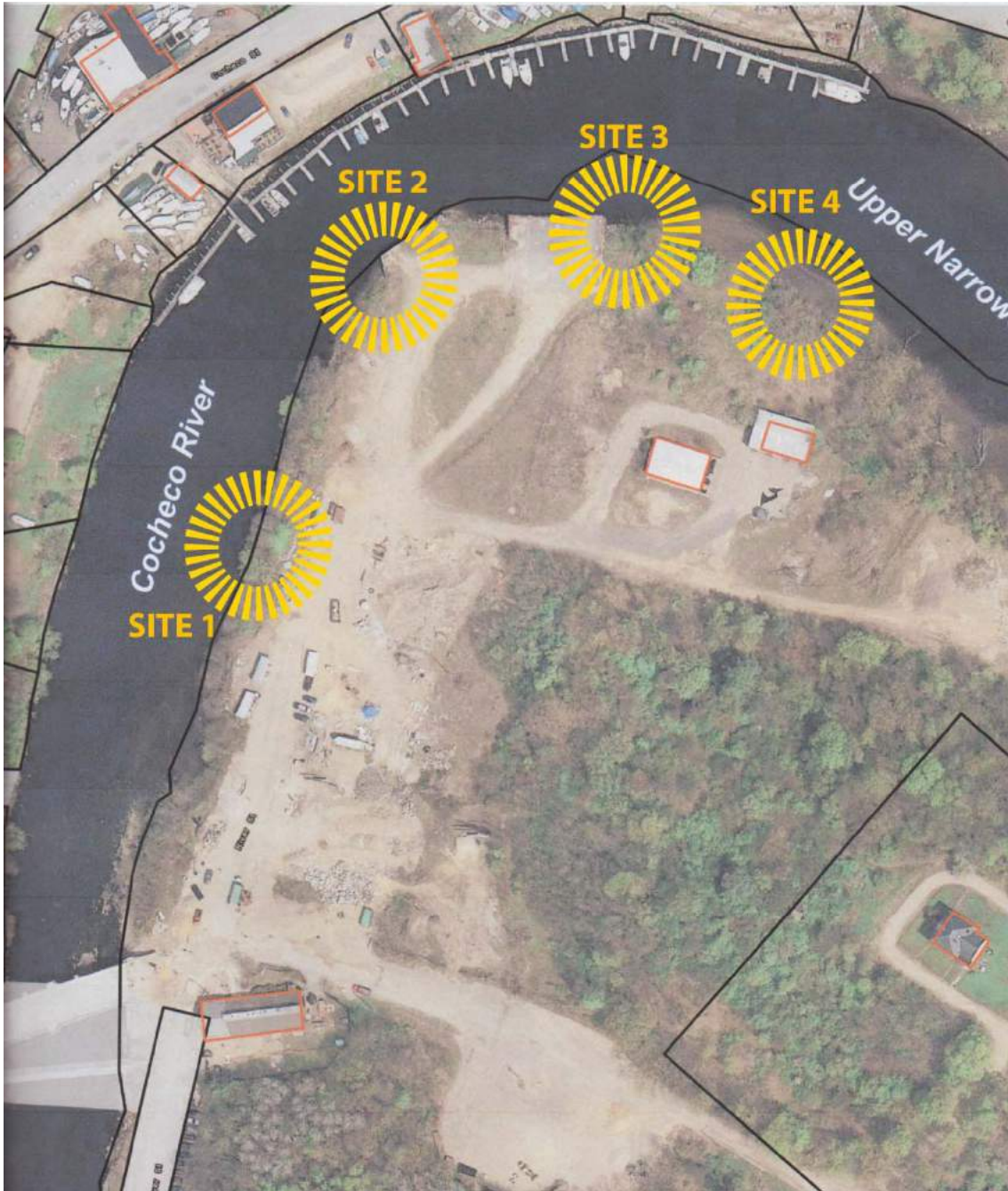




BOATHOUSE/DOCK DESIGN

COCHECO WATERFRONT





*Site 1:*

Pros: Minimizes conflict with power boats, visible from the bridge

Cons: Potential boathouse could disrupt more 'urban' waterfront edge

*Site 2:*

Pros: Could attach to existing bulkhead to reduce costs

Cons: Potential conflicts with power boats

*Site 3:*

Pros: Widest part of channel before mudflats will reduce conflict with power boats

Cons: Conflicts with potential tour boat tie-up at existing sheet pile

*Site 4:*

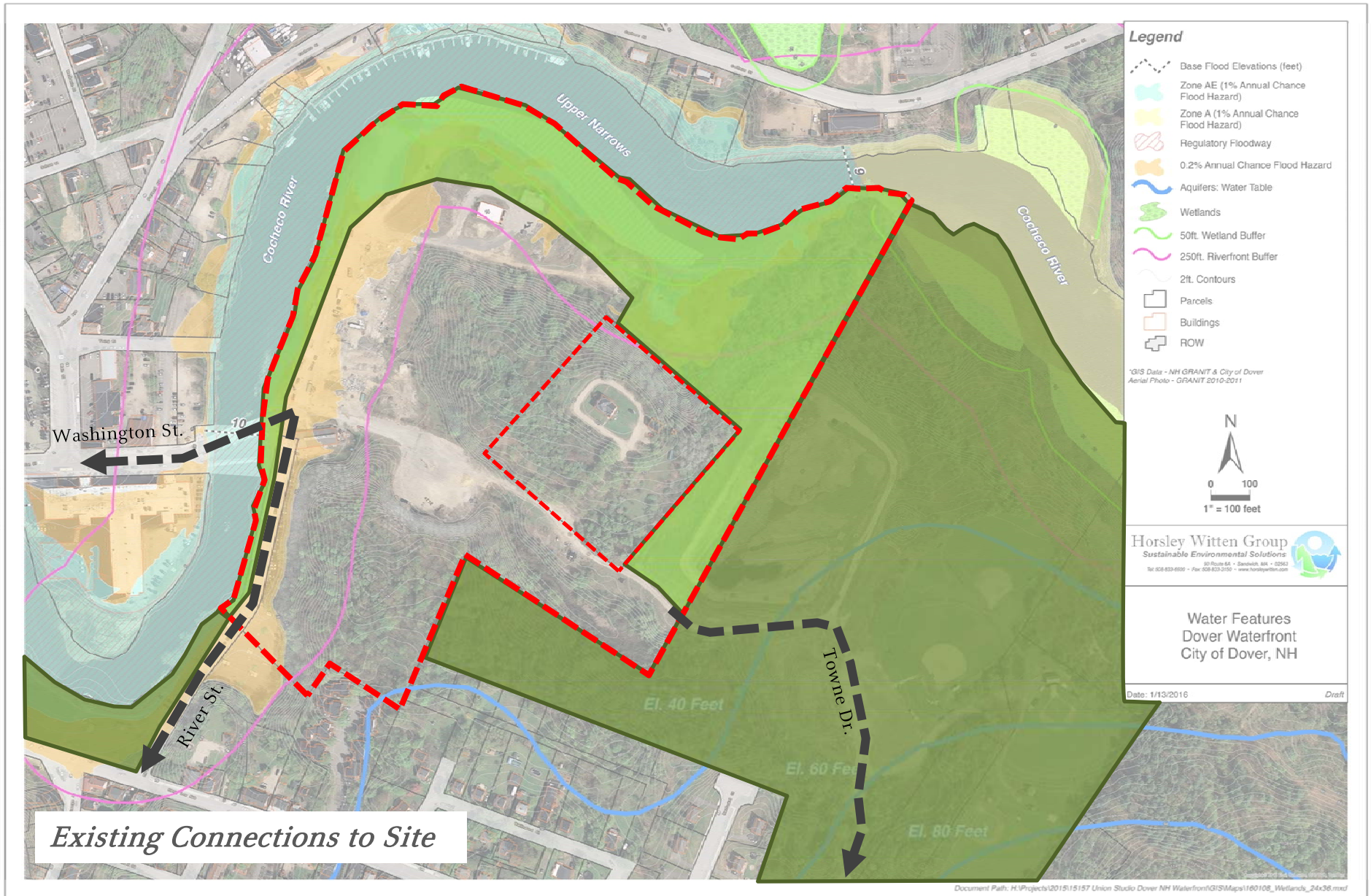
Pros: Least disruptive to public waterfront

Cons: Building the dock over the mudflats may require a larger structure and helical piles which will increase costs

BOATHOUSE/DOCK DESIGN

COCHECO WATERFRONT

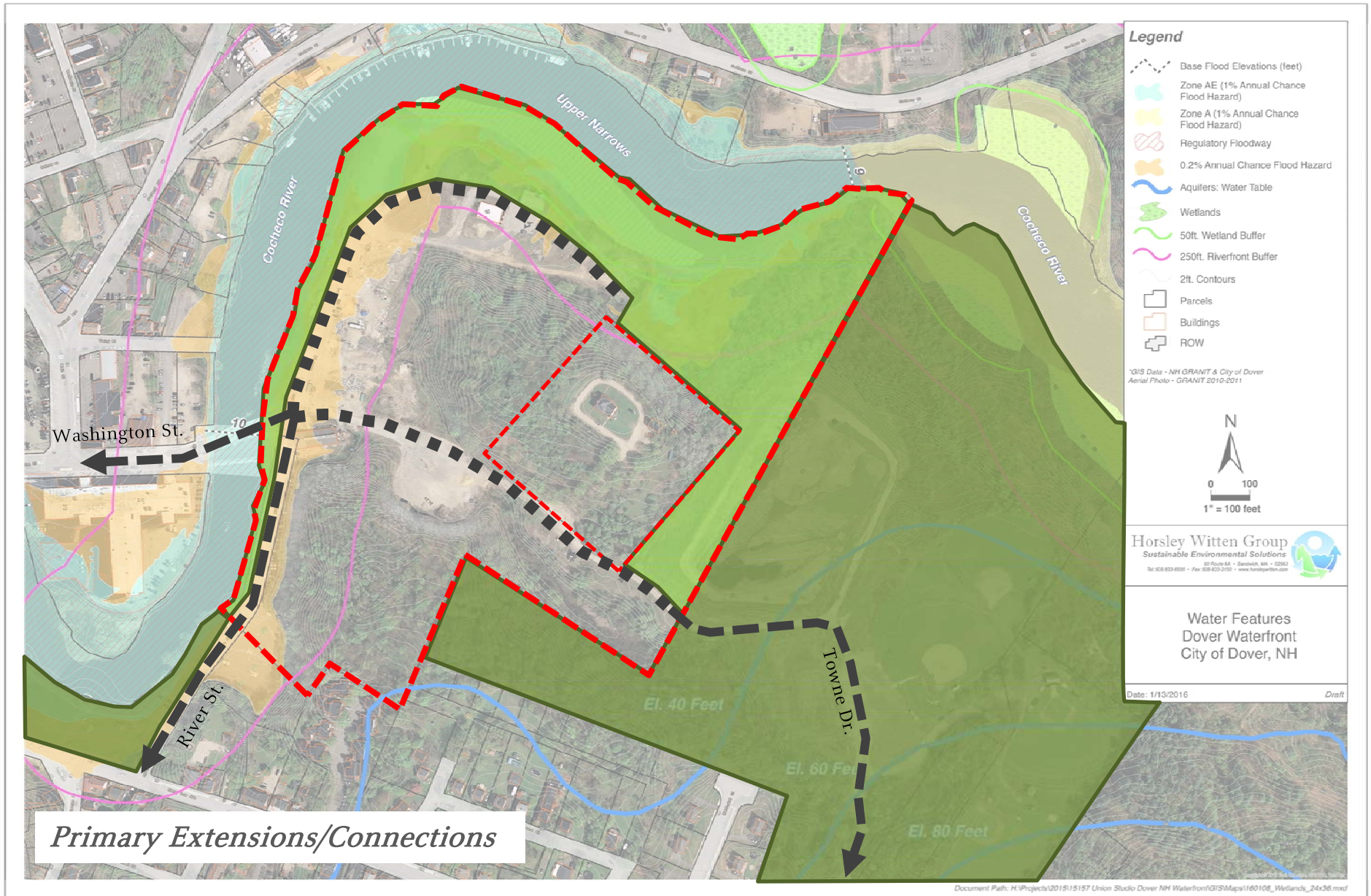




SITE CONNECTIONS

COCHECO WATERFRONT





SITE CONNECTIONS

COCHECO WATERFRONT





SITE CONNECTIONS

COCHECO WATERFRONT





SITE CONNECTIONS

COCHECO WATERFRONT

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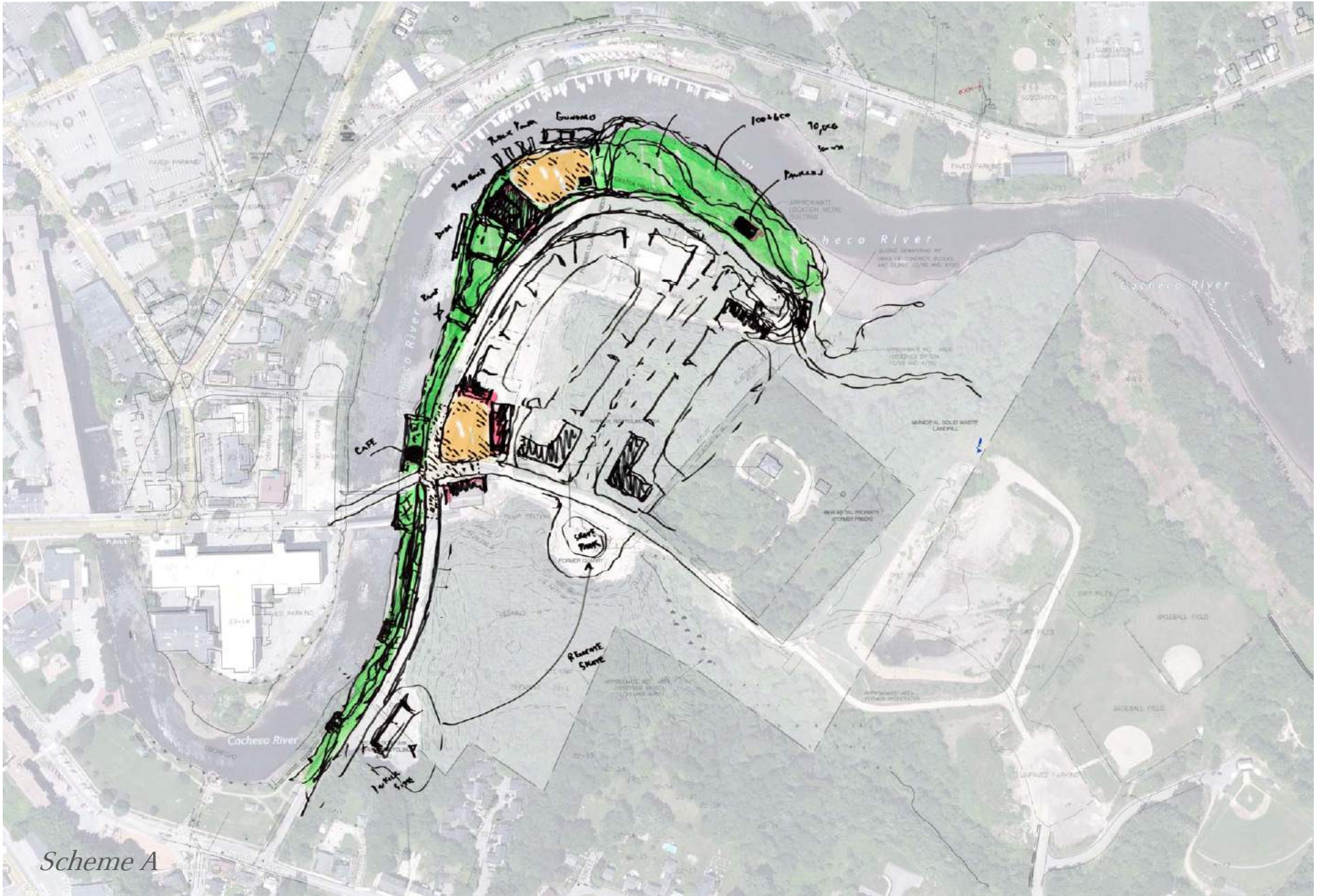
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*Preliminary Site Concepts*

*Next Steps*



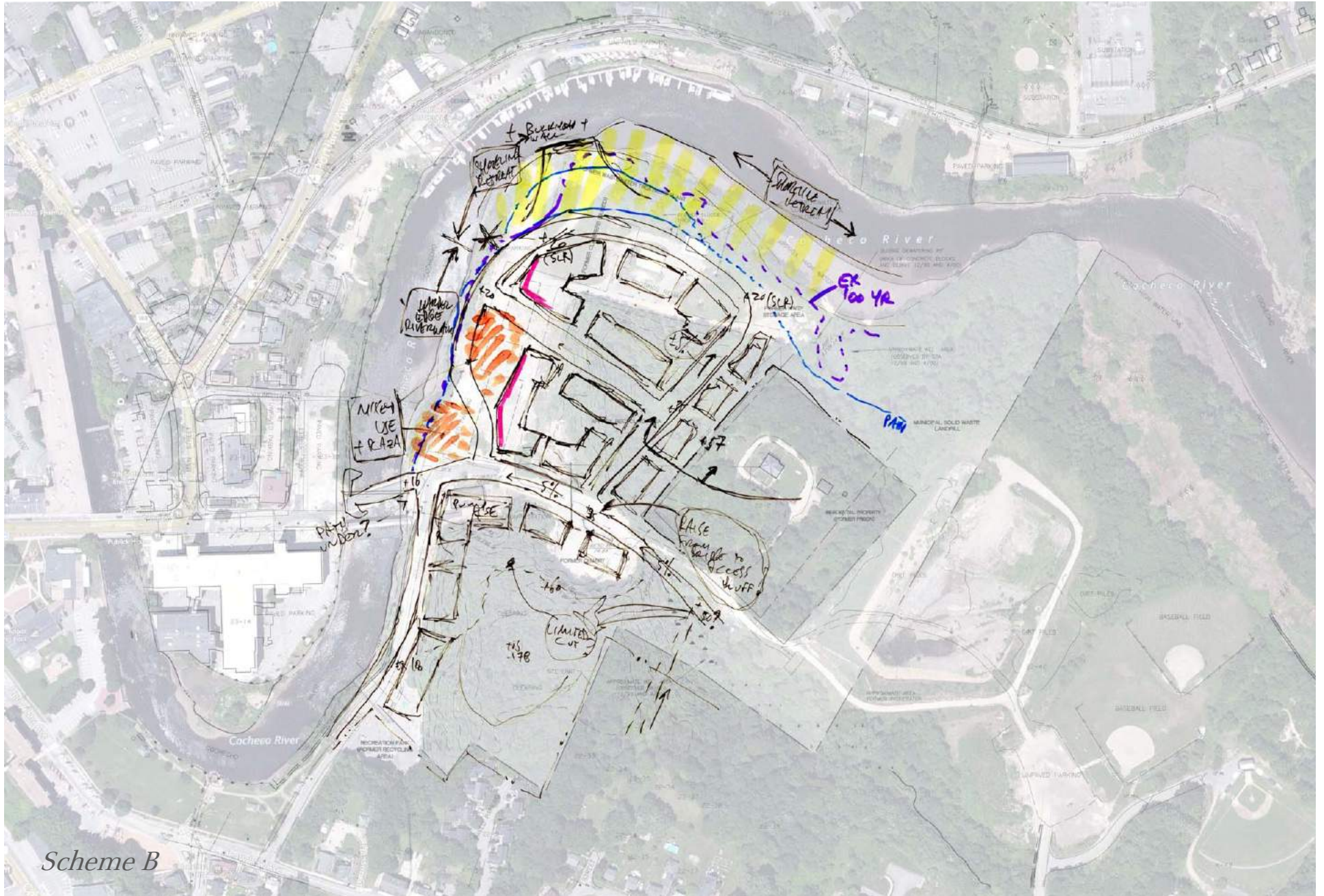


*Scheme A*

PRELIMINARY SITE CONCEPTS

COCHECO WATERFRONT



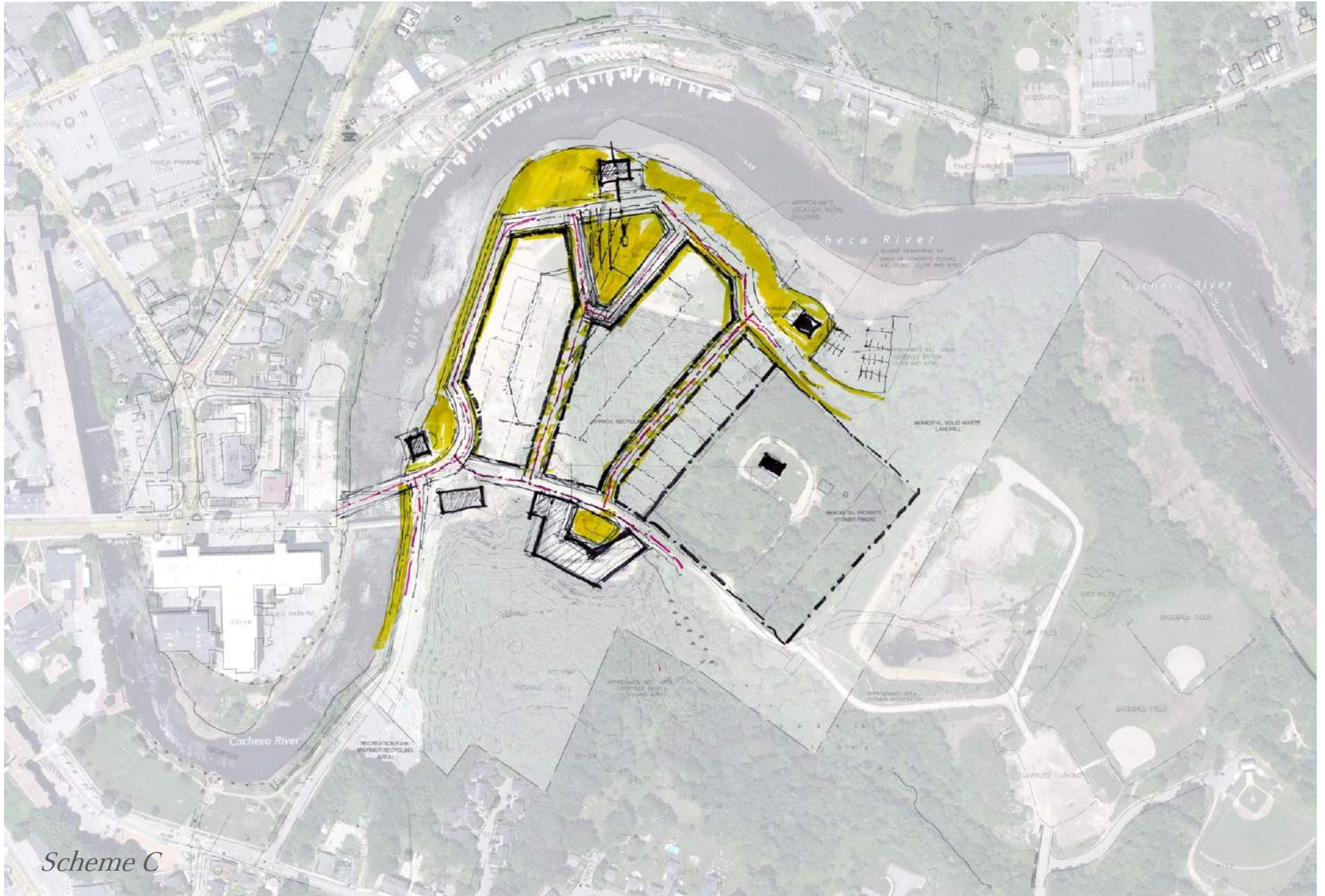


Scheme B

PRELIMINARY SITE CONCEPTS

COCHECO WATERFRONT





*Scheme C*

PRELIMINARY SITE CONCEPTS

COCHECO WATERFRONT





*Options for Intersection of  
Washington and River Streets*

PRELIMINARY SITE CONCEPTS

COCHICO WATERFRONT





*Options for Bluff  
Development/Excavation*

PRELIMINARY SITE CONCEPTS

COCHECO WATERFRONT

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Preliminary Permit/Approval Meetings

January/February

~~Task 2: Preliminary Site Concepts~~

Task 3: Draft Concept Plans

February/March

*Fast-Tracked Engineering*

Task 4: Soil Remediation Plans and Permitting

April/May/June

Task 5: Dock Design and Permitting

April/May/June

NEXT STEPS

COCHECO WATERFRONT