

**MAINE** is for  
**SHORELINES**



**Bowdoinham's Living Shoreline and Boat Launch Design**



# Meeting Agenda

- Overview of Bowdoinham Masterplan – Park Space for People
- Phase I Implementation Focus – Shoreline Access, Shoreline Stabilization
- Breakout Workgroups:
  - Group A: Shoreline Access – Hand-Carry Boat Launch
    - Concepts 1, 2, 3
    - Feedback and Discussion
  - Group B: Shoreline Stabilization - Living Shoreline Restoration
    - Concepts 1,2,3
    - Feedback and Discussion
  - Re-Group and summary of comments to all
  - General Q&A (next steps, process, etc. 5-10mins.)



# Project Locations



Bowdoinham

Philip Maily Waterfront Park & Boat Launch

Public Works Redevelopment Site

Maine Central R.R.

Hand-carry boat launch and living shoreline stabilization Areas

Cathance River

River Road



Maily Waterfront Park Boat launch



Existing Unstable Shore line and debris



Existing Shoreline with less impacts





# Masterplan

Cathance River

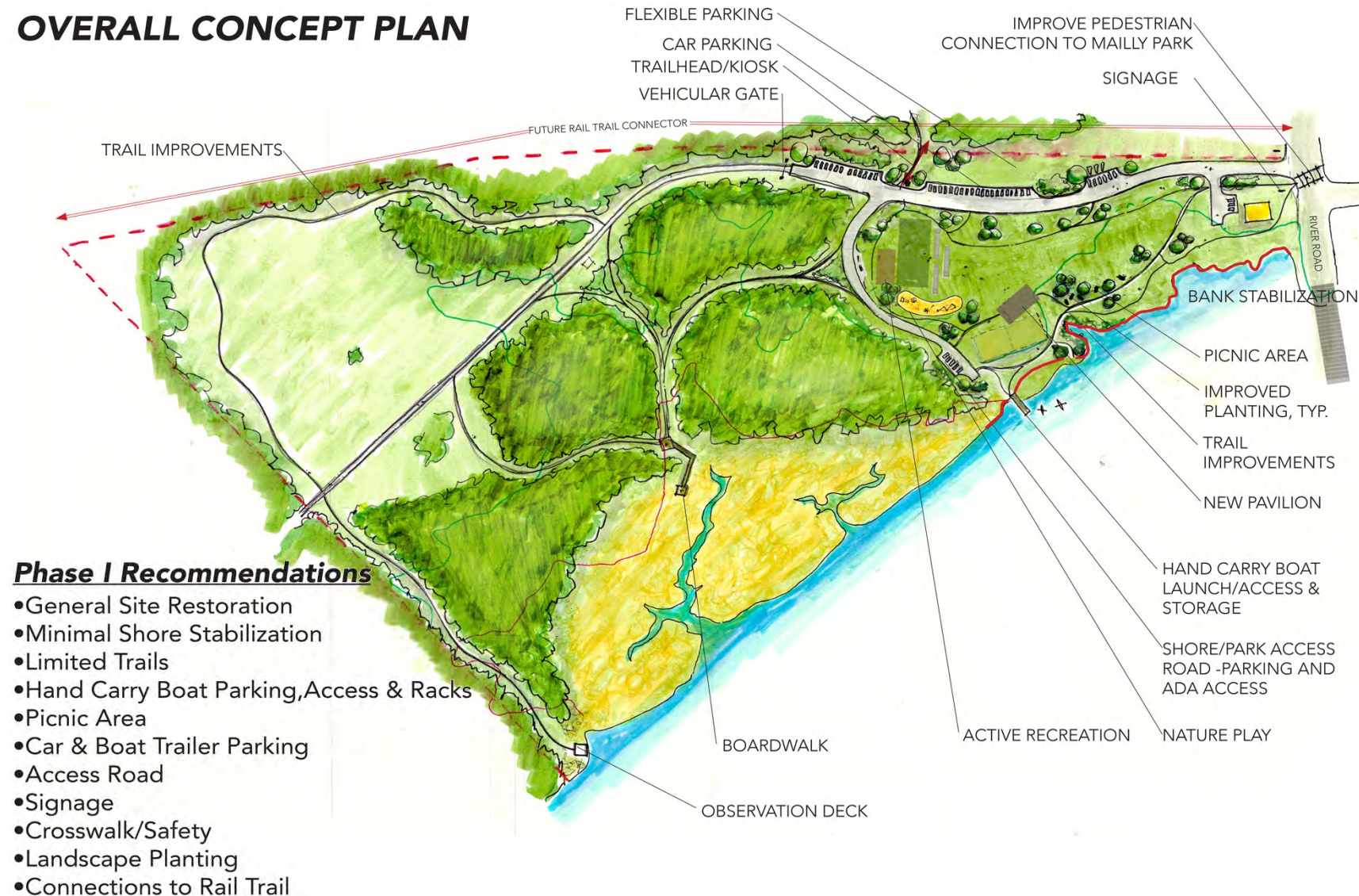
## KEY

- |   |   |   |
|---|---|---|
| 1 Pedestrian Connection to Mally Park<br><i>Improved Access</i> | 7 Pavilion<br><i>60'x 30' Post and Beam Pavilion</i>              | 13 Rail Trail Access<br><i>Signage / Kiosk</i>          |
| 2 Park Entry Signage  | 8 Active Recreation<br><i>Volleyball, Bocce, Horseshoe Courts</i> | 14 Future Rail Trail Connector<br><i>TBD</i>            |
| 3 Passive Lawn Space<br><i>Flexible Area</i>                    | 9 Nature Play<br><i>Area for Playspace</i>                        | 15 Mown Paths<br><i>Improved Pedestrian Trails</i>      |
| 4 Flexible Parking<br><i>Gravel Roads and Parking Spaces</i>    | 10 Kayak Racks<br><i>Parking Space</i>                            | 16 Boardwalk with Observation Deck<br><i>Accessible</i> |
| 5 Path / Circulation  | 11 Hand Carry Boat Launch<br><i>Access and Storage</i>            | 17 Observation Deck                                     |
| 6 Picnic Area   | 12 Bank Stabilization   |   |



# Masterplan Background

## OVERALL CONCEPT PLAN







Existing

Conditions







Existing



Conditions







**KEY**

- |   |   |  |
|---|---|--|
| ① Pedestrian Connection to Mally Park<br><i>Improved Access</i> | ⑦ Pavilion<br><i>60'x 30' Post and Beam Pavilion</i>              | ⑬ Rail Trail Access<br><i>Signage / Kiosk</i>          |
| ② Park Entry Signage  | ⑧ Active Recreation<br><i>Volleyball, Bocce, Horseshoe Courts</i> | ⑭ Future Rail Trail Connector<br><i>TBD</i>            |
| ③ Passive Lawn Space<br><i>Flexible Area</i>                    | ⑨ Nature Play<br><i>Area for Playspace</i>                        | ⑮ Mown Paths<br><i>Improved Pedestrian Trails</i>      |
| ④ Flexible Parking<br><i>Gravel Roads and Parking Spaces</i>    | ⑩ Kayak Racks<br><i>Parking Space</i>                             | ⑯ Boardwalk with Observation Deck<br><i>Accessible</i> |
| ⑤ Path / Circulation  | ⑪ Hand Carry Boat Launch<br><i>Access and Storage</i>             | ⑰ Observation Deck                                     |
| ⑥ Picnic Area   | ⑫ Bank Stabilization  |  |





Boat Launch

Elements







TRAIL PARKING  
+ OVERFLOW

WALKING TRAIL

PROPOSED DRIVE

NATURAL PLAY  
+ RECREATION

FEMA 100 YEAR FLOOD ZONE

WETLAND

WETLAND

TEMPORARY PHASE  
ACCESS ROAD (TO BE  
REMOVED IN FUTURE  
PHASES)

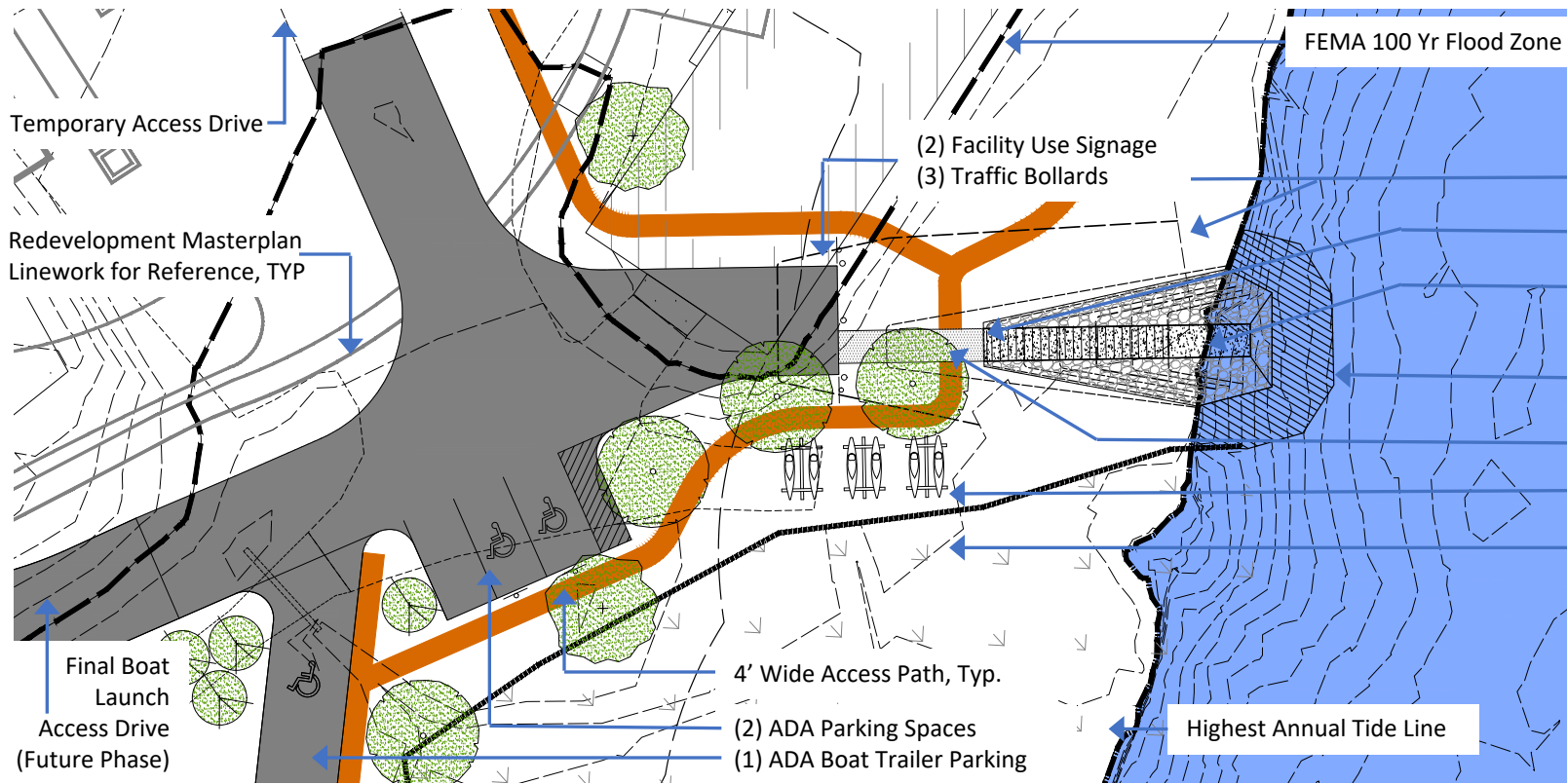
PAVILLION

SHORE LINE TRAIL

EXISTING PUBLIC  
WORKS FACILITY (TO  
BE REMOVED)

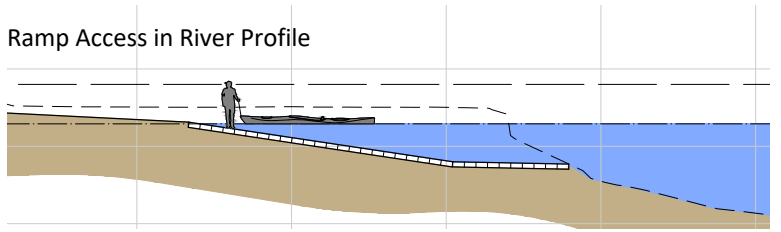
HIGHEST ANNUAL TIDE LINE



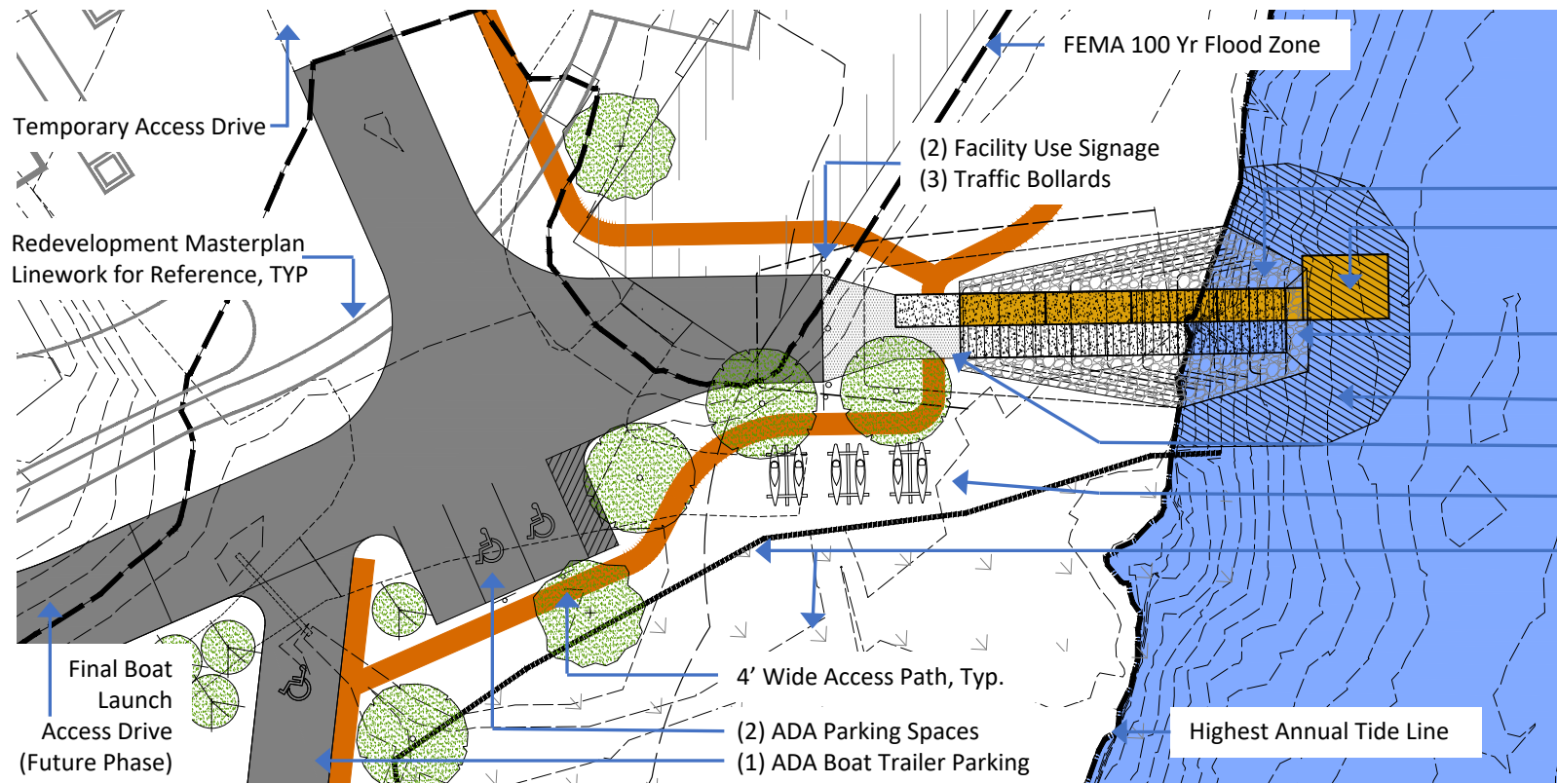


# Ramp Access Plan

- Approx. Limits of Living Shoreline Restoration Work
- Steps w/ boat slide & handrail
- 18" x 12' Pre-Cast Concrete Planks w/ curbing each side of ramp
- Riverbed Cleanup Area
- Paved Walkway (5% Max Slope)
- (3) Kayak Storage Racks
- Delineated Wetlands Boundary & 75' NRPA Setback



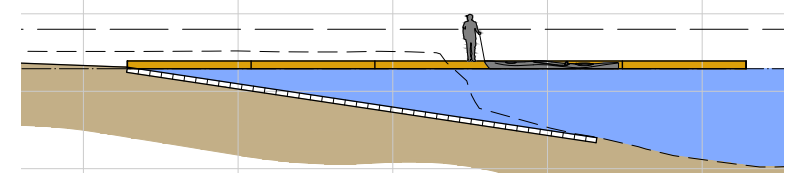




# ADA Access Plan

- 4' Depth –Riprap Stabilization
- (4) 6'x16' Floats w/ (1) ADA Boat Launch Float
- 18" x 12' Pre-Cast Concrete Planks w/ curbing each side of ramp
- Riverbed Cleanup Area
- Paved Walkway (5% Max Slope)
- (3) Kayak Storage Racks – 8 Boats / Rack
- Delineated Wetlands Boundary & 75' NRPA Setback

Floating Dock in River Profile











# Shoreline Restoration and Shoreline Trail

**KEY**

- |  |  |  |
|--|--|--|
| <p>① Pedestrian Connection to Maily Park<br/><i>Improved Access</i></p> <p>② Park Entry Signage</p> <p>③ Passive Lawn Space<br/><i>Flexible Area</i></p> <p>④ Flexible Parking<br/><i>Gravel Roads and Parking Spaces</i></p> <p>⑤ Path / Circulation</p> <p>⑥ Picnic Area</p> | <p>⑦ Pavilion<br/><i>60'x30' Post and Beam Pavilion</i></p> <p>⑧ Active Recreation<br/><i>Volleyball, Bocce, Horseshoe Courts</i></p> <p>⑨ Nature Play<br/><i>Area for Playspace</i></p> <p>⑩ Kayak Racks<br/><i>Parking Space</i></p> <p>⑪ Hand Carry Boat Launch<br/><i>Access and Storage</i></p> <p>⑫ Bank Stabilization</p> | <p>⑬ Rail Trail Access<br/><i>Signage / Kiosk</i></p> <p>⑭ Future Rail Trail Connector<br/><i>TBD</i></p> <p>⑮ Mown Paths<br/><i>Improved Pedestrian Trails</i></p> <p>⑯ Boardwalk with Observation Deck<br/><i>Accessible</i></p> <p>⑰ Observation Deck</p> |
|--|--|--|



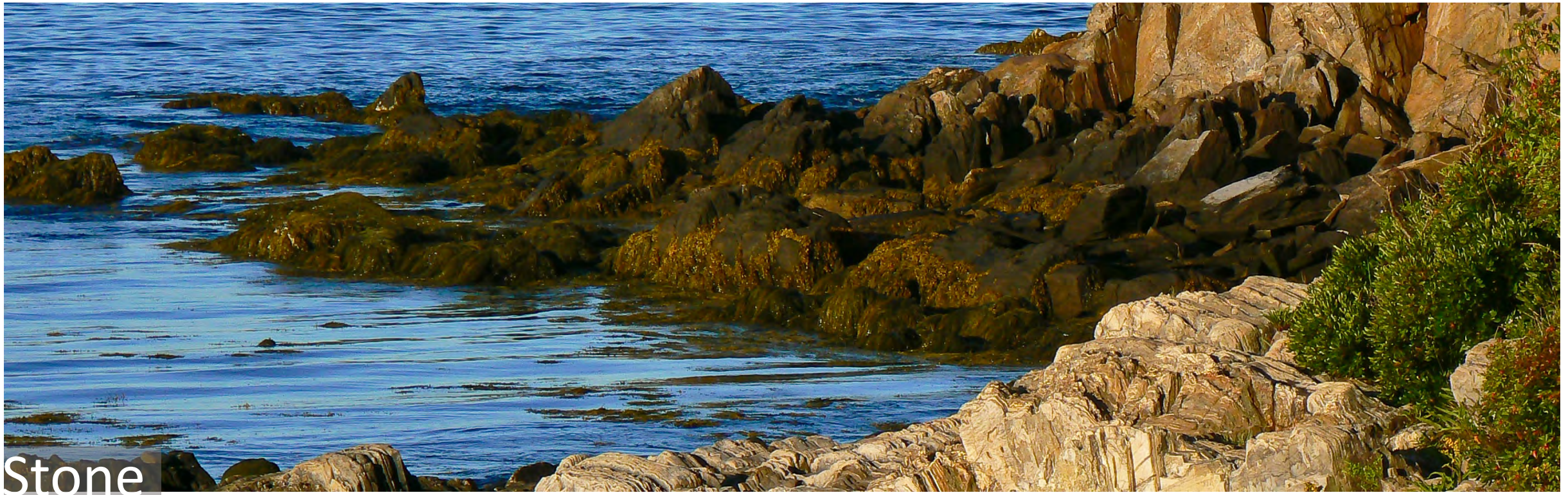


# Shoreline Restoration

## Elements







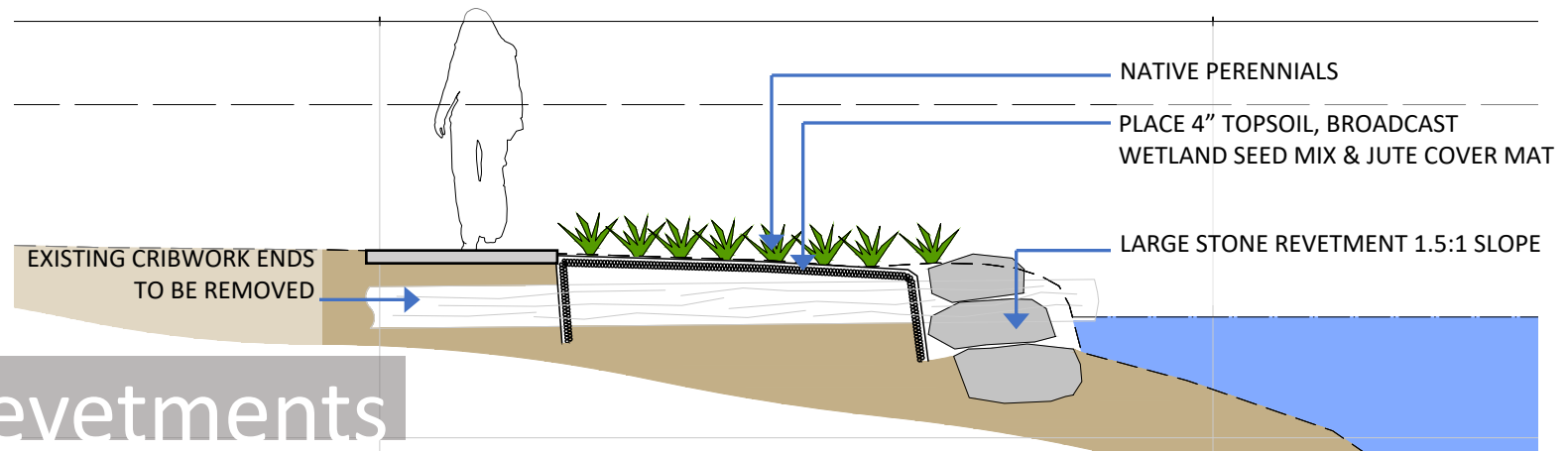
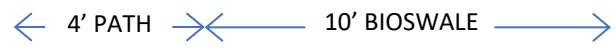
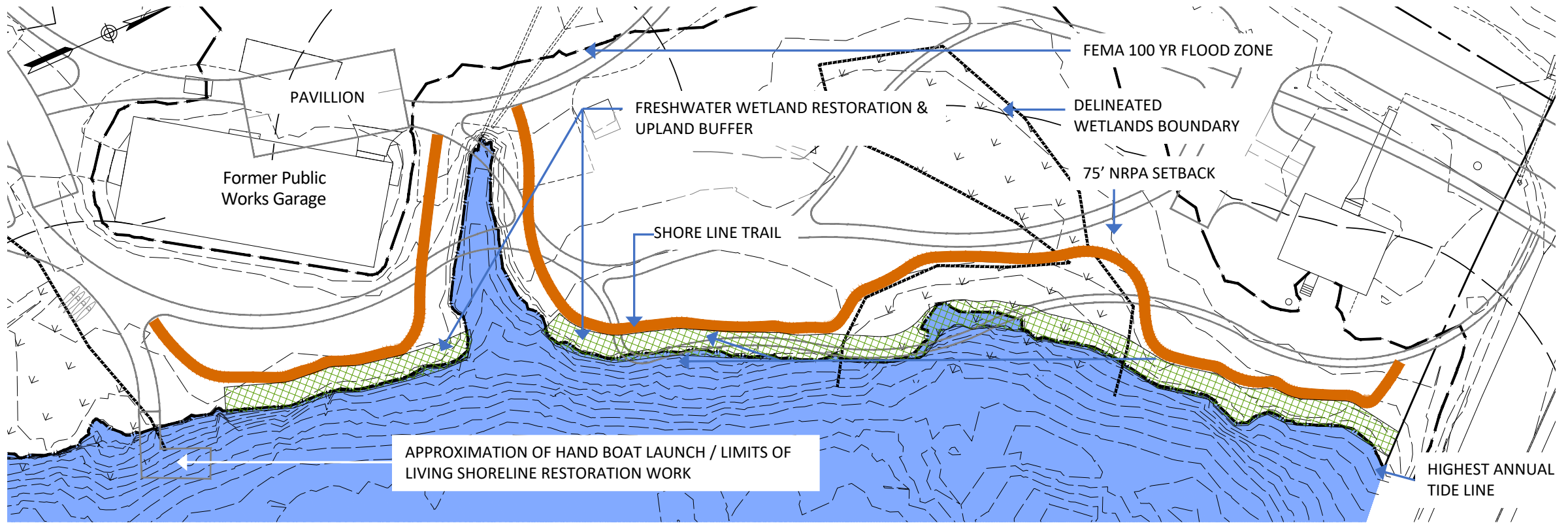
Stone



Revetments







# Stone Revetments





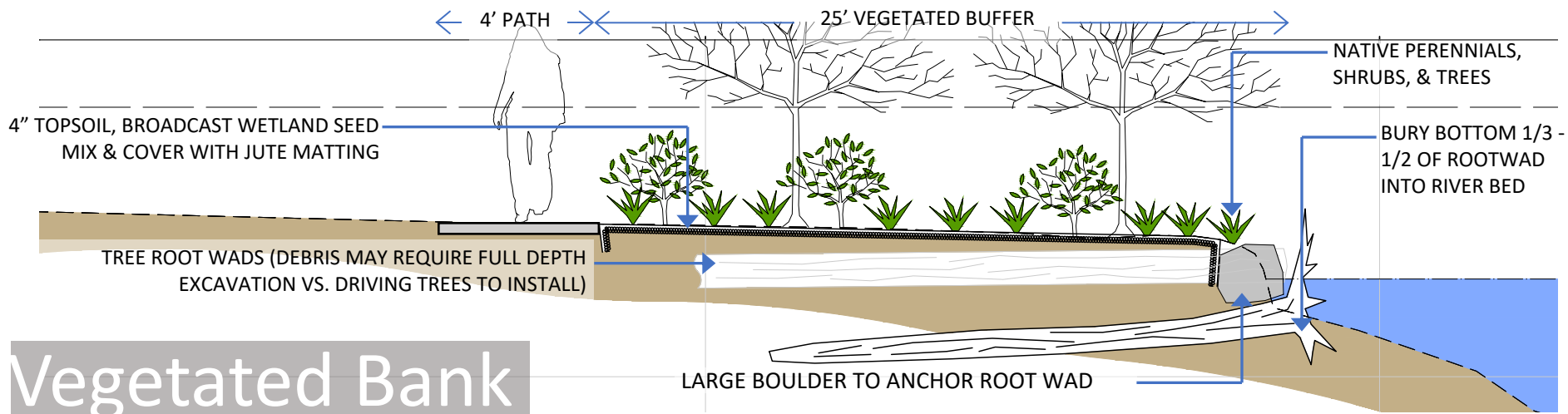
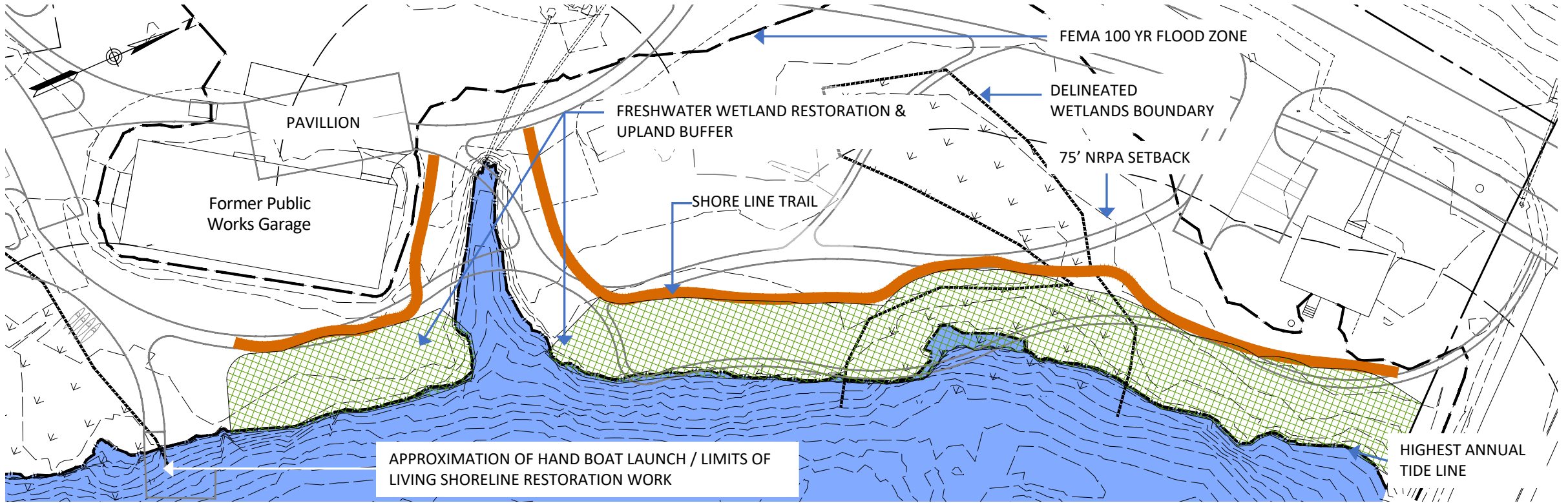
Vegetated



Bank







# Vegetated Bank





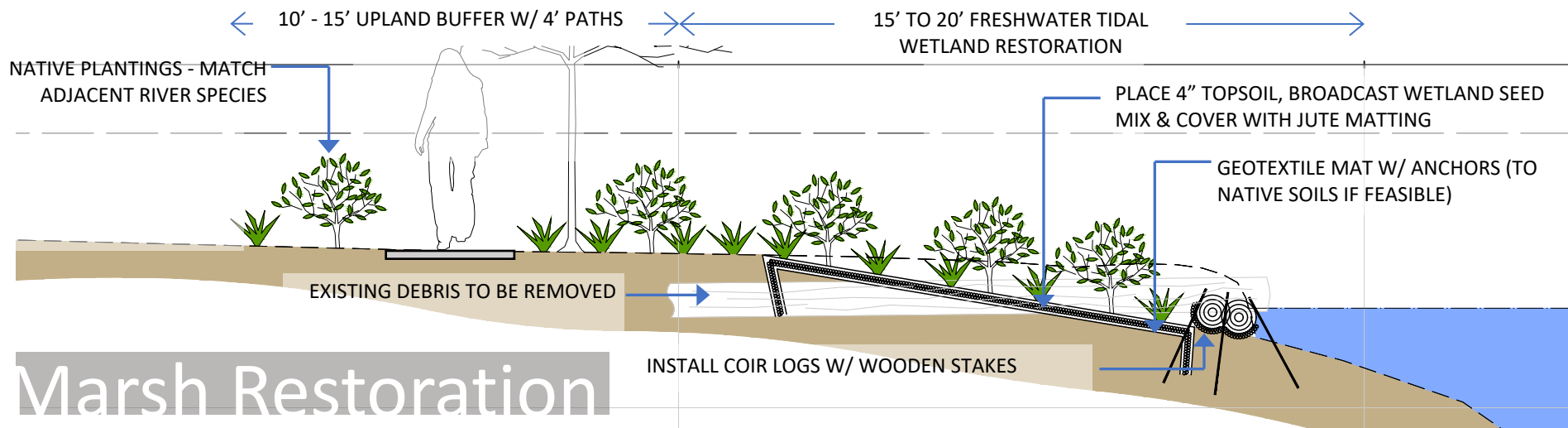
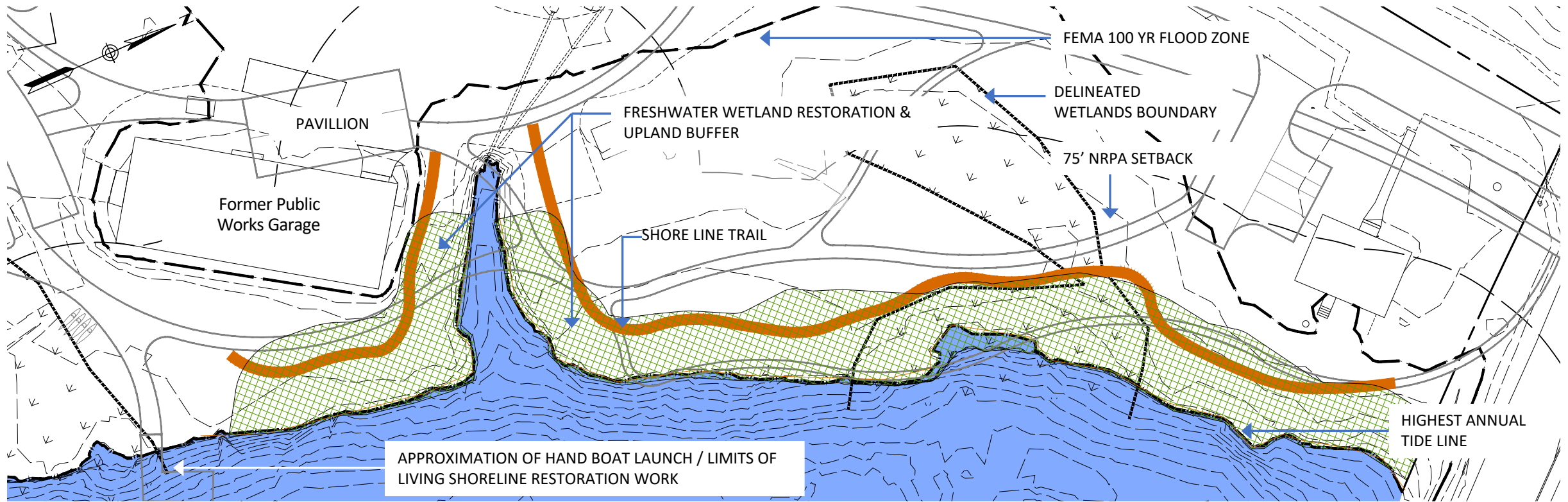


Marsh

Restoration







# Marsh Restoration







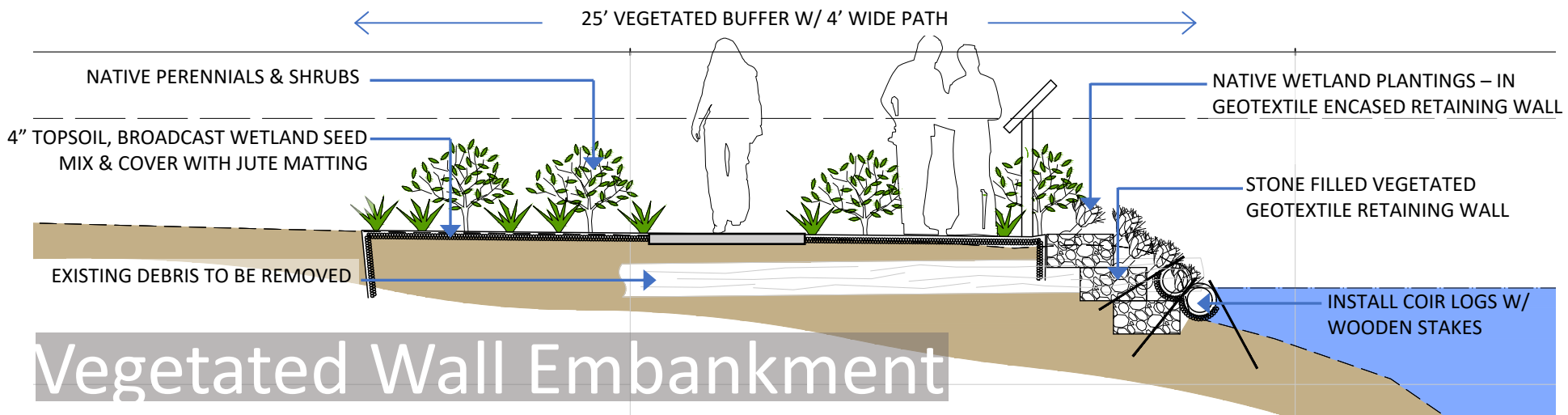
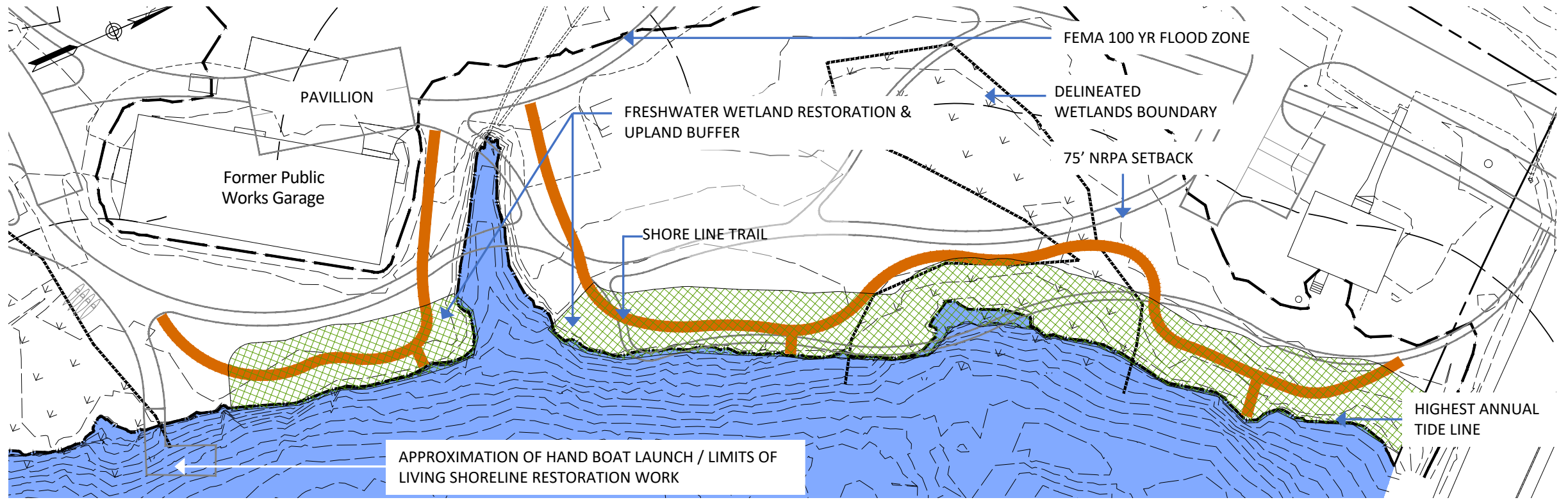
Vegetated Wall



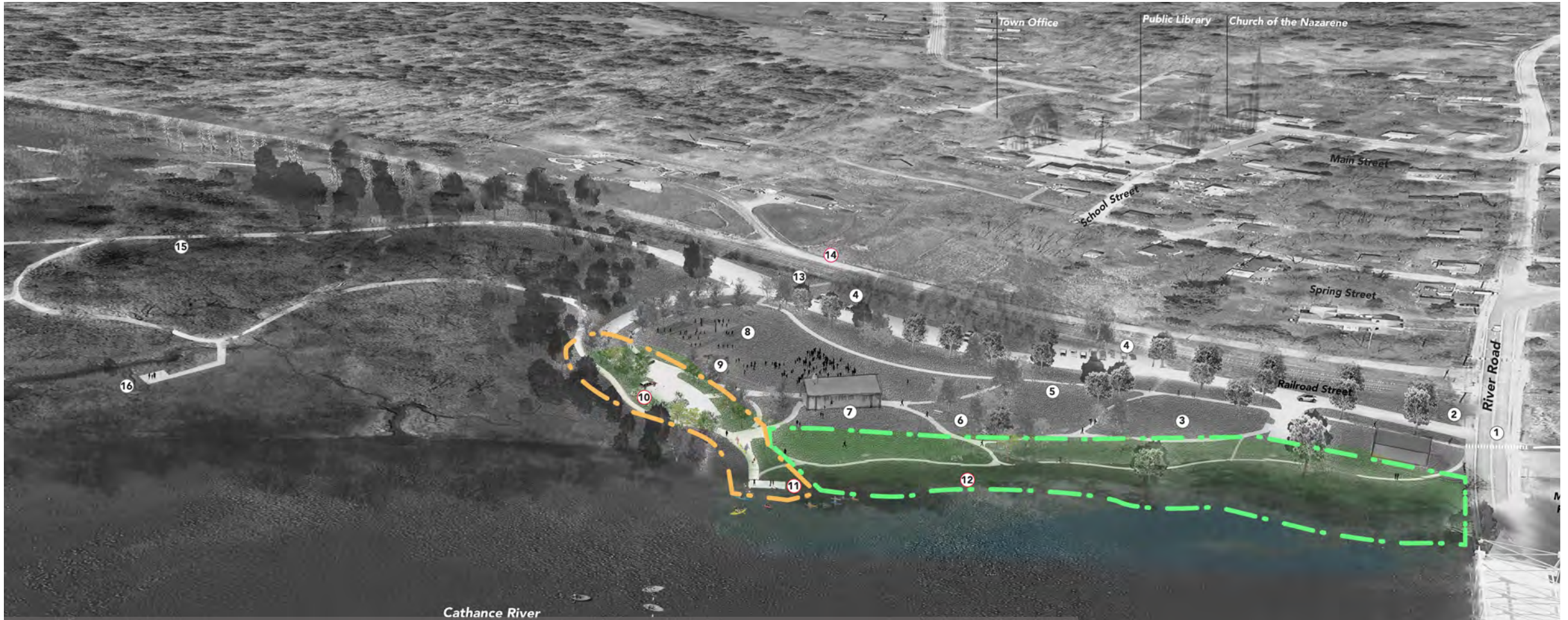
Embankment











# Shoreline Access & Shoreline Restoration

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# Summary Slide

## Masterplan phase I focus points:

- Hand carry boat launch for shore and river access

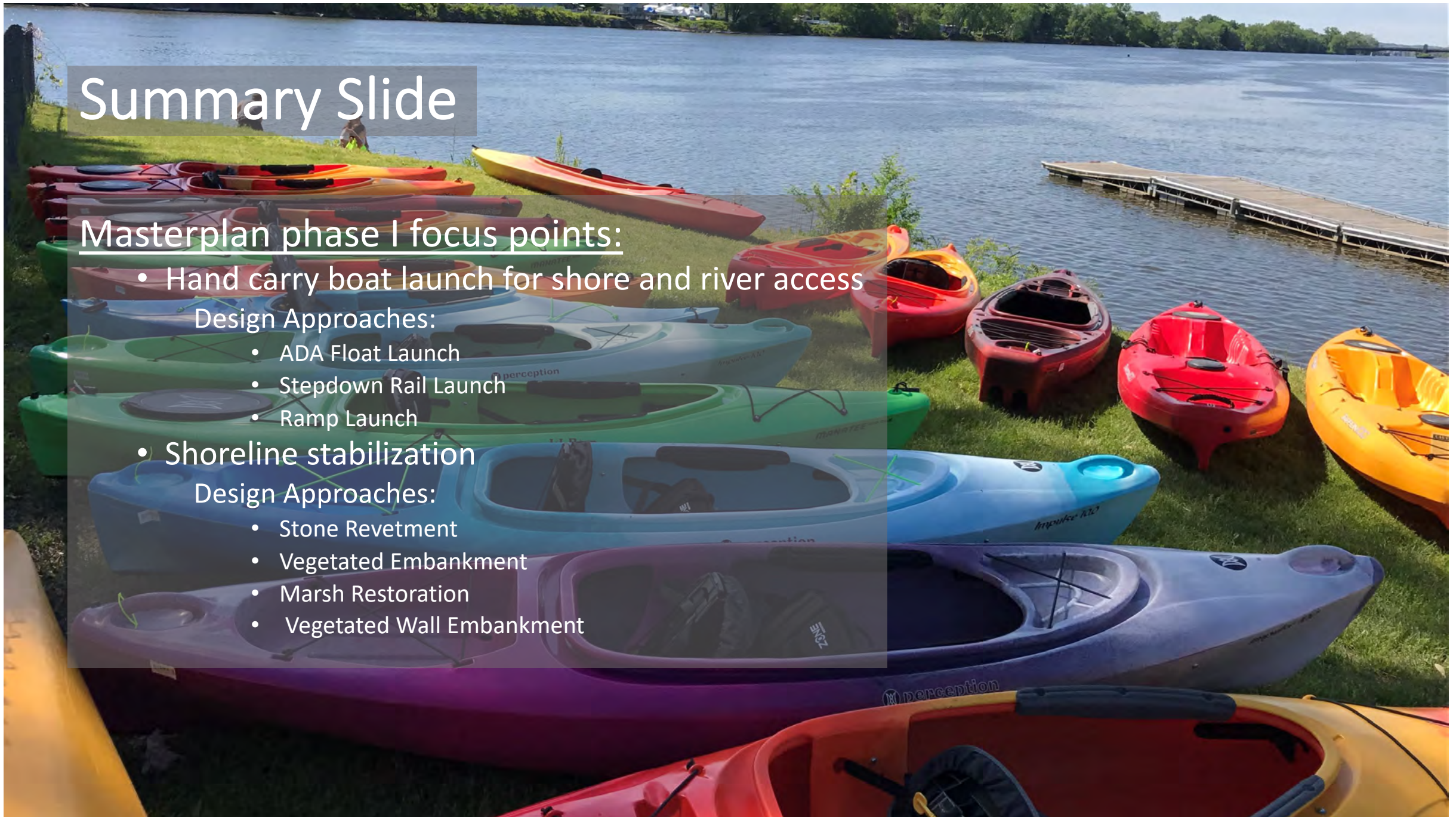
### Design Approaches:

- ADA Float Launch
- Stepdown Rail Launch
- Ramp Launch

- Shoreline stabilization

### Design Approaches:

- Stone Revetment
- Vegetated Embankment
- Marsh Restoration
- Vegetated Wall Embankment





# Next Steps

## Schedule Review if Funding Becomes Available

- Design Development on Favored Elements Late Fall 2019
- Preferred Option Public Review Late Fall 2019 – November 21st
- Permitting Winter / Early Spring 2020
- Construction Documents Winter / Early Spring 2020
- Bidding Late Spring / Early Summer 2020
- Construction Late Summer / Fall 2020