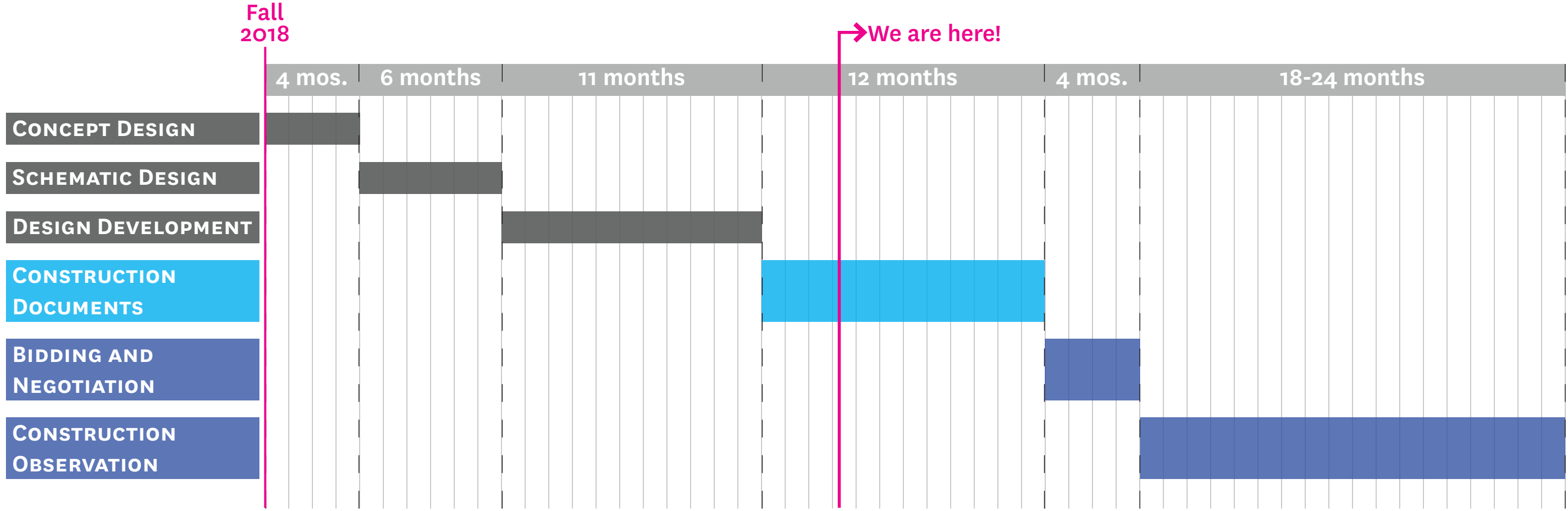


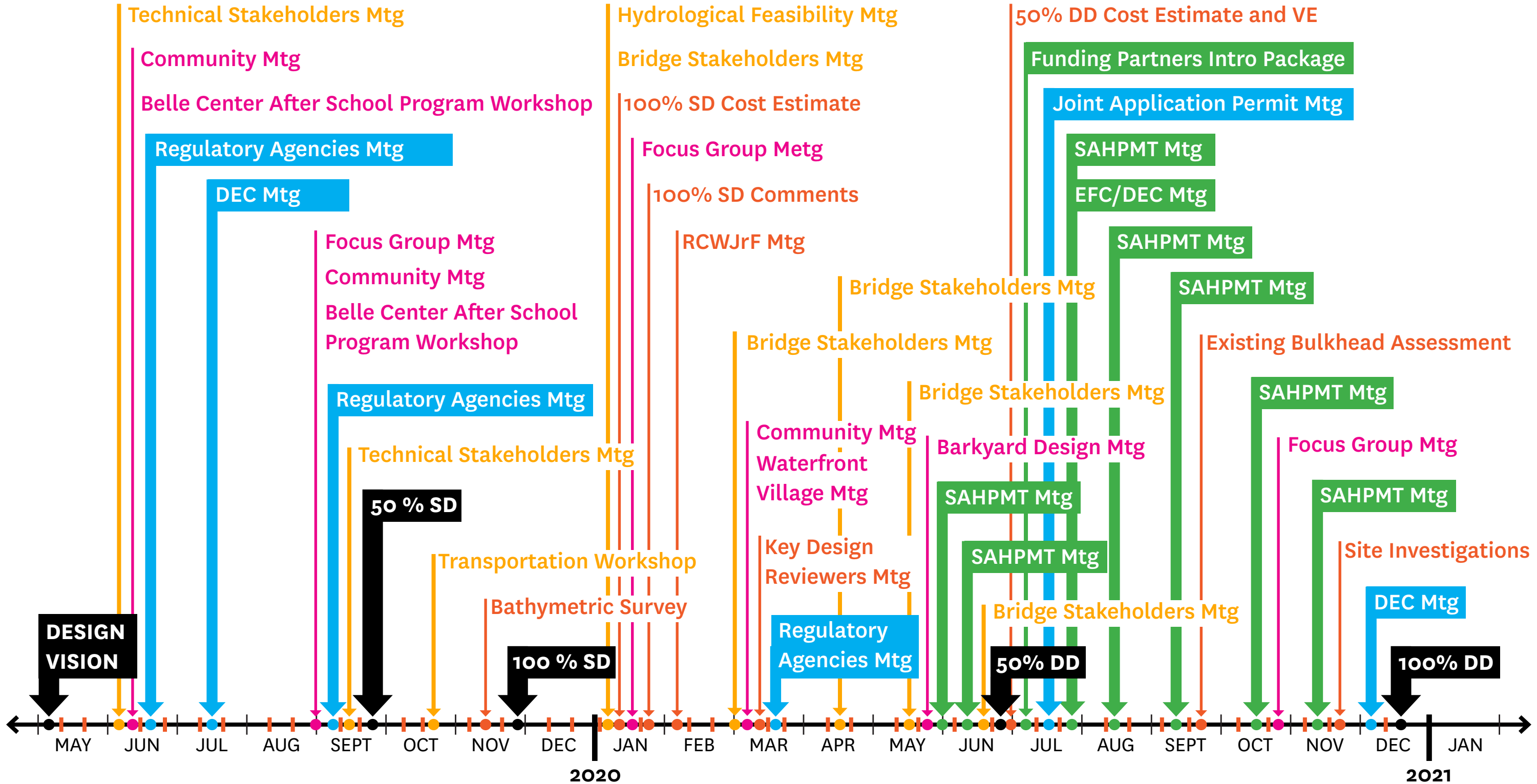
Ralph C. Wilson, Jr. Centennial Park

City of Buffalo | Buffalo Urban Development Corporation

MVVA | 09 September 2021

Project Schedule





Client Group

Funding Partners

Community

Regulatory Agencies

Technical Stakeholders

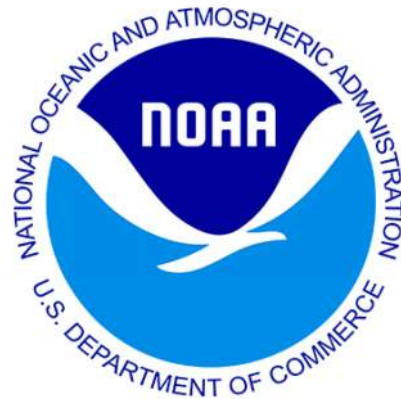
**Ralph C. Wilson, Jr.
Centennial Park**

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graph LR; CG[Client Group] --- C; FP[Funding Partners] --- C; Com[Community] --- C; RA[Regulatory Agencies] --- C; TS[Technical Stakeholders] --- C; C --- RCW[Ralph C. Wilson, Jr. Centennial Park];
```

Regulatory Agencies | Funding Partners



**US Army Corps
of Engineers®**



**Office of
General Services**



Design Process



Existing Conditions



September 2021 Design Scheme

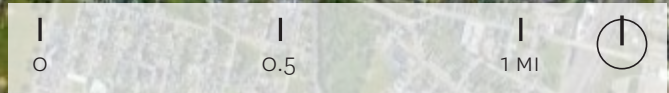
Factors that Lead to Extreme Storm Events



Breakwater Features near RCWJCP



Prevailing Wind and Wave Direction





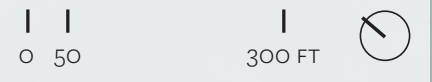
Land Subsidence and Existing Bulkhead Deterioration



Existing Bulkhead Condition Assessment (WSP 2020)



5-10 Year Lifespan
(no major changes to current conditions and/or typical storm events.)



Shoreline Design Goals



**Structural
Resiliency**



**Flood
Protection**



**Ecological
Function Uplift**



**Enhanced
Experience**

Inlet Alternatives



Alternative 1: No Action



Alternative 2: Rip Rap Shoreline



Alternative 2A: Modified Inlet Island

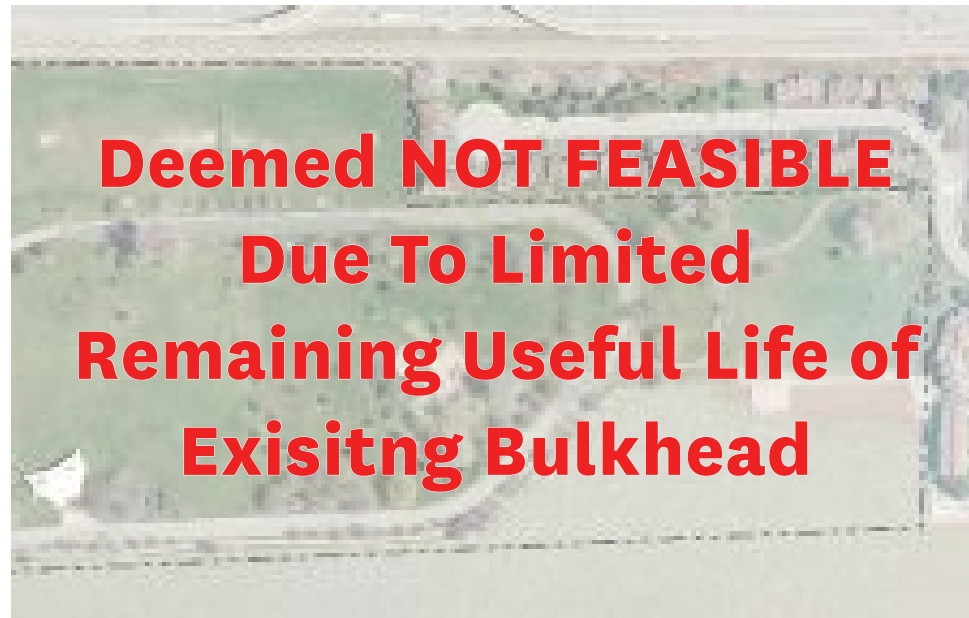


Alternative 3: Enhanced Inlet Habitat Creation

Inlet Alternatives - Parameters

- 1. Project Goals Achieved.**
- 2. Existing SAV Protection and Disturbance.**
- 3. Quantity and Type of Habitat Created.**
- 4. Net Total Habitat Gain.**
- 5. Land Surface Converted into Water Surface and Vice Versa.**
- 6. Construction Cost and Available Funding.**

Inlet Alternatives - Outcome



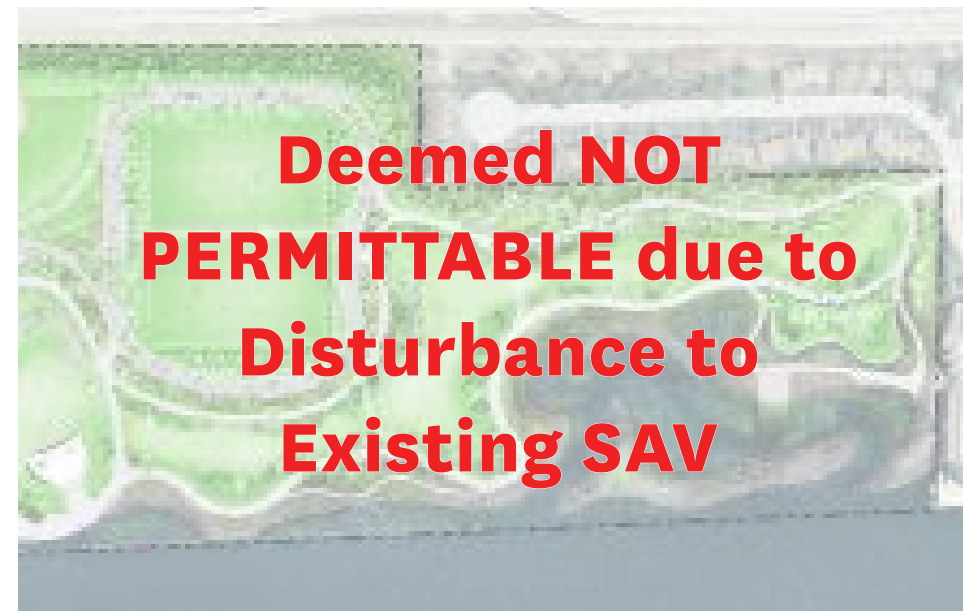
Alternative 1: No Action



Alternative 2: Rip Rap Shoreline



Alternative 2A: Modified Inlet Island



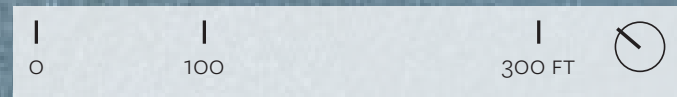
Alternative 3: Enhanced Inlet Habitat Creation

Inlet Alternative 2A

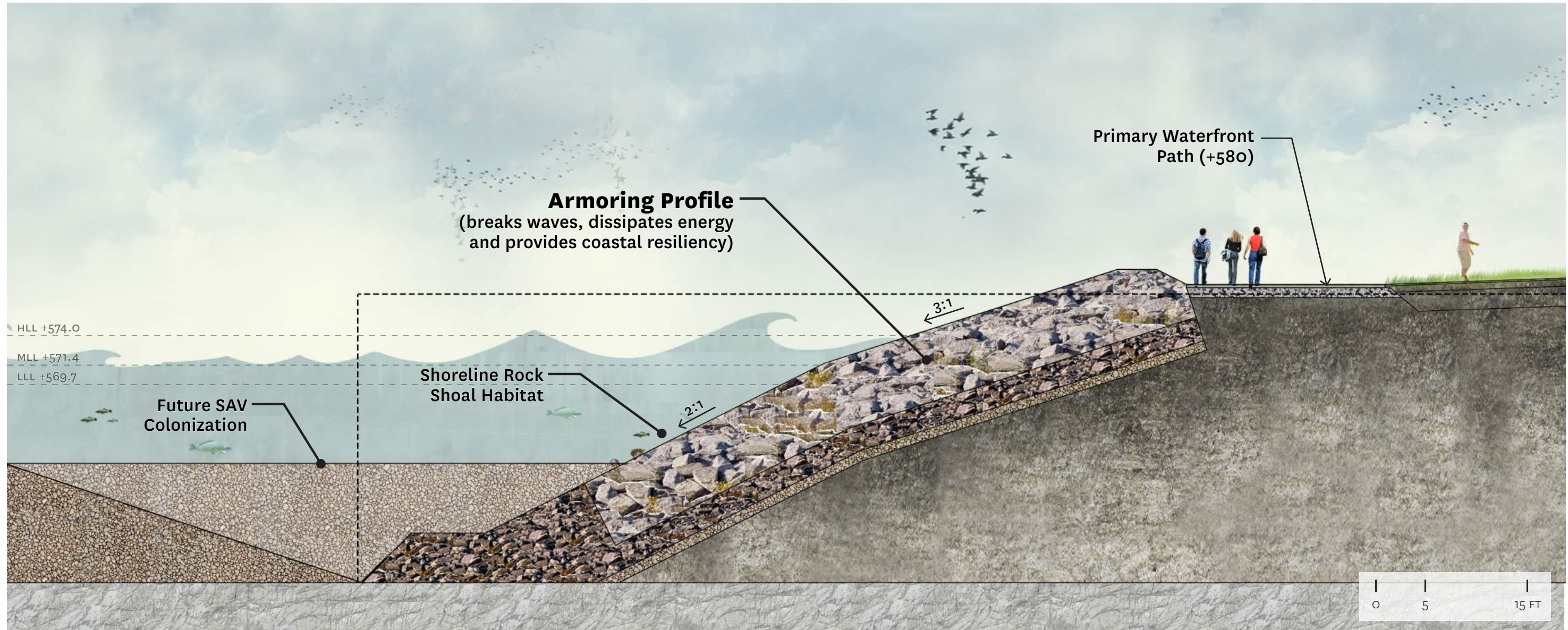


Alternative 2A - Profiles

- Armored Slope
- Armored Slope with Coastal Sill
- Habitat Cove

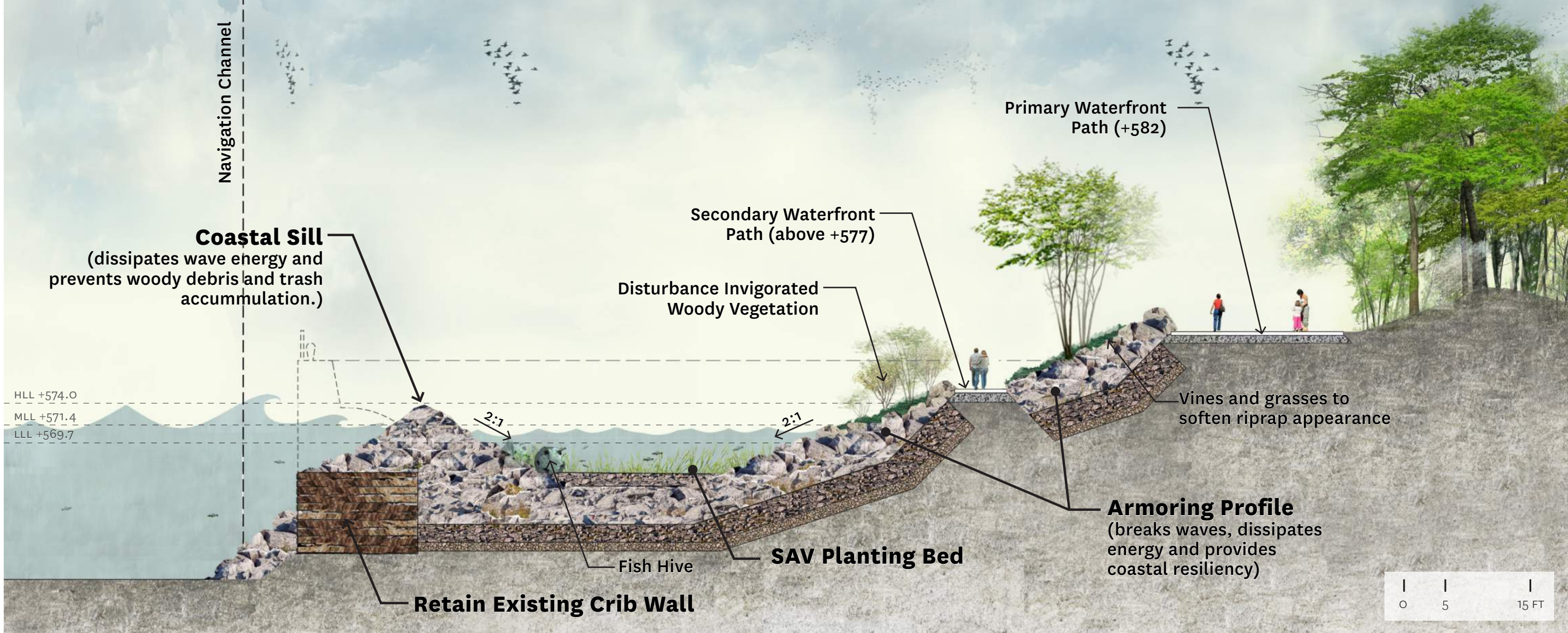


Armored Slope



* Note: Section profile to be adjusted based on hydrological modeling results.

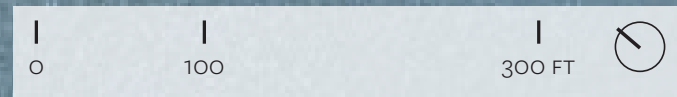
Armored Slope with Coastal Sill



* Note: Section profile to be adjusted based on hydrological modeling results.

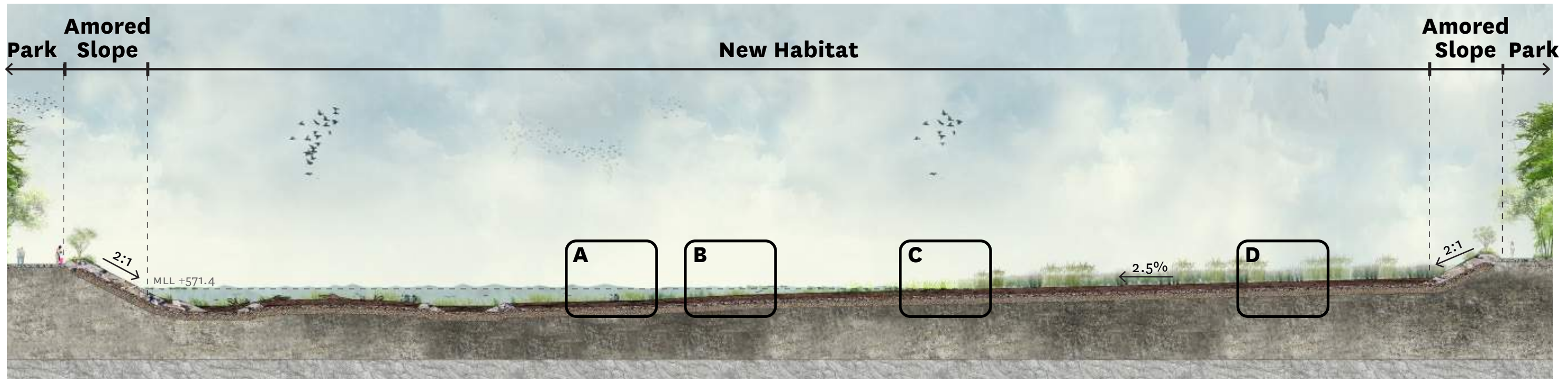
Alternative 2A - Profiles

- Armored Slope
- Armored Slope with Coastal Sill
- Habitat Cove



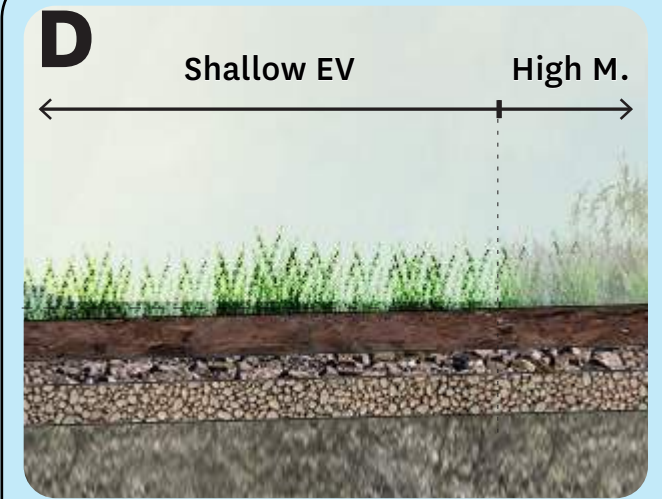
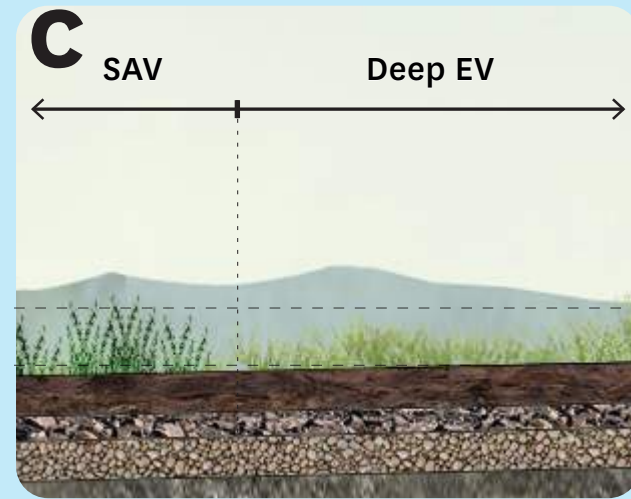
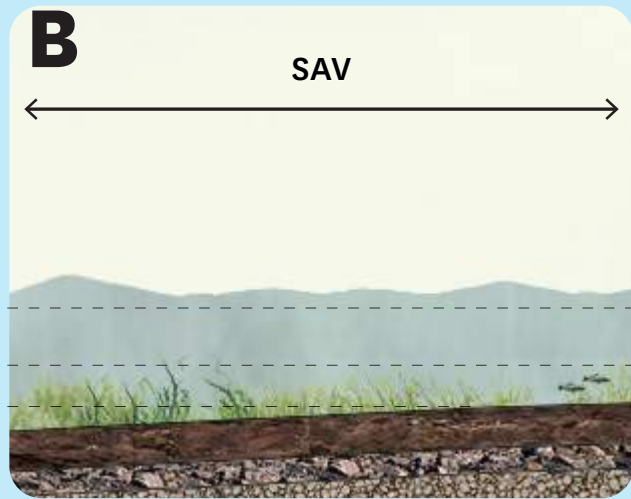
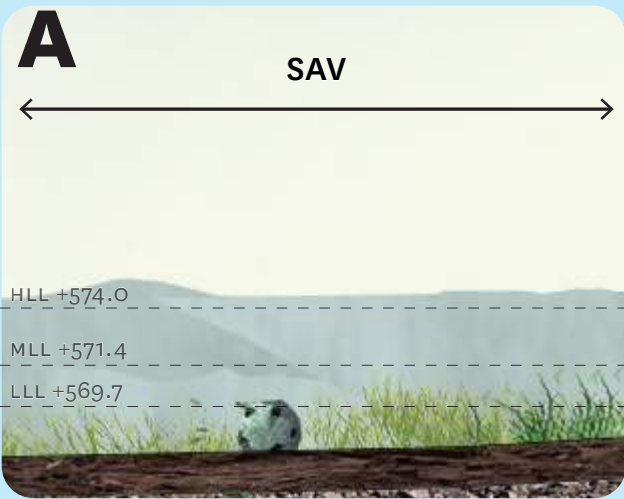


Habitat Cove B

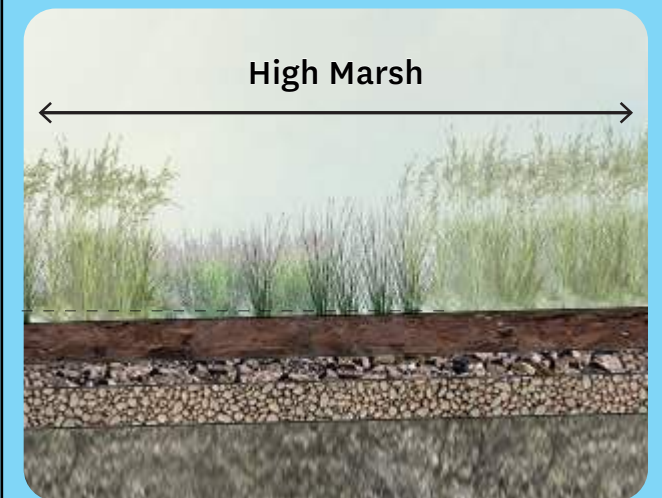
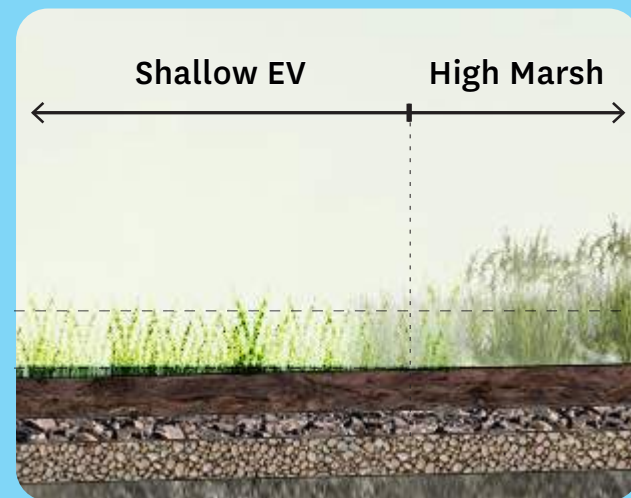
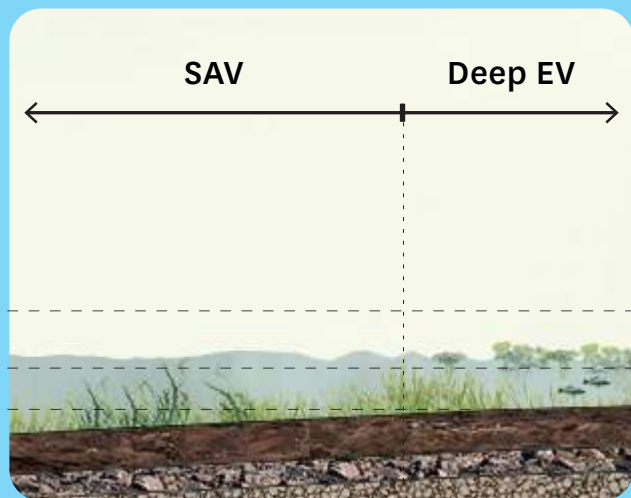
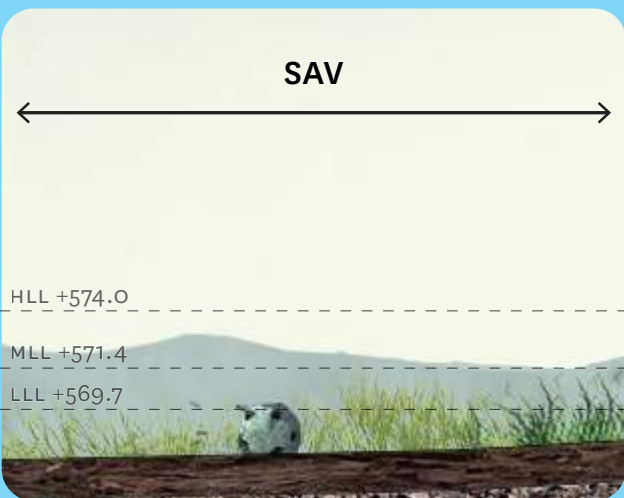


* Note: Section profile to be adjusted based on hydrological modeling results.

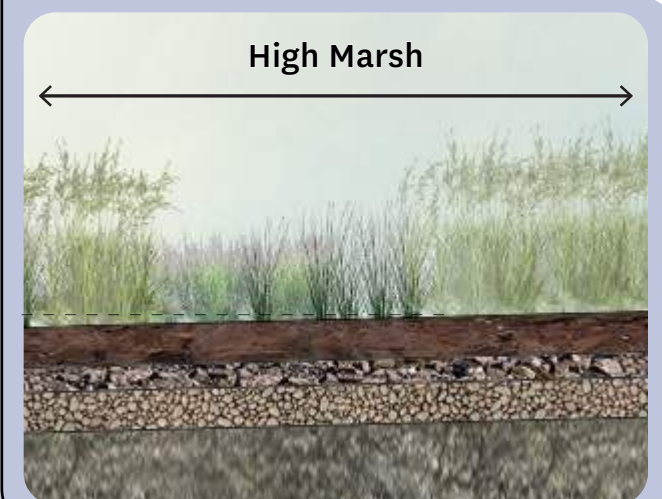
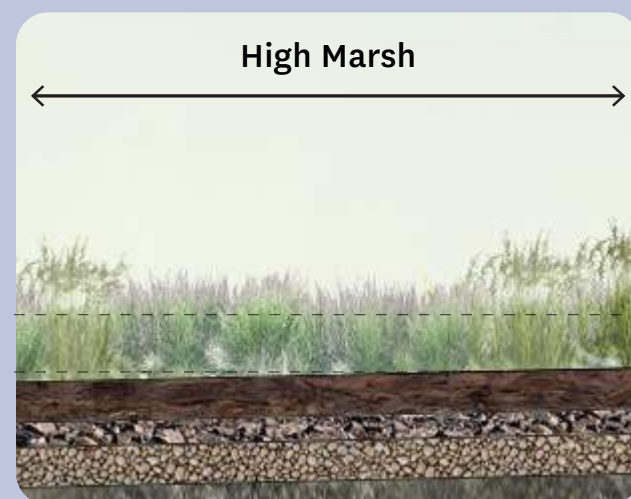
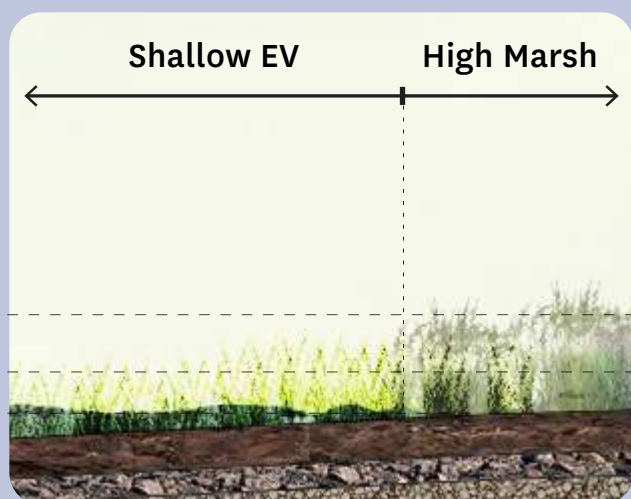
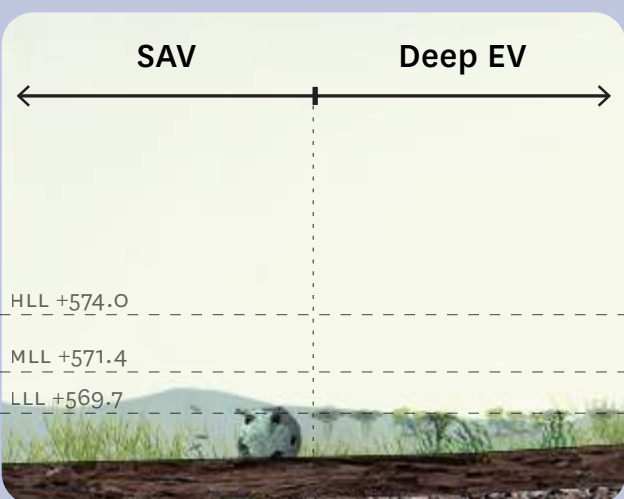
HLL +574.0



MLL +571.4



LLL +569.7



Shoreline Plant Communities

Submerged Aquatic Vegetation



Deep Emergent Vegetation



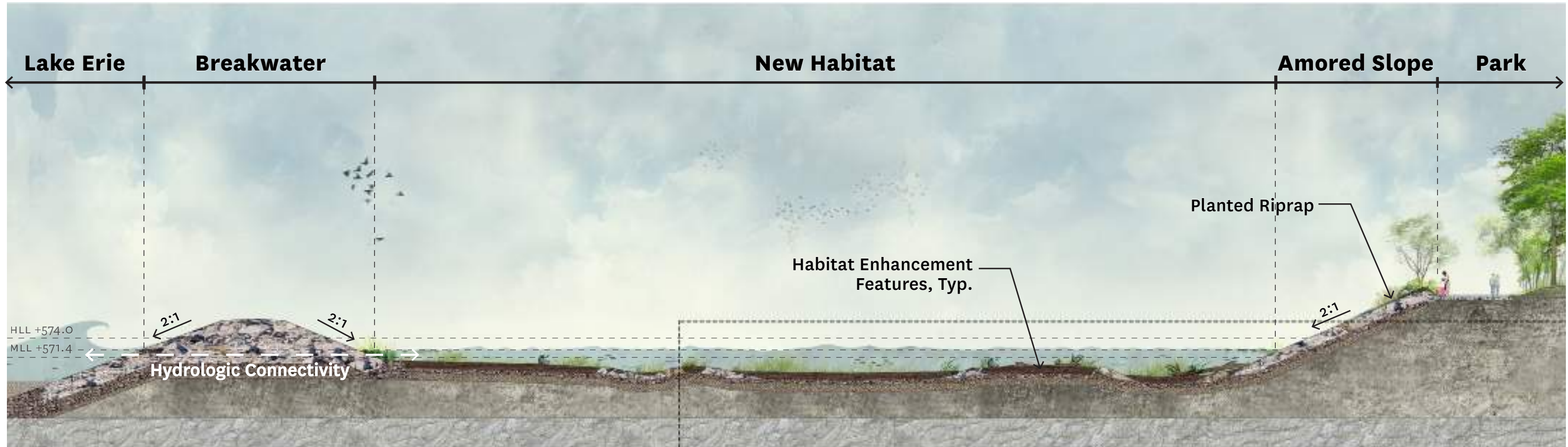
Shallow Emergent Vegetation



High Marsh

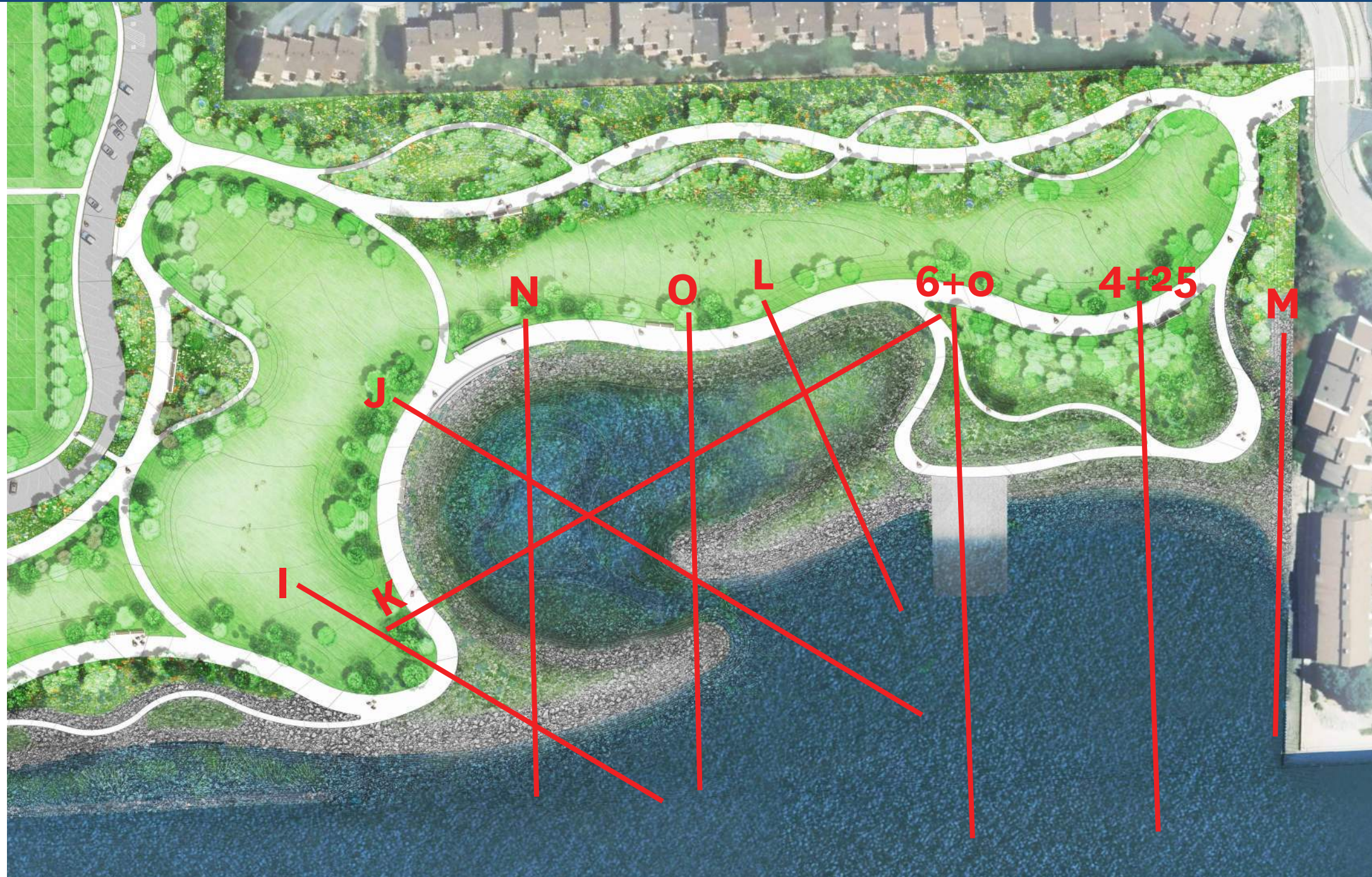


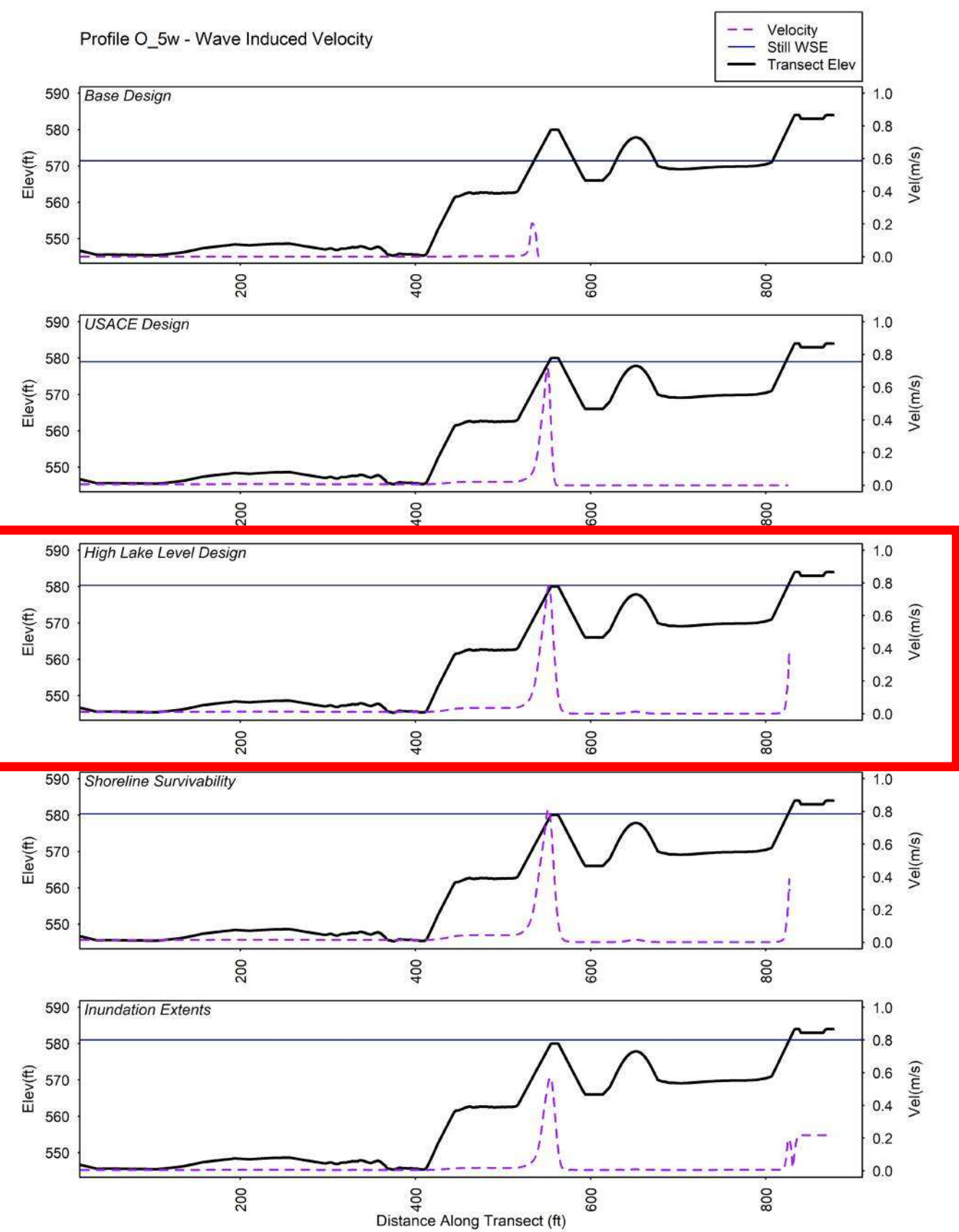
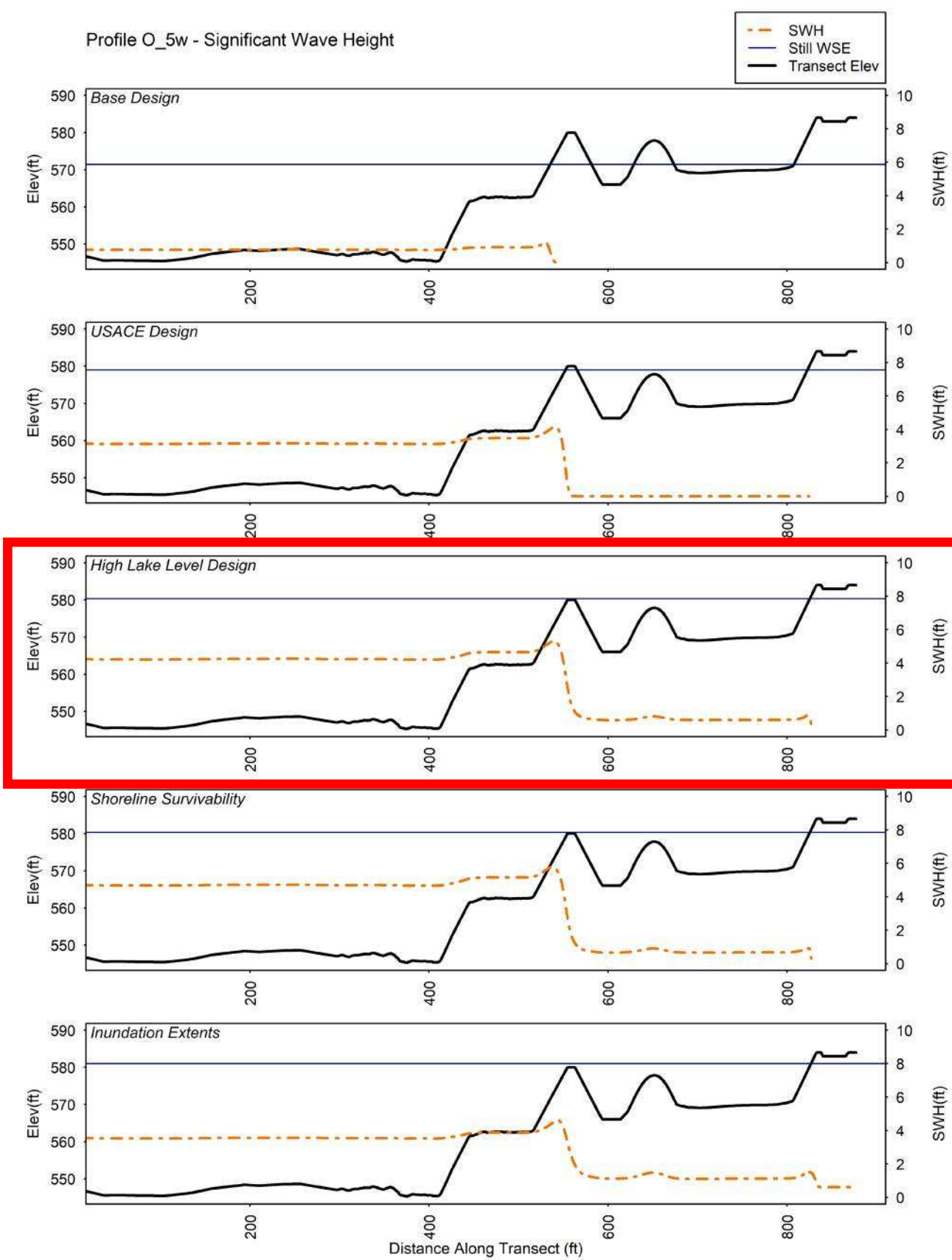
Habitat Cove A



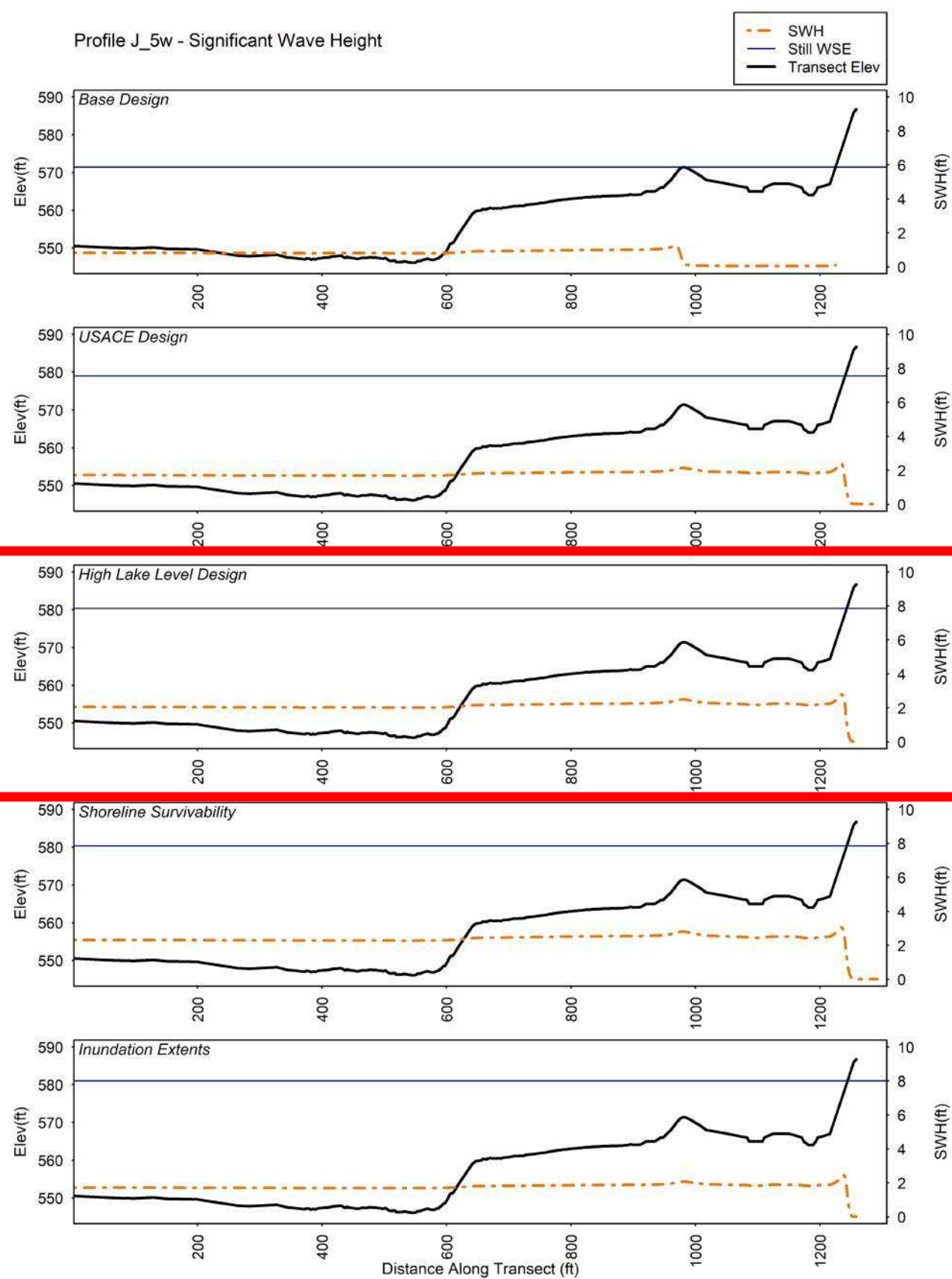
* Note: Section profile to be adjusted based on hydrological modeling results.

CSHORE Transects

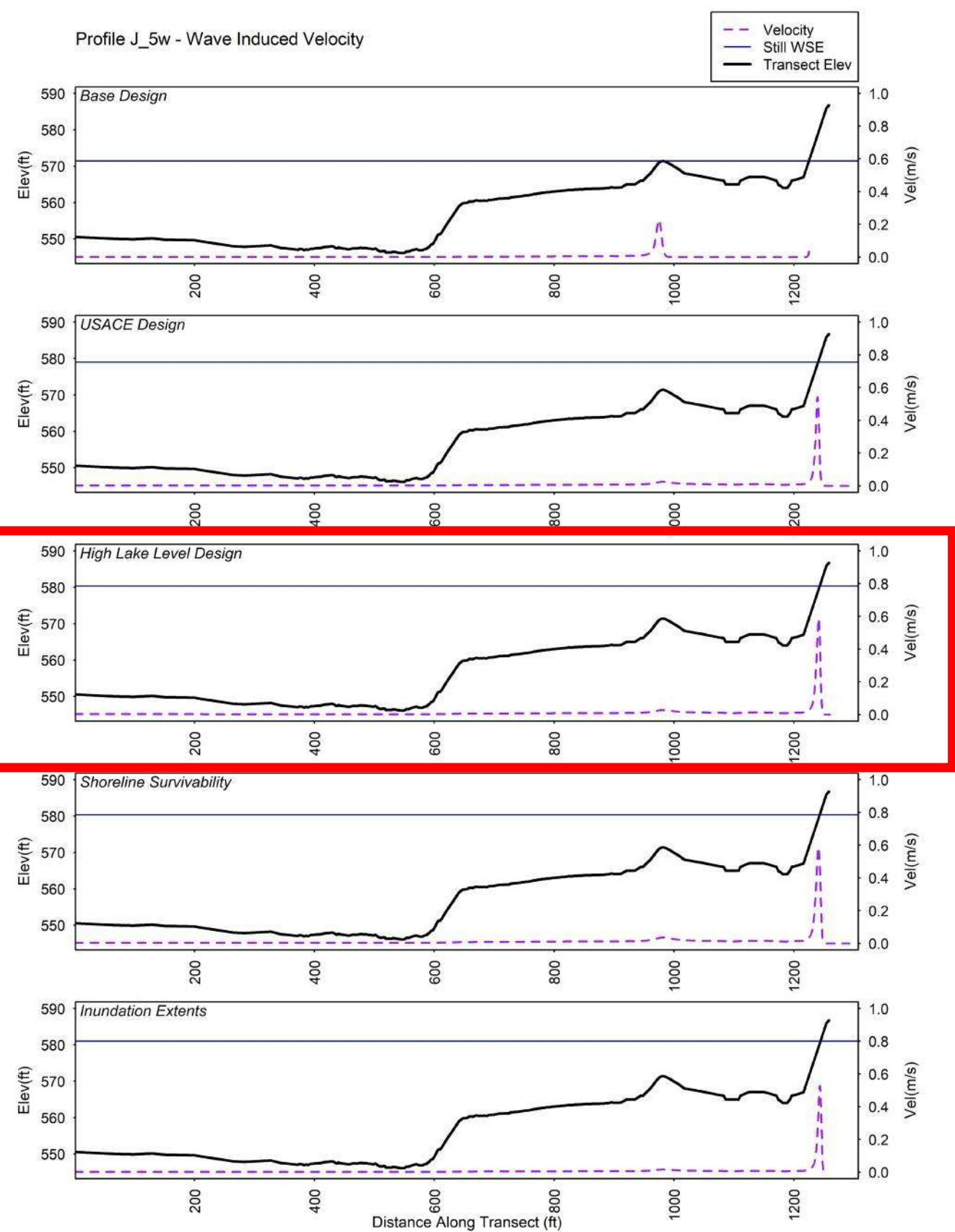




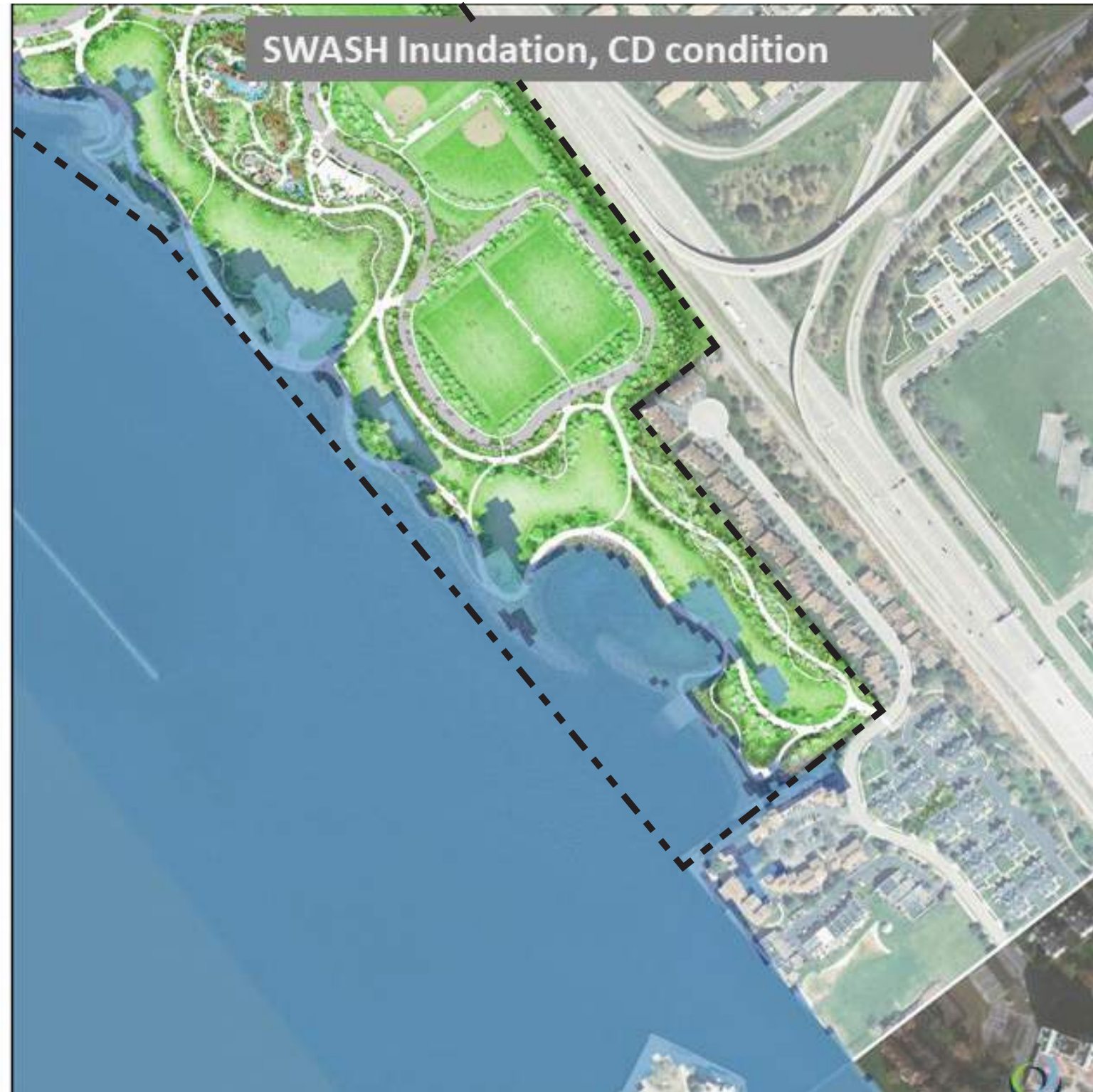
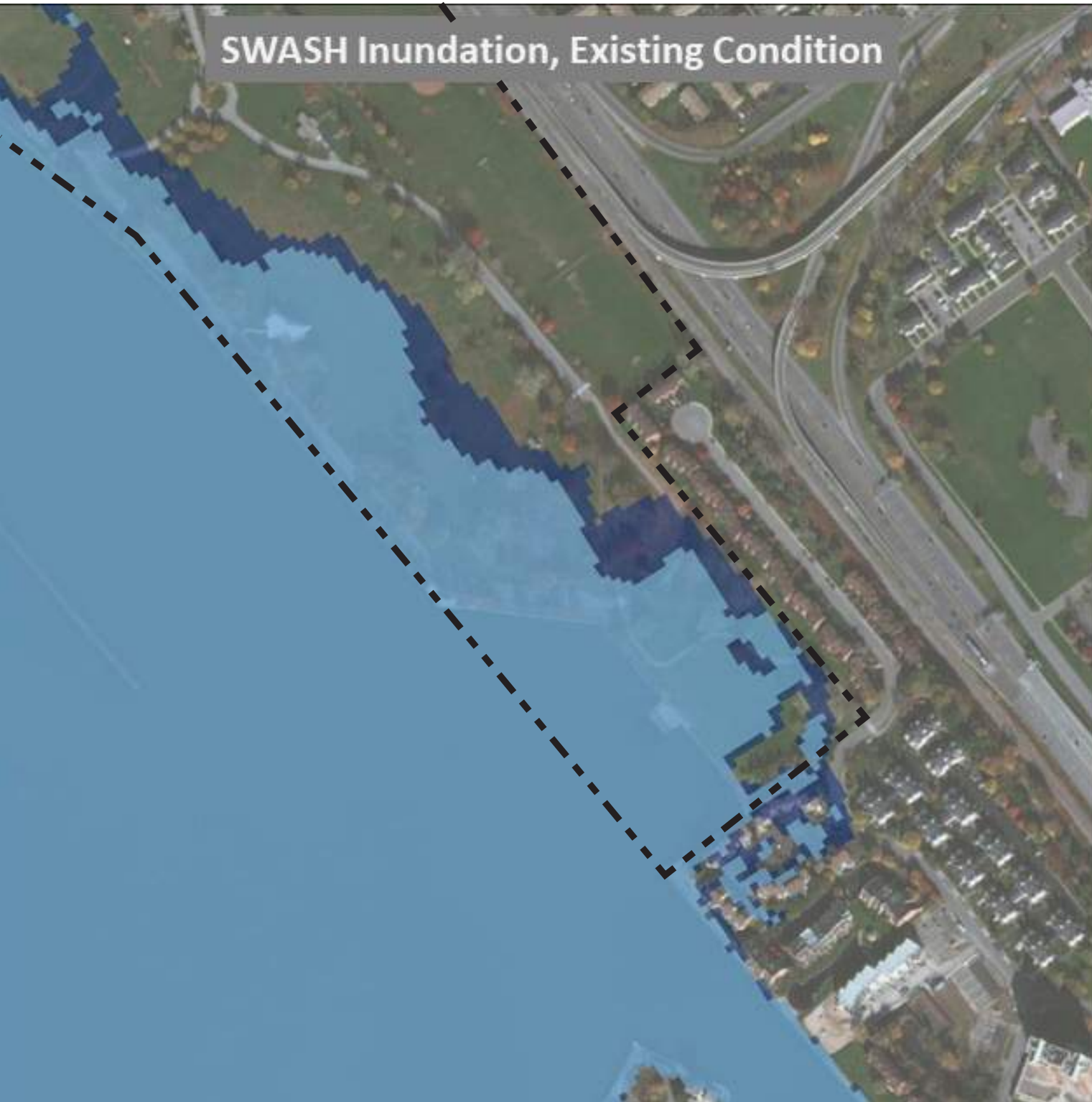
Profile J_5w - Significant Wave Height



Profile J_5w - Wave Induced Velocity



Analyzing Flooding through Hydrological Modeling



Flood Protection at RCWJCP

