

Town of Marblehead's Municipal Shipyard Resiliency Improvements Project

Chief Hoffer Site Visit
February 23, 2024



Project Area and Plan

to mitigate long-term risks from sea level rise, storm surge, and waves

Town Properties:

1. Parker's Boat Yard
2. Marblehead Municipal Light Department
3. Hammond Park
4. Commercial Street Pier
5. Marblehead Yacht Club
6. Cliff Street Boat Yard



Issues Affecting the Project Area

Waterfront structures are degraded and in need of investment



Deeper and more frequent flooding is occurring and predicted to increase



Public access along the waterfront is limited and disconnected





Project Goals and Proposed Improvements

Mitigate long-term risks from sea level rise, storm surge, and waves

- Raising seawalls, boatyards, and park to mitigate tidal and storm surge flooding
- Installing wave attenuating floats to mitigate wave overtopping risks.

Support existing water-dependent, industrial, and recreational uses

- Repaving boatyards, improving commercial vehicle access, increasing open space, and expanding dockage

Enhance public access to and across the waterfront

- Creating a continuous, safe, and accessible waterfront pathway connecting Parker's Boatyard through Hammond Park to Cliff Street

Resilient Design Standards



Massachusetts State Hazard Mitigation & Climate Adaptation Plan



Climate Resilience Design Standards & Guidelines

Recommended Design Standards for Seawalls



Sea Level Rise/Storm Surge

Target Planning Horizon: 2070



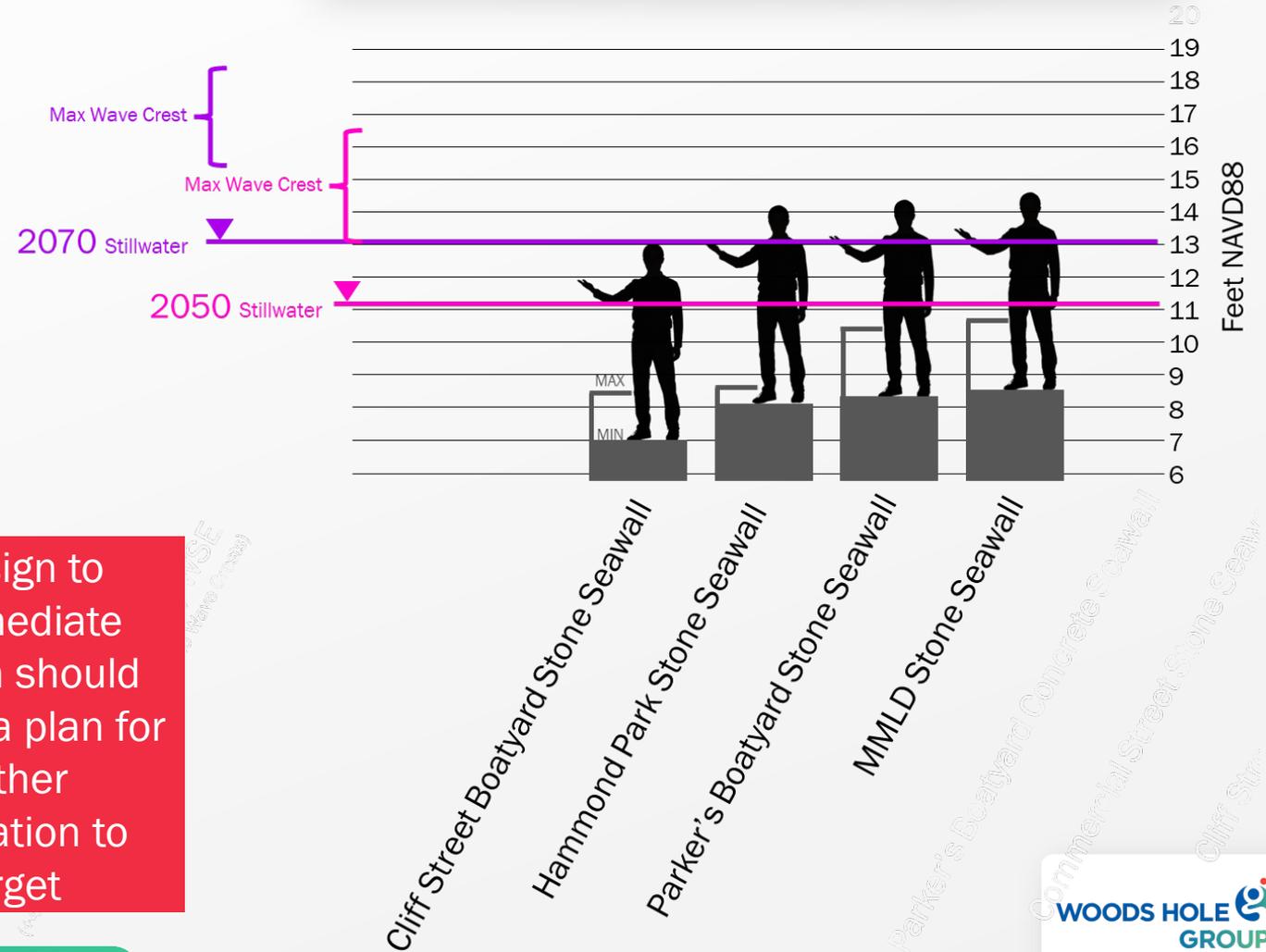
Intermediate Planning Horizon: 2050

Return Period: 50-yr (2%)



*Design to Intermediate horizon should include a plan for further adaptation to Target

50-Year Coastal Design Storm



Municipal Shipyard Resiliency Improvements

#1: Reconstruct and raise seawalls

#2: Fill and grade landward areas of boatyards and Hammond Park

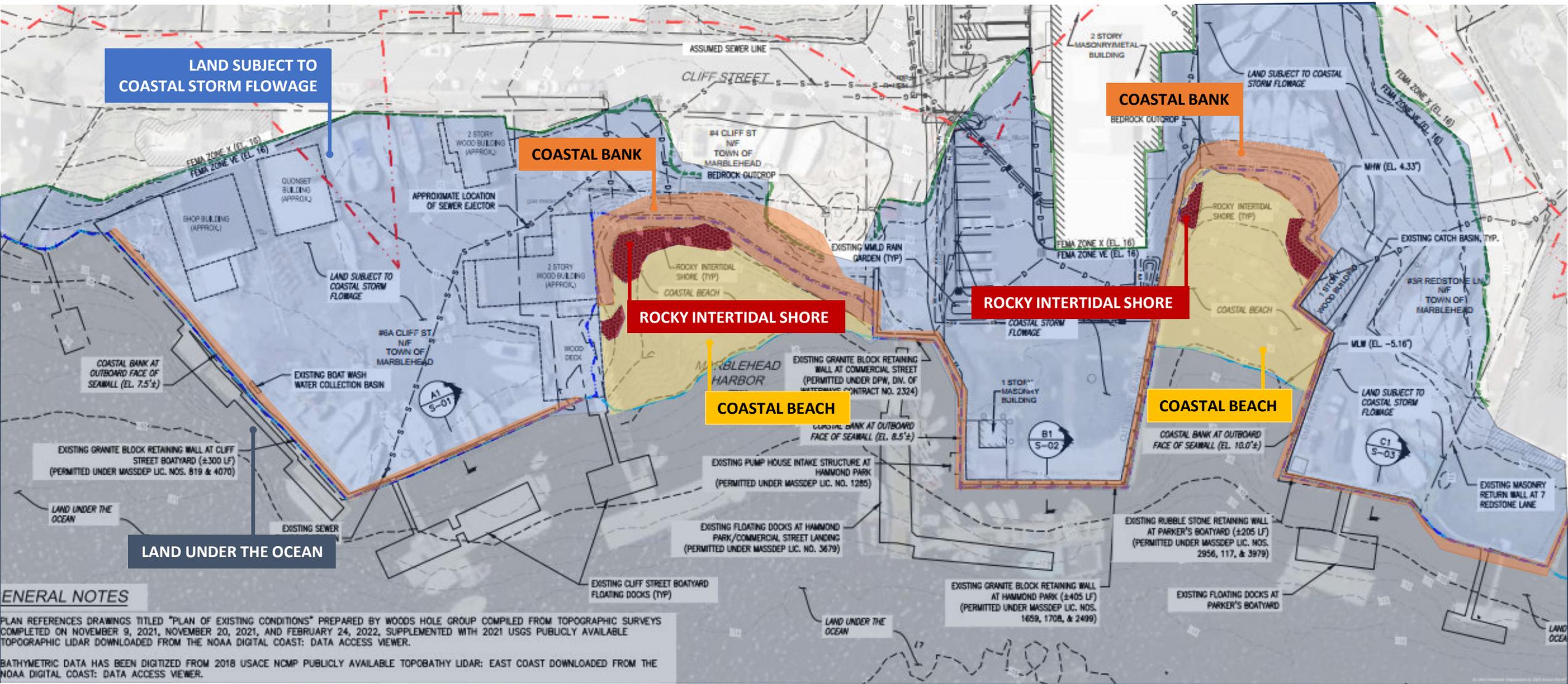
#3: Install pile-anchored, wave attenuating floating docks

#4: Remove buildings and remove/reinstall operations equipment

#5: Construct public access infrastructure improvements

#6: Construct stormwater management infrastructure improvements

Coastal Resource Areas



GENERAL NOTES

PLAN REFERENCES DRAWINGS TITLED "PLAN OF EXISTING CONDITIONS" PREPARED BY WOODS HOLE GROUP COMPILED FROM TOPOGRAPHIC SURVEYS COMPLETED ON NOVEMBER 9, 2021, NOVEMBER 20, 2021, AND FEBRUARY 24, 2022, SUPPLEMENTED WITH 2021 USGS PUBLICLY AVAILABLE TOPOGRAPHIC LIDAR DOWNLOADED FROM THE NOAA DIGITAL COAST: DATA ACCESS VIEWER.

BATHYMETRIC DATA HAS BEEN DIGITIZED FROM 2018 USACE NCMF PUBLICLY AVAILABLE TOPOBATHY LIDAR: EAST COAST DOWNLOADED FROM THE NOAA DIGITAL COAST: DATA ACCESS VIEWER.

THE LOCATION OF DRAINAGE UTILITIES CALLED OUT AS "APPROXIMATE EXISTING DRAIN LINE" HAVE BEEN APPROXIMATED BASED ON STORMWATER DATA RECEIVED FROM THE TOWN OF MARBLEHEAD DPW ON JANUARY 17, 2023. ACTUAL LOCATIONS MAY VARY.

SEWER LINE AND SEWER EJECTOR AT CLIFF STREET BOATYARD ARE APPROXIMATE BASED ON INFORMATION PROVIDED ON MASSDEP LIC. NO. 3368. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF THE SEWER LINE WITH THE DPW AND DIGSAFE PRIOR TO BEGINNING WORK.

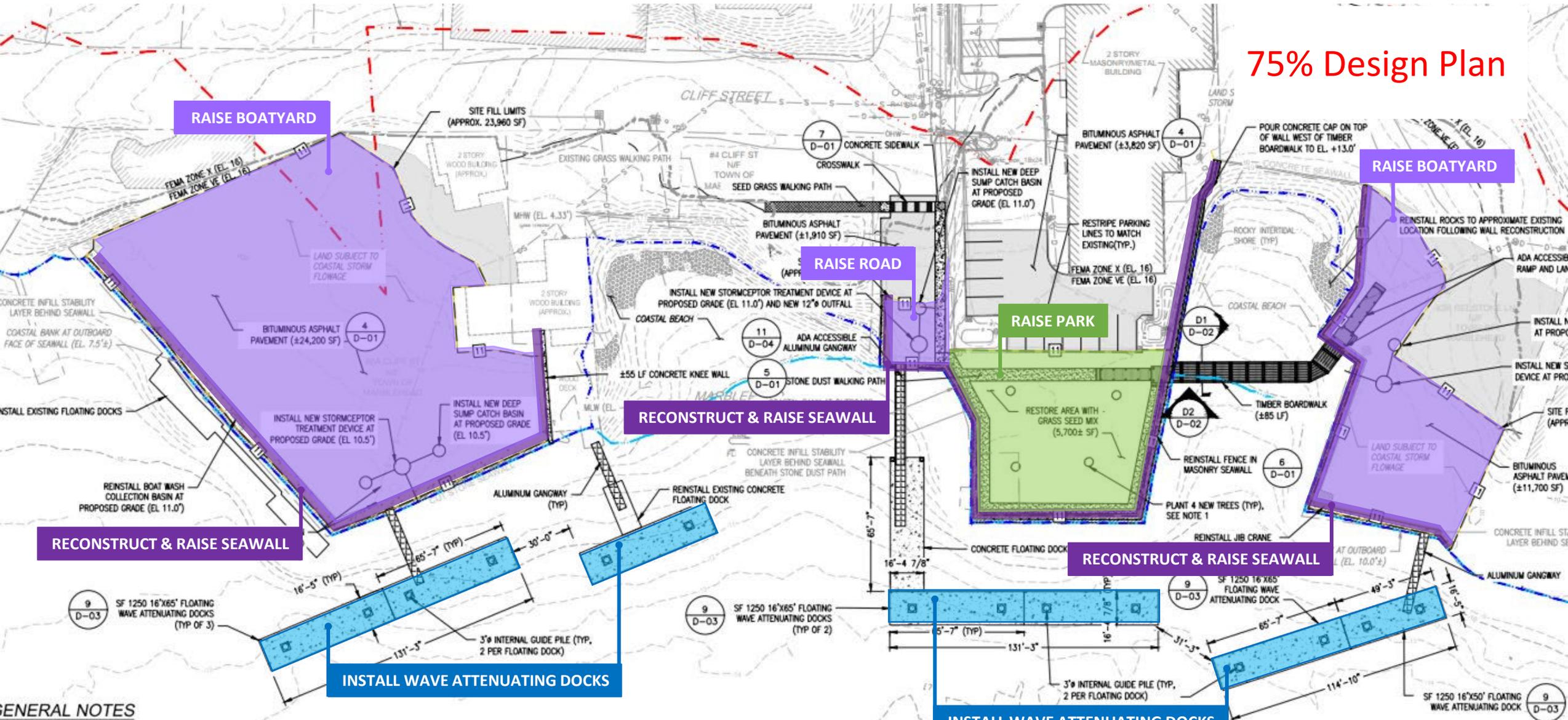
EXISTING CONDITIONS PLAN

SCALE: 1"=30'

PLAN NORTH

Proposed Site Plan - Mitigate long-term risks from sea level rise, storm surge, and waves

75% Design Plan



GENERAL NOTES

SPECIES, DIAMETER, AND LOCATION OF PROPOSED TREES TO BE COORDINATED WITH AND APPROVED BY THE TOWN OF MARBLEHEAD TREE WARDEN.

LOCATION AND ATTACHMENT CONFIGURATION OF HISTORICAL PLAQUES PREVIOUSLY AFFIXED TO THE PUMP HOUSE TIMBER INTAKE PLATFORM TO BE COORDINATED WITH OWNER/ HISTORICAL COMMISSION.

EXISTING PARK FEATURES AT HAMMOND PARK INCLUDING BENCHES AND FLAGPOLE TO BE REINSTALLED AT LOCATIONS COORDINATED WITH OWNER.

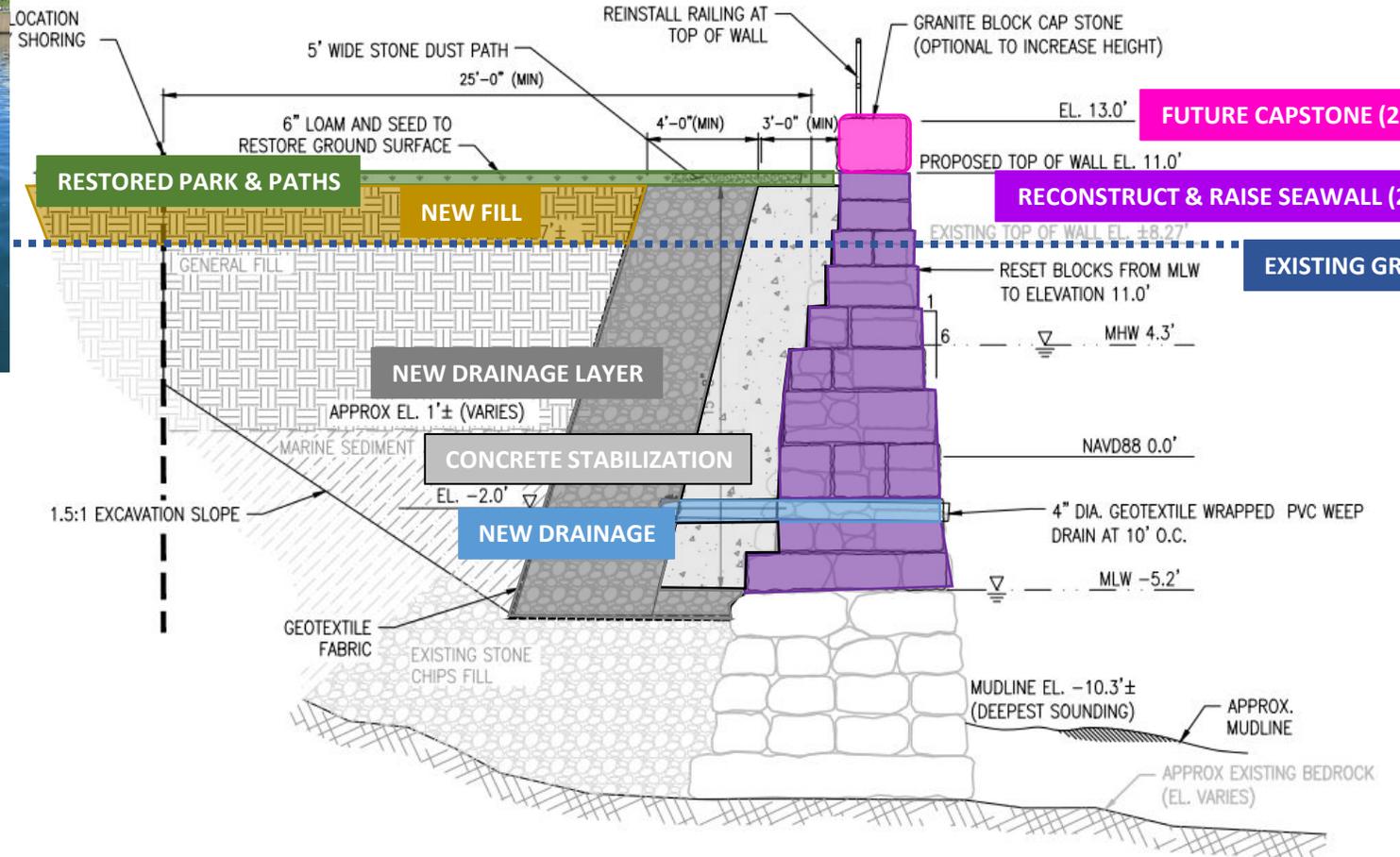
PROPOSED SITE PLAN

SCALE: 1"=30'

Resilient & Adaptive Seawall Design

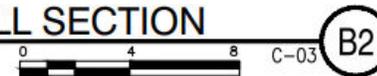


75% Design Plan



HAMMOND PARK PROPOSED SEAWALL SECTION

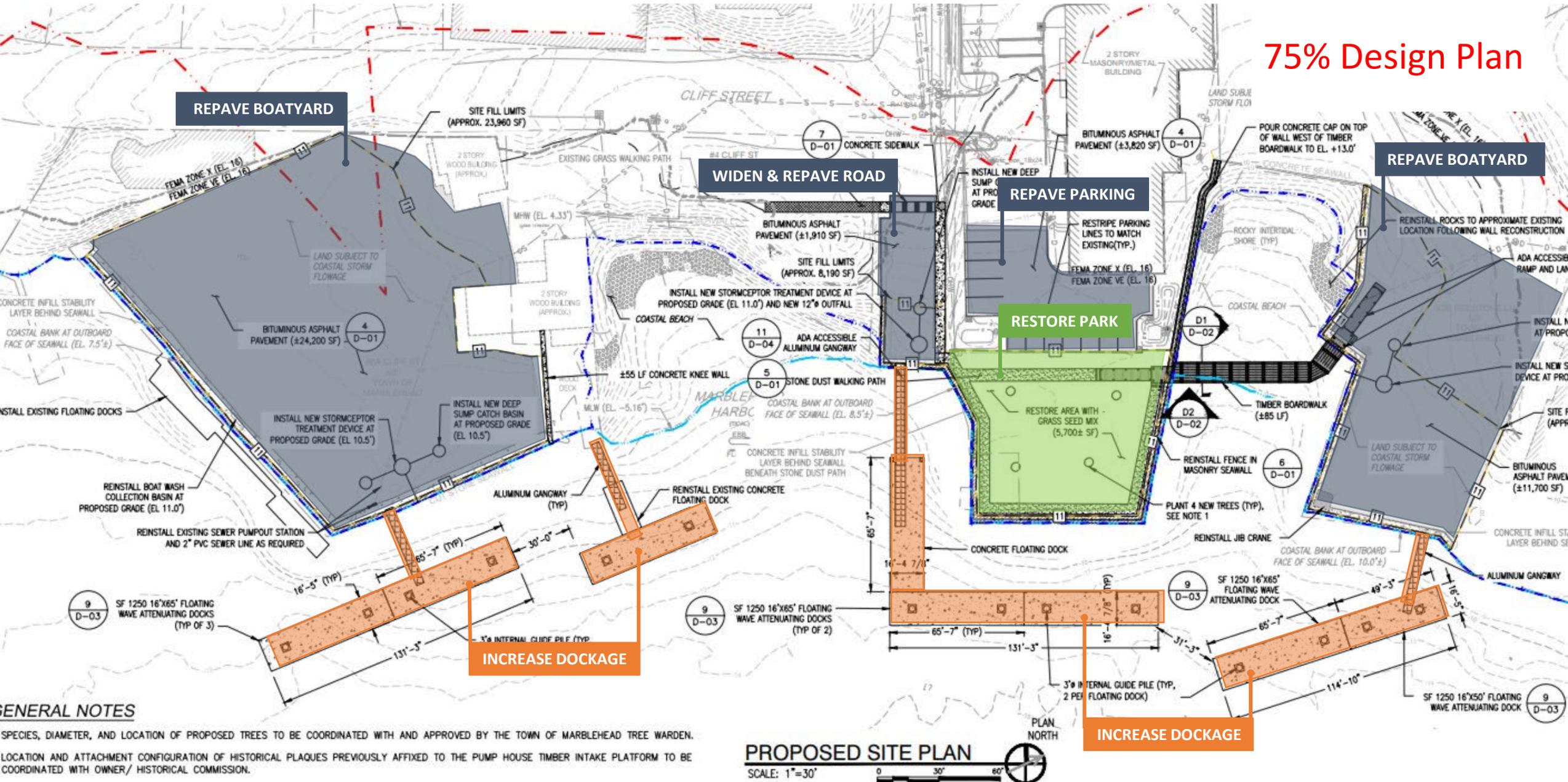
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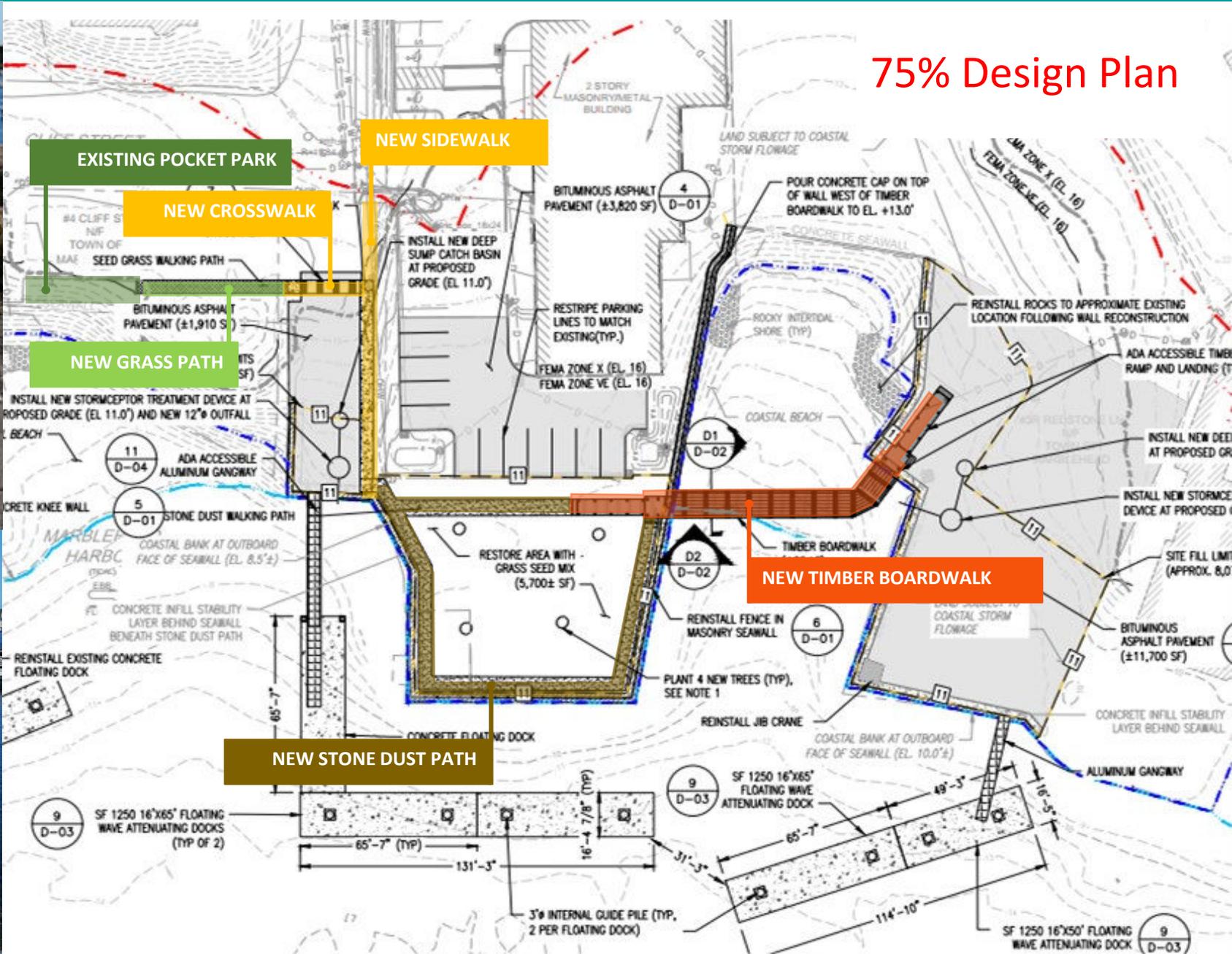
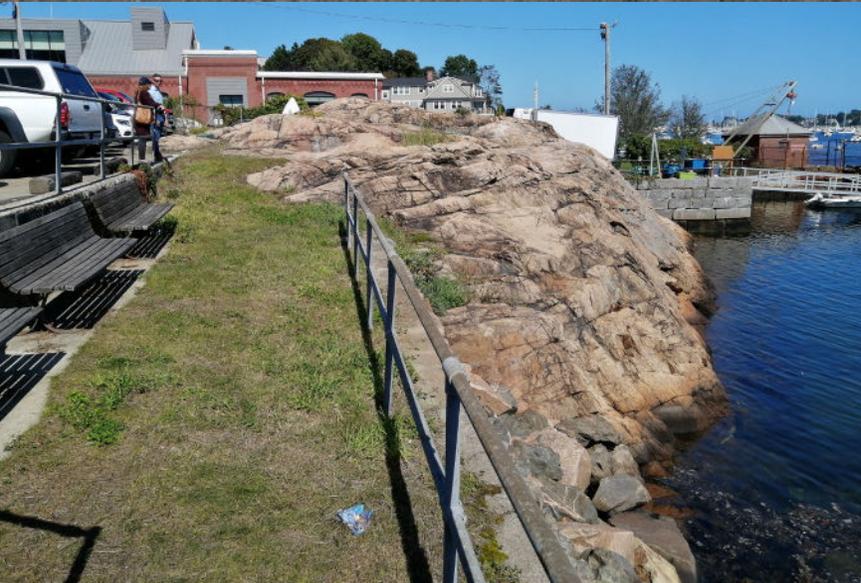
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Proposed Site Plan - supporting existing water-dependent, industrial, and recreational uses

75% Design Plan



Enhance public access to and across the waterfront



Permitting

› MEPA

- EENF Certificate (7/31/23)
- EIR Certificate (3/1/24 expected)

› State and Local Wetlands

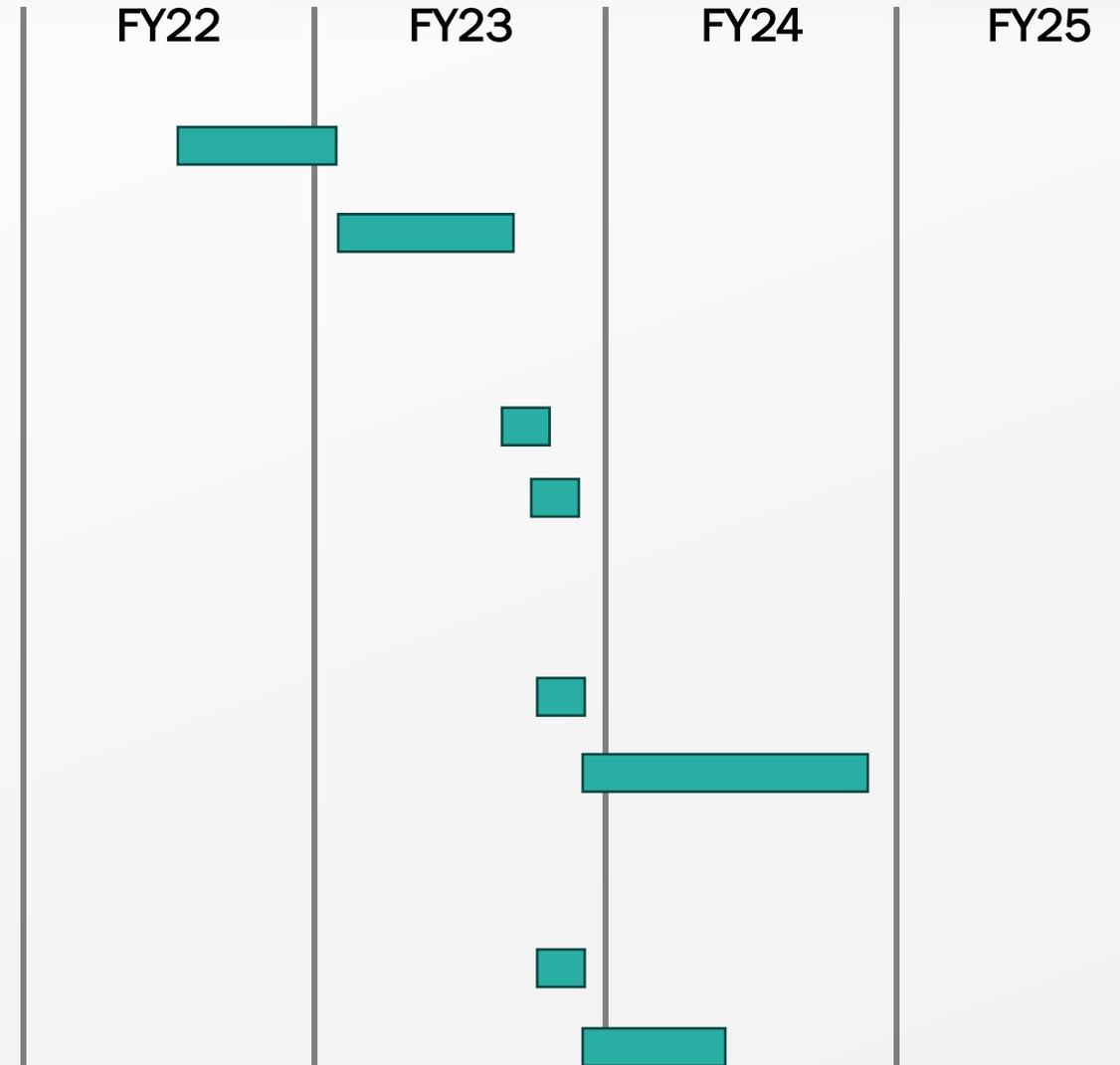
- Notice of Intent (2/28/24 filing)
- Order of Conditions expected +1-2 months

› Chapter 91

- License Application (April/May 2024 filing)
- License expected +10-12 months

› US Army Corps and CZM Consistency

- Pre-Construction Notification (April/May 2024)
- Takes 6 months



Funding Proposed Plan – 75% Design & Cost Estimates

› Cliff Street Boatyard

\$4.6M

› Hammond/MMLD/Commercial

\$4.4M including boardwalk

› Parker's Boatyard

\$4.8M

› TOTAL

\$13.8M

Construction anticipated to commence in June 2025 and take approximately 12 to 16 months to complete if implemented in one phase, or three years to complete if implemented in multiple phases.

