



SWAMPSCOTT PIER PROJECT

HARBOR & WATERFRONT ADVISORY COMMITTEE

February 3, 2022

Status Updates

- What we heard at the last meeting:
 - Dredging of the harbor is most important to the Fishermen
 - Concerns about splitting up the beach by constructing pier to the west, maintaining connection between Fish House and Pier
- Big Storm Event on 1/17
- Round 1 Geotech Soil Sampling Occurred on 1/18
- Group Meeting with Regulators – 1/11/22 – EPA, MA DEP, MEPA, DMF, CZM
 - Primarily Related to Eelgrass Concerns



January 17th Storm Event



January 17th Storm Event



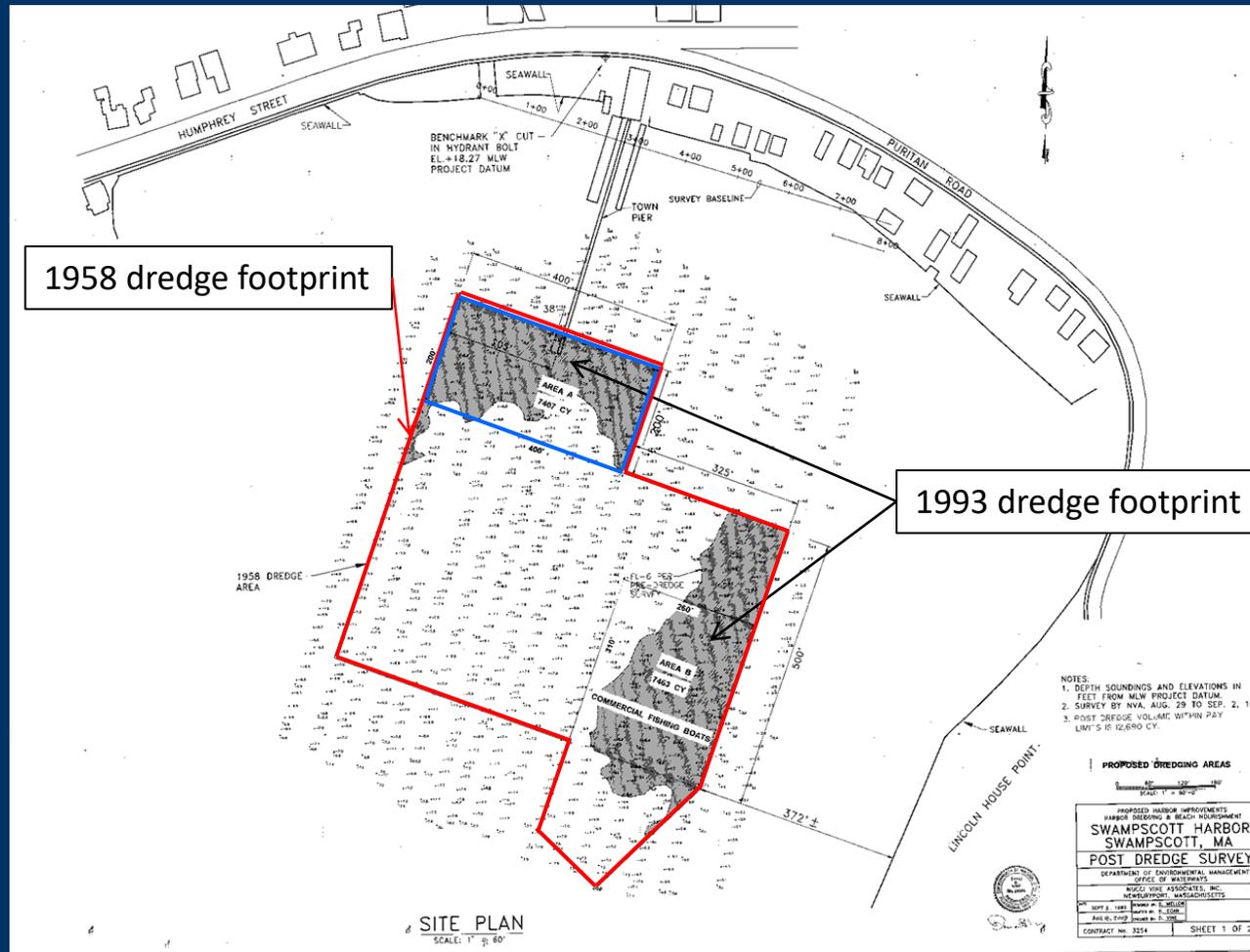
Boring Program



2 Boreholes- Similar profiles:

- 10-12 ft – Sand
- 15-17 ft – Med to stiff clay (one layer of soft clay)
- No refusal to 27 ft below grade – Bedrock not Encountered
- Typical Peri-glacial Subsurface Conditions

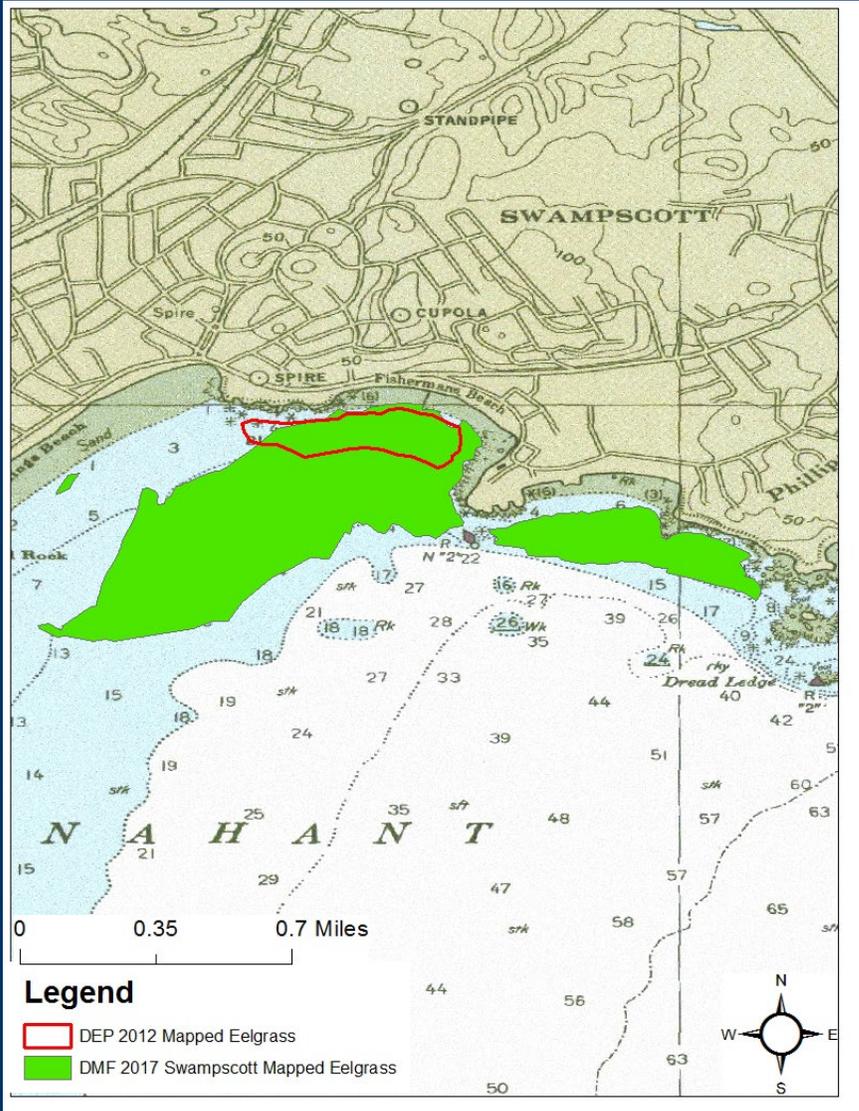
HISTORIC HARBOR DREDGING



Dredging has occurred in the Harbor historically twice:

- 1958 – As outlined in red
- 1993 – As shaded in gray

Eelgrass



Eelgrass

- Eelgrass is protected under state and federal statutes as it:
 - Provides habitat and shelter to juvenile fish and invertebrates
 - Improves water quality by absorbing nutrients
 - Protects shorelines from erosion
- Regulators review projects through the objective of
 - Avoid and Minimize, Mitigation – regulators against (and costly)
- Eelgrass is impacted from dredging, vessel moorings and shading from direct sunlight.
- Raising structure and orienting north-south, minimizes shade
- Need updated surveys- at peak biomass- Summertime
 - Location, Density, and Health of Eelgrass

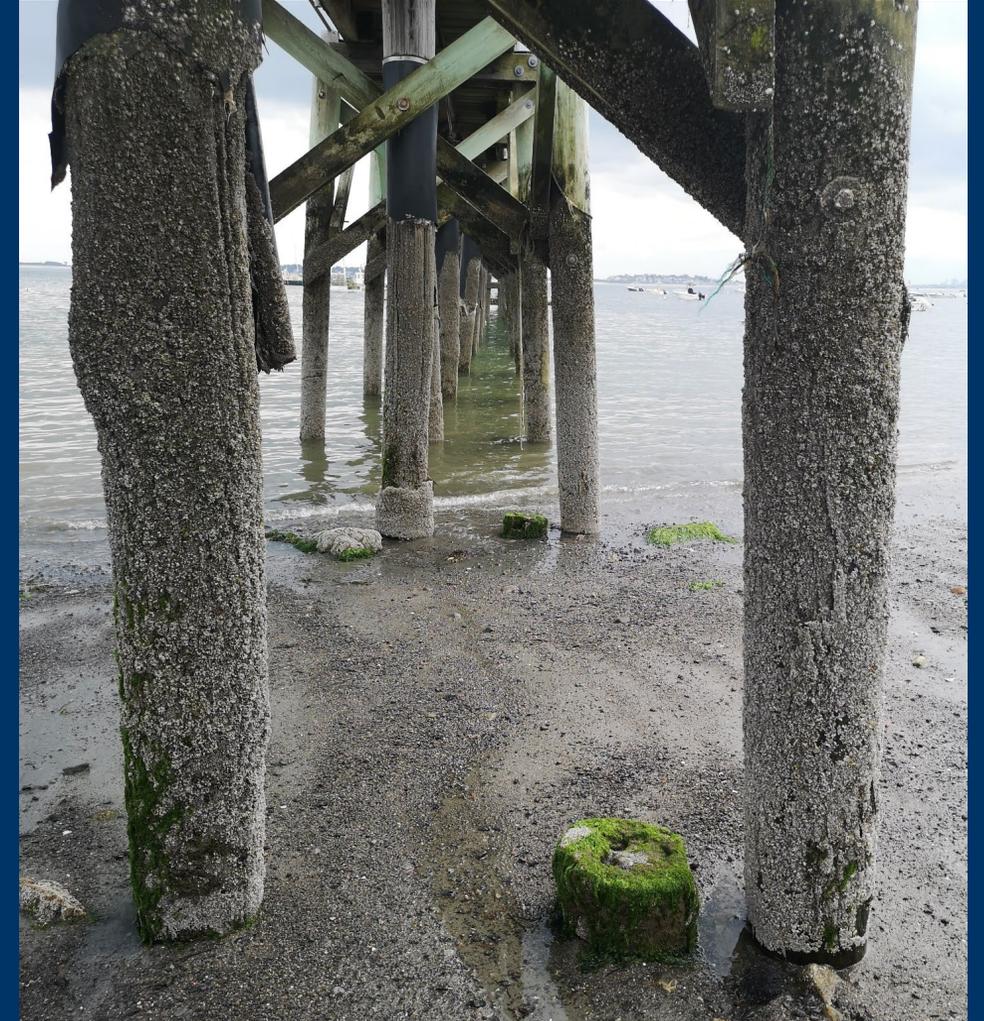


Existing Structure

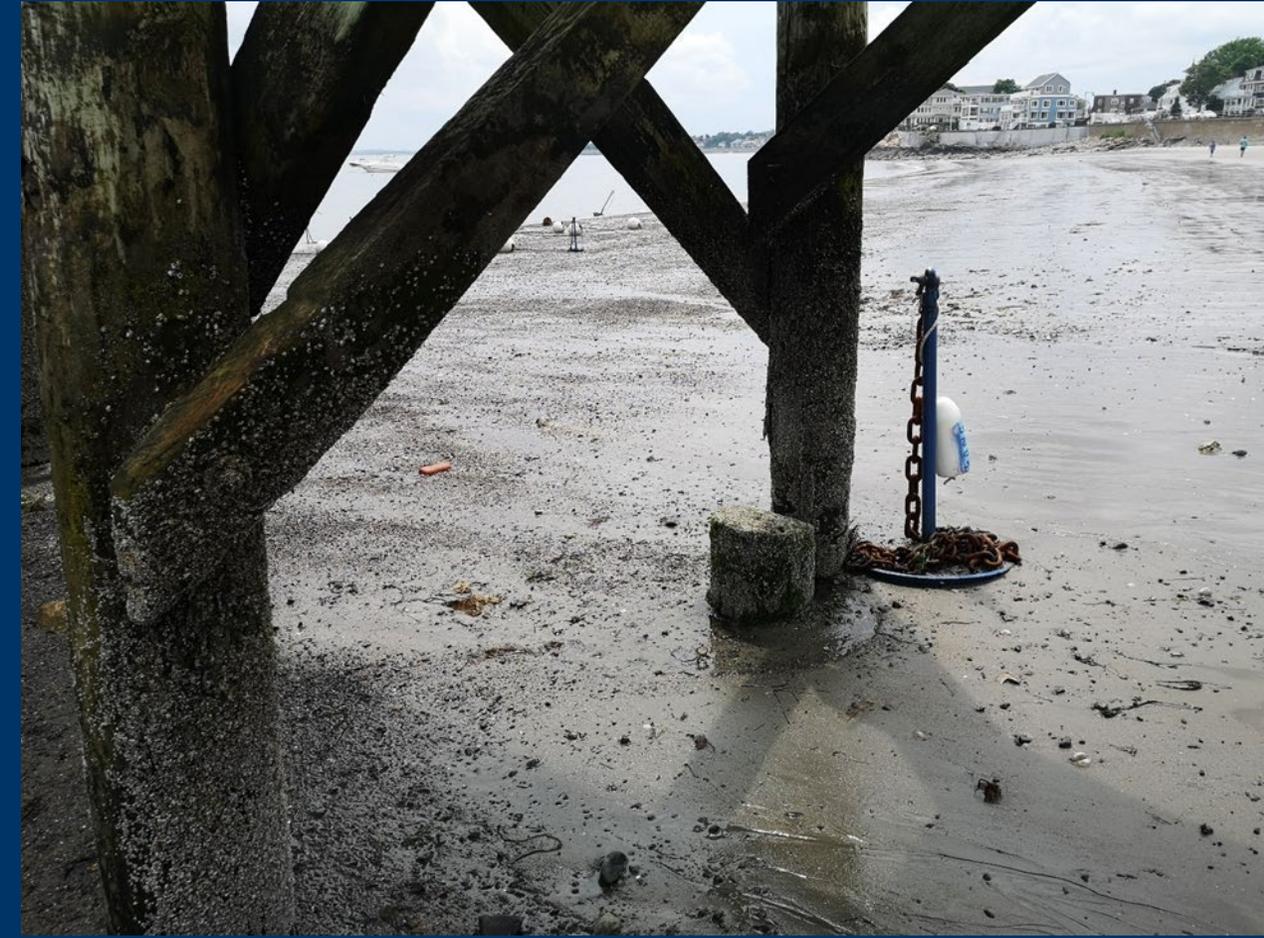
- Timber Structure – Completed in 1961 – 61 years old
 - Original Design Life would have been indicated in original design report- Unavailable
 - Typical Design Life for Timber Pile Supported Marine Structures – 50 yrs
 - Does not mean Structure is unsafe or structurally unsound after 50 yrs
 - Structure needs to be inspected, monitored and maintained
 - Balance of replacement cost versus continual maintenance costs
 - Timber is a non-homogenous material, and can weather and age differently within the same structure
 - Need to look at Piles, Caps, Stringers, Braces, Deck, and mudline
 - Review over time, baseline inspection versus subsequent inspections

Existing Structure

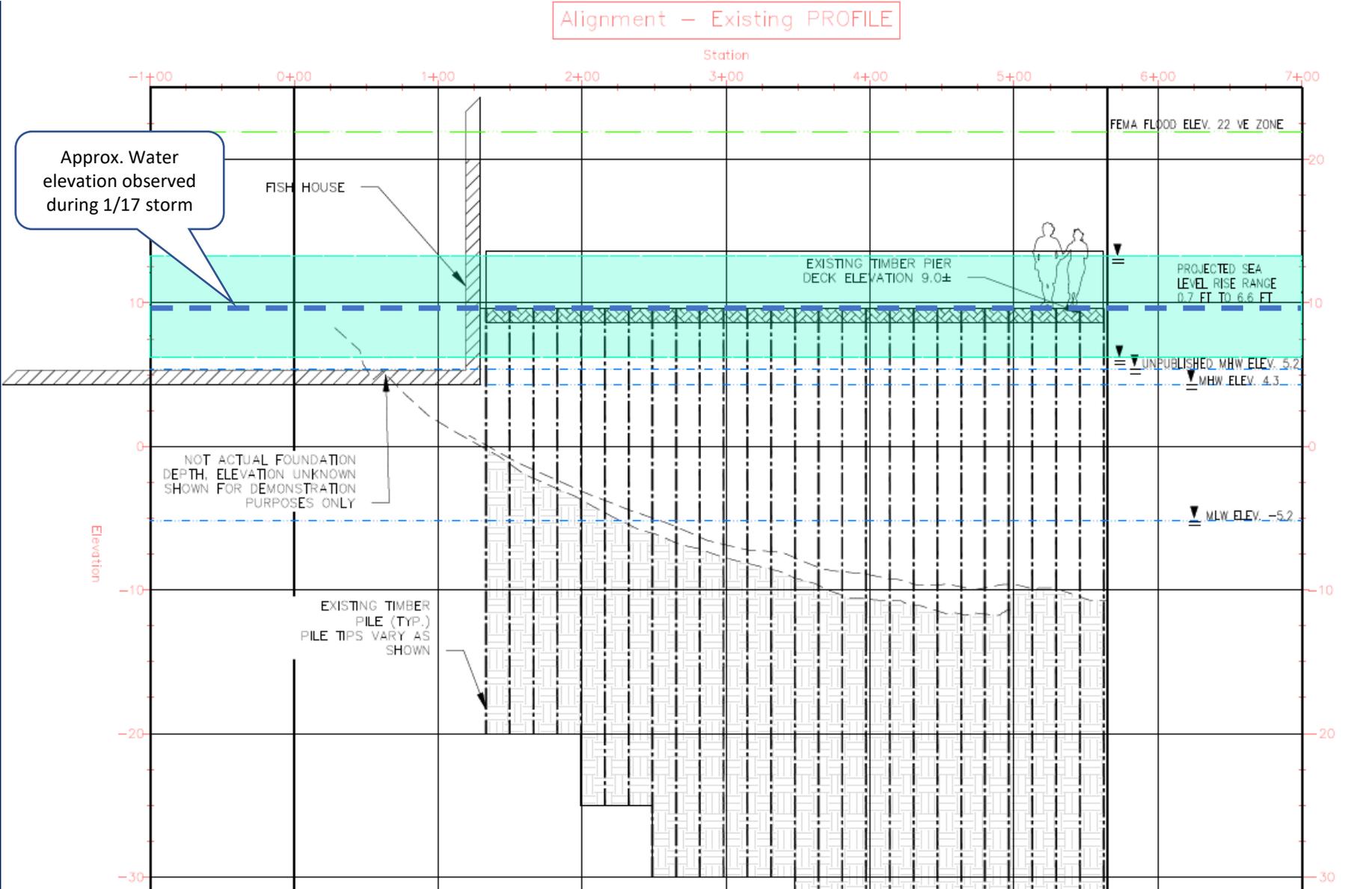
A complete structural assessment (consistent with the ASCE Waterfront Facilities Assessment Manual), has not been completed, However, we have performed above water and intertidal area documentation



Existing Structure



Structure Height



Next Steps

- Eelgrass Documentation Plan
 - With Buy-in from Regulators
 - Regulators will require study be conducted during Peak Biomass-Summer
- Bathymetric Survey
- Review Geotechnical Information for Structure
- Adjust Timeline

