

A PRESENTATION

MARIN COUNTY
PARKS
PRESERVATION • RECREATION

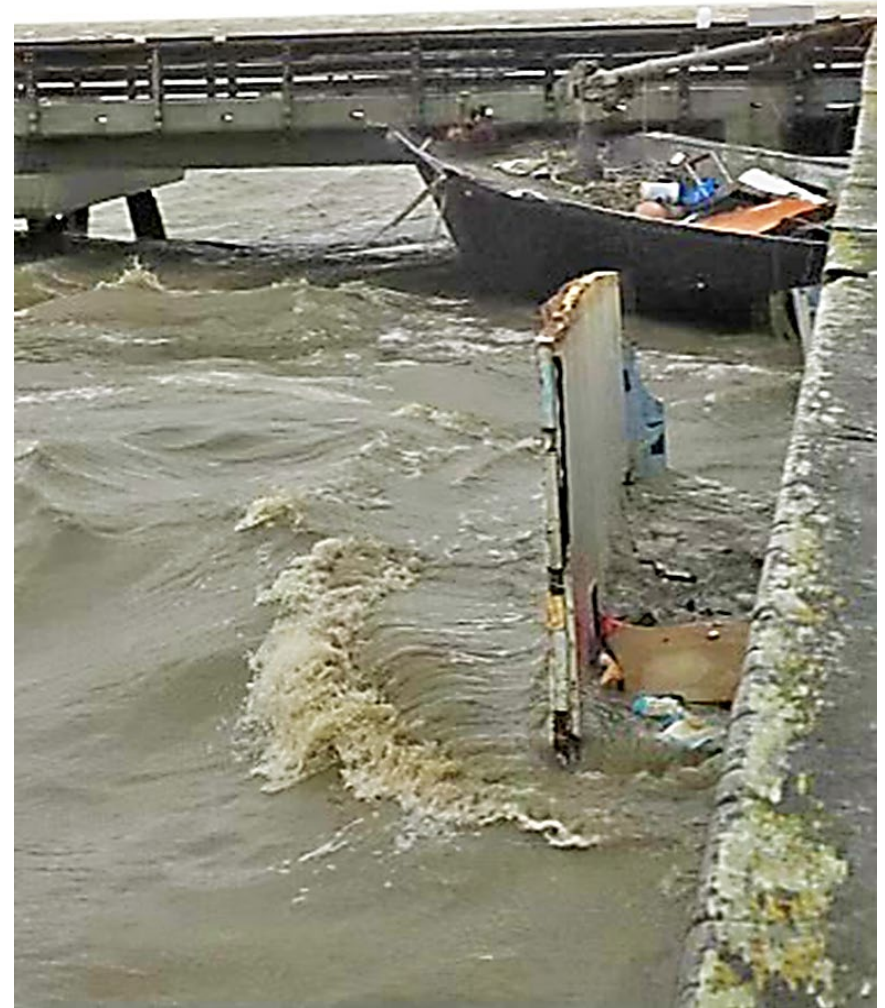


McNears Pier Damage

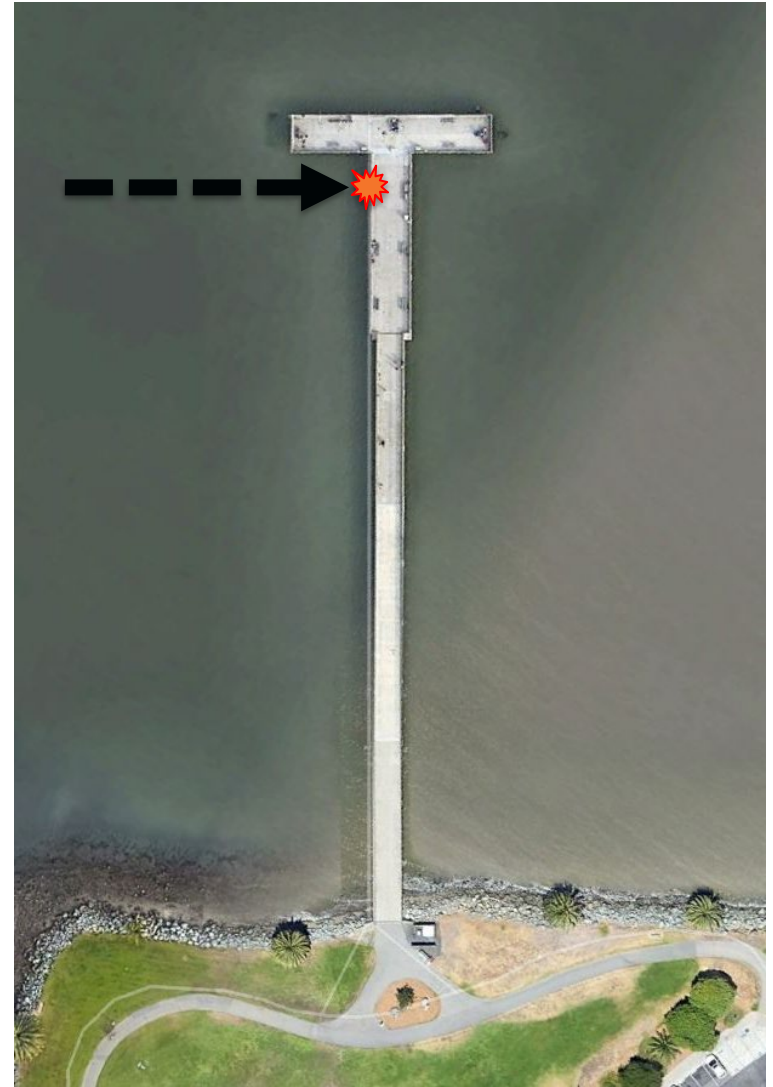
June 20, 2023

MARCH 21, 2023: VESSEL IMPACT

- 40' concrete vessel
- Mooring broke loose during storm
- Vessel struck pier on north side.



DAMAGE LOCATION



PIER DAMAGE

- Railing section damaged
- Concrete curb cracked
- Water line broken



DAMAGE LOCATION

- Expansion joint at pier head lifted
- Pier shifted with impact
- For public safety, end of pier closed



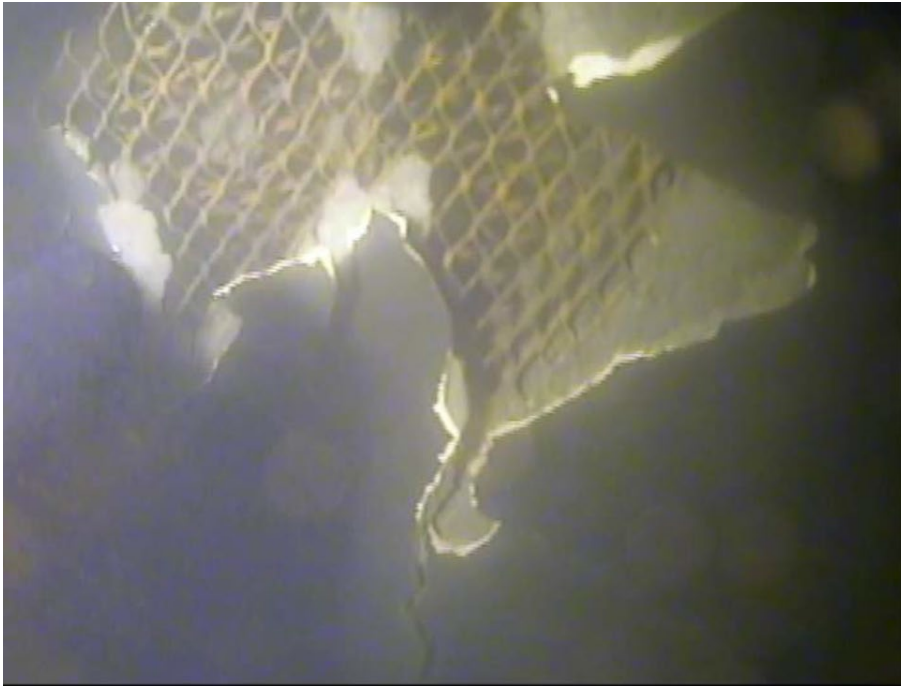
PIER STRUCTURAL DAMAGE

- Pile (F14) severely damaged
- Structural integrity compromised



PIER STRUCTURAL DAMAGE

- Underwater assessment revealed more damage
- Vessel remnants leaning on pile



North Face – 10 feet below surface – Vessel debris abutted to pile



North Face – Top of pile showing severe damage

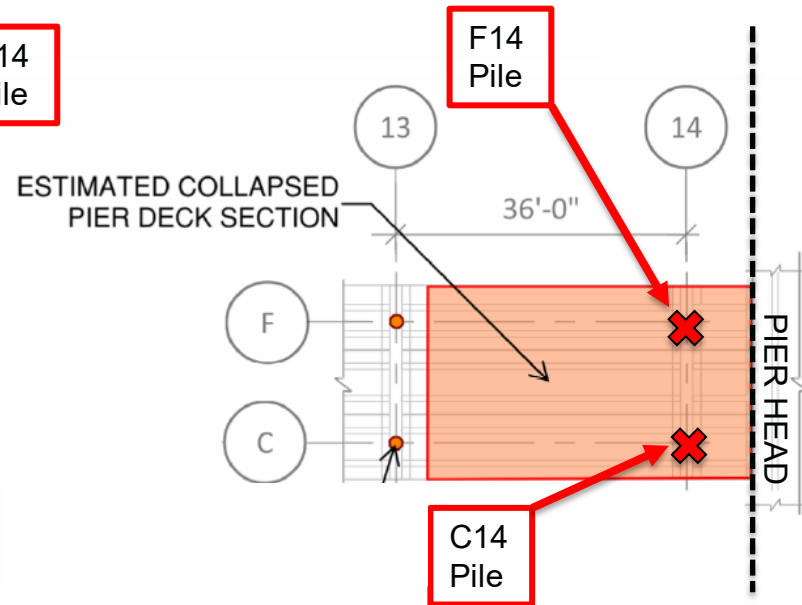
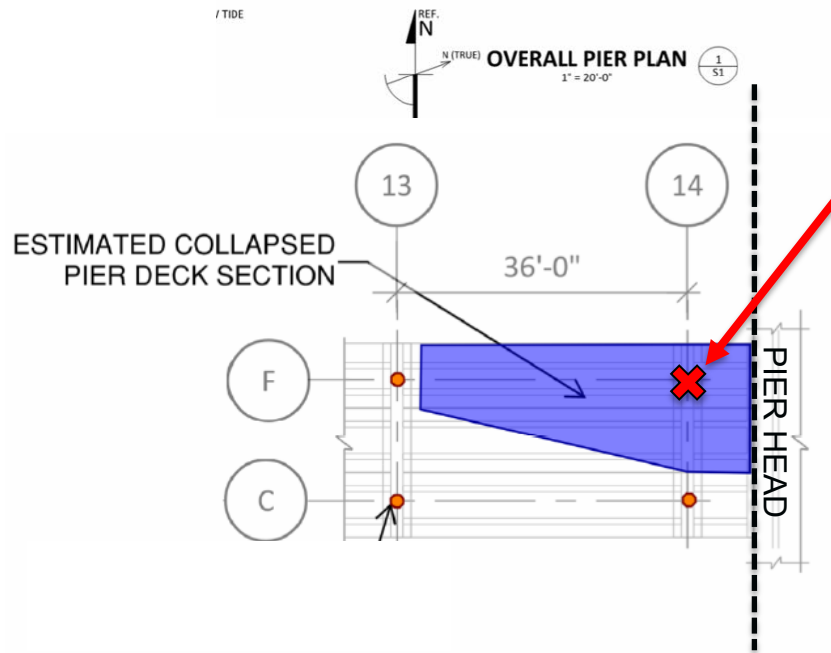
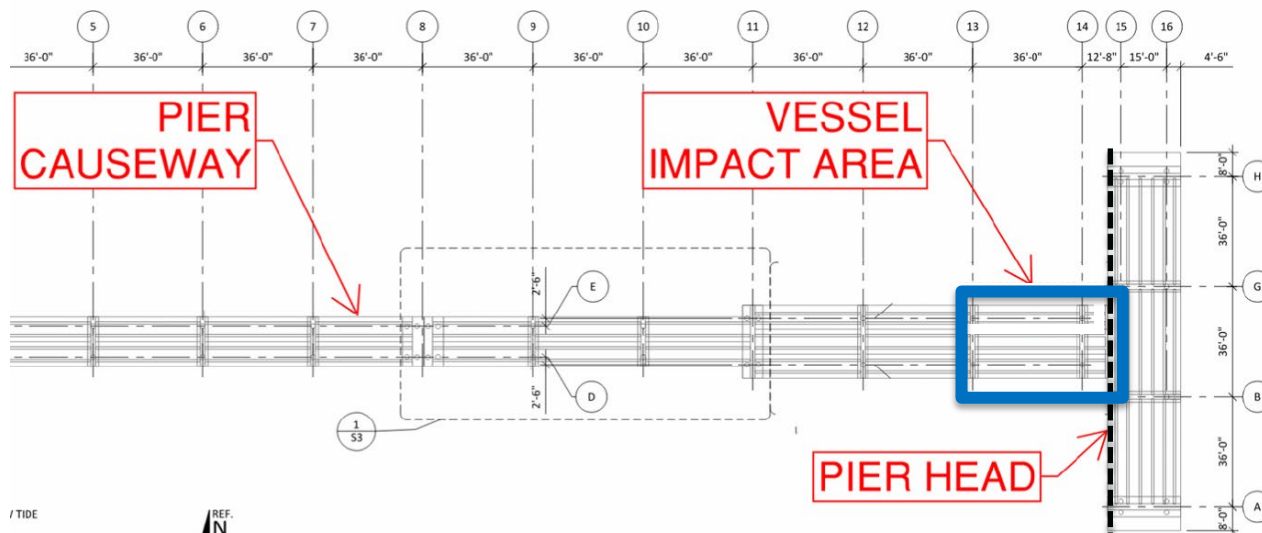


POTENTIAL FOR FAILURE

- Damage puts pier at risk of collapse if piling fails
- Potential causes:
 - Vertical and lateral movement
 - Minor seismic activity
 - Deterioration from localized waves/currents
 - Another collision (even if indirect)
 - Storm wind and waves
- Failure risk increases with each day



FAILURE SCENARIOS



SCENARIO 1: PARTIAL COLLAPSE

SCENARIO 2: FULL COLLAPSE

POTENTIAL FOR FAILURE

- Potential risk to human life if pier were to fail.
- Difficult to secure area and keep public away from pier.



MCNEARS PIER DAMAGE: NEXT STEPS

- On March 25th BOS authorized contract for repair design
- With BOS authorization, begin emergency repair contracting procedures
- Support Risk Management with insurance claim efforts
- Repair pier and re-open pier upon successful project completion.



MCNEARS PIER DAMAGE

Questions?