MEMORANDUM

February 6, 2026

TO: MEMBERS, PORT COMMISSION
Hon. Gail Gilman, President
Hon. Stephen Engblom, Vice President
Hon. Willie Adams
Hon. Steven Lee
Hon. Ken McNeely

FROM: Michael Martin
Acting Executive Director

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Michael Martin
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SUBJECT: Informational presentation on Port facility conditions.

DIRECTOR'S RECOMMENDATION: Information Only – No Action Required

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EXECUTIVE SUMMARY

Throughout its modern history, the Port has continuously worked to keep aging facilities and infrastructure in serviceable repair. Generally, the Port's facilities — constructed between the late 19th and early 20th centuries — require significant investment to address deterioration and seismic vulnerabilities. Sea level rise has added complexity to the conditions issue, such that the current challenge is the dual imperative of repairing aging facilities and mitigating seismic risk, while carefully selecting investments that align with anticipated shoreline elevation — so that today's work does not require expensive rework in the coming decades.

Across the waterfront, the Port's facilities' conditions vary widely. While investments over the decades have improved roofs and rehabilitated some structures, approximately 25% of roofs are in poor condition and a typical pier is in poor to fair condition (with "poor" meaning that repairs should be carried out with moderate urgency while "fair" means that repairs are recommended, though are not a high priority). Electrical utilities are largely in poor to fair condition, nearing their end-of-life. Water and sewer systems are generally in fair condition but vulnerable in marine environments, and storm drainage trash-capture upgrades are needed to meet regulatory requirements by the end of 2030. Maritime

infrastructure — including berths, docks, and floats — requires ongoing maintenance, with major equipment and aging barges needing replacement. Streets and parks are generally in serviceable condition, though some areas need reconstruction or refresh investments.

With important elements of the Port's facilities deteriorating and with insufficient capital funding to bring all facilities to a state of good repair, the Port will continue to pursue a multipronged strategy in stewarding our waterfront, including:

- **Structural Integrity:** Continue rapid structural assessments and prioritize investments in substructures and superstructures to extend the life of piers and wharves, especially those with strong tenant prospects and usability.

- **Waterproofing and Roof Renewal:** Prevent deterioration by replacing roofs and building envelopes that have reached end-of-life, focusing on facilities critical to revenue generation.

- **Revenue-Driven & Risk-Reduction Investments:** Allocate capital toward facilities that can deliver measurable economic returns while meeting regulatory and safety requirements.

- **Strategic Debt Financing:** Pursue bond issuances for high-impact capital projects that demonstrate a clear return on investment and strengthen the Port's long-term operating revenues.

- **Resilience Integration:** Incorporate seismic and flood resilience into all major projects, aligning with federal flood studies and long-term shoreline elevation plans, and considering how potential, future federal investments may be part of a project's funding solution.

- **Public-Private Partnerships:** Explore opportunities for private capital to support rehabilitation and activation of key areas, such as Pier 68 and historic finger piers, through intermediate-term leases or joint ventures.

- **System Modernization and Key Equipment Purchase:** Implement modern property and asset tracking systems to streamline lifecycle cost analysis and improve capital planning efficiency. Place into service new pile-driving crane barge and pile-repair crew next year to bring key repair work in house and reduce Port's exposure to cost escalation for critical work.

In sum, the Port must balance urgent repairs with long-term resilience planning. This overview underscores the need for focused, strategic investments that extend facility life, support economic vitality, and prepare for climate adaptation.

STRATEGIC OBJECTIVES

Robust condition assessments and improvements to the Port's facilities support the following strategic objectives:

Economic Growth:
Property portfolio: Invest in Port facilities to keep them in good repair for revenue generation and public uses.

Productivity:
Attract and retain tenants to build an economically successful and vibrant waterfront.

Equity:
Share economic prosperity. Facility assessments and repairs completed by Port's diverse employees and through Port's contracts advance equitable opportunities, particularly for BIPOC-owned and local business enterprises.

Sustainability:
Advance environmental stewardship by investing to comply with environmental regulations.

Evolution:
Evolve the waterfront through infrastructure and building investments to renew and extend the useful life of Port facilities.

BACKGROUND

The Port of San Francisco's stewardship of our iconic waterfront has faced a variety of challenges over the decades — from rapid growth to cargo containerization, labor actions, and freeway construction and demolition, among others. The current challenge is the maintenance and renewal of our aging facilities — to protect them from deterioration and catastrophic earthquake damage — while ensuring that today's investments support a future waterfront that is resilient to sea level rise and flooding.

Stewardship and investment in the Port's property have become significantly more complex due to the looming threat of sea level rise. The Port must plan for a future — possibly just a few decades away — in which the shoreline is raised by 2 to 7 feet to protect the City. At the same time, the Port must invest in substructures, roofs, sprinklers, and other infrastructure located in front of, behind, and sometimes on top of that future, elevated shoreline.

In short, the Port is navigating a period marked by conflicting imperatives. On one hand, the deteriorating condition of aging facilities demands urgent investment. On the other hand, uncertainty around the timing and design of an elevated shoreline calls for carefully considering expenditures — ideally based on solid projections of how long each investment will remain useful.

Sound decision-making in the face of this conflict requires assessing the cost and durability of each investment with the expected "return" on the investment. Meaning, staff must assess total project cost and compare that with the expected array of investment benefits, such as public access, facility condition improvements, increased revenue, and improvements to historic fabric. This analysis is not a new process. What is new in these assessments is the *time* we have to recoup investments – it is both limited and uncertain.

PORT OF SAN FRANCISCO CONSTRUCTION HISTORY

Large areas of the Port were constructed over a 60-year period, primarily between the 1870s and 1930s. While major projects have improved and replaced significant sections of the Port, much of the infrastructure and buildings are over a century old. Below is a summary of key construction periods along the waterfront.

- **Union Iron Works – 1849, 1885.** Lured by inexpensive land, deep water access, and seclusion from Downtown, the Union Iron Works was founded at Pier 70 as the first major civilian-owned shipyard on the West Coast. In 1905, Bethlehem Steel took over, expanding production through both World Wars. Designated as part of the National Register of Historic Places in 2014, portions of the district have been rehabilitated and are prepared for new development. The former ship repair yard, however, closed in 2017 and has been tenanted with only temporary uses over the last nine years.[1]

- **Seawall and Ferry Building – 1870s–1910s.** Conceived by the State of California in the 1870s and completed in the 1910s, the Embarcadero Seawall transformed three miles of muddy tidelands into a deep-water port.[2] To convert muddy shoreline into usable land, rock embankments, timber bulkheads, and concrete walls, reclaimed over 500 acres for piers and roadways. The Ferry Building was constructed and opened in 1898 for ferry passengers and as a ferry depot.[3]

- **Finger piers – 1900s–1930s.** Historic finger piers from Pier 45 in the north to Pier 48 in the south were constructed as break-bulk cargo facilities. Their design was inspired by the City Beautiful Movement, with classical and monumental architectural treatments to match the significance of the maritime industrial operations they supported.[4]

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[1] See Pier 70 history summary: https://www.sfport.com/sites/default/files/FileCenter/Documents/127-Pier%2070%20History.pdf, Microsoft Word - pier70history.doc

[2] See Seawall Earthquake Safety Program Bond Report, April 2018. https://www.sfport.com/sites/default/files/2021-11/Seawall%20Bond%20Report.pdf, Seawall Bond Report.pdf

[3] Landmarks Preservation Advisory Board, Final Case Report, December 15, 1976, summarizes history of the Ferry Building.

[4] See https://www.sfport.com/sites/default/files/2016-4-27_booklet_overview_of_historic_resources_and_stewardship.pdf, Port of San Francisco Waterfront Plan Update

- **Fisherman's Wharf piers & buildings, 1915 –1920s.** While the Fisherman's Wharf area was a fishing center for Chinese and Italian immigrants as early as the 1850s – and for Indigenous Peoples' tribes, including the Ramaytush Ohlone for thousands of years before that – the filled land around Jefferson, Hyde, and Leavenworth Streets and the construction of bulkhead wharves in the Wharf area date to 1913 to 1919.[5]

- **Pier 50, 1920s and 1940s.** Originally serving as a grain terminal near Mission Bay, Pier 50 was built in the 1920s and significantly expanded in the 1940s to the current, 1,500 feet long pier. In 1946, Mission Rock — a rocky island — was burned and filled to create additional terminal space. By 1950, the expanded Mission Rock Terminal encompassed about 20 acres with four sheds.

- **Embarcadero Freeway, 1959.** The Embarcadero Freeway was constructed along the waterfront in 1959, paralleling the seawall. It remained a fixture until its demolition in 1991.

- **Pier 80, Piers 92–96 – 1960s–1970s.** Pier 80 and Piers 94-96 were originally developed for container cargo shipping operations. From the mid-1990's, container cargo business decreased in San Francisco and consolidated at much larger West Coast container and cargo facilities, including at the Port of Oakland, and these sites transitioned to breakbulk and roll on-roll off maritime uses.[6]

- **Pier 39 – 1970s.** The current Pier 39 opened in October 1978 as a 50-store, 23-restaurant entertainment complex complete with a diving pool and street performers. Over subsequent decades, it became one of San Francisco's top attractions.[7]

- **Embarcadero freeway removal, 1991.** After City voters rejected a measure to remove the freeway in 1986,[8] the City and Caltrans removed the Embarcadero Freeway in 1991 after damage from the 1989 Loma Prieta earthquake.

- **Modern investments from Piers 1 ½–3-5 to the Ballpark, 1990s–2006.** During this roughly 15-year period, the Embarcadero Promenade and the new Giants Ballpark were constructed, and the historic Ferry Building Area and Piers 1½-3-5 completed rehabilitation and reopened.

- **New construction and rehabilitation, 2013–present.** Between 2013 and 2025, historic rehabilitations of Pier 15 (Exploratorium) and the Historic Core, Building 12,

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[5] See historic evaluation of Fish Alley area, here: https://www.sfport.com/files/Planning/Docs/Fish_Alley_Hist_Resources_Eval.pdf

[6] See Port's Maritime Eco-Industrial Center document for history of these piers: 032216_Piers 80-96 Strategy.pdf; and https://www.sfport.com/sites/default/files/032216_Piers%2080-96%20Strategy.pdf

[7] See History of PIER 39 - PIER 39, https://pier39.com/history-of-pier-39/

[8] See excerpt from Portal: San Francisco's Ferry Building and the Reinvention of American Cities, John King, Who Regrets Tearing Down the Embarcadero Freeway? - Streetsblog San Francisco https://sf.streetsblog.org/2024/02/26/who-regrets-tearing-down-the-embarcadero-freeway

and Building 49 (YMCA) at Pier 70 have reopened. Four new buildings and a new waterfront park have been constructed at Mission Rock, and the Port has opened new open spaces at the Brannan Street Wharf and Crane Cove Park.

Port facilities were largely built between 75 and 150 years ago. While many spectacular new buildings and parks have been built since the original construction of the Port and rehabilitation projects of a handful of the Port's more than two dozen historic buildings have been roundly praised, reconstruction and replacement of aging buildings and infrastructure is painstaking and expensive work.

FACILITIES CONDITIONS OVERVIEW

Facility conditions are summarized below by the key categories, and **Table 1** provides an overview of conditions:

A. Marine Substructures
B. Buildings and Roofs
C. Utilities
D. Floats & Major Equipment
E. Streets and Parks

Table 1. Facility Conditions Overview

Category	Conditions Overview
Marine Substructures	Fair to poor condition, as rated in the American Society of Civil Engineers manual for such structures.
Roofs and Building Structures	Roughly a quarter of roofs in poor condition, a quarter in fair condition, and a half in good condition, as assessed by Port staff visual inspections.
Utilities	
Electrical	Most medium voltage equipment must be replaced in four locations. Electrical equipment throughout our facilities is replaced on an ongoing basis when failures or safety concerns arise.

Category	Conditions Overview
Sewer, Water, and Fire Suppression Systems	In-street pipes are in fair condition; Focus on moving plumbing above pier deck when possible; pipes in marine environments degrade more quickly and are vulnerable to floating debris damage. Fire suppression systems have been installed in most locations and are regularly inspected.
Storm Drainage	Fair condition; major trash capture investment required to meet regulations by end of 2030.
Floats & Major Equipment	Fair conditions. Fisherman's Wharf Forward includes lagoon improvements; New pile-driving barge to be delivered; 4 barges nearing end-of-life.
Streets & Parks	Streets in fair to poor conditions; Amador Street in poor condition and project underway to reconstruct. Parks in good to fair condition, with some requiring capital refresh.

A. Marine Substructures

A related Port memorandum, see Item 8A, February 6, 2026, provides details on the conditions of the Port's over-water buildings' superstructure and substructure. As described in that report, the Port has a prescribed monitoring system for substructures - the facilities which are aged and most vulnerable to deterioration - and implements safety protocols including load restrictions, localized closures, and full closures, if necessary. While many of the Port's piers and wharves do not have load restrictions or closures, the average condition of these substructures falls between *fair* and *poor,* utilizing the overall system rating developed by the American Society of Civil Engineers.[9]

[9]The American Society of Civil Engineers' Manual provides a standardized scale of overall system ratings. *Fair* rating means: All primary structural elements are sound but minor to moderate defects or deterioration observed. Localized areas of moderate to advanced deterioration may be present but do not significantly reduce the load-bearing capacity of the structure. Repairs are recommended, but the priority of the recommended repairs is low.

Poor rating means: Advanced deterioration or overstressing observed on widespread portions of the structure but does not significantly reduce the load-bearing capacity of the structure. Repairs may need to be carried out with moderate urgency.

B. Roofs and Building Structures

The Port maintains about 58 roofs on buildings originally constructed between 1870 and 2014, including both hard surface and metal roofs. While a typical Port roof is very large, covering roughly 80,000 square feet, Port property also includes small, out-building roofs between 5,000 and 10,000 square feet.

The Port began a concerted effort to replace roofs in 2007 and estimates slightly more than half of the roofs are in good condition, a quarter are in fair condition, and a quarter are in poor condition and are subject to failures. Buildings with roofs in the poorest condition tend to have some structural deterioration due to dry rot or corrosion damage. Correcting such structural damage after it occurs adds significant expense beyond just re-roofing costs.

C. Utilities

Utilities on Port property include facilities delivering electricity, water, sewer, natural gas, and storm drain and roof drainage through and from Port property. Generally, facilities located outside of streets accepted by the San Francisco Public Works Department are maintained by the Port. This means that – broadly and with some exceptions – utilities in Jefferson Street, the Embarcadero, Illinois Street, and Cargo Way are maintained by SFPUC or PG&E, and utilities north or east of these roads are maintained by the Port.

Electrical Utilities

The Port maintains all electrical equipment generally north of Jefferson Street and east of The Embarcadero, Terry Francois Boulevard, Illinois Street, and Cargo Way. Within Port properties, a broad range of low-voltage electrical equipment is installed, including switchboards, panelboards, general-purpose transformers, lighting systems, pump station control panels, and switches. These assets are primarily maintained by the Port's electricians. In contrast, medium–voltage electrical infrastructure, such as service transformers and medium-voltage switchgear with associated breakers, is operated and maintained by SFPUC's Utility Field Service. Overall, the Port's electrical utilities are in poor to fair condition.

Specifically, much of the outdoor electrical equipment has been exposed to the harsh marine environment accelerating wear and corrosion, and systems are 20 to 30 years old. While still operational, the Port's electrical equipment systems are approaching the end of useful life, impacting both reliability and safety.

Several of the Port's medium voltage facilities, which require specified training and certifications to service, must be replaced and are included as projects in the Port's proposed Capital Improvement Plan due to their long lead time and criticality. These include equipment and switchgear at Pier 50, Pier 68-Shipyard, Pier 80, and Piers 94/96. Port staff view the Pier 68 Shipyard and Pier 80 as strong candidates for private capital

investments in our working waterfront. The Port would also like to replace distribution panels in roughly a dozen finger piers and sheds; however, limited funding means that these will likely be replaced on an emergency basis.

Water, Sewer, Fire Suppression, and Storm Drains

Port's plumbing and pipefitter tradespeople respond to water, sewer, and storm drain issues. Upon inspections or when bill-monitoring indicates a leak, the Port's engineering team may recommend a complete replacement of water, sewer, fire suppression, or storm drain systems. In addition, the Port's environmental staff coordinate closely on these infrastructure systems, due to water quality regulations that may drive urgent repairs or system replacement.

- **Water and sewer**. Overall, water and sewer facilities, which are located in Port's streets and roadways, are in fair to good condition; systems that are over water but above pier decks are in fair condition, and systems located under piers are serviceable, but vulnerable to failure due to the harsh marine environment and due to floating debris that can damage or break pipes.[10] Port staff have documented persistent water and sewer issues at half a dozen piers and other locations, leading to proposed capital projects supporting water and sewer upgrades.

- **Fire Safety & Fire Suppression**. While many Port buildings were not built with fire sprinkler systems, the Port has installed approximately 45 fire sprinklers, standpipe, or combined systems in the last few decades, protecting most of the buildings that the Port directly manages. Those systems are inspected and tested on an ongoing basis.

- **Storm drainage.** Larger and larger storm events and water quality regulations have highlighted storm drain facility issues. The Port's current practice is to conduct as-needed, targeted storm drain condition inspections at specific sites (e.g., Pier 94/96, Pier 80, among others) primarily to support capital improvement projects or tenant or Port staff requests. Port Maintenance serves as the first responder for storm drainage issues in the field and, at times, performs pre-storm season preventive checks where feasible. The Port is also planning a major investment in storm drains in response to the State Water Resources Control Board requiring the installation of systems that fully capture trash in storm drains by 2030.

D. Floats & Major Equipment

- **Maintenance Barges and Ferry Floats**. The Port owns 4 maintenance barges – including one crane and three materials-barges and all are nearing the end of useful life. The Port expects delivery of a new pile-driving crane barge next year. The Port

[10] In 2011, the Port commissioned a comprehensive under-pier utility review to serve as a baseline for maintenance and capital repairs. Of the 30 locations surveyed, 10% had 20 to 30 years of life remaining, 47% had 5 to 10 years of life remaining, and 43% were anticipated to require repair or replacement in 0 to 5 years. Since that report, Port's maintenance staff continue under-pier inspections – though the program went on hiatus for several years during COVID – and repair any system failures.

also maintains a variety of floats, including the new off-the-boat fish sales float at Fisherman's Wharf, a Downtown ferry float, and two ferry floats at China Basin, among others. Typically, floats should be sent for major repair (meaning, to a drydock) every 10 years, which is a multimillion-dollar cost.

- **Berths, docks, and slips**. The Port maintains maritime berths for large commercial and cruise vessels, harbor docks and slips – including those in Fisherman's Wharf Harbor - for commercial and sport fishing, and marina slips for recreational boating. As an overview, about 42 of the Port's 80 potential maritime berths are tenanted or frequently visited with vessels in transit and are in fair to good condition. Key infrastructure issues include aging bollards and fenders, the lack of available utilities and connections (electrical and water), and strengthening the integrity of the piers nearest the dock. The Fisherman's Wharf Forward project includes projects to improve lagoon conditions, as the first steps towards renewal in this important center for maritime business.

  Fisherman's Wharf Inner and Outer and Hyde Street Harbors host about 180 slips. Floating and fixed docks in the harbors are in serviceable condition, with key facility needs such as ice machine, fender pile and stall replacements, electrical upgrades, ladder replacements, and roadway issues. The 700 recreational vessel slips in South Beach Harbor are in fair to good condition, with issues like new lighting requirements, community room upgrades, ADA and other park upgrades, and new gating needs.

- **Major equipment**. The hydraulic lift serving the passenger gangway at the Pier 27 cruise terminal and the lifting mechanism of the Illinois Street bridge are examples of major equipment that require Port maintenance and ultimately complete replacement at the end of useful life. A project has begun to replace aging lift equipment at Pier 27. Also, Port staff plan to evaluate the process to convert the Illinois Street drawbridge to a fixed-span bridge, like the 3rd Street Bridge, which is located one block to the west, in the coming years.

E. Streets and Parks

Along the Port's 7.5 miles of waterfront, Port staff maintain street segments north of Jefferson Street, the Embarcadero multi-use promenade, and sections of streets south of Mariposa and east of Illinois Streets, including Amador Street and Cargo Way. The Port also has about 107 acres of open space and directly maintains about 69.5 of those acres. Generally, the Embarcadero Promenade is in good condition, the street segments north of Jefferson Street are in fair to poor condition, Cargo Way is in fair to poor condition, and Amador Street is currently in poor condition, but a project now underway will reconstruct the entire street. Port parks and open spaces are in good condition, though a small number of locations, including the South Beach tot lot, need capital refreshes.

ASSEMBLING INFORMATION ON FACILITY CONDITIONS

This assessment of Port's facilities and infrastructure is compiled from various Port records stored across multiple summary tables and software systems used by staff in different divisions and with a focus on different infrastructure disciplines. Consolidating this information for mutual understanding and analysis — especially in preparation for the Capital Improvement Program — is a significant effort.

Currently, our systems do not adequately support tracking, assessing, or planning improvements. As a result, staff spend more time than ideal creating comprehensive analyses. However, there is a key opportunity for efficiency: when the Port implements modern systems for property and asset tracking, staff can redirect their efforts toward delivering services more effectively.

FACILITY CONDITIONS CONCLUSIONS

Reviewing the Port's 150+ year old construction history and the modern contributions to the Port's built form is both inspiring, as many places have been successfully reborn as new, beloved places along the waterfront, while also incredibly daunting because the need for replacements of aging infrastructure and buildings far exceeds our resources.

This overview is a clear call for a relentless focus on directing investments to improvements that are most impactful to extending a facility's future.

Critical for Facility's Future

- **Substructure and Superstructure -** ***Continue robust deployment of the Rapid Structural Assessment program.*** Invest in these key structural elements of piers and wharves to extend the life of facilities where other investments are being made to support facilities with a strong tenant track record or strong tenant prospects. Complete procurement of a crane barge to expand the capability of the Port maintenance staff to complete certain repairs and avoid the cost and time of contracting.

- **Watertight** - ***Invest to prevent leaky roofs or building envelopes, which accelerate deterioration;*** Similar to the importance of the superstructure and substructure maintenance, roof maintenance is a key factor in asset life extension. Prioritize roofing projects where systems have reached the end of their useful life.

Extend Port's Resources

- **Invest in revenue-return and risk-reduction projects** - ***Where possible, target capital budget towards investments that extend the useful life of revenue-generating facilities***. Many major projects proposed for the capital plan are required for regulatory compliance and to reduce liabilities. Staff have also focused a portion of the Port's capital expenditures on increasing revenue.

- **Where appropriate, include facility renewals in resilience projects,** *both in terms of seismic risks as well as in implementing the federal flood study (i.e., elevation of historic wharf structures and bulkhead buildings).*

- **Consider and pursue debt financing vehicles for some projects.** Pursue bond issuances for high-impact capital projects that demonstrate a clear return on investment and strengthen the Port's long-term operating revenues.

- **Explore options for partnerships where private capital can extend the Port's reach in renewing its facilities – including:** (a) Evaluate and recommend path for new partnership opportunities to bring private capital to the rehabilitation and reactivation of the Pier 68 area and (b) Evaluate financial feasibility for an intermediate term (i.e., 15- to 30-year) lease to provide near-term investment in an historic finger pier.

- **Extend staff's effectiveness with new systems and key equipment.** Systematizing the Port's property portfolio – including tracking and analyzing predictable life cycle costs and revenue projections – will markedly improve near- and long-term decision-making. In addition, next year's delivery of a crane barge, designed for pile-driving and the availability of a new, pile-driving crew is anticipated to reduce contracting timelines and slow the cost escalation the Port has faced over the years for over-water, maintenance projects.

Prepared by: Rebecca Benassini
Strategic Portfolio Manager

For: Michael Martin
Acting Executive Director