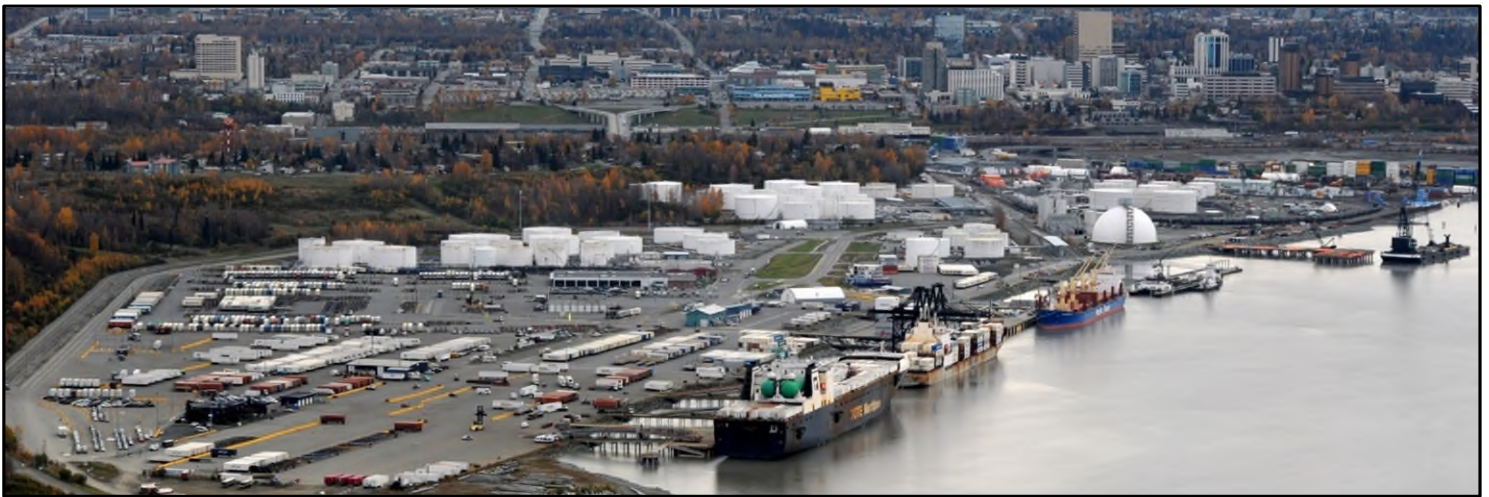




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*Professional Consulting and Advisory Services
for Review and Evaluation of the*
“Port of Alaska Modernization Program (PAMP)”



Source: Port of Alaska Website

Final Report Prepared for:



May 11, 2023

CONFIDENTIAL AND PROPRIETARY

TABLE OF CONTENTS

PAMP REVIEW AND EVALUATION REPORT COVER PAGE.....	1
TABLE OF CONTENTS	2
REVIEW AND EVALUATION PREAMBLE.....	3
REPORT PURPOSE AND OBJECTIVES	3
AUTHOR SUMMARY QUALIFICATIONS AND RELATED EXPERIENCE	3
DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT.....	3
<u>PART A - EXECUTIVE FINDINGS AND CONCLUSIONS.....</u>	4
PROFESSIONAL OPINIONS REGARDING PAMP POA UNIFORM TARIFF.....	4
RORO WHARF/QUAY PAMP PHASE 2B RECOMMENDED IMPROVEMENTS.....	6
MODERN MILITARY RORO OPERATIONS.....	8
SUMMARY PROFESSIONAL OPINIONS.....	9
<u>PART B - PORT AND PAMP PROJECT BACKGROUND INFORMATION.....</u>	9
THE PORT OF ALASKA (POA).....	9
THE 2012 FAILED POA INTERMODAL EXPANSION PROJECT (PIEP)	10
USDOT INSPECTOR GENERAL (USDOT IG) AUDIT REPORT.....	11
THE PORT OF ALASKA MODERNIZATION PROGRAM (PAMP) OVERVIEW.....	12
"REVISED AND EXPANDED" PAMP PHASE 2 CARGO TERMINAL MODEL.....	15
<u>PART C - DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT....</u>	17

REVIEW AND EVALUATION PREAMBLE

TOTE Group LLC, herein after referred to as “TOTE,” executed a Professional Consulting and Advisory Services engagement agreement with Vickerman & Associates on April 12, 2023, in connection with the Review and Evaluation of the “*Port of Alaska Modernization Program (PAMP)*” specifically focusing on the Phase 2B Cargo Terminals in the PAMP.

REPORT PURPOSE AND OBJECTIVES

The purpose of this report is to provide TOTE with a third-party professional review, evaluation, and professional opinion of the “*Port of Alaska Modernization Program (PAMP)*” focusing on PAMP Phase 2B Cargo Terminals.

AUTHOR SUMMARY QUALIFICATIONS AND RELATED EXPERIENCE

John Vickerman is the author of this Review and Evaluation Report and is the President of Vickerman & Associates, LLC, a firm specializing in the planning and design of port, intermodal rail, and freight logistics facilities worldwide. John has worked on major port and intermodal rail projects throughout North America and the world for more than 40 years. Mr. Vickerman was the Principal-In-Charge and/or Project Manager for **67 of the 90 North American deep-water general cargo container port strategic master development plans**.

Mr. Vickerman’s international experience includes work for major Canadian Ports, the Ports of Rotterdam and Hong Kong, the intermodal freight analysis for Eurotunnel (the Chunnel between England and France) for British Rail (Rail Freight Distribution), as well as port strategic master planning projects in Panama, Honduras, Australia, Brazil, and emerging new Transshipment port projects in Indonesia.

John’s experience with the Port of Alaska includes the preparation of a Strategic Master Plan. John was the Principal-In-Charge for the following Strategic Port Planning professional services consulting commission:

Port of Anchorage Comprehensive Strategic Port Master Plan prepared by Vickerman/Zachary/Miller Inc. (VZM), TranSystems, a predecessor firm to Vickerman & Associates, LLC, and published in 1999. The Port of Anchorage commissioned the team of Vickerman/Zachary/Miller Inc. in association with Northern Economic LLC and Tryck-Nyman-Hayes, Inc. to prepare a Comprehensive Strategic Port Master Plan for the Port Authority accommodating POA requirements to the year 2020.

John Vickerman is both a licensed Professional Civil Engineer and registered Architect in 22 states and holds a master’s degree in Structural Engineering and Structural Mechanics from the University of California, Berkeley, and a Bachelor of Science Degree in Architectural Engineering from California Polytechnic State University in San Luis Obispo, California.

The author retired as a Captain in the Civil Engineer Corps of the United States Naval Reserve after 38 years of service primarily focusing on U.S. Navy facility planning and design projects.

DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT

The author has relied on industry information from personal research and relevant information within the North American port and maritime shipping industry. Mr. Vickerman has independently obtained and reviewed information from public sources regarding the parties involved in this review and evaluation, and the North American container shipping and logistics industry. John Vickerman has relied on his personal professional knowledge, prior container port planning, design and operational project

experience, and his Subject Matter Expert (SME) experience and direct marine industry expert knowledge in the preparation of this report.

This report contains, among other things, Mr. Vickerman’s professional opinion regarding an evaluation of the proposed Port of Alaska Tariff and Surcharge Concept for a Uniform Pricing Tariff. When facts and data from reference documents are cited, the report author has attempted to independently confirm applicability and accuracy with information from previous industry experience and other relevant industry data and information. When referenced documents are used in this report, the author has independently analyzed the parameters, assumptions and methodologies used in the referenced source to ensure the resulting conclusions and figures are accurate and dependable to the best of his professional ability. Please refer to **Part D - Documents and Information Considered in this Report** on page 17.

PART A – EXECUTIVE FINDINGS AND CONCLUSIONS

PROFESSIONAL OPINIONS REGARDING PAMP POA UNIFORM TARIFF

In his 40 years of port and maritime consulting experience, **the author is not aware of any North American Public Port Authority that assessed their port tenants a Uniform Port Facility Tariff Surcharge, whereby port tenants would pay for improvements, via the Port Tariff Surcharge, for other port tenant’s facility improvements not related to the port tenant’s specific port operational needs.**



A clear example is container terminal Ship-To-Shore (STS) wharf/quay gantry crane facility improvement costs. The author has not seen nor is aware of the cost of STS wharf and facility improvement costs being assessed by a North American Public Port Authority with the intent to collect the associated improvement costs from Port Authority port tenant(s) and port user(s) **that do not use the STS cranes in their respective terminal operations.** Usual and customary port industry standard tariff practice and procedures typically only consider the direct costs for terminal related operations and equipment within an existing port terminal footprint.

A Comprehensive Plan of Finance was derived from an excerpt from the PAMP Phase 2 Comprehensive Plan of Finance Plan, dated July 6, 2021, (please refer to page 17 of this report).

The average projected surcharge per ton for Terminal No. 1 (Matson) and Terminal No. 2 (TOTE) to cover debt service, and based upon 2020 cargo activity, equals \$29.04 per ton. Current rates per ton (wharfage, dockage, and security) are slightly more than \$3 per ton for both carriers. This proposed rate represents more than an eight-fold increase (800% increase) based on total costs and more than a thirteen-fold increase (1,300% increase) based only on current POA wharfage fees.

The current POA Uniform Tariff deliberations may be co-mingling replacement cost elements for aging and deteriorated (corroded wharf/quay pilings) and previously failed infrastructure project improvements (i.e.: PIEP Project - Open Cell Sheet Piles) with wharf/quay terminal improvement costs for potential unknown port future terminal expansion opportunities and future port terminal entities beyond the current port tenant users of the POA.

It is the author’s experience that the vast majority of port terminal agreements in North America including but not limited to the following major Public Port Authority examples of the Port of Long Beach California, the Port of New York / New Jersey, the Northwest Seaport Alliance (Port of Seattle and Port of Tacoma), the Port of Jacksonville, Florida, the Port of Miami, Florida, the Port of New Orleans, Louisiana and the Port of Virginia to name a few all demonstrate that improvements at one port terminal are not mandated or unilaterally applied to tenants of another port terminal much less a competitive port terminal operation. Typically, increased port terminal improvement costs due to higher levels of improved port infrastructure are not borne by unrelated port tenants without the ability to directly benefit from the use of the improvements in their respective terminal operations.

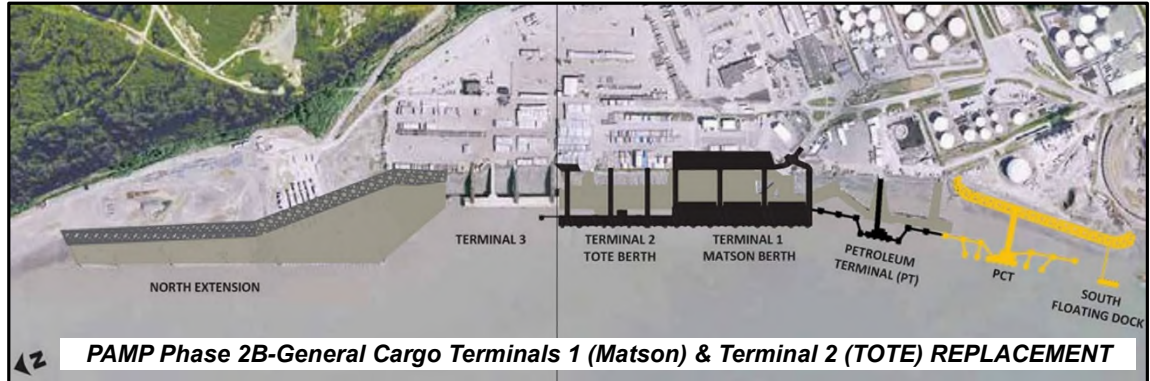
Requiring one port tenant to subsidize the costs of another port terminal’s capital improvement and enhancements, including STS gantry crane improvements, or terminal improvements proposed for some future unknown port tenant and from which there is no direct derived benefit, substantially distorts market forces and supply chain logistics costs and, in the opinion of the author, is not a usual and customary port terminal tariff practice or methodology in North America.

This is especially true in a case where the terminal improvement costs substantially exceed what is needed to serve the current market customers and thus make only one port user more efficient at the expense of competitor carrier terminals. This POA approach will penalize TOTE’s current customers and force them to bear the costs associated with unnecessary port improvements and infrastructure that they do not have use of or cannot directly benefit from.

Please consider the following salient summary executive findings and conclusions by the author for the TOTE terminal related attributes and contributions concerning the Port of Alaska:

1. TOTE has long served Alaska for nearly 50 years and that commitment remains in place backed by new technology and new ships. Alaska is a unique marine transport logistics marketplace that needs competitive Roll-On/Roll-Off (RORO) services.
2. Without a doubt, accurate terminal improvement costs are paramount factors in any fair and competitive port tariff determination. However, the tariff costs must directly relate to the current terminal operations and equipment, not some undefined expected future terminal operational condition or event. The PAMP Phase 2B cargo terminal improvement wharf/quay design and associated terminal improvement costs must be finalized before the POA establishes any new tariff surcharge determination.

3. Fair and equitable methods and analysis to allocate port improvement and port terminal equipment costs based upon each port tenant’s unique operational needs is typically **the usual and customary goal and practice of North American Public Port Authority terminal tariff determinations.**
4. A Uniform POA Tariff Surcharge based on Terminal No. 1 (Matson) STS gantry crane terminal improvement needs and conventional container yard operations unilaterally applied to a completely different Terminal No. 2 (TOTE) Roll-On/Roll-Off (RORO) operation could disrupt competitive POA general cargo markets and may harm Alaskan consumers. The proposed Unilateral Uniform Tariff Surcharge mandating wharf/quay uniform width and gantry crane gage rail width improvements for both POA Cargo Terminal No. 1 and No. 2 tenants is a substantial departure from the past POA funding and tariff practices.
5. **RORO Wharf/Quay PAMP Phase 2B Recommended Improvements** (with future wharf/quay expandability)
 - a. The following RORO wharf/quay construction terminal improvements with future expansion capability is a practical “*Right-sized Measure*” approach to the latest call for a POA Uniform Surcharge Tariff application. The following terminal wharf/quay deck design technical approach is recommended to achieve the proposed new continuous wharf/quay fender face construction improvements similar to the approved PAMP Phase 2B site plan illustrated below.



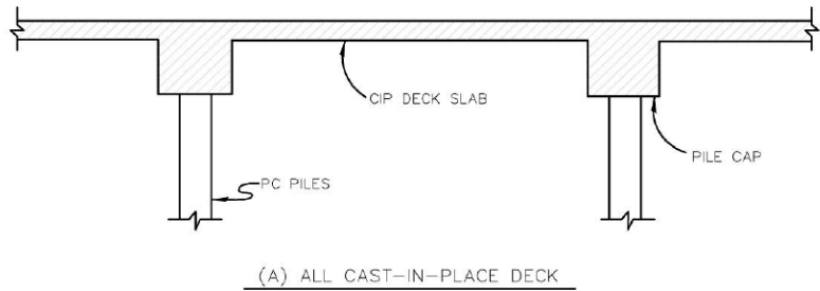
- b. The POA has indicated that the PAMP Phase 2B will involve a total replacement of POA’s existing cargo docks with new POA terminal improvements and a design life of 75 years. This total terminal improvement effort is expected by the POA to take approximately 10 years to complete.
- c. The above illustration depicts “**A Port of Alaska Modernization Program Phasing Graphic for Phase 2B (2025-2032)**” forwarded as an attachment to the First Progress Report for the period ending 31 January 2023, (2nd quarter of SFY 2023), from the Municipality of Anchorage regarding the Port of Alaska Modernization Program and dated February 1, 2023.
- d. *Above Illustration Explanatory Note:* The existing Terminal 1 (Matson) and Terminal 2 (TOTE) wharf/quay operational footprints are proposed by the POA to be relocated southerly to a new position in the port area depicted in black in the above illustration and located further out into the shipping channel, reportedly to improve maintenance dredging operations. In the latest

PAMP phasing, the old Terminal 3 footprint is scheduled for demolition in its entirety in Phase 4 (2030-2035).

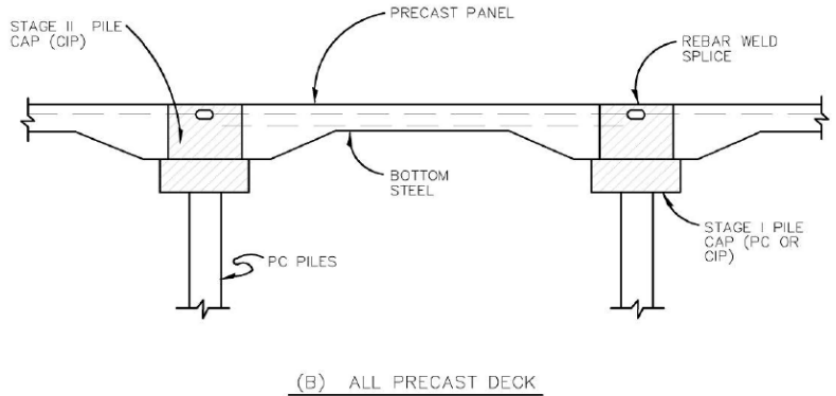
- e. Today’s port design engineering practice typically considers a variety of value engineered, seismic, environmental, life cycle and competitive sustainability facility considerations for the development of new modern port waterfront infrastructure. Future flexibility in port expansion, new vessel characteristics, ship-to-shore (STS) gantry crange evolutionary requirements as well as competitive port terminal issues are all dominant design factors for consideration in today’s modern port facility design and construction decisions and should be considered in the PAMP Phase 2B cargo terminal improvement designs.
- f. The following recommended wharf/quay deck construction examples are described in the **U.S. DOD Unified Facilities Criteria (UFC) – Design Manual for Piers and Wharves (UFC 4-152-01)** dated 24 January 2017 (Section 4-3, Figure 4-1 – please see the following figure) and apply to all U.S. DOD wharf/quay installations.

From durability, maintenance, and life-cycle-cost viewpoints, the concrete deck examples illustrated below are UFC top-quality, recommended port wharf/quay deck structures. The deck slabs are supported on pile caps, using the following three construction techniques:

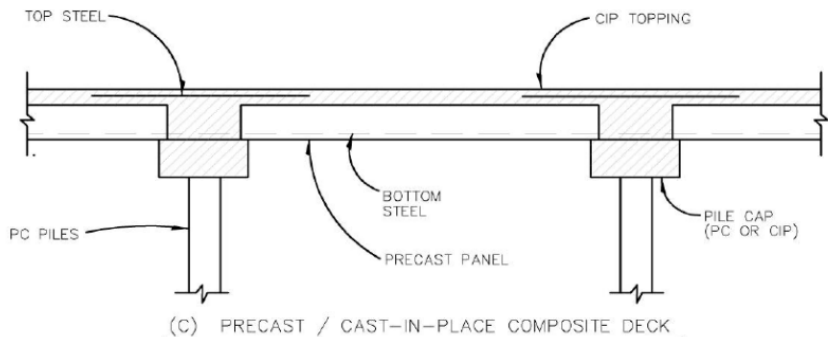
(A) All Cast-In-Place Reinforced Concrete Wharf/Quay Platform Deck Construction.



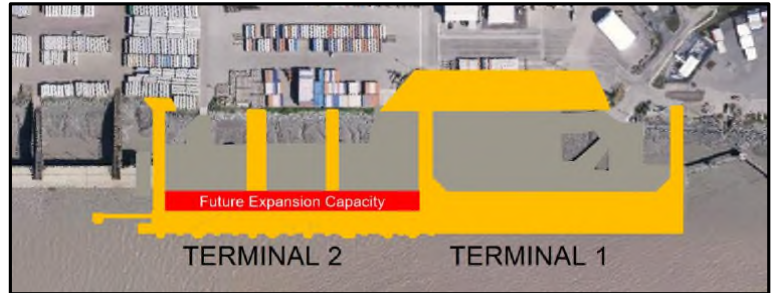
(B) All Precast Pre or Post Tensioned Reinforced Concrete Deck Slab Wharf/Quay Construction.



(C) Precast / Cast-In-Place Wharf/Quay Platform Deck Composite Construction.



- g. Future Terminal 2 (TOTE) structural wharf/quay platform deck expansion provisions can be practically and cost effectively achieved in the original proposed narrower platform structure (yellow area in the illustration to the right) to accommodate future construction of uniform wharf/quay width considerations.



Future tenant needs and future wharf/quay width improvements can be readily included in the original platform structure when required and as needed, in the future such as but not limited to:

- Future 100 ft. STS gantry crane support girders, structural cross elements, crane tie downs and subterranean electrical bus trench construction and connections or accommodations for above ground gantry crane electrification systems, can be practically achieved.
 - Future Uniform Wharf/Quay platform deck width area surface expansion can easily be achieved. Expansion of the original narrower RORO wharf/quay deck platform width and associated wharf/quay utility systems can be realized without significant terminal operational disruption.
- h. The narrow RORO wharf/quay width approach (illustrated in yellow in the above graphic) will permit TOTE to operate on a narrower more efficient RORO wharf/quay platform deck that meets all of TOTE’s operational needs and would allow the POA the flexibility of adding a uniform wharf/quay platform width for Terminal 2 (TOTE) in the future if and when required by a future port tenant or future POA terminal need. Please refer to the red wharf/quay area in the above illustration.

6. Modern Military RORO Operations:

A modern RORO marine terminal and wharf/quay provides the flexibility and benefits for berthing and servicing of military, cruise vessel and non-container, non-standard marine vessels operations.

A careful look at U.S. DOD vessel requirements reveals that military RORO vessels are the preferred and most frequently requested asset in Port Planning Order (PPO) requirements involving military load-out for strategic seaport operations.



U.S. DOD RORO sealift is the preferred means of deploying and sustaining U.S. combat power required in major ground operations, typically accounting for upwards of 90 percent of all military cargo using U.S. strategic seaports, like the POA, to quickly and efficiently deploy and meet U.S. overseas force projection demands.

Summary Professional Opinions:

- Imposition of Tariff Surcharge fees on the POA general cargo Terminal 2 (TOTE) for infrastructure improvements to another POA terminal from which the Terminal 2 (TOTE) user/operator will not derive any direct benefit would impose an unusual and unfair cost increase that the Terminal 2 (TOTE) customers would most likely not be willing to pay for, unfairly putting the Terminal 2 (TOTE) operation at a competitive commercial supply chain disadvantage.
- Success of the PAMP Phase 2B should be determined by a solution that is **equitable, impartial and ensures competitive fairness**. Equitable and fair terminal improvement criteria are achieved in the impartial evaluation of each ocean carrier’s overall business model characteristics. Different cost structures across different businesses, including port users, already exist in the POA and has supported successful market-based approaches that have historically served the citizens of Alaska well.
- Considering all the attributes of the above-described section No. 5 (page 6) approach for the design and construction of the Terminal 2 PAMP narrow RORO wharf/quay improvements, there is simply no justification to spend hundreds of millions of dollars more in the PAMP to meet the current needs of the POA, the State of Alaska, and specifically that of the Terminal 2 (TOTE) user.
- The project development requirements for Terminal 1 (Matson) lift-on/lift-off (LOLO) operations are distinctly different from the unique requirements for Terminal 2 (TOTE) roll-on/roll-off (RORO) operations. Terminal 1 and terminal 2 should have **distinctly unique and separate tariffs based upon the specific needs of the respective terminal user/operator. Anything less creates an inequitable and unfair playing field and a disequilibrium in the Alaskan maritime shipping supply chain marketplace.**

PART B – PORT AND PAMP PROJECT BACKGROUND INFORMATION

THE PORT OF ALASKA (POA)

The Port of Alaska (POA) is a Landlord Port and an enterprise function of the Municipality of Anchorage, Alaska. The POA commenced operation in September 1961 as the Port of Anchorage, with a single berth. In its first year of operation, 38,000 tons of cargo crossed the dock.

As reported by the POA website, the Port is a Municipality of Anchorage-owned facility that serves all of Alaska and the nation. It is Alaska’s most versatile port that handled 5.2 million tons of fuel and cargo freight in 2022, including containers, liquid bulk, dry bulk, break bulk, and also cruise ships. About half of all Alaska inbound cargo crosses the POA docks, about half of which is delivered to final destinations outside of Anchorage statewide, including the Southeast Region. The Anchorage Assembly renamed “Port of Alaska (POA)” in October 2017 to reflect its regional, state, and national significance.

The POA is the State of Alaska’s population and business hub. Some 40 percent of Alaskans live in Anchorage and 60 percent of state residents live within a two-hour drive of the port.

Anchorage docks leverage and are leveraged by hundreds of millions of dollars of freight-related, private, and public-sector infrastructure. Approximately 50 percent of all waterborne freight entering the State, and 90 percent of all refined petroleum products sold within the Railbelt and beyond (87 percent of the State’s population) move through the POA on an annual basis.



The POA is a “U.S. Commercial Strategic Seaport” that supports U.S. DOD missions in Alaska, the Pacific, and the Arctic. The Port of Alaska is immediately adjacent and connected to Joint Base Elmendorf-Richardson that handles most of U.S. DOD’s inbound and outbound Alaska freight except for munitions and explosives. Strategically located less than 9.5 hours by air from 90 percent of industrial world infrastructure, the Port is also well positioned to support the emerging and developing Arctic shipping routes and U.S. National Arctic strategic interests.

Finally, The POA is key to state and federal disaster response and recovery from events ranging from earthquakes to pandemics. Its Upper Cook Inlet location makes the Port of Alaska the only tsunami-proof, inbound cargo port in Southcentral Alaska.

THE 2012 FAILED POA INTERMODAL EXPANSION PROJECT (PIEP)

The following information was derived from the February 14, 2013 “Port of Anchorage Intermodal Expansion Project Suitability Study” prepared by CH2MHILL for the U.S. Army Corps of Engineers, Alaska District.

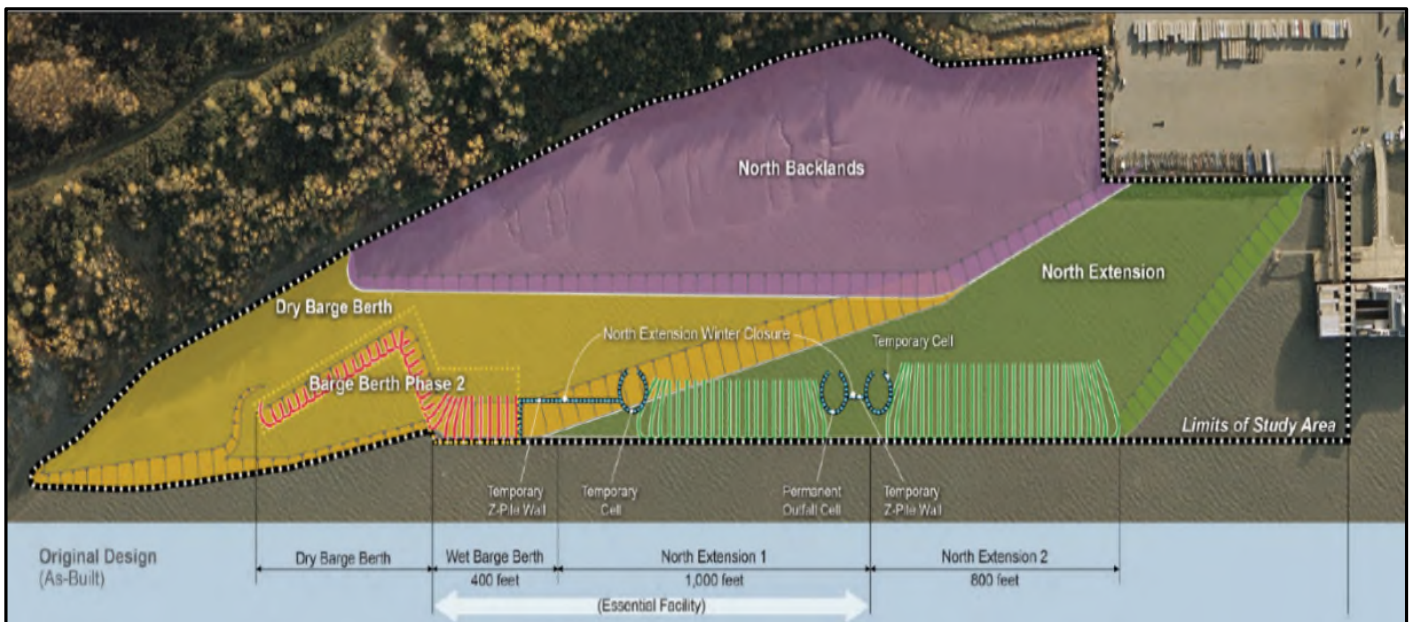
The existing infrastructure at the Port of Alaska (POA) was largely built in the 1960s and according to CH2MHill, is reaching the end of its useful life. The POA Intermodal Expansion Project (PIEP) was intended to provide new berthing facilities for the shipping companies calling at the POA.

An Open Cell Sheet Pile® (OCSP®) design was selected for the project based on representations by the design engineer, PND Engineers, Inc. (PND). However, as the project moved into the construction phase, the appropriateness and suitability of the OCSP® system for the POA was called into question, primarily because of significant problems encountered while installing the OCSP® System.

CH2MHILL was contracted in 2011 by the United States Army Corps of Engineers (USACE) in partnership with the Maritime Administration (USDOT-MARAD), the POA, and the Municipality of Anchorage (MOA), to conduct an independent suitability study of the OCSP® system used in the POA North Expansion area of the then ongoing PIEP.

The suitability of the OCSP® system depends on the project internal and global geotechnical stability of the OCSP® wall elements for static (or gravity) and seismic loading. The OCSP® system represents a creative and novel approach to wharf construction. However, the POA site was found to have numerous complex critical conditions that make it a particularly difficult and problematic port development site. **The PIEP OCSP installation was found to have numerous major defects and structural failures.** Finally, it was determined that the Northern Expansion projects all needed to be reconstructed and replaced using a suitable engineering method.

The MARAD-led PIEP Program was cancelled in 2012. The failed PIEP program was reported to have caused \$253 million (13 % of the initial total PAMP Budget) in damage, required repairs and replacement and reconstruction of damaged port infrastructure. These repairs were reported to generate no POA revenues according to the January 17, 2019, Assembly Enterprise, and Utility Oversight Committee deliberations.

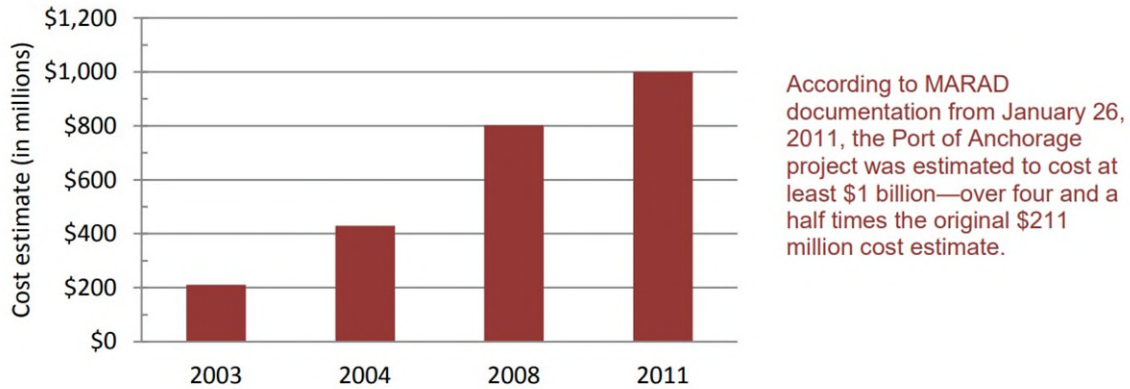


USDOT INSPECTOR GENERAL (USDOT IG) AUDIT REPORT

In 2003, the Maritime Administration (MARAD) was authorized to administer funds for developing and modernizing the Port of Anchorage. The Port of Anchorage Intermodal Expansion Project (PIEP), a partnership with the Port and the Municipality of Anchorage, had experienced significant setbacks, including major construction problems and schedule delays.

On August 2, 2013, the U.S. Department of Transportation (USDOT) - **Office of Inspector General (IG) Audit Report** (Report Number: CR-2013-117) issued a formal audit of the USDOT Maritime Administration (MARAD) management and administration of funds for developing and modernizing the Port of Anchorage.

Figure 1. The Port of Anchorage Project’s Cost Estimates Increased Significantly Between 2003 and 2011



Source: 2003 Port of Anchorage contract, 2005 Port of Anchorage contract modification, 2008 Port of Anchorage contract, and MARAD document (“Explanation of PIEP Project Cost Increases”)

The above graphic from the Inspector General’s Report (Figure 1) illustrates the substantial PIEP cost increases from \$211,000 in 2003 to \$1,000,000 in 2011, **a four and a half times increase over the original project cost estimates.**

The setbacks with the Port of Anchorage project raised USDOT concerns about MARAD’s ability to manage its port projects. Given MARAD’s significant role, the USDOT Inspector General (IG) questioned the Agency’s execution of its port infrastructure development responsibilities.

The USDOT IG issued a warning that until MARAD strengthens its planning, oversight, and contracting processes, ongoing and future port projects will continue to be at risk of cost overruns and schedule delays. The IG Report included nine detailed recommendations.

Outcome of the POA Lawsuit and Reluctance of State Lawmakers:

The Municipality of Anchorage spent several years suing the U.S. Department of Transportation’s Maritime Administration for flawed oversight of inadequate construction work by PIEP construction contractors.

On December 9, 2021, the Municipality was awarded \$367.4 million by a federal judge in the lawsuit. USDOT MARAD is appealing the ruling. The Municipality of Anchorage commissioned a study that concluded that the design was incompatible with the glacial silt soils that underlie the project area.

THE PORT OF ALASKA (POA) MODERNIZATION PROGRAM (PAMP) OVERVIEW

The following PAMP graphics were published by the POA and depict the various phases of the original PAMP including the most recent PAMP Phase refinements and target dates.

PORT OF ALASKA MODERNIZATION PROGRAM



PHASE 1



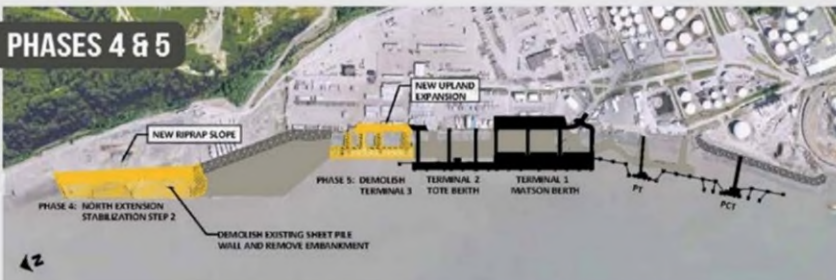
PHASE 2



PHASE 3



PHASES 4 & 5



The Port of Anchorage (POA) is currently identifying and updating plans for modernizing its facilities through the Port of Anchorage Modernization Program (PAMP), sometimes referred to as the Anchorage Port Modernization Program (APMP), which, in general has replaced the PIEP Improvements Plan Program described in the previous section.

As stated in the latest PAMP Legislative Reports, the Municipality of Anchorage existing POA terminals have exceeded their design and economic life due to severe corrosion on piling and changing cargo transport practices. The Port of Alaska Modernization Program (PAMP) will provide four new terminals for shipping companies calling on Alaska via the state’s busiest import and intermodal freight distribution hub: Anchorage.



In the Municipality of Anchorage Legislative Report dated January 31, 2023, the PAMP Phasing was revised and updated, please refer to the adjacent illustration to the left.

The updated POA Modernization Program is not a single project but rather a **Rehabilitation and Improvement Development Program** that includes eight separate project components:

1. Petroleum-Cement Terminal
2. North Extension Stabilization Work (to repair damages caused by the failed POA PIEP Program)
3. **General Cargo Terminal No. 1** (lift-on/lift-off terminal - Matson)
4. **General Cargo Terminal No. 2** (roll-on/roll-off terminal - TOTE)
5. USDOD Strategic Port Enhancements (to comply with strategic port requirements)
6. Seismic/Resiliency Enhancements
7. User Requested Enhancements (e.g., 100-gauge cranes, roll-on/roll-off trestles, etc.)
8. Petroleum (only) Terminal

The updated PAMP projects will ultimately provide **four new port terminals** for shipping companies calling on Alaska via the following five-phase program comprised of multiple projects:

Phase 1 includes the South Backlands Stabilization (**SBS**), Transitional Dredging (**TD**), South Floating Dock (**SFD**) Relocation, and the Petroleum and Cement Terminal (**PCT**) projects.

Phase 2 includes the North Extension Stabilization Step 1 (**NES1**), Port Administration Office Replacement, and replacement of the general cargo Terminal 1 (**T1**) and Terminal 2 (**T2**).

Phase 3 includes the Petroleum Terminal (**PT**) project.

Phase 4 includes the North Extension Stabilization Step 2 (**NES2**) project.

Phase 5 includes the Terminal 3 (**T3**) demolition project.

“REVISED AND EXPANDED” PAMP PHASE 2 CARGO TERMINAL MODEL

The expanded PAMP PHASE 2B configuration is a significant change from the PAMP preliminary wharf/quay design concept and layouts approved by the Anchorage Assembly in 2021 that called for one terminal built for using Ship-to-Shore (STS) cargo gantry cranes to handle containers (Matson), and a second narrower non-STs crane RORO Terminal for handling freight that rolls off ocean freighters (TOTE) directly onto the POA docks.

With support from the mayor’s office, the POA is now moving forward with a revised and expanded more expensive (\$150 to \$200 million) design that could add hundreds of millions of dollars to its already substantial price tag. Under the new concept, the cargo terminal attributes would be identical and of the same wharf/quay width, with the same contiguous 100 ft. gage wharf/quay STS gantry crane trackage improvements.

The same operational lay down area for the wharf/quay STS gantry cranes are more capable than the existing outdated gantry cranes currently serving a single terminal (Matson). The *Revised and Expanded* PAMP PHASE 2 Cargo Terminal Model was approved in a 3-2 vote at the December 20, 2022, meeting of the port PAMP Design Advisory Board Meeting.

The new *Revised and Expanded* model, recommended by the Municipality Honorable Mayor Dave Bronson, calls for building cargo docks big enough to support 100-foot gage wharf/quay STS gantry cranes along the entire length of the two-cargo terminal wharf/quays. A larger/wider STS crane gage means a larger crane geometry and increased port terminal infrastructure improvements.

Compared to estimates for the variable dock model (one configuration for Matson and one configuration for TOTE), the uniform design is projected to add \$150 million-\$200 million to the overall project, according to recent cost estimates prepared by Jacobs, the engineering firm handling the current phased POA modernization program.

More recently, though, the funding potential may have changed. On top of the lawsuit funds already awarded to the Anchorage Municipality, State legislators have included \$200 million for the Port in their current capital budget last May 2022. Those funds can be used to potentially leverage matching funds, extending the value even further. **The total probable cost estimate for the PAMP Project is currently estimated at \$2.0 billion.**

The general evolution of the PAMP Modernization Program cost estimate is illustrated below.

Review and Evaluation of the
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The following represents a PND February 2019 project cost estimate for the PAMP.

Project Component	Current PAMP Plan	PND Option 1 Minimal Concept	PND Option 2 Minimal Concept w/RO-RO Trestles	PND Option 3 Full Build T1 and T2
1 Petroleum & Cement Terminal (PCT) & South Backlands Stabilization (SBS)	\$240,000,000	\$0	\$0	\$0
2 Landside Buildings (LSB)	\$15,000,000	\$0	\$0	\$0
3 North Extension Stabilization (NES Step 1 and Step 2)	\$253,000,000	\$0	\$0	\$0
4 Terminal 1 (Matson)	\$747,000,000	\$0	\$0	\$0
5 Terminal 2 (Tote)	\$448,000,000	\$0	\$0	\$0
6 Petroleum Terminal (PT)	\$177,000,000	\$0	\$0	\$0
7 Terminal 3 Demolition	\$48,000,000	\$0	\$0	\$0
8 North Terminal 1 (N1)	\$0	\$186,000,000	\$186,000,000	\$186,000,000
9 North Terminal 2 (N2)	\$0	\$0	\$64,000,000	\$115,000,000
Total	\$1,928,000,000	\$186,000,000	\$250,000,000	\$301,000,000

The following Municipality of Anchorage PAMP Cost Estimate was dated December 14, 2022.

PAMP – Cost By Phase	
• Initial Planning & Startup	\$ 22.8 million
• Phase I	
– Petroleum and Cement Terminal (PCT)	\$ 220.9 million
• Phase II A	
– Administrative Building (Complete Dec 2023)	\$ 11.1 million
– North End Stabilization Step 1 (Complete Dec 2024)	<u>\$ 132.0 million</u>
Total Phase II A	\$ 143.1 million
• Phase II B	
– Cargo Terminal Replacement (Complete 2030)	<u>\$ 1.105 Billion</u>
• Phase II Total	\$ 1.248 Billion
• Phase III	
– Petroleum Terminal 2 (Complete 2032)	\$ 185.2 million
• Phase IV	
– North End Stabilization Step 2 (Complete 2031)	\$ 134.5 million
• Phase V	
– Terminal 3 Demolition (Complete 2032)	<u>\$ 55.3 million</u>
PAMP ALL Phases - Total Cost	\$1.867 Billion

Explanatory Note: The June 7, 2022 PAMP Presentation by Mr. Ross Riswold provided an estimate for T1 of \$643 million and an estimate for T2 of \$460 million.

PART C – DOCUMENTS AND INFORMATION CONSIDERED IN THIS REPORT

The following documents and websites were referenced and considered in this report:

Port of Anchorage (POA) Website:

[https://www.portofalaska.com/modernization-project/design-advisory-board/BUSINESS – TONNAGE SUMMARY](https://www.portofalaska.com/modernization-project/design-advisory-board/BUSINESS-TONNAGE-SUMMARY) - POA Historical Port Tonnage Report for 2013 to 2022: <https://www.portofalaska.com/business/ten-year-tonnage-summary/>
MODERNIZATION PRPGRAM –

POA 2023 Proposed Utility/Enterprise Budgets – MOA Manager / POA Port Director.

<https://www.muni.org/Departments/budget/utilitiesEnterprise/2023%20Utilities/2023%20Proposed%20Util%20Ent/Web%2004%20-%20Port%20of%20Alaska.pdf>
2022 Approved Utility Enterprise Activities Budgets

Municipality of Anchorage (MOA) – Port of Alaska Modernization Program (PAMP)

Surcharge Concept (Repayment of Port Debt for the PAMP)
dated December 14, 2022

Port Authority Approaches to Terminal Financing and Investment Recovery

dated January 21, 2022, Prepared for TOTE Maritime by Mercator Consultants

Port of Alaska Modernization Program Draft Rate Study

dated August 26, 2021 - Prepared by CH2MHill Anchorage, AL

Port of Alaska Modernization Project – Municipality of Anchorage

Assembly Enterprise and Utility Oversight Committee –

Special Meeting Date: February 20, 2019,
Assembly Member Constant, Committee Co-Chair

Assembly Enterprise and Utility Oversight Committee Meeting – January 17, 2019

Port of Alaska Modernization Program – Financial Advisory Services – Final Report
dated November 8, 2018

Prepared for the Municipality of Anchorage and the Port of Alaska by Capstan Consulting, LLC and Davenport & Company, LLC

US Department of Transportation - Office of Inspector General – AUDIT REPORT

**“MARAD Has Taken Steps to Develop a Port Infrastructure Development Program
But Is Challenged in Managing Its Current Port Projects”**

dated August 2, 2013

Port of Anchorage Intermodal Expansion Project Suitability Study – Final Summary Report

dated February 14, 2013,

Prepared for USACE, POA, Municipality of Anchorage by CH2MHill