The Oakland Waterfront Ballpark District Project at the Howard Terminal, Maritime and Seaport Impacts and Considerations

A White Paper prepared for:

Pacific Merchant Shipping Association

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September 2022

Executive Summary

This paper assesses various seaport and maritime operational impacts and considerations with respect to the proposed Howard Terminal Stadium project (the "Project") in the Port of Oakland [aka: the *Oakland Waterfront Ballpark District Project by the Oakland Athletics Investment Group, LLC*]. Its purpose is to educate and inform key stakeholders about maritime operational impacts and requirements occasioned by the intended Project.

The Port of Oakland is a critical component of the U.S. Maritime Transportation System and underpins both the economic security of California and the overall security of the Nation. Oakland is designated by the U.S. Maritime Administration as one of the nation's 18 strategic commercial ports in the National Port Readiness Network. These are ports that are critically important to our national defense planning and preparedness. The Port of Oakland is also one of only five west coast ports with federal channels and maritime transportation system components capable of handling large modern vessels requiring a 50-foot channel and is the nation's 8th largest container port. The port is served by two major intercontinental railroads and three interstate roadways nearby to port terminals. Recent supply chain interruptions have shown the importance of multiple operational deep-draft ports in the Maritime Transportation System.

The Project in the Port of Oakland Inner Harbor raises several questions and concerns with respect to future maritime and seaport operations. The authors note that a number of the Project materials and correspondences address the need to consider Seaport Compatibility Measures to "*ensure that the Project does not impact or interfere with the Port's use of operations outside of the Project*," and that there have been several seaport impact analyses to date. These are reflected in the Final Environmental Impact Report. However, we find that many impacts, considerations and challenges with respect to seaport and maritime operations have been inadequately addressed despite reassurances within the Project proposal and the Final EIR, which is primarily focused on environmental impacts and not a detailed analysis of the range of mitigations needed for potential near- or long-term disruptions to port operations. Moreover, there appears to have been a lack of in-depth maritime stakeholder engagement and limited maritime stakeholder input, especially with respect to anticipation of operational concerns and specific planning for and around the potential impacts of the Project on the maritime community and seaport operations.

Summary of Findings and Recommendations

The authors conclude that additional Project study and planning is required. This paper specifically recommends further engagement with maritime stakeholders considerably beyond what has already taken place and that the concerns identified herein and as follows be fully considered and evaluated as this paper recommends before the project moves forward.

1. **National Strategic Port Readiness:** Given the Port of Oakland's designation as a strategic commercial port serving the National Port Readiness Network (NPRN) as previously noted, the proposal to remove the Howard Terminal site and its dock capacity and lay berth access from dedicated port use in this highly developed intermodal seaport raises concerns that have yet to be addressed.

2. **Operating parameters for safe and efficient movement of deep-draft commercial and public vessels in the Oakland Inner Harbor Navigational Channel:** Changes to port infrastructure and its waterways uses and users, along with the potential introduction of new non-maritime activities in immediate proximity to an active port create new operating conditions that require re-evaluation of seaport operating parameters and guidelines.

3. **Port priority land usage and the Project:** Given the public funds committed to the seaport over the decades, the decision to remove land in such a port from port priority use should be carefully considered – land removed is likely permanently lost to maritime use. Howard Terminal is currently used for staging, queuing and maneuvering containers and trucks used for drayage, in addition to providing lay berthing with provision for cold ironing.

4. **Maritime security in the Port of Oakland Inner Harbor during construction and long-term presence of the Project:** A number of the documents listed in Appendix A refer to the potential for security incidents and indicate a discomfort with the manner in which security has been addressed to date. We agree. At a minimum, the U.S. Coast Guard and other relevant oversight entities must be consulted to determine whether and how facility and vessel security plans need to be reviewed for changes in risk profiles engendered by the Project and any additional risk reduction measures that would need to be implemented and tested.

5. **Effect of the Project on the viability of the Inner Harbor Turning Basin Widening project:** As currently proposed, reserved land on the Howard Terminal would be available for return to the Ballpark Project upon the close of a 10-year window. It is unclear from Project materials and current information on the turning basin study whether this 10-year window would be adequate for the various elements of design, evaluation, review, and construction necessary for completion of the Inner Harbor Turning Basin Widening Project.

6. **Land-side seaport operations, disruptions and upsets:** Loss of proximate laydown and staging capacity can lead to increased drayage travel, and the potential for increased transportation congestion outside the terminal, particularly on days of games or other events at the Project venue. Also noted, extensive rail lines are located just outside access points to the proposed Project, where freight train stoppage and switching is routine, and passenger trains regularly run. Adding large numbers of event attendees, new permanent residences and several thousand workers all traveling to and from the site adds complexity, risk and significantly more interactions in this congested transportation space. The potential impacts of this on port operations needs to be more fully studied.

7. **Hazardous materials release disruptions and upsets:** The Project introduces new and more complex contingency planning needs for non-port related entities, event patrons and residences in immediate proximity to potential hazardous materials incidents within the port.

8. **Waterway safety and ship movement, disruptions and upsets:** The Project presents the potential to introduce disruptions and impediments to safe and efficient maritime operations during both Project construction as well as for its permanent long-term presence. Specific concerns are the potential impact of Project construction activity on the

waterway and the likelihood of a significant increase in recreational vessel presence in the vicinity of the Project. With respect to the latter, large vessels and the tugs that help them maneuver move exceedingly large volumes of water and generate significant water turbulence as they operate their propulsion and maneuvering systems. This is a very real and direct hazard to small vessels because they are subject to being swamped or capsized by this turbulence when operating near deep-draft vessels and their assist tugs. Despite proposed Seaport Compatibility Measures, no work has yet been done, nor have the named consulting agencies met to begin the detailed process of determining responsibilities, analyzing and modeling the new waterway risks, and then developing, resourcing, implementing and operationalizing the envisioned protocol.

Recommendations

1. **National Strategic Port Readiness:** Engage the U.S. Coast Guard and MARAD, co-leads for the local Steering Committee of the Port Readiness Committee, to examine potential impacts on operational flexibility and redundancy for national defense and strategic requirements if the Howard Terminal is removed from future seaport use and redeveloped as proposed by the Project.

2. **Operating parameters for safe and efficient movement of deep-draft commercial and public vessels in the Oakland Inner Harbor Navigational Channel:** Formally evaluate potential Project impacts to navigation safety, waterway operations and maritime commerce in the Oakland Inner Harbor for both the Project construction period as well as for its permanent long-term presence. Project proponents should engage the U.S. Coast Guard Sector San Francisco Captain of the Port and the Army Corps of Engineers District Engineer to complete this process**.**

3. **Port priority land usage and the Project:** Conduct a comprehensive, independent and objective examination of the impact of the loss of this waterfront terminal to maritime use with respect to the ongoing efficiency, operations and strategic value of the port. Evaluate alternatives offered in the existing proposals and mitigations for efficacy, feasibility and viability given forecasts for future maritime commerce growth.

4. **Maritime security in the Port of Oakland Inner Harbor during construction and long-term presence of the Project:** Assess the impacts of the Project on the security profile of the waterways and adjacent terminals, to include a comprehensive consideration of potential security incidents under a range of scenarios and contingencies. Factors to consider, among others, include the immediate proximity to an active commercial waterway of the Project, the potential for significantly increased private and recreational vessel presence during events, and the presence of large numbers of event patrons, residents and businesses in close proximity to active port industrial facilities.

5. **Effect of the Project on the viability of the Inner Harbor Turning Basin Widening project:** Assess potential impacts on the Oakland Inner Harbor Turning Basin Widening project viability as part of the Project approval. Potential near-term and long-term conflicts between the two projects, with appropriate mitigations, need to be considered and worked out in advance.

6. **Land-side seaport operations, disruptions and upsets:** Conduct a study to model the changes in container movements and flows throughout the port that may be engendered by the Project to determine the extent and nature of impacts to terminal efficiencies, landside transportation, railway operations. This should include associated impacts on continued safe access and egress for routine and emergency vehicle travel. Develop, publish and require all parties to adhere to mitigation measures to ameliorate complexity, risk and significantly more interactions in this congested transportation space.

7. **Hazardous materials release disruptions and upsets:** Develop hazardous materials release scenarios that address the potential downwind impacts and exposures; emergency response considerations for hazardous materials releases on adjacent port facilities or moored vessels; evacuation and egress considerations for abutting stadium patrons and development residents, businesses and workers; and refuge and dispersal areas adequately distanced from adjacent port facilities and industrial hazards.

8. **Waterway safety and ship movement, disruptions, and upsets:** Engage relevant maritime stakeholders and regulatory agencies to determine, assess and analyze potential waterway impediments introduced during construction and long-term presence of the Project. Specifically, engage named consulting agencies (to include the Oakland Police Department) to begin the coordination necessary to identify relevant responsibilities, authorities, resources and capabilities to patrol and control the waterway, and to conduct a detailed analysis as previously discussed of the operational requirements and waterway impacts occasioned by the Project.

Authors' Bios

Vice Admiral Peter Neffenger, USCG (ret), was appointed in 2015 by President Barack Obama to lead the Transportation Security Administration (TSA), a position he held until January 2017. Prior to this he enjoyed a distinguished 34-year career in the U.S. Coast Guard, where he served as the 29th Vice Commandant, the head of Coast Guard global operations, and most notably as the Deputy National Incident Commander for the 2010 Gulf oil spill, the largest and most complex in U.S. history. He is a recognized expert in national security, in crisis leadership, and in organizational transformation. His transformation of the TSA led to his being named one of the 25 most influential business travel executives of 2016 by Business Travel News. He is President of Neffenger Consulting, LLC; is a Trustee of Baldwin Wallace University; and serves on a number of corporate, non-profit and advisory boards. He holds an MPA from Harvard University; an MA in National Security and Strategic Studies from the U.S. Naval War College; an MA in Business Management from Central Michigan University, and a BA from Baldwin Wallace University. He is a two-time recipient of the Department of Homeland Security's Distinguished Service Medal, in addition to numerous military awards; is a Distinguished Senior Fellow at Harvard University's National Preparedness Leadership Initiative; a Distinguished Senior Fellow at Northeastern University's Global Resilience Institute; and is a member of the Pacific Council on International Policy.

Rear Admiral Roy Nash, USCG (ret), is President of Nash Maritime Consulting LLC, currently advising clients and trade associations on safety and security risks and providing assessment services to port and maritime industries. He serves as a consultant to large industrial companies, crafting marine safety and security solutions, evaluating risk and achieving regulatory compliance. Nash also provides leadership advice to large and small organizations, including lessons learned while leading through crises. He has also served as member of a safety and reliability review board for a major cruise line. As a U.S. Coast Guard Officer, Rear Admiral Nash completed thirty-four years in operational, marine technical, and senior leadership positions. He commanded field units as Captain of the Port, Officer in Charge of Marine Inspection, Federal Maritime Security Coordinator, and as Commanding Officer of the national Marine Safety (technical) Center. As a Flag Officer, he served as Eighth District Commander, responsible for Coast Guard missions and operations along the U.S. Gulf Coast and Western Rivers, as Deputy of the National Maritime Intelligence Center, and as Deputy Area Commander for the Deepwater Horizon Oil Spill response in the Gulf of Mexico. Rear Admiral Nash holds a Bachelor of Science degree from the U.S. Coast Guard Academy, and a Master of Science degree in Fire Protection Engineering from Worcester Polytechnic Institute.

Introduction

This paper offers an assessment of various maritime and seaport operational impacts and considerations with respect to the proposed Howard Terminal Stadium project (the "Project") in the Port of Oakland [aka: the *Oakland Waterfront Ballpark District Project by the Oakland Athletics Investment Group, LLC*]. Its purpose is to educate and inform key stakeholders about maritime operational considerations, impacts and requirements occasioned by the intended Project that remain unaddressed. In particular, this paper focuses on an assessment and discussion of specific maritime and seaport considerations as Project evaluation progresses.

In preparing this paper the authors met with a variety of maritime stakeholders in the Oakland seaport and reviewed a wide range of existing studies and documents as listed in Appendix A. The reviewed documents in total provide significant background on the various economic aspects of the Port of Oakland and substantial detail regarding the scope, extent and anticipated impacts of the Project. Existing materials also delineate a wide range of considerations and challenges. This paper does not duplicate that work and incorporates such detail by reference. However, we specifically concur with the safety, security and operational concerns raised by many of these studies and documents, especially with respect to potential impacts on seaport and maritime operations.

The authors further note that a number of the Project materials and correspondences address the need to consider Seaport Compatibility Measures to "*ensure that the Project does not impact or interfere with the Port's use of operations outside of the Project*,"[1] and that there have been several seaport impact analyses to date. These are reflected in the Final Environmental Impact Report. However, we find that many considerations, impacts and challenges with respect to seaport and maritime operations have been incompletely and inadequately addressed despite reassurances within the Project proposal, the analyses of certain stakeholders, and the measures proposed in the Draft Mitigation, Monitoring and Reporting Program of the Final Environmental Impact Report.[2] There appears to have been a lack of in-depth maritime stakeholder engagement and limited maritime stakeholder input, especially with respect to anticipation of operational concerns and specific planning for and around the potential impacts of the Project on the maritime community and seaport operations.

This paper, therefore, examines the following categories of maritime and seaport impacts and considerations and recommends the need for additional studies, determinations and stakeholder consultations before commencing the Project:

1. National Strategic Port Readiness given the Port of Oakland's designation by the U.S. Maritime Administration as a strategic commercial port serving the National Port Readiness Network;
2. Maritime operating parameters relevant to maintaining safe, secure, and efficient movement of deep-draft commercial and public (government) vessels within the Port of Oakland Inner Harbor;

[1] Port of Oakland letter to the Oakland City Council regarding Seaport Compatibility Measures, December 16, 2021.
[2] https://cao-94612.s3.amazonaws.com/documents/App_02-Appendix-MMRP.pdf

3. Port priority land usage: concern for loss of port maritime terminal capacity and the importance of reliable intermodal infrastructure including pier, rail, and interstate roadway connections to efficient port operations;
4. Maritime security in the Port of Oakland Inner Harbor during construction and long-term presence of the Project;
5. Effect of the Project on the viability of the Oakland Inner Harbor Turning Basin Widening project;
6. Landside seaport operations: potential for disruptions and upsets to container movements; introduction of new emergency planning and response requirements;
7. Waterway safety and ship movement disruptions and upsets: during Project construction and long-term permanent presence.

The Maritime Transportation System – the Macro View:

> "*The benefits of a strong maritime transportation system are immediate and self-reinforcing. Improved waterborne infrastructures relieve the growing congestion on highways and rail lines. We obtain better access to 95% of the world's markets overseas, grow our domestic and foreign trade, help maintain hundreds of thousands of middle-class jobs, and play a critical role in promoting America's energy independence. But the benefits go beyond the economy. Policies and programs supporting the U.S. maritime transportation system enable us to project power on a global scale and maintain national security, with our U.S.-flag carriers supporting military operations by transporting equipment, fuel, and other provisions needed to successfully engage our adversaries. We can also respond to a crisis anywhere in the world.*"[3]

An assessment of the potential maritime impacts of the proposed Project on operations in the Port of Oakland necessarily begins with an understanding of the Port of Oakland's role as an important component of the Maritime Transportation System (MTS) of the United States, and specifically the Port of Oakland's designation and value as a U.S. strategic commercial port.

The U.S. Maritime Administration (MARAD) defines the MTS expansively as a system of systems that includes navigable waterways, ports and harbors and their associated infrastructure, the abundance and variety of land-side connections which combine to move people and goods to and from the water to their destinations and the policies, procedures and professional maritime community that support its operations. This system of ports with federally maintained channels and navigation aids, efficient intermodal and intercontinental railroad connections and interstate access for trucking, pipelines and energy infrastructure, supported by a highly trained and specialized maritime labor force underpins our nation's economic health and security.

To quote MARAD, "*The U.S. Marine Transportation System is clearly one of our greatest national assets. It has helped ensure our continuing leadership in international trade and is an engine of economic growth at home*."[4]

Commercial seaports, therefore, are more than just a local resource and economic engine. Each commercial seaport in the United States is a component of a much larger, complex and critically

[3] https://www.maritime.dot.gov/

[4] U.S. Maritime Administration Report, America's Ports and Intermodal Transportation System, January 2009, pg 7.

important MTS. And the MTS is itself a key component of a highly efficient global transportation system that is a foundational element of U.S. economic prosperity and national security.

Seaports and National Strategic Port Readiness

Among many programs in support of its mission to ensure the U.S. maritime industry meets the nation's economic and security needs, MARAD has established the National Port Readiness Network (NPRN).[5] The NPRN is a cooperative among nine federal agencies and organizations, along with representatives from designated strategic commercial ports across the United States. The NPRN works to ensure the readiness of these strategic commercial ports to support sealift and force deployment during strategic contingencies and other national defense emergencies.

Within the U.S. MTS there are some 360 commercial seaports. Of these, only 18 are specifically designated by the NPRN as strategic commercial ports in support of national defense requirements.

The Port of Oakland is one of these 18 strategic commercial ports.

The Port is also one of only five west coast ports with federal channels and maritime transportation system components capable of handling large modern vessels requiring a 50-foot channel. Of additional note, U.S. Coast Guard Island Alameda is located at the southern end of the Oakland Inner Harbor Navigation Channel and is the homeport for several important U.S. Coast Guard Cutters, including four U.S. Coast Guard National Security Cutters, the largest and most capable interoperable cutters in the USCG fleet. The USCG is an armed service with a national defense readiness mission and requires a dependable, safe and secure means of access to the sea at all times.

MARAD specifically commented on the importance of strategic commercial ports in a 2009 report in which they noted the following:

> *America's commercial ports, especially those designated as Strategic Ports, are essential to our national defense. Accommodating military cargoes in times of emergency is in the national interest. Military cargoes are irregular in timing and have a 'surge' component that places an inordinate demand on our designated national strategic port system – often to the detriment of the ports' regular commercial customers and stakeholders. It is vital to national security that our Strategic Ports be able to* ***provide operational flexibility and possess sufficient redundancy*** *to meet the needs of a wide range of missions and timelines.*[6] [emphasis added]

The very next paragraph of the 2009 report adds the following caution:

> *Competing land-use issues adversely impact port expansion efforts. A limited amount of property exists for marine development purposes in and around existing port facilities. Port expansion plans face competing development issues and environmental concerns that further limit expansion activities.* ***Property that may be suitable for port development is subject to constant pressures for non-port uses, such as office, residential, or recreational development****. When a parcel of land is designated for non-port use, it is rarely returned.* [7] [emphasis added]

[5] https://www.maritime.dot.gov/ports/strong-ports/national-port-readiness-network-nprn
[6] U.S. Maritime Administration Report, America's Ports and Intermodal Transportation System, January 2009, pg 8.
[7] Ibid, pg 9.

Strategic ports are selected in part for their location, capacity and flexibility to respond to the often unpredictable, urgent and immediate demands of the national defense establishment as it trains and responds to contingencies across the globe. As such, it is critically important to examine and address the wide range of potential national defense, security and contingency response implications when contemplating local changes to port uses in a strategic commercial port like the Port of Oakland. This is especially the case if such changes would limit operational flexibility, reduce redundancy and permanently remove land from future seaport use.

The Maritime Transportation System – the Micro View

> *"Since our founding in 1927 the Oakland Seaport has served as the principle ocean gateway for international containerized cargo shipments in Northern California. The Oakland Seaport oversees 1,300 acres of maritime-related facilities serving a local market of over 14.5 million consumers, 34 million within a seven-hour drive and 50% of the US population by rail. Three container terminals and two intermodal rail facilities serve the Oakland waterfront. All shipping channels and 90% of berths at the Port are dredged to -50 feet, capable of accommodating vessels up to 18,000 TEU capacity. The Union Pacific and BNSF railroad facilities are located adjacent to the heart of the marine terminal area to provide a reliable and efficient movement of cargo between the marine terminals or transload facilities and the intermodal rail facilities."*[8]

A closer look at the Port of Oakland reveals why it is such a critically important national strategic asset. At the local level, a seaport is a powerful economic engine and important node in the global transportation supply chain. As the Port itself catalogued in the above quote, the Oakland seaport has evolved over the years into a large, integrated, reliable and efficient intermodal "principle ocean gateway" for Northern California and the nation This is what successful seaports such as the Port of Oakland do (currently ranked as the 8th largest container port in the U.S.). Ports evolve and adapt over time in response to the ever-changing nature of seaborne trade. As ships have grown ever larger in length and capacity in response to the incessant demands of the global economy to move cargoes in an efficient and timely manner, seaports have continued to increase terminal capacity, developed ever greater cargo handling efficiencies and capabilities and dramatically improved intermodal connectivity in order to remain competitive. Seaports are not static or fixed – flexibility, adaptability and the capacity for growth are keys to future viability.

The flexibility and capacity of the Port of Oakland are reflected in the impressive variety of seaport related assets and infrastructure serving the port. A partial accounting includes: the Oakland Inner and Outer Harbor marine terminals; the Inner and Outer Harbor Turning Basins; modern containerized cargo handling equipment; container laydown locations, staging areas and necessary swing space; close and extensive railway access; heavy load roadways leading directly to interstate highways; professionally operated towing vessels of appropriate sizes and capabilities to safely guide large cargo ships to and from berths; experienced licensed marine pilots with published guidelines for operating safely in the seaport; federally designed and maintained navigation channels; federally maintained navigational aids; a Vessel Traffic Service; and public and private terminal berths for vessels with well-maintained seawalls, bulkheads and mooring systems.

[8] The Port of Oakland, "Your Port Your Partner," https://www.oaklandseaport.com

Findings, Observations and Recommendations

1. National Strategic Port Readiness

Given the Port of Oakland's designation as a strategic commercial port serving the National Port Readiness Network (NPRN) as previously noted, the proposal to remove the Howard Terminal site and its dock capacity and lay berth access from dedicated port use in this highly developed intermodal seaport raise concerns that have yet to be addressed. As a strategic port, the associated NPRN interests and requirements must be considered. These interests are represented by a local Port Readiness Committee for each of the nation's 18 strategic commercial ports. The committee is comprised of representatives from the nine federal agencies and organizations of the NPRN, along with certain key maritime community stakeholders, and chaired by the local U.S. Coast Guard Captain of the Port. The Port Readiness Committee is the appropriate entity to review the Project proposal for any potential impacts on port readiness capabilities, capacities and continued viability for national strategic and national security purposes.

Recommendation*: Engage the U.S. Coast Guard and MARAD, co-leads for the local Steering Committee of the Port Readiness Committee, to examine potential impacts on operational flexibility and redundancy for national defense and strategic requirements if the Howard Terminal is removed from future seaport use and redeveloped as proposed by the Project.*

2. Operating parameters for safe and efficient movement of deep-draft commercial and public vessels in the Oakland Inner Harbor Navigational Channel

Maritime port and harbor operating parameters and guidelines are based upon existing conditions and established infrastructure. Within the San Francisco Bay and its Tributaries, the San Francisco Bar Pilots have published detailed operating guidelines that define considerations, conditions and parameters for moving commercial vessels to and from sea.[9] These guidelines reflect natural factors of tide cycle and tidal currents in the port, and best times to maneuver deep-draft vessels through waterways and to their berths. The Pilot Operations Guidelines also make best use of the cumulative regional expertise and experience of the professional mariners tasked with ensuring the timely and safe navigation of a vessel's movement from sea to berth and safely back to sea. The depth, width and condition[10] of channels through harbors, rivers and estuaries; the presence and capability of assist towing vessels; the adequacy of turning basins; the availability of the professional expertise of the Bar Pilots, towing vessel operators, Vessel Traffic Services and ship Captains and Crews; and infrastructure configuration and use are all key elements supporting these guidelines. Changes to port infrastructure and waterways uses and users, along with the potential introduction of new non-maritime activities create new operating conditions that require re-evaluation of seaport operating parameters and guidelines.

Recommendation: *Formally evaluate potential Project impacts to navigation safety, waterway operations and maritime commerce in the Oakland Inner Harbor for both the Project construction period as well as for its permanent long-term presence. The U.S. Coast Guard and the U.S. Army Corps of*

[9] San Francisco Bar Pilots Operations Guidelines for the Movement of Vessels on San Francisco Bay and Tributaries, June 14, 2021.

[10] The U.S. Army Corps of Engineers routinely conducts channel and turning basin surveys and coordinates required maintenance.

Engineers are the lead federal agencies to determine and guide this formal consideration, and each have well-defined processes and procedures for doing so. Project proponents should engage the U.S. Coast Guard Sector San Francisco Captain of the Port and the Army Corps of Engineers District Engineer to complete this process.

3. Port priority land usage and the Project

Waterfront maritime terminals and reliable pier, rail and interstate connections are key to efficient port operations and strategic value to the NPRN. Substantial public investment has been made over time in the Port of Oakland pier and facility infrastructure, intercontinental railways and rail connections, interstate highway access, and deep-draft federally designated and maintained navigation channels to create one of the nation's most effective and efficient intermodal cargo transfer and transport hubs. Oakland further benefits from immediate proximity to a deep-water harbor and easy access to sea. Such highly developed ports are relatively few in number.

Given the public funds committed to the seaport over the decades, the decision to remove land in such a port from port priority use should be carefully considered – land removed is likely permanently lost to maritime use. The Howard Terminal is currently used to accommodate a wide range of functions, including receiving container imports, exports, chassis, and empty containers. In support of this, in January 2022 the Port of Oakland and the U.S. Department of Agriculture (USDA) announced a partnership to ease congested ports and supply chain issues through a 25-acre pop-up site at Howard Terminal – nearly half the property – indicating the important value of the Howard Terminal to the efficient movement of goods throughout the region. Moreover, the Howard Terminal typically hosts over 325,000 truck gate transactions per year and is located close to port terminals allowing for efficient and timely operations.

Of additional importance, as the availability of west coast lay berths has diminished, the Howard Terminal provides accessible, adequate and desirable lay berth space with provision for cold ironing. In fact, the USNS JOHN GLENN is currently berthed there in cold iron status, and during the early months of the pandemic the Howard Terminal served as a critically important berth for two cruise ships that had been held at sea while protocols for safe entry were determined.

A comprehensive, independent and objective examination of the impact of the loss of this terminal on the efficiency and operations of the port should be conducted. In particular, alternatives offered in the existing proposals and mitigations should be fairly and realistically evaluated as to their efficacy and feasibility. Indeed, the Bay Conservation and Development Commission acknowledged the potential for the ongoing viability of the Howard Terminal in their Staff Summary and Preliminary Recommendation of May 2, 2022.[11]

[11] The BCDC Bay Plan Amendment 2-19 Staff Summary and Preliminary Recommendation of May 2, 2022: ". . . *Although the expanded turning basin certainly would reduce the size and berth length of Howard Terminal, BCDC staff's preliminary analysis indicates that Howard Terminal would still have the basic physical characteristics needed to accommodate dry bulk and Ro-Ro (although export Ro-Ro may be more feasible than import Ro-Ro), and even limited container cargo (in this scenario, any future use for container cargo may be limited to smaller, niche vessels). Furthermore, the Applicant and Port of Oakland state that rehabilitating the terminal would be cost-prohibitive. However, any use for cargo handling would require varying ranges of investments and improvements. Even if Howard Terminal were not found to be financially feasible for cargo operations now, this may not preclude future investments to attract cargo and allow Howard Terminal to contribute to meeting regional cargo demand.*

***Recommendation**: Conduct a comprehensive, independent and objective examination of the impact of the loss of this waterfront terminal to maritime use with respect to the ongoing efficiency, operations and strategic value of the port to include the loss of lay berth capacity. Evaluate alternatives offered in the existing proposals and mitigations for efficacy, feasibility and viability given forecasts for future maritime commerce growth.*

4. Maritime security in the Port of Oakland Inner Harbor during construction and long-term presence of the Project

The Maritime Transportation Security Act of 2002 (MTSA)[12] established standards, processes and guidelines for determining, evaluating and mitigating maritime security concerns and challenges for vessels, maritime facilities, maritime workers and the adjacent and involved waterways. Vessel and Facility security plans are the vehicles for implementing MTSA. The U.S. Coast Guard is the lead federal agency with responsibility for enforcing MTSA. Each Coast Guard Captain of the Port also leads an Area Maritime Security Committee comprised of federal, state and local agencies, organizations and maritime community stakeholders tasked with oversight of port security risk, processes, procedures and policies in the ports in which they operate. A number of the documents listed in Appendix A refer to the potential for security incidents and indicate a discomfort with the manner in which security has been addressed to date. We agree. Specific concerns include the potential for increased presence of recreational and private vessels, risks posed by waterside fireworks events, impacts of building reflections on waterway operations, and the ability of local agencies to respond to these and other risks properly and adequately. At a minimum, the U.S. Coast Guard and other relevant oversight entities must be consulted to determine whether and how facility and vessel security plans need to be reviewed for changes in risk profiles and any additional risk reduction measures that would need to be implemented and tested. The Oakland Police Department must also be consulted to determine whether they are able to resource and respond as envisioned in the Project materials.

There are several specific maritime security concerns that must be addressed. A number of these are highlighted in the following recommendation.

***Recommendation**: Assess the impacts of the Project on the security profile of the waterways and adjacent terminals, to include a comprehensive consideration of potential security incidents under a range of scenarios and contingencies. Factors to consider, among others, include the immediate proximity to an active commercial waterway of the Project, the potential for significantly increased presence of private and recreational vessels during Project associated events; the plan for periodic fireworks events from vessels positioned in the Inner Harbor waterway (which raises questions regarding the risks posed by the fireworks themselves, on-water fireworks crowd management and the positioning of the barge in the narrow Inner Harbor Navigational Channel); the need for a fuller study of the potential impact of building reflective surfaces on commercial vessels navigating and maneuvering in the channel; and the presence of large numbers of event patrons, local residents and businesses in close proximity to active port industrial facilities.*

However, BCDC staff acknowledges there is uncertainty regarding whether and how using Howard Terminal could be financially feasible."

[12] The Maritime Transportation Security Act of 2002, Public Law 107–295—Nov. 25, 2002

5. Effect of the Project on the viability of the Inner Harbor Turning Basin Widening project

The Port of Oakland has been working with the U.S. Army Corps of Engineers to study the feasibility of widening the Inner and Outer Harbor Turning Basins to address the critical need for increased safety margins for turning the latest generation of large commercial vessels. The Army Corps study states, "*The Tentatively Selected Plan would modify the Inner Harbor Turning Basin and Outer Harbor Turning Basin to allow vessels to operate within the Oakland Harbor more efficiently and allow large vessels to call more frequently. The increase in cargo per vessel call yields economic benefits by allowing for more efficient use of [state-of-the-art] containerships*."[13] This study is ongoing, but the turning basin project is strongly supported by maritime stakeholders in the Oakland seaport (terminal and vessel operators, marine Pilots, the Port of Oakland and others) and is widely seen as critically important to ensuring the port's ability to remain competitive into the future. It will ensure the Port of Oakland maintains the ability to continue to evolve to attract and accommodate the largest state of the art vessels, and to maneuver them safely in the waterways.

To address this need, the Project proposes a Maritime Reservation Scenario that would temporarily reserve approximately 10 acres of the Howard Terminal Project site for a 10-year period commencing from May 2019 to accommodate the expansion of the Inner Harbor Turning Basin.[14] However, as currently proposed, reserved land would be available for return to the Ballpark Project upon the close of the 10-year window. It is unclear from Project materials and current information on the turning basin study whether this 10-year window would be adequate for the various elements of design, evaluation, review and construction necessary for completion of the Inner Harbor Turning Basin Widening Project.

Hence, it raises concerns and questions as to whether the Inner Harbor Turning Basin Widening Project and the Waterfront Ballpark District Project are ultimately mutually compatible if the Turning Basin project is not given priority over the 10 acres of the Maritime Reservation. What are the impacts of one project upon the other? The importance, relevance and priority of the Inner Harbor Turning Basin Widening project to the future of the port is insufficiently addressed in materials associated with the Project.

Recommendation: *Assess potential impacts on the Oakland Inner Harbor Turning Basin Widening project viability as part of the Project approval. Additionally, investigate removing Maritime Reservation Scenario land from Ballpark Development Project use and dedicating to the Turning Basin project as it moves through its various studies and approvals. Near-term and long-term conflicts between the two projects, with appropriate mitigations, need to be considered and worked out in advance.*

6. Land-side seaport operations, disruptions and upsets

Container movement disruptions and upsets: Terminal operators endeavor to offload, maneuver, and onload containers seamlessly onto ships and land-side intermodal connections. Maritime commerce and supply chain interruptions can be exaggerated by slowing or stopping container flow into

[13] Oakland Harbor Turning Basins Widening Navigation Study Draft Integrated Feasibility Report and Environmental Assessment, U.S Army Corps of Engineers, dated December 2021

[14] Waterfront Ballpark District at Howard Terminal Response to Comments/Final Environmental Impact Report, dated December 2021, Chapter 4.10, pg 4.10-64.

or out of a port terminal. The proximity of laydown and staging space for containers adjacent to vessels so they may be loaded in appropriate and desired order to (for vessel stability, cargo compatibility and so forth) improves efficiency, reduces container congestion and enhances the safety of terminal operations. Loss of such proximate laydown and staging capacity can lead to increased drayage travel, and the potential for increased transportation congestion outside the terminal, particularly on days of games or concerts at the Project venue. Also noted, extensive rail lines are located just outside access points to the proposed Project, where freight train stoppage and switching is routine, and passenger trains regularly run. Adding large numbers of event attendees, new permanent residences and several thousand workers all traveling to and from the site adds complexity, risk and significantly more interactions in this congested transportation space. The potential impacts of this on port operations needs to be more fully studied.

Recommendation: *Conduct a study to model the changes in container movements and flows throughout the port that may be engendered by the Project to determine the extent and nature of impacts to terminal efficiencies, landside transportation, railway operations. This should include associated impacts on continued safe access and egress for routine and emergency vehicle travel. Develop, publish and require all parties to adhere to mitigation measures to ameliorate complexity, risk and significantly more interactions in this congested transportation space.*

7. Hazardous Materials Release Disruptions and Upsets:

Hazardous materials (Hazmat) of many types and varieties are routinely transported on vessels, in shipping containers and on rail cars moving through port facilities and surrounds, and specifically on terminals along, and the vessels navigating and mooring within, the Oakland Inner Harbor waterway. As such, the potential is ever present for a release of Hazmat in the environs of the port in the event of damage to a container or its contents, rail cars or vessels themselves. Such potential is addressed for existing port operations and infrastructure in the various emergency and safety plans required by oversight and regulatory agencies and entities. The Project, by definition, substantially changes existing infrastructure and creates new potential impacts upon the operations of adjacent terminals and waterways. The Project also introduces new and more complex contingency planning needs for non-port related entities, event patrons and residences in immediate proximity to potential Hazmat incidents within the port. Hence, a new assessment of safety and emergency response requirements and the associated need to update contingency plans are required.[15]

Recommendation: *Evaluate Hazmat disruptions and upsets that must be considered and assessed by relevant oversight authorities and emergency response organizations occasioned by the presence of the Project and the change in use of the Howard Terminal facility. Considerations include the effect upon emergency and contingency plans by the addition in immediate proximity to active industrial areas of non-industrial office space, residential high-rise property and a stadium venue with large numbers of patrons and workers. Considerations include developing Hazmat release scenarios that address the potential downwind impacts and exposures; emergency response considerations for Hazmat releases on adjacent port facilities or moored vessels; evacuation and egress considerations for abutting*

[15] A leaking container causing a hazardous release of liquid or vapor in the port (on a terminal or moored vessel) must be managed by terminal operations in concert with emergency responders. Such an event can result in an emergency evacuation order to workers and adjacent populations, depending on the associated hazard and quantity of the material being released, the prevailing wind, and capability of local responders to enter the hazard area.

stadium patrons and development residents, businesses and workers; and refuge and dispersal areas adequately distanced from adjacent port facilities and hazards.

8. Waterway safety and ship movement, disruptions and upsets

Safe maritime navigation is served by an integrated system of navigational rules, local policies and procedures, fixed navigational aids, the controlled movement of deep-draft vessel traffic by professional marine pilots and mariners, and the oversight and advice of the San Francisco Bay Vessel Traffic Service operated by the U.S. Coast Guard. Commerce flow is diminished when deep-draft vessels are impeded in their ability to navigate safely and efficiently to and from their intended berths (due to congestion, for example). This is similarly true for any disruptions to the cargo loading process due to landside traffic congestion. The Project presents the potential to introduce disruptions and impediments to safe and efficient maritime operations during both Project construction as well as for its permanent long-term presence. Managing the presence and operations of vessels needed during Project construction must be planned and coordinated with waterway stakeholders. This is also true regarding the added presence of recreational craft in busy federal channels, where safe marine operations may often not be possible without active enforcement activity.

Vessel movements within ports, harbors and waterways are carefully timed to the ebb and flow of tides and currents,[16] which influence margins of safety and windows of operations for vessels moving through a port, particularly large deep-draft vessels.[17] Moreover, such vessels are constrained by their size and are unable to maneuver and operate outside of defined navigational channels. This is of critical concern when sharing a narrow waterway with small shallow-draft vessels. Large vessels have a limited ability to avoid shallower draft vessel operators (such as private recreational vessels) who may be less concerned about their position with respect to the navigational channel and may maneuver inadvertently into the path of a constrained deep-draft vessel. Large vessels and the tugs that help them maneuver also move exceedingly large volumes of water and generate significant water turbulence as they operate their propulsion and maneuvering systems. This is a very real and direct hazard to small vessels because they are subject to being swamped or capsized by this turbulence when operating near deep-draft vessels and their assist tugs.

Various Project materials have commented specifically upon the potential for increased risks posed by recreational vessels in this critical commercial waterway. Materials note that the addition of a ballpark stadium and entertainment venue immediately adjacent to the active Inner Harbor Navigational Channel and Turning Basin increases the likelihood of a regular presence during stadium events of a large number of recreational watercraft of all types congregating in the Oakland Inner Harbor and Turning Basin.

In response, the Project proposes a mitigation measure[18] that would require the Project sponsor to "*have a protocol for boating and water recreation for the site to be approved by the City of Oakland*

[16] There are generally two full tide cycles per day in Oakland Inner Harbor.
[17] Deep-draft vessels are commonly those confined to the depth of the navigational channels, turning basins, anchorages and marine berths, which are dredged and maintained to depths suitable for safe navigation. Vessels constrained to the channel operating depths are given preference to those not so constrained.
[18] Waterfront Ballpark at Howard Terminal Project Draft Mitigation Monitoring and Reporting Program, Mitigation Measure LUP-1a: Boating and Recreational Water Safety Plan and Requirements.

and the Port of Oakland, in consultation with the San Francisco Bay Area Water Emergency Transportation Authority, the Harbor Safety Committee of the San Francisco Bay Region, and the United States Coast Guard (collectively, the "Consulting Agencies")." The proposed mitigation measure further states "*The protocol shall specify measures to minimize conflicts with maritime navigation resulting in safety hazards and ship delay, and shall be implemented prior to and during baseball games, concerts, and other large events (as defined in the TMP) scheduled at the ballpark or the Waterfront Park.*"

The proposed measure implicitly assumes that this protocol will emerge from this mandate. But no work has yet been done, nor have the named consulting agencies met to begin the detailed process of determining responsibilities, analyzing and modeling the new waterway risks, and then developing, resourcing, implementing and operationalizing the envisioned protocol. The U.S. Coast Guard's process for assessing risk generally begins with a formal Navigation Safety Risk Assessment (NSRA), typically conducted in coordination with the U.S. Army Corps of Engineers. The purpose of the NSRA is to study, catalog and analyze changes in use and users the Project presents to the waterway. It is the precursor to any discussion of operational protocols or activity. Local law enforcement and response agencies also have specific processes that need to be included.

Recommendation:

Construction: *Engage relevant maritime stakeholders, regulatory and law enforcement agencies to determine, assess and analyze potential waterway impediments introduced during construction of the Project. The construction of the proposed Project can expect to involve marine vessels in the Oakland Inner Harbor supporting demolition, materials delivery and construction support over an extended period of time so it is critical to determine specific operational measures and controls that will be needed.*

Implementing Mitigation Measure LUP-1a: *Engage named consulting agencies (to include the Oakland Police Department) to begin the coordination necessary to identify relevant responsibilities, authorities, resources and capabilities to patrol and control the waterway, and to conduct a detailed analysis as previously discussed of the operational requirements and waterway impacts occasioned by the Project.*

Conclusion

The Waterfront Ballpark District Project at the Howard Terminal in the Port of Oakland Inner Harbor raises a number of yet-to-be-addressed questions and concerns with respect to future maritime and seaport operations. This paper recommends specific concerns and challenges that remain either unaddressed or addressed inadequately to date. Several of these recommendations require direct and active engagement with regulatory and oversight agencies and more in-depth consultations with maritime stakeholders in order to derive a full and complete understanding of the various maritime and seaport operational impacts and considerations yet to be addressed and mitigated.

Appendix A

Documents Reviewed

1. Waterfront Ballpark District at Howard Terminal Draft Environmental Impact Report, dated February 2021.
2. Waterfront Ballpark District at Howard Terminal Response to Comments/Final Environmental Impact Report, dated December 2021.
3. San Francisco Bay Conservation and Development Commission, Staff Final Recommendation for Bay Plan Amendment No. 2-19 Concerning Removing Howard Terminal from Port Priority Use Area Designation (For Commission consideration on June 30, 2022), dated June 17, 2022.
4. Security Risk Assessment – Findings Report, dated July 13, 2021. Prepared for the East Oakland Stadium Alliance by The Edward Davis Company, Boston, MA.
5. Oakland Harbor Turning Basins Widening Navigation Study Draft Integrated Feasibility Report and Environmental Assessment, U.S Army Corps of Engineers, dated December 2021.
6. Port of Oakland letter to the Oakland City Council regarding Seaport Compatibility Measures, dated December 16, 2021.
7. San Francisco Bar Pilots Operations Guidelines for the Movement of Vessels on San Francisco Bay and Tributaries, June 14, 2021.
8. U.S. Committee on the MTS (October 2017), National Strategy for the MTS: Channeling the Maritime Advantage, 2017-2022. Washington, DC: https://www.cmts.gov/assets/uploads/documents/National_Strategy_for_the_MTS_October_2017.pdf .
9. American Association of Port Authorities, Port of Oakland Seaport Security presentation, 2005: https://www.aapa-ports.org/files/SeminarPresentations/05_Admin_Legal_Keegan_Jane.pdf .
10. Maritime Transportation System Security Recommendations for the National Strategy for Maritime Security, dated 2005; https://www.dhs.gov/sites/default/files/publications/HSPD_MTSSPlan_0.pdf .
11. Coast Guard Tactics, Techniques, and Procedures 3-71.7 – Waterways Management (WWM): Navigation Safety Risk Assessments, dated 3 Sept 2015.
12. "Impacts of the A's Proposed Howard Terminal Stadium on the Operations and Economics of the Oakland Seaport," Prepared for the East Oakland Stadium Alliance by Economic & Planning Systems, Inc., September 2019.
13. "Big Boats vs. Small Boats; Not a Fair Comparison," American Boating Association, September 9, 2022. https://americanboating.org/bigvssmall.asp .