PORT OF TACOMA

OFF-DOCK CONTAINER SUPPORT FACILITY ALTERNATIVES ANALYSIS

Grette Associates LLC
ENVIRONMENTAL CONSULTANTS

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PREPARED FOR:

PORT OF TACOMA
1 SITCUM WAY
TACOMA, WA 98421

PREPARED BY:

GRETTE ASSOCIATES LLC
2102 NORTH 30TH STREET, SUITE A
TACOMA, WASHINGTON 98403
(253) 573-9300

JULY 8, 2022

SCOTT MAHARRY
ASSOCIATE SCIENTIST

DATE

Grette Associates LLC
ENVIRONMENTAL CONSULTANTS

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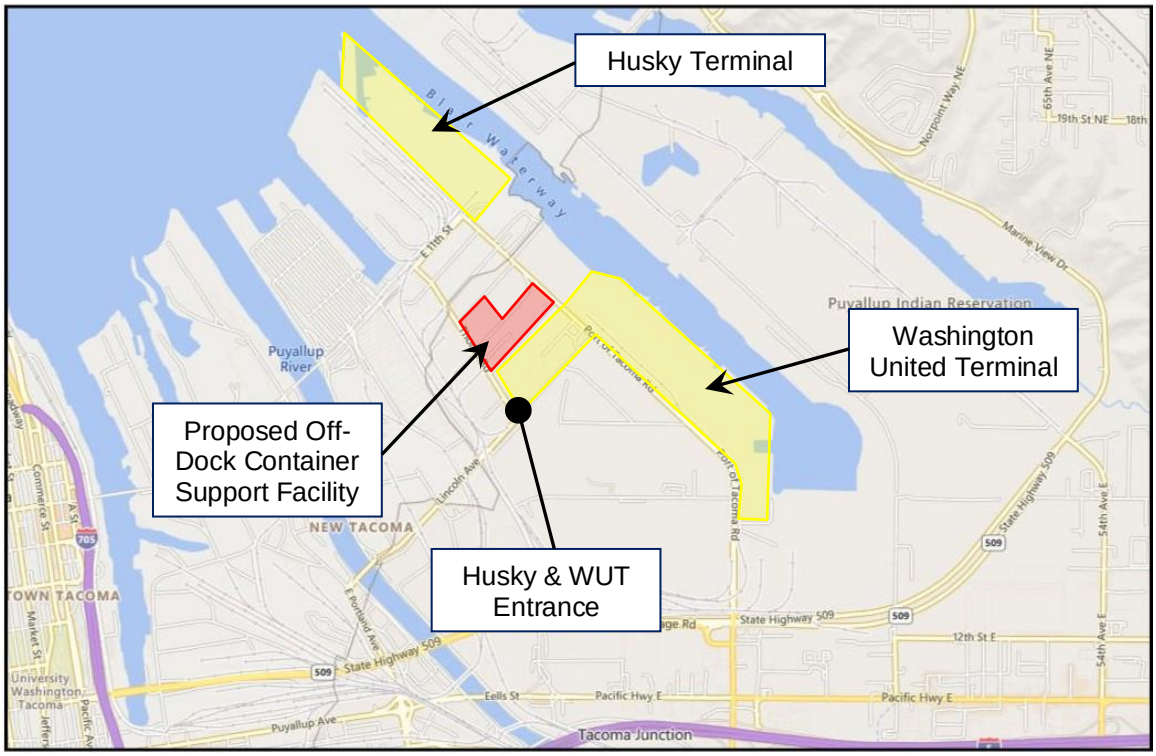
1 INTRODUCTION

Grette Associates (Grette) is under contract with the Port of Tacoma (Port) to prepare an Alternatives Analysis for the proposed Port of Tacoma Off-Dock Support Facility Project (Project) to provide off-dock storage and processing support for container shipping operations at the Port as close as possible to the Husky Terminal (Husky) and Washington United Terminal (WUT) Entry Gate. See Figure 1 for a vicinity map. The following Alternatives Analysis evaluates several potential properties (alternatives) against a common set of project design criteria to determine the adequacy and practicability of each alternative.

This Alternatives Analysis has been prepared in accordance with the guidance in the U.S. Army Corps of Engineers' (USACE) Seattle District *Alternatives Analysis Framework* (USACE 2016) to meet the requirements of the Clean Water Act Section 404 (b)(1) Guidelines along with 40 CFR 230.

Figure 1. Vicinity Map



1.1 Proposed Project

The proposed "Project" will develop the preferred alternative site into a fully functioning off-dock container yard to use for empty container and chassis storage, a single-high reefer pre-trip wash facility, and a wheeled reefer valet drop-off location, with the ability to also process fully laden containers. Other site features will include a truck entry and exit gate on Maxwell Way with a guard shelter, two emergency access gates on Thorne Road, an

office trailer, perimeter security fencing, site lighting and power, security cameras, a railroad crossing, a roadability-testing area, and stormwater improvements.

Proposed work includes clearing and grubbing, earthen fill, isolated excavation, site-wide grading, subgrade preparation, base course and pavement systems, stormwater infrastructure, and other utilities.

2 PROJECT PURPOSE AND NEED

International container ports up and down the West Coast, including the Port of Tacoma (Port), have become congested and therefore inefficient. These inefficiencies are contributing to increased cargo handling costs and excessive greenhouse gas emissions (GHG) and air quality impacts. The Purpose of the *Off-Dock Container Support Facility* project (Project) is to relieve congestion and improve marine container terminal capacity and efficiency at the Port of Tacoma in order to meet the public's need and demand for increased cargo movement. The proposed Project is to construct a off-dock container support facility of approximately 25 acres as close as practicably possible to the Husky and WUT entry gate, with a maximum distance of 1 mile, to help fulfill the Project Purpose and Need.

This Project is needed because existing Puget Sound Gateway Ports are operating above 80 percent capacity utilization[1]. This is causing inefficient operations and inefficient container handling, which is resulting in a ripple of supply chain impacts that include excessive truck queuing and idling, cargo ships waiting at anchor or offshore for available terminal berths, train backlogs, delayed cargo deliveries, and slowed or halted manufacturing. For example, as of April 2022, new data from Windward, a maritime artificial/predictive intelligence company, show that 20 percent of the global container fleet is stuck in port congestion[2].

In addition, inefficiency is both expensive and contributes to air quality and climate change impacts. Removing that inefficiency will have immediate positive impacts to air quality and a reduction in fuel consumption and greenhouse gas emissions. As part of the Port's and Northwest Seaport Alliance's (NWSA) emphasis on limiting its role in global warming and reducing greenhouse gas emissions, the Port is committed to improving the efficiency of cargo processing (terminal efficiency), both inbound and outbound. This includes the use of on-dock and off-dock rail to move containers, efficient access to nearby highway corridors, and maximizing terminal efficiency.

There are numerous sources of data documenting the need for this Project, including the Port's Strategic Plan[3], the NWSA's strategic business documents[4], the Northwest Ports

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1 Capacity Utilization is the physical number of containers a facility can hold given its mode of operations. Above 80 percent capacity utilization, there is an inverse relationship between the number of containers on the terminal and the efficiency of the terminal. i.e., as capacity utilization goes up, efficiency goes down.

2 Windward: Fifth of World's Containerships are Stuck in Port Congestion (Maritime Executive, 4/19/22).

3 https://www.portoftacoma.com/planning/2021-2026-strategic-plan

4 Currently Federal Maritime Commission (FMC) confidential documents.

Clear Air Strategy[5], Port operations data, the NWSA annual reports, industry news articles, and directives/fact sheets from the White House[6].

2.1 Project Purpose and Need Details

As summarized above, the problem is that international container ports up and down the West Coast, including the Port of Tacoma, have become congested and therefore inefficient. The Project need is to reduce congestion and improve marine container terminal capacity and efficiency within the Port of Tacoma in order to meet the public's need and demand for increased cargo movement. Additional evidence and details of the Project need are provided below.

Inefficient container terminals create bottlenecks throughout the supply chain with negative repercussions; ships at anchor across Puget Sound and idling off the coast waiting for berth space, exports sitting on docks for weeks or longer, North American manufacturing slowing or even halting altogether[7], and reduced inventory on retailers' shelves. As of April 2022, new data from Windward[2], the maritime artificial/predictive intelligence company, show that 20 percent of the global container fleet is stuck in port congestion. This has all helped drive inflation to a four-decade high.

When a terminal is above 80 percent capacity utilization, there is an inverse relationship between the number of containers on the facility and the productivity/efficiency of the terminal (marine container terminal capacity and efficiency). Once capacity utilization is above 80 percent, as more containers are added to the terminal, movement of those containers through the facility (production utilization) greatly slows. This is particularly true in the Puget Sound Gateway (ports of Seattle and Tacoma). Washington United Terminals (WUT), which is located immediately adjacent to the proposed off-dock container support facility, is currently operating at 94 percent capacity utilization; during the height of the Fall peak season in 2021, WUT operated at over 100 percent capacity utilization. Another measure of terminal efficiency is truck turn time—how long it takes a truck to enter then exit a terminal. WUT's turn time is 20 percent slower than the gateway average and 30-100 percent slower than similar facilities in Seattle.

With help from the Biden Administration[6], West Coast ports are working hard to improve the marine container terminal capacity and efficiency part of the supply chain. In addition, the Washington state legislature is also supporting this effort with funding for this off-dock container support facility. Ports are investing in labor, equipment, and land to work to improve terminal capacity and efficiency. While more labor and improved equipment can help with the production utilization/efficiency of a facility, it takes land to make it work. The largest and best trained labor force with the best equipment will still struggle if it is buried in containers.

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5 Northwest Ports Clean Air Strategy | Northwest Seaport - Port of Tacoma (nwseaportalliance.com)

6 The Biden Administration has many on-going initiatives, an executive order, Ocean Shipping Reform Act of 2022, and a bipartisan Infrastructure Deal to improve the national supply chain including providing over $15 million to the Port of Tacoma to provide this off-dock container facility. Industry news articles and The White House fact sheets and briefings are provided in Appendix A.

7 North American auto makers and other manufacturers have had numerous production shutdowns during 2021 and early 2022 due to a lack of imported parts and materials.

West Coast ports, and particularly the Port of Tacoma, need more land in the form of off-dock container facilities to relieve congestion at terminals and increase capacity and efficiency. Although more on-dock space at terminals would be best, the Port of Tacoma's existing international container terminals have already fully utilized available on-dock space. The terminals are confined by adjacent properties that are already being used for port logistics or by transportation networks (i.e., roads and rail). An example of this is the Husky Terminal (Husky), which in 2019 re-purposed area from an adjacent terminal (Terminal 7) to expand the on-dock space by 21 acres. Even with this additional on-dock space, there is a need for more; however, the terminal is confined by surrounding port logistic uses, transportation networks (rail, 11th Street, Port of Tacoma Road), and Puget Sound.

WUT is confined by the U.S. Oil marine transfer station and dock, Erdahl Ditch/Pierce County Terminal, Port of Tacoma Road, and the Blair Waterway/Puget Sound. With the port's on-dock/adjacent space already maxed out, there is no land available to further expand existing international terminals on-dock capacity. The next best option is to increase the off-dock capacity, and the closer to container terminals, the better; to improve marine container terminal capacity and efficiency and decrease the environmental impacts of traffic and associated emissions. Consolidating container and chassis storage and processing, container and chassis repair, container wash-down, preparation of refrigerated containers, and administrative support functions in a off-dock area outside of the main terminals will free up more on-dock area for terminal operations and cargo mobility and logistics which will improve terminal capacity and efficiency.

An example of this intense land pressure can be seen at WUT and Husky in Tacoma (see Figure 1). Another example of the congestion within Port of Tacoma terminals is that during the Fall peak season in 2021, terminals were stacking containers on their facility in areas not meant for container storage, including rail tracks, alleys, and areas normally used for terminal operations. One terminal resorted to stacking containers on the dock fronting a berth area thus eliminating an operating berth from the terminal just to increase capacity, at the expense of terminal efficiency. The use of limited on-dock space for the aforementioned reasons reduces the processing and operational space for both inbound and outbound containers on the terminals. This on-dock congestion creates a bottleneck for port operations and logistics, preventing import containers from efficiently accessing the external highway and rail network, prevents export containers from entering the terminals efficiently, and makes unprocessed empty containers and chassis unavailable to serve regional agricultural and cargo exports.

Ports across the West Coast experience an annual peak season from mid-summer through the end of the year. Back-to-school and holiday imports and the annual surge in agricultural exports account for the seasonal increases in cargo. Further, due to unprecedented high demand for retail imports since mid-2020, the entire supply chain has been stressed or disrupted, resulting in increased economic and trade stressors in many locations. Improving marine container terminal capacity and efficiency is a critical public need and a high priority for the current Biden Administration[6]. Action is needed to reduce ship, terminal, rail, and road congestion and to address the ripple effects shipping and terminal logistics issues have on the rest of the supply chain. Given the container throughput problems up and down the West Coast, these types of off-dock container support facilities are now seen

as a critical infrastructure public need to help improve container port operations and the efficiency of the supply chain.

This critical need is further demonstrated by the fact that even after recent on-dock and off-dock improvements such as the Husky Terminal 7 expansion, West Hylebos Terminal container support facility, Husky and WUT entry gate, and the PCT entry gate there is still a need for more. Husky expanded its on-dock capacity by incorporating 21 acres of Terminal 7 in 2019. An off-dock container support facility was opened at the Port of Tacoma's West Hylebos Terminal in 2021, adding approximately 12 acres of additional off-dock space[8]. In 2012, and a 2020 upgrade, approximately 18.5 acres were improved as a combined entry gate for Husky and WUT, and approximately 10 acres in 2016 were improved as an entry gate for Pierce County Terminal (PCT), both entry gate facilities were designed to queue trucks/containers and improve container processing. With all these additional off-dock and process improvement facilities being utilized to their maximum extent there is still a critical public need for additional off-dock space for container and chassis management and processing at the Port of Tacoma.

Besides impacts to the cargo supply, inefficient terminal operations and their impacts to the supply chain logistics create unnecessarily high carbon footprints. This starts with ships at anchor running generators, or others idling off the coast both waiting for berth space burning fuel that would not have been burned if they could come straight into the dock. Double, triple, or more handling of containers on terminals burns fuel in yard equipment that would otherwise not be burnt under efficient terminal operations. Trucks idling in long lines and dealing with congested terminals also burn more fuel than if turn times were low and the trucks were kept moving. Inefficiency is both expensive and has negative air quality and climatic impacts. Removing that inefficiency has immediate positive impacts to air quality and a reduction in fuel consumption and greenhouse gas emissions.

The Northwest Ports Clean Air Strategy is a collaborative effort among the Port of Tacoma, Port of Seattle, NWSA, and Vancouver Fraser Port Authority in British Columbia (Northwest Ports) that sets a vision to phase out emissions from seaport-related activities throughout the Georgia Basin-Puget Sound airshed by 2050. This clean air and climate strategy committed to initial targets of 50% and 80% reductions in air and greenhouse gas emissions from Tacoma, Seattle, and Vancouver, B.C. seaports by 2030 and 2050, respectively. The Northwest Ports Clean Air Strategy was recently updated, with a goal of port-wide carbon neutrality by 2050.

As part of the Port's and NWSA's emphasis on limiting its role in global warming and reducing greenhouse gas emissions, the port is committed to improving the efficiency of cargo processing (terminal efficiency), both inbound and outbound. This includes the use of on-dock and off-dock rail to move containers, efficient access to nearby highway corridors, and maximizing terminal efficiency.

Improving marine container terminal capacity and efficiency by adding off-dock container support facilities will decrease truck queuing and idling time, reduce inefficient container handling, reduce the time cargo ships spend waiting at anchor or offshore for available

[8] This location is near the Pierce County Terminal and provides off-dock space to all three international container terminals (Husky, WUT, and PCT).

terminal berths, and minimize train backlogs, keeping this equipment moving and reducing unnecessary greenhouse gas emissions.

2.2 Basic Project Purpose and Water Dependency

The basic Project purpose is to relieve congestion and improve marine container terminal capacity and efficiency at the Port of Tacoma in order to meet the public's need and demand for increased cargo movement.

For the purposes of the Alternatives Analysis, the Project is considered water-dependent as it is directly tied to loading cargo ships on the Blair Waterway, the Project requires access to, and close proximity to, the Blair Waterway, and but for the confined nature of the terminals (by existing port logistic properties or transportation networks [Port of Tacoma Road]), this activity would be occurring on-dock and immediately adjacent to the water. This Project is a critical component of the water-dependent activity of shipping at the Port of Tacoma's international container terminals.

2.3 Overall Project Purpose and Geographic Area

The overall Project purpose is to construct a off-dock container support facility of approximately 25 acres of contiguous area as close as practicably possible to the Husky and WUT entry gate, with a maximum distance of 1 mile, to relieve congestion and improve marine container terminal capacity and efficiency within the Port of Tacoma to meet the public's need and demand for increased cargo movement. Contiguous area refers to the amount of land (one or more tax parcels) the Port can practicably assemble, regardless of ownership, that isn't already being used substantially for Port logistics or major infrastructure/manufacturing or habitat conservation activities supporting the public need, and that are confined within existing right-of-way (except one crossing of a low volume railroad track is considered acceptable within the Project area).

As supporting information, WUT alone requires at least an additional 25 acres to improve marine container terminal capacity and efficiency (e.g., operate at or below the 80% capacity utilization). Other Port of Tacoma terminals need similar additional space. Although more on-dock space at terminals would be the best way to improve terminal capacity and efficiency, the Port's existing international terminals are already maxed out for on-dock/adjacent space and are confined by adjacent properties that are already used for port logistics or by transportations networks (roads and rail) as previously detailed. With the Port's on-dock/adjacent space already maxed out, there is no availability to further expand existing international terminals on-dock. The next best option is to increase the off-dock capacity, and the closer the better to increase cargo/terminal efficiency and decrease environmental impacts. The off-dock sites intercept truck trips that would otherwise go directly to an over-capacity terminal; therefore, the off-dock facility would increase terminal capacity without negatively changing traffic patterns and off-terminal impacts. The farther away a near-/off-dock container facility is, the less cargo/terminal efficiency[9] is improved and the more other environmental effects increase (such as traffic/congestion, fuel consumption, and emissions); therefore, the geographic area considered for siting this

[9] Cargo/terminal efficiency is also affected by container drayage which is the distance transporting containers between the terminals to near dock facilities. Drayage is often roundtrip.

facility is as close as possible to the Husky and WUT entry gate with a maximum distance of one mile.

3 PROJECT DESIGN CRITERIA

Based on the Project Purpose and Need, the preferred site must be capable of meeting all requirements of the completed Project. As the Port is dedicated to reducing greenhouse gas emissions, efficient cargo processing for both inbound and outbound containers is a significant factor in design criteria. This includes the use of on-dock and off-dock rail and container support facilities to move containers, as well as efficient access to nearby City of Tacoma freight/heavy haul transportation network and state and interstate highway corridors (Figure 2).

These features are specific elements of the basis of design that are required to provide sufficient empty or fully laden container and chassis storage capacity and processing, a single-high reefer pre-trip wash facility, a wheeled reefer valet drop-off location, roadability lanes, maintenance facilities, offices, entrances/exits, security, and the ability to safely maneuver the site while ensuring all infrastructure improvements are sufficient to support operations.

3.1 Size

The size of the Project is approximately 25 acres of contiguous area as close as practicably possible to the Husky and WUT Entry Gate, with a maximum distance of 1 mile, as described further in the Project Purpose and Need. Contiguous area refers to the amount of land (one or more tax parcels/properties) the Port can practicably assemble, regardless of ownership, that isn't already being used substantially for Port logistics or major infrastructure/manufacturing or habitat conservation activities supporting the public need, and that are confined within existing right-of-way (except one crossing of a low volume railroad track is considered acceptable within the Project area).

3.2 Shape

The shape of the Project/alternative should generally be square or rectangular and of sufficient width to accommodate the Project design criteria described above and allow for efficient, effective, and safe use and operations of the facility.

3.3 Geographic Area

The geographic area for siting this Project is as close as possible to the Husky and WUT Entry Gate, with a maximum distance of one mile, as described in more detail in the Project Purpose and Need above. The one-mile radius is bounded by the Puyallup River to the west as there are only two bridges across the river which would cause unacceptable traffic and logistical issues that would not fulfill the Project Purpose and Need. The one-mile radius is also bounded to the east by the Blair Waterway as there are no bridges across the Blair Waterway and the transit distance around the Blair Waterway exceeds one-mile.

Figure 2. Heavy Haul/Freight Corridor Map

4 POTENTIALLY PRACTICABLE ALTERNATIVES IDENDIFICATION

The purpose of this analysis is to evaluate a range of potential alternative sites on which to implement the proposed Project. These alternatives must be evaluated to the same level of

detail and will include a No Action Alternative to allow a comparison of the effects of approving the proposed action with the effects of not approving it.

4.1 Development of Potentially Practicable Alternatives

All contiguous properties within existing rights-of-way/easements, regardless of ownership, and that are not already being used for port logistics or are major infrastructure/manufacturing or habitat conservation activities supporting the public need, were screened using the Project Purpose and Need in Section 2 as well as the Project design criteria in Section 3, to identify potentially practicable alternatives.

In order to identify potentially practicable alternatives in Section 4.1.1 and to evaluate them in Section 5, information from the Pierce County Assessor's Office and the City of Tacoma's TacomaMAP Geographic Information System website (including Pierce County Tax Assessor-Treasurer information) was collected and used in the analysis. This information included parcel ownership and existing use, size and shape, zoning, rights of way, land use history, distance from the Husky and WUT Entry Gate and from road and rail networks, and assessed value. See Appendix B for a summary of this data. Additionally, information from the Washington State Department of Ecology's (Ecology) Toxics Cleanup *What's in My Neighborhood* map search tool was used to identify sites with past or present soil and groundwater contamination issues (Ecology 2022).

4.1.1 Identified Potentially Practicable Alternatives

The majority of the parcels and contiguous areas (combined parcels within ROWs) within the Project geographic area (1 mile) are already being used for port logistics or major infrastructure/manufacturing (e.g., U.S. Oil and Concrete Tech) or habitat conservation activities supporting the public need. Based on the screening described above, five potentially practicable alternative sites were identified as detailed in Table 1 and Figure 3. Only three of the five contiguous areas were approximately 25 acres or larger; however, the five largest contiguous areas were considered for further evaluation of potentially practicable alternatives in Section 5.

4.1.2 No-Action Alternative

Under the No Action Alternative, the Port of Tacoma would continue to process cargo and container storage and movement at its current container terminal space and level of efficiency. The No Action Alternative would maintain the physical container storage and movement constraints within the Port terminals, hampering the ability to effectively manage the current and forecasted increased volume of container traffic. Trucks, trains, and ships would continue to wait at idle in traffic for dock space to open up for inbound cargo to be delivered to trucks and rail or for outbound cargo to be offloaded from trucks and rail and loaded onto ships. The Port will become increasingly more congested and more inefficient thereby contributing further to the local, state, national, and international cargo congestion and the associated social, economic, environmental, and traffic impacts.

Table 1. Potentially Practicable Alternatives Identification Matrix

Potential Sites[10]	Identification Criteria (Project Design Criteria)					
	Size (~25 ac)			Shape (square/rectangular, sufficient width, RR track location)	Geographic Area: 1 mi. (Distance to Husky & WUT Entry Gate [mi.])	Potentially Practicable Alternative (Yes/No)
	Contiguous Area (ac)	Low Volume RR Tracks (No.)	Private RR Tracks (No.)			
1	24.5	1	0	acceptable	0.38	Yes (Alternative 1)
2	22.4	1	1	potentially acceptable	0.60	Yes (Alternative 2)
3	27.2	0	4	potentially acceptable	0.50	Yes (Alternative 3)
4	43.2	0	2	acceptable	0.75	Yes (Alternative 4)
5	32.0	1	5	potentially acceptable	0.37	Yes (Alternative 5)
6	5.8	0	0	too small	0.50	No
7	7.4	0	0	too small	0.41	No
8	9.7	0	0	too small	0.52	No
9	13.2	0	0	too small	0.41	No
10	17.8	0	1	too small	0.64	No
11	15.7	0	2	too small & narrow	0.38	No
12	5.0	0	0	too small	0.13	No
13	9.5	0	0	too small	1.32	No
14	13.6	0	0	too small & odd, narrow shape	0.78	No

[10] Potential Sites are areas that were identified within the geographic area after excluding parcels that are already being used substantially for Port logistics or major infrastructure/manufacturing or habitat conservation activities supporting the public need and that are confined within existing right-of-way (except one crossing of a low volume railroad track is considered acceptable within the Project area).

FIGURE 3: PRACTICABLE ALTERNATIVES IDENTIFICATION

ALTERNATIVE 5:
<u>Identification of Potentially Practicable Alternatives</u> (see Section 4 & 5, Table 1)
Size: (32.0 ac)
Shape: Potentially Acceptable
Low vol. thru RR: 1
Private RR: 5

<u>Practicability Evaluation</u> (see Section 6 and Table 2)
Port-Owned: No
For Sale: No
Total Prelim. Cost: $49.6
- Assessed Cost: $41.8M
- Demo Cost: $7.8M
- Other Costs not included: Yes (Section 6)

Distance to Gate: 0.37 mi.
Use: Rail car parts/repair, truck rental, MFG roofing products, storage/parking, metals recycling, warehousing.
Min. No. of Businesses: ~5
Contamination: Yes, on-going cleanup. Other unknown.

ALTERNATIVE 4:
<u>Identification of Potentially Practicable Alternatives</u> (see Section 4 & 5, Table 1)
Size: (43.2 ac)
Shape: Acceptable
Low vol. thru RR: 0
Private RR: 2

<u>Practicability Evaluation</u> (see Section 6 and Table 2)
Port-Owned: No
For Sale: No
Total Prelim. Cost: $46.5M
- Assessed Cost: $38.6M
- Demo Cost: $7.9M
- Other Costs not included: Yes (Section 6)

Distance to Gate: 0.75 mi.
Use: MFG pressure treated lumber & poles
Min. No. of Businesses: ~1
Contamination: Yes, on-going cleanup. Other unknown.

ALTERNATIVE 2:
<u>Identification of Potentially Practicable Alternatives</u> (see Section 4 & 5, Table 1)
Size: (22.4 ac) too small, but evaluated further
Shape: Potentially Acceptable
Low vol. thru RR: 1
Private RR: 1

<u>Practicability Evaluation</u> (see Section 6, Table 2)
Port-Owned: No
For Sale: No
Total Prelim. Cost: $26.4M
- Assessed Cost: $22.9M
- Demo Cost: $3.5M
- Other Costs not included: Yes (Section 6)

Distance to Gate: 0.60 mi.
Use: MFG, Warehousing, Recycling, Distribution
Min. No. of Businesses: ~6
Contamination: Yes. Known contamination & ongoing cleanup

STEP 1 - Identification of Potential Practicable Alternatives based on Project Design Criteria (Section 4 & 5, Table 1):
Project Design Criteria: Size (~25 ac), Shape (mostly sq or rectangle), Geographic Area (<1 mi)

- Identified 1 mi radius around Husky & WUT Entrance Gate (yellow star) & excluded outside parcels & parcels across the Puyallup River & Blair Waterway (red hatching).

- Screened out sites that are already used substantially for port logistics (blue shading) or major infrastructure/manufacturing or habitat conservation (red shading).

- Screened out contiguous sites that are too small or sites that the shape is not acceptable (orange shading). Five closest contiguous sites in size were retained for further evaluation as Potentially Practicable Alternatives.

STEP 2 - Practicability Evaluation of Potentially Practicable Alternatives based on Evaluation Criteria (see Section 6 and Table 2): Evaluation Criteria: Availability, Cost, Logistics, Existing Technology

- Evaluated the 5 Potentially Practicable Alternatives identified in Step 1 above (Section 4 & 5, Table 1) for practicability (Section 6, Table 2) which resulted in the identification of 1 Practicable Alternative (Alternative 1).

ALTERNATIVE 1
<u>Identification of Potentially Practicable Alternatives</u> (see Section 4 & 5, Table 1)
Size: (24.5 ac)
Shape: Acceptable
Low vol. thru RR: 1
Private RR: 0

<u>Practicability Evaluation</u> (see Section 6 and Table 2)
Port-Owned: Yes
For Sale: No
Total Prelim. Cost: $15.0M
- Assessed Cost: $15.0M
- Demo Cost: $0
- Other Costs not included: Minimal

Distance to Gate: 0.38 mi.
Use: Storage, Transload, Container Support
Min. No. of Businesses: Port-owned, 3 short-term tenants
Contamination: Cleaned up. No known contamination.

ALTERNATIVE 3:
<u>Identification of Potentially Practicable Alternatives</u> (see Section 4 & 5, Table 1)
Size: (27.2 ac)
Shape: Potentially Acceptable
Low vol. thru RR: 0
Private RR: 4

<u>Practicability Evaluation of Potentially Practicable Alternatives</u> (see Section 6 and Table 2)
Port-Owned: No (except 2 parcels, 1.99 ac)
For Sale: No
Total Prelim. Cost: $46.0M
- Assessed Cost: $34.1M
- Demo Cost: $11.8M
- Other Costs not included: Yes (Section 6)

Distance to Gate: 0.50 mi.
Use: MFG, Warehousing, Greenhouse, Distribution, Retail, Recycling, Offices, U.S. Customs & Border Patrol
Min. No. of Business: ~14
Contamination: Yes, on-going cleanup. Other unknown.

Husky Terminal & Terminal 7 (27)
West Sitcum Terminal (40, 41A, B, C)
Off-Dock Support & Rail (69, 69A)
Concrete Technology
U.S. Oil
Husky & WUT Entry Gate
Washington United Terminal - WUT (22, 23, 24, 25)
U.S. Oil Refinery
Warehouses
Container Support Facilities
Fire Dept
Auto Warehousing Terminal (33, 33A, 33C, 38)
Rail Yard (33B)
Mitigation (37B, D, E)
Warehouses (35, 35A, 36, 36A, 36B)
Excluded
Excluded

8. Screened out: too small (~9.7 ac)
9. Screened out: too small (~13.2 ac)
10. Screened out: too small (~17.8 ac)
11. Screened out: too small (~15.7 ac), shape
7. Screened out: too small (7.4 ac)
6. Screened out: too small (5.8 ac)
12. Screened out: too small (5.0 ac)
13. Screened out: too small (~9.5 ac), shape
14. Screened out: too small (~13.6 ac), shape

5 EVALUATION OF POTENTIALLY PRACTICABLE ALTERNATIVES

The criteria used to evaluate each of the potentially practicable alternatives are described in detail below. These include availability, cost, logistics, and existing technology.

5.1 Evaluation Criteria

5.1.1 Availability

Availability refers to the Port's ability to reasonably procure the parcel(s) for development of the proposed Project through purchase, condemnation, or some other means. Each potentially practicable alternative maybe comprised of more than one parcel. This includes parcels that are currently or were recently for sale, parcels that could be obtained through eminent domain/condemnation, and parcels that are currently owned by the Port.

Parcels that are not considered to be available for the purposes of this analysis include those where the land uses are already port logistics or are major infrastructure/manufacturing or habitat conservation activities supporting the public need. Specifically, port logistics sites and the U.S. Oil Refinery, Concrete Technology, Tacoma Fire Department, and Gog-e-hi-te habitat sites were excluded from this analysis. Port logistics includes container operations, container support facilities, rail and rail yards, warehousing, break bulk, automobile/equipment import processing, and other similar Port, warehouse, transload, and distribution activities and was excluded from the analysis as replacing one Port logistic activity/use with another would not achieve the Project Purpose and Need. One crossing of low volume Tacoma rail line(s) to connect adjacent properties was considered "contiguous" for the purposes of this analysis.

Most properties within the geographic area (one mile) are zoned Port Maritime & Industrial District (PMI) (DART 2022). Per the Tacoma Municipal Code TMC 13.06.060.C(3), these parcels are in a district to prioritize the use of cargo port terminals, port-related logistics, and industrial activities such as cargo yards, transportation facilities, warehousing, manufacturing, distribution, retail, and industrial related offices. PMI is characterized by higher levels of noise and odors, large-scale production, large buildings and sites, extended operating hours, and heavy truck traffic. This designation requires access to major transportation corridors, often including heavy-haul truck routes and rail facilities. Commercial and institutional uses are limited, and residential uses are generally prohibited.

A small portion of the geographic area south of SR 509 is zoned M-2 Heavy Industrial District. Per the Tacoma Municipal Code TMC 13.06.060.C(2), this district is intended to allow heavy industrial and manufacturing uses that can reasonably be accommodated without adverse impacts on the public's health, welfare, or safety. The impacts of these industrial uses include extended operating hours, heavy truck traffic, and higher levels of noise and odors. This classification is only appropriate inside Comprehensive Plan areas designated Heavy Industrial.

5.1.2 Cost

The potential cost associated with the different potentially practicable alternatives evaluated in this analysis is a means of comparison and does not reflect a cost-benefit analysis. Cost alone was not used as a sole means of excluding a site from further scrutiny.

Evaluation of cost for the potentially practicable alternatives (comprised of one or more parcels) used in this analysis as a preliminary cost consideration includes assessed value of the parcel(s) and demolition costs of existing buildings. The assessed value includes land and improvements based on Pierce County Assessor information (Appendix B). See Appendix C for the rough order of magnitude cost estimate and assumptions for the demolition of existing buildings which is also based on data from Appendix B. Other costs not considered in the total preliminary cost includes increased costs associated with appraised value, environmental due diligence, condemnation and displacement costs, survey, actual building demolition adjustments, non-building demolition, site preparation (not including project-related construction), and potential unknown contamination and cleanup costs. Note, appraised value can be considerable higher than the tax assessed value; however, the assessed value is readily available and used in this analysis as part of the preliminary cost consideration. Regarding potential unknown contamination, the evaluation of this includes considerations of remedial investigations within the Commencement Bay/Nearshore Superfund site, permitting and cleanup costs, and costs for on-going future monitoring. These other costs will be determined as necessary if an alternative advances in the evaluation/screening.

5.1.3 Logistics

Logistics criteria include elements of the Project Purpose and Need and Project design criteria for the potentially practicable alternative, including the geographic location and transportation logistics, property size and shape, existing rail rights-of-way within or between parcels, and presence of potential unknown contamination and related constraints.

Logistics criteria also includes the social and economic impacts related to the condemnation of property within the Tacoma Tideflats. Removal of a business or businesses from a site during condemnation will increase unemployment in the region, place undue hardship on businesses including small businesses and depress economic activity in Pierce County, all of which are counter to the Port's mission: "The Port of Tacoma makes strategic investments in our harbor and community to promote prosperity, trade and jobs, while protecting and enhancing our environment[11]".

5.1.4 Existing Technology

Existing technologies primarily refers to the technologies associated with preparation of the site for construction of the proposed Project. This can be means and methods associated with demolition of existing site infrastructure, rerouting or demolition of existing utilities, and potential remediation constraints (i.e., cleanup, monitoring, restrictive covenants, cleanup liability) resulting from contaminated soils and/or groundwater on the site.

[11] The Lower Wapato Creek Mitigation Site reestablishes a portion of the lower Wapato Creek channel and associated features to as close to the historic creek location as possible, creating fish habitat and diverse tidal and non-tidal wetland habitat functions, and providing forested riparian upland area for lower Wapato Creek. The mitigation site greatly improves the wetland quality and functions above what is present at the Project site and includes the added benefit of creating fish habitat. This is in keeping with the mission of the Port to protect and enhance the local environment.

5.2 Screening of Potentially Practicable Alternatives

The following table presents a matrix for evaluation of each of the five identified potentially practicable alternatives identified above in Table 1 to determine practicable alternatives for further evaluation in Section 6 below.

Table 2. Potentially Practicable Alternatives Evaluation Matrix

Evaluation Criteria (Practicability)	Factor	Alternative 1 (Preferred)	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Availability	Port-Owned or Reasonably Available for Acquisition?	**YES**	**NO**	**NO**	**NO**	**NO**
		Port-owned	Only through condemnation (private businesses)	Only through condemnation (private businesses)	Only through condemnation (private businesses)	Only through condemnation (private businesses)
Cost	Reasonable Acquisition and Pre-Development Costs (including contamination)?	**YES**	**NO**	**NO**	**NO**	**NO**
		$15.0M total prelim. cost ($15M assessed value, $0M demo), minimal additional cost: Port-owned, no existing infrastructure, past/remediated contamination	$26.4M total prelim. cost ($22.9M assessed value, ~$3.5M demo), high additional costs: condemnation & relocation, extensive infrastructure to remove, known past/current contamination	$46.0M total prelim. cost ($34.1M assessed value, ~$11.8M demo), high additional costs: condemnation & relocation, extensive infrastructure to remove, known contamination cleanup issues	$46.5M total prelim. cost ($38.6M assessed value, ~$7.9M demo), high additional costs: condemnation & relocation, known contamination and cleanup, long-term monitoring on-going	$49.6M total prelim. cost ($41.8M assessed value, ~$7.8M demo) high additional costs: condemnation & relocation, known contamination and ongoing cleanup
Logistics	Sufficient Size? (~25 acres), Distance?	**YES**	**NO**	**YES**	**YES (Excess)**	**YES (Excess)**
		24.5 acres, 0.37 mi. to gate	22.4 acres, 0.60 mi. to gate	27.2 acres, 0.50 mi. to gate	43.2 acres, 0.75 mi. to gate	32.0 acres, 0.37 mi. to gate
	Free of Contamination Constraints?	**YES**	**NO**	**NO**	**NO**	**NO**
		Past soil remediation complete; no further constraints	One parcel currently undergoing cleanup, likley site-use controls	Two parcels currently undergoing cleanup	Cleanup activities complete, long-term monitoring on-going	Two parcels currently undergoing cleanup, others complete
	Free from Social Justice and Economic Impacts?	**YES**	**NO**	**NO**	**NO**	**NO**
		Site is Port-owned and vacant, 3 short-term tenants to be relocated to other Port property	Condemnation required for 7 parcels and elimination or relocation of ~6 businesses	Condemnation required for 15 parcels and elimination or relocation of ~14 businesses	Condemnation required for 1 parcel and elimination or relocation of ~1 business	Condemnation required for 7 parcels and elimination or relocation of ~5 businesses

Table 2 (cont.). Potentially Practicable Alternatives Evaluation Matrix

Evaluation Criteria (Practicability)	Factor	Alternative 1 (Preferred)	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Existing Technology	Free of Extensive Site Preparation (demo, utilities, constraints)?	**YES**	**NO**	**NO**	**NO**	**NO**
		no demo, utilities, or remediation needed	demo &/or utilities needed, remediation constraints likely	demo &/or utilities needed, remediation constraints likely	demo &/or utilities needed, remediation constraints likely	demo &/or utilities needed, remediation constraints likely

5.2.1 Alternative 1 (Preferred Alternative)

Alternative 1 (preferred alternative) consists of four Pierce County tax parcels 6965000350, 6965000380, 6965000390, and 6965000400 (Figure 4). The total site area encompasses 24.5 acres and is situated to the east of Thorne Road and north of Maxwell Way in Tacoma, Washington in Section 34 Township 21 Range 03 Quarter 41.

5.2.1.1 Availability

Alternative 1 properties are Port-owned and available for the Project. Short-term tenants would be relocated to other Port-owned properties. Alternative 1 properties are zoned PMI and are used for storage, transload, and container support facilities. The existing land uses and zoning surrounding Alternative 1 are of similar use and are listed below.

South: Thorne Rd and PMI - Warehousing, Industrial, Manufacturing, and Storage
North: Port of Tacoma Rd and PMI - Warehousing, Industrial, Storage, Recycling, Container Support Facilities, and Petroleum Distribution
East: Maxwell Way and PMI - Warehousing, Industrial, Storage, Container Support Facilities
West: PMI - Warehousing, Industrial, and Storage

In 2011, on-site buildings were demolished, and utilities serving the buildings were terminated and capped inside the property line. The tanks and building foundations have been removed/remediated. Security fencing bounds the perimeter of the site. Railroad tracks and an access road separate parcels 6965000350 and 6965000400. The railroad tracks are used for car storage for the adjacent recycling facility and also serve a crude-by-rail use (Moffat & Nichol, 2020). The railroad tracks are considered low volume tracks for this analysis and are not a main track line.

5.2.1.2 Cost

All three parcels are currently under Port ownership. The total combined assessed value of all three parcels is approximately $15 million. The estimated demolition cost is approximately $0 million as there are no buildings on the site. The total preliminary cost for Alternative 1 is $15 million. Other costs not considered in this total preliminary cost are minimal and are associated with minor site preparation and potential tenant relocations

5.2.1.3 Logistics

The site contains relatively flat grades with surface materials consisting of gravel (11.5 acres), vegetation (10.4 acres), and asphalt concrete pavement (ACP) (2.6 acres). Approximately 4.2 acres of the site are characterized as wetlands. The average existing site elevation is approximately +17 feet mean lower low water (MLLW) (Moffat & Nichol, 2020).

Alternative 1 is approximately 0.38 miles (2,000 feet) from the entrance to the Husky and WUT Entrance Gate via traveling west on Maxwell Way to Thorne Road, then south on Thorne Road to the entrance gate. Alternative 1 is located approximately 1.80 miles (9,500 ft) from the entrance to Interstate 5 at Port of Tacoma Road, Exit 136.

Accessing Portland Ave via Lincoln Ave from Thorne Rd, the WA-509 entrance is 1.40 miles (7,392 ft) from Alternative 1. From the Portland Ave entrance to WA-509, the entrance ramp to Interstate 705 North is located approximately 1 mile (5,280 ft) south.

Alternative 1 contains active railroad facilities on-site, separating Pierce County tax parcel 6965000350, 1451 Thorne Rd, and parcel 6965000400, 1721 Thorne Rd (87). All railroad facilities can be accessed on-site, and as part of the proposed Project, an at-grade rail crossing will provide access between parcels 6965000400 and 6965000350, avoiding the use of Thorne Road. Utility infrastructure is available on the site and can be reconnected to the new Project infrastructure.

Alternative 1 would not involve the elimination of jobs or businesses. Some short-term tenants of the Port would be relocated to other Port-owned properties.

Alternative 1 is approximately 25 (24.5) acres, which is of sufficient size to substantially accommodate all of the Project design features on-site.

5.2.1.4 Existing Technologies

The Alternative 1 site is currently undeveloped with no infrastructure or buildings. Demolition of the site will consist of removal of forested and shrub vegetation and filling of depressional wetlands on the site. All utilities serving the site were abandoned and stubbed at the property perimeter during previous site demolition activities.

Past contamination on the site was limited to contaminated soils related to past site land use. All contaminated soils were cleaned up and no further cleanup actions or site-controls are required.

Figure 4. Potential Practicable Alternative 1

5.2.2 Alternative 2

Alternative 2 consists of seven Pierce County tax parcels, 0320032030, 0320032035, 0320032039, 0320032047, 0320031033, 0320036003, and 0320036004 (Figure 5). The total site area encompasses 22.4 acres and is situated northeast of the intersection of Lincoln and Stewart Avenues and southwest of the intersection of East 18th St. and Marc Ave in Section 03 Township 20 Range 03 Quarter 24.

5.2.2.1 Availability

None of the seven parcels are owned by Port and none are known to be currently available for sale. Alternative 2 properties are zoned PMI and are used for propane storage and distribution, industrial and commercial materials recycling, construction materials sales and distribution, and warehouses. The existing land uses and zoning surrounding Alternative 2 are of similar use and are listed below.

South: Stewart Ave & PMI – Warehousing, Industrial, Manufacturing, Container Support Facilities, and Storage
North: Marc Ave and PMI – Warehousing, Industrial, and Storage
East: Lincoln Ave & PMI – Warehousing, Industrial, Container Support Facilities, and Storage
West: E. 18th St. and PMI – Warehousing, Industrial, Manufacturing, and Storage

5.2.2.2 Cost

None of the seven parcels are owned by the Port, and the total combined assessed value of all seven parcels is approximately $22.9 million. The estimated demolition cost is approximately $3.5 million. The total preliminary cost for Alternative 2 is $26.4 million. Other costs not considered in the total preliminary cost includes increased costs associated with appraised value, environmental due diligence, condemnation and displacement costs, survey, actual building demolition adjustments, non-building demolition, site preparation (not including project-related construction), and potential unknown contamination costs. Two of the parcels have had past cleanups completed for the presence of soil and/or groundwater contamination and one parcel (-2039) is currently undergoing contamination cleanup activities.

5.2.2.3 Logistics

Alternative 2 is approximately 0.60 miles (3,152 feet) from the Husky and WUT Entrance Gate via traveling north on Lincoln Ave to Thorne Road and traveling west on Thorne Road to the entrance gate.

Alternative 2 is located approximately 2.66 miles (14,050 ft) from the entrance to Interstate 5 at Port of Tacoma Road, Exit 136.

Accessing Portland Ave via Lincoln Ave, the WA-509 entrance is 0.54 miles (2,860 ft) from Alternative 2. From the Portland Ave entrance to WA-509, the entrance ramp to Interstate 705 North is located approximately 1 mile (5,280 ft) south.

Alternative 2 contains active railroad tracks through the site. The railroad tracks are considered low volume tracks for the purposes of this analysis and are not a main track line

as they dead end at an adjacent offsite property to the north. The railroad tracks can be accessed on-site, and as part of the proposed Project, an at-grade railroad crossing would provide access between parcels to the north and south. It is unclear at this time the level of viability or accessibility of the rail facilities or crossing the rail facilities.

Alternative 2 is approximately 22.4 acres in total area, which will require modification of Project elements specific to the capacity of storage and other elements. The size of the site will require a significant reduction in some Project features and alteration of the site plan elements to accommodate a reduced capacity of storage, reduced practicability and efficiency of the facility, and potential unsafe layout, circulation, and operations. These elements may include the empty container capacity, reefer pre-trip capacity, wheeled chassis capacity, block stowed chassis capacity, wheeled-reefer stalls. Reduction of these elements/capacities will not meet the Project Purpose and Need.

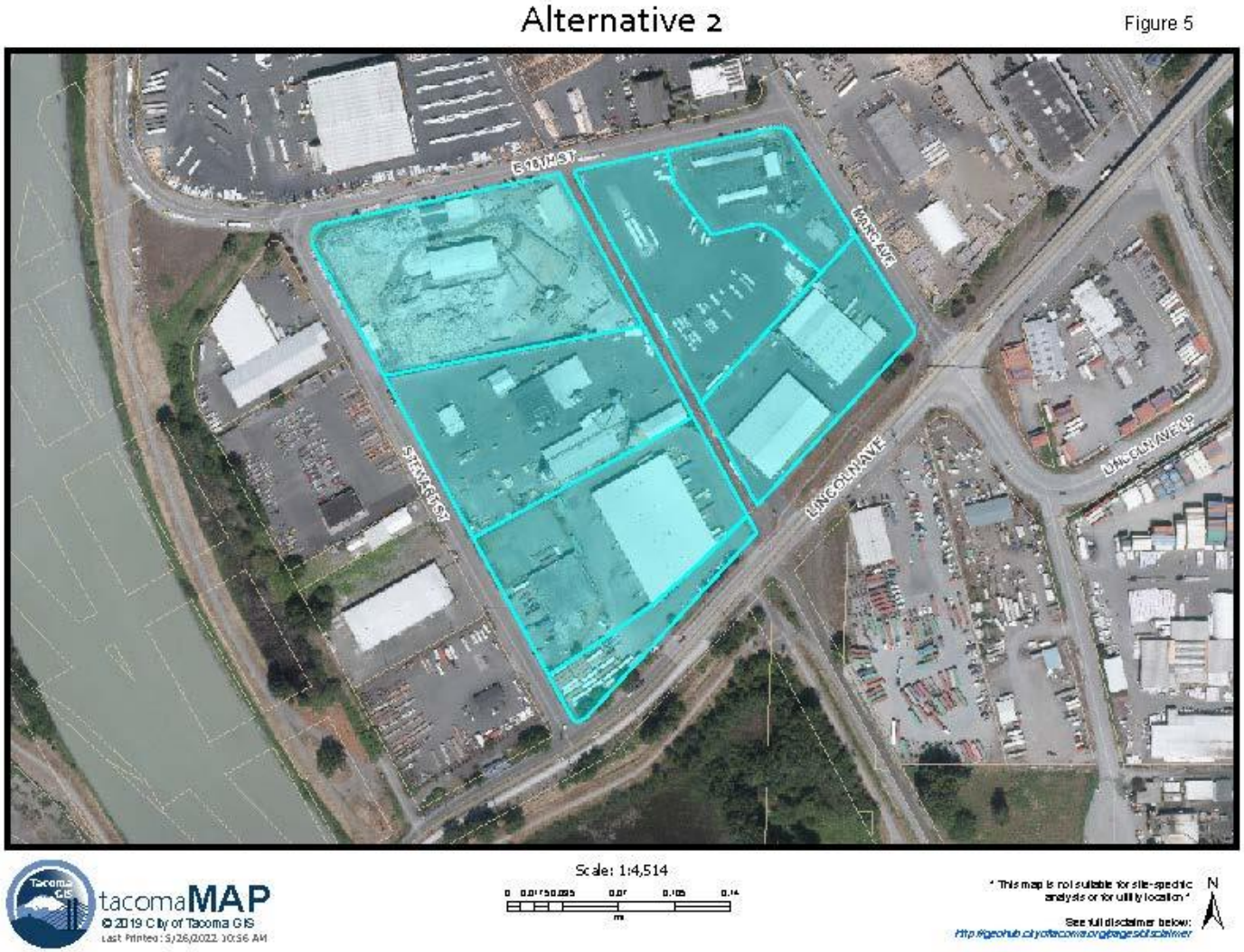
Alternative 2 also has issues related to the shape of the existing land and topography, which will cause unique development constraints that will not meet the goal of the intended Project. While the site has rail access on-site, the location of the rail corridor through the center of the site will compromise the design and layout of the proposed facility.

Development of Alternative 2 would involve the condemnation of seven parcels and the elimination or relocation of approximately six private businesses and an unknown number of jobs. Businesses to be eliminated or relocated would include construction waste recycling, petroleum distribution, and cargo logistics businesses.

5.2.2.4 Existing Technology

Alternative 2 consists of at least six businesses, including construction waste recycling, cargo/shipping logistics, and propane storage and distribution. Extensive infrastructure and utility demolition would be required for this site. In addition, three properties have known contamination issues, and one is currently undergoing cleanup operations. Site-use controls on Alternative 2 are likely.

Figure 5. Potential Practicable Alternative 2.



5.2.3 Alternative 3

Alternative 3 consists of 15 Pierce County tax parcels, 0321353021, 0321353022, 0321353024, 0321353026, 0321353035, 0321353040, 0321353039, 0321353018, 0321353019, 0321353031, 0321353029, 0321353027, 0321353028, 0321353033, and 0321353034 (Figure 6). The total site area encompasses 27.2 acres and is situated south of Port of Tacoma Rd and east of Lincoln Ave in Section 35 Township 21 Range 03 Quarter 33.

5.2.3.1 Availability

Only two parcels (1.99 acres) are owned by the Port. The remaining 13 parcels are privately owned, and none are known to be currently available for sale. Alternative 3 properties are zoned PMI. The entirety of Alternative 3 is impervious surfaces, consisting of pavement and densely developed with existing structures. Existing land uses on the parcels include lumber and millwork processing and distribution, materials recycling, equipment sales and distribution, greenhouse, manufacturing, warehousing, retail, offices, and cargo logistics. The existing land uses and zoning surrounding Alternative 3 are of similar use and are listed below.

South: PMI - Warehousing, Industrial, Manufacturing (U.S. Oil Refinery), and Storage
North: Port of Tacoma Rd and PMI - Warehousing, Industrial, Container Terminal, and Storage
East: PMI - Warehousing, Industrial, Container Terminal, and Storage
West: Lincoln Ave and PMI - Warehousing, Industrial, Manufacturing, Retail, Medical Clinic, and Storage

5.2.3.2 Cost

Only two parcels (0321353027 and 0321353029) of the 15 are owned by the Port. The total combined assessed value of all 15 parcels is approximately $34.1 million, of which $2.8 million is owned by the Port). The estimated demolition cost is approximately $11.8 million. The total preliminary cost for Alternative 3 is $46.0 million. Other costs not considered in the total preliminary cost includes increased costs associated with appraised value, environmental due diligence, condemnation and displacement costs, survey, actual building demolition adjustments, non-building demolition, site preparation (not including project-related construction), and potential unknown contamination and cleanup costs.

Two of the parcels (0321353028 and 0321353035) are currently undergoing cleanup actions overseen by Ecology. Both sites contain varying levels of petroleum hydrocarbons and other chemical contamination in soil and groundwater due to historic land uses. Given the long cleanup histories of the sites and the ongoing nature of the cleanup process, the costs associated with further remediation activities and future operations and monitoring of the cleanup are unknown.

5.2.3.3 Logistics

From the most northwestern corner of Alternative 3, the site is 0.50 miles from the Husky and WUT Entrance Gate via traveling West on Lincoln Ave to Thorne Road, then north to the entrance gate.

Alternative 3 is located approximately 1.65 miles (8,728 ft) from the entrance to Interstate 5 at Port of Tacoma Road, Exit 136.

Accessing Portland Ave via Lincoln Ave, the WA-509 entrance is 1.59 (8,400 ft) miles from Alternative 3. From the Portland Ave entrance to WA-509, the entrance ramp to Interstate 705 North is located approximately 1 mile (5,280 ft) south.

Alternative 3 contains railroad tracks on-site from the north, running through the center of the site parallel to Port of Tacoma Road almost the entire length of the site. The railroad tracks are considered private tracks for this analysis as they dead end on private property within the Alternative 3 site. It is unclear at this time the level of viability or accessibility of the rail facilities.

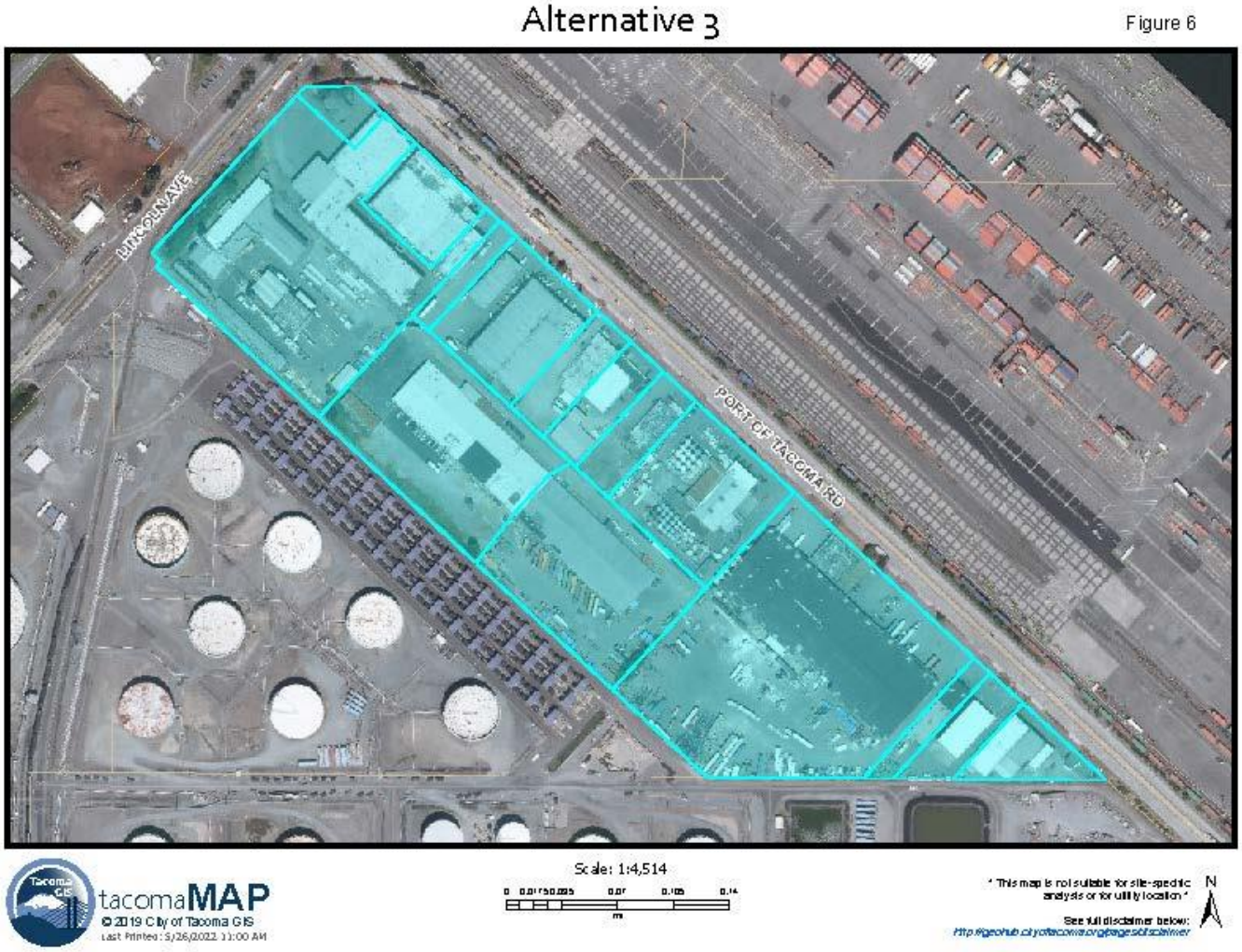
If the railroad tracks running through the middle of the site were not allowed to be abandoned and demolished the location of them would make this alternative not practicable. Additionally, constraints on development and operation of the site are likely due to ongoing cleanup activities on the Pacific Functional Fluids and former J.L. Darling sites and other unknown contamination.

Development of this site would require the condemnation of the 13 parcels not owned by the Port, relocation of approximately 14 businesses, and elimination of those jobs on the Tacoma Tideflats.

5.2.3.4 Existing Technology

Alternative 3 contains parcels that are fully developed with industrial infrastructure, including manufacturing facilities, storage and logistics, U.S. Customs and Border Patrol facility, retail, and wood products distribution. Extensive demolition of industrial infrastructure and rerouting and demolition of utilities would be required. Additionally, constraints on development and operation of the site are likely due to ongoing cleanup activities on the Pacific Functional Fluids and former J.L. Darling sites and other unknown contamination.

Figure 6. Potential Practicable Alternative 3.



5.2.4 Alternative 4

Alternative 4 consists of one Pierce County tax parcel, 8950000245 (Figure 7). The total site area encompasses 43.2 acres and is situated north of East 18th St. and Stewart St. in Section 03 Township 20 Range 03 Quarter 21.

5.2.4.1 Availability

The parcel is owned by one private entity and is not known to be currently available for sale. The Alternative 4 parcel is zoned PMI and is used for manufacturing, storing, and distributing pressure treated lumber and poles. The existing land uses and zoning surrounding Alternative 4 are of similar use and are listed below.

South: East 18th ST. and PMI - Warehousing, Industrial, Manufacturing/Recycling, Container Support Facilities, Propane Distribution, and Storage
North: PMI - Warehousing, Industrial, Container Terminal, Container Support Facilities, and Storage
East: PMI - Warehousing, Industrial, and Storage
West: Stewart ST and Puyallup River

5.2.4.2 Cost

The Alternative 4 parcel is not owned by the Port, and it's assessed value is $38.6 million. The estimated demolition cost is approximately $7.9 million. The total preliminary cost for Alternative 4 is $46.5 million. Other costs not considered in the total preliminary cost includes increased costs associated with appraised value, environmental due diligence, condemnation and displacement costs, survey, actual building demolition adjustments, non-building demolition, site preparation (not including project-related construction), and potential unknown contamination and cleanup costs.

5.2.4.3 Logistics

Alternative 4 is approximately 0.75 miles from the Husky and WUT Entrance Gate via traveling south on Marc Ave to Lincoln Ave, north on Lincoln Ave to Thorne Road, then north to the entrance gate.

Alternative 4 is located approximately 2.79 miles (14,720 ft) from the entrance to Interstate 5 at Port of Tacoma Road, Exit 136.

Accessing Portland Ave via Lincoln Ave, the WA-509 entrance is 0.67 miles (3,530 ft) from Alternative 4. From the Portland Ave entrance to WA-509, the entrance ramp to Interstate 705 North is located approximately 1 mile (5,280 ft) south.

Alternative 4 contains railroad tracks on-site. The rail originates from the south, crossing East 18th St. and continues north into the site, extending approximately halfway through the center of Alternative 4. The railroad tracks are considered private tracks for the purposes of this analysis as they dead end on private property within the Alternative 4 site. It is unclear at this time the level of viability or accessibility of the rail facilities, crossing the rail, or removing the rail through demolition. In addition, based on the research there appears to be multiple unused rights-of-way or easements on this property that may preclude development and use or require additional legal and real estate actions and costs.

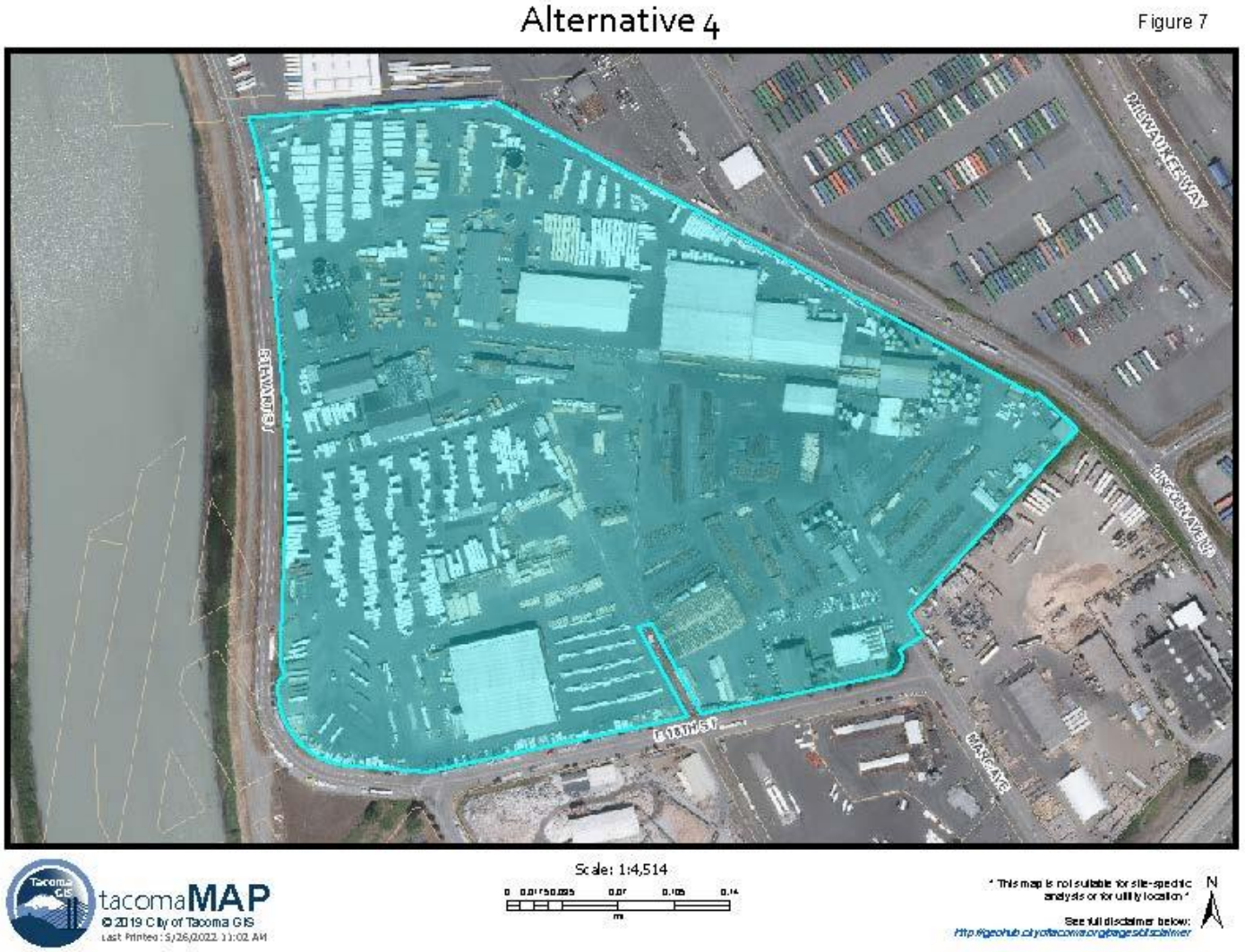
The site is currently leased/operated by Stella-Jones, which manufactures pressure-treated lumber and utility poles at the site. This site has undergone cleanup activities to remediate contaminated soil and groundwater from past wood treatment production at the site. While cleanup is complete, long-term monitoring and evaluation of groundwater on the site is on-going.

Alternative 4 is owned by a private construction and supply-chain business not affiliated directly with the Port of Tacoma and is operated/leased by a private company. Acquisition of the property would require eminent domain and condemnation by the Port. This would also require relocating the business and eliminating the jobs in the Tacoma Tideflats and reduce the local supply of treated lumber and utility poles, in addition to the detrimental impacts to the local economy and supply chain.

5.2.4.4 Existing Technology

Alternative 4 encompasses a site that currently involves the manufacturing of pressure-treated lumber and utility poles. Extensive demolition of existing infrastructure and utilities would be necessary. Furthermore, contamination cleanup has been completed on the site; however, long-term monitoring of contaminated groundwater is on-going. The site is subject to a restrictive covenant that likely limits the activities that can be conducted on the site.

Figure 7. Potential Practicable Alternative 4.



5.2.5 Alternative 5

Alternative 5 consists of 7 Pierce County tax parcels, 6965000520, 6965000530, 6965000543, 6965000544, 6965000550, 6965000561, and 6965000562 (Figure 8). The total site area encompasses 32.0 acres, and all parcels are adjacent to and south of Thorne Rd between the East 14th Street right-of-way/railroad tracks and East 19th Street. The parcels are situated in Section 34 Township 21 Range 03 Quarter 31.

5.2.5.1 Availability

None of the seven parcels are owned by Port and none are known to be currently available for sale. Alternative 5 properties are zoned PMI and are used for storage, repair, manufacturing, warehousing, distribution, equipment/truck rental, metals recycling, and associated offices. The existing land uses and zoning surrounding Alternative 5 are of similar use and are listed below.

South: Tacoma Rail, Port of Tacoma South Intermodal Rail Yard, Milwaukee Way and PMI - Warehousing, Industrial, Container Support Facilities, and Automobile Import Processing and Storage
North: Thorne Rd. and PMI - Warehousing, Industrial, Container Support Facilities, and Storage
East: East 19th St., Lincoln Ave. and PMI - Warehousing, Industrial, and Storage
West: East 11th St. and PMI - Warehousing, Industrial, and Storage

5.2.5.2 Cost

None of the seven parcels are owned by the Port, and the total combined assessed value of all seven parcels is approximately $41.8 million. The estimated demolition cost is approximately $7.8 million. The total preliminary cost for Alternative 2 is $49.6 million. Other costs not considered in the total preliminary cost includes increased costs associated with appraised value, environmental due diligence, condemnation and displacement costs, survey, actual building demolition adjustments, non-building demolition, site preparation (not including project-related construction), and potential unknown contamination and cleanup costs.

Most of the properties are currently owned and operated by a wide range of businesses, from truck rental and freight shipping to metals recycling and roofing materials production. Several sites within Alternative 5 have undergone cleanup actions overseen by Ecology in the past, including the Pabco Roofing Products site and a site formerly owned by General Chemical Tacoma. The costs associated with continued cleanup operations and potential future monitoring at these sites are unknown at this time but would likely represent a considerable cost.

5.2.5.3 Logistics

Depending where the Alternative 5 entrance is constructed along Thorne Rd, Alternative 5 is less than 0.37 miles from the Husky and WUT Entrance Gate via traveling south on Thorne Rd to the entrance gate.

Alternative 5 is located approximately 2.02 miles (10,700 ft) from the entrance to Interstate 5 at Port of Tacoma Road, Exit 136.

Accessing Portland Ave via Lincoln Ave from Thorne Rd, the WA-509 entrance is 1.3 miles (6,864 ft) from Alternative 5. From the Portland Ave entrance to WA-509, the entrance ramp to Interstate 705 North is located approximately 1 mile (5,280 ft) south.

The entirety of Alternative 5 runs parallel to Thorne Road and the Port of Tacoma South Intermodal Rail Yard. Alternative 5 contains 1 railroad track that completely bisects the site from east to west and is considered a low volume track for the purposes of this analysis. Five additional railroad tracks are present on the site and are considered private tracks for this analysis as they dead end on private property within the Alternative 5 site. There are railroad tracks adjacent and parallel to the west side of the Alternative 5 site between Alternative 5 and the Port of Tacoma South Intermodal Rail Yard. All of these onsite and adjacent railroad tracks originate from the south. It is unclear at this time the level of viability or accessibility of the rail facilities or if they can be crossed or removed. The presence of these rights-of-way may considerably constrain design options for the Alternative 5 site.

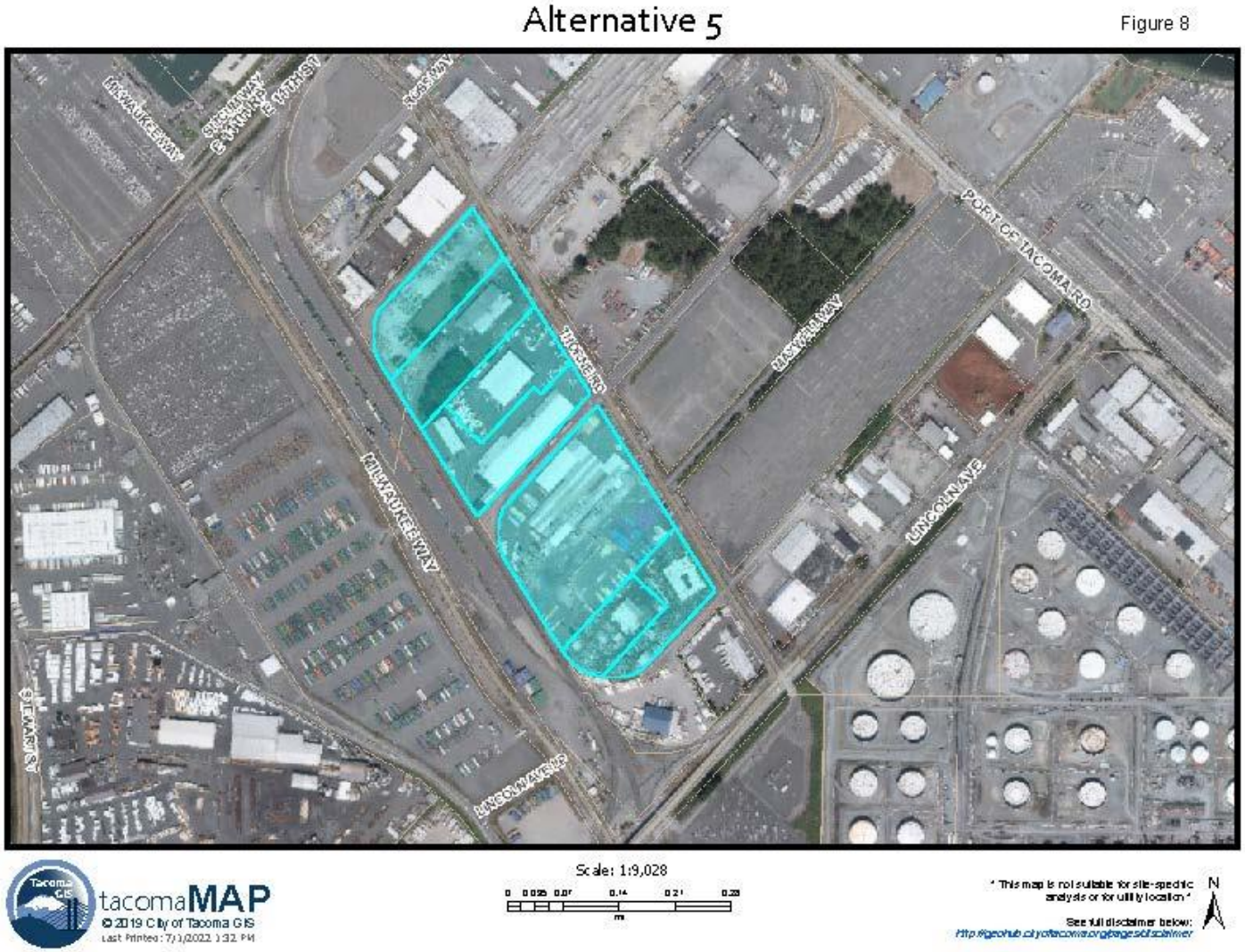
The Alternative 5 parcels occupy approximately 32.0 acres between Thorne Road and the Port of Tacoma South Intermodal Rail Yard along Milwaukee Way. Multiple rail spurs cross the parcels, and several parcels contain port logistics and construction products businesses that are important to the local economy and supply chains. In addition, approximately 5 acres of the site is a heavy metal recycler with unknown contamination. These constraints, along with possible contamination considerations, would constrain the design of the Port's proposed Project on this site.

All seven parcels are privately owned and would require condemnation through eminent domain. Several of the parcels are operated by private businesses which are important to the local economy and supply chain, including a large roofing materials manufacturer, several freight/shipping logistics companies, and metal recycling and supply. Condemnation of the properties and elimination or relocation of at least five businesses and associated jobs would negatively affect the local economy. The lost jobs would increase unemployment within the Tacoma Tideflats and lower the economic output of the region, contrary to the Port's mission. Furthermore, removal of several of these businesses would result in impacts to local supply chains, eliminating the production capacity of construction materials, metal fabrication, and port logistics within the Alternative 5 site.

5.2.5.4 Existing Technology

The properties comprising Alternative 5 are all developed with industrial infrastructure. Extensive demolition of such infrastructure and utilities would be necessary. In addition, several sites within Alternative 5 have undergone cleanup actions in the past and given the location and past land uses, contamination could be present at one or more other parcels. Therefore, the level of environmental investigation, contamination, and restrictions is currently unknown for this alternative.

Figure 8. Potential Practicable Alternative 5.



6 EVALUATION OF PRACTICABLE ALTERNATIVE

Based on the evaluation of the potentially practicable alternatives and the no-action alternative summarized in Table 1, the only practicable alternative that would meet the requirements of the proposed Project's purpose, need, and design criteria, based on the evaluation criteria of availability, cost, logistics, and existing technology is Alternative 1. This alternative is also the Port's Preferred Alternative. Alternative 1 meets the size and proximity (geographic area) requirements, while also being primarily vacant (no permanent existing jobs or infrastructure to remove), free of known or suspected contaminants, and Port-owned. While the site does contain a low volume rail spur bisecting the site, the shape of the site allows adequate interior space with which to design around the rail spur and to provide a crossing of the rail spur. Furthermore, utility infrastructure is present at the perimeter of the site and would not need to be demolished or rerouted within the site or extended to the site from outside utility corridors.

Based on the evaluation in Section 5 and the above summary, Alternative 1 meets all four evaluation criteria the best. Alternative 1 is the most available (Port-owned), lowest property/site preparation cost (Port-owned, vacant with existing utilities, no demolition needed, no contaminants), the most logistically acceptable (closest to Husky and WUT Entrance Gate, no property condemnation or job/business relocation), and the most technically feasible (vacant, no demolition, no known contamination) of all the potentially practicable alternatives.

6.1 Environmental Effects of the Practicable Alternative

The parcels comprising Alternative 1 are bound on all sides by industrial development and uses. The parcels are vacant, except for Port short-term leased areas used for temporary storage, transload, and container support facilities.

6.1.1 Special Aquatic Sites

Two forested wetlands occur within the central portion of the Alternative 1 site. The wetlands, Wetland A and Wetland B, comprise approximately 4.42 acres and are both Category III wetlands. The wetlands are dominated by a forested canopy of black cottonwood (*Populus balsamifera*) over an understory of slough sedge (*Carex obnupta*). Functionally, the wetlands are hydrologically isolated from one another and the surrounding landscape, though an Approved Jurisdictional Determination issued by the USACE in April 2022 determined the wetlands to be adjacent to Traditionally-Navigable Waterways (Blair and Sitcum Waterways) due to the presence of manmade fill (USACE 2022).

For a detailed description of the wetlands on the site, please refer to the Wetland Analysis Report prepared for the Project (Grette Associates 2021).

Development of Alternative 1 would necessitate the complete filling and removal of both Wetland A and Wetland B in order to achieve the Project Purpose and Need. Alternative designs on the site, including shifting site features or reducing container/chassis capacity, would result in not fulfilling the stated Project Purpose and Need. Therefore, both wetlands would be entirely filled.

Removal of the wetlands would eliminate the habitat function provided by them, including low quality small mammal and insect foraging, and songbird and raptor nesting. The wetlands are not connected to any other nearby vegetated areas or wetlands by any vegetated corridors.

The wetland areas likely do provide some measure of water quality functions, as nearby adjacent sites to the north likely contribute stormwater runoff to the wetlands. However, such function is likely minimal due to the industrial sites' stormwater collection systems and the roadside ditches collecting and conveying runoff to the City's stormwater system.

6.1.2 Endangered Species Act-Listed Plants and Animals

There are no plants or animals listed under the Endangered Species Act (ESA) residing on or near the Alternative 1 site. While the site is located within the Pacific Flyway, no listed migratory birds have been observed using the site or surrounding areas for nesting or roosting. Additionally, during the four separate wetland delineation efforts recently conducted at the site (2005, 2007, 2013, 2020) no listed plant species were ever observed. Furthermore, no databases identify the presence of rare or listed plant species at the site. Therefore, development of the proposed Project on the Alternative 1 site would not affect ESA-listed plant or animal species. For additional details, please refer to the No Effects Determination Technical Memorandum prepared for the Project (Grette Associates 2022).

6.2 Other Significant Effects

No other significant impacts are expected from the development of the preferred alternative site (Alternative 1). All previously-known contaminants were removed from the site and no further cleanup actions (i.e., long-term monitoring) or restrictive covenants are required. Also, as the Port owns the property and it is currently vacant with no developed infrastructure, no private property requires condemnation and no permanent private businesses will require relocation. Existing Port tenants will be relocated to other Port property, as necessary. Therefore, development of the site will not result in the displacement of businesses or the elimination of jobs on the Tacoma Tideflats thus not impacting human/social welfare and environmental justice concerns. Air quality will be improved by Alternative 1 as it would have the lowest emission associated with container drayage because Alternative 1 is the closest to the Husky and WUT Entrance Gate. In addition, Alternative 1, as compared to the no action alternative, will lower greenhouse gas and particulate emissions (associated with burning fossil fuels) overall as it reduces traffic, truck idling, ship idling/waiting, and multiple container handling, and increases overall container terminal efficiencies and port logistics in general.

7 DETERMINATION OF LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE

Based on the results of the evaluation of the potentially practicable alternatives in Section 5 and Section 6, the only practicable alternative for the Project Purpose and Need is Alternative 1 (the preferred alternative). While the site does contain sensitive aquatic sites (wetlands) that would be affected by the Project, Alternative 1 is the Least Environmentally Damaging Practicable Alternative (LEDPA) capable of achieving the Project Purpose and Need.

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PORT OF TACOMA

OFF-DOCK CONTAINER SUPPORT FACILITY ALTERNATIVES ANALYSIS

APPENDIX A: PURPOSE AND NEED SUPPORTING DOCUMENTATION

BRIEFING ROOM

Executive Order on America's Supply Chains

FEBRUARY 24, 2021 • PRESIDENTIAL ACTIONS

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. The United States needs resilient, diverse, and secure supply chains to ensure our economic prosperity and national security. Pandemics and other biological threats, cyber-attacks, climate shocks and extreme weather events, terrorist attacks, geopolitical and economic competition, and other conditions can reduce critical manufacturing capacity and the availability and integrity of critical goods, products, and services. Resilient American supply chains will revitalize and rebuild domestic manufacturing capacity, maintain America's competitive edge in research and development, and create well-paying jobs. They will also support small businesses, promote prosperity, advance the fight against climate change, and encourage economic growth in communities of color and economically distressed areas.

More resilient supply chains are secure and diverse — facilitating greater domestic production, a range of supply, built-in redundancies, adequate stockpiles, safe and secure digital networks, and a world-class American manufacturing base and workforce. Moreover, close cooperation on resilient supply chains with allies and partners who share our values will foster collective economic and national security and strengthen the capacity to respond to international disasters and emergencies.

Therefore, it is the policy of my Administration to strengthen the resilience of America's supply chains.

Sec. 2. Coordination. The Assistant to the President for National Security Affairs (APNSA) and the Assistant to the President for Economic Policy (APEP) shall coordinate the executive branch actions necessary to implement this order through the interagency process identified in National Security Memorandum 2 of February 4, 2021 (Renewing the National Security Council System). In implementing this order, the heads of agencies should, as appropriate, consult outside stakeholders — such as those in industry, academia, non-governmental organizations, communities, labor unions, and State, local, and Tribal governments — in order to fulfill the policy identified in section 1 of this order.

Sec. 3. 100-Day Supply Chain Review. (a) To advance the policy described in section 1 of this order, the APNSA and the APEP, in coordination with the heads of appropriate agencies, as defined in section 6(a) of this order, shall complete a review of supply chain risks, as outlined

in subsection (b) of this section, within 100 days of the date of this order.

(b) Within 100 days of the date of this order, the specified heads of agencies shall submit the following reports to the President, through the APNSA and the APEP:

(i) The Secretary of Commerce, in consultation with the heads of appropriate agencies, shall submit a report identifying risks in the semiconductor manufacturing and advanced packaging supply chains and policy recommendations to address these risks. The report shall include the items described in section 4(c) of this order.

(ii) The Secretary of Energy, in consultation with the heads of appropriate agencies, shall submit a report identifying risks in the supply chain for high-capacity batteries, including electric-vehicle batteries, and policy recommendations to address these risks. The report shall include the items described in section 4(c) of this order.

(iii) The Secretary of Defense (as the National Defense Stockpile Manager), in consultation with the heads of appropriate agencies, shall submit a report identifying risks in the supply chain for critical minerals and other identified strategic materials, including rare earth elements (as determined by the Secretary of Defense), and policy recommendations to address these risks. The report shall also describe and update work done pursuant to Executive Order 13953 of September 30, 2020 (Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals From Foreign Adversaries and Supporting the Domestic Mining and Processing Industries). The report shall include the items described in section 4(c) of this order.

(iv) The Secretary of Health and Human Services, in consultation with the heads of appropriate agencies, shall submit a report identifying risks in the supply chain for pharmaceuticals and active pharmaceutical ingredients and policy recommendations to address these risks. The report shall complement the ongoing work to secure the supply chains of critical items needed to combat the COVID-19 pandemic, including personal protective equipment, conducted pursuant to Executive Order 14001 of January 21, 2021 (A Sustainable Public Health Supply Chain). The report shall include the items described in section 4(c) of this order.

(c) The APNSA and the APEP shall review the reports required under subsection (b) of this section and shall submit the reports to the President in an unclassified form, but may include a classified annex.

(d) The APNSA and the APEP shall include a cover memorandum to the set of reports submitted pursuant to this section, summarizing the reports' findings and making any additional overall recommendations for addressing the risks to America's supply chains, including the supply chains for the products identified in subsection (b) of this section.

Sec. 4. Sectoral Supply Chain Assessments. (a) Within 1 year of the date of this order, the specified heads of agencies shall submit the following reports to the President, through the APNSA and the APEP:

(i) The Secretary of Defense, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the defense industrial base that updates the report provided pursuant to Executive Order 13806 of July 21, 2017 (Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States), and builds on the Annual Industrial Capabilities Report mandated by the Congress pursuant to section 2504 of title 10, United States Code. The report shall identify areas where civilian supply chains are dependent upon competitor nations, as determined by the Secretary of Defense.

(ii) The Secretary of Health and Human Services, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the public health and biological preparedness industrial base (as determined by the Secretary of Health and Human Services). The report shall complement the work conducted pursuant to section 4 of Executive Order 14001.

(iii) The Secretary of Commerce and the Secretary of Homeland Security, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for critical sectors and subsectors of the information and communications technology (ICT) industrial base (as determined by the Secretary of Commerce and the Secretary of Homeland Security), including the industrial base for the development of ICT software, data, and associated services.

(iv) The Secretary of Energy, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the energy sector industrial base (as determined by the Secretary of Energy).

(v) The Secretary of Transportation, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the transportation industrial base (as determined by the Secretary of Transportation).

(vi) The Secretary of Agriculture, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the production of agricultural commodities and food products.

(b) The APNSA and the APEP shall, as appropriate and in consultation with the heads of appropriate agencies, recommend adjustments to the scope for each industrial base assessment, including digital networks, services, assets, and data ("digital products"), goods, services, and materials that are relevant within more than one defined industrial base, and add new assessments, as appropriate, for goods and materials not included in the above industrial base assessments.

(c) Each report submitted under subsection (a) of this section shall include a review of:

(i) the critical goods and materials, as defined in section 6(b) of this order, underlying the supply chain in question;

(ii) other essential goods and materials, as defined in section 6(d) of this order,

underlying the supply chain in question, including digital products;

(iii) the manufacturing or other capabilities necessary to produce the materials identified in subsections (c)(i) and (c)(ii) of this section, including emerging capabilities;

(iv) the defense, intelligence, cyber, homeland security, health, climate, environmental, natural, market, economic, geopolitical, human-rights or forced-labor risks or other contingencies that may disrupt, strain, compromise, or eliminate the supply chain — including risks posed by supply chains' reliance on digital products that may be vulnerable to failures or exploitation, and risks resulting from the elimination of, or failure to develop domestically, the capabilities identified in subsection (c)(iii) of this section — and that are sufficiently likely to arise so as to require reasonable preparation for their occurrence;

(v) the resilience and capacity of American manufacturing supply chains and the industrial and agricultural base — whether civilian or defense — of the United States to support national and economic security, emergency preparedness, and the policy identified in section 1 of this order, in the event any of the contingencies identified in subsection (c)(iv) of this section occurs, including an assessment of:

(A) the manufacturing or other needed capacities of the United States, including the ability to modernize to meet future needs;

(B) gaps in domestic manufacturing capabilities, including nonexistent, extinct, threatened, or single-point-of-failure capabilities;

(C) supply chains with a single point of failure, single or dual suppliers, or limited resilience, especially for subcontractors, as defined by section 44.101 of title 48, Code of Federal Regulations (Federal Acquisition Regulation);

(D) the location of key manufacturing and production assets, with any significant risks identified in subsection (c)(iv) of this section posed by the assets' physical location;

(E) exclusive or dominant supply of critical goods and materials and other essential goods and materials, as identified in subsections (c)(i) and (c)(ii) of this section, by or through nations that are, or are likely to become, unfriendly or unstable;

(F) the availability of substitutes or alternative sources for critical goods and materials and other essential goods and materials, as identified in subsections (c)(i) and (c)(ii) of this section;

(G) current domestic education and manufacturing workforce skills for the relevant sector and identified gaps, opportunities, and potential best practices in meeting the future workforce needs for the relevant sector;

(H) the need for research and development capacity to sustain leadership in the development of critical goods and materials and other essential goods and materials, as identified in subsections (c)(i) and (c)(ii) of this section;

(I) the role of transportation systems in supporting existing supply chains and risks associated with those transportation systems; and

(J) the risks posed by climate change to the availability, production, or transportation of critical goods and materials and other essential goods and materials, as identified in subsections (c)(i) and (c)(ii) of this section.

(vi) allied and partner actions, including whether United States allies and partners have also identified and prioritized the critical goods and materials and other essential goods and materials identified in subsections (c)(i) and (c)(ii) of this section, and possible avenues for international engagement. In assessing these allied and partner actions, the heads of agencies shall consult with the Secretary of State;

(vii) the primary causes of risks for any aspect of the relevant industrial base and supply chains assessed as vulnerable pursuant to subsection (c)(v) of this section;

(viii) a prioritization of the critical goods and materials and other essential goods and materials, including digital products, identified in subsections (c)(i) and (c)(ii) of this section for the purpose of identifying options and policy recommendations. The prioritization shall be based on statutory or regulatory requirements; importance to national security, emergency preparedness, and the policy set forth in section 1 of this order; and the review conducted pursuant to subsection (c)(v) of this section;

(ix) specific policy recommendations for ensuring a resilient supply chain for the sector. Such recommendations may include sustainably reshoring supply chains and developing domestic supplies, cooperating with allies and partners to identify alternative supply chains, building redundancy into domestic supply chains, ensuring and enlarging stockpiles, developing workforce capabilities, enhancing access to financing, expanding research and development to broaden supply chains, addressing risks due to vulnerabilities in digital products relied on by supply chains, addressing risks posed by climate change, and any other recommendations;

(x) any executive, legislative, regulatory, and policy changes and any other actions to strengthen the capabilities identified in subsection (c)(iii) of this section, and to prevent, avoid, or prepare for any of the contingencies identified in subsection (c)(iv) of this section; and

(xi) proposals for improving the Government-wide effort to strengthen supply chains, including proposals for coordinating actions required under this order with ongoing efforts that could be considered duplicative of the work of this order or with existing Government mechanisms that could be used to implement this order in a more effective manner.

(d) The APNSA and the APEP shall review the reports required under subsection (a) of this section and shall submit the reports to the President in an unclassified form, but may include a classified annex.

Sec. 5. General Review and Recommendations. As soon as practicable following the submission of the reports required under section 4 of this order, the APNSA and the APEP, in coordination with the heads of appropriate agencies, shall provide to the President one or more reports reviewing the actions taken over the previous year and making recommendations

concerning:

(a) steps to strengthen the resilience of America's supply chains;

(b) reforms needed to make supply chain analyses and actions more effective, including statutory, regulatory, procedural, and institutional design changes. The report shall include recommendations on whether additional offices, personnel, resources, statistical data, or authorities are needed;

(c) establishment of a quadrennial supply chain review, including processes and timelines regarding ongoing data gathering and supply chain monitoring;

(d) diplomatic, economic, security, trade policy, informational, and other actions that can successfully engage allies and partners to strengthen supply chains jointly or in coordination;

(e) insulating supply chain analyses and actions from conflicts of interest, corruption, or the appearance of impropriety, to ensure integrity and public confidence in supply chain analyses;

(f) reforms to domestic and international trade rules and agreements needed to support supply chain resilience, security, diversity, and strength;

(g) education and workforce reforms needed to strengthen the domestic industrial base;

(h) steps to ensure that the Government's supply chain policy supports small businesses, prevents monopolization, considers climate and other environmental impacts, encourages economic growth in communities of color and economically distressed areas, and ensures geographic dispersal of economic activity across all regions of the United States; and

(i) Federal incentives and any amendments to Federal procurement regulations that may be necessary to attract and retain investments in critical goods and materials and other essential goods and materials, as defined in sections 6(b) and 6(d) of this order, including any new programs that could encourage both domestic and foreign investment in critical goods and materials.

Sec. 6. Definitions. For purposes of this order:

(a) "Agency" means any authority of the United States that is an "agency" under 44 U.S.C. 3502(1), other than those considered to be independent regulatory agencies, as defined in 44 U.S.C. 3502(5). "Agency" also means any component of the Executive Office of the President.

(b) "Critical goods and materials" means goods and raw materials currently defined under statute or regulation as "critical" materials, technologies, or infrastructure.

(c) "Critical minerals" has the meaning given to that term in Executive Order 13953 of September 30, 2020 (Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals From Foreign Adversaries and Supporting the Domestic Mining and Processing Industries).

(d) "Other essential goods and materials" means goods and materials that are essential to national and economic security, emergency preparedness, or to advance the policy set forth in section 1 of this order, but not included within the definition of "critical goods and materials."

(e) "Supply chain," when used with reference to minerals, includes the exploration, mining,

concentration, separation, alloying, recycling, and reprocessing of minerals.

Sec. 7. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

JOSEPH R. BIDEN JR.

THE WHITE HOUSE,
February 24, 2021.

BRIEFING ROOM

White House Announces John D. Porcari as Port Envoy to the Biden-Harris Administration Supply Chain Disruptions Task Force

AUGUST 27, 2021 • STATEMENTS AND RELEASES

WASHINGTON – Today, the White House announced that John D. Porcari will be the Port Envoy to the Biden-Harris Administration Supply Chain Disruptions Task Force.

The Task Force was established in June to address supply and demand mismatches that emerged in several sectors as the economy reawakened following the Administration's historic vaccination and economic relief efforts. Transportation Secretary Pete Buttigieg leads the Task Force focus on ports and trucking issues. The Task Force's leadership also includes Agriculture Secretary Tom Vilsack on food and agriculture and Commerce Secretary Gina Raimondo on homebuilding and semiconductors.

"The strength of the U.S. economic recovery has tested the near-term capacity of our supply chains, and the Administration is operating on all fronts to ease bottlenecks and facilitate the flow of goods across the country," **said NEC Director Brian Deese.** "Our country's ports are the gateways for getting goods to market, which makes the appointment of John Porcari as Ports Envoy an especially important step forward in alleviating these disruptions that are impacting consumers, workers, and businesses alike."

Since the launch of the Task Force, Secretary Buttigieg and the Department of Transportation have been engaged in extensive outreach and engagement with port stakeholders including virtual round table held in July with representatives of all aspects of the ports' supply chain. Out of this work, it has become clear that the challenges at our ports, some of which have existed for years, require dedicated focus by experienced, senior leadership to drive toward outcomes that will reduce congestion, improve operations and set us on a sustainable path for the future. John Porcari is uniquely qualified to take on this role.

Envoy Porcari will work closely with Secretary Buttigieg and his team at the Department of Transportation as well as the National Economic Council to address the congestion at U.S. ports. Disruptions in global shipping and rapid shifts in demand have led the cost of shipping

containers between China and the West Coast to grow more than 90% compared to 2019. This congestion is being felt particularly acutely at the Ports of Los Angeles and Long Beach, which together handle the largest share of containerized cargo moving through U.S. ports. Port workers and terminals have handled containerized cargo volumes that rose 40% in the first half of this year compared to the same time last year. Envoy Porcari will work with these stakeholder and others at the ports to address the backlog and associated delivery delays and product shortages being experienced by American consumers and businesses.

In addition, to Porcari's work, the Biden Administration has negotiated an historic $17 billion in investments in port infrastructure as part of the Bipartisan Infrastructure Deal. The funding would help address congestion and supply chains over time by investing in repair and maintenance backlogs and reduce congestion and emissions near ports.

John D. Porcari, Port Envoy to the White House Supply Chain Disruptions Task Force, Department of Transportation

John D. Porcari is a nationally recognized public and private sector infrastructure leader, who has delivered some of America's most challenging projects and driven the adoption of equitable, community-serving infrastructure policies and projects at the local, state and federal levels.

As Deputy Secretary and Chief Operating Officer of the Department of Transportation in the Obama-Biden administration (2009-2014), Porcari was directly involved in overseeing port, intermodal, maritime policy and maritime-related competitive grant programs throughout the United States.

In a previous role, serving twice as Secretary of Transportation for the State of Maryland and Chairman of the Maryland Port Commission (1999-2003 and 2006-2009), Porcari initiated a strategic plan for the Port of Baltimore that built it into the largest ro/ro (roll on/roll off) port in the nation, exporting construction and agricultural machinery from the Midwest to the world and growing the port into one of the nation's top ten in terms of both dollar value and tonnage.

Under Porcari's leadership, the Port of Baltimore also entered into a pioneering public-private partnership to expand its Seagirt container terminal, adding a fourth, 50-foot container berth and state of the art cranes to accommodate the newest super-post-panamax container vessels.

This 50-year, $1.3 billion dollar P3, with the strong support of labor, has become a national model.

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BRIEFING ROOM

FACT SHEET: Biden Administration Efforts to Address Bottlenecks at Ports of Los Angeles and Long Beach, Moving Goods from Ship to Shelf

OCTOBER 13, 2021 • STATEMENTS AND RELEASES

President Biden knew that there would be massive economic challenges emerging from the pandemic. The Biden Administration acted quickly to get the economy moving again – passing and implementing the American Rescue Plan to get checks in bank accounts and get Americans vaccinated.

But as the country recovers from a once in a century pandemic and economic crisis, the private businesses that make up our supply chains, which get goods to businesses and the American people, have struggled to keep up. The pandemic has led to a surge in e-commerce, with sales increasing 39 percent in the first quarter of 2021 compared to the first quarter of 2020. At the same time, COVID has disrupted workers in key transportation and logistics nodes – the jobs of 1,800 Southern California port workers were disrupted because of COVID earlier this year.

These disruptions are not just happening here at home, but all around the world as COVID has led to global shut downs and disruptions. The Chinese ports of Yantian (Shenzhen) and Ningbo-Zhoushan—two of the top 5 largest ports in the world—each experienced multi-week partial-terminal closures aimed at curbing COVID outbreaks, slowing global supply chains due to increased dwell times and cancelled sailings. In September, hundreds of factories closed under lockdown restrictions in Vietnam, halting production that supports thousands of retailers worldwide. They have been slowly reopening in early October but must still contend with mounting supply chain issues. These disruptions have made the transportation supply chain more unstable and difficult to predict.

The President launched the Supply Chain Disruptions Task Force in June, which included a focus on transportation and logistics bottlenecks to the U.S. economic recovery. After meeting

with local government leaders and companies to diagnose the problems and identify solutions, Port Envoy John Porcari was appointed in August to help drive coordination between the many private firms who control the transportation and logistics supply chain.

Today, the Administration is convening business leaders, port leaders, and union leaders to discuss the challenges at ports across the country and actions each partner can take to address the delays and congestion across the transportation supply chain. And the President will meet with the leadership from the Ports of Los Angeles and Long Beach and the International Longshore and Warehouse Union (ILWU) to discuss the actions they are each taking to address these challenges in Southern California.

These leaders are announcing a series of public and private commitments to move more goods faster, and strengthen the resiliency of our supply chains, by moving towards 24/7 operations at the Ports of Los Angeles and Long Beach. These two ports are the point of entry for 40 percent of containers to the U.S., and are on track to reach new highs in container traffic this year. Through August, Los Angeles has moved 30% more and Long Beach over 20% more containers to help U.S. exporters reach customers around the world and U.S families and factories get the goods they need.

These commitments will speed up shipments of goods throughout the country and include:

The Port of Los Angeles is expanding to 24/7 operation. The Port of Long Beach expanded operations in mid-September. The Port of Los Angeles is now joining them by adding new off-peak night time shifts and weekend hours. This expansion means the Port of Los Angeles has nearly doubled the hours that cargo will be able to move out of its docks and on highways.

The International Longshore and Warehouse Union (ILWU) has announced its members are willing to work those extra shifts. This will add needed capacity to put towards clearing existing backlogs. This is an important first step, now the private businesses along the supply chain need to move their operations to 24/7.

Large companies are announcing they will use expanded hours to move more cargo off the docks, so ships can come to shore faster. Unlike leading ports around the world, U.S. ports have failed to realize the full possibility offered by operation on nights and weekends. Moving goods during off-peak hours can help move goods out of ports faster. For example, at the Port of LA, goods move 25 percent faster at night than during the day. These commitments will help unlock capacity in the rest of the system—including highways, railroads and warehouses—by reducing congestion during the day.

The commitments being announced today include:

- The nation's largest retailer, **Walmart**, is committing to increase its use of night-time

hours significantly and projects they could increase throughput by as much as 50% over the next several weeks.

- **UPS** is committing to an increased use of 24/7 operations and enhanced data sharing with the ports, which could allow it to move up to 20 percent more containers from the ports.
- **FedEx** is committing to work to combine an increase in night time hours with changes to trucking and rail use to increase the volume of containers it will move from the ports. Once these changes are in place, they could double the volume of cargo they can move out of the ports at night.
- **Samsung** is committing to move nearly 60% more containers out of these ports by operating 24/7 through the next 90 days. 72% of U.S. homes have at least one Samsung product, from appliances to consumer electronics.
- **The Home Depot** is committing to move up to 10% additional containers per week during the newly available off-peak port hours at the Ports of L.A. and Long Beach.
- **Target**, which is currently moving about 50 percent of its containers at night, has committed to increasing that amount by 10 percent during the next 90 days to help ease congestion at the ports.

Across these six companies over 3,500 additional containers per week will move at night through the end of the year.

Those boxes contain toys, appliances, bicycles, and furniture that Americans purchased online or at their local small business, and pieces and parts that are sent to U.S. factories for our workers to assemble into products. And this is just a start—these commitments provide a clear market signal to the other businesses along the transportation supply chain—rails, trucks, and warehouses—that there is demand to move additional cargo at off-peak hours.

Secretary Buttigieg and Port Envoy Porcari will continue to work with all stakeholders to help more businesses access these expanded hours, and move the rest of the supply chain towards 24/7 operations.

This effort is part of the ongoing work of the Biden-Harris Supply Chain Disruptions Task Force to continue to identify emerging bottlenecks to the economic recovery and take action to clear them to help families, workers, and businesses get the goods they need.

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BRIEFING ROOM

Improving and Tracking Supply Chains Link by Link

NOVEMBER 03, 2021 • BLOG

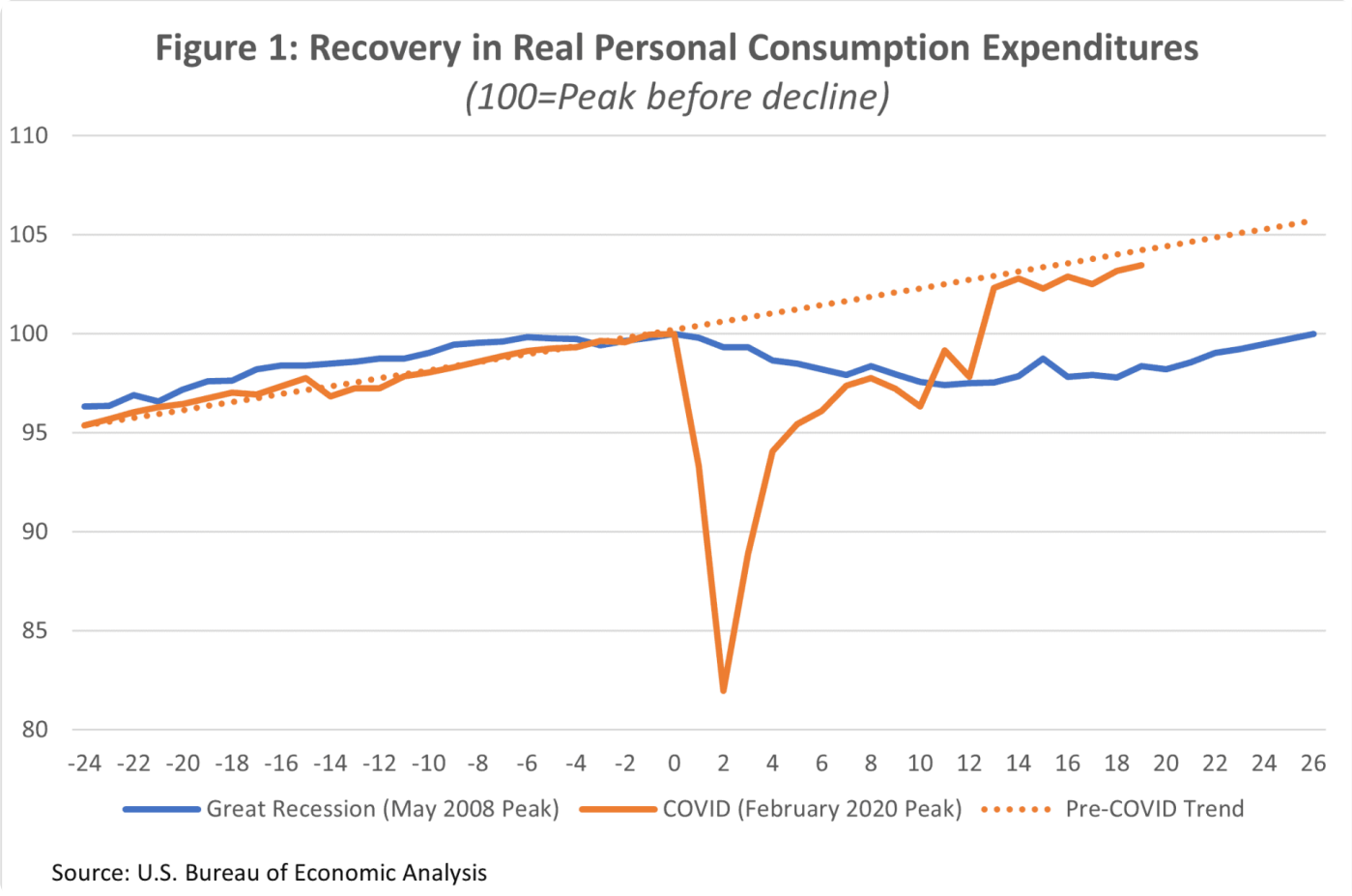
John D. Porcari, Sameera Fazili, and Liz Reynolds

"Supply chains," a term once reserved for business logistics teams, has now become a household phrase. Whether you're shopping for a car, a refrigerator, or a sweater, delays and backlogs have drawn attention to the largely private sector systems responsible for both making goods and moving them from factories to shelves and doorsteps. These private systems are also global, and therefore the global nature of the pandemic has proven to be a profound disruption to supply chains since the pandemic first took hold in early 2020. That is why President Biden called for greater coordination between our closest trading partners to overcome these collective issues during the G-20 summit this weekend.

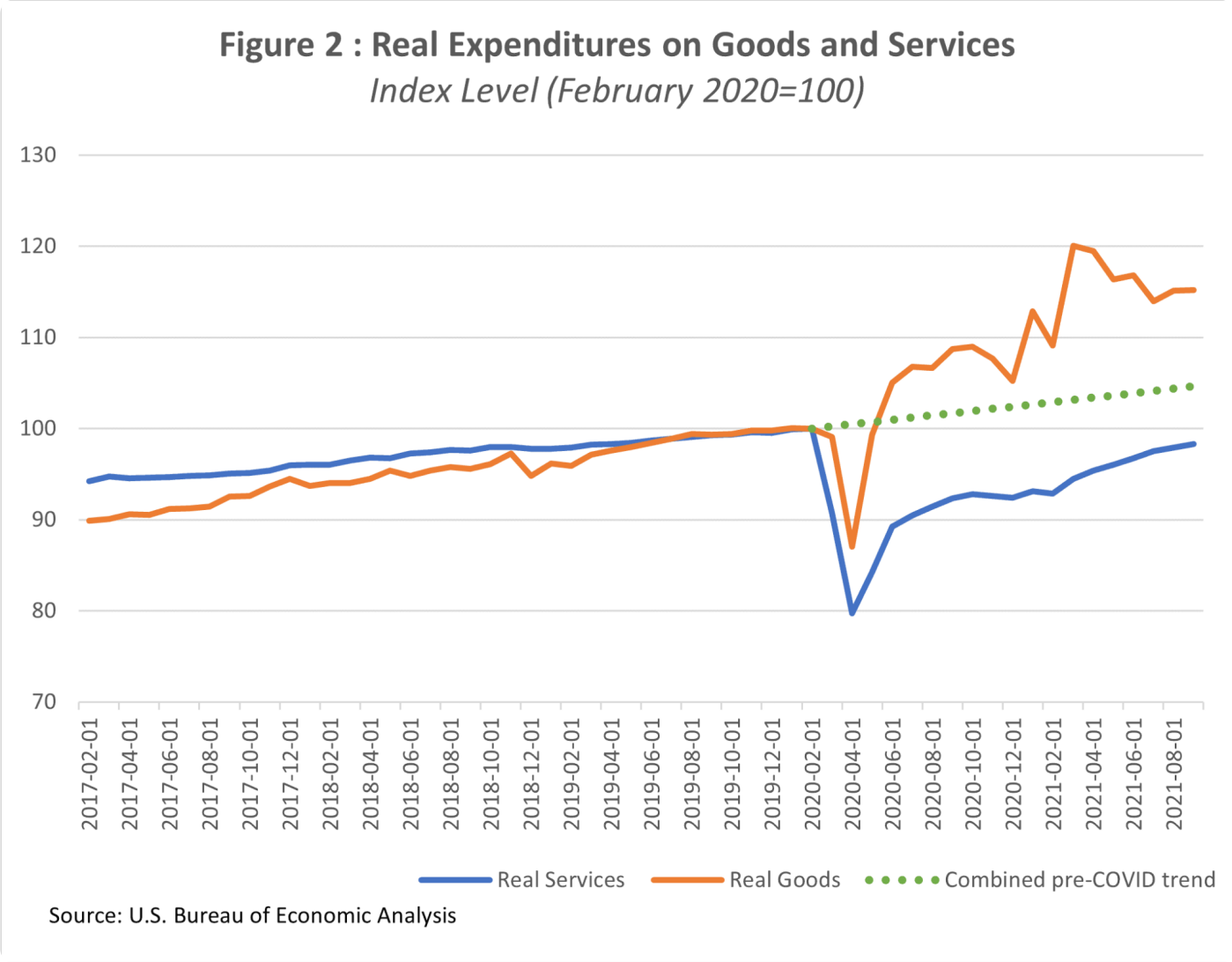
While supply chain disruptions remain a challenging side effect of the COVID-19 pandemic, they now also signal the swift return of strong consumer demand in the U.S. after one of the deepest recessions on record. In this blog post, we detail how the Biden-Harris Supply Chain Disruptions Task Force is measuring and tracking the status of the leading drivers of disruptions in our transportation and logistics supply chain, and the steps we are taking to ensure that goods continue to reach the households and businesses who depend on them.

Rising Tides

Since President Biden took office, nearly 5 million jobs have been created, the unemployment rate has dropped to below 5 percent, the number of people collecting unemployment insurance benefits has fallen by 2.5 million, and food insecurity has declined nearly 40 percent. President Biden's economic agenda has propelled the United States to the fastest economic growth in nearly 40 years over the first three quarters of this year, and over the pandemic as a whole the U.S. leads G7 countries in its recovery. As a result of this historically strong recovery, American families have been able to return their overall spending to pre-pandemic trends. This marks a stark contrast with this point in previous economic recoveries.



But while overall consumer spending is almost back to its pre-pandemic trend, the composition of that spending is quite different. Since the pandemic, consumer purchases of goods—like furniture, appliances, and food—has shot past pre-pandemic levels, and spending on services—like healthcare and vacations—has not yet returned to pre-pandemic trend levels. As the pandemic recedes, spending on goods is expected to decline and spending on services to rise. We are already seeing that with spending on goods in September well below its April 2021 peak, but we still have a ways to go. In the meantime, our supply chains are moving record volumes of goods – and being asked to continue to do so. They also must withstand ongoing disruptions due to the global pandemic, as shipping delays due to the delta variant has demonstrated. The reshuffling of spending from services to goods as the public health situation improves will be critical for reducing disruptions.



Our Periscope on Supply Chains

Starting today, we will be publishing a twice monthly dashboard of metrics to track progress at both the ports of Los Angeles and Long Beach, and in the economy at large. Here, we explain what we are tracking and why it matters.

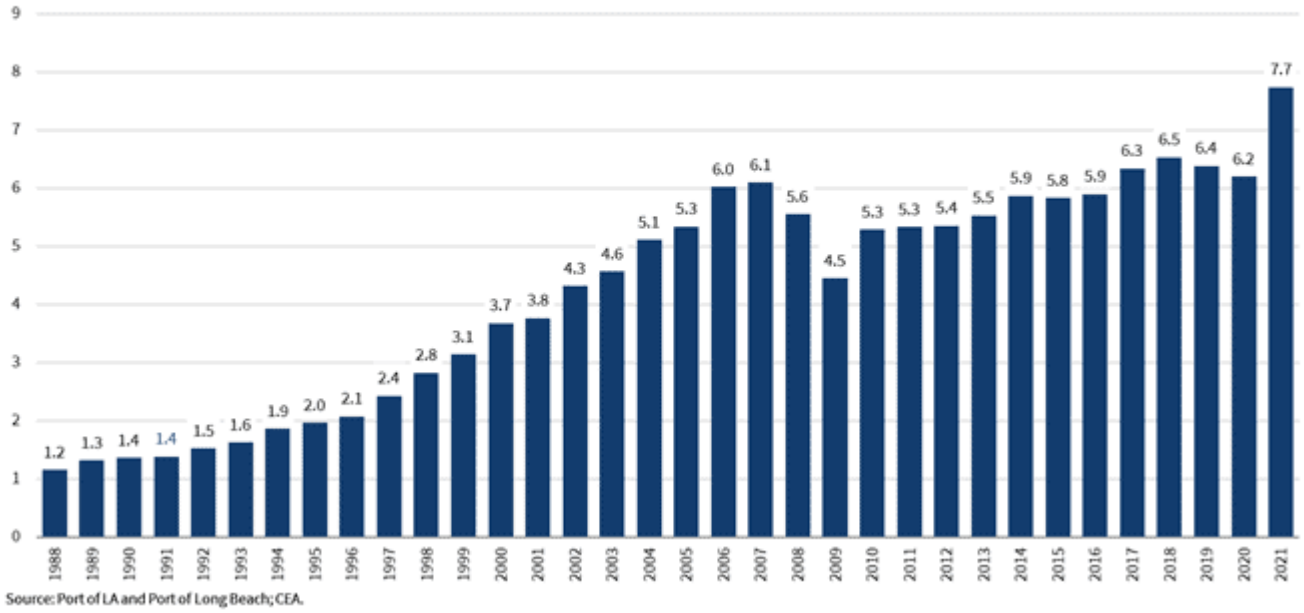
Ships at Anchor

One of the most visible and widely reported-on indicators that the demand for goods remains abnormally high is the number of container ships waiting to dock at the Ports of Los Angeles and Long Beach, which together handle 40 percent of containerized imports entering the country. Normally, there are only few container ships “at anchor” waiting to dock; on Friday, there were 75. This number is partly driven by consumer demand for goods, and also impacted by delta-related port and factory shutdowns in Asia.

Cumulative Import Volume

A closer look shows that in fact more—not less—goods are moving through our transportation and logistics supply chain, across our ports, warehouses, and stores. This can be seen by looking at the volume of containers (as measured by twenty-foot equivalent units or TEUs) coming into the Ports of Los Angeles and Long Beach (Figure 3). Between January and September, over 7 million loaded containers were imported, 18 percent higher than over the same period in 2018, which had been the previous record.

Figure 3: Port of Los Angeles and Port of Long Beach cumulative loaded imports through September
Millions of TEUs



Source: Port of LA and Port of Long Beach; CEA.

The Biden-Harris Administration will be closely tracking the cumulative number of imported containers processed for the rest of the year and will be highlighting data twice a month. Preliminary data for the first half of October indicates that the ports imported nearly 380,0000 loaded containers for a cumulative 8.1 million containers imported this year. That suggests the ports remain significantly ahead of where they were at the same point in 2018 and are on pace to break new records by year's end.

Retail Inventories

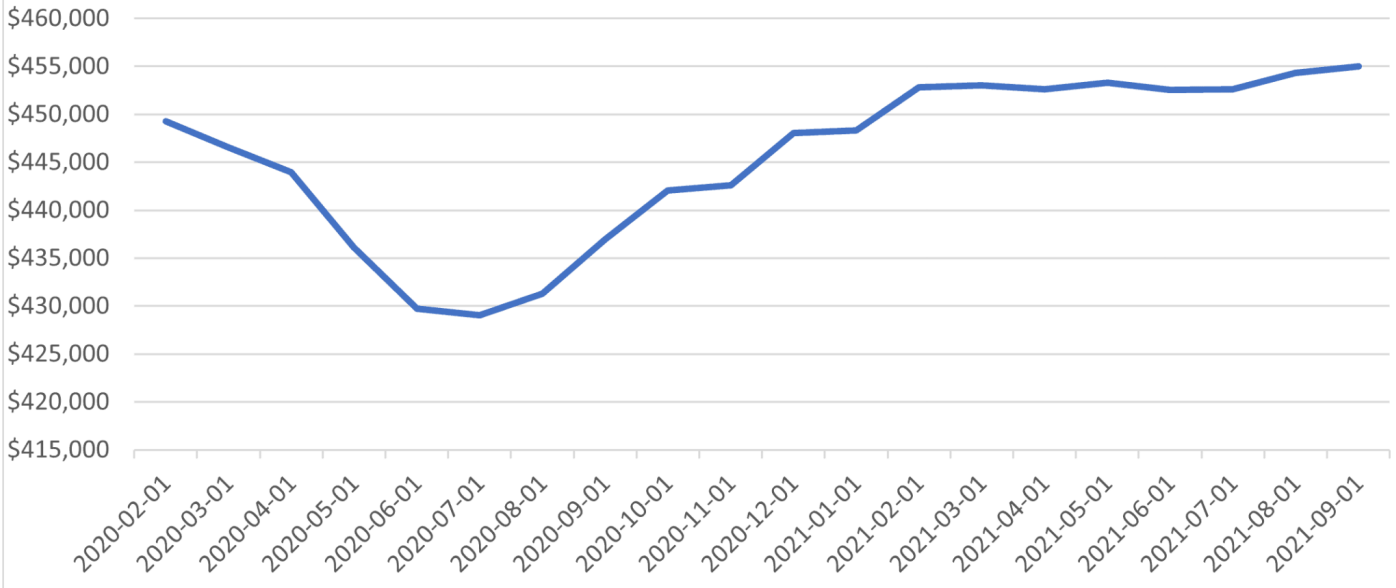
It's not enough to move goods into the country—we also need to make sure that we get them on shelves. The gold-standard U.S. Census Bureau data suggests that the rest of the supply chain is in fact succeeding in keeping store shelves stocked. Inflation-adjusted retail inventories excluding autos grew between the end of August and the end of September. And at the end of September, they were 4 percent higher than they were a year ago and are actually above pre-

pandemic levels (Figure 4). We have excluded autos from this measure because the decline in auto inventories is a result of a global semiconductor shortage affecting the autos sector worldwide, including in large auto producing countries like Germany and Japan.

Other real time measures of availability of goods in stores—such as the IRI Supply Index—similarly shows that retail stores' rates of keeping goods in-stock is 89 percent, near the pre-COVID level of 91 percent. These higher frequency data measures also suggest that, as recently as last week, there had been no deterioration in retail inventories since the Census reported the end of September retail inventory numbers.

Figure 4: Store Shelves Have Recovered to Pre-Pandemic Levels

Real Retail Inventories without Autos in Millions, February 2020-September 2021



Source: U.S. Census Bureau and U.S. Bureau of Labor Statistics. September 2021 is the advance estimate.

We will continue to track cumulative container imports, retail inventory levels, and in-stock indicators, to help us monitor the ability of this historically high volume of goods to make their way to warehouses and store shelves, comparing inventory levels to the pre-pandemic period. Throughout this work, we will remain focused on increasing velocity and fluidity along the goods movement supply chain, working in close partnership with the private sector. Our commitment to tackle bottlenecks and inefficiencies is aimed at helping to get goods to the families and businesses that need them as our economy continues to recover from the pandemic. We will also continue to closely watch the rotation from goods to services consumption, as we expect that rotation to ease pressures on the goods movement supply chain.

Lifting more Boats

As U.S. consumers continue to purchase goods at a high level, decades of neglect and underinvestment in our infrastructure have left the links in our goods movement supply chains struggling to keep up with the rapid and persistent increase in goods movement that the pandemic has generated.

This poses a collective action problem in the largely private system that moves containers of goods from ships to docks to trains and trucks to get distributed to warehouses, factories, and stores. Which is why the President issued a call to action to encourage every link in the goods movement chain to move towards a 24/7 pace to increase the volume and pace of products flowing through the system. The Ports of Los Angeles and Long Beach and International Longshore and Warehouse Union (ILWU) workers joined together to make the first commitment. Some of the countries' largest companies joined in as well—including Walmart, Target, FedEx, UPS, Home Depot, and Samsung—committing to try a new solution.

Since then, others have also joined in. The state of California stepped up, issuing an executive order to identify state-owned sites to serve as temporary warehouses and allow trucks to carry more goods. The City of Long Beach next helped create more storage space through a temporary zoning change to facilitate container storage. Just in the last week, Union Pacific, one of the two major railroads responsible for moving goods out of the port, announced it would operate its station near the ports 24/7 and offer discounts to customers for each container they moved by rail. In addition, the U.S. Department of Transportation (USDOT) and

the State of California announced a $5 billion partnership to modernize California's goods movement chain, strengthening the capacity and resiliency of the nation's key import and export hub. The result of these combined efforts will be more space available to store containers and faster paths for containers to exit and enter the ports.

These "pull" strategies are important first steps, and we will continue to do more to energize the private companies that drive the goods movement chain. This includes supporting the ports' decision to fine containers that stay on the docks too long. The system of loading boxes off ships, onto docks, onto trains or trucks, and out of the port's gates relies on collaboration between private companies including ocean carriers, terminal operators, cargo owners, freight forwarders and trucking companies. With more rail cars now operating, there is more capacity to move goods out of the ports. And some of the largest retailers have committed to move more goods at off-peak hours. The system is primed to move a historic volume of goods, with the companies that drive the goods movement chain coming together to take action.

Moving Forward

This is precisely what the Biden-Harris Supply Chain Disruptions Task Force has been set up to do: act as an honest broker to encourage companies, workers, and others to stop finger-pointing and start collaborating. Many have responded to this call, recognizing that a once-in-a-century pandemic requires us all to do our part to support our nation's economic recovery. Moving all links in the supply chain simultaneously doesn't happen overnight, but the actions being taken by every link in the chain are making a difference. These actions are starting to clear the backlogs and break down the barriers that have made it hard to move this unprecedented volume of goods.

We will also continue to track how well our nation's transportation and logistics supply chain is handling this increased flow. We will report cumulative imports through Los Angeles and Long Beach, retail inventories, and the number of ships at anchor at the two ports on a twice-a-month basis through at least the end of the year.

We need to seize this moment to strengthen our country's future competitiveness by focusing longer term on building the resilience of our nation's supply chains. That includes a goods movement chain that is more resilient, fluid, and can operate at a higher velocity. For too long, our country has underinvested in the roads, railways, ports and projects that propel goods movement. With the Infrastructure Investment and Jobs Act, we can make the fundamental changes that are long overdue for our ports, rail and roads. This is how we build back better, with government bringing workers and businesses together to leverage American ingenuity to tackle the challenges brought on by a global pandemic.

BRIEFING ROOM

FACT SHEET: The Bipartisan Infrastructure Deal Improves the Supply Chain from Ship to Store

NOVEMBER 10, 2021 • STATEMENTS AND RELEASES

Decades of neglect and underinvestment in our infrastructure have left the links in our goods movement supply chains struggling to keep up with the rapid and persistent increase in goods movement that the pandemic has generated. Further, extreme heat waves, catastrophic wildfires, and severe drought are taking American lives and livelihoods. In the last year alone, extreme weather has cost America more than $100 billion—often hitting historically underserved groups the hardest, particularly low-income communities, communities of color, and people with disabilities.

Despite global disruptions due to the pandemic, America is moving record numbers of goods from our ports to shelves and homes. The Ports of Long Beach and Los Angeles, for example, which import 40% of all containerized imports into the country—are handling the most in their history, 17% more than their previous record year.

The Administration has already taken unprecedented steps to get goods flowing from ships to shelves faster right now. That includes partnerships with the ports of LA and Long Beach to move to 24/7 operations—in addition to partnerships with labor as well as private sector leaders like Wal-Mart, UPS, Target and FedEx who are taking similar action—and the port action plan to accelerate investment in our ports, waterways, and freight networks.

The Bipartisan Infrastructure Deal will make the fundamental changes that are long overdue for our ports, airports, rail and roads to ensure that our supply chains are more resilient and efficient from future shocks. Modern, resilient, and sustainable port, airport, and freight infrastructure will help improve efficiency, reduce costs, and support U.S. competitiveness by removing bottlenecks and expediting commerce, while reducing greenhouse gas emissions and the environmental impact on neighboring communities. The plan will strengthen supply chains by investing almost $50 billion in our ports and airports on top of expanding existing programs that support freight investment across modes.

This historic legislation will:

Upgrade our nation's airports and ports to strengthen our supply chains and reduce costs, improve U.S. competitiveness, reduce emissions. Our ports and waterways need repair and reimagination to address long-term disinvestment that has weakened the resilience of our supply chains. The United States built modern aviation, but our airports lag far behind our competitors. According to some rankings, no U.S. airports rank in the top 25 of airports worldwide and no U.S. port ranks in the top 50 ports for efficiency. The legislation invests $17 billion in port infrastructure and waterways and $25 billion in airports to address repair and maintenance backlogs, reduce congestion and emissions near ports and airports, and drive electrification and other low-carbon technologies. Port infrastructure and waterway investments will double as an investment in environmental justice in and around port facilities by deploying zero-emission technologies and reducing idling and emissions, which impair air quality in adjacent neighborhoods and communities, often which are historically disadvantaged.

Repair and rebuild roads and bridges critical to trucking goods movement and lower costs for American families. Almost 70% of the goods movement volume in the United States is transported by trucks, while 1 in 5 miles of highways and major roads, and 45,000 bridges, are in poor condition. The legislation will reauthorize surface transportation programs for five years and invest $110 billion in additional funding to repair our roads and bridges and support major, transformational projects along the goods movement supply chain. The legislation makes the single largest investment in repairing and reconstructing our nation's bridges since the construction of the interstate highway system. The legislation provides States greater flexibility to address surface transportation workforce development, training, and education needs, including activities that address current workforce gaps, including training opportunities for truck drivers to support a renewed national goods movement system. Additional trained truck drivers and expanded trucking routes, will help reduce costs of everyday goods and services, saving money for American families.

Increase investments in freight rail and intermodal infrastructure to improve safety, efficiency, and job growth for long-distance inland goods movement. Freight and intermodal rail are core to the inland movement of goods through our supply chain, delivering goods over long-distances in an efficient and environmentally friendly manner. The legislation invests $5 billion in the Infrastructure for Rebuilding America grant program, which supports highway and rail projects critical to efficient goods movement and provides $5 billion to the Consolidated Rail Infrastructure and Safety Improvements grant program, which funds projects that improve the safety, efficiency, and reliability of intercity passenger and freight rail. The DOT's Railroad Rehabilitation and Improvement Financing (RRIF) program will add

landside port infrastructure as an eligible project category and make permanent the transit-oriented development project eligibility, supporting States in utilizing freight rail and intermodal investments at catalysts for economic development and job growth from their shores to their stores. This additional infrastructure will allow more goods to be transported by rail, increasing competition and reducing costs for consumers. A new $500 million railroad crossing elimination grant program will invest in safety across the goods movement chain and protect the health and well-being of the traveling public.

Make our supply chain infrastructure resilient against the impacts of climate change, cyber-attacks, and extreme weather events. Millions of Americans feel the effects of climate change each year when their roads wash out, power goes down, or schools get flooded. These effects are exacerbated when our supply chains for making and moving goods are disrupted, and those same Americans can't access the goods and services they need on a regular basis. Last year alone, the United States faced 22 extreme weather and climate-related disaster events with losses exceeding $1 billion each—a cumulative price tag of nearly $100 billion. Now that disruptions have shown how vulnerable these lines of global commerce can be due to COVID-19, the Biden Administration will not go back to business as usual. Passing this legislation increases our resilience in the face of climate change, cyber-attacks, and natural disasters. The legislation makes our communities safer and our infrastructure more resilient to the impacts of climate change and cyber-attacks, with an investment of over $50 billion to protect against droughts, floods and wildfires, in addition to a major investment in weatherization. The legislation is the largest investment in the resilience of physical and natural systems in American history.

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U.S. DEPARTMENT OF AGRICULTURE

USDA Announces Partnership with Northwest Seaport Alliance to Ease Port Congestion and Restore Disrupted Shipping Services to U.S. Grown Agricultural Commodities

Press Release
Release No. 0064.22

Contact: USDA Press
Email: press@usda.gov

SEATTLE, March 18, 2022 — Agriculture Secretary Tom Vilsack today announced plans for prepositioning containers of agricultural goods near port terminals to help improve service for shippers of U.S. grown agricultural commodities. The U.S. Department of Agriculture (USDA) is partnering with Northwest Seaport Alliance (NWSA) to enhance access to a 49-acre "pop up" site to accept either dry agricultural or refrigerated containers for temporary storage at NWSA in Seattle to reduce operational hurdles and costs, making it so they can more quickly be loaded on ships at the export terminals. The NWSA includes the marine cargo operations of the ports of Seattle and Tacoma and is the fourth-largest container gateway in the United States.

Congestion-induced impacts to vessel schedules and prioritization of returning containers empty to Asia have significantly raised barriers for exporting agricultural products in containers, resulting in lost markets and disappointed customers. The Northwest Seaport Alliance has seen a nearly 30% decline in the export of agricultural

commodities in the last six months of 2021 and the ratio of loaded versus empty container exports has shifted to predominately empty containers since May 2021.

USDA's partnership with the NWSA's existing near-dock facility at Terminal 46 in Seattle is part of the Biden-Harris Administration's Supply Chain Task Force efforts with state and local governments and builds on earlier efforts. USDA's efforts to increase capacity at the NWSA follow the Department's announcement on January 31, 2022, of a similar partnership with the Port of Oakland in California, and a US Department of Transportation partnership with the Port of Savannah in Georgia. USDA continues to seek opportunities to partner with additional ports or other intermodal container facilities to help American farmers and agricultural producers move their product to market and manage the short-term challenges while pressing the ocean carriers to restore better levels of service.

"The pandemic revealed vulnerabilities across our supply system and as the economy has made an historic recovery, it has put additional strain on the supply chain," Vilsack said. "The Biden-Harris Administration is calling out ocean carriers that are taking advantage of the situation to leverage undue profits and are treating U.S. agricultural companies and producers unacceptably. That is why we are using creative approaches to improve port operations while elevating American-grown food and fiber."

"This new pop-up port project will give Washington farmers a place to store their products so they're ready to make the next available ship," said U.S. Sen. Maria Cantwell. "As the Washington growing season ramps up over the next few weeks, this new pop up port will fill up with containers of hay, grains, peas, lentils, refrigerated dairy products, all ready to load onto ships and reach consumers across the globe. This is one tool to help address port congestion, and I will continue to work to hold foreign shipping companies responsible for the price hikes that are leaving our farmers, growers and exporters on the sidelines."

"Over the past year, The Northwest Seaport Alliance has been working closely with ag exporters to help mitigate supply chain challenges," stated Ryan Calkins NWSA co-chair and Port of Seattle Commission President. "We appreciate Secretary Vilsack's leadership and look forward to this pilot program reducing costs for ag producers and helping bring more U.S. exports to foreign markets."

"In partnership with PCMC, the NWSA has opened more than 60-acres of near-dock storage across our gateway to reduce port congestion and increase export opportunities," stated Deanna Keller NWSA Managing Member and Port of Tacoma Commission Vice-President "The partnership with the USDA will further our efforts and provide needed relief for ag producers in our region."

About the Partnership

The Farm Service Agency (FSA) will make payments to agricultural companies and cooperatives that preposition containers filled with American-grown agricultural commodities at the "pop-up" temporary site at the Port of Seattle. Specifically, FSA payments of $200 per dry container and $400 per refrigerated, or reefer, container will help cover additional logistical costs. The sign-up will be streamlined through a central application process with the details available in a Notice of Funding Availability that will be published in the coming weeks. Payments will be made in arrears and verified with the pop-up terminal records.

The benefits of relieving congestion and addressing capacity issues at ports through partnerships like this one at the NWSA go well beyond the local region, as commodities and agricultural products grown and processed from thousands of miles away flow through the Port. American farmers, ranchers, workers, rural communities and agricultural companies throughout the supply chain will benefit from efforts to restore and improve proper service by ocean carriers; and ultimately, getting safe, nutritious U.S.-grown products to consumers around the world.

USDA touches the lives of all Americans each day in so many positive ways. In the Biden-Harris Administration, USDA is transforming America's food system with a greater focus on more resilient local and regional food production, fairer markets for all producers, ensuring access to safe, healthy and nutritious food in all communities, building new markets and streams of income for farmers and producers using climate smart food and forestry practices, making historic investments in infrastructure and clean energy capabilities in rural America, and committing to equity across the Department by removing systemic barriers and building a workforce more representative of America. To learn more, visit www.usda.gov.

From the JOC:

Empties vs. exports highlights precarious balancing act for US supply chain

Dustin Braden, Shipper Engagement Manager | Apr 14, 2022 2:52PM EDT

Throughout the COVID-19 pandemic, ocean carrier business practices, particularly around exports, have come under immense media, government, and industry scrutiny.

A recent CNBC story on the volume of empties hauled by ocean carriers, supposedly at the expense of laden exports, illustrates the difficulties in pinpointing a single source of supply chain disruption and how disparate perceptions of an issue can be depending on where a party sits in the supply chain.

Importantly, the level of laden exports has been falling for two years, with the high of 13 million TEU hit in 2019, compared with 12 million TEU in 2021. The 2021 export number is down 3 percent from 2020 and 10.1 percent from 2019, according to PIERS, a JOC.com sister company within IHS Markit. There's a mix of factors at play in that decline, including bans on plastics and paper waste, the February 2021 Texas freezeout that cut into resins manufacturing, the higher value of the dollar, and increased global competition, particularly for agricultural commodities. With paper waste and plastic article exports each above 1 million TEU for many years, any decline in those sectors brings down overall US export volume.

Although agriculture interests have struggled to secure capacity — volume for oil seeds fell 6.8 percent year over year in 2021 while cotton was down 21 percent, for example — other sectors with higher profit margins have been able to post healthy year-over-year gains. Notably, US exports of furniture and bedding jumped 41 percent in 2021, autos and parts exports increased 22.2 percent, and machinery and boilers rose 14 percent. In a free market system, the exporters able to bear higher shipping costs without destroying their margins will secure capacity.

In addition to higher rates, agricultural interests are struggling because of their remote locations away from major import hubs and a dysfunctional intermodal rail network. Poor

intermodal service reliability coupled with low inventory levels have pushed countless importers to transload their containers into trucks, even when the shipper would prefer to use rail. This reduces the number of ocean containers reaching the US interior that exporters need to load their cargo while an inefficient rail network makes repositioning containers for export more cumbersome and expensive.

The role of empties in port congestion

With a thorough understanding of the dynamics behind US ocean export volume declines, it is time to return to the issue of empties, which trucking companies and logistics providers have called a major factor in US port congestion.

Empties contribute to port congestion in two primary ways: first, by taking up terminal or yard space that could be used to store loaded containers, and second by eating into chassis supply. Many in the supply chain have no choice but to store empties on chassis, which means that chassis that should be used to haul loaded imports or exports are idle instead.

This presents a catch-22 for ocean carriers that have been maligned for not carrying exports. Because empties are taking up space, there is no terminal real estate for exporters to deposit containers, and any effort to send sweeper ships to clear out terminals and improve port operations would then skew the number of loaded exports versus empties hauled by the carriers, making them a target of government and private interests.

Because US law currently requires that ocean carriers provide "common carriage" to all parties, it would be unacceptable and illegal for carriers to outright prioritize empties over exports. While the US Federal Maritime Commission is currently auditing 16 ocean carriers for violations of common carriage, newcomers to the trans-Pacific trade are under greater scrutiny from the agency's Bureau of Enforcement. This, in tandem with the aforementioned factors reducing US exports, could suggest that the largest carriers serving US trade are complying with common carriage requirements of US shipping law.

Regardless of the outcomes of the audits, this most recent episode around empties highlights the dizzying complexity of the modern supply chain, wherein gains for drayage truckers and marine terminals can be interpreted as a loss for exporters.

Contact Dustin Braden at dustin.braden@spglobal.com and follow him on Twitter: @dbrades89.

Windward: Fifth of World's Containerships are Stuck in Port Congestion

Shanghai's lockdowns and port congestion is impacting containerships globally

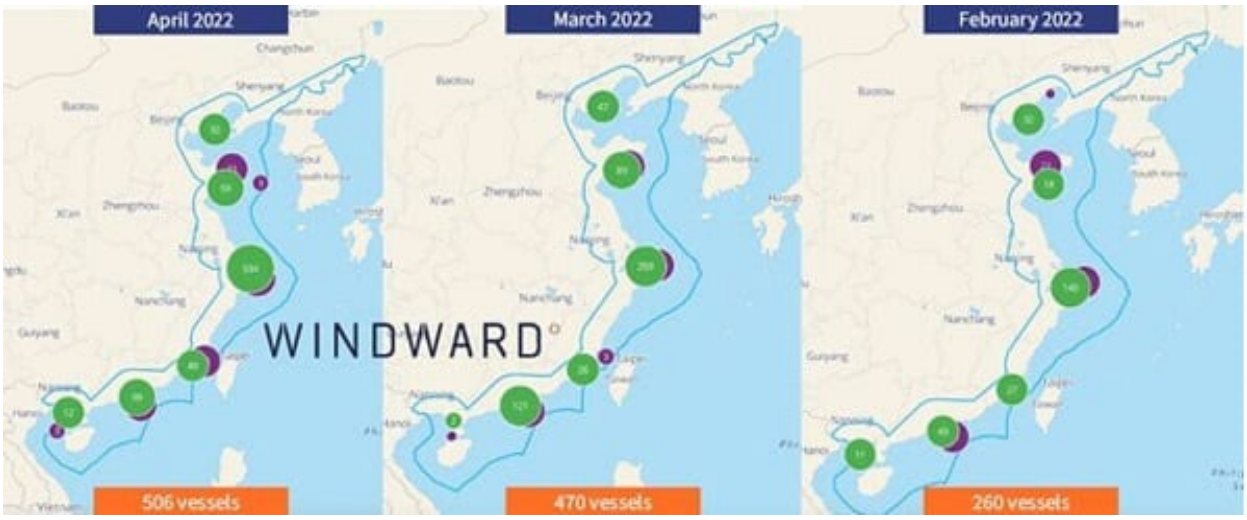
Maritime Executive, 4/19/22

After signs of progress that the backlogs of containerships stacked up outside ports might be easing, it appears that the trend is reversing itself. With lockdowns impacting the movement of vessels at the major Chinese ports, the congestion appears to be spreading to other ports around the globe.

New data from Windward, the maritime AI company, shows that a fifth of all the world's containerships are stuck in port congestion. Further, they calculate that a quarter of all the ships are specifically stuck at Chinese ports. Carriers have been struggling to manage their schedules which have already shown low reliability. Now, there are increasing reports of the number of containerships diverting away from Shanghai, but that is adding to the delays at other ports such as Ningbo-Zhoushan due to the added volumes, or carriers are resorting to blanked sailings.

The increases align with the lockdown in Shanghai that began at the end of March. Just before that, Sea-Intelligence reported the first improvement in schedule reliability in two years. While nearly two-thirds of all containerships were still behind schedule in February 2022, Sea-Intelligence's monthly Global Liner Performance report highlighted that reliability returned to levels not experienced since mid-2021. Further, they reported that the number of days vessels were behind schedule while still high had also improved.

"The lockdowns in China are heavily impacting the congestion outside the country's ports," writes Windward based on data pulled for its Maritime AI platform and released on April 19. "The number of container vessels waiting outside of Chinese ports today is 195 percent higher than it was in February."



Congestion off China's ports in the last three months from Windward's Maritime AI data

Windward uses three images each providing a 48-hour snapshot of container vessels waiting outside of China's ports to illustrate their analysis. They compare February when there were no lockdowns in China

to March when Shenzhen was in lockdown, and now April as the lockdown reached Shanghai a city of 25 million people and home to the world's busiest container port.

"The trend is clear – in the April and March snapshots, there were 506 and 470 vessels, respectively, stuck outside of Chinese ports. In February, that number was only 260. In essence, lockdowns in China have nearly doubled the congestion outside the country's ports," concludes Windward.

Chinese officials continue to insist that the port of Shanghai is open and functioning. They point to the use of a closed-loop where port workers were placed inside a bubble separated from the city and people coming and going to the port. Truckers have been required for example to have negative COVID-19 tests to enter the port and truck traffic has been greatly reduced. Still, the ports are experiencing shortages of employees due to the spread of the virus.

While it would seem that with so many vessels stuck off China that other ports might be seeing relief, the opposite appears to be happening with schedules being disrupted for many of the major shipping routes. The Marine Exchange of Southern California's data for example shows the number of container vessels again on the rise. On April 4, just as the lockdowns began in Shanghai, California reached a new low on its containership traffic with a total of 33 ships heading to Los Angeles and Long Beach. Today, by comparison, the Southern California backlog has jumped to 51 containerships, either near shore or steam toward the ports.

"When looking at the global picture, between April 12-13, 2022, 1,826 container vessels were waiting outside of ports worldwide," reports Windward. "That's 20 percent of all container vessels globally!"

Global port congestion from Windward's Maritime AI data

Windward's Maritime AI data shows that 506 vessels are waiting offshore at China's ports which represents more than a quarter (27.7 percent) of all the ships waiting outside of ports around the world. For comparison, in February, Windward calculates that the backlog off China's ports accounted for about a sixth (14.8 percent) of the vessels stuck in port congestion worldwide.

Shanghai has begun to report some progress containing the recent wave of the virus and a decline in the number of daily cases. The health authorities have begun to relax some restrictions permitting factories to resume work using a closed-loop keeping workers onsite but it is unclear when the port can begin to regain its normal productivity. Even then there are fears of another ripple effect around the globe as shippers rush to move goods that have been stuck in the supply chain and carriers rush vessels to international ports seeking to restore disrupted schedules.

From American Shipper: (week of June 6, 2022)

Los Angeles/Long Beach: Competition heats up for America's gateway

Despite East Coast gains, Los Angeles/Long Beach still handles double the imports of New York/Jersey

Los Angeles/Long Beach wasn't always the container gateway to America. That crown used to belong to New York/New Jersey. Containerization combined with rising imports from Asia and transcontinental rail swung the pendulum to the West Coast over recent decades — although now the pendulum is swinging back to the east.

The first American trading ship called in California's San Pedro Bay in 1805. By the time California became the 31st state in 1850, port activity was flourishing. Los Angeles' population surged in the early 20th century and boosted business further. The main channel was dredged in 1912, two years before the Panama Canal opened.

As shipping switched to containers in the 1960s and 1970s, the East Coast retained its dominance. According to historical data from the Bureau of Transportation Statistics (BTS), East and Gulf Coast ports still handled 66% of the country's containerized trade in 1981. It wasn't until 1989 that the West Coast took the lead, according to the BTS data.

Data on the East Coast/West Coast split is also compiled by the McCown Report, covering the country's top 10 ports. According to McCown, the West Coast's share of imports had risen to 65% by 2000. Los Angeles/Long Beach handled 4.9 million twenty-foot equivalent units that year, more than triple New York/New Jersey's volumes.

At the turn of the century, Los Angeles/Long Beach had clearly taken the crown. But the contest was far from over.

East Coast claws back market share

American imports from overseas surged and the size of container ships escalated. Between 2000 and 2015, imports to Los Angeles rose 57%. Over the same period, New York/New Jersey container imports rose 113%; those to Savannah, Georgia, by 288%; to Norfolk, Virginia, by 90%; and to Houston by 148%.

In 2015, the West Coast's share of the top 10 ports' imports had pulled back to 57%. Then came the opening of the expanded Panama Canal, allowing larger vessels to transit from Asia to the East Coast, and the gap between the coasts narrowed even further. By last year, the East Coast had a 49% share.

According to McCown, "The transition from East/Gulf Coast ports representing 36.5% of total inbound volume in 1995 to 43.3% in 2015 — the last full year before the expanded Panama Canal opened — was equivalent to an average shift of 34 basis points per year.

"The subsequent change from 43.3% [in 2015] to 48.8% in 2021 was the equivalent of 92 basis points per year, underscoring that a canal allowing container ships more than three times larger is accelerating a shift that will continue."

During a 2020 interview with American Shipper, Deutsche Bank transportation analyst Amit Mehrotra maintained that the pull of the East Coast was a secular trend. "Keep in mind that 60% of the population lives east of the Mississippi," he said. "At the end of the day, if you come into the West Coast, you're going to have to rail a lot of it east, to where the demand centers are.

"With the expansion of the Panama Canal and the port projects on the East Coast that allow for bigger ships, and with the majority of the population in these states, it disproportionately favors the East Coast ports."

The COVID era and what's next

The COVID area has brought more changes. In the first half of 2021, as shippers raced to bring in more cargo, Los Angeles/Long Beach gained favor. Then congestion exploded in Southern California. More cargo shifted to the Panama Canal route. And concerns over the outcome of the West Coast labor negotiations gave another advantage to the East Coast.

In the three months through April, the East and Gulf Coast actually took a slim lead, with a 50.2% share. Even so, Los Angeles/Long Beach remains by far the single biggest gateway, with double the import volume of New York/New Jersey.

Looking forward, McCown believes the East Coast option makes more sense for many importers.

"When I started working at McLean Industries in 1980, the trans-Atlantic trade for U.S. Lines was almost as big as the trans-Pacific trade," he told American Shipper.

"The other big factor [beyond rising Asian imports] that helped the West Coast was the growth of double-stack train service, which allowed the Eastern population centers to be reached faster than all-water service [via the Panama Canal].

"But from a pure cost, emissions and congestion standpoint, today way too many boxes come over the West Coast," argued McCown, who believes that "if you solve just for those three factors and ignore transit time, only around 25% of inbound boxes should come in via the West Coast."

Biden slams ocean carriers ahead of Port of LA speech

Speech may tout victories but president's task force has so far provided mixed results

Ahead of President Joe Biden's planned speech at the Port of Los Angeles on Friday, the White House released a video of the president on a phone call with retailers who are complaining about the high cost of ocean shipping.

"One of the big reasons why prices are going up is the cost of shipping things across the Pacific, in particular," Biden says during the call. "There's only nine major ocean line shipping companies who ship from Asia to the United States. These companies have raised their prices by as much as 1,000%."

The video ends with Biden calling on Congress to pass the Ocean Shipping Reform Act, which the U.S. House of Representatives is expected to vote on as early as next week. "I expect it to pass. And I'm looking forward to signing it," Biden states.

In his upcoming speech, Biden is expected to recount efforts by his administration to ease the supply chain disruption and high shipper costs that have dominated much of his tenure.

"President Biden must assure that the international ocean carriers, as a condition of bringing imports from China and other countries into the US through US ports (and announcing billions of dollars of profit each quarter), provide dependable and affordable ocean transportation for our agriculture exports to the world," Peter Friedmann, executive director of the Agriculture Transportation Coalition, told FreightWaves in anticipation of Biden's speech.

Biden has so far devoted a significant amount of time in office to dealing with supply chain disruption. The following is a recap of some of the major actions the administration has taken to alleviate supply chain disruptions at the ports.

24/7 operations

When the ports of Los Angeles and Long Beach expanded their gate hours in September, it provided a toehold for companies like Walmart, FedEx and UPS to follow suit in October with plans to expand their container operations at the ports as well — part of the administration's effort to unclog the massive container bottleneck at the country's largest container terminal complex.

The effort was aided by ocean carriers such as CMA CGM, which opened its terminal gates to 24/7 operations and offered a $100-per-container incentive to intermodal truckers and importers to move containers off its dock within eight days. And railroads have been operating 24/7 port operations for years.

But because of the number of other players connected to port operations — including warehousing and drayage trucking and port labor — moving to 24/7 operations was a steep hill to climb.

"I think in concept when you have huge volumes, [going 24/7] sounds like a very good solution," said Tim Lynch, senior director at the law firm Morgan & Lewis, speaking at a recent meeting of the National Industrial Transportation League.

"The difficulty there is, while there were circumstances where longshoremen were there ready to load or unload, the trucks weren't coming in because the drivers were out of hours or they couldn't find chassis. So just having the ports operating 24/7 without the rest of the supply chain accommodating that, it's sort of a hollow victory."

Pop-up container yards

In November, the Biden administration helped fund the Georgia Ports Authority's emergency overflow "pop-up" container storage lots at sites miles from the actual port areas by redirecting $8 million in federal funds.

The lots proved successful in alleviating congestion at the Port of Savannah, and the port task force, along with the U.S. Department of Agriculture and the Port of Oakland, replicated the concept earlier this year with funding for a new 25-acre container staging area near the port reserved specifically for agriculture exports.

In addition to paying 60% of the cost to start up the latest "pop-up" container yard, USDA is providing shippers that use the yard a $125-per-container subsidy to offset the logistical costs of getting the containers there. A similar partnership with USDA was created in March at the Northwest Seaport Alliance, which includes the ports of Seattle and Tacoma, with subsidies to shippers of $200-$400 per container.

"Based on what I'm hearing, these have been useful," John Butler, president and CEO of the World Shipping Council, told FreightWaves. "There's always a question of scale, because you can only handle only so much cargo that way. But it has effectively been deployed by the administration and I think it's making a difference."

Infrastructure funding

Biden's transportation chief, Pete Buttigieg, visited the ports of Los Angeles and Long Beach in January, using the visit to promote record-setting cargo volumes while vowing to address the potential for anticompetitive behavior within the ocean container markets.
He also promoted historic investments in maritime infrastructure, from funding authorized within the $1.2 trillion infrastructure bill signed by the president in November.

"As long as the pandemic persists, as long as we are making up for decades of past disinvestment, we are going to see impacts on shipping times and shipping costs," Buttigieg stated.

To counter those impacts, Buttigieg cited a $52.3 million grant to support an on-dock rail project at the port of Long Beach. The grant was part of a $241 million package of 25 port projects awarded in 19 states.
In May, DOT announced the most annual funding from its Port Infrastructure Development Program — $684 million — in the department's history.

"[Those investments] take time to implement; they're a long-term set of tools," Butler said. "That was a bipartisan effort, and I think it's one of the most appropriate ways the federal government can address these supply chain issues. We know we're behind on maintaining and expanding infrastructure, and you can't have efficient end-to-end supply chains unless we keep up."

Freight Logistics Optimization Works

To build on efforts and improve the flow of goods through physical infrastructure, the White House announced in March a Department of Transportation data-sharing effort called Freight Logistics Optimization Works (FLOW), a pilot freight data exchange aimed at improving the digital infrastructure connecting the supply chain.

The pilot — which administration officials hoped would result in a proof-of-concept freight data exchange by the end of the summer — had 18 initial participants, including ports, shippers, trucking, warehousing and logistics companies.

"These key stakeholders will work together with the Administration to develop a proof-of-concept information exchange to ease supply chain congestion, speed up the movement of goods, and ultimately cut costs for American consumers," a White House fact sheet stated.

Since the concept's launch, however, little progress has been announced publicly — but there has been skepticism and concern.

A month after FLOW was announced, Sen. Roger Wicker, R-Miss., sent a letter to Buttigieg asking for more information on how FLOW would operate, and the extent to which the government would be involved in overseeing it.

"Any work to enable greater efficiencies in the freight transportation system must be usable for the enormous number of stakeholders who work in, and rely on, the freight network," Wicker wrote. "To be successful, the FLOW initiative should adopt a balanced, open-minded approach that incorporates feedback from a broad array of transportation stakeholders and shippers."

Trucking leasing task force

The administration's multifaceted Trucking Action Plan unveiled in December to bolster the trucking sector includes a Driving Good Jobs initiative launched jointly by DOT and the Department of Labor. The goal of the initiative is to raise the bar not only on driver recruitment but on retention — including studying the issue of truck driver pay and unpaid detention time.

It also directs the Federal Motor Carrier Safety Administration to create a truck leasing task force, applicants for which FMCSA began accepting in April. Tasks that the law requires the panel to accomplish include reviewing the agreements available to drayage drivers at ports.

Port drayage has been a sector of trucking generating a high number of complaints about predatory leasing practices.

“The Truck Leasing Task Force represents one of the important actions the administration is taking to improve the trucking industry,” Buttigieg said in announcing the program. “America’s truck drivers need and deserve fair leasing agreements, and this work will help ensure that leasing is aboveboard.”

Hear it again: Congress looks to fix supply chain kinks, including in the Northwest

JUN 15, 2022 at 4:10 PM

KUOW/NPR: KUOW - Hear it again: Congress looks to fix supply chain kinks, including in the Northwest

The Pacific Northwest, like the rest of the world, is dealing with supply chain issues.

An increased demand for foreign goods, combined with a worker shortage, and a lack of port terminals and shipping containers is making it more expensive and time-consuming to move products.

Congress just took a step aimed at ironing out one slice of that mess: It's The Ocean Shipping Reform Act - a bill that passed with bipartisan support yesterday in the House of Representatives, and is now heading to the President's desk.

Anderson Hay and Grain in Ellensburg grows hay — as you might expect. Around 80% of the company's sales come from the export market, shipping hay around the world to feed cows, horses, and other livestock.

But in recent years, that's gotten harder.

"A lot of priority has been given to ship empty containers back to Asia quickly," said Mark Anderson, the CEO of Anderson hay. "It's still incredibly profitable for the carriers, even if they're anchored, waiting in line to get unloaded. So that's been incredibly unusual and difficult."

Last year, the Port of Seattle saw a 126% increase in wait times for ships.

That situation means goods being imported into the US are coming in at a slower pace and are more expensive. Agriculture exporters like Anderson are facing price hikes and shipping companies that don't want to load their containers with more expensive exports.

Anderson said the cost of shipping has, in some cases, doubled for him within the last five years. Other companies just aren't shipping to where his customers are anymore.

"We've worked for years to develop a lot of these markets," Anderson said. "And to not be able to service them competitively is really difficult."

Congress has proposed a fix for the exporting problems people like Anderson are facing: A new law called the Ocean Shipping Reform Act.

The law would boost the authority of the Federal Maritime Commission by giving the agency more regulatory power. It would also restrict shipping companies' ability to send empty containers to other countries to be refilled, allowing American exporters to be more competitive in the international market.

A version of the bill passed with bipartisan support in the Senate last week, and similar legislation passed in the House last year. Once the differences in those bills are hammered out, it's expected to eventually wind up on the President's desk to be passed into law.

"Right now, the supply chain isn't working," said U.S. Senator Maria Cantwell (D-WA) on the Senate floor. "Our ports have been clogged, shipping companies have struggled to keep up with demand, and the costs of American exporters, who are trying to get hay, milk, and apples to the global market, have gone through the roof."

But opponents say that the bill won't ease the supply chain crunch.

The World Shipping Council, which represents the ocean shipping liner industry, argues that the law threatens to "make existing congestion worse."

The groups said Congress should be "making investment in port infrastructure" instead.

Sen. Cantwell said that the government is already making that investment through the infrastructure bill, which was signed into law in November.

US politicians maintain the Ocean Shipping Reform Act is going to help solve our supply chain issues. Meanwhile, the World Shipping Council says the proposed law won't solve the real problems the industry is facing.

So, who's right?

Everyone, and no one, said Bindiya Vakil. Vakil is the CEO and cofounder of Resilinc, which provides supply chain monitoring, resilience mitigation, and risk management services.

She said there's no silver bullet for fixing the supply chain. In her view, it will take a collaborative, global effort to solve the issue; the Ocean Shipping Reform Act may help, but it's only one part of a larger system that needs improvement.

PORT OF TACOMA

OFF-DOCK CONTAINER SUPPORT FACILITY ALTERNATIVES ANALYSIS

APPENDIX B: PIERCE COUNTY ASSESSOR & RESEARCH DATA

Pierce County Assessor & Research Data														
Parcel No.	Size (ac)	Assessed Value	No. of Bldgs	Bldg (SF)	Bldg Type	Low Vol RR	Dead-end RR	Land Use	Use Code	Business Use	Business Name	No. of Bus.	Port-Owned	Notes
Alternative 1														**0.38 mi. to entry gate**
6965000350	7.64	$ 4,697,700		0	n/a	1	0	Industrial	6600-CONTRACTOR SERVICES	Storage/Container Support	Port short-term tenant	1	Yes	RR bisects Alternative 1 adjacent to and S of this parcel.
6965000400	8.36	$ 5,121,700		0	n/a			Industrial	6600-CONTRACTOR SERVICES	Storage/Container Support	Port short-term tenant	1	Yes	
6965000390	3.00	$ 1,832,600		0	n/a			Industrial	6600-CONTRACTOR SERVICES	Undeveloped	n/a		Yes	
6965000380	5.49	$ 3,355,000		0	n/a			Industrial	6600-CONTRACTOR SERVICES	Storage, Transload	Port short-term tenant	1	Yes	
4	24.49	$ 15,007,000	0	0		1	0					3		Total
Alternative 2														**0.60 mi. to entry gate**
0320031033	3	$ 4,431,900	1	24,000	Metal Frame	1	0	Industrial	2400 - Lumber & Wood MFG	MFG, Warehouse, Distribution	Rew Materials/unknown	1	No	Low Vol RR separates middle of Alternative 2
			2	24,050	Metal Frame									
0320036004	1.72	$ 1,270,500	1	2,402	Wood Frame	0	0	Industrial	2400 - Lumber & Wood MFG	MFG, Warehouse, Distribution	Likely same as 032006004		No	
0320036003	3.22	$ 2,331,600		-	n/a	0	0	Industrial	2900-PETRO INDUSTRIES	Propane Distribution	Propane Northwest	1	No	
0320032030	5.23	$ 5,258,700	1	5,138	Metal Frame	0	1	Industrial	5100-WHOLESALE TRADE	Wood/Lumber Recycling/MFG	Recovery 1	1	No	Short dead end/private RR spur
			2	2,400	Wood Frame									
			3	8,880	Metal Frame									
0320032035	4.2	$ 4,326,600		-	n/a	0	0	Industrial	2400 - Lumber & Wood MFG	MFG, Storage	Ryder Used Trucks/unknown	1	No	
0320032039	4.08	$ 4,418,700	1	16,680	Masonry	0	0	Industrial	6310-GEN WAREHOUSING STORAGE	MFG, Recycling, Storage	Legacy Transport Services, GEF	2	No	
			2	50,065	Masonry									
0320032047	0.98	$ 892,900		-	n/a	0	0	Industrial	6310-GEN WAREHOUSING STORAGE	Storage	Same as Parcel 0320032039		No	
7	22.43	$ 22,930,900	8	133,615		1	1					6		Total

Pierce County Assessor & Research Data															
Parcel No.	Size (ac)	Assessed Value	No. of Bldgs	Bldg (SF)	Bldg Type	Low Vol RR	Dead-end RR	Land Use	Use Code	Business Use	Business Name	No. of Bus.	Port-Owned	Notes
Alternative 3														**0.50 mi. to entry gate**
0321353019	0.35	$ 329,400	1	2,600	unknown	0	0	Industrial	2400-LUMBER & WOOD MFG	Office	Liagana Pacific, Inc.	1	No	
0321353018	5.8	$ 6,569,000	1	1,536	Wood Frame	0	1	Industrial	2400-LUMBER & WOOD MFG	MFG, store, distribute building products (moldings, casing, millwork)	Liagana Pacific, Inc.		No	RR spur deadends w/n Alternative 3. RR bisects parcel NW to SE.
			2	19,680	Masonry					Office				
			3	24,942	Wood Frame									
			4	1,984	Wood Frame									
			5	5,768	Wood Frame									
			6	3,360	Wood Frame									
			7	2,600	Wood Frame									
			8	19,200	Wood Frame									
			9	7,700	unknown									Bldg SF determined by aerial image
			10	1,600	unknown									
			11	10,200	unknown									
0321353031	0.89	$ 1,607,000	1	25,584	Masonry	0	0	Industrial	2400-LUMBER & WOOD MFG	Cardboard recycling	Green Planet 21	1	No	
0321353028	0.66	$ 833,400	1	9,880	Masonry	0	0	Industrial	3900-MISC MFG	Environmental Services (waste handling/recycling)	Crystal Clean	1	No	
0321353029	0.34	$ 334,000		-	n/a	0	0	Industrial	6310-GEN WAREHOUSING STORAGE	Driveway			Yes	
0321353027	1.65	$ 2,471,500	1	39,740	Masonry	0	0	Industrial	6310-GEN WAREHOUSING STORAGE	Warehouse, Office, Storage/Warehouse	U.S. Customs, K&M Supply, Port	2	Yes	
			2	6,000	Masonry									
0321353039	3.35	$ 3,804,700	1	45,600	Masonry	0	1	Industrial	8600-MARIJUANA GROW OPERATIONS	Warehouse/Greenhouse	unknown	1	No	RR spur deadends w/n Alternative 3. RR along northern edge of parcel.
0321353040	2.99	$ 2,529,700	1	38,400	Masonry	0	1	Industrial	6310-GEN WAREHOUSING STORAGE	Warehouse	unknown	1	No	RR spur deadends w/n Alternative 3. RR along northern edge of parcel.
0321353026	6.11	$ 7,998,000	1	86,600	Masonry	0	1	Industrial	3900-MISC MFG	Warehosue, Transloading, Logistics	Tri-Pak Inc.	1	No	RR spur deadends w/n Alternative 3 & this parcel. RR bisects parcel from NW to SE.
			2	4,320	Wood Frame					Office				
0321353035	1.98	$ 2,410,000	1	40,000	unknown	0	0	Industrial	5100-WHOLESALE TRADE	MFG, Storage, Distribution of fluids	Pacific Fluids	1	No	Buildings and MFG equipment/tanks.
			2	3,400	Masonry									
0321353034	0.66	$ 882,000	1	6,544	Masonry	0	0	Industrial	6310-GEN WAREHOUSING STORAGE	Lght Industrial MFG, Storage, Distribution	unknown	1	No	
0321353033	0.66	$ 1,158,200	1	7,800	Masonry	0	0	Commercial	6310-GEN WAREHOUSING STORAGE	Warehouse, Distribution, Retail	Tacoma Screw Products	1	No	
			2	720	Metal Frame									
			3	4,800	Metal Frame									
0321353024	0.4	$ 996,800	1	8,400	Masonry	0	0	Industrial	3900-MISC MFG	MFG/Warehouse	unknown	1	No	
0321353022	0.64	$ 1,447,300	1	7,560	Metal Frame	0	0	Industrial	3900-MISC MFG	MFG/Warehouse	Nordlund Boat Company	1	No	
0321353021	0.68	$ 774,000	1	13,504	Masonry	0	0	Industrial	5060-WAREHOUSE CONDO	MFG (machine & welding)	Olympic Machine & Welding	1	No	
15	27.16	$ 34,145,000	29	450,022		0	4					14		Total

Pierce County Assessor & Research Data														
Parcel No.	Size (ac)	Assessed Value	No. of Bldgs	Bldg (SF)	Bldg Type	Low Vol RR	Dead-end RR	Land Use	Use Code	Business Use	Business Name	No. of Bus.	Port-Owned	Notes
Alternative 4														**0.75 mi. to entry gate**
8950000245	43.2	$ 38,553,700	1	43,128	unknown	0	2	Industrial	2400-LUMBER & WOOD MFG	MFG & pressure-treated lumber & poles	Stell-Jones Corp./ MacFarland Cascade	1	No	Bldg SF determined by aerial image
			2	6,400	unknown									Bldg SF determined by aerial image
			3	7,800	unknown									Bldg SF determined by aerial image
			4	9,000	unknown									Bldg SF determined by aerial image
			5	1,500	unknown									Bldg SF determined by aerial image
			6	1,500	unknown									Bldg SF determined by aerial image
			7	1,800	unknown									Bldg SF determined by aerial image
			8	270	unknown									Bldg SF determined by aerial image
			9	100	unknown									Bldg SF determined by aerial image
			10	1,100	unknown									Bldg SF determined by aerial image
			11	35,000	unknown									Bldg SF determined by aerial image
			12	5,200	unknown									Bldg SF determined by aerial image
			13	7,200	unknown									Bldg SF determined by aerial image
			14	66,000	unknown									Bldg SF determined by aerial image
			15	29,000	unknown									Bldg SF determined by aerial image
			16	20,600	unknown									Bldg SF determined by aerial image
			17	19,000	unknown									Bldg SF determined by aerial image
			18	35,000	unknown									Bldg SF determined by aerial image
			19	6,000	unknown									Bldg SF determined by aerial image
			20	1,000	unknown									Bldg SF determined by aerial image
			21	5,000	unknown									Bldg SF determined by aerial image
1	43.2	$ 38,553,700	21	301,598		0	2					1		Total

Pierce County Assessor & Research Data														
Parcel No.	Size (ac)	Assessed Value	No. of Bldgs	Bldg (SF)	Bldg Type	Low Vol RR	Dead-end RR	Land Use	Use Code	Business Use	Business Name	No. of Bus.	Port-Owned	Notes
Alternative 5														**0.37 mi. to entry gate**
6965000520	4.14	$ 528,700	1	620	unknown	0	0	Industrial	5100-WHOLESALE TRADE	Storage, Parking	unknown	1	No	Bordered by RR at E 14th St to north. Bldg SF determined by aerial image.
6965000530	4.31	$ 3,778,500	1	14,818	Masonry	0	2	Industrial	5100-WHOLESALE TRADE	Rail car parts, storage, repair, MFG	Greenbrier Rail Service	1	No	
			2	12,400	Wood Frame									
6965000543	3.41	$ 3,574,800	1	20,000	Masonry	0	0	Industrial	6390-RENTAL EQUIP AUTO TRUCK	Penske truck rental	Penske Truck Rental	1	No	
			2	10,800	Canopies									
6965000544	4.35	$ 5,074,500	1	50,000	Masonry	1	1	Industrial	6310-GEN WAREHOUSING STORAGE	Industrial Lght MFG	PABCO Roofing Products	1	No	1 Low Vol RR borders south side
			2	11,964	Wood Frame					Material Shelters				
			3	8,042	Wood Frame					Material Storage Sheds				
			4	5,256	Wood Frame					Office Building				
			5	1,196	Wood Frame					Shed - Equipment				
			6	10,240	Wood Frame					Gen Warehouse				
			7	5,700	Wood Frame					Gen Warehouse				
6965000550	10.86	$ 23,712,800	1	16,160	Wood Frame	0	2	Industrial	3900-MISC MFG	Roof Product MFG, storage & distribution	PABCO Roofing Products		No	1 Low Vol RR border north side, counted above
			2	28,800	Wood Frame					Storage Warehouse				
			3	25,195	Metal Frame					Industrial Lght MFG				
			4	18,560	Metal Frame					Industrial Lght MFG				
			5	6,635	Metal Frame					Industrial Lght MFG				
			6	5,360	Metal Frame					Industrial Lght MFG				
			7	4,700	Metal Frame					Industrial Lght MFG				
6965000561	2.88	$ 2,853,500	1	18,260	Wood Frame	0	0	Industrial	3300-PRIM METAL INDUSTRIES	Metals recycling	Tacoma Metals Recycling	1	No	
			2	1,050	unknown									Bldg SF determined by aerial image
			3	1,200	unknown									Bldg SF determined by aerial image
			4	500	unknown									Bldg SF determined by aerial image
			5	500	unknown									Bldg SF determined by aerial image
6965000562	2.07	$ 2,257,500	1	8,240	Masonry	0	0	Industrial	3400-FAB METAL PRODUCTS	Metals recycling	Tacoma Metals Recycling		No	Bordered by E 19th St to south
			2	3,000	Wood Frame									
			3	1,647	Metal Frame					Modular Office				
			4	1,050	Metal Frame									
			5	2,800	Metal Frame									
			6	1,440	Metal Frame									
			7	1,000	Metal Frame									
7	32.02	$ 41,780,300	31	297,133		1	5					5		Total

PORT OF TACOMA

OFF-DOCK CONTAINER SUPPORT FACILITY ALTERNATIVES ANALYSIS

APPENDIX C: COST ESTIMATE FOR DEMOLITION OF EXISTING BUILDINGS

Rough Order of Magnitude (ROM) Cost Estimate for Demolition of Existing Buildings

Methods:

Utilized 2019 demo contractor cost of $11.25/SF, escalated to 2023 using CPI (2017-2021 CPI sourced from the U.S. Bureau of Labor Statistics, Western Information Office, for the Seattle area, and 7% assumed for 2022-2023).
Calculated building demo contractor cost based on SF of buildings determined from tax assessor records and/or aerial imagery.
Applied the following soft costs to the demo contractor cost to calculate a ROM Demo Cost Estimate for each alternative: 12% A&E, 15% staff/PM, 10% sales tax, 50% contingency.

Assumptions:

This is not a budget. This is a rough order of magnitude cost estimate for comparison of alternatives only and is based on limited available data and the assumptions provided.
Does not include cost esclation past 2023.
Does not include regulated building materials (RBM) survey, abatement, or disposal which can add significant costs to the demo.
Only includes an estimate for demo of buildings based on an estiamte of buildings assocated with parcels for each alternative. An extensive survey is required to determine actual area of buildings and demo requirements.
Demo costs vary significantly due to siding material, framing material, equipment, number of stories, square footage, RBM abatement, recycle fees, dump fees, etc. and are not specifically accounted for in this estimate.
Does not include demo of footings, foundations, equipment, tanks, pavement, utilities, railroads, building/site contents, or other structures or infrastructure.
Does not include other land preparation costs such as utilities, mitigation, or repairing inadequate subgrade.
Does not inlcude due diligence, environmental investigations, cleanup/remediation costs, or other ancillary costs.

Est. Demo Cost/SF Adjustment					
Annual C.P.I. (%)		**1.40%**	**7.60%**	**7.00%**	**7.00%**
Year	**2019**	**2020**	**2021**	**2022**	**2023**
Est. Demo Cost/SF	11.25	11.41	12.27	13.13	14.05

Building Demo Rough Order of Magnitude (ROM) Cost Estimate					
	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Contractor Demo Cost/SF	14.05	14.05	14.05	14.05	14.05
Est. Bld SF	-	133,615	450,022	301,598	297,133
Est. Contractor Cost	$ -	$ 1,877,291	$ 6,322,809	$ 4,237,452	$ 4,174,719
A&E Cost (12%)	$ -	$ 225,275	$ 758,737	$ 508,494	$ 500,966
Staff/PM Cost (15%)	$ -	$ 281,594	$ 948,421	$ 635,618	$ 626,208
Sales Tax (10%)	$ -	$ 187,729	$ 632,281	$ 423,745	$ 417,472
Contingency (50%)	$ -	$ 938,645	$ 3,161,405	$ 2,118,726	$ 2,087,359
Demo Subtotal	$ -	$ 3,510,534	$ 11,823,653	$ 7,924,035	$ 7,806,724
Assessed Value	$ 15,007,000	$ 22,930,900	$ 34,145,000	$ 38,553,700	$ 41,780,300
Preliminary Total	**$ 15,007,000**	**$ 26,441,434**	**$ 45,968,653**	**$ 46,477,735**	**$ 49,587,024**