Port of Astoria - Capital Facilities Plan Narrative

INTRODUCTION

Completion of the Capital Facilities Plan (hereafter, “CFP”) by the Port of Astoria represents a major strategic undertaking that has not been completed in many years. Along with the recently completed Strategic Business Plan (hereafter, “SBP”), these two documents represent a major turning point in the Port's recent history. Working together and in support of each other, both documents provide critical direction and focus at a time when such highly focused efforts are necessary to maintain the Port's role as an economic driver for the NW Oregon region and the state.

The purpose of this prefatory section is the following:

- provide an overview of the CFP drafting process
- describe past and current efforts to financially support operations and maintain infrastructure:
  - rate review
  - new development
  - maintenance process improvements

I. CFP Drafting Process

A. Narrative - Cost Estimating - Phasing - Cost Estimation

Initiation of the Capital Facilities Plan (hereafter, "CFP") commenced with a project narrative draft written by Matt McGrath, Deputy Director; he has been with the Port for almost seven years and is therefore very familiar with all aspects of Port operations. The narrative defined and described the projects in detail. Appropriate projects were then split into phases - with estimated costs assigned to each phase. Additionally, projects appropriate for known grant programs were assigned estimated amounts for potential grant funding.

B. Planning

The planning process employed a Planning Tool (hereafter, "Tool"), developed by an outside consultant, with the capacity to place each project within various time frames. Mr. McGrath accomplished the initial project prioritization[1] in accordance with the standards laid out by the Strategic Business plan (hereafter, "SBP"). The Tool's *input* is a manual prioritization - or sequencing - of all projects and project phases in accordance with the resulting

---

[1] The projects were prioritized according to the following criteria

1 Public Safety: projects with the most significant safety concerns were promoted to the top.
Examples: pier 2 west, pier 2 east

2 Environmental Compliance: non-routine or unique projects that implicate the most serious environmental concerns.
Example: AOC4, pier 3 stormwater system

3 Maintain Revenue: projects that must be completed in order for the Port to maintain existing revenue streams and tenants.
Example: pier 2 west, pier 2 east, dredging, pile replacement, road and utility replacement

4 New Revenue: development projects that bolster the Port's financial condition through creation of new revenue sources.
Example: pier 3 boatyard expansion, RV development park

5 Routine Maintenance: projects that address longevity of Port assets and are not currently critical to maintain the function or safety of the asset.
Example: asphalt seal coating, utility upgrades

6 New Projects: projects that are neither essential nor routine but will improve the Port’s overall infrastructure functionality and/or appearance.
Example: west marina security gates, pier 1 bioswale, airport tetrahedron

prioritization. Taking into account adjunct inputs such as projected annual net income, potential grant & other non-Port funds, and possible loan funds, the Tool then calculates and maps out the time frame into which each project will fall given the projected available funds. The *output*, then, is a time map of all projects. It is important to note that the Tool only accounts for funding; it does not account for other variables that may affect the exact timing of a particular project (permitting, contracting rules, grant fund timing, etc.).

C. Capital Facilities Plan Final Product

The time map served as the basis for the chart that became part of the CFP. In addition to totals of the estimated costs for each time period, the chart includes brief notes on how each project is justified by the SBP, simplified project descriptions, and the project number to allow for easy cross-reference between the Narrative and Chart components of the CFP. Funding and grant notes were also included.

II. Financial Independence

A. Port Rate Review and Modification

1. Lease Re-Negotiations

In accordance with the SBP, the Port is currently in the process of re-negotiating numerous leases across Port properties; Pier 2 and airport leases are prominent among them. These leases were executed prior to 2001 and include many tenant-favorable terms that were intended to attract new business and drive job growth - below-market lease rates and decreased tenant-maintenance obligations being among them. Renegotiated leases will both increase lease rates and shift financial responsibility for certain maintenance items to the tenants. Additional funds from these modified terms are a critical component of the goal to make the piers self-sustaining. Actions outlined below will also contribute to this goal.

2. Marina and Boatyard Rate Increases

Historically, the Port has pulled revenue from its piers to subsidize other operations - particularly the marina, the boatyard and the airport. However, fee structures for the marina and boatyard have been steadily increased over the past five years. Currently, both are now fully supported by their own revenues and no longer need to be subsidized. Therefore, pier revenues that were historically siphoned off to these operations may now be funneled directly into the piers themselves.

3. West and East Mooring Basin Moorage Rate Increases

In addition to the past rate increases described above, the Port will be implementing new rate structures at both mooring basins over the next three fiscal years (21-23) to increase rates for moorage.

4. Airport Lease Rates

The Port is currently in the process of revising its airport ordinance to increase rates that have not changed in over a decade; this will also include automatic CPI increases every year.

5. Rates' Review Processes

No single review process would suffice to maintain all Port rates at levels that reflect current market conditions. The Port's varying lines of business exist in different markets and may be constrained by different industry and government regulatory regimes. Below is a summary of the separate processes the Port employs to maintain fair, equitable, and competitive rates:

• Land and other Real Estate Lease Rates. These rates have historically been governed by lease negotiations conducted by Port staff; these rates have never been governed by the Commission. It is the intention of the Port to continue such a policy so that these rates may be more responsive to current market conditions. Further, lease agreements generally contain CPI and/or rent adjustment clauses that provide another mechanism by which lease rates will stay current.

• Port Tariff. The Tariff is reviewed by staff annually and governs rates for moorage, cargo security, ILWU labor, and associated sub-categories of terminal expenses. Further, the Port is a member of the North West Marine Terminal Association (NWMTA); this industry organization provides rate increase fairness and consistency across all ports in the northwest by publishing annual CPI and other fee increase recommendations. Generally, NWMTA's recommendations are followed. Although the Port is free to disregard these recommendations, the NWMTA's review process provides an additional layer of rates-review that provides further corroboration for the Port's determinations on these fees - and further assurance to the State that the Port has processes in place to address Port rates and fees.

• Marina, Boatyard Airport Rates. Re-evaluation and increase of marina, boatyard and airport rates must be passed via Port Ordinance through the Commission. The current revision (see above) will abrogate several previous rate Ordinances and consolidate all such rates into one Ordinance, allowing for easier future rate review and maintenance. The new Ordinance will have language requiring a maximum extent of time before the rates must be reviewed again.

B. New Development

In tandem with the above rate increases at the airport, the Port executed a tri-partite Non-statutory Development Agreement with the City of Warrenton and the Scoular Company to govern the development of a fish meal processing plant at the Airport Industrial Park. Approved by the City of Warrenton on Dec 10, 2020 - with construction set to begin in early 2021 - this initial Airport Industrial Park development will accomplish three purposes: 1) drive the airport sewer infrastructure project (Project 15), which will, among other ends, solve stormwater infiltration and intrusion issues at the airport, 2) bring in a new source of revenue to the airport, and 3) provide capacity for, and incentive to, other major tenants' subsequent development at the industrial park (further increasing airport revenue). The airport rate increases and subsequent development opportunities will cement the financial independence of the airport.

C. Maintenance Process Improvements

1. Comprehensive Information Source

The Port's ability to finance operations and maintain its infrastructure depends on more than just increased revenue; several factors must work together in a synergistic manner to produce such success. One such significant factor is timely and comprehensive information regarding the current condition of all assets and their sub-components. The Port has historically lacked such data and this deficiency contributed to the now-critical deferred maintenance issues. The Port corrected this deficiency by initiating a three-year Geographic Information System ("GIS") development plan in the spring of 2016. The Port's customized GIS system went live in the spring of 2019 and continues to be utilized by operations and maintenance staff daily. Each asset component that is replaced or repaired is now entered into the GIS database, including the date the component was replaced, component specifications, identification of replacement personnel, and other relevant data. Further, subsequent component inspections will be utilized to update the components' existing condition and remaining life expectancy. This database is the critical component on which the Port can build a comprehensive and sustainable maintenance plan for all properties. GIS, in turn, provides a critical tool for the Port to demonstrate its ability to maintain an asset once improved. As the GIS database grows and these costs can be predicted with much greater accuracy, maintenance costs become verifiable. Verifiable costs + [already] verifiable budget projections provide the necessary foundation to demonstrate the ability to maintain Port infrastructure.

2. Maintenance Component Improvements

As a result of much-improved permit procurement processes and marked progress in Port-staff expertise in permitting, the Port will be able to - as just one example for purposes of this sub-section - use HDPE posts on the East Basin Causeway instead of untreated timber (as it has in the recent past). HDPE posts are unlikely to require replacement for decades while the untreated timber degraded quickly over the course of several years. With the HDPE, routine maintenance of the Causeway is then limited to inexpensive components such as broken deck boards, railing, etc. This is just one example of Port success in significantly reducing maintenance costs. This, in turn, enhances the Port's ability to finance operations and maintain infrastructure.

III. Summary

The above narrative has outlined several major developments:

- lease re-negotiations
- marina rate increases that have made the marina self-sustaining
- boatyard rate increases that have made the boatyard self-sustaining
- airport rate increases that contribute to the airport's financial autonomy
- airport industrial park development that will strengthen the airport's financial independence

These accomplishments stand on their own as significant progress. In addition, they also contribute to the major goal of making the piers financially independent. As discussed, pier revenue has historically been siphoned off to non-profitable business centers. Now that those business centers are financially autonomous, pier revenue will be re-directed to pier repair and maintenance. As Pier 2 is the most important infrastructure repair currently needed, the

aforementioned progress outside of Pier 2 will serve as a vital contribution not just to the overall health of the Port, but to the Pier 2 seafood cluster in particular.

Under the salutary influence of these efforts and accomplishments, the Port is well positioned to move forward and execute its new Capital Facilities Plan. The direction provided by the CFP will focus the Port's renewed efforts and build upon recent success. The SBP and the CFP will be reviewed every five years to ensure these two documents remain current and relevant. Further, the CFP is just the tool needed right now as the Port prepares to undertake an aggressive grant pursuit strategy in support of the CFP.

PROJECT LIST

1. 413 Gateway Improvements

Description

Once home to the Oregon State Police and Shooting Stars Day Care, the 413 Gateway Building is in need of maintenance and upgrades. Certain exterior components must be replaced to ensure the long-term viability of the structure. Interior upgrades will be addressed once a tenant is secured and the tenant's needs are known.

Relation to SBP[2]

Justification for all projects in this Capital Facilities Plan is guided by the fundamental rule (hereafter, the "Rule") identified on page 13 of the Strategic Business Plan (SBP):

> *Going forward, the Port of Astoria will be adhering to the following guiding principles when implementing its Strategic Business Plan: . . . Projects that protect the Port's revenue sources (infrastructure repairs / improvements) or create new sources of revenues take priority—except for projects that address safety, security and/or environmental issues.*

[2] As the Port is fully committed to projects that are consistent with the Strategic Business Plan (hereafter, "SBP"), each project in this Capital Facilities Plan will contain a section entitled "Relation to SBP." The purpose of this section is to make the connection to the SBP explicit – to explain why the particular project supports, and is consistent with, the SBP.

In all discussion throughout the CFP, protection and/or creation of revenue is assumed to be a priority that warrants the inclusion of a project in this document. Other Guiding Principles implicated by a project will be noted where relevant. All page references within the 'Relation to SBP' section of each project description refer to the page number in the Strategic Business Plan.

As to the current project, lease revenue is the largest revenue center (pg 11); therefore, preservation of the real estate that supports this revenue stream is a high priority. This project preserves Port-owned real estate and therefore supports the lease revenue stream. "Gateway" projects (improvements to Port-owned real estate on Gateway Avenue) are grouped together and identified as Maintenance Needs (pg 22); 413 Gateway is within this group. This building has been a consistent source of revenue for the Port; delay on the exterior maintenance presents a risk of loss of this reliable source of lease revenue. Maintenance of Gateway projects is also listed as a Critical Issue under the Situational Analysis (pg 39).

Funding Notes

Many of the projects throughout the Capital Facilities Plan will be financed primarily by the Port. There are various reasons for this:

- the project does not fit within any known grant programs (given the thousands of grant programs available, this conclusion is subject to change with further research)
- for various reasons, the project must commence soon; given the general exclusion of pre-award costs, it is not feasible to apply to a grant program for these projects
- the project cost is too low to warrant commitment of the necessary resources to apply for *most* grant programs

For these projects, there is no need for funding notes as the Port will simply include and incorporate these projects into the annual budget process. Thus, the primary source of funding for these types of projects is the Port.
It is anticipated that this project will fall into that category.

413 Gateway Renovations				
Component	**Action**	**Existing**	**New**	**Estimated Cost**
Roofing	Replace	Asphalt Shingle	Asphalt Shingle	$25,000.00
Siding	Replace	Vinyl	Fiber Cement	$38,000.00
Windows	Install new; replace damaged			$1,800.00
Paint	Exterior			$8,000.00
			Total:	**$72,800.00**

2. 422 Gateway Building Upgrades

Description

Renovations to this structure began in 2016. The Port boosted those efforts in 2019 in response to an opportunity to increase lease revenue by leasing the then-current Port administration offices in the Pier One building; the necessary interior renovations were completed and Port staff returned to this building in December of 2019. To date, the Port has completed the following renovations:

- roof replacement w/25-year TPO
- replacement of the east awning support
- tear out and installation of the east entrance deck
- renovation of prior Commission Chambers
- renovation of Suite 100 (Port Offices, including Commission Chambers)
- renovation of Suites 120, 150, 160 & 170
- installation of fiber cement siding on northeast corner of building
- upgraded exterior LED lighting

Due to long-deferred upgrades and the need for modernization, retaining the marketability of this property depends on a number of projects:

422 Gateway Renovations				
Component	**Action**	**Existing**	**New**	**Estimated Cost**
Siding	Replace	Vinyl	Fiber Cement	$45,000.00
HVAC	Replace			$12,500.00
Bathrooms	Renovation			$25,000.00
Windows	Replace damaged			$8,500.00
Paint	Interior and Exterior			$35,000.00
East Foyer	Renovation			$20,000.00
West Foyer	Renovation			$10,000.00
2nd Floor Suites	Remodel Suites			$35,000.00
2nd Floor Common Areas	Renovation			$15,000.00
			Total:	**$206,000.00**

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, preservation of the real estate that supports this revenue stream is a high priority (see 'Relation to SBP' under Project 1). This project preserves Port-owned real estate and therefore supports the lease revenue stream. "Gateway" projects (improvements to Port-owned real estate on Gateway Avenue) are grouped together and identified as Maintenance Needs (pg 22); 422 Gateway is within this group. This building has been a consistent source of revenue for the Port; delay of the maintenance needs presents a risk of loss of this reliable source of lease revenue. Maintenance of Gateway projects are also listed as a Critical Issue under the Situational Analysis (pg 39). The itemized upgrades are all necessary to preserve the marketability of this building and attract future tenants – not to mention the preservation of Port administration offices, which are located herein.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

3. 426 Gateway Lot

Description

The Port Maintenance Shop is a 4,000 sq ft building on the northeast corner of Portway Drive and Hamburg Avenue. The lot directly south of the shop is vacant and could be developed to meet several different needs. One possibility is to double the size of the existing maintenance shop

by adding another 100’ x 40’ steel building in the vacant lot to the south. Another is to construct a small office building, with adjacent parking, within the 7,000 sq ft lot.

426 Gateway Lot - Estimated Project Costs			
Component	**Sq Ft**	**Cost per Sq Ft**	**Total**
Steel Building	2,000	$40.00	$80,000.00
Concrete	2,000	$4.50	$9,000.00
Asphalt	5,000	$3.00	$15,000.00
Landscaping			$19,000.00
Permitting			$1,040.00
		Total	**$124,040.00**

426 Gateway Lot - Estimated Monthly Rents			
Component	**Sq Ft**	**Cost per Sq Ft**	**Total**
Parking	5,000	$0.05	$250.00
Office Space	2,000	$1.25	$2,500.00
			$2,750.00

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, construction of new real estate that supports this revenue stream is a high priority (see ‘Relation to SBP’ under Project 1). The ‘Office’ option of this project creates new Port-owned real estate and therefore supports the lease revenue stream. Addition of an office-type structure of this size and purpose would add a significant source of revenue and is therefore a priority.

At the time of drafting, addition of port shop space is not a priority due to reduced maintenance staff. The existing facility is sufficient. A significant change in circumstances would be required to promote the shop-space-addition option to an elevated priority.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

4. AIP 26 Apron Phase 2

Description

Due to COVID-19 and the passage of the CARES Act, Phase 2 of the AIP 26 Apron Improvements will be a 100%-funded grant with no matching requirement from the Port. The grant was initially estimated at $3,450,000 with a 10% match requirement. The reduction of the grant amount is due to the lowest qualified bid being well below the programmatic estimate, though the scope remains unchanged:

Administrative	$10,000
Engineering Services During Construction	$294,200
Construction	$2,077,15
Total	$2,381,352

Construction on the project is scheduled to begin in the spring of 2021 and completed before the end of the calendar year.

Relation to SBP

FAA Airport Improvements are an identified Maintenance Need (pg 23). Maintaining Asset Infrastructure is identified as a Critical Need (pg 19); the airport Apron is a critical component of the airport's infrastructure and is therefore a priority. The airport is a Key Asset that must be available for the district's economic development (pg 24); this project preserves the basic airport infrastructure. This project supports statewide planning goal 12 - Transportation (pg 36). The project is also consistent with the Statewide Port Strategic Plan, which calls for a focus on airport maintenance (pg 37). This project ameliorates one of the identified Weaknesses (lack of funds for airport maintenance to support future airport operations (pg 38)). Renovation of Port Infrastructure is a Critical Issue (pg 40). As matching funds will not be required for this project, the listed Critical Issue of loss of state matching funds (pg 41) is obviated; thus, it is all the more important for this project to move forward as scheduled. Finally, this project is necessary to maintain operational functionality of the airport, which is one of the Property and Infrastructure Goals (pg 48).

Funding Notes

This project will be financed fully by FAA and ODA.

5. Airport Master Plan

Description

The current Airport Master Plan was last completed in 2008 and is due for renewal in 2022. The necessary revision work is estimated to require $450k - with $300k of that being funded by FAA Non-Primary Entitlement (NPE) funds. The remaining $150k could be funded by: 1) applying for a COAR grant that would provide up to 7.5% of the cost of the plan, or 2) working with the FAA and other airports to essentially "trade" an additional $150k of NPE funds from another airport in exchange for giving up $150k of future Port NPE funds eligibility.

Relation to SBP

This project is explicitly identified as an Action Plan item under Property and Infrastructure Goals (pg 49). Completion of this plan is a mandatory pre-requisite to FAA grant funding,

and is therefore a high priority to the future of the airport. This project is already identified and listed as part of the current Capital Improvement Plan (CIP) for AST (FAA designation for the airport).

Funding Notes

The Port intends to apply for a COAR grant from ODA for the balance of the funding needed (see 'Description' above). The secondary option is to trade with other airports, as mentioned, to gain the additional 150K. If neither prove fruitful, the Port will pay the 150K from its own funds.

6. AOC4

Background

In December of 2001, the Port of Astoria was issued a notice by the Oregon Department of Environmental Quality of a LNAPL (light non-aqueous phase liquid) groundwater contamination at the south end of Slip 2. This contamination was a result of leaks along conveyance lines that carried oil and gas to vessels on the Port's Pier 2. DEQ's determination was that the Port of Astoria was responsible for 50% of the cleanup costs. A site remedial investigation/feasibility study (RI/FS) was completed pursuant to DEQ Order (ECSR-NWR-01-11, effective December 14, 2001) between the Port of Astoria (Port), McCall Oil and Chemical Company (McCall Oil), Harris/VanWest (now Harris/Flying Dutchman), Niemi Oil Company (Niemi Oil), Chevron-Texaco, Shell Oil Company (Shell), Delphia Oil Company (Delphia), and Qwest. The AAW site contains ten former properties with historical petroleum use that contributed, or may have contributed, to contamination at the site. The DEQ's Record of Decision ("ROD") was issued to the Port of Astoria in June 2019 after nearly two decades.

Project Description

The project consists of the *construction* of an absorbent marine "mattress," which will absorb LNAPL contaminants over time, and *monitoring* of the site for the next thirty years.

Current Status

Since 2009, the Port has spent $695,972.03 on testing and analysis (water, soil and air), environmental engineering, attorney's fees and coordination with DEQ (numbers good as of May 18, 2020). These costs include design engineering and project estimates but do not include deferred Port attorney's fees from Landye Bennett which total close to $1 million and must be paid on settlement.

AOC4: Maul Foster Preliminary Cost Estimates 3

Total Estimated Remedy Design, Permitting, and Construction WITH 30% CONTINGENCY	$3,357,000
Total Monitoring, Operation, Maintenance and Administration WITH 30% CONTINGENCY	$1,801,000
Total ROD Defined Remedy Cost	**$5,158,000**

On April 7, 2020, the Port Commission approved and executed a draft settlement with McCall Oil and Chemical Corporation and Exxon Mobil Corporation. This settlement outlines the terms of a collective settlement in which the Port will receive $2.9 million from both McCall Oil and Exxon Mobil under the following terms:

- McCall Oil: two installments of $775k. The first installment is due upon the entry of the anticipated DEQ Consent Order (late spring/early summer 2020) and the second installment is due upon DEQ's approval of the Port work plan to comply with the DEQ's ROD.

- Exxon Mobil: one installment of $1.35 million due upon the entry of the DEQ Consent Order.

The Port is awaiting issuance of DEQ's Consent Order, which will provide final project directives. The Port had expected to receive the Consent Order in late spring/early summer 2020; as of drafting of this plan, the Consent Order has not been received. Once it is received, the Port will begin the permit process and development of an RFQ (Request for Qualifications) for construction according to existing and forthcoming engineering documents.

<u>Relation to SBP</u>

The Rule (see 'Relation to SBP under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the environmental category and is therefore a priority over revenue-generating projects. The legal requirement for this project is unequivocal and clear. The Port must proceed regardless of revenue implications.

<u>Funding Notes</u>

The total cost - $5.158 million – is spread over 30 years. Of this, McCall Oil and Exxon Mobil will provide $2.9 million. The remaining $2.258 million is spread over the 30- year time frame. In fact, the estimated cost for each year is known with reasonable certainty. Years 3, 4, 14, and 24 are the main concerns for the Port: these years' costs exceed the Port's capacity to fund on its own. The remainder of the years can be financed by the Port alone.

7. Boatyard Expansion

7.1 Boatyard Expansion Feasibility Study

Background

The Boatyard is a consistent and profitable enterprise for the Port. The Boatyard's prime location along the Central Waterfront, current size/footprint, 88-ton Marine TraveLift and close proximity to Englund Marine are all attractive advantages to those wishing to renovate, construct and/or maintain recreational, special use and commercial fishing vessels. The Port's self-service policy also provides an advantage to vessel owners seeking autonomy and competitive pricing throughout construction and maintenance processes.

Need for Study

Though the Boatyard is a consistent performer, its service size and scope of services are limited by the historically restricted footprint (4 acres), limited capacity boat lift (88 ton) and lack of covered shop space. However, the loss of log exporting has opened up Pier 3 to other potential uses; expansion of the boatyard is a prime candidate. Such a study is advisable before the Port seeks another cargo operation that may be highly susceptible to market and international trade fluctuations.

Vision

An additional 12 acres would provide an excellent footprint for an expanded operation, allowing for an 800 to 1200-ton lift, covered maintenance spaces, offices and expanded washdown facilities. The Port receives consistent requests from vessel owners looking to haul out vessels that cannot be handled with existing Port equipment. Likewise, the Port receives many comments and requests to add maintenance buildings and infrastructure that could allow project work to continue through Astoria's wettest and windiest seasons. The Boatyard at Toledo is a good example of the type of expansion that may be realized in Clatsop County and the economic benefits that it may provide to the community.

Funding Notes

The primary possibility for financing this project is from the Port Planning and Marketing Fund, which the Port will likely apply for once the new Inter-Governmental Agreement ("IGA") with the state is in place. Should such application be successful, the balance will be funded by the Port.

7.2 Boatyard Expansion Plan

Description

Subject to the Feasibility Study findings, the Port will draft and finalize an expansion plan. Based on preliminary research, the Port expects the feasibility study to return a favorable report regarding a multi-phased Boatyard expansion.

7.3 Boatyard Expansion and Development

Description

Detailed cost estimates will be provided during the planning stages. There are many different components that may be considered for a three-to-four-year expansion process. Primary tasks will be:

- permitting
- securing project funding; applying for Boatyard grants
- complete pier design
- construct mobile lift pier
- construct new washdown pad
- site preparation
- extend utilities
- acquire and install 800-ton mobile lift
- structural surface preparation to support 800-ton mobile lift
- design and construct an enclosed environmental work building for large boat painting
- final site work including roads, landscaping, utilities and other maintenance
- construct covered work shed
- design and construct new boatyard office

Relation to SBP

The above boatyard projects are explicitly identified as one of many Critical Issues (pg 19). The boatyard is identified as a Key Asset that needs to be maintained to support future economic development at the Port (pg 24). Development is a priority because the current boatyard is an under-performing asset (pg 50) that could garner much greater revenue with the above-described expansion project; therefore, the combination of above projects is one of the Action Items under Property and Infrastructure Goals (id.). The boatyard expansion is also identified as part of the Five-Year Capital Plan (pg 58).

Funding Notes

The plan is to budget sufficient Port funds to match grant funds. Agencies with suitable and relevant grant programs are the following: EDA, MARAD, and possibly Business Oregon.

8. Central Waterfront Dredging

Conclusion

The Port of Astoria's ability to maintain sufficient water depth at its Central Waterfront terminals is inadequate and must be significantly modified.

Brief Summary

▪ The vessels that use the Port of Astoria's deep draft terminal capabilities represent vital military, environmental, business, and economic interests.
▪ The Port's unique location presents inherent obstacles – severe storms, tidal swings, and salinity effects - to maintaining adequate dredge depths.
▪ The Port's dredge-burden-to-size ratio is much larger than other ports, causing a dredge burden too heavy for the Port to carry alone.
▪ The Port's dredging equipment is incapable of handling the dredge burden.
▪ The permitting requirements present inane and conflicting rules from the regulatory agencies.
▪ The combined influence of above factors results in the Port's dredge equipment taking three months to dredge material that adequate equipment could remove in a few days.

Operational Needs

Dredging maintains the Port's ability to act as a port of call for a variety of vessels and in service to a variety of functions, including but not limited to the following:

- Emergency Berthing: The Port of Astoria's Pier 1 acts as an emergency berth for vessels in the vicinity. Pier 1 was utilized for this purpose at the end of 2018 when the US Coast Guard directed the *Leon Oetker* – a 600-foot bulk carrier - to Pier 1 after experiencing radar and steering malfunctions.
- US Military Vessels: The US Navy, US Coast Guard and US Army Corps of Engineers routinely utilize Pier 1, including USACE's dredge *Essayons*.
- Seafood Processors: The Port's seafood cluster located within Slip 1 (Bornstein Seafoods) and Pier 2 (Astoria Pacific Seafoods and Da Yang Seafoods) historically lands over 100 million pounds of seafood annually.
- Cruise Lines: The face of Pier 1 also functions as its main cruise terminal and is host to roughly 25 vessels and 50,000 cruise visitors per year with Carnival, Holland America, Norwegian, Princess and Disney Cruise Lines. Pier 2 East also provides the infrastructure for river boat dockings from American Cruise Lines.
- Boatyard Operations: In addition to providing access to the Pier 2 Seafood cluster, Slip 2 provides access to the Port's Boatyard and Haul Out facility. This facility is utilized not only by the local fishing fleet but the USCG and USACE.
- Log Export Vessels: Prior to tariff challenges, the Port shipped roughly 65 million board feet of logs annually.
- Cascadia Subduction Event Infrastructure: As the Port of Astoria is the first deep-water Port on the Columbia River as well as the only deep-water Port on the Columbia River that is west of bridge infrastructure, the Port of Astoria is strategically located to provide critical operations capacity when the next DOGAMI-predicted Cascadia Subduction Zone Event occurs.

Geographical Challenge

The Port's location makes it vulnerable to unique hazards: severe winter storms, extreme tidal swings, river confluence eddying, and abnormal salinity levels. First, proximity to the

Columbia Bar and Pacific Ocean expose the Port to particularly severe storms. Second, such proximity also means extreme tidal swings. Both of these hazards have contributed to the accelerated deterioration of Pier 2 West mentioned above. On extreme tides, Astoria can experience an 11-foot tidal swing that generates tremendous erosion and sedimentation forces along the Port's Central Waterfront. Third, the Port's location at the confluence of Young's Bay and the Columbia River also causes large-scale eddying, which exacerbates already-significant sediment accumulation within the Port's slips (especially in Slip 2). Fourth, the abnormal salinity levels caused by constant mixing of the Pacific Ocean with the Columbia River increase the precipitation of solids from the water at dredge depths. This means that solids suspended in the water have a higher tendency to drop from the water and end up as sediment along the Port's Central Waterfront rather than travelling westward to the Pacific or eastward to Tongue Point. Few, if any, Oregon ports other than Astoria face all of these challenges.

Financial Challenge

The Port of Astoria is unique among northwest ports with respect to its dredging-burden-to-size ratio. Financially speaking, the Port is a relatively small Port with annual operating revenues of approximately $8 million. Depending on winter storms and accretion rates, the Port may be responsible for the removal of between seventy-five and one hundred thousand cubic yards of dredge material from its Central Waterfront within any given year. At a reasonable removal cost of $15 per cubic yard - plus contractor mobilization costs of around $500,000 - the Port would have to expend between $1.625 and $2.0 million on contractor dredging following a heavy sedimentation year. This represents a disproportionate percentage of dredging costs as compared to budget revenues (20.31% to 25.0%). The Port cannot spend this much every year and stay afloat.

Equipment Challenge

To combat these costs, the Port of Astoria decided roughly two decades ago to purchase a 1972 Dixie 16-inch hydraulic suction (flow lane) dredge. The expectation was that dredging costs would be as low as possible and the Port would not be limited by contractor availability. The acquired dredge was designed to operate in lakes and marinas at depths between -15 and -32 feet MLLW. As operations evolved at the Port and deeper water berths were needed for new revenue streams - including log exports and cruise vessels - dredge components were altered. The ladder was extended from 70 to 80 feet so that it could reach -42 MLLW at low tide. Rear pivot spuds were lengthened from 60 to 73 feet to deepen the anchor depth and thereby achieve deeper dredge depths. But it has become apparent that the dredge was not engineered to handle the loads generated by these lengthened components. The cutterhead is now operating at angles for which it was not designed. This causes inefficiency when operating below certain depths (around -35 feet MLLW). The hydraulic pump is overtaxed because it is pumping more water than its design allowed. The winter ebb currents in Astoria are frequently so strong that the hydraulic sleeves that lift the spuds and allow the dredge to change position ("walk") are incapable of lifting the spuds; as a result, the dredge becomes stuck due to the exponential increase in hydrodynamic forces resulting from the spud lengthening. These shortcomings may be best

illustrated by analogy to a Volkswagen Beetle being modified and used as a bulldozer: It may get the job done for a time but the stress on the original frame will eventually take its toll and cause a catastrophic failure.

Permitting Challenge

Environmental permitting has become increasingly cumbersome, disjointed and costly. Recent National Marine Fisheries Service (NMFS) rulings have proven arbitrary, while federal and state agencies are on different environmental tolerance pages. The Port is currently dealing with an issue regarding exceedances of 4-methyphenol in Slip 1, which is a byproduct of the decomposition of biological material. These exceedances are very likely the result of the seafood processing discharges by the Port's three seafood processors located in Slip 1 and on Pier 2 – all of which discharge into Slip 1. The Oregon Department of Environmental Quality issued 900-J permits to each of the Port's seafood processors which allows them to discharge this seafood waste into Slip 1 and thus into the Columbia River. These state-permitted discharges result in the elevated levels of 4-methylphenol. Under the US Army Corps of Engineers Permit application process, however, the Portland Sediment Evaluation Team (PSET) states that Slip 1 sediments containing elevated levels of 4-methylphenol must be removed from the water and deposited upland.

The Port is currently in its second year of the Central Waterfront dredge permitting process. At the forefront of this expensive process is the necessity to mount a response to PSET's findings; this requires, among other measures, conducting bioassay analysis of the Slip 1 sediments containing elevated levels of 4-methylphenol. Uncertain of the eventual result of this quasi-legal challenge to PSET, the Port has applied for a permit which allows for both hydraulic cutter-head suction dredging (Port-owned equipment) and mechanical dredging (clamshell, tug and dump scow) in order to increase the likelihood that a marine contractor can be engaged to perform the dredging as quickly as possible when and/or if the decision was made to change dredging methods based on PSET's decision.

Due to the potentially large volume of sediments to be removed, the discharge location for the Port's Central Waterfront permit application is located north of the navigation channel. This area was approved because the volume of the proposed sediments demands a large area to settle and prevent mounding. While this area is easy to access via mechanical dredging (tugs and dump scows), *it is very risky for the Port's current hydraulic suction dredge operations*. In order to discharge within the provided disposal boundaries, the discharge pipe must be sunk and anchored *under the shipping channel*. This is a dangerous practice as any failure in the anchor and/or discharge pipe may result in damage to cargo vessels - which could potentially lose propulsion and steering capabilities just hundreds of yards from the Astoria-Megler bridge supports. This translates into an increasingly unacceptable a risk for the Port to bear.

Operational Reality

The resulting inefficiencies, caused by equipment limitations and permitting struggles, translate to increased costs over time. For example, the Port of Astoria conducted minimal

dredging due to permit constraints during the In-Water Work Window (IWWW) from November 1, 2019 to February 28, 2020. Permit conditions limit the Port's hydraulic dredge to removing sediments only on each outgoing tide and only in the harsh winter conditions experienced in its current dredge window of November 1st through February 28th. Over the course of roughly three months, from December to February, one crew removed slightly over 15,000 cubic yards of material. These low numbers were caused by the above-discussed equipment limits and operational complications from the Columbia River's ebb tidal strength during the IWWW. Much of the Port crew's time was spent trying to free the spuds so that they could continue dredging. *A contractor outfitted with an adequate clamshell and dump scow(s) could remove the same amount of sediment in a few days*.

The aging equipment also has heavy maintenance requirements. On average, six Port of Astoria maintenance personnel spend six months per year total on dredging – four months for the actual dredging in the work window between November and February and two additional months during the year for maintaining the dredge. This means that for roughly six months every year, near all landside maintenance at the Port of Astoria grinds to a halt while maintenance staff are engaged with dredging duties.

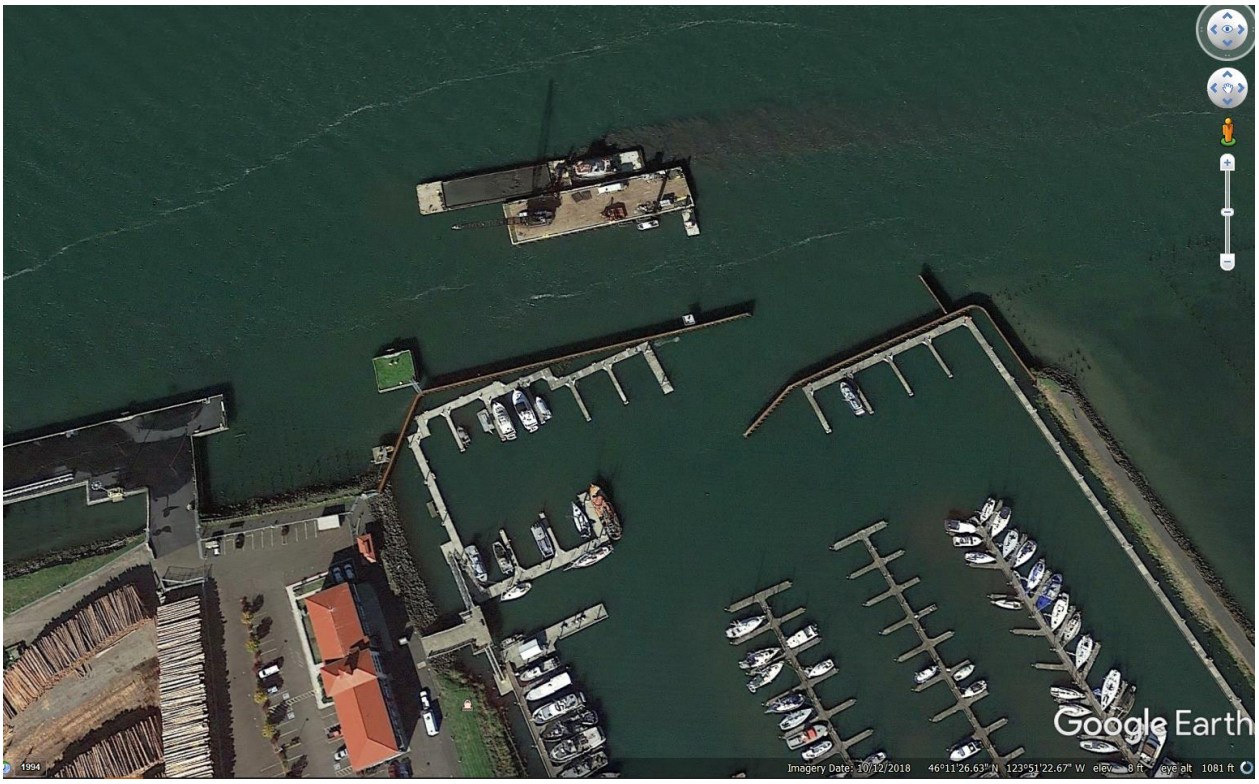
For two decades, the Port has kept costs manageable by shouldering 100% of the dredging burden. This is a burden that very few – if any – similar sized Ports have shouldered. Consider some of the upriver Ports: Columbia County/Westward, Longview, Kalama, Port of Vancouver. None of these ports operate a dredge – they have the funds to contract the work as needed. Columbia County is another interesting comparison: Its location is largely self-scouring and they have had no need to dredge their central waterfront for many years. Each of these ports has a larger operating budget and lower sedimentation rates (and therefore lower dredging costs) than the Port of Astoria. This is a challenge that the Port of Astoria must address.

Solution

The Port needs help shouldering its disproportionate dredging burden. Should the Port of Astoria desire to continue dredging in-house, it should conduct a small-scale feasibility study to ascertain the advisability of purchasing mechanical dredging equipment, to include a dredge barge, tug and dump scow. Such a study must consider, among other factors, productivity: It will only be productive for a portion of the year. If purchasing mechanical dredging equipment is considered, the Port should – to the extent possible – purchase components that may be utilized for other beneficial tasks or seek out partnerships with other ports to share the cost.

Another option is to seek an agreement with the US Army Corps of Engineers. USACE routinely dredges the shipping channel along the lower Columbia. The photo below (October 12, 2018) shows this work being done by a USACE contractor along the Port's Central Waterfront - a few hundred feet away from its most critical deep-water infrastructure, the face of Pier 1 (cruise terminal) and Slip 1 (cargo terminal). The dredge is also only a few hundred feet from its proposed disposal location on the north side of the

shipping channel. As mobilization costs are typically the most expensive line item in a dredge contractor's proposal, it would benefit both the Corps and the Port to share this cost. Such an arrangement would also benefit the contractor by providing more CY removal opportunities under the same mobilization. As the Corps must routinely schedule this work to maintain the shipping channel and must hire contractors to augment its own capabilities and capacities, the Port may be able to benefit from the relationships that the Corps has developed with contractors like J.E. McAmis and Manson Construction.



At the time of drafting, this appears to be the most viable solution. This option would allow the Port to liquidate its inadequate and costly dredging assets to focus its maintenance efforts on landside infrastructure. The Port is in the process of working with USACE staff to develop a Memorandum of Agreement whereby the Port can avail itself of this opportunity.

<u>Relation to SBP</u>

Maintaining adequate water depths along the piers is critical to Port operations. Accordingly, Central Waterfront dredging is an identified, required, Maintenance Need (pg 22) and Threat under the Situational Analysis (pg 39 - i.e., *lack of dredging* is the threat). In determining investment priories, dredging is a central issue and therefore identified as one of the maintenance Critical Issues (pg 40). Central to the Five-Year Capital Plan along the entire waterfront is the return of the piers to "full functionality" (pg 58). This goal demands adequate dredging – neither piers nor marinas can fully function as such without adequate water depths.

Funding Notes

The most promising option for funding the Port's dredging work is a cooperative agreement between USACE, its dredging contractor(s), and the Port, as described above. The Port has already reached out to the Corps and preliminary indications are positive. This option does leave the Port subject to the Corp's schedule. But the Port believes it can work around this schedule, particularly as the Port's dredging needs have been temporarily reduced due to the departure of Astoria Forest Products and the log exports.

9. Central Waterfront Master Plan

Description

The Port's recent loss of a major log export tenant (Astoria Forest Products) on Piers 1 and 3 warrants a thoughtful re-evaluation of the highest and best use for the Port's valuable Central Waterfront District (CWD).

The Port is currently exploring Astoria's Urban Renewal Fund to provide a waterfront plan whose scope may include development within certain sub-districts (Bornstein's Seafood on the west to the Maritime Memorial on the east). Once the development plan is completed and approved, the Port will again seek Astoria's Urban Renewal funds to advance the Central Waterfront's development. The City of Astoria is currently working with potential contractors to develop the scope of work.

While planning is important for cementing direction(s) for the Port's development efforts, any CWD Master Plan should be developed with the understanding that it must be flexible. As such, the CWD Master Plan is a living document that may be revisited frequently to accommodate potential fluctuations in various market conditions.

Relation to SBP

This plan is identified as an Action-Plan item under the Property and Infrastructure Goals section of the SBP for the Waterfront West district (pg 50). Both the Market Potential and Economic Development Potential versus Cost charts identify this plan as having a low cost to benefit ratio – for both market and economic development benefits (pg 54). Further, given the large proportion of Port revenue attributable to the former log export tenant, loss of this tenant demands a thoughtful re-evaluation of the best use for the Central Waterfront District (CWD).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project. However, the Port will pursue City of Astoria Urban Renewal funds and possibly an EDA planning grant before fully committing its own funds.

10. Chinook Building & Vacant Lot

Description

The Chinook Building is part of the district subject to the Central Waterfront Master Plan (see Project 9). Due to safety concerns and the generally dilapidated condition of the building, the Port has recently relocated all existing tenants. The future of this building depends upon the results of the Master Plan. Work on the building, therefore, has been suspended for now. Should the planning process prove unreasonably lengthy, the Port may proceed with renovations of this building in order to re-instate the needed revenue stream. This project's placement on the CFP Chart, therefore, is tentative.

This project will work in tandem with the Central Waterfront Master Plan and Chinook Building & Vacant Lot projects (Project 9 & 10) to develop the West Marina Waterfront.

Relation to SBP

While revenue generation is a top priority, and while lease revenue is the top revenue center for the Port, uncertainty over the future of this sub-district (that includes the Riverwalk Inn, old Seafarer restaurant, the Chinook bldg., and the vacant lot east of the Chinook building) makes this project more difficult to justify under current conditions. Such uncertainty underlies the justification for this building being identified as a potential asset to sell (pg 19, 23). While this building will stay on the CFP as an important asset to consider in future Port plans, it is not a *high* priority at this time for the reasons stated above. At minimum, some type of strategic planning specific to the CWD would be advisable prior to renovating this asset, as full and immediate renovation may result in a design inconsistent with the vision for the CWD that results from the Master Plan (see Project 9).

Funding Notes

Port funds are the primary source. Loans may be used that could be repaid through increased lease income (as a result of renovated commercial rental space). The project does not appear to be amenable to known grant programs.

11. East Basin – Causeway Rehabilitation

Background

The Oregon Department of Transportation performs gratis bridge inspections on the four "bridges" on Port of Astoria's Central Waterfront:

- East Mooring Basin Causeway
- Bridge # 22527 - Pier 2 East; Bents 1-90
- Bridge # 22452 – Pier 2 East & North; Bents 91-200
- Bridge # 22526 – Pier 2 West; Bents 202-300

The East Mooring Basin ("EMB") Causeway was shut down in November 2018 due to concerns over the deterioration of the substructure components, as shown in ODOT's annual inspections and subsequent timber boring reports. Replacement is cost prohibitive. The Causeway driving/walking surface was originally timber. Concrete was poured over the structure in the early 1990s without any pan decking that would allow the supporting wood components to breathe and dry. This "improvement" made maintenance of the supporting components much more difficult and contributed to accelerated deterioration. Further, in-water components and permitting are of concern as well. The last round of post and mud sill repair on the Causeway was permitted under condition that the post material be untreated timber. This was a stop-gap solution: The posts that were replaced a mere eight years ago have already failed.

Description

Rather than replace the structure, the Port can return the Causeway to vehicle and pedestrian traffic standards by removing previous short-term fixes and replacing failing components; the scope would retain the long-term viability of the existing structure and ease future maintenance burdens. Absent complete replacement, the best option must start with removal of the concrete decking. Port staff can handle this work - beginning shore side and cutting the concrete into small panels and removing with the Pettibone RT crane. Once the panels are removed, the timber components can then be easily replaced from the top. Untreated timber posts will be replaced with structural HDPE posts that will not only provide a long-term component solution but also require no permit consultation: the HDPE posts meet the US Army Corps of Engineers' SLOPES (Standard Local Operating Procedures for Endangered Species) permitting requirements.

The Port's original plan was to purchase materials and employ existing Port maintenance personnel to do the repair work over the course of several years. With this approach, Port-financed repairs are a viable and realistic option. However, layoffs due to COVID-19 have delayed this plan. While repair of the causeway is a high priority, because Pier 2 takes priority, this project will be on hold until maintenance personnel can be re-hired or until grant funds can be secured to hire contractors to do the work.

Relation to SBP

Due to the closure, only a handful of vessels are currently moored at the East Basin, reducing moorage revenue significantly. Providing high quality "facilities and amenities" is a strategic objective for the mooring basins (pg 8). The causeway is one of the Key Assets that must be maintained in order to support the economic development of the region (pg 24). Because commercial fishing is expected to remain a strong core industry sector (pg 32), and because the EMB provides mooring berths for commercial fishing vessels, maintenance of the causeway is a priority for both direct lease revenue as well as indirect support of the commercial fishing industry. Maintenance of all piers supports Statewide Transportation goal 12 and 17 by increasing maritime networks and access (pg 36). Repair of the causeway

is an identified Maintenance Need (pg 22), a Critical Issue (pg 40), an Action-Plan Item under Waterfront East Property & Infrastructure Goals (pg 51), and an identified Activity under the Five-Year Capital Plan for Waterfront East (58).

Funding Notes

At the time of drafting, it is anticipated that the Port will fund this project by employing its own personnel to do the work. A portion of the supplies have already been acquired. Secondarily, the Port may seek grant funding for the remaining supplies – and the necessary contract labor should the Port be unable to hire its own labor to do the work - through the EDA.

12. East Basin Dredging

Background

A significant portion of the East Mooring Basin is not able to be used for its intended purpose due to inadequate water depths (the description here ignores the Causeway issue - see Project 11). Currently the basin has 82 slips – but many more are possible with adequate dredging (among other obstacles – see SBP pg 51).

Relation to SBP

Maintaining adequate water depths in the marinas is critical to marina operations. Accordingly, East Marina dredging is an identified Maintenance Need (pg 22), a Threat under the Situational Analysis (pg 39 - *i.e., lack of dredging is the threat*). In determining investment priories, dredging is a central issue and therefore identified as one of the maintenance Critical Issues (pg 40). Lack of dredging in the East Marina has reduced the effective capacity of the marina to 1/3 of design capacity (pg 51).

The Property Goals for Waterfront East do not discretely identify dredging as a Goal or Action Plan item; however, the 'Background and Status' section (pg 51) *does* identify lack of dredging as an issue - explaining how this deficit significantly reduces Port revenue through severe under-utilization of the mooring basin's capacity. Further, because the Goal is to make the East Mooring Basin a fully performing asset, and because one Action Plan item is to increase the Port's net revenue from the property (pg 51-52), and because adequate dredging is an essential requisite to both, dredging is a high priority.

Yet despite the priority of dredging, this project will likely be demoted on the CFP for the following reasons: 1) Due to the uncertainty over the future of the East Mooring Basin (EMB) generally, the Master Plan update takes priority; 2) considering the magnitude of any major EMB re-development project, it is more advisable to take on the smaller projects that would bring additional revenue to the Port in a shorter period of time (like the causeway repair – see Project 11). It does not make sense to take on an extensive visioning and re-

development process for the EMB and leave the Causeway unrepaired during this likely long process. It makes more sense to undertake as soon as possible a less costly project to rehabilitate the Causeway in order to maintain this major asset than let it further degrade while waiting for a Master Plan to be completed; 3) such rehabilitation will bring additional revenue to the Port in a shorter period of time than a Master Plan would.

Funding Notes

Funding for this project is not yet known. Given the uncertainty of meeting future dredging needs at the Port (see Project 8), the exact plan for completing the dredging here is yet unknown.

13. East Basin – OSU Seafood Lab

Description

Due to ambiguity over the exact terms of a very old agreement between the Port and Oregon State University over the disposition of this building, the Port has been unable to re-assert full control over this piece of real estate. Although not specifically mentioned by the SBP, successful reclamation of the Seafood Lab would mean immediate additional revenue generation. Given the relatively low cost of the legal fees, the return on such an investment is high enough to justify pursuing re-assertion of control over this building at the East Mooring Basin.

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, reclamation of legal control over this piece of real estate is a high priority. Successful reassertion of control would introduce a new [lease] revenue source to the Port.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

14. Gateway Avenue Re-Design & Development

Description

As the primary thoroughfare between Bornstein Seafoods on the east and Englund Marine on the West, as well as the primary access to the Port's Seafood Cluster on Pier 2, it is important for Gateway Avenue to provide a safe and aesthetic route along the Port's Central Waterfront. Riverland properties such as Charter/Spectrum, Fed Ex, and Marine Spill Response Corporation occupy the central and southern portion of Gateway, while Port administrative, mechanic's and maintenance offices occupy the north. Though there are many pedestrians traversing the trucking route, there are currently no sidewalks, curbs, bike lanes, lane dividers, landscaping or meaningful signage. To ensure public safety and

improve Gateway's appearance and longevity, Gateway Avenue should be redesigned.

Relation to SBP

Asphalt (and utilities) maintenance on Gateway Ave is identified as a Critical Issue (pg 40). Road access is a basic pre-requisite to all other Port operations and revenue generating activities. Further, sidewalks, curbs, bike lanes, and lane dividers are important safety infrastructure – a value that takes priority over revenue generation (pg 13).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project. City of Astoria Urban Renewal funds are a secondary source.

15. Airport Wastewater System

Background

AST receives and uses, on average, 1 million gallons of water from Warrenton city per year. Currently the city of Warrenton is receiving about 5 million gallons of water per year back from AST, contributing to the already-strained capacity of the city's wastewater treatment facility. The additional water comes from stormwater and groundwater intrusion into the WWII-era AST wastewater system. The Port needs to eliminate the wastewater-system intrusion in order to help the city of Warrenton preserve and maintain their existing wastewater treatment infrastructure for as long as possible, as well as avoid surcharges that Warrenton intends to impose on the Port should the problem not be addressed.

Further, until this problem is solved, the City of Warrenton will oppose Port efforts to develop its airport industrial park, which will obstruct the potential for new lease-based revenue streams.

To address these challenges, the Port contracted with A.M. Engineering in July 2020 to collect data, assess the system and provide alternatives for reconstruction or reconditioning of the system. A.M. Engineering's study is complete. The recommendation adopted by the Port is replacement of the current system with a private pressurized sanitary system.

Relation to SBP

Revenue generation and maintenance of existing infrastructure underly the SBP directives (see Project 1). This project implicates both: a severely compromised wastewater system undermines the entire airport infrastructure's usefulness. As failure to move forward on this project will result in opposition from the city of Warrenton to further development at the airport industrial park and significant revenue opportunity, overcoming such opposition demands that this project be a high priority. And because a significant development opportunity exists at the time of the drafting of this document, this project is placed high on the Plan's priority list.

Funding Notes

The Port has applied for a COAR grant from ODA to help fund this project. If that fails, it is anticipated that the Port will be the primary source of funds for this project.

16. Pier 1 – Asphalt Work

Description

The Port needs additional asphalt on Pier 1 in order to increase its leasable laydown area, add parking infrastructure and improve its stormwater sampling results. This project therefore involves excavation, regrading, repair and asphalt installation.

Relation to SBP

Improvement of the piers is necessary to attract future tenants – particularly larger industrial tenants with heavy equipment. Pier 1 is a Key Asset that must be preserved in order to support the District's economic development (pg 24). A basic improvement like asphalt supports Statewide Planning Goals 12 and 17 (pg 36) by improving and investing in transportation and water-dependent-use related assets (like a regionally-significant pier). Given the state's collateral interest in Pier 1 (& 2), the condition and long-term viability of the piers is of significant concern, and therefore a high priority (pg 46-47). This project helps preserve both.

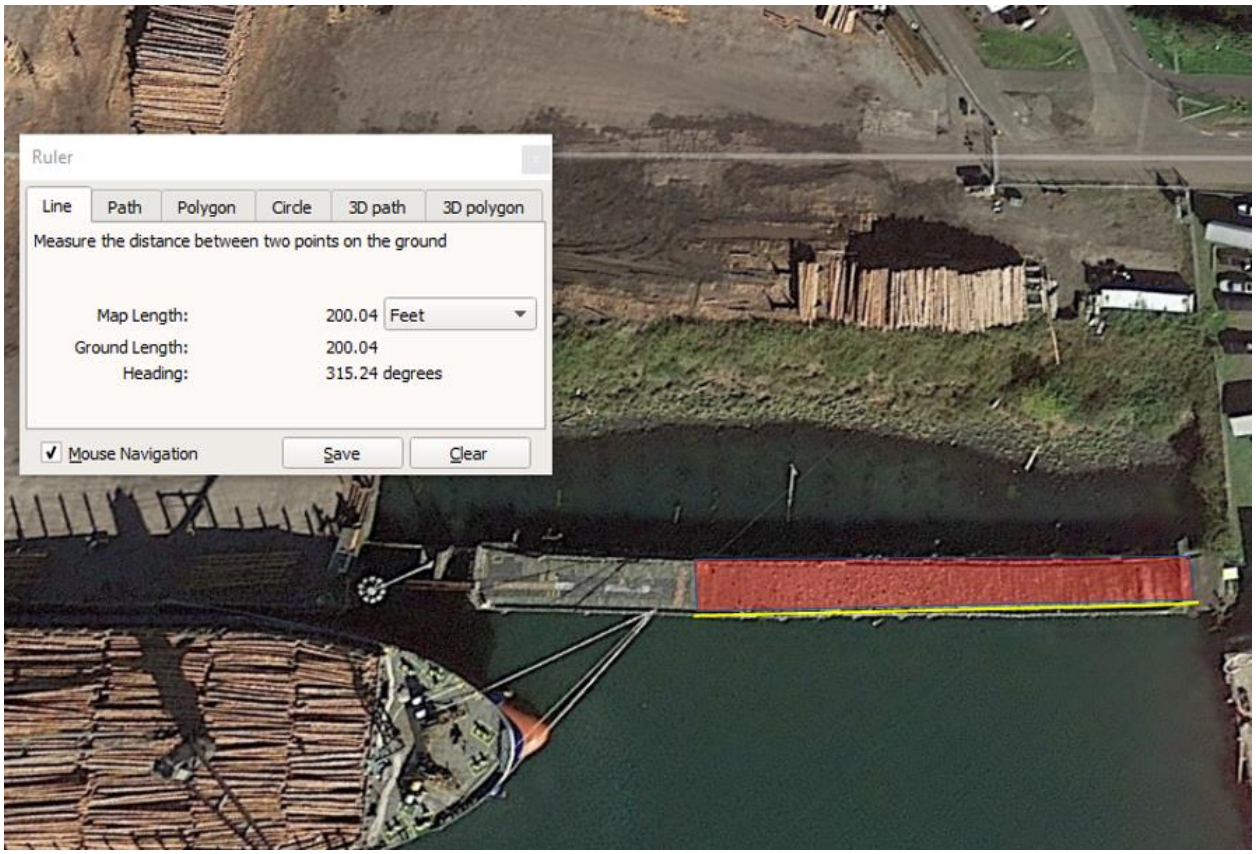
Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

17. Pier 1 – Bridge Repairs

Description

The southern 200' of bridge dock on the west side of Pier 1 needs to be replaced. The north one hundred and fifty feet of the bridge were replaced in 2019 to address safety concerns with vessel tie-ups within the slip. The remaining 200 feet on the south side, leading to Bornstein Seafoods, could be replaced in-house for approximately $125,000.



Though the southern end of the bridge is currently in dis-use, once repaired it will serve an important role in Bornstein Seafood's proposed Interpretive Center ("Center"). This dock will be utilized for berthing fishing vessels and serve as one piece of a larger plan to set up a fish market where locals and tourists can purchase fish directly from the vessel owners.

Relation to SBP

Pier revenue is the second most important Revenue Center (pg 13). This project does not directly result in additional revenue; however, it does put in place one piece of infrastructure important to future development of the Center (see above), which itself will

result in additional lease revenue. Additionally, project #2 is on hold because Bornstein intends to enter into a long-term lease for the 417 Gateway lot in order to serve as parking for the Center. Providing support for the Center is therefore a priority as such support indirectly maintains the lease revenue on the 417 Gateway property. Further, the current condition of the bridge is a safety concern; safety issues take priority over revenue generation (pg 13).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

18. Pier 1 – Cruise Terminal Development

Description

This project is intended dovetail with the Central Waterfront Master Plan and expand cruise infrastructure at the Pier 1 terminal. Improvements to the cruise terminal include pavilions or rentable gazebos and similar spaces for local vendors, mobile offices to be used for security check-in for embarking passengers, and other mobile structures near the southern end of the Pier 1 parking lot to provide cover for cruise passengers waiting for tour buses, taxis and other transportation.

Relation to SBP

As one of three business lines that account for the majority of Waterfront West revenue (itself the largest source of revenue for the Port – pg 50), support of the cruise ship industry is a priority. Local economic impact of cruise-ship port-of-calls is projected to surpass $11 million by 2021 (pg 42). Future growth of the cruise ship business line is projected to be stable if the Port is able to improve existing infrastructure (pg 44). This project improves existing infrastructure and expands the Port's capacity to host cruise ship visitors. Further, this project supports Statewide Planning Goal 17 – Water Dependent Uses (pg 36).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project. As the cruise ship business line is the primary beneficiary of this work, an increase in cruise-related fees is a potential source of reimbursement for the costs.

19. Pier 1 – Generator

Description

To ensure continuity of security and administrative operations on Port properties, both the Pier 1 Building and the 422 Gateway Building need to be fit with on-demand generators. This will also ensure that all tenants within both buildings would be able to remain operational during any power outage. Tenants affected include not only all Port

administration offices (with the exception of the Boatyard), but also the Oregon Department of Transportation and several medical offices.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the safety and security category and is therefore a priority over revenue-generating projects. The generator will address both: it will provide power to Port security cameras and other equipment so that surveillance of Port property is not interrupted during a power outage.

Funding Notes

At the time of drafting, it is anticipated that the Port will apply for funds through FEMA's Port Security Grant Program to fund this project.

20. Pier 1 Entrance Bioswale

Description

The scope consists of the design, excavation, replumbing and re-seeding of a new bioswale at the entrance driveway to Pier 1 offices. The current bioswale is not functioning as it should and needs to be rehabilitated in order to improve stormwater sampling results.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the environmental category and is therefore a priority over revenue-generating projects. The bioswale serves an important purpose in the Port's stormwater treatment plan – which is directly connected to environmental concerns.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

21. Pier 1 – Repair / replace sea wall

Description

Extending from north to south along the west side of the Port's cargo terminal, the Pier 1 sea wall needs extensive repairs. In addition to the aggressive weather patterns along the Port's Central Waterfront, heavy equipment usage associated with Astoria Forest Products' log export business has exacerbated the infrastructure's degradation. The deterioration of the 380' Pier 1 seawall is leading to subsidence of the overhead surfaces (location denoted by yellow line in above figure). The $750,000 estimated here is for repairs made with timber components using existing design. Replacement with a sheet pile system would require $1.9 million (at $5,000 per linear foot) plus permitting costs.

Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38). Therefore, repair of all pier structures is a high priority for the Port. Repair of the seawall is a high priority deferred maintenance item. Generally, repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure Goals (pg 56). Finally, "Improve[ment of] the piers to full functionality" is a Five-Year Capital Plan Goal (pg 58).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project. However, given the nature of the infrastructure, a MARAD grant is also a possibility.

22. Pier 1 – Replace Power House

Description

The power house at the north end of Pier 1's cargo area serves two purposes. Its primary function is that of landing area for Pier 1 utilities infrastructure that includes electrical, plumbing and sewer pumps. Its second function is that of a restroom for cargo loading operations on Pier 1. The structure is in poor condition but could be made to provide valuable infrastructure for tourists, tenants and cruise passengers traversing Pier 1. This project could also dovetail with the Central Waterfront Master Plan and the Bornstein Seafood Interpretive Center.

Relation to SBP

This project is connected to three different but complementary projects for the Port: basic utility infrastructure (several projects), cruise terminal development (Project 18), and the Central Waterfront Master Plan (Project 9). Because the eventual and ultimate purpose of this structure depends on other projects' outcome, it is a low priority as of the time of drafting. Premature improvement and investment in this structure could result in a design inconsistent with that eventual purpose.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

23. Pier 1 West Fender Piles

Description

Timber fender piles along the perimeters of Piers 1 and 2 serve as consumable infrastructure for fishing and cargo vessel berthing. Approximately 100 fender piles along Pier 1 West need to be replaced at an estimated cost of $3,000 each. Historically, the Port has replaced no more than 25 fender piles per year; consistent with this realistic approach, the Port therefore intends to do this project in phases until all damaged piles are replaced.

Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38). Therefore, repair of all pier structures is a high priority for the Port. Replacement of fender piles is a high priority deferred maintenance item - essential to the basic functionality of the piers and necessary to prevent inordinate and preventable damage to both piers and vessels. Generally, repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure

Goals (pg 56). Finally, “Improve[ment of] the piers to full functionality” is a Five-Year Capital Plan Goal (pg 58).

Funding Notes
At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

24. Central Waterfront Road & Utilities

24.1 Pier 2 – Roadway Rehab

Description
The roadway infrastructure leading out to Pier 2 is in poor condition. Approximately 30,000 square feet of roadway needs to be replaced at a cost of $5 per sq ft. Replacement would start at the entrance to Pier 2 from Gateway Avenue and work north. The work will proceed in affordable phases until all of the salvageable asphalt is adequately repaired and sealed.

Relation to SBP
Basic infrastructure - roads, sewer, water lines – are essential pre-requisites to all other business lines at the Port. Given the directive of the Rule, this project is a priority because it protects revenue sources by maintaining basic infrastructure.
Also, see Justification for Project 28. Roads in good condition are a basic pre-requisite to the operation of the pier - the primary source of revenue to the Port.

Funding Notes
At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

24.2 CWD Water and Sewer Line Replacement

Description
The Port of Astoria is the number one water consumer for the City of Astoria; most of that water is purchased by the seafood processors. A good portion of the water and sewer infrastructure serving the Port’s seafood cluster on Pier 2 is past its service life; it is afflicted with occlusions and other issues that severely restrict the delivery of water to the Pier 2 processors - Bornstein’s Seafoods and Da Yang Seafoods. These restrictions negatively impact seafood processing capability - especially for species such as shrimp whose processing has high water requirements.

This project will work in tandem with the asphalt repairs to Pier 2 to avoid redundancy in scopes of work between the two projects. Depending on cost, this project is amenable to separation into phases to ensure replacement over three to five years.

Relation to SBP

Basic infrastructure - roads, sewer, water lines – are essential pre-requisites to all other business lines at the Port. Given the directive of the Rule, this project is a priority because it protects revenue sources by maintaining basic infrastructure.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

25. Pier 2 – Pier 2 East Fender Piles

Description

Timber fender piles along the perimeters of Piers 1 and 2 serve as consumable infrastructure for fishing and cargo vessel berthing. Approximately 100 fender piles along Pier 2 East need to be replaced at an estimated cost of $3,000 each. Historically, the Port has replaced no more than 25 fender piles per year; consistent with this realistic approach, the Port therefore intends to do this project in phases until all damaged piles are replaced.

Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38). Therefore, repair of all pier structures is a high priority for the Port. Replacement of fender piles is a high priority deferred maintenance item - essential to the basic functionality of the piers and necessary to prevent inordinate and preventable damage to both piers and vessels. Generally, repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure Goals (pg 56). Finally, "Improve[ment of] the piers to full functionality" is a Five-Year Capital Plan Goal (pg 58).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

26. Pier 2 – Pier 2 East Repairs

Description

The east side of Pier 2 near Bornstein Seafoods, through the northwestern tip of the face of Pier 2 near Da Yang Seafoods, is comprised of bents 91 through 201. Though the

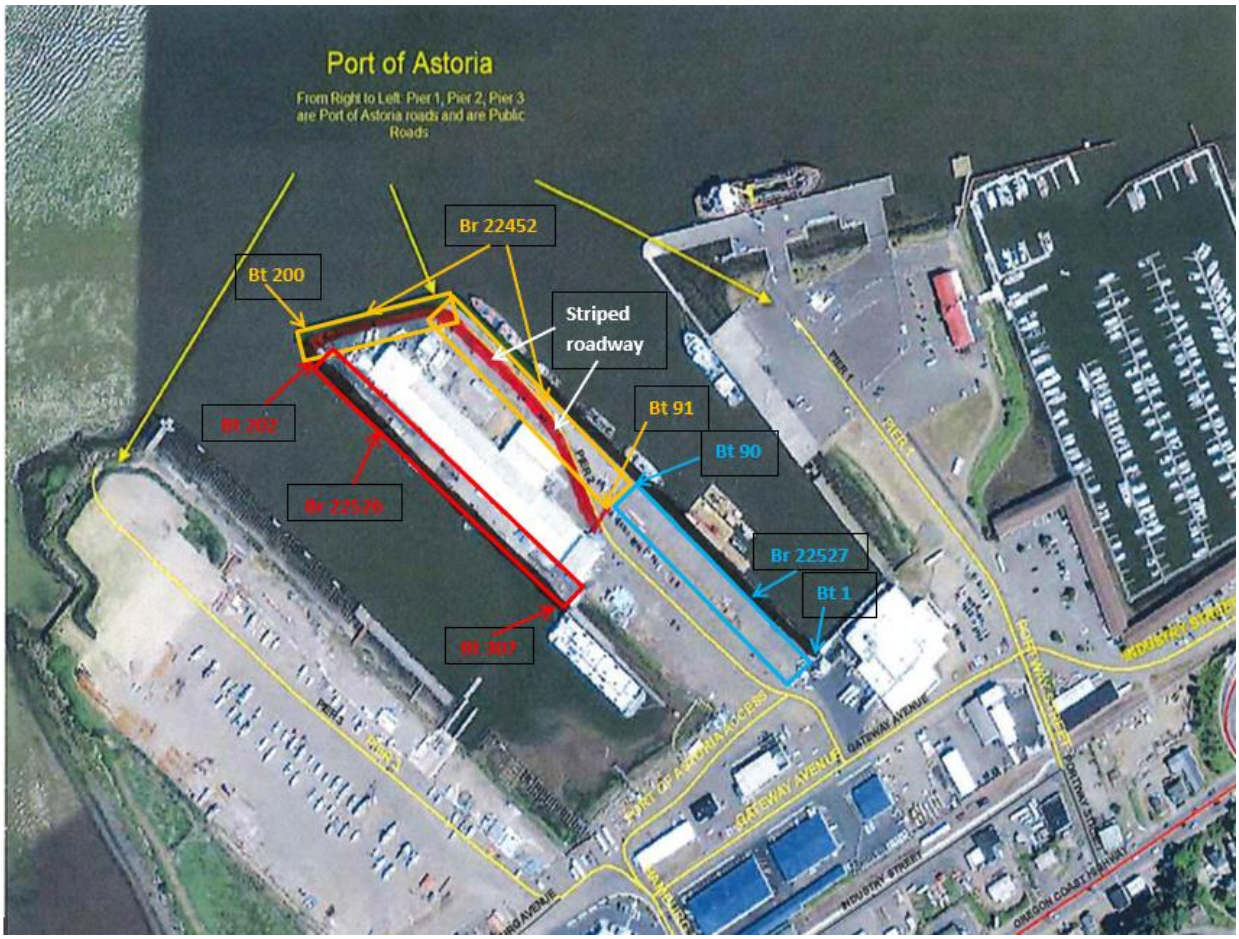
substructure on Pier 2 East is basically the same age as the substructure on Pier 2 West, the west side of Pier 2 is more susceptible to failures due to consistent easterly storm and tidal influences. As a result, the failures between bents 91 and 201 are less serious and prominent than those between bents 202 and 300. Though less severe, ODOT has still recommended 3-ton weight restrictions on the structure. This restriction has decreased the rate of seafood production.

Solution

To complete the repairs quickly, the Port will develop a Request for Proposals (RFP) for the repairs to Pier 2 East with an "as-is" repair scope. Repairs will be based on ODOT timber boring and inspection reports. The RFP may either be developed in tandem with Pier 2 West or separately. As mobilization for each project could be $100k or more and one side of the pier must remain open for traffic, the most cost-effective alternative is likely to develop an RFP for Pier 2 West and East in tandem - with the understanding that Pier 2 West repairs take priority and Pier 2 East repairs to be completed immediately after. If possible, construction to be completed in the same IWWW (In Water Work Window).

Project Permitting

Though the Pier 2 East failures are less extensive than those on Pier 2 West, they still require detailed planning and revised permitting. The current permit allows for replacement of an insufficient number of posts and substructure components to complete this project. Depending on RFP responses and the time required to complete each project (P2W, P2E respectively), it may also be advisable to seek an extension to the existing November 1 to February 28 IWWW in hopes of completing the work in one continuous project.



Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38). Therefore, repair of all pier structures is a high priority for the Port. Generally, repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure Goals (pg 56). Finally, "Improve[ment of] the piers to full functionality" is a Five-Year Capital Plan Goal (pg 58).

Funding Notes

The Port can contribute matching funds for this project and intends to apply for grant funding through MARAD, as a separate phase of Project 28 – Pier 2 West.

27. Pier 2 – Pier 2 West Fender Piles

Description

Timber fender piles along the perimeters of Piers 1 and 2 serve as consumable infrastructure for fishing and cargo vessel berthing. Approximately 100 fender piles along Pier 2 West need to be replaced at an estimated cost of $3,000 each. Historically, the Port has replaced no more than 25 fender piles per year; consistent with this realistic approach, the Port therefore intends to do this project in phases until all damaged piles are replaced.

Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38). Therefore, repair of all pier structures is a high priority for the Port. Replacement of fender piles is a high priority deferred maintenance item - essential to the basic functionality of the piers and necessary to prevent inordinate and preventable damage to both piers and vessels. Repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure Goals (pg 56). Finally, "Improve[ment of] the piers to full functionality" is a Five-Year Capital Plan Goal (pg 58).

Funding

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

28. Pier 2 – Pier 2 West Repairs

Description

Pier 2 West - Sheet Pile Wall. When constructed in the 1980's, the western portion of the Pier 2 Warehouse perimeter stem-wall foundation was placed approximately 8 feet from the [west-side] timber and sheet pile retaining wall. This placement close to the timber and sheet pile wall, with the resulting lateral foundation forces, have contributed to the bending and outward rotation failure of the retaining wall. These failures have contributed to the slow subsidence of the west side of the Pier 2 warehouse. The sheet pile wall must now be bolstered or replaced.

Pier 2 West - Dock Substructure and Deck. Pier 2's substructure condition has resulted in 3-ton weight restrictions imposed by ODOT bridge inspectors and given rise to numerous safety concerns around Pier 2 Warehouse's perimeter. The area of greatest concern covers Bridge #22526: bents 202-300 (see photo above). Here, many of Pier 2 West's mud sills,

posts and caps have failed; the consequent deck failure has necessitated temporary steel plate repairs. These temporary fixes are a growing safety concern because they provide a false sense of security: an ostensibly solid deck surface on a substructure that is slowly failing. The Port must make repairs to Pier 2 West as soon as possible to ensure public safety and seafood processing continuity.

Solution

The Port sought FEMA funding to replace the substructure components due to damage caused by the December 2015 storm. Though the Port did receive funding for other projects, funding for Pier 2 West was denied due to lack of maintenance records. In the spring of 2019, the Port of Astoria engaged KPFF Engineers to determine the reasons for the infrastructure failures and provide viable repair solutions. KPFF's scope of work included the following:

- conduct geotechnical surveys to determine soil composition, compaction characteristics and soil loss rate through the pile wall
- conduct LIDAR and side-scan bathymetry to determine erosion rates and baseline underwater topography
- conduct surveys to determine Pier 2 West Warehouse's current rate of subsidence
- determine reason(s) for Pier 2 Warehouse subsidence;
- determine current depth and remaining life of existing sheet pile wall
- develop estimates to move sheet pile wall approximately 20 feet to the west
- develop feasible long-term options for:
    - sheet pile wall repair / replacement,
    - pier 2 West Warehouse stem-wall foundation underpinning,
    - pier 2 Warehouse concrete slab underpinning, and
    - post, pile and timber substructure reconstruction

As of April 30, 2020, the Port has paid KPFF $138,631.54 for the project and is awaiting survey and sounding results which should be available sometime in the fall of 2020. At that time, KPFF will present the Port with the results of their findings and discuss viable long-term repair alternatives. While an exact estimate of the project cannot yet be ascertained because the scope is not yet known, the Port estimates this project at $3 million.

Project Permitting

While the current Port permit allows repair of posts and substructure components, the volume of allowed replacements is insufficient for this project (at least as to in-kind replacement scope). Once the Port agrees to a repair methodology and scope of repair work (fall 2020), the Port will again engage KPFF for the PS&E (Plans, Specifications & Estimates) portion of the project. Soon thereafter, the permit process will commence - estimated to cost between $175k and $250k. Project permitting cannot begin until the method of repair/replacement is determined and appropriate plans can be drawn. Once the

PS&E portion is complete, the Port will immediately begin developing appropriate Invitation to Bid documents (ITB) – in consultation with KPFF - for the repair work.

Relation to SBP

"Deferred maintenance of the Port's berthing and dock structures . . . imperils the Port's ability to continue operations" (pg 38, 44). Therefore, repair of all pier structures is a high priority for the Port. Repair of pier structures is an identified Maintenance Need (pg 22-23) and a Critical Issue (pg 39) – critical not just for support of the seafood processing jobs (pg 47) and cruise line operations (pg 50), both of which are critical economic drivers for the Port (pg 50), but also because of the state's collateral interest in Piers 1 and 2 (pg 46). Though expensive, repair of the piers will bring a large return in market and economic development potential (pg 54). To "prioritize the repair and/or replacement of pier structures" is an Action Plan item under Infrastructure Goals (pg 56). Finally, "Improve[ment of] the piers to full functionality" is a Five-Year Capital Plan Goal (pg 58).

Funding Notes

The Port intends to apply for both the PIDP and BUILD grant in 2021 to assist with this project. An EDA grant is also a possibility. Should those grants not be awarded, the Port will likely have to proceed with small-scale repairs within the Port's budget and continue to apply for the MARAD grants in subsequent years.

29. Pier 3 – Storm Water System Maintenance

Description

Constructed on Pier 3 in 2016, the Port's stormwater treatment system is approaching a needed maintenance interval. Maintenance will include removal of contaminated soils from the forebay, settling pond and bioswale, reconstruction of the bioswale underdrain components, jetting of the lines, and replacement of Oyster shell gabions.

- Bioswale Reconstruction: $60,000
- Gabion / Oyster Shell Replacement: $10,000
- Disposal of contaminated forebay & settling pond sediments: $15,000
- Misc. Maintenance: $5,000

Relation to SBP

The Rule (see 'Relation to SBP under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the environmental category and is therefore a priority over revenue-generating projects. The treatment system serves an important purpose in the Port's stormwater treatment plan – which is directly connected to environmental concerns. Maintaining satisfactory sampling results is a basic pre-requisite to Port operations: exceedances [will eventually] present a serious interruption to Port operations.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

30. Port Security Enhancements

Description

In recent years, the Port has allocated $50k within its annual budgets for security expenditures. This allocation was done with the hope of utilizing the $50k as the matching requirement for a 3:1 $200k total PSGP award. The Port was awarded this grant in 2017 and funded the improvement of surveillance infrastructure and lighting, as well as a limited amount of improvement to fencing, training, radio equipment, etc.

The next phase is the replacement of nearly all the remaining low and high-pressure sodium lighting along the central waterfront with high-efficiency LED fixtures. This includes lighting for Pier 1, the Riverwalk Inn and Chinook Building parking lots, the West Mooring Basin overflow parking lot, the East Basin gravel lot, Pier 2, 424 Gateway mechanic's shop, 426 Gateway maintenance shop and the Pier 3 Boatyard.

Future plans include the following: building generator, security vehicle, training materials and programs, and relocation of the above-ground fuel storage tank at the 10 Pier One building.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project

falls into the security category and is therefore a priority over revenue-generating projects. The number of risks ameliorated by this project is long and will augment the Port's capacity to maintain a safe environment for the businesses that are the lifeblood of Port operations.

Funding Notes

The Port will continue to apply for the PSGP grant through FEMA; the Port will budget sufficient matching funds for the award. Some portions of the project will be financed by short-term loans.

31. Landside Asphalt Maintenance

Description

There are numerous asphalt repair projects – listed here in order of priority.

31.1 SE Flightline Drive / Airport Rd - SE Flightline Drive provides secondary access to the airport from the south and receives about one quarter of the entering and exiting traffic. It has numerous potholes and the surface is alligatoring.

Cost: $70,000 (±14,000 sq ft @ $5.00 per)

31.2 12th Place – There are two areas where previous water pipe installation projects have compacted and settled from traffic. The first area is across from the Coast Guard gate and part of the settlement is quite pronounced. Extension collars will have to be added to water shutoff cover due to the amount of settlement. Work will have to be done by a paver; edges may have to be milled to get a good permanent patch. The second area is at the intersection of 12th Place and Flightline Drive.

Cost: $7,500

Coast Guard Gate

12th Place and Flightline Drive

31.3 Flightline Drive at the Terminal – Concrete slabs are breaking up across the drive. The area will be subject to Life Flight construction traffic. The depressions will be patched with asphalt but this will be an interim fix only. Eventually, the concrete will have to be removed, new base placed and compacted and a permanent asphalt patch applied.

Cost: $30,000 (±6,000 sq ft @ $5.00 per)

31.4 Roadway in front of Lektro Building – Concrete slabs are breaking up across the portion of the road for which the Port of Astoria is responsible. Approximately 12,125 square feet (25’ x 485’) of roadway must be replaced.

Cost: $60,625 (±12,125 sq ft @ $5.00 per)

31.5 Reseal and stripe roads and parking areas – $5,000

Various roadways and parking lots at the airport lack adequately visible lane and parking space marking and present a source of potential liability to the Port. This work will be done with a combination of Port labor and contract work.

Relation to SBP

Basic infrastructure - roads, sewer, water lines – are essential pre-requisites to all other business lines at the Port. Given the directive of the Rule, this project is a priority because it protects revenue sources by maintaining basic infrastructure. Specifically, basic infrastructure such as asphalt is called out in the SBP (pg 22, 23, 40) as a Maintenance Need.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

32. Riverwalk Inn / Marina Waterfront RFP

Description

In support of the Central Waterfront re-development process - and in conjunction with the Central Waterfront Master Plan (project 9) and the Chinook Building & Vacant Lot project (Project 10) – a promising and viable option is to sell the Riverwalk Inn to a high-end hotelier that will work in cooperation with the Port's plans to re-develop the Central Waterfront. The Port will draft an RFP that will seek long-term improvements to the hotel's infrastructure as well as ancillary development such as restaurants and food trucks, retail spaces, meeting spaces and common areas.

Relation to SBP

Sale of the hotel is identified as a Recommended Step as part of addressing the Critical Issue of identifying additional sources of revenue (pg 19), a Recommendation under the Port Assets/Infrastructure breakdown (pg 23), and an Opportunity under the SWOT analysis (pg

39). The sale of the property is a component in an overall plan that includes the Central Waterfront Master Plan (Project 9).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

33. RV Park Development

33.1 RV Park Feasibility Study

Description

The Port owns over 100 acres of undeveloped property on the Skipanon Peninsula - a large portion of which is potentially valuable waterfront property. Some portions are adjacent to DSL land (on the north at the entrance to Young's Bay); and some to Clatsop County and City of Warrenton property (Warrenton Marina entrance on the west). A bulk of the Port's properties on the peninsula are divided by SE King Street and could potentially be developed into a high-end RV Park, with views of the Columbia, Young's Bay and Astoria-Megler Bridge.

This study would focus on the costs and benefits of locating such a park on the peninsula, including the economic impact to the community as well as the Port. The study would also determine the extent of wetlands mitigation needed and possible sources for such mitigation measures.

Relation to SBP

See Justification for Project 33.3 below.

The RV Park feasibility study is identified as a study necessary to clarify the potential options for the development of the Skipanon peninsula so that the highest and best use can be determined (pg 18, 52). It is also identified as a Goal of the Facilities and Business Plan (pg 59) and as a Strategic Objective (pg 8).

Funding Notes

The Port would likely apply for a Business Oregon grant for this project as it appears suitable for the Port Planning and Marketing Fund. The Port would be the secondary source of funds for this project.

33.2 RV Park Development Plan / Permitting & Engineering

Description

If the feasibility study indicates that an RV Park at this location would be a good investment, the Port would then execute a multi-phased approach to the development of the RV Park. This would include such action items as gathering input from local and regional sources to

determine what amenities are most needed & desired as well as garnering the support of local and state partners. Subsequent Commission approval would then be followed by engagement of appropriate design professionals and engineers.

Funding Notes
The Port will be seeking grant funds for this project. Potential sources include EDA and Business Oregon.

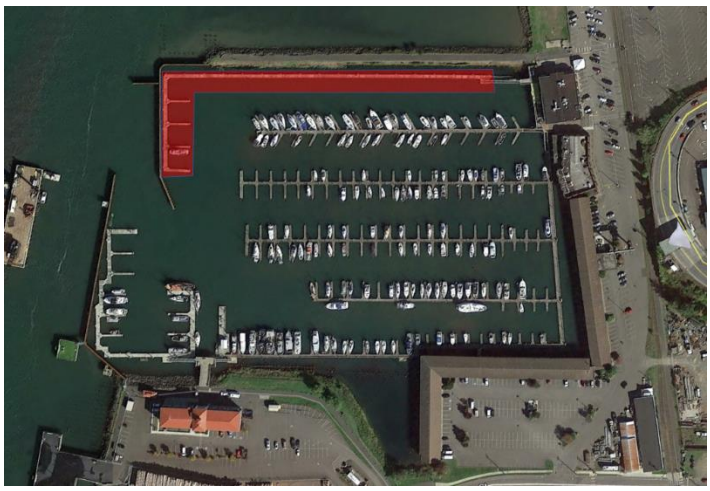
33.3 RV Park Development
Description
The RV Park would be developed in phases that would include:

- wetlands mitigation
- utilities
- roads, trails & paths
- building infrastructure
- dry camping & full-hookup areas

Relation to SBP
As a potential new business opportunity for the Skipanon (pg 8) that awaits a feasibility evaluation (pg 18), this project is specifically identified as one of the viable development options for the Skipanon peninsula (pg 52) and also identified as a Recommended Action Plan item (by the Airport Advisory Committee) under Property and Infrastructure goals (pg 49). The SWOT analysis also recognizes an RV park as an Opportunity (pg 39). A "watersports/camp village" on the Skipanon is an identified Goal as part of the Five-Year Capital Plan (pg 58). The viability of this project, of course, depends upon the outcome of Project 38.1 (RV Park Feasibility Study). Should the results of the study be favorable, the long-term revenue from the project would serve as the major justification: "Projects that protect the Port's revenue sources (infrastructure repairs/improvements) or create new sources of revenues take priority" (pg 13).

Funding Notes
This project will not be possible without outside funding. EDA and the state of Oregon are the most likely candidates. Another possibility is a public-private partnership. Given the strong economic outlook for RV parks generally, finding a private partner is eminently possible - especially if the results of the feasibility study are favorable.

34. West Marina – "T" Dock Power



Description

The West Marina's "T" Dock along the marina's eastern side is underutilized for two reasons: inadequate water depth and lack of necessary electrical power. As to the former, the Port has contracted with Bergerson Construction to complete a three-year, three-phase dredging project beginning FY 2020-21 (Project 35). The first phase of this contract will include dredging along T-dock's 900-feet in order to provide the water depth necessary for larger vessels to berth. While this will allow larger vessels to utilize the dock for moorage, increased electrical power will be necessary to make T-dock a fully viable option for larger vessels.

T-dock already has some of the necessary electrical components, such as power pedestals and conduit. Still needed is installation of new electrical wiring through existing housing components. Once dredging and electrical upgrades are complete, the Port will be able to open T-dock to daily, monthly and annual moorage.

Relation to SBP

Marina revenue is the fourth most important revenue source (pg 11). The West marina continues to maintain a 100+ waiting list for its mooring slips. Given the historical vacancy rates (extremely low) and the continued and persistent interest, providing power to the T-dock is very likely to increase marina revenue. This project is therefore a priority.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project. The Oregon State Marine Board may also have funds available.

35. West Marina – Dredging

Description

The Port contracted with Bergerson Construction to complete a three-year, three-phase dredging project beginning FY 2020-21. The project is scheduled to remove about 75,000 cubic yards of material from the West Basin Marina. The cost is estimated at $1.5 million and includes a $100,000 contingency.

Relation to SBP

Maintaining adequate water depths in the marinas is critical to marina operations. Accordingly, West Marina dredging is an identified, required, Maintenance Need (pg 23) and a Threat under the Situational Analysis (pg 39 - *i.e., lack of dredging is the threat*). In determining investment priories, dredging is a central issue and therefore identified as one of the maintenance Critical Issues (pg 40). Marina revenue is the 4th most important source of revenue (pg 11). The West marina maintains a waiting list in excess of 100 (pg 17); the demand is steady & high and the long-term outlook is very favorable. Without adequate dredging, the marina capacity will steadily decline. Therefore, maintaining this asset is a high priority.

Funding Notes

Given the high priority of this project, the Port will likely have to move forward regardless of any outside funding availability. At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

36. West Marina – Pile Replacement

Description

The Port originally installed over three hundred 9-inch (diameter) guide piles for the docks and floats within the West Basin Marina despite the design indicating 12.75-inch piles. These undersized piles are now failing at an accelerated rate. To remedy the issue, the Port needs to replace about 200 guide piles over the next four years. Replacing the guide piles will also be a multi-phase project and, due to budgetary constraints, may extend beyond the four-year time frame.

Relation to SBP

See Justification for projects 23, 25, and 27. Piles, whether fender piles or guide piles, are like water, sewer, and roads: they must be maintained in order to allow continued operations of the marina and piers. Maintaining asset infrastructure is a Critical Need (pg 19); guide piles are such infrastructure. Marinas are a Key Asset that must be “preserved and available to support the District’s economic development” (pg 24); the guide piles are essential to marina operations. Statewide planning goals 9, 12, and 17 are all supported by fully-functioning marinas (pg 36). Item 6 under the Five-year Capital Plan is to “Update failing infrastructure to modern-day standards. Maintain infrastructure that is in good repair to preserve the longevity and useful life” (pg 57). All piling replacement at the Port supports this Goal/Action Item.

Funding Notes

Given the high priority of this project, the Port will likely have to move forward regardless of any outside funding availability. At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

37. West Marina – Security Fencing

Description

The Port is experiencing increasing vandalism, theft and vagrancy at the West Basin Marina. To ensure the safety of Port employees, Port tenants, their vessels and their property, Marina access must be limited to those that have legitimate business within the West Marina's boundaries. Access can be controlled with gate and card access systems.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the security category and is therefore a priority over revenue-generating projects. The number of risks ameliorated by this project is long and will augment the Port's capacity to maintain a safe environment at the West Marina.

Funding Notes

The Port will likely combine this project with other security-related projects as part of a PSGP grant application. The Port would be the secondary source of funds for this project.

38. Airport – Radio-read Water Meters

Description

The City of Warrenton is converting all water meters to those that can be "read" by radio signal ("radio-read" meters). As a courtesy, the City has continued to read the Port's non-radio-read meters despite this work being a Port obligation. If the Port converts to radio-read meters, the City will continue to read the Port's meters free of charge. If the Port does not convert, the City will simply bill us for water use at the master meter on the property line and the Port will then be responsible for manual reading of its own meters and preparing invoices for tenant rebills.

Relation to SBP

Avoiding long-term, regular charges that could be avoided with a low one-time cost (about $6,000) supports the Port's directive to maximize revenue (pg 13). At the time of drafting, this project falls fairly low on the priority sequence and will likely be worked into future budgets over the next few years.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

39. Airport – Terminal Building Upgrades

Terminal Building

Description

The Terminal Building is long overdue for relatively superficial maintenance and upgrades. Two windows have broken seals and need replacement. To retain a modicum of marketability, flooring and lighting should be replaced - along with some of the furniture. The exterior walkway is over-worn and needs deck boards, railing, and paint (at minimum). The public space would be vastly improved with a dropped ceiling and a new coat of paint on the exterior deck. The FBO and Welcome signs on the roof need refurbishment or replacement.

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, preservation of the real estate that supports this revenue stream is a high priority (see 'Relation to SBP' under Project 1). This project preserves Port-owned real estate and protects airport-related revenue streams by maintaining a basic element of all airports: a terminal building. It is identified as a Recommended improvement (pg 23), a Key Asset to maintain (pg 24), supports Statewide Planning Goal 12 (pg 36), and preserves an identified Strength under the SWOT analysis (pg 38). Given the relative size and importance of AST, its economic impact (see pages 14 & 48), and the county-wide benefit it offers (pg 19), the terminal building – as the most prominent face of the airport – must be maintained. Attracting new aviation tenants to the airport may depend on it (pg 13).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for

this project. The Port will likely employ its own maintenance personnel to perform the upgrades.

40. Airport – Lektro Roof Repair

Description

One portion of the Lektro roof suffers from regular leaks. It appears that the primary cause may be a lack of capacity in the existing roof drainage system, resulting in excess ponding in the valley and eventual leakage.

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, preservation of the real estate that supports this revenue stream is a high priority (see 'Relation to SBP' under Project 1). This project protects an existing revenue source by maintaining an existing asset. Further, this building is a collateral asset for Port loans with the state (pg 46) and therefore must be preserved.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

41. Airport – T Hangar Repairs

T Hangar track system failures

Description

'A,' 'B,' and 'C' T-hangar rows are approaching 40 years old. The electrical system is inadequate and aging. Roofs are approaching the end of their useful lives and the steel track systems that support the rolling hangar doors are beginning to fail. Renovating the structures to original functionality will require a detailed capital improvement program - which the Port intends to complete after the larger FAA projects are completed. It is estimated that each row of hangars will require $100,000 worth of work to address all maintenance concerns.

Relation to SBP

Lease revenue is the largest revenue center (pg 11); therefore, preservation of the real estate that supports this revenue stream is a high priority. This project preserves Port-owned real estate and therefore supports the lease revenue stream (see 'Relation to SBP' under Project 1). This project protects a current source of revenue – hangar lease revenue.

Hangar availability is a key component of AST, which is identified as a Key Asset that must be maintained in order to "support the District's economic development" (pg 24). It also supports Statewide Planning Goal 12 (pg 36) and preserves an identified Strength under the SWOT analysis (pg 38). Given the relative size and importance of AST, its economic impact (see pages 14 & 48), and the county-wide benefit it offers (pg 19), the T hangars – as the primary asset that attracts new aviation tenants - must be maintained.

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.

42. Airport- Security Gate Operators, Fencing & Cameras

Security Gate Operators

Coast Guard Ramp

Description

The northwest security gate at the Terminal Building has been nonfunctional for several years. It is left open in the day, which invites occasional unauthorized traffic on the ramp, and is padlocked at night, which inhibits authorized and emergency access (Life Flight, Medix). The southeast gate at the west end of the T hangars is functional but electronic controls are obsolete, difficult to locate and expensive. The system is currently serviced by an outside vendor from Portland.

Lack of fencing prevents both the airport and Coast Guard ramps from being secure and opens the Port to significant liability. To bolster airport security, this project will install several hundred feet of fencing and replace existing swing gates and controls with more effective FOB-activated cantilevered gates. To enhance surveillance and Port security effectiveness, this project will also install two PTZ (pan-tilt-zoom) surveillance cameras and two fixed cameras at the gated locations – all of which can be remotely controlled.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project

falls into the security category and is therefore a priority over revenue-generating projects. The number of risks ameliorated by this project is long and will augment the Port's capacity to maintain a safe environment at the airport.

Funding Notes

Based on current information, airport security enhancements are not eligible for the PSGP through FEMA. Further investigation will be ongoing, but it appears that the Port will be the primary source of funding for this project.

43. Airport - Rehab the Tetrahedron

KAST Tetrahedron

Description.

The tetrahedron is a surface wind indicator that is highly visible from the air. To restore daytime functionality, it needs a coat of paint - which can be done by staff, Coast Guard and volunteers for $1,000-$1,500. The remainder is for restoration of the lighting system for night operation.

Relation to SBP

The Rule (see 'Relation to SBP' under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the [aviation] safety category and is therefore a priority over revenue-generating projects. This project indirectly supports revenue streams by maintaining a basic asset to aviation operations.

Funding Notes

This project can be completed with Port maintenance personnel and locally-sourced supplies. Therefore, it is anticipated that the Port will be the primary source of funds for this project.

44. Airport – Vegetation Management

Description

Vegetation (bushes, trees, grass, etc.) is penetrating the Primary, Transition and Approach Surfaces in numerous locations across the airport. The Port is obligated by previous grant awards' conditions to keep these surfaces free from obstructions.

Tree and shrub penetration of the Transition Surface on NE side of RWY 31

Tree and shrub penetration of the Transition Surface on SE side of RWY 26

Tree and shrub penetration of the Primary and Approach Surfaces of RWY 26

Tree and shrub penetration of the Transition Surfaces on the north side of RWY 26.

Tree and shrub penetration of the Primary and Transition Surfaces on the north side of RWY 26.

Tree and shrub penetration of the Primary and Transition Surfaces on the north side of RWY 26.

Tree and shrub penetration of the Approach Surface on the west side of RWY 8.

The equipment itemized below is necessary for the Port to fully handle the vegetation management work at the airport. This equipment investment will pay for itself in 2-3 years through increased labor efficiency. Most of the equipment purchases will allow Port staff to perform the landscaping and maintenance tasks required at the airport and keep the Port in compliance with its grant award obligations.

1. John Deere Rotary Broom - $5,000

   At present, the airport has no capability to deal with grass cuttings that get on the ramps and taxiways. Grass is considered 'foreign objects or debris" (FOD). This is a concern to operators of turbine engine aircraft as the FOD can be sucked into an operating engine. It is not likely to cause an engine failure, but no one wants to take a chance. This is what Taxiway A looks like most of the grass growing season.

John Deere Rotary Broom

Taxiway Alpha with grass clippings

   The Oregon Department of Environmental Quality's 1200-Z Stormwater permit obligates the Port to perform regular sweeping - which must currently be contracted out. The rotary broom shown an attachment that is driven by the John Deere TerrainCut 1550

mower that the Port purchased in 2018. Changing from the mower to the broom and vice versa takes very little time and expands the usefulness of the 1550.

2. John Deere Front Angling Blade - $2,350

John Deere Angling Blade

This blade is an attachment that is driven by the John Deere TerrainCut 1550 mower that was purchased in 2018. Changing from the mower to the broom to the blade and vice versa takes very little time and further expands the usefulness of the 1550.

The blade will serve several purposes. First it can be used to scrape vegetation from joints and cracks in the pavement. It is best to deal with the problem mechanically. If sprayed there is an environmental sensitivity and if the spray is effective the grass/weed residual still needs to be removed. Up to now we have been doing it by hand with a flat shovel when absolutely necessary.

3. John Deere Dual Wheel Kit - $1,050

The Port's Terrain Cut 1550 is a four-wheel drive mower. It does well on firm ground but if the ground is soft from recent rain it can get stuck easily. So far, this season (2020) it has become stuck six times and the Port has been able to pull it out with the winch on the new pickup. Last year the Port spent about $600 on commercial towing to do the same job. This dual wheel kit attaches a second wheel assembly to the existing front drive wheel for a total of four main driving tires instead of two. This spreads the weight of the mower over a larger area and provides more traction.

4. Stihl Backpack Blower - $600

This is a very useful tool for cleaning both surface areas and enclosed places. It would be helpful along with the rotary broom for cleaning the ramp of debris and cleaning debris from around storm inlets.

5. Tractor

The PTO on the Port's 50-year-old Massey-Ferguson tractor is past its useful life. To handle the mowing and sundry landscaping operations necessary at the Airport, the Port must acquire another tractor or contract out mowing operations.

6. Flail Mower - $8,000

The current mower used with the Massey Ferguson tractor is a 60" wide Brush Hog mower. It is functional but is aging and the tractor can power a larger cutter. The larger size will improve the operating and labor efficiency of mowing. The Brush Hog has three horizontally rotating blades. When it strikes a thick sapling, a rock, or a high spot in the ground, the power train must absorb the shock. The flail mower has 50-60 blades that rotate vertically and have a hinged connection to the drive shaft. When it encounters an object that it cannot cut the blade flexes at the hinge and goes over the object.

Brush Hog

Flail Mower

It is a very effective tool for heavy grasses, young willows and blackberry vines. Because of its options for attachment to the tractor it is also helpful for cutting the edges of open drainage ways. Taking advantage of the power take-off horsepower, we can operate a wider mower and be more efficient.

Relation to SBP

The Rule (see 'Relation to SBP under Project 1) identifies three types of projects that take priority over revenue generation: safety, environmental, and security projects. This project falls into the [aviation operations] safety category and is therefore a priority over revenue-generating projects. The risks presented by the operational realities this equipment seeks to mitigate must be reduced to protect the Port.

45. Airport – QT Pod M4000 Self-Serve Avgas CC Terminal

Description

The Port's current credit M3000 dial-up card terminal is over ten years old and manufacturer support ceased earlier this year (2020). To ensure continuity of self-service credit-card aviation fuel sales, the Port will need to upgrade the equipment prior to losing

service support. The QT Pod M4000 Fuel system is prevalent among regional airports and offers upgrades to ensure that continuity:

- cellular, Wi-Fi and ethernet-capable options for card processing
- improved user interface
- web-based software application
- automatic software updates

Service contracts are available with purchase of any system; financing is available over a 6-year term.

Relation to SBP

Self-serve aviation fuel is a basic service expected by patrons of AST. As a basic element of an airport with the regional importance that AST occupies (see pages 14 & 48), and the county-wide benefit it offers (pg 19), such a basic service must be maintained. Attracting new aviation tenants to the airport may depend on it (pg 13).

Funding Notes

At the time of drafting, it is anticipated that the Port will be the primary source of funds for this project.