UPLANDS DEVELOPMENT STUDY

October 2016

CITY OF SEWARD ALASKA

SMIC
SEWARD MARINE INDUSTRIAL CENTER EXPANSION

AIDEA
Alaska Industrial Development and Export Authority

ARCADIS

SEWARD MARINE INDUSTRIAL CENTER EXPANSION

TABLE OF CONTENTS

FIGURES

TABLES

EXHIBITS

SEWARD MARINE INDUSTRIAL CENTER EXPANSION

SMIC UPLANDS DEVELOPMENT
OVERVIEW OF POTENTIAL DEVELOPMENT OPTIONS

1. EXECUTIVE SUMMARY

Since the early 1980's, the City of Seward and State of Alaska have invested in the Seward Marine Industrial Center (SMIC) and its supporting infrastructure with the mutual goal of establishing a marine industrial services facility and spurring economic development. A number of private firms, governmental agencies, and educational institutions have leased or purchased parcels at SMIC and have invested in a range of marine vessel maintenance and repair (M&R), fabrication, logistics services facilities and operations, and maritime vocational training programs. SMIC's location enjoys ice free, deep water navigation and provides connectivity with the highway network serving the southcentral and the interior population centers of the state, as well as access to the Alaska Railroad terminus in Seward and the airport facilities in Seward and Anchorage. Full utilization of SMIC's waterside and landside facilities has been hampered by unsafe operating conditions for vessels in the marine basin caused by the swell and wake action circumventing the existing partial breakwater structure. Construction is now underway on an extension of the breakwater structure that will enhance the operational safety of the SMIC marine basin, making the facility more attractive and useful to the fleet of commercial and recreational vessels operating in Alaskan waters. With the new breakwater scheduled to be completed by April 2017, SMIC will be able to realize the economic development benefits of the public and private sector investments made to date in the facility and positioned to attract a range of new development opportunities.

In early 2015, through a cost sharing agreement, the City of Seward and the Alaska Industrial Development and Export Authority's (AIDEA) Project Development and Asset Management Team commissioned this study. The objective of this study is to evaluate the development potential of SMIC's upland area and marine facilities given the pending completion of the new breakwater structure. Through a

Recommendations

- Establish Advisory Committee to oversee/guide SMIC development
- Improve SMIC facility to meet needs of current and future users; encourage private investment
- Promote and market SMIC's facilities, strategic location in Alaska
- Encourage partnerships with UA, AVTEC and industry partners to support workforce development
- Consider zoning modifications as SMIC develops to include housing, retail and other uses

review of previous studies and reports, and a series of interviews with current and potential users, as well as a work session with maritime industry operators and commercial service providers, this study sought to identify companies, organizations and individuals interested in expanding their operations at SMIC or in developing new businesses or other activities at the facility. These reviews and interviews resulted in a number of viable development opportunities being identified for SMIC, and a workshop convened with a broad range of SMIC stakeholders--including industrial, financial, economic, real estate and educational subject matter experts, discussed additional long-term development opportunities for SMIC and the City of Seward. Although no particular option emerged as the single best development opportunity for SMIC, a number of SMIC's existing attributes, such as the existing vessel lift capabilities and available work and storage areas, suggest that SMIC will be able to attract a greater number of vessels to the facility for the range of services provided. This increased utilization of the SMIC maritime basin will in turn attract additional commercial and educational investments in maritime related activities to the facility, spurring upland development. Accordingly, development policies of the City should be flexible and seek to encourage public and private sector investments that complement and build on the existing infrastructure and services provided.

Interviews with current tenants and prospective users did identify a number of near-term development opportunities for the SMIC uplands area and explored a range of mid- to long-term development possibilities. Near-term development options mentioned by current tenants and users encouraged the continued development of the Seward Shipyard and M&R operations, and supported an expansion of existing marine education and vocational training facilities at SMIC. These developments would build directly on the existing infrastructure, operations and training programs at SMIC and could potentially achieve a fuller utilization of SMIC's work and storage areas and equipment capacities. This would help the City to meet its immediate revenue goals for the facility while accommodating the needs and interests of the current tenants and prospective users.

The stakeholder work session considered additional long-term development opportunities for SMIC, ranging from an expansion of education and training facilities to introducing housing accommodations for students conducting marine research or pursuing vocational training, or for workers engaged in commercial vessel services. Together with the user interviews, the work session helped to emphasize several strengths, or competitive advantages, of SMIC—such as proximity to population centers, existing vessel haul-out capacity, available land for additional businesses and development, and access to educational programs and a trained labor force. In addition, participants in the study confirmed a list of near-term capital improvements to address some of the weaknesses attributed to SMIC, including inadequate public facilities and service amenities, a lack of sheltered workspaces, and damaged docking structures. Figure 1 is a visual graphical representation summarizing the work session's ideas and emphasizing the importance of collaboration. A larger version of the graphic is found at the end of Exhibit 1, SMIC Strategic Work Session Summary.

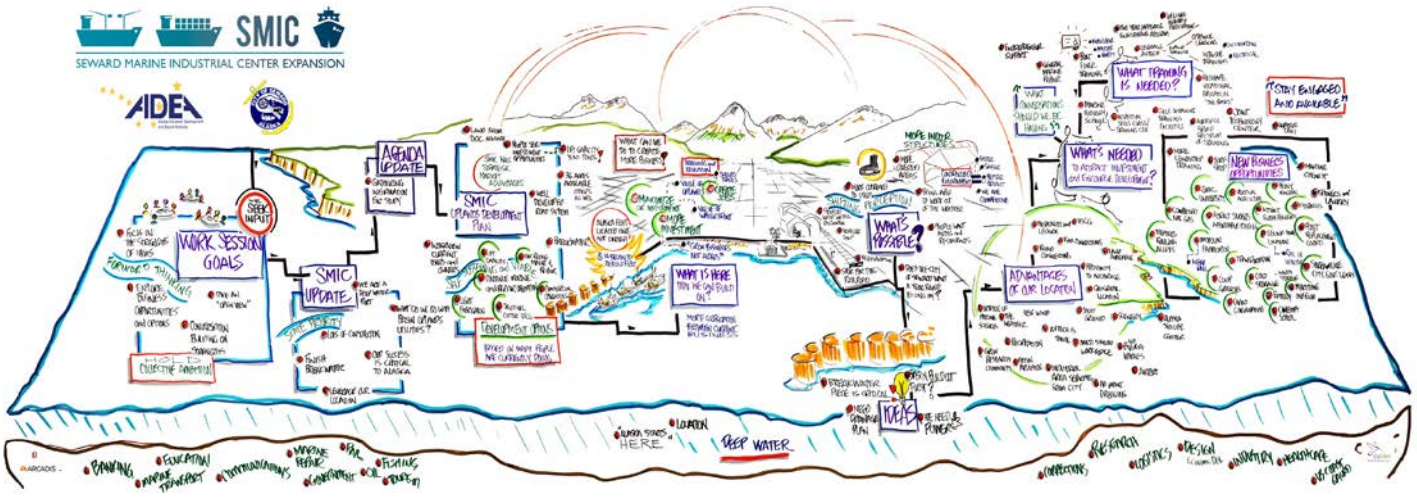

Figure 1. SMIC Work Session - Graphic Summary (Jan. 22, 2016)

In recent years, the City TraveLift has operated at roughly 25% of its available capacity, and the work and storage areas of SMIC could accommodate a greater number of vessels. The vessel lift capacity of the SyncroLift (5,000-ton) and the TraveLift (330-ton) provide a particular value to vessels of 50' or greater operating in the Alaskan fleet. Vessels of 50' or more in length comprise roughly 25% of the active fleet, and recent regulatory changes will encourage operators to keep older vessels in operation. All of this suggests that SMIC has an opportunity to attract a greater number of the larger vessels now operating in Alaska for the range of M&R and fabrication services available at the facility.

Building on the public and private infrastructure and M&R operations in-place, the City can increase utilization of the SMIC facility by attracting a greater number of the larger vessels. This increased activity would, in turn, encourage a further expansion of the M&R, fabrication, and other marine related businesses, and, with an enhanced usability of the North and East docks, demand for logistics services dockage would increase. Full utilization of the existing SMIC capacities would also allow the City to achieve sustainable economic operation of the SMIC facility and attract further development of the upland area, and set the foundation for an expansion of the maritime research, education and vocational training activities at SMIC and in Seward.

To derive an estimate of the potential revenue a greater utilization of the vessel lift capacity and upland area of SMIC would generate, a potential build-out of the parcels available for development focusing on M&R and fabrication operations was prepared. This exercise shows that full utilization of the existing capacities at SMIC would generate sufficient annual revenues to achieve sustainable economic activities and foster additional economic development opportunities, such as an expansion of the maritime research, education, and vocational training facilities. Revenues to SMIC and to the City could be further enhanced with the introduction of retail commercial activities, such as hoteling accommodations, convenience shopping, and food and restaurant services that generate tax receipts to the City.

Through the interviews and work session, a number of suggestions were put forward encouraging the City to take a more pro-active role in shaping and advancing the development of SMIC. These suggestions included the continued expansion of M&R and fabrication operations as well as maritime education and training activities, and highlighted a number of operational practices and administrative policy options available to the City. The implementation of these suggestions would represent a more active management of the facility by the City, and work to attract a greater share of the growing demand for commercial vessel services to SMIC, thereby promoting a fuller utilization of the existing infrastructure and facilities.

As expressed by current and potential users and the broader set of SMIC stakeholders, the following recommendations are made for the City to consider in advancing the development of SMIC as a marine industrial services and educational and research center, and in accommodating the interests of both the public and private sector:

- City of Seward should consider establishing an active governance structure to include an Advisory Committee representing businesses, industry experts, stakeholders and user groups charged with overseeing and guiding the City's interest in the future development and promotion of SMIC
- Address current deficiencies and advance facility improvements at SMIC to meet the needs of current tenants and users, and to encourage private sector investment and developments
- The City of Seward and broader community should collectively promote and market the advantages of SMIC, emphasizing the advantages that the port facilities of Seward offer in terms of location and connectivity to the state's urban centers, rail facilities, and cargo capacities of the Anchorage airport
- Encourage the development of partnerships between the University of Alaska, AVTEC, and industry partners to create a workforce development/new product incubation facility at SMIC to provide maritime vocational training and education as well as research opportunities through the University,
- Consider zoning modifications permitting the inclusion of housing, convenience shopping and food services at SMIC as the area becomes further developed.

This study found solid support among current and prospective users of SMIC for the continuing improvement and development of the facility. The existing infrastructure and available services, together with completion of the new breakwater structure, represent value assets and provide a stable foundation for the further development of SMIC. With these assets in place, SMIC has the capacity to accommodate more users of the Seward shipyard, vessel haul-out equipment, and dockage spaces and upland areas. These favorable circumstances afford the City with a number of possible options to efficiently manage the facility, promote a greater utilization of the existing assets, and encourage the continued development of the facility.

The current breakwater construction will enhance SMIC basin operational safety, and enhance use of SMIC to commercial and recreational vessels traveling in Alaska's waters.

2. INTRODUCTION

A new breakwater structure for SMIC is scheduled to be completed by April 2017. This new structure will improve the operational safety and efficiency of the SMIC marine basin, vessel dockage and moorage, and haul-out services. Along with these waterside navigational and operational improvements, the City hopes to encourage a greater use of the SMIC facilities and advance development of the upland area. This study considers opportunities for additional upland development and the expansion of commercial, governmental and educational activities at SMIC, and presents recommendations for the City to consider as a mean to improve the overall operating efficiency, revenue potential, and continuing development of the SMIC facilities.

Over the past three decades, the City and state of Alaska have invested in SMIC infrastructure and facilities with the goal of attracting marine industrial and commercial services, maritime-related job training and research opportunities, and additional economic development opportunities. The new breakwater structure will enhance the competitive advantages that SMIC offers to Alaskan mariners in terms of year round, ice-free waterfront access; large dry-dock and haul-out capacities; available work area and storage space; and direct connectivity to the state's transportation networks and urban population centers. As an example, SMIC provides ready access to the world's busiest air cargo facility, the Anchorage International Airport.

To date, existing infrastructure and equipment improvements at SMIC have attracted a range of commercial, educational and governmental users. These existing users have expressed a commitment to expanding their operations at SMIC. In addition, it is anticipated that the safety and operational improvements associated with the new breakwater will attract additional users and new developments to SMIC, along with an expansion of existing operations, the development of additional maritime industrial services, and growth of educational facilities and programs.

3. SMIC EXISTING SITE AND CONDITIONS

3.1 LOCATION

SMIC is located on approximately 200 acres of land on the eastern side of Resurrection Bay in Seward, Alaska. The Initial Development Area of SMIC, which is the focus of this study, consists of 82 acres. A six-mile, two-lane roadway provides direct access from SMIC to the Seward airport, the Alaska Railroad, Alaska's highway network, and the Anchorage International Airport. Seward is one of Alaska's two ice-free, medium draft harbors with all-weather air, rail, and road access to Southcentral and Interior Alaska.

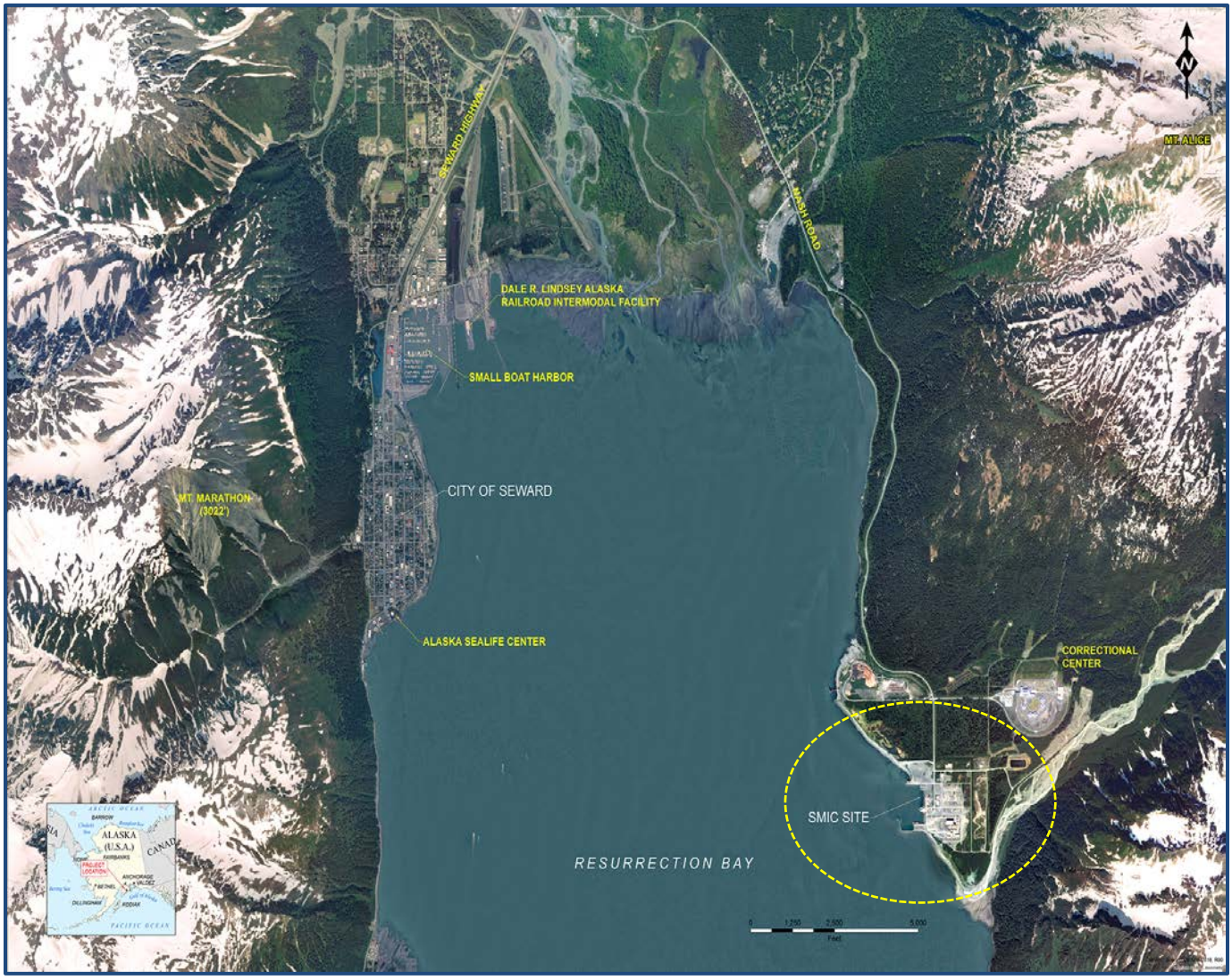

Figure 2: Aerial View of SMIC and Resurrection Bay

3.2 FACILITY

The City began development of SMIC in the early 1980's to serve as an industrial center and shipyard for commercial and recreational vessels. As shown in Figure 3, SMIC facilities currently include a partially enclosed marine basin; docking structures; a shipyard and marine vessel haul-out equipment; vessel maintenance and repair (M&R) services; and upland areas for vessel repairs, storage space, and material laydown, as well as land area available for future development. The facility operates year round, and is unique in providing direct highway and railway access to and from the urban population center in Anchorage and other communities along the Alaska rail belt up to Fairbanks.

Figure 3: Existing SMIC Maritime Facilities

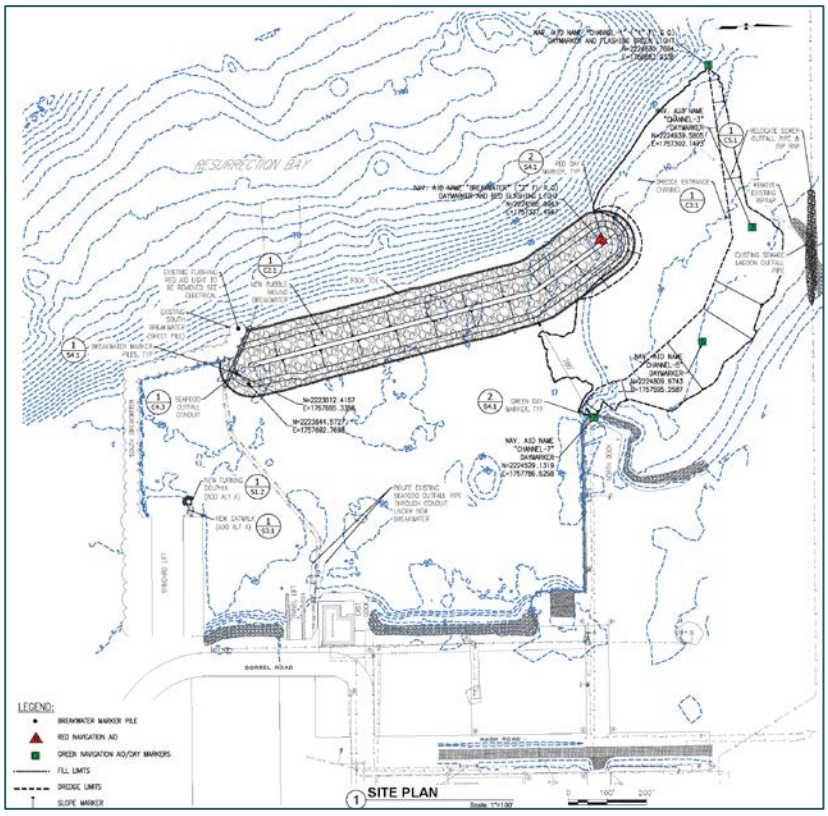

Figure 4: SMIC Expansion-Phase I: New Breakwater Structure

Water depth in the SMIC basin is maintained at -25' mean-lower-low-water (MLLW) alongside the North Dock, and at -21' draft in the main basin. SMIC can accommodate medium draft vessels for cargo off-loading, fueling, and moorage alongside the North Dock. The south face of this dock is 430' long, and the west face is 114'. The East Dock is 132' long along the sheet pile bulkhead facing west, and four steel/lumber dolphins provide mooring space north of the bulkhead along the unfinished length of the East Dock to the North Dock. The City-owned TraveLift facility, located immediately south of the East Dock, has two 119' long, 8' wide concrete piers set 32' apart to accommodate operations of the new 330-ton TraveLift, which is capable of lifting most vessels up to 167'

long (as per TraveLift vendor specifications) and transporting vessels to the uplands area for maintenance, repairs or storage. Vigor Industrial currently manages the Seward Dry Dock facility under a long-term management contract with the City, and operates the 5000-ton Synchrolift located on the south end of the basin, which can haul out vessels up to 350' in length and 80' of beam. The existing breakwater is constructed of self-standing sheet pile cofferdam cells and smaller connecting cells, and extends 750' to the west of the shoreline before turning north for a length of 275'. In 2014, the City successfully secured additional funding to improve the navigational infrastructure at SMIC and is constructing a new 1,009' rubble mound breakwater. The new rubble mound breakwater structure will extend the northerly end of the existing breakwater structure, as shown in Figure 4. In addition to the construction of a new breakwater, the City has invested in providing power (electricity), communications, potable water and sewer/storm drainage services to the leased parcels at SMIC.

Construction of the rubble mound breakwater at SMIC commenced in 2015 and is scheduled for completion by April 2017. Completion of the breakwater will provide the SMIC basin with improved protection from swell and wake action, thereby improving the functionality and capacity of the SMIC harbor for maritime operations.

4. SMIC UPLANDS AND CURRENT USERS/PRIVATE BUSINESSES

4.1 UPLANDS

The upland parcels at SMIC are zoned for Industrial use under the City's Zoning Code. In addition to the Industrial uses identified in the code, the City provides recreational parking (seasonal), and public access to campground areas established along Spring Creek, Fourth of July Creek and Resurrection Bay.

Along with the marine structures, haul-out equipment, and transportation infrastructure noted above, the City has developed the following structures and services in the upland area:

- Harbor Master office and a storage building for spare parts and equipment;
- Vessel wash-down pad & wastewater collection facility;
- A storm water collection system within the shipyard complex operated by Vigor;
- Master Electrical Substation;
- A sewer system serving SMIC and the surrounding area with sufficient capacity to accommodate anticipated growth;
- Electricity, potable water and sewer systems up to boundary of the developed areas;
- High mast and area lighting; and
- Internal roadway and traffic circulation, with the road segments south of Jellison Avenue as service roads, not open to the public.

4.2 CURRENT TENANTS/BUSINESSES AND THEIR OPERATIONS

As shown in Figure 4 (excluding the 65.6-acre parcel now owned by the State of Alaska Department of Corrections), the central upland area of SMIC comprises 32 parcels of various sizes covering approximately 92.2 acres, of which 56.6 acres are either leased or in use, including 1.2 acres which are privately owned—leaving 35.6 acres available for lease and development. Currently, the City Boat Yard occupies 11.85 acres and other common use areas occupy about 11.68 acres, including internal roads and the wash-down area. M&R service operations, supply and logistics service providers, educational institutions and other governmental agencies occupy about 45 acres, with 34 acres currently generating revenue for SMIC of roughly $156,000 in land rents and leases, and $107,500 in storage fees, in 2014. About eleven (11) acres are not currently generating annual revenue payments, including parcels used by AVTEC (7.58 ac.), the U.S. Coast Guard (USGC, 0.03ac.), and 1.94 acres housing the main power substation north of the Jellison Avenue.

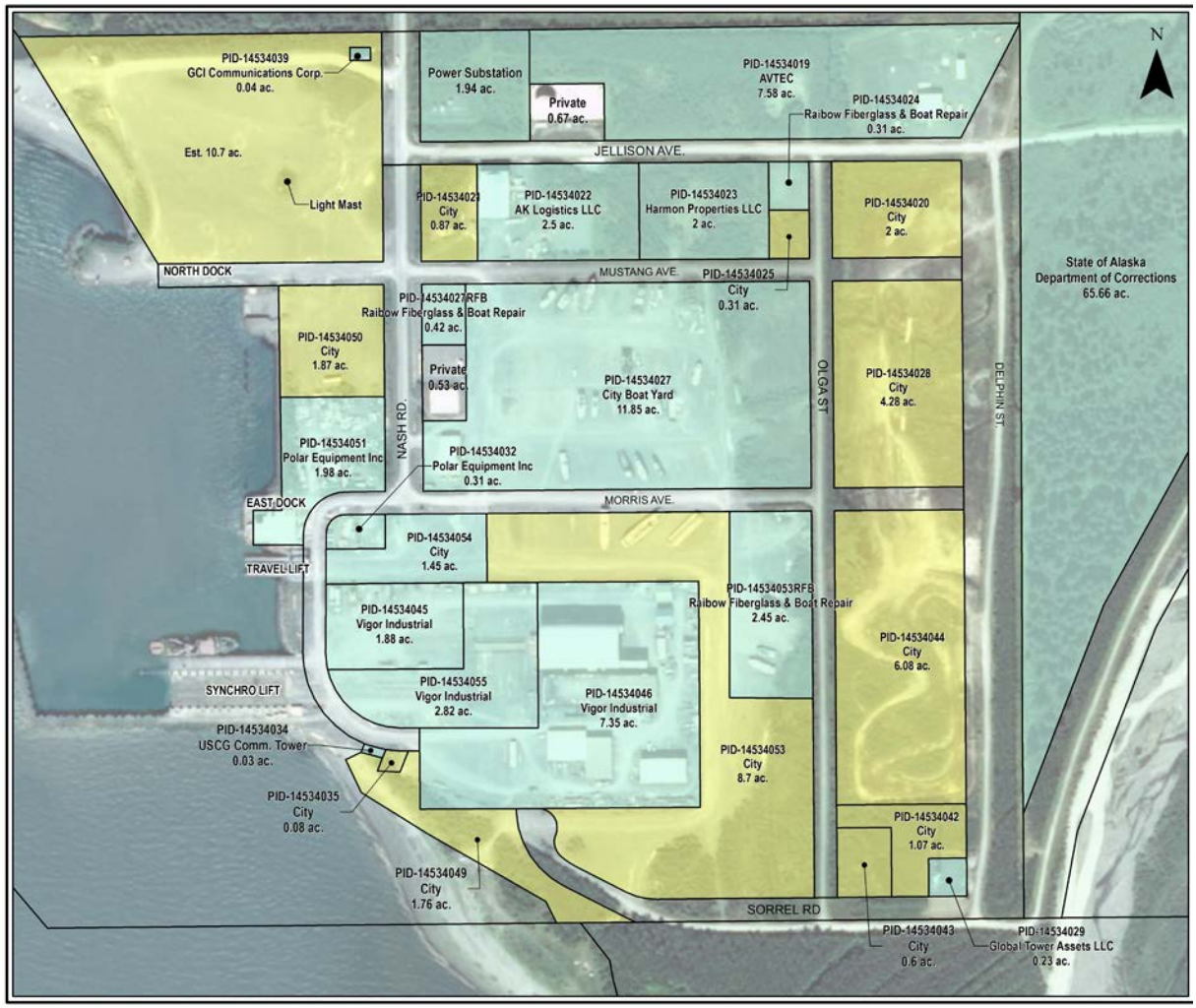

Figure 5: Current Users/Private Businesses at SMIC

SMIC's current tenants and users are listed below, and the parcels they either lease or own are identified in Figure 5.

- **Vigor Industrial** – operates the Seward dry dock and shipyard at SMIC, and is a leader in shipbuilding, ship repair, refit, fabrication and other industrial services in Alaska and the Pacific Northwest. (http://vigor.net/facilities/seward)
- **Alaska Vocational Technical Center (AVTEC)** – provides technical and vocational skill training in a wide variety of industrial and technological fields. AVTEC's Maritime Training Center's mission is to provide Alaskans with skills and technical knowledge to enable them to be productive in the continually evolving maritime industry. In Seward, AVTEC has a Full Mission Bridge Maritime Simulator that provides realistic vessel operations training. This is the only bridge simulator in AK and one of only a few facilities of this type in the U.S. (https://avtec.edu/department/alaska-maritime-training-center)
- **Raibow Fiberglass & Boat Repair** – provides winter storage, vessel shrink wrap, structural and cosmetic repairs for boats and marine vessels, as well as marine material supplies and parts for M&R/fabrication services at SMIC. (https://aksbdc.org/client-profiles/raibow-fiberglass-boat-repair-llc)
- **Alaska Logistics LLC (AKL**) – provides barge transportation of materials and equipment from Seattle to Western Alaska, with transportation and logistics services handled at the ARRC dock facility. At their SMIC facility, AKL performs M&R services on their vessels and equipment and stores materials and equipment. (http://www.alaska-logistics.com/portSeward.html)
- **Polar Equipment Inc.** – processes fresh/frozen packaged fish, seafood, shellfish, aquatic invertebrates, and aquatic plants. Polar's processing plant is on the East Dock.
- **GCI Communications Corp Tower** – GCI is a statewide telecommunications service provider. The GCI facility houses communication equipment to transmit signals in the immediate vicinity.
- **Global Tower Assets, LLC** – local telecommunications service provider. Their SMIC parcel houses a communication tower.
- **USCG** – maintains a small communication tower near the dry-dock.
- **Harmon Properties, LLC** – Real estate development company provides building & storage units of various sizes used for enclosed-space boat-work and as storage units.
- **Communication North** – Supply and repair store for boat electrical and communication equipment and materials, located on a company owned 0.5-acre parcel.
- **Petro 49 & Shoreside Petroleum Inc.** – Fuel and lubricant supplier and distributor. At SMIC, Shoreside Petroleum has a 15,000-barrel capacity tank storage on a company-owned 0.7-acre parcel. (http://www.shoresidepetroleum.com/)

Tenants typically hold 5-year leases with the City, with options to extend, and two tenants have recently signed 99-year leases.

5. SMIC DEVELOPMENT PERSPECTIVES OF CURRENT USERS AND PROSPECTIVE TENANTS

To assess the extent to which improved maritime operational safety and functionality in the marine basin would encourage current upland businesses to expand their operations and help attract new users and businesses to SMIC, a series of one-on-one interviews were conducted with current users and representatives of a select set of maritime related industries and commercial service providers likely to be interested in using the SMIC basin, docking facilities and upland area. Interviews were also conducted with a number of companies and organizations with fleet operations in Alaskan waters and that require periodic and seasonal haul-out for inspections, M&R services, and storage space.

Users/Businesses		Existing	Near-term Interest		Mid-term Interest		Long-term Interest		As a Back-up Facility	
		Tenant	Marine	Uplands	Marine	Uplands	Marine	Uplands	Marine	Uplands
O/G Exploration										
1	Furie Alaska Operations		x	x						
2	Dutch Shell						x	x		
O/G Support Services-Ocean Towing/Marine										
3	Edison Chouest Offshore						x	x		
4	Fairweather LLC									
5	Saltchuk/FOSS/TOTE/Anderson Tug & Barge						x	x	x	
6	Crowley Marine Services		x	x						
7	Petro 49/Shoreside Petroleum	x						x		
Marine Shipping & Transporation Services										
8	Alaska Railroad Corporation-Seward								x	
9	Alaska Marine Lines/Lynden Transport									
10	Alaska Logistics LLC	x					x	x	x	
Maritime Research-Marine Industrial Vocational Training										
11	University of Alaska Fairbanks - R/V Sikuliaq						x	x	x	
12	Fairweather Science LLC								x	
13	Alaska Institute of Technology - AVTEC	x				x		x		
Vessel/Boat Building and Marine Maintenance & Repair										
14	Vigor Industrial - Seward Shipyard	x						x		
15	Motive Power Marine Inc.		x	x						

Table 1: Interview Results

The companies and organizations interviewed represented a range of potential users likely to be interested in the mix of M&R, marine vocational training, and logistic support services available at SMIC, along with the transportation and logistics connections available in Seward. Interviews were designed to gauge the interest of these entities in either expanding existing or introducing new types of operations and services at

SMIC, as well as to gain a direct assessment of SMIC's relative competitiveness and any required improvements. Table 1 provides a summary of the companies and organizations interviewed along with an initial indication of each organization's interest in using SMIC in the near-, mid-, and long-term.

This series of independent interviews indicated that, overall, there is broad support among current and prospective businesses and organizations for further development of the SMIC facilities. Those with vessel fleet operations appreciate the value of Vigor operating the shipyard and believe there will be opportunities for their companies to make more use of SMIC with the completion of the breakwater and implementation of additional services and facilities that improve the operating efficiency, safety and economic growth of SMIC.

The M&R and vessel fabrication entities participating in the interviews indicated a strong and immediate interest in expanding their operations at SMIC. Maritime shipping and logistics entities, along with educational and research institutions, and the USCG, showed continuing or longer term interests. Participants in the interviews saw the established maritime service industry in Seward—together with the vessel lift capacity and shipyard facility, M&R services, and available upland area at SMIC—as constituting the competitive advantages Seward has over other regional harbors. There are presently two common user haul-out/M&R operations at SMIC—the Vigor Shipyard and the City Boat Yard. Vigor provides M&R services for larger vessels and operators (using the Syncrolift), whereas the City Boat Yard focuses on vessels of sizes that can be handled by the City TraveLift. With these established local businesses, participants generally envisioned a development approach for SMIC focusing on an expansion of marine M&R services, and vessel fabrication and modification. Consequently, the notion of prioritizing maritime shipping and logistics at SMIC was relatively less favored, especially by those participants with well-established operations using the intermodal rail access available at the Alaska Railroad (ARRC) dock facilities. Nevertheless, these maritime and logistics providers did recognize a good potential for the SMIC facility to support their business over the long-term and on a contingent basis, and encouraged the City and ARRC to coordinate developments between their respective facilities so as to provide a full range of complementary maritime services in Seward. Such a coordinated development approach was also viewed as favorable by the Oil & Gas companies interviewed, as they perceive some potential uses of SMIC for tender vessels, oil rigs and equipment laydown as eventually determined by Oil & Gas industrial demand.

These expressions of interest and intended investments provide a set of likely expansion opportunities to existing services and the addition of new operations at SMIC, as well as a basis for prioritizing capital improvements and operating practices so as to encourage and sustain the competitiveness of the facility and to best utilize and leverage the City's in-place assets. The capital improvements identified by the interview participants and provided by the City are detailed in section 7.5.

5.1 SMIC'S SWOT ASSESMENT

The interviews and work session held with SMIC stakeholders helped to highlight certain competitive strengths SMIC offers to the majority of the Alaskan fleet, particularly for the vessels classified from 50' to 200'+ in length. For vessels of this size in the Alaskan fleet, the haul-out capabilities of the TraveLift and SyncroLift, together with the available workspace and upland storage area, represent a unique value proposition. From the interviews and previous documents, the following strengths, weaknesses, opportunities and threats (SWOT) of SMIC, as an ongoing operation, where identified.

5.1.1 Strengths

- Geographic location affords mariners with a year-round ice-free harbor
- New breakwater structure will provide for safer maritime operations and mooring
- Immediate landside access to Alaska's state highway network and the ARRC railhead
- Proximity to regional population centers providing access to a broad range of economic activities and resources, including the fourth busiest cargo airport in the world and University of Alaska campuses
- Central location for the Alaskan fleet, near the Gulf of Alaska
- Available land for lease and development
- Proximity to trade routes
- Provides haul-out capacities with the 330T TraveLift and 5000T SyncroLift--advantageous for 50' to 200'+ vessels
- Boatyard and storage area capacities allow owners to perform work on their vessels
- Available shipyard and dry-dock capacities
- Available Marine Industrial Support (MIS) services are comparable with the range of MIS services in Homer or Kodiak
- Alaska's Institute of Technology (AVTEC) provides M&R vocational training at SMIC
- The Seward Marine Center; Alaska SeaLife Center; and University of Alaska's Alaska Region Research Vessel (ARRV/Sikuliaq) provide Arctic research capabilities out of Seward

5.1.2 Weaknesses

- Electric power, water and sewer utilities partially extended through upland area
- Public restroom facilities inadequate
- Inadequate moorage and dockage space
- Existing dockage damaged, fendering system broken
- Working dock area limited
- No on-site pump-out station
- Upland experiences poor drainage, spot flooding and icing
- Sheltered/enclosed work area not available in City Boat Yard
- Basin working area limited

- Administrative (paperwork) and insurance provisions can be onerous for users
- Work area not secured (no fencing or security camera CCTV)
- Derelict vessels in boat yard
- Shortage of housing and high cost of living in Seward
- Lack of winter activities in Seward

5.1.3 Opportunities

- Land available for a range of developments, including residential and educational uses
- Existing businesses interested in expanding operations
- Aging commercial fleet will require more M&R and modification work
- Shipyard subcontracts with local M&R businesses
- Collaboration with shipyard to provide an on-site training facility for AVTEC vocational training programs
- Prospective users interested in using SMIC: Crowley, Furie, Inlet Fish
- USCG replacing patrol vessels with Sentinel class cutter, M&R now performed at USCG facility in Ketchikan, but new fleet requires larger scale facilities
- Increase use of docking and moorage likely with completion of breakwater structure
- Use of North Dock cargo loading likely to increase with completion of breakwater structure; though this requires repair/replacement of damaged fenders
- Coordinated operations/services with ARRC docks and operations to attract large-scale commercial operations
- Collaboration with University of Alaska to expand education and research facilities at SMIC
- Develop housing for worker and students
- Adjust upland lease terms/rates
- Increased financial performance with increased land value as development continues
- Adjust fiscal policies
- Zoning Code update

5.1.4 Threats

- Administrative overhead placed on potential users
- Maritime regulations limiting investments in expanded Alaska commercial fleet
- Workforce availability and technical training level/capabilities
- Weak economic conditions in the state
- Low price of crude oil

6. SMIC UPLANDS DEVELOPMENT RECOMMENDATION

6.1 DEVELOPMENT GOALS

The City has made significant investments in SMIC as a marine industrial center over the last three decades. As of yet, however, the full economic development potential of the SMIC facility has not been realized, owing in large part to the inadequate protection provided to the marine basin with the partial breakwater structure. The partial breakwater leaves the basin and dock system exposed to swell and wake action, causing hazardous vessel operating and docking conditions to the extent that damage has occurred to vessels and the docking systems. This, in turn, has discouraged vessels from using the facility, resulting in less revenue for SMIC and requiring greater repair and maintenance costs, thereby negatively impacting the financial performance of SMIC.

Achieving economically sustainable operations and advancing the development of SMIC are primary goals of the City and State. Building on and leveraging the infrastructure and equipment investments in place presents the most immediate path forward to increasing the use of SMIC and to realizing the City's development goals. In addition to the revenues generated for SMIC through the provision of leases and various services--such as the TraveLift, storage, fuel and power sales, and dockage and wharfage--the further development of commercial and educational activities at SMIC will generate greater property and sales tax revenues for the City as land values increase and demand grows for hotel accommodations, restaurant services and retail sales.

6.2 UPLAND DEVELOPMENT AREAS

As shown in Figure 6, the SMIC upland parcels have been platted and are available for lease and development. When leased, the practice has been for the tenant to clear and grub the parcel, grade and prepare the site in conformance with City Code, and connect to the utilities that the City extends to the parcel boundary.

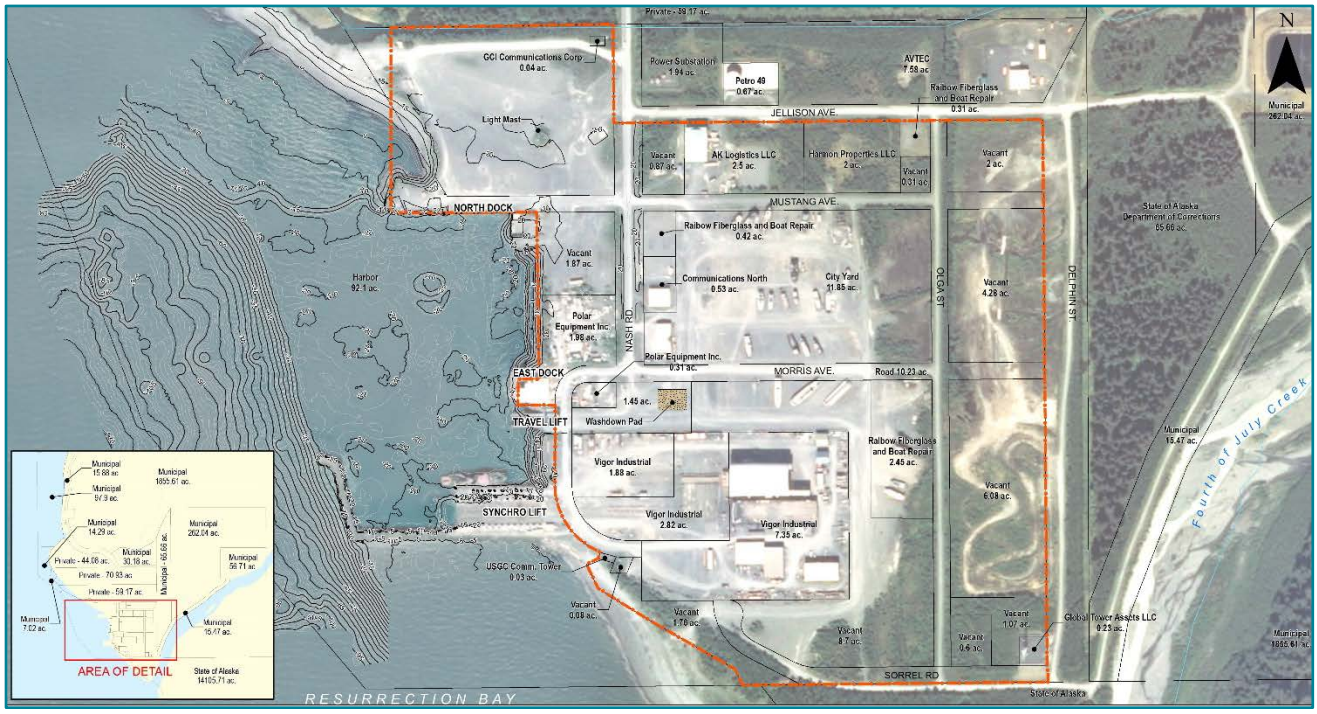

Figure 6: SMIC Development Area

The SMIC Initial Development Area, as defined by the dotted red line shown in Figure 6, includes the parcels west of Delphin Street and south of Jellison Avenue, as well as the area north of the North Dock towards the GCI leasehold and public access pathway to the beach. Outside of the Initial Development Area, possible future development areas include the City-owned parcels to the north of Jellison Avenue, where the power substation and AVTEC facility are located. The City has transferred a portion of the 65.66 acre parcel immediately east of Delphin Street to the State (through a 1984 agreement with the City) for a planned expansion of the correction facility. The City retained ownership of the sewer lagoon and associated infrastructure as well as approximately 15 acres of the site that will be available for future development. In addition, the City reports that the privately owned parcels to the north of SMIC (of about 170 acres) may potentially be available for purchase or joint development with the City as part of future SMIC developments.

The timing of these potential future development areas being available or required for SMIC development is currently uncertain. As such, to meet the immediate and near-term development needs of SMIC, this study limits discussion to the Initial Development Area of roughly 82 acres.

6.3 INITIAL DEVELOPMENT AREA AND POTENTIAL DEVELOPMENT OPTIONS

For the Initial Development Area, with essential infrastructure and services in place and a majority of parcels either tenanted or housing City operations, one potential near-term development option, or an "organic growth" approach, was considered. This potential option encourages the continued development of M&R services and business capabilities at SMIC, and works to meet the City's immediate development goals of achieving sustainable revenues while being consistent with the expansion and investment plans expressed by current and potential users. As it sits, with its vessel lifting capacity and available work and storage areas, SMIC is in a position to attract a greater number of 50' and larger vessels currently active in Alaskan waters and requiring M&R services or storage. The continued growth of M&R activities at SMIC is generally anticipated, and the City could consider a number of administrative and fiscal policy options to hasten or accelerate this growth trend. These proactive options would include a possible third-party operator of the City Boat Yard as a way to provide for a more focused and efficient management of the facility, and a coordinated public/private marketing and promotion effort to attract more vessels to SMIC.

Near-term administrative and fiscal policy options that encourage and support the expansion of M&R services at SMIC, and that align with the competitive strengths identified for the facility, would help to build business for the existing M&R operators, leverage in-place investments in the TraveLift and SyncroLift haul-out capacities, and increase use of the SMIC upland work and storage areas. These options also help to realize a number of other potential opportunities identified for the facility by accommodating new users and sustaining the M&R service capabilities available to both Vigor and vessel owners, supporting AVTEC training options with operators, and expanding educational and housing opportunities for students and workers. Additionally, these options preserve capital investment decisions and allow a "build-to-market" pace of capital improvements while keeping other managerial and fiscal policy options available for consideration, such as administration of SMIC as a special tax district and cooperatively promoting SMIC with the business community. Most of the identified weaknesses relate to near-term capital improvement needs, such as the need to extend utilities and improve public facilities and service amenities. These options allow capital needs to be addressed incrementally along with new private investments and additional upland leases.

A more focused and proactive management policy would complement or build on organic growth, and possibly involve some additional capital expenditures by the City. These proactive capital expenditures could increase the width capacity of the TraveLift, thereby increasing the number of larger vessels capable of using the TraveLift, and accomplish some pre-development activities for the available parcels, including completion of a drainage system, extension of utilities and the provision of sheltered or covered work yard spaces. A gravel landing ramp to accommodate large vessels and barges would also be beneficial. Bringing in a third-party operator for the City Boat Yard could accomplish many of these improvements and would provide for a proactive and dedicated management of the facility. These proactive options can be seen as an extension of the Organic Growth approach: as the businesses and activities grow

spontaneously, the attractiveness of operating the City Boat Yard by a third party operator becomes more viable.

Factors favoring the potential development option for expanding M&R operations at SMIC include:

- SMIC represents an attractive option to vessels of 50' to 200'+, is relatively close to productive fishing grounds, and has adequate existing capacity to significantly expand its use. In 2014, only 7% of the vessels serviced at SMIC were of 100' and longer, indicating that SMIC has the capacity to attract more of the larger vessels operating in the Alaskan fleet.
- Vigor incorporates the use of local subcontractors in performing work in their shipyards, and this available sub-contracting work helps to attract and support smaller scale M&R businesses and suppliers. With sufficient demand for these local M&R businesses, additional M&R related operators would likely seek long-term arrangements in SMIC.
- The AVTEC vocational training operations at SMIC are close to the marine M&R and vessel fabrication operators, which represents a mutually beneficial arrangement. AVTEC benefits by being situated near the marine industrial vocational and on-the-job training opportunities for their students that are available with the M&R operators; and the operators, like Vigor, benefit with the development of a qualified labor force specifically trained to meet their needs.
- The petroleum supply and M&R operators participating in the interviews suggested that they would work to attract fishing fleet owner-operators as customers, and that it would help their businesses if fishing fleet operators, like Coastal Villages, could be attracted to SMIC for fuel and other vessel inspection and M&R services.

In addition, there are a significant number of vessel operators that prefer to self-perform M&R work on their vessels. Accordingly, vessels able to use the City TraveLift could be attracted to SMIC.

6.4 OTHER DEVELOPMENT OPTIONS CONSIDERED

Interviews with current and potential users included major oil and gas industry participants, namely Shell, Furie Alaska and Edison Chouest. These discussions considered an alternative development approach that would see the SMIC facility being developed to serve a primary industry, such as O&G or a commercial fishing fleet. In this instance, the O&G participants did see some uses or services that could be provided by SMIC, given the various vessels and pieces of equipment used in their operations. For example, Furie moored their Spartan 151 rig at SMIC for the 2015 winter season. Dockage remains a key potential opportunity for the SMIC basin, and with the new class of cutter being deployed by the USCG, dockage potential and existing lift capacity at SMIC could position SMIC as a viable option for servicing these new vessels.

A work session was conducted in January 2016 with a broad range of SMIC stakeholders--including industrial, financial, economic, real estate and educational subject experts--to identify possible long-term development opportunities for SMIC. This work session generated lively and thorough discussions between the City and SMIC users and community members, and the content and course of these discussions were graphically recorded (Exhibit 1). A number of improvements to the SMIC facility suggested by the stakeholders are included below along with other improvements that were recommended in previous studies. Several operational and administrative suggestions are included in the closing section of this study.

Representatives of UAA and maritime subject matter experts participating in the work session encouraged the expansion of maritime research, education and vocational training facilities at SMIC and in Seward. Increasing these activities and providing housing and retail services at SMIC would build demand for restaurants and other commercial enterprises in Seward, generating greater sales tax revenues for the City and eventually bolstering property values and taxes.

7. POTENTIAL MARKET AND CAPACITY ASSESSMENT

From interviews with current and potential users, and as expressed by stakeholders during the work session, development options emphasizing the continued growth and expansion of M&R services provided at SMIC emerged as a potential development approach for the near- to mid-term. This emphasis on expanding existing M&R operations and attracting additional M&R and fabrication investments at SMIC builds on and leverages the City's previous investments in infrastructure and utilities at SMIC, including the new breakwater, and is supported by current and potential users of SMIC.

More importantly, this M&R focused approach works to position SMIC and the City to capture a larger share of the growing market for M&R services in Alaska; increases utilization of existing capital assets and overall revenues generated by the facility; and provides a framework for the collaborative development and promotion of SMIC. As reviewed and presented in the following sections, a number of factors indicate that demand for M&R services by the Alaskan fleet will be increasing, and that the existing haul-out capabilities and available workspace and storage areas at SMIC have the capacity to capture a larger share of this market.

To evaluate the viability of continuing the development of the uplands with the expansion of M&R and related services at SMIC, a potential build-out of the Initial Development Area with M&R operations was prepared. This potential M&R build-out demonstrates that, given a full utilization of existing capacities, SMIC has the potential to generate additional annual revenues.

7.1 VESSEL M&R AND FABRICATION SERVICES MARKET OVERVIEW

Vessel M&R is an integral part of the shipping and shipbuilding industry. Ship repair facilities provide a broad range of services, including ship conversions, retrofits and renovations, routine maintenance, major

damage repairs, and minor equipment replacements. In a recent Maritime Industrial Support (MIS) report, McDowell (2014) highlights that most of the vessels operating in Alaskan waters were built between 1970 and 1989, and 1,300 vessels were built before 1970, including all of the approximately 400 vessels exceeding 60' in length. McDowell's database identifies 8,970 vessels (including 1,310 vessels operating in Alaska but home-ported in other West Coast states) as comprising the Alaskan fleet. Out of the total fleet, 24% (2, 090 vessels) are 50' or greater in length.

Overall McDowell estimated the Alaskan fleet spends approximately $100 million annually for M&R services. Given the progressive nature of M&R expenditures in relation to the size of a vessel, it is reasonable to suggest that vessels of 50' or more account for the majority, say 50%, of M&R expenditures, while representing a quarter of the total fleet. With its annual vessel handling capacity of approximately 350 vessels, SMIC could potentially accommodate 16% of the 50' plus vessels in the fleet, which would equate to a market potential of over $8 million per year in M&R services.

With the aging fleet, demand for M&R services will increase as operators seek to both improve the performance and extend the useful life of their vessels. This will be especially so for the operators of vessels longer than 49'--given that the Coast Guard Authorization Act of 2010 requires new vessels over 49' in length to be surveyed and classified under the regulations, and vessels exceeding 79' to be assigned a load line. The effect of these regulations will be to increase both the acquisition cost of new vessels and the operating costs of nearly all commercial fishing vessels, thereby incentivizing the continued use of older vessels.

In general, conversion and repair work is more profitable for shipyard operators than new construction work, as reported by the International Labor Organization (ilo.org). Repair contracts, overhaul and conversion works also help to stabilize the workforce during times of limited new construction, and, conversely, new construction augments the repair labor workload. At SMIC, the fabrication and repair services provided by Vigor frequently draw on the M&R capabilities of the other business operating at SMIC, and the lifting capacity and available work area of the City Boat Yard works to complement the scale of services offered by Vigor. Accordingly, SMIC represents a particular value to the larger commercial vessels of the Alaskan fleet, providing ample lifting capacities and a range of M&R services.

Commercial fishing boats, rigs and fleet tender ships, and transportation/distribution vessels require frequent inspection and M&R work, and eventually complete overhauls, to maintain efficient and safe operations. Examples of M&R services required include:

- Blasting and repainting the vessel's hull, freeboard, superstructure, interior tanks and work areas
- Major machinery rebuilds and installation (e.g., diesel engines, turbines, generators and pump stations)

- System overhauls, maintenance and installation (e.g., flushing, testing and installation of piping systems)
- New system installation, either adding new equipment or replacing systems that are outdated (e.g. engine, navigational systems, combat systems, communication systems or updated piping systems)
- Propeller and rudder repairs, modification and alignment
- Creation of new machinery spaces on the vessel (e.g. cut-out of existing steel structure and adding new walls, stiffeners, vertical supports and webbing).

In many cases, repair services are required due to emergency situations with little warning, occasionally making vessel repair work a fast moving and unpredictable working environment. For normal repair work, vessels will typically stand in the shipyard anywhere from 3 days to 2 months, and major repair or conversion work will often take 6 months to a year or more.

7.2 SMIC CAPACITY AND PROJECTION OF POTENTIAL DEMAND/ACTIVITIES

At SMIC, the larger vessels in the Alaskan fleet have the option of using Vigor for major repair works or performing work themselves in the City Boat Yard, and they can use the storage area at SMIC for laying-up through the off-season, typically from October through March each year.

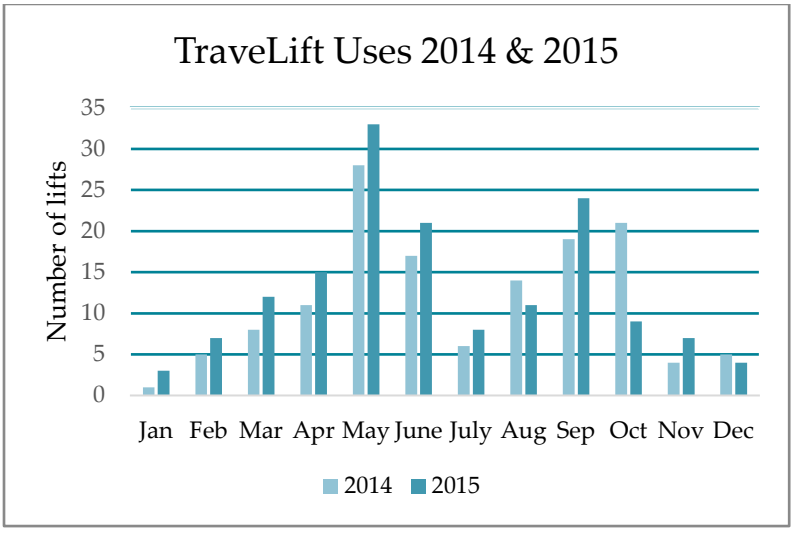

Figure 7: Number of TraveLift Movements to Haul-out and Launch Vessels

Recent data on the use of the City TraveLift shows a total of 143 one-way lifts in 2014, and 153 lifts in 2015. Figure 7 presents TraveLift data for recent years on a monthly basis, and demonstrates peaking at the start of the operating season in May and again in September/October when vessels are arriving at the end of the season for M&R or storage services at SMIC. The information also shows 2015 lift activity increased by 6% over the number lifts in 2014.

The total number of recorded lifts was generated by roughly 100 vessels, ranging from 50' to 136' in length, with a majority of these vessels making repeated visits in 2014 and 2015. Most of the vessels using the TraveLift (69%) were from 60' to 99', and 24% were less than 60'. The remaining 7% of serviced vessels were 100' or greater. These lift figures are only for the City TraveLift and include vessels visiting SMIC for M&R services or long-term storage, and thereby generating revenues for SMIC. Vessels using the SyncroLift, operated by Vigor under lease agreements with the City, are not included. The City does not receive lift fees for vessels using the SyncroLift; however, the City does receive annual lease payments from Vigor.

Source Based on the McDowell Group Database (harbor with dry-dock facility)*

REGION	HARBOR	HOME PORT FLEET						
		28'-35'	36'-49'	50'-59'	60'-99'	100'-200'	200' plus	Total
South Central	Seward*	114	135	20	25	5	2	301
	Anchorage	121	84	17	20	11	1	254
	Cordova	381	67	48	15	1	2	514
	Homer	280	234	45	28	9	0	596
	Whittier	82	71	10	4	2	0	169
	Valdez	67	134	22	7	8	3	241
	Dillingham	181	0	1	4	3	0	189
	Naknek/King Salmon	296	0	1	5	3	0	305
	Kodiak	128	186	102	69	25	1	511
	Subtotal	**1650**	**911**	**266**	**177**	**67**	**9**	**3080**
Bristol Bay/AK Peninsula	Sand Point	23	36	22	3	2	0	86
	King Cove	9	27	7	1	0	0	44
	Subtotal	**32**	**63**	**29**	**4**	**2**	**0**	**130**
Aleutian & Pribilof Islands	Dutch Harbor*	10	10	11	7	22	3	63
	Subtotal	**10**	**10**	**11**	**7**	**22**	**3**	**63**
Southeast Alaska	Craig	28	53	17	2	0	0	100
	Haines	47	30	3	3	1	1	85
	Hoonah	27	20	3	1	0	1	52
	Juneau	380	378	77	67	35	5	942
	Ketchikan*	136	189	56	54	35	14	484
	Petersburg	123	126	79	31	9	3	371
	Sitka*	186	283	66	52	9	1	597
	Wrangell	75	88	12	17	5	1	198
	Subtotal	**1002**	**1167**	**313**	**227**	**94**	**26**	**2829**
Western Alaska	Nome	12	3	3	0	1	0	19
	Subtotal	**12**	**3**	**3**	**0**	**1**	**0**	**19**

Table 2: Home Port Fleets at Alaska Harbors

As indicated in Table 2, twenty-five (25) vessels between 60' to 99' are currently home-ported in Seward. TraveLift records show that sixty-eight (68) vessels in this size have recently used SMIC, indicating that SMIC, with its current lifting capacity and available work area, does attract the larger vessels (60'+) of the fleet operating in Alaskan waters.

Previous reports (PND, 2009 TIGER Grant) identified that SMIC, due to unsafe wave conditions in the basin, has had to turn away as many as 30 to 60 vessels requiring repairs. These vessels were from Unalaska, Kodiak, or Seward, and ranged from 100' to 300' in length. It is recorded that at least half these vessels had to travel instead to the Puget Sound area for repair work. The travel costs (2005) associated with these vessels range from a low of $168,400 for 15 vessels to a high of $505,300 for 30 vessels, according to a U.S. Army Corps of Engineers Continuing Authorities Project Fact Sheet, May 12, 2005 (www.cityofseward.net/smic). With the completion of the breakwater and for the range of M&R services available, many of these vessels would again travel to Seward, rather than Puget Sound, thus reducing vessel operating costs and potentially increasing vessel productivity with more time spent on commercial activities than on repositioning of the vessel.

SMIC has sufficient existing lift capacity and uplands area to attract a greater number of vessels, especially larger vessels of 50' to 200'+. For example, the City TraveLift is operated from 8:00AM to 5:00PM, 7 days a week during the summer (April to September), and it maintains similar hours through the winter (October to May) but closes on Sundays. Given this operating schedule, and accounting for the average 3-hour service time required for the different operations performed by the TraveLift to accomplish haul-outs, block set-up and wash down movements—and using an availability factor of 70% to allow for maintenance and downtime—the City TraveLift has the capacity to handle roughly 580 vessel lifts a year. Accordingly, the utilization rate of the TraveLift was roughly 25% in 2014.

As noted earlier, SMIC represents an attractive option to vessels of 50' to 200'+, is proximate to Alaska fishing grounds, and has adequate existing capacity to significantly expand use. Only 7% of vessels serviced at SMIC in 2014 were of 100' and longer, suggesting that SMIC has the ability to gain market share within the existing fleet of larger vessels.

The availability of the upland area to accommodate M&R and storage activities similarly demonstrates that SMIC has the capacity to attract more vessels. For parcels representing the 82 acres of the upland Initial Development Area, 46.4 acres are currently leased or owned, and 35.6 acres are available for lease. Under current operating practices at SMIC, the TraveLift is used to haul-out and launch vessels, to position and block vessels, and to straddle carry vessels to and from the water and work or storage spaces. To gauge the capacity of SMIC's available upland area, in terms of the number of vessels that could be accommodated per year for M&R and storage services, an industry benchmark was applied for the number of workspaces provided per acre for the different vessel sizes, with adjustments made to the working area required to accommodate operating space requirements for the 330 ton TraveLift with its 47' wide exterior

dimension. The TraveLift wheels are on casters, which can be rotated to allow the TraveLift to maneuver sideways. Accordingly, the limiting dimension on maneuverability of the TraveLift, when carrying vessels, is the length of the vessel. A buffer of ten percent (10%) was added to vessel lengths to account for additional gear that frequently extends past the bow or transom of vessels, as well as for safe operations. With these assumptions and adjustments, the estimated land utilization by vessel size is shown in Table 3.

VESSEL SIZE (FT)	BEAM WIDTH (FT)	TRAVELIFT WIDTH (FT)	RESIDUAL SPACE	PULLOUT DISTANCE MULTIPLIER	TOTAL AREA REQUIRED (FT^2)	VESSELS PER ACRE
50	18.0	47.0	14.5	2.1	3,413	12
60	20.0	47.0	13.5	2.1	4,221	10
70	22.0	47.0	12.5	2.1	5,072	8
80	24.0	47.0	11.5	2.1	5,964	7
90	25.0	47.0	11.0	2.1	6,804	6
100	26.0	47.0	10.5	2.1	7,665	5
150	30.0	47.0	12.0	2.1	13,230	3
200	33.5	47.0	12.0	2.1	19,110	2

Table 3: Land Utilization Based on the 330-Ton TraveLift

Recent TraveLift records demonstrate an average annual turnover ratio of 3.5 can be established for utilization of the working area and storage space, which equates to an average of 48 vessels per acre per year for 50' vessels; 31 for 60' to 90' vessels; and 13 for 100'+ vessels. The actual number of vessels SMIC could accommodate each year would depend on the mix of vessel sizes. For example, apportioning the work and storage area available to vessels ranging in size from 50' to 200', as shown in the conceptual build out and discussed later in this report, the initial development upland area at SMIC, including the City Boat Yard, has a sustainable capacity to accommodate roughly 330 to 350 vessels per year, at 80% utilization and depending on vessel sizes. It should be noted that this capacity estimate is predicated on an apportionment of the available area between M&R working areas and storage space, and the apportionment between these uses could vary. Moreover, these calculations factor in sufficient operating space for the TraveLift to accomplish vessel positioning and blocking functions throughout the SMIC area: static density capacity could be increased significantly if a smaller lift or trailers were used to position, block and transport smaller, 50' to 70', vessels to and from work and storage spaces.

In addition to available haul-out and work space and storage capacities, SMIC has demonstrated its potential to attract vessels for moorage and wharfage services. With repairs to the North Dock and extension of the East Dock, it is likely that the previous level of usage for moorage and dockage would be achieved. The East Dock extension could be accomplished by replacing and repositioning the existing dolphins to accommodate the docking of larger vessels of 100'+ and thereby allowing M&R services to be provided on docked vessels. The revenues generated by these activities would further contribute to the economic sustainability of SMIC.

7.3 MARINE M&R AND FABRICATION CENTER— A POTENTIAL DEVELOPMENT OPTION

To demonstrate how the SMIC uplands might be further developed with the expansion of M&R and fabrication services, a potential M&R and fabrication build-out of SMIC was used. This potential build-out assumes expansion of M&R and fabrication operations, together with Storage Units, and the incorporation of public amenities and services. This build-out would increase utilization of the City Boat Yard and lease out all initial development parcels for SMIC. As depicted in Figure 8, M&R and light fabrication operations would be developed on parcels east of Olga Street, and at the northwest corner of the Olga and Sorrel intersection. Private storage units are shown occupying the available parcel abutting the northeast corner of the Olga and Sorrel intersection. Commercial amenities, food service, laundry, and a convenience store are situated in the beach access corridor in the northern portion of the parcel north of North Dock and the planned gravel ramp or beach landing area. A two-story building situated on the 1-acre parcel northeast of Nash and Mustang would provide space for offices, a convenience store, laundry services, and lavatories and showers. The City Boat Yard is shown at capacity, and the parcels encircling Vigor's operation are utilized for vessel and equipment storage. The waterfront parcel immediately south of North Dock is reserved for general dockside access and short-term use as needed to support maritime operations. Preserving this working wharf area anticipates that a new dock would eventually be constructed along the east shore to provide additional docking space for vessel loading, as well as for short-term and in-water M&R service needs. As noted, a structure for food service and public amenities is provided in the beach access area north of the North Dock, along with parking and landscaping. These services and amenities would be used by people working at SMIC and by visitors to the beach area.

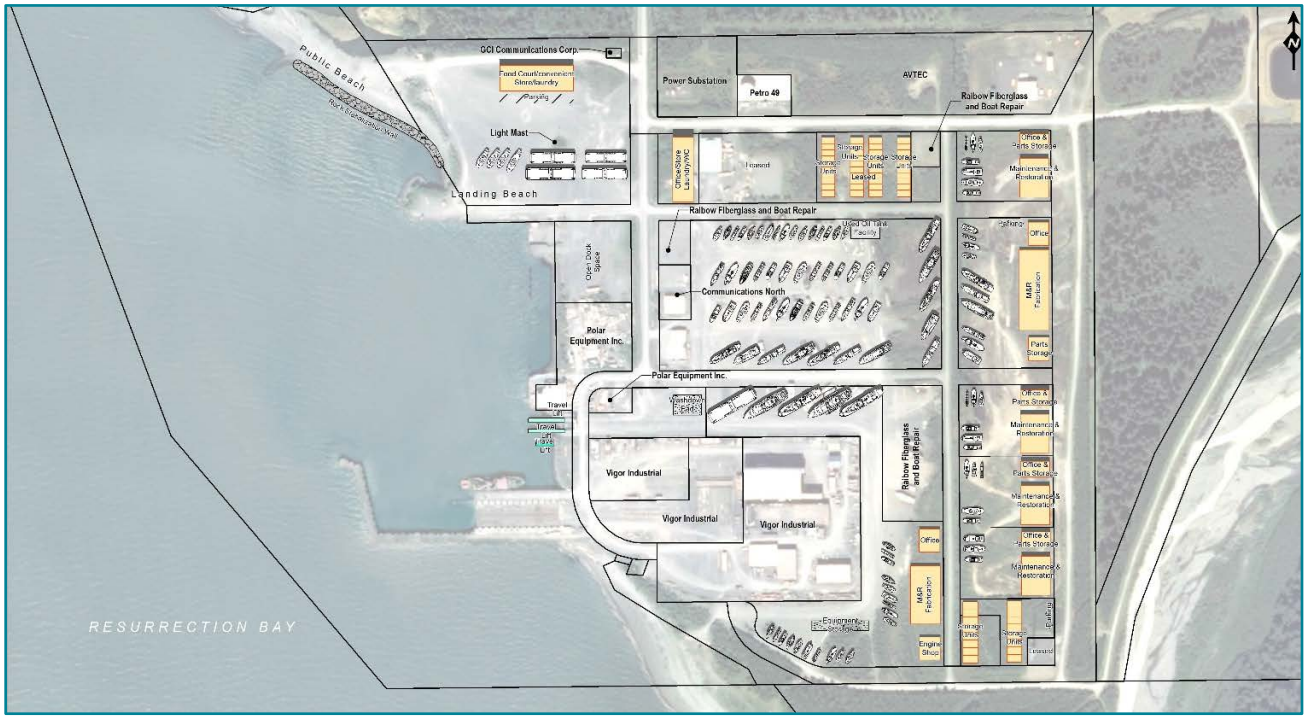

Figure 8: SMIC Conceptual M&R and Fabrication Build-Out

It is assumed that available parcels are leased by new tenants, and that these new tenants develop the parcels to support and sustain on-going M&R operations, including light fabrication and restoration services. Accordingly, tenant improvements include a structure for offices and parts or material storage, and sheltered areas for M&R and fabrication or restoration work. With this build-out, SMIC receives lease payments for the tenanted parcels, and storage fees and short-term work area rental fees. The City additionally receives property taxes on the tenant improvements, as well as sales taxes from commercial transactions. Retail services, including convenience shops and food outlets, are included in the build-out, generating additional sales tax revenues for the City and supporting higher property values and taxes.

7.4 SMIC CURRENT AND POTENTIAL OPERATING REVENUE

7.4.1 2014 Operating Revenue

In 2014, total operating revenue for SMIC was $469,792.66. SMIC generates revenue from various activities, including land rents and leasing of the upland parcels; boat lift fees; vessel storage fees; boat wash down fees; moorage and wharfage; and fueling and labor services. As presented in Table 4, the majority of revenues are received from Land Rents and Leases (33.2%), Boat Lift Fees (28.5%), and Storage Fees (22.9%), which together make up 84.6% of total revenue, with the balance of 15.4% received from the other revenue sources of SMIC Power Sales, Wash-down Pad Fees, Moorage, Wharfage, Fuel Pumping Fee, and Labor Services.

REVENUE SOURCES		REVENUE ($US)	SHARE (%)
1	Land Rents & Leases	$156,195	33.2%
2	Boat Lift Fees	$133,949	28.5%
3	Storage Fees	$107,481	22.9%
4	SMIC Power Sales	$45,864	9.8%
5	Wash-down Pad Fees	$7,956	1.7%
6	Moorage Fees	$6,763	1.4%
7	Wharfage Fees	$5,995	1.3%
8	Fuel Pumping Fee	$4,698	1.0%
9	Labor & Services	$892	0.2%
TOTAL OPERATING REVENUE		$469,793	100.0%

Table 4: SMIC's 2014 Operating Revenue

Based on the 2014 operating revenue and statistics, SMIC generated an average of $936 in Boat Lift Fees and $751 in Storage Fees per vessel lift. The average Land Rents & Leases revenue was $4900/acre, with the actual per acre lease revenue received for any a particular parcel depending on specific leasing agreements with the City. A few of the leased parcels do not generate lease payments.

In addition, revenues generated through sales taxes and property taxes at SMIC accrue to the City's general fund accounts, and not to the SMIC Enterprise Fund. Privately owned structures and improvements established on leased parcels are taxed on the basis of their assessed value; however, this does not affect the land lease rate which is based on an assessment of the land value only.

7.4.2 Potential Operating Revenue

To estimate the potential revenue that would be derived with the M&R build-out as one of the development options of the Initial Development Area parcels, the currently available 35.6 acres are assumed to be leased out at a constant rate per acre, and the estimated uplands capacity of 330 vessels per year is assumed to be fully utilized to support M&R and storage services. As discussed earlier, the annual capacity of the City TraveLift is estimated to be 580 vessel lifts, which is sufficient to support the holding capacity of the upland area of about 330 vessels a year. Some number of the larger vessels that cannot be handled by the TraveLift would be hauled out by the Synchrolift, or use the proposed gravel beach ramp north of the North Dock.

For land rents and leases, the leasing rate for City-owned land is currently 8% of the assessed land value. According to the City, an unimproved one-acre parcel at SMIC is assessed at a value of $75,000, which would lease for $6,000 per year. Land values are reassessed at five-year intervals, resetting the baseline leasing rate. Accordingly, land lease rates will be increased as land values in the area improve. In the revenue estimate, all figures are expressed in constant 2014 dollars and not escalated to account for greater land valuation or inflation.

With these capacity and revenue rate assumptions, a revenue estimate can be projected for SMIC given the conceptual M&R build-out. As expressed in constant 2014 dollars, annual revenues at full build out of the initial development area would be $1,655,688, as shown in Table 5. The revenues shown for Land Rents & Leases reflect the current lease rate and land value assessment of $75,000 per acre, and Boat Lift Fees and Storage Fees are estimated at the average lift and storage fee per lift based on 2014 data. The remaining revenue items comprising 15.4% of total revenues are extended proportionately by item in relation to total revenue.

	SOURCES OF OPERATING REVENUE	2014	CONCEPTUAL BUILD-OUT FULLY OCCUPIED
1	Land Rents & Leases	$156,195	$418,746
2	Boat Lift Fees	$133,949	$545,161
3	Storage Fees	$107,481	$437,440
4	SMIC power Sales	$45,864	$161,638
5	Wash-down Pad Fees	$7,956	$28,038
6	Moorage	$6,763	$23,836
7	Wharfage	$5,995	$21,129
8	Fuel Pumping Fee	$4,698	$16,558
9	Labor & Services	$892	$3,142
	OPERATING REVENUE	$469,793	$1,655,688

Table 5: Initial Development Area Conceptual Build-out - Potential Operating Revenue

In addition to the potential operating revenue demonstrated in Table 5, with improvements made to the North and East docks, it is likely that the use of these facilities would increase for logistics and in-water M&R activities, with the result that revenues from these activities (Wharfage, Fuel Pumping Fee, and Labor & Services) would increase more than the proportioned amount shown in Table 6. Moreover, to the extent that this potential demand is realized, the City would have a degree of flexibility to upwardly adjust the land lease and sales tax rates, as well as the other service fees, applicable at SMIC.

7.5 CAPITAL IMPROVEMENTS AND OPERATING EXPENSES

It is broadly recognized that completion of the breakwater will increase the usefulness of the SMIC basin for maritime operations and docking, and help to attract a greater number of vessels to SMIC for M&R services. A number of current M&R service providers have identified plans to expand their businesses and operations at SMIC, and a few potential new users were identified in the course of the SMIC user interviews. These near- to mid-term expansions and potential additional users offer some guidance as to the infrastructure and service improvements that could be made by the City in coordinating investments with these private sector businesses and maritime operators.

Previous studies have generated a number of possible capital improvements that could be made at SMIC, and current and prospective users participating in this current effort confirmed that the following list of capital improvements would contribute to the expansion of on-going M&R operations and help attract new private sector investments.

These possible capital improvements include:

ITEM		CAPEX ESTIMATE
1	Electrical Improvements/Substation	$200,000
2	Electric Infrastructure Improvement	$200,000
3	North Dock Repair	$750,000
4	Drainage System Improvement*	$1,200,000
5	Security and Fencing*	$300,000
6	Restroom Facilities	$36,000
7	TraveLift Pier & Extension	$300,000
8	Replacement of 4 Dolphins	$1,000,000
9	Gravel Ramp	$150,000
	TOTAL	$4,136,000
For the City Boat Yard Area		

Table 6: SMIC Improvement Projects and Cost Estimates

At SMIC there are now two options for hauling out vessels: the Synchrolift can haul-out vessels up to 5,000 tons, 350' in length and 80' in width; and the City TraveLift which can handle vessels up to 330 tons and 32' in beam. The Synchrolift is operated by Vigor under agreements with the City, and by these agreements vessels hauled out by the Synchrolift can only be worked on by the Vigor Shipyard.

Some interview participants suggested it would help to expand their businesses if Synchrolift users had the option to use M&R service providers of their choice, as opposed to having to use Vigor. Moreover, some participants suggested the City could widen the TraveLift piers to allow vessels with a beam wider than 32' the option of using either the TraveLift or the Synchrolift. Others suggested the creation of a gravel ramp to bring up large barges and vessels of certain types by airbags, a practice widely used in many shipyards. Widening of the TraveLift and installing a gravel barge ramp would provide for additional users of the upland storage areas and more business for the M&R operations. Providing a range of options to vessel owners will increase the overall use of SMIC and grow the M&R services and fabrication business for all the operations at SMIC.

The existing finished grades throughout much of SMIC are uneven, which causes puddling and differential wear and settling. Improving the current condition of grading and paving has been identified as an immediate improvement priority by the current tenants, and a desired condition for prospective users.

The capital expenditure (CAPEX) estimates for the improvements identified in Table 6 have been compiled from a number of previous studies and preliminary estimates provided by the City, and as such represent a rough order of magnitude estimate of possible CAPEX expenditures at this point. In general, the City intends to extend utilities incrementally with the tenanting of the available parcels, and repair and improve the docking structures as funding opportunities are identified.

Operating expenses at SMIC for FY2015 were budgeted at $430,817. With the new breakwater and the extension of utilities and service systems along with the build-out of the SMIC upland areas, these annual operating expenses will accordingly increase. Nevertheless, the revenue estimate suggests that SMIC can readily achieve financial sustainability with the facility operating at available capacities. In addition, as activities at SMIC increase, the City would have the ability to adjust fiscal policies in order to keep a proper alignment between revenues and operating expenses.

8. MANAGEMENT IMPLICATIONS AND POLICY CONSIDERATIONS

8.1 LEASING POLICIES

The City's Municipal Code (Chapter 7.05 – Acquisition and Disposal of Real Property) contains provisions for the disposition of the City's interest in real property, including lease agreements. Code provisions require that a public hearing be held prior to the disposition of real property, with the essential terms and conditions of the proposed disposition or lease presented, and that the City Council approve an authorizing resolution confirming that the essential terms and conditions, and the method of disposition, are in the public interest. Essential terms and conditions of City leases generally include length of the lease, rental rate, and development agreements. The amount of rent paid to the City for leased properties is adjusted to fair market value on July 1 of every fifth year through the term of the lease. Sections of this Code grandfathered exclusions and provided for exceptions to the fair market adjustment where the Council finds that the public interest will be served. The Code also authorizes the City Manager to negotiate short-term leases (not exceeding 120 days) of City property, provided the Council passes a resolution approving such leases at the next regularly scheduled City Council meeting.

A number of leases are in place at SMIC, and these leases include performance clauses requiring the lessee to improve and use the land for a business purpose, and not to hold it for speculation. Two of the leases in place are long-term, 99-year leases.

A desktop review was conducted of standard leasing policies and terms at a number of West Coast harbors, including the ports of Anchorage, Ketchikan, Everett, Seattle and Los Angeles. This review showed that the City's leasing policies were relatively well defined and structured, and were generally consistent with the governance and lease rate provisions found at other West Coast harbors. Most of the harbors allowed short-term leases to be negotiated and implemented by senior management, with longer-term leases requiring approval by the Council or Board of Directors. Several harbors specifically limit the extent of long-term leases, such as the port of Anchorage's 55-year limit and the port of Los Angeles's 30-year limit. Long-term leases are typically conditioned on the lessee making significant leasehold capital investments to develop the property and, for any leases extending beyond the statutory term, the Board or Council would need to find appropriate public benefits. With these reference examples, the 99-year lease agreements in place at SMIC would represent exceptionally long lease terms. Leases of exceptional

duration tend to limit the ability of the City to prepare and implement long-range master plans, or a specific area development plan, for the SMIC facility, and, accordingly, should only be approved where the City Council finds sufficient public benefit.

Under current lease agreements at SMIC, tenants are responsible for the preparation of the leased site and for raising elevation of a parcel to the level required for their intended structure and operations. Over time these works by the tenants have progressed in a piecemeal fashion as parcels have been leased out. These circumstances tend to compromise efficient operations at SMIC, in both the near and long term, and contribute to the grade differentials at SMIC that cause puddling and icing conditions.

A number of harbors, such as Kotzebue, are implementing rental and storage space rates on the basis of square area rather than on vessel length. The area rate method tends to increase the applicable rental rates, and would represent a policy option the City can consider for SMIC. As noted previously, SMIC provides a unique value proposition to larger vessels with its existing lift capacity, and establishing space rental and use rates on the basis of area versus overall vessel length would work to increase space rental revenues.

8.2 LAND USE AND ZONING CODE

Presently at SMIC all of the parcels forming the Initial Development area are zoned for Industrial (I) use, and the Future Development parcels are zoned as Resource Management (RM). Under the zoning code, uses within a designated zone are limited to those enumerated specifically in the code. Industrial uses include repair, fabrication, storage, and wholesaling and distribution operations, along with other business uses generally considered to be a nuisance or otherwise incompatible with residential uses. As such, the existing zoning is consistent with a M&R and fabrication focused build-out incorporating some measure of commercial and public services.

The City's Comprehensive Plan (CP) recommends an updating of the zoning code to address a number of non-conforming uses and the pattern of development which has occurred since adoption of the plan. This update of the zoning code could consider introducing a new zoning designation, such as Employment Lands, which would allow for the inclusion of a limited number of work/live units as part of the existing or future M&R structures at SMIC, or the development of work/live condominiums or artists' lofts. The Employment Lands zoning designation is common in British Columbia, where it is applied to preserve industrial uses and promote employment in water-fronting communities. Permitting a certain number and type of residential occupancies at SMIC would work to enliven the overall development and support a modest growth of commercial services as envisioned in the potential M&R build-out. The zoning code presently defines a Commercial Building Apartments category which accommodates a mix of residential and commercial uses within a building, as well as Watchman or Caretaker dwellings category that allows accessory dwellings for industrial or commercial uses. Implementing an Employment Lands zoning code as an overlay district applicable to the existing zoning designations, such as Industrial and Commercial

zones, would work to establish an Employment Lands zoning ordinance with a minimal impact on existing zoning codes.

8.3 FISCAL AND MANAGEMENT POLICIES

The City has the ability to treat SMIC as a special tax district, which allows a degree of flexibility in the application of city tax schedules. Some prospective businesses mentioned they would explore market opportunities available at SMIC, and would consider any incentives provided by the City in terms of development services, management policies, and the regulation of property taxes. Accordingly, development policies for SMIC could incorporate a graduated scale for property taxes to incentivize desired property developments.

Vessel operators managing larger fleets of vessels routinely schedule the laying up and servicing of their vessels well in advance. As these operators represent a stable and long-term potential user of the SMIC facilities, instituting management practices addressing this scheduling needs of large scale operators would work to bolster SMIC revenues on an annual and recurring basis. In shaping these management policies, provisions could be included that secure payment for the use of space reserved in advance in the event that the vessels do not arrive as scheduled.

To optimize the operational efficiency and attention to user requirements and schedules, the City could consider contracting with a third party operator of the City Boat Yard. This operator would be encouraged to increase the overall efficiency of the boat yard and use of the TraveLift, and to invest in improvements in the facilities to expand the range of services that can be performed on site, such as the building of a sheltered work area. In addition, a third party operator would be able to proactively market the use of the boat yard to the Alaskan fleet.

The City's administrative and management policies can affect how well SMIC operations work in conjunction with the ARRC Dock Facility. The ARRC dock has shipping and logistic advantages, along with upland areas for logistic support. In terms of dock and upland storage space, SMIC could represent a complementary option to the ARRC dock for long-term, offseason docking. Discussions between the City and ARRC should seek to emphasize the compatible attributes of the two facilities and work to minimize cost-based competition where services might overlap.

8.4 PROMOTION AND MARKETING OF SMIC

To hasten the attraction of additional M&R investments and vessels to SMIC, the City could initiate a proactive campaign to promote and market the investment opportunities and range of M&R services and educational activities available at SMIC. As noted previously, SMIC, with its large lift capacities and available working and storage areas, presents a unique value proposition to the Alaskan fleet, and particularly so for larger vessels. Attracting more vessels would also serve the interests of the existing

M&R operations, which suggests that a cooperative and straightforward effort by the City and current SMIC users to engage and attract the operators of the larger vessels in the Alaskan fleet would be a worthwhile undertaking.

A campaign focused specifically on engaging the operators of the 2,090 vessels in the Alaskan fleet of 50' or greater in length is recommended. This number of prospective users can be contacted directly, and, by engaging these operators to learn of any obstacles to their use of SMIC, any issues can be addressed directly with the operator or through adjustments in operational practices. The number of established M&R providers in the Pacific Northwest is also limited, and these operators can be engaged directly to encourage their investment in SMIC. Similarly, the providers of marine vocational training and educational opportunities are few in number and can be directly contacted about expanding and coordinating education and economic development options at SMIC.

The coordinating of promotion and marketing efforts by the City with current users, potential new businesses, and community interests would be facilitated with the formation of an Advisory Committee, as recommended by participants in the SMIC work session. In particular, the Advisory Committee would serve to encourage the ongoing participation of the public, current and future users, project stakeholders, and new partners in the continuing development of SMIC.

The Advisory Committee would also be beneficial in seeking synergies between the educational and vocational training facilities at SMIC and in attracting additional research activities and workforce participation programs.

9. CONCLUSION

Cumulative investments, including the new breakwater structure, by the City, State, educational and research institutions, and private sector interests have worked to establish SMIC and Seward as a major marine industrial center. Leveraging and building on these in-place assets represents an immediate- to near-term development approach capable of meeting the City's goals of establishing sustainable commercial activities at SMIC, and supporting the economic development aims of the State.

Current and prospective users of SMIC see opportunities to expand operations or introduce new marine industrial and storage activities, and there is demonstrated support for continued M&R and fabrication development, along with an expansion of marine vocational training and arctic research facilities and activities. Market conditions and regulatory actions suggest that the need for M&R and fabrication services by the Alaskan fleet will be increasing, and with its available vessel haul-out capacity and available work and storage areas, SMIC enjoys a relative competitive advantage to attract more of the Alaskan fleet, and particularly the larger vessels of greater than 50'.

As an example, a potential build-out of the Initial Development Area focusing on the shipyard and M&R facilities suggests that, with a greater utilization of the capacities in place, SMIC has the potential to generate a multiple of its current operating revenues, and the City has a degree of flexibility in terms of operating practices and fiscal policies to incentivize these developments.

Stakeholders and subject matter experts participating in the work session were encouraged to consider a broad range of possible future development alternatives for SMIC. Participants at this work session generally reiterated the infrastructure and operational concerns raised by the interview participants, and lent support to the continued growth of M&R and fabrication operations at SMIC while encouraging an expansion and energizing of the vocational training and possible Arctic research activities.

Overall, however, no single best option for developing the SMIC uplands emerged in the course of this study. Accordingly, any near-term public investments should be consistent with maintaining flexibility in development options and the broader long-term potential of the SMIC facility.

The infrastructure improvements made to date, the expressed interests of current and prospective users to expand operations and to make new investments, and the observations and suggestions from the broader stakeholders group support near-term opportunities for M&R and fabrication operators to expand their operations at SMIC.

Attracting additional users to the facility will improve overall utilization of the boat yard and upland areas. With the growth of marine industrial services available at SMIC and a continuing expansion of education and vocational training activities, the City will be able to invest in capital improvements and public amenities, thereby promoting further commercial development and a broadening of the range of marine related services and educational activities available at SMIC.

The following recommendations are put forward by AIDEA's Project Development and Asset Management team for the City to consider in evaluating options for continuing the SMIC facility development in a manner consistent with both public and private interests:

- City of Seward should consider formalizing an active governance structure to include an Advisory Committee representing businesses, industry experts, stakeholders and user groups to oversee and direct the City's interest in the future development and promotion of SMIC
- Address current deficiencies and advance facility improvements at SMIC to meet the needs of current tenants and users, and to encourage private sector investment and developments
- The City of Seward and broader community should collectively promote and market the advantages of SMIC, emphasizing the advantages that the port facilities of Seward offer in terms of location and connectivity to the state's urban centers, rail facilities, and cargo capacities of the Anchorage airport

- Encourage the development of partnerships between the University of Alaska, AVTEC and industry partners to create a workforce development/new product incubation facility at SMIC to provide maritime vocational training and education as well as potential research through the University, and
- Consider zoning modifications permitting the inclusion of housing, convenience shopping and food services at SMIC as the area becomes further developed.

9.1 IMPLEMENTATION OF RECOMMENDATIONS

To implement some of the recommendations presented above, a series of planning activities would likely be required, as discussed below.

Suggested Planning Activities

Formally establish a SMIC Advisory Committee chartered by the City Council to oversee development and management policies for SMIC and to recommend actions to be undertaken by the City. Members of the committee should be designated by the Council or Mayor and represent a range of business and community interests.

The Advisory Committee should be supported by a full-time planning staff member of the City. This planner would be charged with drafting and gaining approval of the committee By-Laws, preparing an annual work plan, budget and schedule for the Advisory Committee, planning support, preparing committee meeting agendas, implementing studies and investigations approved by the Advisory Committee, and maintaining documentation of the committee's activities. This planner support position could be funded through the SMIC Enterprise Fund.

Key priorities for the SMIC planning support position would be to establish the Advisory Committee and gain the committee's approval of an annual work plan and budget, possibly including:

- Work plan elements including a revised condition assessment of the SMIC facilities and confirmation of capital improvements desired with completion of the new breakwater structure
- Preparation of a Specific Area Plan for SMIC and an update of the Zoning Code to permit a broader mix of land uses
- Strategies to revise property tax and sales tax schedules reflecting the funding requirements identified in the Specific Area Plan;
- Identify and pursue funding strategies to implement capital improvements and the Specific Area Plan
- Structuring of a promotion strategy to attract a more of the Alaskan fleet and to solicit new private sector developments, and
- Engaging with the University of Alaska and AVTEC to expand education, research and vocational training activities at SMIC and expanding the use of AVTEC's full bridge simulator as a service offering by SMIC to commercial vessel and equipment operators.

10. REFERENCES

City of Seward, 2014. "Seward Marine Industrial Center (SMIC) Enterprise Fund, Fiscal Year 2014 and 2015."

NEI, June 2012. "Economic Analysis and Financing Strategy for Homeporting Community Development Quota Vessels in Seward, Alaska."

Economic Development Council of Seattle and King County, November 2013. "Washington State Maritime Cluster Economic Impact Study."

City of Seward, September 2009. Seward Marine Industrial Center Infrastructure Improvements, American Recovery & Reinvestment Act (ARRA), Transportation Investment Generating Economic Recovery Surface Transportation Discretionary Grant Program (TIGER).

McDowell Group, September 2014. "Trends and Opportunities in the Alaska Maritime Industrial Support Sector."

NEI, April 2009. "Seward Marine Industrial Center Uplands Operations Analysis."