

**City Manager**  
Tom Moran

**Port Director**  
Joy Baker

**Harbormaster**  
Lucas Stotts



**Nome Port Commission**  
Jim West, Jr., Chairman  
Charlie Lean, Vice Chairman  
Doug Johnson  
Mike Sloan  
*Vacancy – Seat A*  
Tony Cox  
Mark Johnson

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**AGENDA**  
**NOME PORT COMMISSION**  
**October 20, 2016**  
**REGULAR MEETING ~ 5:30 PM**  
**COUNCIL CHAMBERS**

- I. ROLL CALL**
- II. APPROVAL OF AGENDA**
  - Resignation of Commission Alvanna-Stimpfle
  - Elect new Secretary
- III. APPROVAL OF MINUTES**
  - 09.15.18 Regular Meeting
- IV. CITIZEN'S COMMENTS**
- V. COMMUNICATIONS**
  - AAHPA Resolution 2016-01 re: ADOT Matching Harbor Grant Funding
  - AAHPA Resolution 2016-03 re: Alaska Statutes Changes on Derelict Vessels
  - Alaska Port & Harbors Impacts Report – Northern Economics
- VI. CITY MANAGER REPORT**
  - 10.10.16 City Manager Report
- VII. HARBORMASTER REPORT**
  - Operations/Maintenance Update - Verbal
- VIII. PORT DIRECTOR REPORT/PROJECTS UPDATE**
  - 10.06.16 Port Director/Projects Status Report
    - 1<sup>st</sup> Quarter F17 Budget Report
    - Harbor Bath House-Laundry Facility – DLG Facility Drawing/Info
- IX. OLD BUSINESS**
- X. NEW BUSINESS**
  - Dead Man Anchor Concepts Proposal for Services – PND Engineers
- XI. CITIZEN'S COMMENTS**
- XII. COMMISSIONER COMMENTS**
- XIII. NEXT REGULAR MEETING**
  - November 17, 2016 - 5:30 pm
- XIV. ADJOURNMENT**

**MINUTES  
NOME PORT COMMISSION  
REGULAR MEETING  
September 15<sup>th</sup>, 2016**

The Regular Meeting of the Nome Port Commission was called to order at 6:15pm by Chairman West in City Hall, located at 102 Division Street.

**ROLL CALL**

Members Present: Charlie Lean; Jim West, Jr.; Doug Johnson (Telephonically)  
Mark Johnson; Tony Cox; Mike Sloan;

Absent: Megan Alvanna-Stimpfle; (excused)

Also Present: Joy Baker, Port Director; Lucas Stotts, Harbormaster; Tom Moran, City Manager; Chris Schuneman, Harbormaster Assistant; Shauntel Bruner, Recording Secretary

In the audience: Margaret DeMaiores, KNOM; Sandra Medearis, Arctic News; Chuck Wheeler; Richard Pietruszka, Bob Scott, John Keeley, Howard Farley, Ron Lemmons

**APPROVAL OF AGENDA**

Chairman West asked for an approval of the agenda.

A motion was made by C. M Johnson and seconded by C. Sloan to approve the agenda as presented.

At the Roll Call:

Ayes: Lean, M Johnson, Cox, D Johnson, Sloan, West Jr.

Nays:

Abstain:

The motion **CARRIED**.

**APPROVAL OF MINUTES**

August 18, 2016 Regular Meeting

A motion was made by C Cox and seconded by C. Lean to approve the minutes.

At the Roll Call:

Ayes: M Johnson, Cox, West Jr., D Johnson, Sloan, Lean

Nays:

Abstain:

The motion **CARRIED**.

## **CITIZENS' COMMENTS**

**John Keeley**, with Phoenix Marine, takes the podium to discuss a letter he submitted to the Commission requesting permission to keep two of his rigs in the harbor this year for the winter season. He is concerned about causing damage to the rigs by continuing to remove each year. He suggests two different locations as potential options and includes that he has increased his insurance policy to ensure any possible liability issues. He does not foresee any issues with the locations as they are backed by other infrastructure and adds that he will have crew in Nome through the winter in the event adjustments need to be made.

**Chairman West** inquires about the insurance coverage.

**Mr. Keeley** responds that there is nothing specific mentioned about the structure being stored in ice, but says that the insurance ensures coverage of all risks and the certificate has been provided.

**C. M Johnson** asks if there are any fuel products stored on board that would remain over the winter.

**Mr. Keeley** said the minimum amount of fuel require for the generator to operate the jacking mechanism will be stored in the safest location on the rig. The required equipment to remain onboard consists of one generator and two power packs to operate the hydraulics.

**C. M Johnson** asks if the City of Nome is also named as additionally insured on the policy certificate.

**Mr. Keeley** and **PD Baker** both reply affirmatively.

**C. M Johnson** asks exactly how the rigs would be stored and if ice would only contact with the legs.

**Mr. Keeley** replies that yes, the rig would be jacked up to the preferred height and the ice would only come in contact with the four legs of the vessel.

**C Lean** said, in the past, the only issues have arisen when a vessel's hull was not completely out of the water, so having the rig elevated above the ice would prevent the issue.

**Mr. Keeley** adds that he wants to make it clear he is not doing this to avoid the costs with pulling out the rig for the season, but believes this is the safer option as pulling out causes unnecessary strain on the vessel, adds to delays at the haul out ramp and storage congestion.

**Chairman West** asks how deep does the water need to be where they are stored.

**Mr. Keeley** states that 4-5 feet should be enough after removing the equipment from the deck.

**HM Stotts** interjects that the depth in the harbor is more than sufficient to achieve that depth. He adds that he hasn't witnessed any dramatic movement of the ice near the South Wall and suggests that location as the ideal place of storage.

**C Lean** mentioned that in winters past, where the ice generally freezes between 5-7 feet, the only issue he has witnessed has been wedging between the structure and the ice. He adds that this could be prevented by moving the legs of the vessel about 2-3 feet away from the wall. Additionally, he says as long as the hull/platform of the vessel is out of the water, this won't be an issue.

**Chairman West** interjects and asks about flooding and the possibility of high water in that area.

**PD Baker** asks how high Mr. Keeley is able to jack up the rig.

**Mr. Keeley** responds that he can get above 15 feet. He expects that if there was a flood, he would be able to get at least 5 feet above the wall to avoid problems.

**Mr. Keeley** acknowledged that kids playing on or around the rig are likely a concern of the City, but it would be difficult for them to access the platform in the way it will be stored. He further added that he would consent to paying any additional fees that may be related to storing in the harbor.

**PD Baker** replies that the fees would be assessed in the same manner as if he were onshore.

**Chairman West** added that storing the rigs in the ice would actually free up space for storage of other user's vessels.

**Mr. Keeley** thanked the commission for their consideration.

### **COMMUNICATIONS**

- A. A letter to the Port Commission from John Keeley, President of Phoenix/pioneer Marine Mining requesting approval to anchor/station two of his three jack-up rigs in the inner harbor for the winter season.
- B. A notice from the City of Nome regarding Fall Clean-Up Week scheduled for October 10<sup>th</sup> through the 15<sup>th</sup>.
- C. A handout regarding the summary of events and schedule for the Arctic Science Ministerial Side-Event happening September 27<sup>th</sup>, 2016.
- D. A draft agenda for the 37<sup>th</sup> Annual AAHPA Conference scheduled to begin September 26<sup>th</sup>, 2016 through September 29<sup>th</sup>, 2016.
- E. An article written by CDR Hector L. Cintron, Jr.- Chief, Prevention Department U.S. Coast Guard Sector Anchorage, titled "Commerce and Navigation Safety on the High Seas in U.S. Arctic and western Alaska."

**PD Baker** mentions that Mayor Richard Beneville will be attending the Arctic Science Ministerial on behalf of the city in Washington D.C. later this month. Additionally, Harbormaster Lucas Stotts will be representing the City/Port at the Annual AAHPA Conference in Dutch Harbor. She adds that there is also an Arctic Ambitions conference in Anchorage scheduled for October 4<sup>th</sup> and 5<sup>th</sup> that she will be attending and presenting on the Port's increased traffic, existing capabilities and plans for expansion.

### **CITY MANAGER'S REPORT** (9/6/16 Written)

**CM Moran** spoke briefly about the issues in his report that affect the Port, mentioning the time spent with Assistant Secretary Darcy with the U.S. Army Corps of Engineers, which included a tour of the port while discussing the traffic and congestion in addition to day to day operations experienced this year. They also attended a preplanning session with the Army Corps District personnel to realign the message regarding the Deep Draft Port pursuit. He also mentions that the Senate Bill that addressed changes in language within the Water Resources & Development Act that supports improvements of remote port facilities when they affect the region has been approved and passed, and there is a corresponding bill currently being considered in the House.

Discussion:

**C. Lean** asks if there was any mention of Cape Nome.

**CM Moran** responds that we are at a bit of a crossroads and thinking that the City may no longer need the Cape, allowing private industry can move in and operate the jetty. He reminds the Commission that it is still in disrepair, but we are hopeful it will be fully restored by fall 2017.

#### **HARBORMASTER'S REPORT**

- September has been surprisingly busy this year and traffic has been diverse from the research vessel to two other French cruises to fuel and cargo vessels coming through.
- Crowley just finished the transportation and delivery of 1.76 million gallons for Bonanza.
- Progress on the tug demo is ongoing with internal cleaning and debris removal.
- Future haul outs happening this year including Bering Marine wanting to get out a barge to store and repair, NSEDC storing a landing craft they hope to sell, as well as the haul outs for existing users that occurs each year.

Discussion:

**C. Lean** inquired about whether consideration has been given to allowing vessels to haul out at the gravel ramp on the east side of the harbor to take advantage of the adjacent Port property.

**HM Stotts** replied that site has been discussed as a possible option but not fully vetted yet as there is a barge buried in the channel. It is possible that the slope could be laid back to allow for haul outs, depending on the final location of the buried barge, and discussion with the City.

**PD Baker** stated that she has photos of the barge burial during the project and its proximity to the southwest corner of Crowley's green warehouse.

**C. M Johnson** asked about the presence of residential properties in the vicinity, receiving an immediate yes, just to the east of E Street, on the north side of River Street, which still allows for a large portion of Tract C being available for use located to the west, and closer to the gravel ramp.

Staff will continue to gather information on the possible future use of this location for storage.

#### **Port Director Report / Projects Update (Written)**

- ASACW Darcy visit; they were very surprised by traffic data and anchored traffic increase.
- Between 2011-2015, dock traffic increased 261%— anchored traffic up 543%
- Traffic stats through 8/31 for 2016 show that we've nearly reached 2015 levels for docked and almost doubled levels for anchored traffic
- WRDA 2016 legislation passed the Senate yesterday and is being considered in the House.
- Preconstruction meeting with Knik was held earlier this week. The crews are onsite sorting the existing rock on hand at the pit to inventory for what is suited to the project.
- Work session with Capt Ed Page for 9/27/16 is on schedule to meet the Commission and discuss the scope of services to assist in developing navigational parameters at the port

#### **OLD BUSINESS**

Snake River Dredging – Sedimentation/Infill for Reconsideration/Discussion

- 09.08.16 PND Technical Memo & Drawings on dredging infill in Snake River

**PD Baker** explained the intent of the additional information from PND was to provide the results of the hydrographic survey/report to address any concerns about sediment infill risks from dredging.

Discussion:

**C. Lean** reminded the group of the discussion in previous meetings on additional dredging next year and explained his review of the report indicates it would take 80 years to fill in the 4' area that has already been dredged. He demonstrated with the shoaling graphic indicating where the infill was expected to occur and agreed that the sedimentation would not fill the entire area, only the upper portion and gradually works its way south over time. Therefore the maintenance schedule in the river would likely be every 10 years or so, not annually. The Council didn't disagree with his explanation and seemed to focus on the idea that the dredge spoils would be laid out on the Thornbush subdivision area and liked that we were accomplishing two goals at once.

**Chairman West** asked if the spoils were in fact being disposed of in the Thornbush site, which was confirmed.

Questions ensued about how to determine the quantity of dry fill and volume of dredging for bidding purposes with **PD Baker** explaining the current plan is to structure the bid to fully dredge the southern half of the river plan (area A) to -8 feet MLLW, and obtain a CY price for incrementally dredging area B based on available funds, which will be calculated on the CY price. The same premise will be used to determine the quantity of dry fill for the eastern portion of the Thornbush site that has already received dredge spoils as the unit price will be needed to determine the volume that can be funded.

**Motion:**

Moved by **C M Johnson** and seconded by **C Cox** that the following motion be approved as written:

Move forward with the dredging of Area A within the PND dredge plan with spoils to be placed within the Thornbush Subdivision, and continuing incrementally into Area B as unit costs and funding allow, and be incorporated into the bid package for site development.

At the Roll Call:

Ayes: C. Sloan, C. West, C. Cox, C. D Johnson, C. M Johnson,  
C. Cox

Nays:

Abstain: C. Lean

**The motion carried.**

**NEW BUSINESS**

Storage of Phoenix Marine Jack Up Rigs in the harbor over winter

**Discussion:**

A consensus discussion ensued as a follow up to earlier comments on the request by Phoenix Marine to store 2 jack-up rigs in the harbor.

**C. D Johnson** reiterated it was time to start capitalizing on the options available to us for reducing haul out and storage congestion at the ramp and these vessels are designed suitably to be stored in the ice, contrary to the vessel with a standard hull.

**C. M Johnson** asked if port staff had a recommendation on the issues raised and whether in-ice storage was a good plan.

**HM Stotts** agreed the space issue onshore is becoming a problem, and believes these vessels being located a few feet away from the south wall and being jacked up above the ice won't be a concern.

Discussion continued on location and vandalism prevention, then proceeded into a recommendation.

**Motion:**

Moved by **C M Johnson** and seconded by **C Cox** that the following motion be approved as written:

Recommend authorization be given to Phoenix Marine to overwinter 2 jack-up platform barges along the south sheet pile wall of the Small Boat Harbor with exact distances and locations at the discretion of port staff.

At the Roll Call:

Ayes: C. Sloan, C. Lean, C. West, C. D Johnson, C. M Johnson, C. Cox

Nays:

Abstain:

**The motion carried.**

**CITIZENS' COMMENTS**

Chuck Wheeler made statements about the 2013 tariff rate study and recommendation for increase and how those are coming along in future projections. How the revenues have changed significantly in the past 3 years. He questioned spending funds for projects in this economic climate, and the port spending money for the deep water port study. The rate study should be modified to reflect updated information. Does the Port have winter labor force to monitor vessel repair work at the facility.

**COMMISSIONERS' COMMENTS**

**C. Lean** - no comments.

**C. D Johnson** - no comments

**C. Cox** – glad we're making progress on the tug scrap and also glad to see the public for attending the work session.

**C. Sloan** – concerned about the City talking so eagerly about Middle Beach development for family recreation, then talking about storing vessels. Is there a specific plan identified? The existing harbor dredging discharge already takes away from the recreational use of that section of beach.

**C. M. Johnson** – thanks port users for coming to meetings and participating. It helps a great deal.

**Chairman West** – also thanks the public for taking the time to participate in the discussion and look forward to the development in the Thornbush area.

**SCHEDULE OF NEXT MEETING**

The next meeting: October 20<sup>th</sup>, 2016 at 5:30PM.

**ADJOURNMENT**

Motion was made by C. Cox that the meeting be adjourned – meeting adjourned at 7:28 PM.

**APPROVED** and **SIGNED** this 20th day of October, 2016.

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**Jim West Jr., Chairman**

**ATTEST:**

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**Megan Alvanna-Stimpfle, Secretary**



# **Alaska Association of Harbormasters and Port Administrators**



## **RESOLUTION NO. 2016-01**

**A RESOLUTION OF THE ALASKA ASSOCIATION OF HARBORMASTERS AND PORT ADMINISTRATORS IN SUPPORT OF FULL FUNDING (\$18,160,055) FOR THE STATE OF ALASKA MUNICIPAL HARBOR FACILITY GRANT PROGRAM IN THE FY 2018 STATE CAPITAL BUDGET.**

**Whereas,** the Alaska Association of Harbormasters and Port Administrators recognizes the majority of the public boat harbors in Alaska where constructed by the State during the 1960s and 1970s; and

**Whereas,** these harbor facilities represent critical transportation links and are the transportation hubs for waterfront commerce and economic development in Alaskan coastal communities; and

**Whereas,** these harbor facilities are ports of refuge and areas for protection for ocean-going vessels and fishermen throughout the State of Alaska, especially in coastal Alaskan communities; and

**Whereas,** the State of Alaska over the past nearly 30 years has transferred ownership of most of these State owned harbors, many of which were at or near the end of their service life at the time of transfer, to local municipalities; and

**Whereas,** the municipalities took over this important responsibility even though they knew that these same harbor facilities were in poor condition at the time of transfer due to the state's failure to keep up with deferred maintenance; and

**Whereas,** consequently, when local municipal harbormasters formulated their annual harbor facility budgets, they inherited a major financial burden that their local municipal governments could not afford; and

**Whereas,** in response to this financial burden, the Governor and the Alaska Legislature passed legislation in 2006, supported by the Alaska Association of Harbormasters and Port Administrators, to create the Municipal Harbor Facility Grant program, AS 29.60.800; and

**Whereas**, the Alaska Association of Harbormasters and Port Administrators, is pleased with the Department of Transportation and Public Facilities administrative process to review, score and rank applicants to the Municipal Harbor Facility Grant Program, since state funds may be limited; and

**Whereas**, for each harbor facility grant application, these municipalities have committed to invest 100% of the design and permitting costs and 50% of the construction cost; and

**Whereas**, the municipalities of the City of Kake, the City of Ketchikan, the City and Borough of Sitka, the Municipality of Skagway, the City of Valdez, and the City and Borough of Wrangell have offered to contribute \$18,160,055 in local match funding for FY2018 towards seven harbor projects of significant importance locally as required in the Harbor Facility Grant Program; and

**Whereas**, completion of these harbor facility projects is all dependent on the 50% match from the State of Alaska's Municipal Harbor Facility Grant Program; and

**Whereas**, during the last ten years the Municipal Harbor Facility Grant Program has only been fully funded twice; and

**Whereas**, during the last ten years the backlog of projects necessary to repair and replace these former State owned harbors has increased to over \$100,000,000.

**Now therefore be it resolved** that the Membership of the Alaska Association of Harbormasters and Port Administrators urges full funding in the amount of \$18,160,055 by the Governor and the Alaska Legislature for the State of Alaska's Municipal Harbor Facility Grant Program in the FY 2018 State Capital Budget in order to ensure enhanced safety and economic prosperity among Alaskan coastal communities.

Passed and approved by a duly constituted quorum of the Alaska Association of Harbormasters and Port Administrators on this 28th day of September, 2016.

*Carl J. Uchytel, P.E.*

Carl Uchytel, President

ATTEST:

*Kim Elliot*

\_\_\_\_\_  
Kim Elliot, Executive Secretary

# Alaska Association of Harbormasters and Port Administrators



## RESOLUTION NO. 2016-3

**A RESOLUTION OF THE ALASKA ASSOCIATION OF HARBORMASTERS AND PORT ADMINISTRATORS IN SUPPORT OF PROPOSED CHANGES TO ALASKA STATUTES CHAPTER 30.30 AND 05.25 IMPROVING THE MANAGEMENT AND PREVENTION OF DERELICT VESSELS.**

**Whereas,** hundreds of derelict vessels currently litter Alaska's coastline and harbors and these numbers will increase every year unless action is taken to address aging fleets and changing commercial fisheries; and

**Whereas,** in the past year alone there have been numerous derelict vessel situations that have cost the state, municipalities, and the federal government considerable expense, including two ex-Navy tugs in Adak, abandoned barges in Steamboat Slough near Bethel, and the tug Challenger that sunk off Juneau; and

**Whereas,** the Alaska Association of Harbormasters and Port Administrators recognizes the widespread costs and the environmental and navigational risks for both municipalities and the state associated with derelict vessels; and

**Whereas,** neighboring states have dramatically strengthened their derelict vessel prevention laws in the past five years to better prevent, track and manage derelict vessels, including raising fees to support state management of derelict vessels and requiring vessel insurance; and

**Whereas,** in 1990 the Alaska legislature passed a resolution acknowledging the need to better understand and address the existing and growing problem of derelict vessels around the state; and

**Whereas,** the State of Alaska has outdated statutes regarding derelict vessels which lack the ability to track vessel owners, agency enforcement authority, statewide coordination of response, funding or vessel insurance requirements; and

**Whereas**, in 2013 the Alaska Association of Harbormasters and Port Administrators supported the creation of the ad-hoc derelict vessel task force which includes representatives from state and federal agencies as well as the Alaska Association of Harbormasters and Port Administrators, regional tribal representatives, federal and state legislative offices, and private industry; and

**Whereas**, over nine full-day meetings, the task force developed thoughtful, robust and meaningful proposed changes that will help all stakeholders around the state, including harbor facilities, better address and prevent derelict vessels; and

**Whereas**, this will help our members protect harbor infrastructure, keep valuable moorage space in our harbors available, and will prevent unsustainable economic, environmental and navigational hazards; and

**Whereas**, the proposed changes will improve communication and coordination between Alaska's harbors and state and federal agencies, directly leading to decreased costs associated with managing derelict vessels.

**Now therefore be it resolved** that the Membership of the Alaska Association of Harbormasters and Port Administrators fully supports the passage by the state legislature of all proposed revisions in Alaska Statutes 30.30 and 05.25.

Passed and approved by a duly constituted quorum of the Alaska Association of Harbormasters and Port Administrators on this 28th day of September, 2016.

*Carl J. Uchytel, P.E.*

Carl Uchytel, President

ATTEST:

*Kim Elliot*

Kim Elliot, Executive Secretary

# **The Economic Benefits of Ports and Harbors in Alaska**

*Prepared for*

**Alaska Association of Harbormasters and  
Port Administrators**

**August 2016**

*Prepared by*



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# Contents

Section	Page
<b>Abbreviations .....</b>	<b>ii</b>
<b>1 Key Findings .....</b>	<b>1</b>
<b>2 The Role of Ports and Harbors in Alaska .....</b>	<b>2</b>
2.1 Movement of Freight .....	2
2.2 Commercial Fishing Industry .....	9
2.3 Tourism .....	11
<b>3 Economic Impact of Port and Harbor Facilities .....</b>	<b>13</b>
3.1 Employment .....	13
3.2 Revenues and Expenses .....	13
3.3 Spending .....	14
3.4 Activity and Uses .....	17
<b>4 References .....</b>	<b>18</b>
<b>5 Appendix A: Statewide Port and Harbor Facility Survey .....</b>	<b>19</b>

Table	Page
Table 1. Movement of Freight in Alaska by Mode, 2015 (Value and Weight) .....	2
Table 2. Volume of Total Waterborne Freight by Port, 2013 (Short Tons) .....	6
Table 3. Volume of Waterborne Freight by Port Excluding Petroleum Products, 2013 (Short Tons) .....	6
Table 4. Volume of Waterborne Freight Per Capita by Port, 2013 (Short Tons) .....	7
Table 5. Volume of Waterborne Freight Excluding Petroleum Per Capita by Port, 2013 (Short Tons) ..	8
Table 6. Regional and Subregional Hubs .....	8
Table 7. Number of Fishermen who Fished by Borough and Census Area, 2015 .....	11
Table 8. Cruise Passengers Volumes by Community, 2008-2013 .....	11
Table 9. CPV Shared Revenues by City and Borough Governments, FY 2008- FY 2014 .....	12
Table 10. Revenue Sources as a Portion of Total Revenues .....	14
Table 11. Expenses Sources as a Portion of Total Expenses .....	14
Table 12. Average Non-Labor Port and Harbor Expenditure Impacts by Borough/Census Area .....	16

Figure	Page
Figure 1. Percentage of the Value of Outbound Freight by Mode, 2015 .....	3
Figure 2. Percentage of the Value of Inbound Freight by Mode, 2015 .....	4
Figure 3. Value of Total Alaska Waterborne Freight by Commodity (\$ Millions) .....	5
Figure 5. Value of Commercial Fishery Landings by State, 2014 (\$ Million) .....	9
Figure 6. Value of Commercial Fishery Landings in Top 10 Alaskan Ports, 2013-2014 (\$ Million) .....	10
Figure 7. Percentage of Harbor User Spending in Local Economy by Category .....	15
Figure 8. Percent of Total Harbor User Spending in Local Economy by Region .....	16

## Abbreviations

AAHPA	Alaska Association of Harbormasters and Port Administrators
CPV	Commercial Passenger Vessel Excise Tax
DCCED	Alaska Department of Commerce, Community, and Economic Development
SPHFS	Statewide Port and Harbor Facility Survey



# 1 Key Findings

Ports and harbors across the State of Alaska provide infrastructure and services that support critical economic activities. Ports and harbors also play an important role in the communities that they are a part of, by providing local employment opportunities and promoting economic activity in the surrounding areas. The key findings from this study are summarized below.

- ***Ports and harbors are critical to the movement of freight throughout the state.***

In 2015, \$28 billion and 40.8 million tons of goods were moved via marine transport out of the state, and \$4.8 billion and 3.4 million tons of goods were moved into the state via marine transport.

- ***Ports and harbors support a thriving fishing industry.***

In 2014, total Alaskan commercial fishing landings were worth over \$1.7 billion and accounted for over one-third of the total commercial fishing landings in the entire United States. Six of the top ten fishing ports in terms of total harvest volume are located in Alaska.

- ***Ports and harbors support tourism activities.***

The presence of harbors has allowed tourism activity, such as charter fishing, sightseeing tours, and boat rentals, to grow by providing the infrastructure to enable and support these activities. Over \$83 million in shared revenues from the Commercial Passenger Vessel Excise Tax (CPV) has been distributed to local governments since the tax was implemented in 2007. This money allows communities to continue to build infrastructure and services to support the tourism industry.

- ***Ports and harbors create local employment.***

Based on survey responses, port and harbor facilities employ an average of nine full-time and seven part-time employees per year. This number varies significantly based the different type and volume of activity occurring at each facility.

- ***Ports and harbors reinject local and outside revenues into the economy.***

Moorage, wharfage, and dockage are the main sources of revenue, and personnel expenses, utilities, and maintenance are the largest expenses for ports and harbors. Port and harbor users also bring in outside revenues through purchases made at local maintenance and repair facilities, restaurants, shops, and bars. The injection of additional income from harbor users into the economy leads to more spending, which creates more income, which leads to more spending—also known as the multiplier effect. The average multipliers associated with this spending range from 1.170 to 1.571 depending on the region of the state in which the spending takes place.

## 2 The Role of Ports and Harbors in Alaska

Ports and harbors across the State of Alaska provide infrastructure and services that support critical economic activities. From the movement of freight, to supporting a thriving fishing industry, to playing a major role in tourism, ports and harbors play a key role in Alaska's state and local economies. This report attempts to quantify the economic impact of ports and harbors using publicly available data sources, including the United States Department of Transportation, Alaska Fisheries Information Network, and the Alaska Visitors Statistics Program, as well as responses from the 2016 Statewide Port and Harbor Facility Survey (SPHFS). The SPHFS is an electronic survey made up of 26 questions about the employment, revenues, expenses, spending, infrastructure, and activities that happen in and around ports and harbors. The survey was distributed through the Alaska Association of Harbormasters and Port Administrators (AAHPA). The full survey can be found in Appendix A.

### 2.1 Movement of Freight

Marine transportation plays a key role in the movement of goods into, out of, and within the state. Alaska has more coastline than the all of the continental United States combined and a very limited road system making marine and air transportation the primary means to transport goods around the state. The distance between Alaska and the rest of the continental United States in combination with the lack of a rail connection also makes marine transportation the primary mode used to move freight into and out of the state. Table 1 shows both the value and volume of freight moved into, out of, and around Alaska in 2015. Marine transportation (water) accounts for the largest values and volumes of goods shipped out of the state, moving a total of \$28 billion and 40.8 million tons of goods out of the state in 2015. Marine transport also accounts for the largest volume and the third largest value of goods brought into the state, moving about 3.4 million tons of goods valued at \$4.8 billion in 2015.

Crude petroleum products account for the majority of the total weight and value of inbound and outbound waterborne freight. Over 99 percent of the total weight of outbound waterborne freight and almost 70 percent of inbound waterborne freight is crude petroleum, with 40.7 million tons and 2.3 million tons respectively. Crude petroleum products also account for over 97 percent of the total value of outbound waterborne freight, accounting for \$27.2 billion in 2015.

**Table 1. Movement of Freight in Alaska by Mode, 2015 (Value and Weight)**

Mode	Within State	Outbound	Inbound	Within State	Outbound	Inbound
	Millions \$			Thousand Tons		
Air*	867.5	12,786.3	13,333.8	119.0	67.2	171.9
Multimodal	540.5	2,261.6	9,889.1	154.9	388.8	1,263.7
Other	18.3	370.6	22.6	1.2	23.9	0.5
Rail	1,598.1	7.1	6.9	3,139.3	3.5	18.5
Truck	14,585.5	882.8	640.2	22,930.3	273.7	196.3
Water	3,482.2	28,119.4	4,798.1	3,663.2	40,890.5	3,392.6

\*Transshipments make up almost three-quarters of the total airfreight that mores through the Anchorage Airport

Note: Pipeline volumes omitted from table due to errors in the dataset.

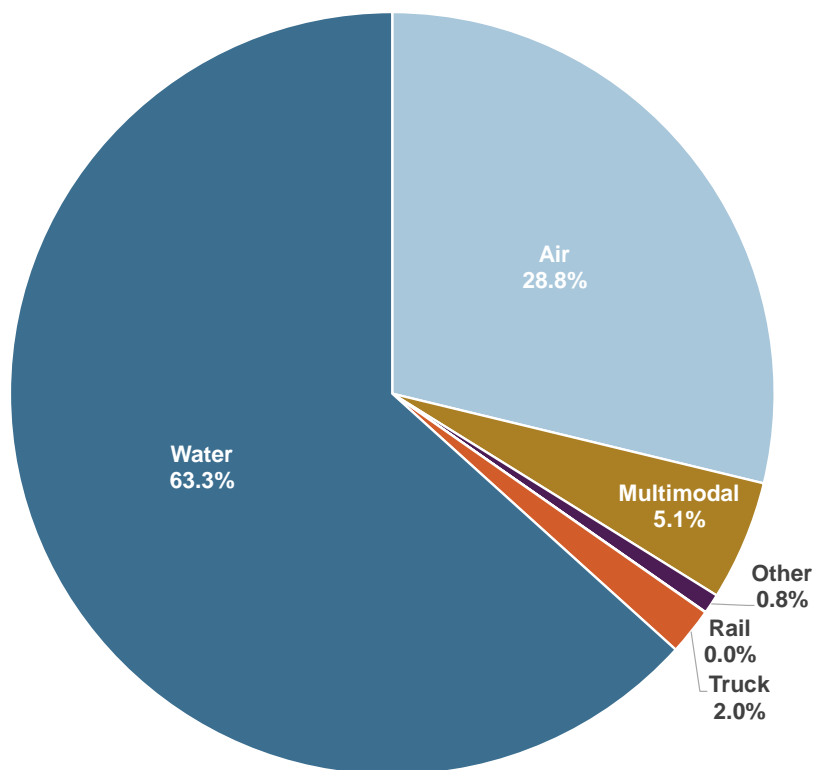
Source: U.S. Department of Transportation, 2015.

It should be noted that the average cost per pound to transport goods via water is significantly less than the cost to transport goods via air, so the while the value of items shipped via air is often higher, the

volume is typically lower when compared to marine transport. It should also be noted that both FedEx and UPS have transshipment operations in Anchorage, which may be influencing the airfreight totals (both weight and value) in the table above. Transit cargo accounts for almost three-quarters of all airfreight that moves through the Anchorage International Airport (Anchorage Economic Development Corporation, 2016). Transit cargos do not enter the local economy, but rather are temporarily stored and resorted before continuing on to their final destination. Time restraints associated with each mode of transportation also may influence shipment decisions. As mentioned before, there are no rail connections between Alaska and the continental United States, but the White Pass and Yukon Railroad operates a route that crosses the Canadian border around Skagway. The numbers shown in Table 1 show outbound and inbound rail freight recorded for this route.

Figure 1 shows the percentage of the total outbound freight value broken out by mode of transportation. Water based transportation moved over 63 percent of the total value of outbound freight in 2015. This movement of goods would not be possible without the existing port and harbor infrastructure around the state. Air transport moves the second largest portion of the value of outbound freight at just under 29 percent of the total value.

**Figure 1. Percentage of the Value of Outbound Freight by Mode, 2015**



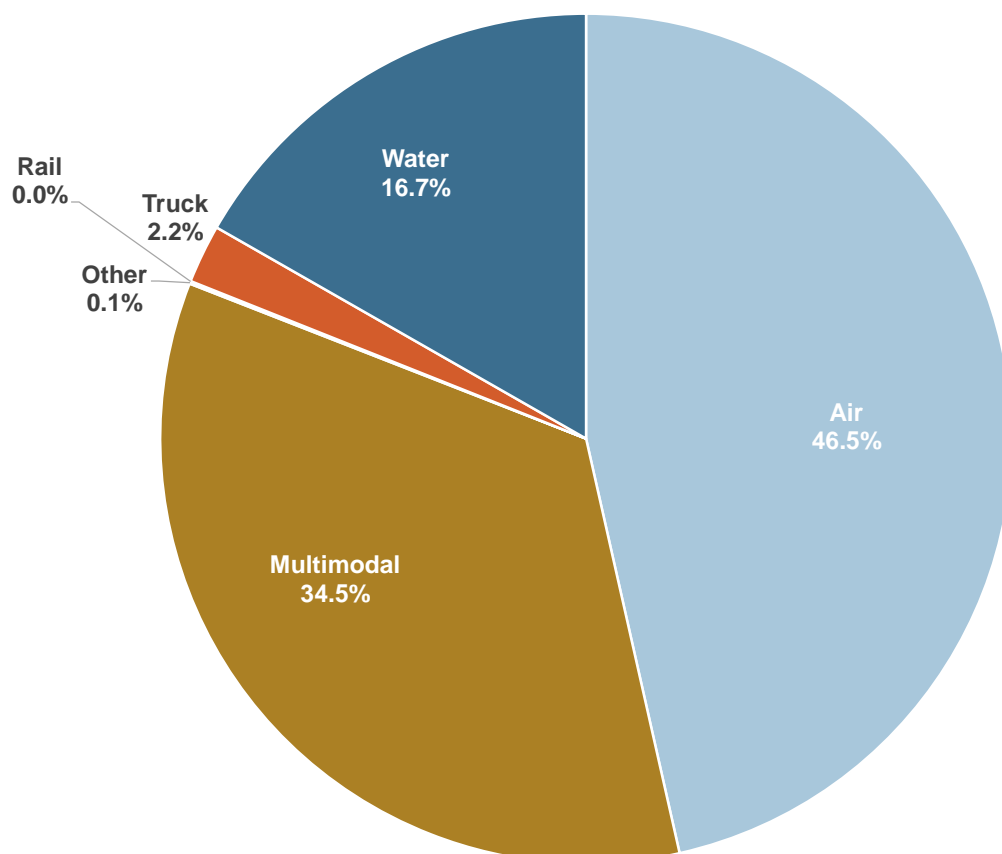
Note: Transshipment volumes included in Air calculation. Pipeline volumes omitted from table due to errors in the dataset.

Source: U.S. Department of Transportation, 2015.

Marine transport plays a smaller role in terms of value for inbound freight, but is still the top mode of transportation when it comes to the volume of inbound freight (see Table 1). Figure 2 shows the value of inbound freight, which is more evenly distributed between modes of transportation compared to

the value outbound freight displayed in Figure 1. Air and multimodal transport moved the largest portion of the value of goods into the state in 2015 with 43 percent and 32 percent respectively.

**Figure 2. Percentage of the Value of Inbound Freight by Mode, 2015**

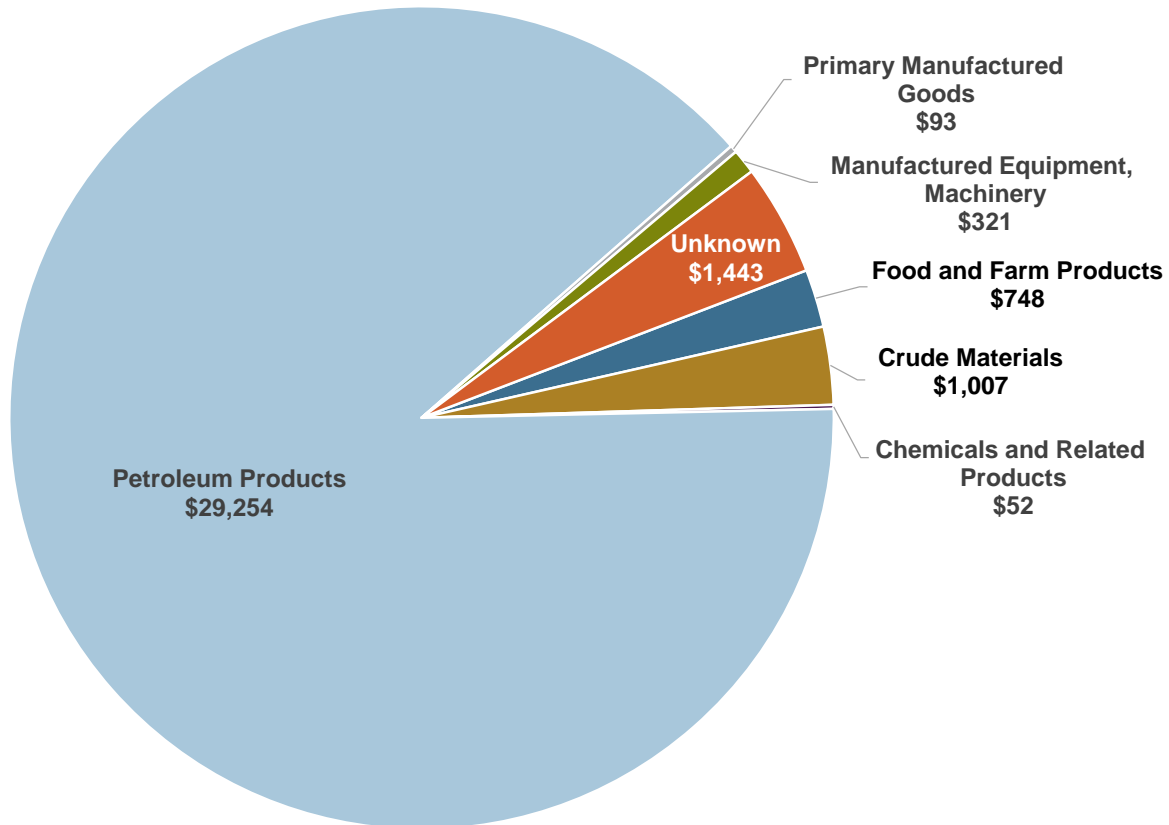


Notes: Transshipment volumes included in Air calculation. Pipeline volumes omitted from table due to errors in the dataset.

Source: U.S. Department of Transportation, 2015.

Figure 3 combines the total inbound and outbound marine freight movements in 2015 and breaks the total value of these movements down by the commodity moved. Petroleum products accounted for almost 89 percent of the total value of marine freight movements in 2015, with a total value of \$29.2 billion. The petroleum product category includes both crude petroleum, fuel oils, and gasoline. Crude materials, which include mining exports, logs, gravel and other wood products, account for the second largest value of goods moved by water throughout the state. In 2015, just over \$1 billion of crude materials were moved via marine transport in Alaska, highlighting the importance of marine transport to a variety of the key industries in Alaska, including oil and gas, mining, and forestry. It also shows the impact the ports and harbors have on the distribution of consumer goods, such as fuel and food products.

**Figure 3. Value of Total Alaska Waterborne Freight by Commodity (\$ Millions)**



Source: U.S. Department of Transportation, 2015.

Table 2 uses data published by the U.S. Army Corps of Engineers through the Waterborne Commerce Statistics Center. This is not a comprehensive data set, but it does include data for 31 Alaskan ports and harbors. The dataset records the volume (in short tons) of both domestic and foreign receipts and shipments at each port. The value of shipments is not captured by this dataset.

**Table 2. Volume of Total Waterborne Freight by Port, 2013 (Short Tons)**

Port	Volume Transported (short tons)	Port	Volume Transported (short tons)
Valdez	28,165,948	Bethel	154,434
Nikiski	4,484,225	Cordova	117,468
Anchorage	2,949,456	Wrangell	80,024
Kivalina	2,498,398	Craig	59,661
Unalaska	1,269,649	King Cove	57,555
Ketchikan	1,058,312	Kake	36,396
Seward	718,541	Old Harbor	33,791
Juneau	708,955	Dillingham	19,174
Iliuliuk Harbor	544,580	Humboldt	16,057
Petersburg	510,751	Hoonah	9,823
Kodiak	344,773	Metlakatla	8,375
Skagway	327,684	Atka	5,560
Whittier	292,418	Seldovia	5,546
Homer	219,082	Egegik	792
Sitka	172,251	Pelican	248
Nome	168,752		

Source: U.S. Army Corps of Engineers, 2013.

Valdez saw the largest volume of freight in 2013 with a total volume of just over 28 million short tons. The volume of shipments seen in Valdez is more than the other 30 ports captured in this data set combined. Valdez is the terminus of the Trans-Alaska Pipeline and has a large volume of oil exports, causing it to be an obvious outlier among the ports listed. The volumes displayed for Nikiski are also heavily influenced by petroleum products, as it is home to the Tesoro refinery. Table 3 displays the volume of waterborne freight excluding petroleum to take a closer look at waterborne commerce in Alaska without the skewing effects of large petroleum exports at selected ports.

**Table 3. Volume of Waterborne Freight by Port Excluding Petroleum Products, 2013 (Short Tons)**

Port	Volume Transported (short tons)	Port	Volume Transported (short tons)
Kivalina	2,359,460	Cordova	54,354
Anchorage	2,028,287	Nome	25,607
Unalaska	931,176	Kake	21,976
Seward	712,995	Valdez	13,403
Ketchikan	704,192	Bethel	10,851
Juneau	555,541	King Cove	10,219
Petersburg	473,833	Dillingham	8,424
Iliuliuk Harbor	315,963	Humboldt	7,708
Whittier	283,988	Hoonah	6,763
Skagway	223,120	Metlakatla	6,589
Kodiak	187,914	Atka	5,560
Sitka	144,893	Nikiski	1,788
Wrangell	73,411	Homer	144

Source: U.S. Army Corps of Engineers, Waterborne Commerce Data, 2013.

When petroleum volumes are removed, Kivalina and Anchorage jump to the top of the list, with the largest volumes of waterborne freight. Kivalina is the primary port used by the Red Dog Mine to import and export materials, and the vast majority of the waterborne freight that comes through this port is directly tied to mining operations. The Port of Anchorage receives the majority of consumer products coming into Alaska, which are then distributed throughout the state via road, air, or barge. The activities at the Port of Anchorage and Kivalina illustrate the important role that ports and harbors play in both exporting the natural resources that bring money into the state's economy and the importation of consumer goods needed to support the state's population.

Many of the ports listed serve populations outside of their immediate communities or support other economic functions like the exportation of natural resources. Table 4 shows the volume of waterborne freight per capita, which is calculated by dividing the total volume of waterborne freight by population of the community in which the port is in. Many of the communities that receive a high volume of waterborne freight do not have a large population, resulting in a high volume per capita.

**Table 4. Volume of Waterborne Freight Per Capita by Port, 2013 (Short Tons)**

Port	Volume Per Capita (short tons)	Port	Volume Per Capita (short tons)
Valdez	7,022	Craig	51
Kivalina	6,064	Nome	44
Whittier	1,156	Homer	43
Nikishka	985	Wrangell	33
Skagway	333	Bethel	25
Unalaska	276	Seldovia	25
Seward	262	Juneau	21
Petersburg	174	Sitka	19
Old Harbor	148	Humboldt	19
Ketchikan	128	Hoonah	13
Iliuliuk Harbor	118	Anchorage	10
Atka	82	Dillingham	8
King Cove	64	Egegik	8
Kake	59	Metlakatla	6
Kodiak	55	Pelican	3
Cordova	51		

Source: USACE, 2013. ADOL&WD, 2013.

Similar to Table 4, Table 5 shows the volume of waterborne freight per capita by port, but extracts the volumes recorded for petroleum products. When petroleum is taken out of the equation, there is a significant drop on the volume of freight per capita in Valdez and Nikiski, indicating that petroleum is the main commodity transported to and from these ports. With the exception of Kivalina, the ports that handle higher volumes of consumer goods, like Whittier and Seward, quickly rise to the top of the list. One exception is Anchorage, which has a relatively low volume of waterborne freight per capita despite some of the largest total volumes of any port listed. The large population served by the Port of Anchorage primarily drives this discrepancy. The Port of Anchorage sees 90 percent of the consumer goods for 85 percent of Alaska (Port of Anchorage, 2016).

**Table 5. Volume of Waterborne Freight Excluding Petroleum Per Capita by Port, 2013 (Short Tons)**

Port	Volume Per Capita (short tons)	Port	Volume Per Capita (short tons)
Kivalina	5,727	Juneau	17
Whittier	1,122	Sitka	16
Seward	260	King Cove	11
Skagway	227	Humboldt	9
Unalaska	202	Hoonah	9
Petersburg	161	Anchorage	7
Ketchikan	85	Nome	7
Atka	82	Metlakatla	4
Iliuliuk Harbor	69	Dillingham	4
Kake	35	Valdez	3
Wrangell	30	Bethel	2
Kodiak	30	Nikiski	0
Cordova	23	Homer	0

Source: USACE, 2013. ADOL&amp;W, 2013

Ports and harbors throughout the state commonly play the role of distribution hub for the surrounding region or are part of a transportation system involving multiple ports. The ports listed in Table 6 were identified as regional and subregional hubs at the Alaska Regional Ports Conference that was put on by the U.S. Army Corps of Engineers in 2010. These ports play a role in the state's transportation network that extends beyond their immediate communities.

**Table 6. Regional and Subregional Hubs**

Community	Type of Hub	Community	Type of Hub
<b>Arctic</b>		<b>Southeast</b>	
Barrow	Regional	Haines	Subregional
Prudhoe Bay	Regional	Juneau	Regional
<b>Interior</b>		Ketchikan	Regional
Koyukuk	Subregional	Petersburg	Regional
Nenana	Regional	Sitka	Subregional
Tanana	Subregional	Skagway	Subregional
<b>Northwest Arctic</b>		<b>Southwest</b>	
Kotzebue	Regional	Adak	Subregional
Nome	Regional	Dillingham	Subregional
Port Clarence	Subregional	Kodiak	Regional
<b>Prince William Sound</b>		Naknek	Subregional
Seward	Regional	Unalaska/Dutch Harbor	Regional
Valdez	Regional	<b>Yukon-Kuskokwim</b>	
Whittier	Regional	Emmonak/Alakanuk	Regional
<b>Southcentral</b>		Bethel	Regional
Anchorage	Regional		
Homer	Subregional		
Port MacKenzie	Subregional		

Source: Northern Economics, Inc., 2011.

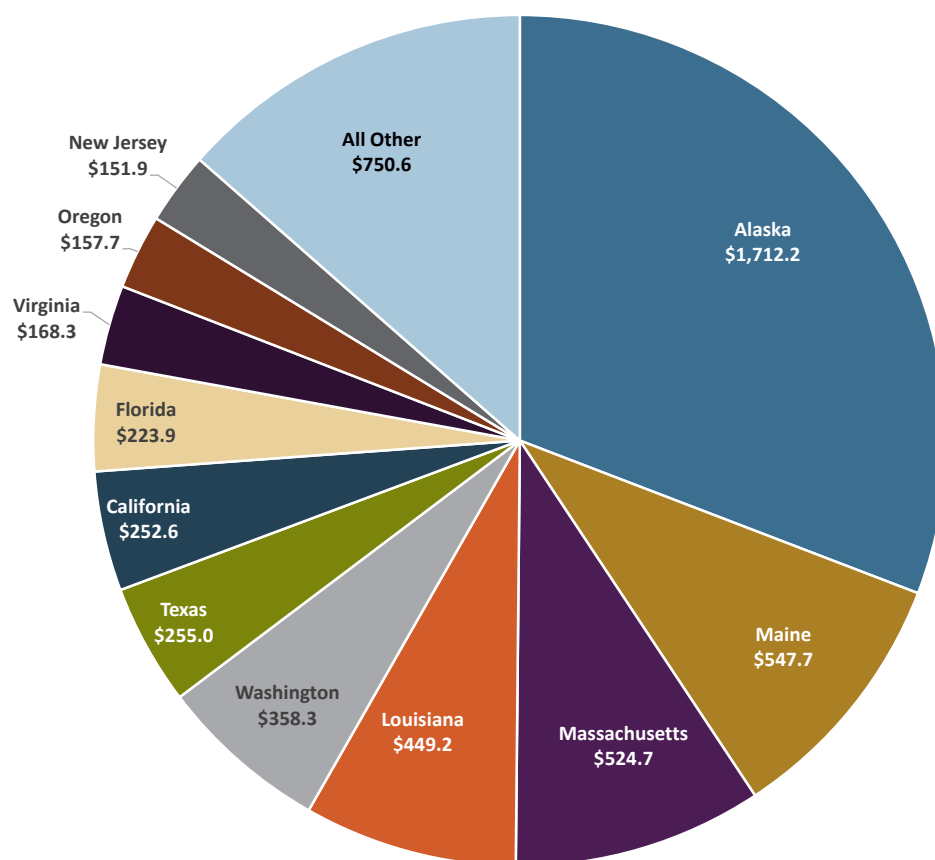


## 2.2 Commercial Fishing Industry

Ports and harbors also play a critical role supporting commercial fishing, one of the biggest industries and source of employment in Alaska. Responses from the SPHFS revealed that fishing fleets, whether they be large catcher processors or smaller charter vessels, make up a significant portion of the vessels served by ports and harbors around the state.

In 2014, the value of commercial fishery landing in Alaska was just over \$1.7 billion, and accounted for over 30 percent of the value of all commercial landing in the United States (Figure 4). Over 31,000 people fish commercially each year in Alaska and seafood harvesting employs over 8,000 people annually (Cannon, 2016). Commercial fishermen and processing companies rely heavily on the port and harbor infrastructure around the state to support their booming industry.

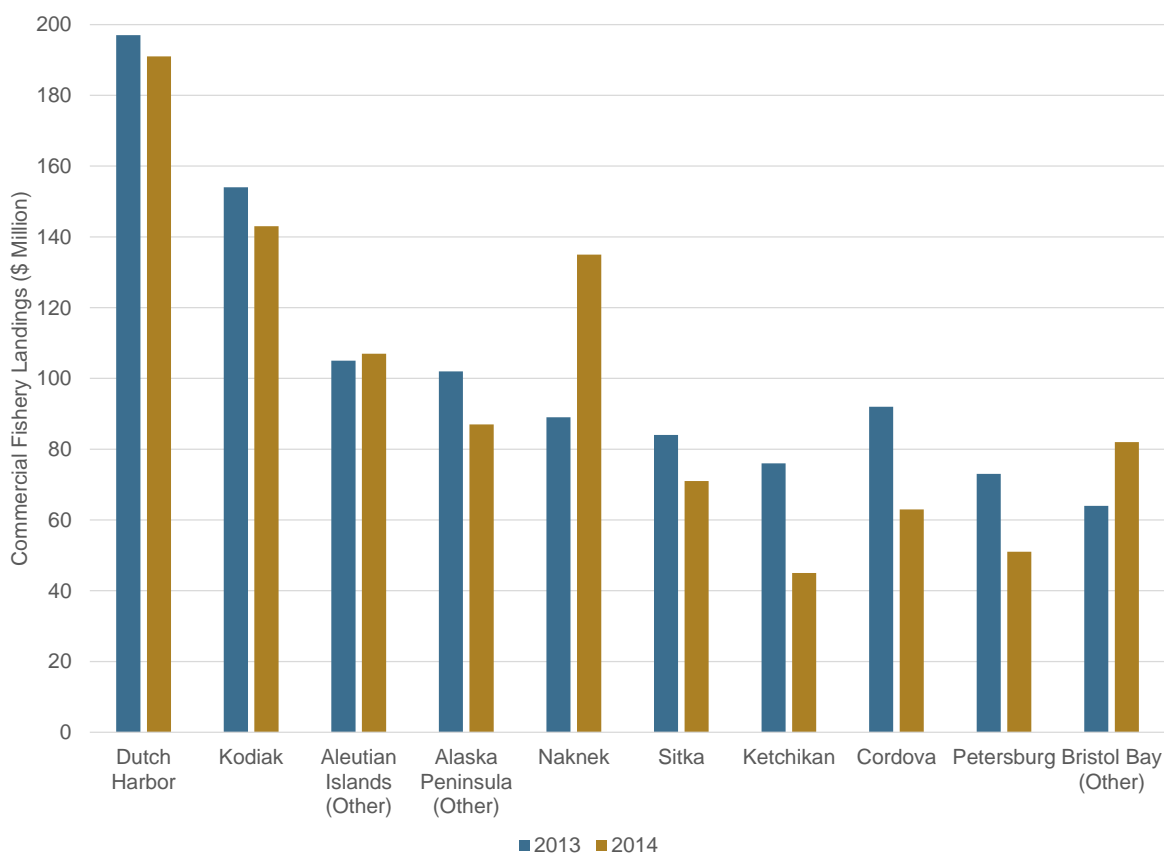
**Figure 4. Value of Commercial Fishery Landings by State, 2014 (\$ Million)**



Source: NOAA Office of Science and Technology, 2014.

Six of the top ten fishing ports by value and five of the top ten fishing ports in terms of volume in the United States are located in the State of Alaska. Figure 5 shows the top ten fishing ports in Alaska in terms of value of total commercial fishing landings. Dutch Harbor has the highest value of commercial landings of any port in both Alaska and the United States with \$762 million in 2014. Kodiak is the second largest port in Alaska and as well as the second largest in the United States in terms of value with \$477 million.

**Figure 5. Value of Commercial Fishery Landings in Top 10 Alaskan Ports, 2013-2014 (\$ Million)**



Source: NOAA Office of Science and Technology, 2014.

Note: Some Alaskan ports are grouped together to protect confidential information.

Responses from the SPHFS also indicate that ports and harbors provide and maintain infrastructure that caters specifically to the needs of the fishing industry. Cranes, fish cleaning stations and ice making machines are available at many of the ports around the state, with the primary use of offloading fish product and chilling fish product. Ports are able to charge for the use of this equipment and bring in additional non-moorage based revenues. As one respondent put it, “we handle all sorts of freight but our primary source of revenue is the fishing industry”.

The economic impacts of the commercial fishing industry extend beyond the primary fishing ports to boroughs and census areas across the state. Table 7 shows the number of fishermen who fished during 2015 by borough and census areas. There are fishermen living in boroughs that do not contain and commercial fishing ports, like the Fairbanks North Star Borough, that bring the money they earn fishing back to their community. This economic activity can be directly linked to the port and harbor infrastructure throughout the state.

**Table 7. Number of Fishermen who Fished by Borough and Census Area, 2015**

<b>Borough/Census Area</b>	<b>Fishermen</b>	<b>Borough/Census Area</b>	<b>Fishermen</b>
Aleutians East Borough	160	Lake and Peninsula Borough	105
Aleutians West Census Area	58	Matanuska-Susitna Borough	231
Anchorage Municipality	524	Nome Census Area	214
Bethel Census Area	440	North Slope Borough	3
Bristol Bay Borough	142	Northwest Arctic Borough	107
Denali Borough	2	Petersburg Census Area	405
Dillingham Census Area	412	Prince of Wales-Hyder Census Area	226
Fairbanks North Star Borough	31	Sitka City and Borough	446
Haines Borough	85	Skagway Municipality	2
Hoonah-Angoon Census Area	117	Southeast Fairbanks Census Area	20
Juneau City and Borough	272	Valdez-Cordova Census Area	328
Kenai Peninsula Borough	1130	Wrangell City and Borough	165
Ketchikan Gateway Borough	232	Yakutat City and Borough	127
Kodiak Island Borough	454	Yukon-Koyukuk Census Area	16
Kusilvak Census Area	475		

Note: Only includes fishermen who fished during the 2015 season.

Source: CFEC, 2015.

## 2.3 Tourism

Ports and harbors around the state also play in key role in supporting the tourism industry by facilitating cruise ship calls, charter-fishing services, and sightseeing tours. The cruise market alone represents over half of Alaska's visitors and between May and September, and in 2013 just under 100,000 out-of-state visitors came to the state via cruise ship (Alaska Department of Commerce, Community, and Economic Development [DCCED], 2014). Cruise ships carried passengers to 14 ports around the state in 2013. Table 8 displays the volume of cruise passengers that visited each of these 14 ports for the years 2008-2013.

**Table 8. Cruise Passengers Volumes by Community, 2008-2013**

<b>Community</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Anchorage	0	256	1,282	14,939	10,030	499
Haines	50,121	43,550	32,259	27,176	31,007	32,378
Juneau	1,032,274	1,019,507	879,310	875,947	927,941	978,559
Ketchikan	941,910	936,220	828,929	844,412	894,320	948,685
Kodiak	11,903	10,235	19,372	14,715	11,551	3,231
Homer	1,163	1,674	12,828	14,990	8,833	254
Hoonah	126,381	134,575	122,974	127,866	120,786	124,320
Seward	165,959	163,056	136,129	132,779	136,892	125,183
Sitka	289,753	224,335	144,383	129,380	110,714	99,920
Skagway	781,676	785,034	697,060	708,981	755,681	821,874
Unalaska	709	3,398	956	707	1,371	1,285
Valdez	5,553	6,367	469	332	0	245
Whittier	220,117	212,598	126,866	130,312	170,758	202,336
Wrangell	4,002	3,842	3,869	4,719	678	6,417

Source: DCCED, 2014.

Cruise visitors bring in money to local economies through purchases they make while their cruise ship is in port, as well as through the Commercial Passenger Vessel Excise Tax (CPV). The CPV is imposed on passengers traveling on commercial passenger vessels on a voyage that lasts more than 72 hours in the state's marine waters. The CPV tax rate of \$34.50 per passenger is collected by the state, which then redistributes a portion of the tax collected to the cities and boroughs in which cruise ship port calls occur. The first seven ports of call each receive \$5 for each passenger who paid the CPV, and if the eligible ports are in cities that are located in a borough, both the city and borough receive \$2.50 for each CPV passenger fee collected. Table 9 shows the CPV tax revenues shared with eligible cities and boroughs between 2008 and 2014. Since the CPV was implanted in 2007, over \$83 million in shared revenue has been distributed to city and borough governments

**Table 9. CPV Shared Revenues by City and Borough Governments, FY 2008- FY 2014**

City/Borough	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Anchorage Municipality	0	0	865	63,575	66,190	48,570	2,975
Haines Borough	107,930	215,410	204,635	154,270	146,680	154,080	140,635
Homer (City)	0	2,898	3,725	31,788	32,688	21,710	855
Hoonah (City)	536,010	359,155	640,015	1,130,220	636,345	610,105	626,225
Juneau, City and Borough	0	0	0	0	4,096,730	4,151,020	4,547,635
Kenai Peninsula Borough	367,430	348,645	391,138	406,080	357,553	364,975	307,578
Ketchikan (City)	0	0	0	0	1,947,248	1,977,770	2,214,745
Ketchikan Gateway Borough	2,040,775	2,326,147	2,313,793	2,088,312	1,947,248	1,977,770	2,214,745
Kodiak (City)	5,102	24,778	25,487	15,762	32,622	23,473	4,600
Kodiak Island Borough	5,103	24,778	25,487	15,763	32,622	23,472	4,600
Seward (City)	367,430	345,747	387,413	374,293	324,865	343,265	306,723
Sitka, City and Borough	1,025,670	1,359,030	1,078,480	706,505	414,130	135,355	302,985
Skagway Municipality	3,717,410	3,862,970	3,904,825	3,455,540	3,470,720	3,728,105	4,011,285
Unalaska (City)	0	0	7,620	3,000	1,310	4,120	4,165
Valdez (City)	0	28,355	31,730	2,335	1,650	0	1,265
Whittier (City)	1,059,970	1,001,985	1,045,550	695,790	637,265	828,865	950,635
Wrangell, City and Borough	0	9,975	26,180	2,510	19,350	1,730	31,430

Source: DCCED, 2014.

In addition to distributing the shared CPV tax revenue, the legislature also has appropriated over \$106 million in CPV-related legislative grants to individual communities that are most impacted by cruise ship activities. These grants are typically used for repairs and upgrades to the facilities used by cruise ships.

Without the ports and harbors around the state that can accommodate and attract cruise ship calls, the revenues generated by the CPV would not exist.

## 3 Economic Impact of Port and Harbor Facilities

### 3.1 Employment

The SPHFS asked respondents to describe the employees that support their port and harbor facilities. A total of 12 ports and harbors from across the state responded to the survey, indicating that they employ an average of 125 year-round employees and 107 seasonal employees each year. Survey responses suggest that on average a single facility employs nine year-round employees and about seven part time employees. It is important to note that the employment varies significantly depending on the size, location, and number of the facilities within each port system. The majority of seasonal employees are hired during the busier summer months of April or May through September or October. Many facilities also hire a smaller number of seasonal employees during the winter months, mainly for snow removal.

The survey also asked about the average pay rates for each employment position. Based on the responses from the 12 participating facilities, we estimated that the average hourly wage is between \$22.96 and \$25.15. Respondents that managed multiple facilities tended to report higher average hourly rates than the responses received from single facility locations.

Along with direct employment, ports and harbors also facilitate a number of indirect jobs in the maritime industrial support sector, fishing industry, and construction industry. The maritime industrial support sector alone consists of more than 800 businesses scattered across the state, providing services and supplies to the vessel owners and operators that use Alaska's ports and harbors (McDowell Group, 2014).

### 3.2 Revenues and Expenses

In addition to providing employment opportunities, ports and harbors also bring in revenues from both local and outside sources that are reinjected into the economy through the purchases of services and goods needed to support port and harbor operations. Some of the most common sources of revenues are the fees charged for the use of port and harbor infrastructure such as moorage, dockage, and wharfage:

- **Moorage:** Tariff charged for mooring a vessel in a harbor; based on vessel length or stall size.
- **Dockage:** Tariff charged for "parking" at the dock; based on vessel length.
- **Wharfage:** Tariff charged for bringing cargo to/from the vessel to/from the dock; based on weight.

Many ports and harbors also generate revenue through the sale of fuel and electricity at their docks. Upland and facility leases, and transfers from local governments, commonly a distribution of sales and fish taxes, round out the top revenue sources at many of these facilities. In many communities, the harbor is the biggest economic driver. As one respondent put it, "The harbor is the main source of revenue for the City".

Table 10 shows the portion of the total annual revenue generated by moorage, dockage, wharfage, fuel and utility sales, transfers from local governments, and leases for three different facility types. Moorage, dockage, and wharfage account for over 50 percent of the average total revenue under each facility type. The portion of total revenues attributable to transfers from local governments varied drastically between respondents, with many facilities reporting that they do not receive any revenue from transfers

and others reporting that up to 35 percent of their total revenues come from transfers. Revenues from utilities and fuel sales accounted for the smallest portion of revenues across all three facility types.

**Table 10. Revenue Sources as a Portion of Total Revenues**

Facility Type	Moorage	Dockage	Wharfage	Utilities/ Fuel Sales	Transfers	Leases	Other
	% of Total Revenues						
Port Only	3.2	10.7	37.5	6.9	11.4	13.9	16.4
Harbor Only	40.0	10.6	20.0	3.3	5.8	9.5	10.9
Port & Harbor	28.8	5.5	20.0	0.2	15.7	20.2	9.6

Source: Northern Economics, Inc. SPHFS Survey data, 2016.

Table 11 shows the portion of the total average annual expenses spent on personnel, routine maintenance, major maintenance, utilities and fuel, major expenses (such as heavy equipment and machinery), and transfers of funds to local governments by facility type. These expenses represent cash flows from ports and harbors that are going back into the economy. Respondents from each facility type indicated that personnel expenses make up the largest portion of their total average annual expenses ranging from just over 30 percent of total expenses to over 50 percent of average annual expenses.

**Table 11. Expenses Sources as a Portion of Total Expenses**

Facility Type	Personnel	Routine Maintenance	Major Maintenance	Utilities/ Fuel	Major Expenses	Transfers	Other
	% of Total Expenses						
Port Only	31.5	8.3	7.5	12.1	1.1	1.7	7.4
Harbor Only	51.8	5.6	12.9	12.3	1.6	3.2	9.8
Port & Harbor	32.7	12.9	18.0	1.5	2.5	2.6	11.7

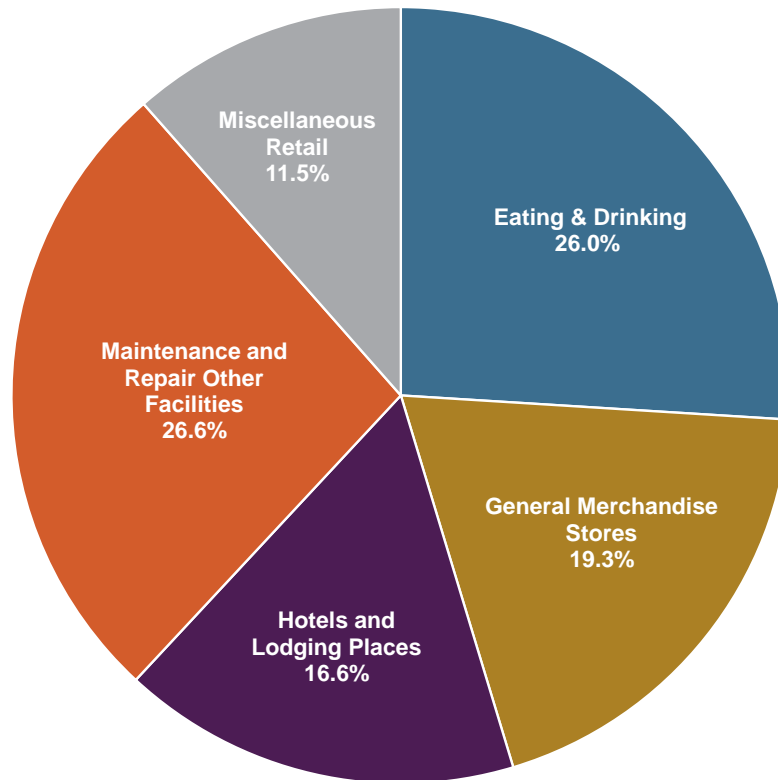
Source: Northern Economics, Inc. SPHFS Survey data, 2016.

The expenses under the personnel category are predominantly employee wages and benefits. These expenses represent cash flows that are coming from ports and harbors and going back into their respective communities through employee spending.

### 3.3 Spending

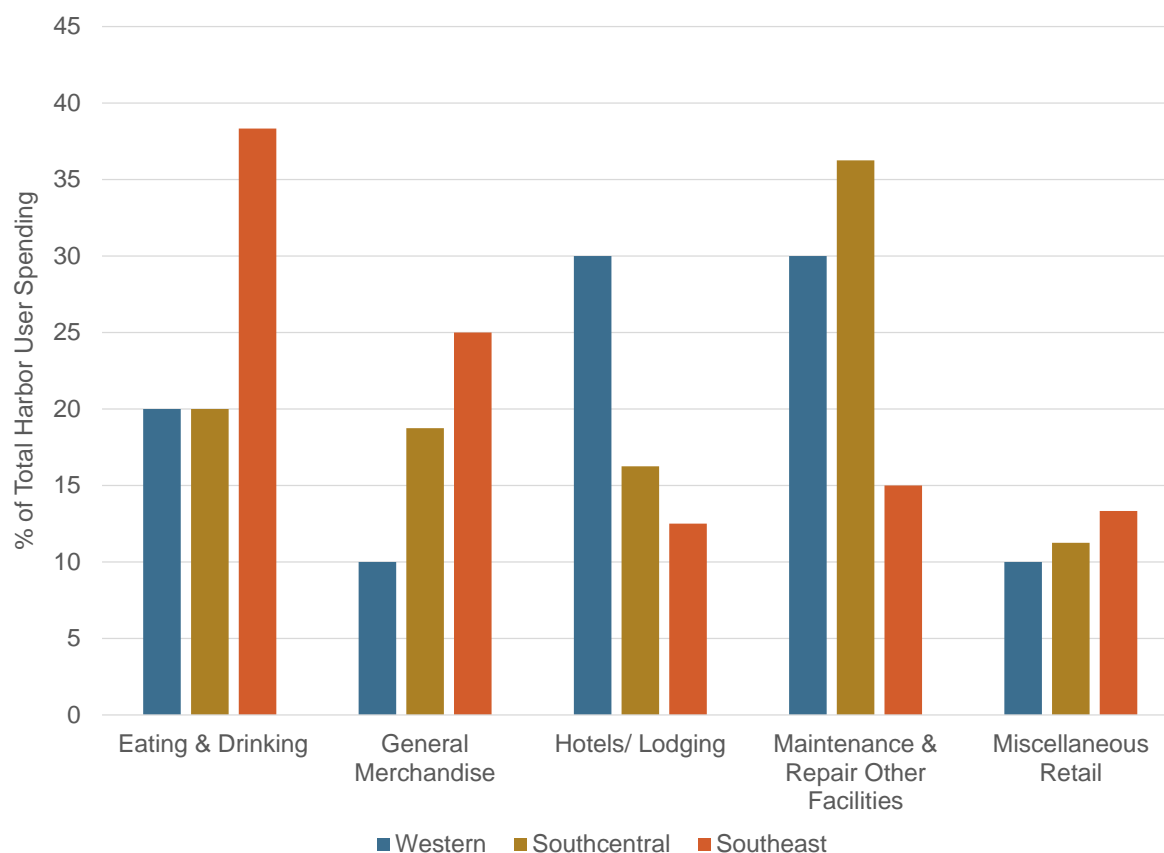
To understand all of the economic activities associated with harbors, we asked survey respondents to estimate how harbor users spend their money while they are in the harbor's community. Along with bringing revenue from outside sources into a community, a harbor also attracts users who spend money in the community outside of the harbor facility. Figure 6 shows the percent of total user spending for common categories of purchases. Together, Eating and Drinking, and Maintenance and Repairs account for over 50 percent of total harbor user spending. General Merchandise and Lodging combined make up almost 36 percent of total harbor user spending.

**Figure 6. Percentage of Harbor User Spending in Local Economy by Category**



Source: Northern Economics, Inc. SPHFS Survey data, 2016.

The distribution of harbor user spending varies between harbors in different regions of the state. Figure 7 shows the average percent of total harbor user spending by spending category in the three regions of the state from which we received survey responses. In Southeast Alaska, a greater portion of harbor users' total spending is on Eating and Drinking, and General Merchandise compared to other regions around the state. Harbor users in Western Alaska tend to spend more on Hotels and Lodging than other regions in the state and harbor users in Southcentral Alaska tend to spend more on Maintenance and Repairs.

**Figure 7. Percent of Total Harbor User Spending in Local Economy by Region**


Source: Northern Economics, Inc. SPHFS Survey data, 2016.

The injection of additional income from harbor users into the economy leads to more spending, which creates more income, which leads to more spending, and so on. This phenomenon is known as the multiplier effect. Northern Economics used IMPLAN, an economic analysis program, to estimate the multiplier effect of port and harbor expenditures at the borough level for common categories of non-labor expenditures. Using the outputs from IMPLAN and data collected through the SPHFS, Northern Economics calculated the average multiplier associated with port and harbor expenditures in the boroughs for which responses were received (Table 12).

**Table 12. Average Non-Labor Port and Harbor Expenditure Impacts by Borough/Census Area**

Borough/Census Area	Average Multiplier
Juneau, City and Borough	1.376
Kenai Peninsula Borough	1.571
Ketchikan Gateway Borough	1.458
Kodiak Island Borough	1.354
Nome Census Area	1.170
Petersburg Borough	1.292
Sitka, City and Borough	1.342
Valdez/Cordova	1.376

Source: Northern Economics, Inc. analysis from SPHFS Survey data, 2016 and IMPLAN Group LLC data.



The multipliers listed in Table 12 quantify the change in the total income compared to the injection of additional income. In other words, for every dollar spent by harbor users, there is a \$1.17 to \$1.57 change in a borough's total income.

### 3.4 Activity and Uses

Ports and harbors often play a larger role in the economy than simply being a marine access point. In many cases, a harbor is a component of much larger transportation network. The following quotes come directly from the responses we received in the SPHFS:

*We [Bethel] are a hub for 29 villages on the Kuskokwim River, 18 villages on the western coast of Alaska, and 6 villages on the Yukon River. We move 90% of all dry cargo for projects in the region.*

*Dillingham is the hub for the Nushagak drainage and serves 9 surrounding villages. ALL of the construction equipment and materials pass over our dock en route to their destination.*

Harbors also play a role in supporting marine-based industries through vessel repair, construction, storage, and crewing. Tourism activities also rely heavily on the port and harbor infrastructure around the state. Activities ranging from cruise ship calls, to charter fishing, to sightseeing and whale watching tours all bring outside money into local and state economies through tourist purchases and state and local taxes.

*Homer is also well known for vessel repair, construction, storage, and crewing*

*Ketchikan is a port of call for approximately 95% of the cruise ships that serve the Alaskan market.*

Ports and harbors also play a key role in strategic military support as well as regional marine safety plans.

*We [Anchorage] are a National Strategic Seaport, so we are responsible for supporting all US Army Alaska deployments and re-deployments. We also have supported several projects for existing North Slope oil & gas infrastructure, as well as local utility construction projects (power plants and wind turbine farms).*

## 4 References

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## 5 Appendix A: Statewide Port and Harbor Facility Survey

### Statewide Port and Harbor Facility Survey

The purpose of this survey is to collect information that can be used to document the benefits that port and harbor facilities provide to Alaska. You have received this survey because of your corporate membership in the Alaska Association of Harbormasters and Port Administrators (AAHPA).

A variety of sources provide publicly available information about our port and harbor facilities, but not all of these sources provide complete data. The purpose of this survey is to corroborate or ground truth published information, and to collect information that may not be available anywhere else.

Northern Economics is conducting this survey in support of AAHPA. The results will be used to document the benefits of ports and harbors in the state through a white paper as well as key findings and statistics that can be used in AAHPA's brochure.

We thank you in advance for your time spent collecting and providing this information. The entire survey is on a single page so that you can review the information you need and, if necessary, print out the survey form and take additional time to gather the information.

If you operate multiple types of facilities, you are welcome to submit multiple survey responses. If you do so, please provide a complete survey for the first facility. On additional facilities, please provide your name (so we can link your multiple responses) and indicate what facility the information applies to in question 6.

If you would prefer to have someone else complete the survey, please forward the survey link to them.

If there are other privately-owned port and harbor facilities in your community that you think should be documented, you are welcome to share the survey link with them. If you do so, please let us know so we can track who has received this information. Some examples of the facilities we are interested in are private docks, barge landings, cruise ship docks, and fuel docks.

If you have any questions, please contact Michelle Humphrey or Mike Fisher at Northern Economics, either by e-mail ([michelle.humphrey@norecon.com](mailto:michelle.humphrey@norecon.com) or [michael.fisher@norecon.com](mailto:michael.fisher@norecon.com)) or phone (907-274-5600).

Please complete this survey by April 7, 2016.

1. What is your name?

2. What community are you in?

3. Please specify who you represent, such as a city or borough government, or a private facility operator.

4. What is the best way to reach you if we have questions? Please provide a phone number, e-mail address, etc.

5. What facility type(s) do you manage? Please check all that apply.

☐ Port

☐ Harbor

☐ Seawall

☐ Other (please specify)

6. If you are submitting multiple responses, please give a short name or description to specify what facility this information applies to.

If this is the first survey/facility you are completing, please respond to every question. For additional surveys/facilities, only your name and information specific to each facility needs to be entered.

7. Please describe the facilities you manage (dock lengths, moorage slip/stall sizes and numbers, etc.).

8. Please describe the employees that support these facilities.

How many year-round employees do you have?

How many hours does each year-round employee work each year (on average)?

How many seasonal employees do you have?

Which months do seasonal employees work?

How many hours does each seasonal employee work each year (on average)?

The next few questions are about financial aspects of your facility. If you are a private facility operator and are not able to provide this information, please provide what you can or contact Mike or Michelle (contact info above) to discuss how we can document this information while protecting your company's information.

9. Please provide standard pay rates for each employment position. In the box below, please list each position with the standard pay (hourly rate or salary).

10. Is your facility operated as an enterprise fund or under the general fund?

☐ Enterprise Fund (or private entity)

☐ General Fund

☐ Other (please specify)

11. Please provide your facility's revenues for 2015, by category. Please enter only numbers. If you need to specify ranges or provide an explanation, please do so in the follow question.

Moorage	<input type="text"/>
Dockage	<input type="text"/>
Wharfage	<input type="text"/>
Utilities and fuel (sold to users)	<input type="text"/>
Transfers from General Fund (raw fish tax, other related taxes, other transfers)	<input type="text"/>
Other	<input type="text"/>

12. Please provide ranges or any other information about your revenues here.

13. Please provide your facility's expenses for 2015, by category. Please enter only numbers. If you need to specify ranges or provide an explanation, please do so in the follow question.

Personnel	<input type="text"/>
Routine maintenance	<input type="text"/>
Major maintenance (annual average / typical amount is okay)	<input type="text"/>
Utilities and fuel (purchased, for sale to users)	<input type="text"/>
Equipment and supplies	<input type="text"/>
Major expenses, heavy equipment, etc. (annual average / typical amount is okay)	<input type="text"/>
Transfers to the General Fund or other fund	<input type="text"/>
Other	<input type="text"/>

14. Please provide ranges or any other information about your expenses here.

15. If your facility receives dredging, please provide the dredging frequency, cost, and source of the funds.

16. Please describe capital projects planned for your facility over the next five years (2016-2020). If possible, please provide a name or simple description, a dollar amount, sources of funds (internal, debt, grants, etc.), and the year(s) in which work will take place.

If this information is provided in detail in a published document, you are welcome to e-mail it to us or send us a link where we can access it.

17. Do you have any other needs for your facility that are not currently planned, such as dredging or additional infrastructure? If so, please mention them here. If you have cost estimates, it would be helpful for you to include them.

18. Are there any planning documents or other information we should know about that are related to your capital projects? For example, are these projects part of a comprehensive plan for the community or a development plan for your facility?

If this information is provided in detail in a published document, you are welcome to e-mail it to us or send us a link where we can access it.

19. If available, please provide a list of major infrastructure assets and their value.

The easiest way to get this information is to look at the replacement value in your insurance documents, or actual costs for facilities constructed recently. If you use either of these sources, please provide the year for which they apply.

20. Please describe activities that take place in your harbor (if applicable).

For example:

What is the size of your fleet?

What types of vessels use your harbor (recreational, commercial fishing, charters, other commercial, oil spill response, U.S. Coast Guard, etc.).

What else is important for us to document about the use of your harbor?

21. If you operate a harbor facility, please estimate what percentage of your users' spending go to the following items. A rough estimate or your best guess is fine.

The reason we are asking this is to get a better understanding of the economic impact of your harbor. The Harbor Economic Impact Model contains spending estimates for different categories, but the original information is dated and primarily based on Southcentral Alaska harbors. We are asking for your estimate of these spending categories to create an average "multiplier" for harbor spending that is appropriate to your region.

Note that these items do not include insurance, mortgages, or other expenses that do not remain in the local economy. We are focused on goods and services purchased in your community.

Please enter responses totaling 100 or 100%.

Eating & Drinking

General Merchandise  
Stores

Hotels and Lodging Places

Maintenance and Repair  
Other Facilities

Miscellaneous Retail



22. Please describe activities that take place in your port (if applicable).

For example:

What types and sizes of vessels call at your dock?

How frequently do these vessels call at your dock?

How long is the typical stay?

What do vessels typically load or offload at your dock? Provide cargo types and volumes/tonnages if available.

23. Please describe any additional facilities or infrastructure present, if not included above.

For example:

Do you have publicly or privately owned cranes?

Do you have an ice house?

Do you have a cold storage facility?

Are there processing facilities that use your facilities for offloading fish or shipping processed product?

24. Please describe any other notable uses of your facilities.

For example:

Are you a major hub in your region, or a gateway to the region?

Have your facilities been used to support Outer Continental Shelf (OCS) oil and gas exploration?

Do you host oil spill response vessels or equipment?

Are your facilities used for moving in equipment and materials for major projects?

Are your facilities used for shipping out equipment and materials for major projects?

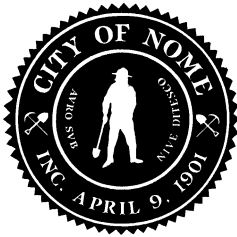
Are there plans for your facilities to be used for any major projects or other activities in the future?

25. If your facility did not exist, please describe how you think this would affect your community, region, etc.

26. In this final question, please share any other views you may have of your facility's role that we haven't asked about above.

Thank you for the time you have spent collecting and entering this information. If you have any questions, please do not hesitate to call or e-mail Michelle Humphrey or Mike Fisher at Northern Economics, either by e-mail ([michelle.humphrey@norecon.com](mailto:michelle.humphrey@norecon.com) or [michael.fisher@norecon.com](mailto:michael.fisher@norecon.com)) or phone (907-274-5600).

The results of this survey and the other work we are doing will be provided to AAHPA in the summer or fall of 2016.



## **CITY OF NOME**

City Manager's Office

P.O. Box 281

Nome, Alaska 99762

907.443.6600

tmoran@nomealaska.org

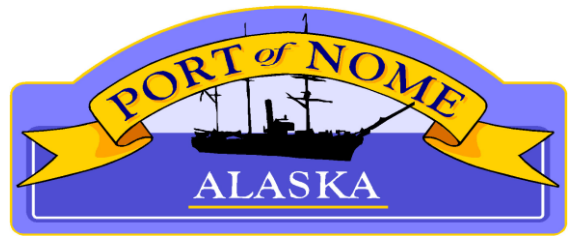
### **City Manager's Report**

**From:** Tom Moran, City Manager  
**Reporting Period:** September 27 – October 14, 2016

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- Still no new leads have turned up in the search for missing Nome resident Joseph Balderas. Even a minor clue could help break the case wide open, so if you know of anyone who knew him personally, please encourage them to talk to the State Troopers. The family is now offering a \$10,000 reward.
- Congratulations to Seiji Heck (Emergency Services Technician) for being selected as the City's Employee-of-the-Month for the month of August. Keep up the good work, Seiji!
- My thanks go out to Chip Leeper for serving as Acting City Manager from September 26<sup>th</sup> through the 30<sup>th</sup>. Thankfully, no emergent issues (like the 2011 fall storm) arose.
- Please join me in congratulating the candidates who were chosen by the voters at the October 4<sup>th</sup> Municipal Election: Jerald Brown, Wes Perkins, Chuck Wheeler, and Barb Amarok. Though the 19% turnout rate was the lowest we've ever seen, Clerk Hammond and I thank those citizens who did actually come out to the polls.
- On October 5<sup>th</sup>, I met with Nova Gold VP Ron Rimelman to discuss cleanup efforts at the "former Alaska Gold power plant" (the site to the west of the Richard Foster Building). We're both working closely with DEC to ensure that site characterization is accurate so that we can properly mitigate known contaminants.
- Also on October 5<sup>th</sup>, I met with Graphite One Resources to discuss the status of its graphite mining project. The management team is planning a "town hall meeting" in Nome at the end of November to provide an update to the public. Despite some rumors to the contrary, the project still has a green light and the deposit has been confirmed as the largest in North America.
- Mark Miller (State of Alaska Emergency Medical Services Manager) was in town on October 6<sup>th</sup> to discuss the status of our Volunteer Ambulance Department after Dr. O'Neil's departure from Norton Sound Regional Hospital. Ambulance Chief Erickson and I decided to ask Dr. Ken Zafren (State of Alaska Medical Director) to temporarily step in so that NVAD can continue operating as an ALS provider. Dr. Zafren accepted on a short term basis.
- Fall Clean-Up was held from October 10<sup>th</sup> – 14<sup>th</sup>. This was the last clean-up event until May.

- The third annual Planning and Zoning Open House was held at Old St. Joe's on Wednesday, October 12<sup>th</sup> from 4 PM until 8 PM.
- Don't forget that the Grand Opening of the Richard Foster Building will be held on the weekend of October 29<sup>th</sup> and 30<sup>th</sup>. Event schedules will be available soon.
- Congressman Don Young will be in town to campaign on October 31<sup>st</sup> and November 1<sup>st</sup>. His staff has asked us to help plan a community Halloween celebration, which will be held at Old St. Joe's on October 31<sup>st</sup> at 6 PM.
- As you all now know, there will be a run-off election for Councilman Culley's seat on Tuesday, November 1<sup>st</sup> at Old St. Joe's from 8 AM until 8 PM. The run-off will be between Councilman Culley and challenger Mark Johnson.
- The Police Department is still recruiting for a Police Officer. This is not a new position, but one that is already built into the FY17 budget.
- October baseball is upon us (but sadly the Red Sox aren't a part of it anymore), so **GO CUBS!**



# Memo

To: Tom Moran – City Manager  
From: Joy L. Baker – Port Director *JLB*  
CC: Mayor & Nome Common Council  
Nome Port Commission  
Date: 10/6/2016  
Re: Port & Harbor Report/Projects Update –October 2016

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The following provides a status update on active issues and projects pertaining to the Port & Harbor.

## **Administrative:**

With the exception of a large number of fueling vessels working at the Nome facility in September, other port activity did see a slowdown as typically occurs in the ice-free season. Ship-to-ship fuel transfers continued offshore with a few dock deliveries. Overall dock occupancy at the Causeway came in right at 60%, some of which was attributable to weather, but significant anchored traffic remained offshore throughout the month.

Docking permits for the home-ported harbor fleet have reached 121 to date for 2016, with sailboats, research vessels, and cargo vessels managing to operate within the congestion, exacerbated by poor operating weather. F17 revenue at September 30 shows we have achieved 50.5% of forecasted revenue – with just 19.4% expended.

Last week I provided a presentation at the Arctic Ambitions V Conference on increased traffic and existing operations at the Port of Nome. The event was sponsored by the World Trade Center Anchorage and focused on development in the Arctic. This was a great networking opportunity and allowed for additional exposure of the Port's maritime and uplands operating capacity and ongoing efforts in expansion.

## **Causeway:**

Arctic Deep Draft Port Study: Discussion continues with the USACE Alaska District and Headquarters regarding the ADDP Study rescoping. The Sept 14 visit by Secretary Jo-Ellen Darcy of the Army Corps of Engineers was brief but informative with City staff providing a large amount of detail and responding to questions. Recent congressional action in the passage of the Water Resources Development Act of 2016 in both the Senate and the House, as well as revised NDAA language, signifies the general consensus that there is significant need for deep water facilities in the Arctic and time is of the essence.

Middle Dock: Additional revisions to the drawings/specs of a concrete ramp extension are under review and anticipate to be priced by the contractor in the next few weeks. Once available, the information will be presented to the Port Commission for review and on to the Council for authorization to award the additional work that would not take place until June 2017. All other work on this project is complete.

West Gold Dock: Gravel operations at the West Gold Dock wrapped up on Sept 1<sup>st</sup> for the Hooper Bay and Shishmaref projects, reaching a total of 134,000 tons exported for the season. The export of materials to these project sites was an excellent boost to the wharfage revenue this season.

*USACE O&M Dredging – the annual maintenance dredging has been completed for the 2016 season, with the post-dredge survey showing all of the shoaling in the outer harbor removed, as well as a portion of the east sump to the extent of available funds. Additional material will be removed from the sump next season, while the contractor is in town clearing the harbor entrance channel.*

#### **Inner Harbor:**

Snake River Moorage Expansion – Dredging Phase II: After discussion with the Port Commission and Council, PND is finalizing the drawings/specs for dredging a portion of the Snake River as part of the Thornbush Site Development.

*Garco Building Upgrade: Staff looking into affordable ways to make improvements to this unit with new siding/roofing with insulated panels. EEIS ROM estimate was over \$500K, which exceeds budgetary limits at this time; therefore, we continue to evaluate options to reduce costs.*

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#### **Port Industrial Pad:**

##### Port Pad Development:

Drainage issues are currently being considered to avoid impacting the adjacent tank farm properties, and once complete, will be incorporated into the fill plan that is based on recent topography and also address access and SWPPP compliance. Once the SOW is final, it will be incorporated into a bid package with the plans/specs for the Snake River dredging. Completion is anticipated to be in late November – with Dec 1<sup>st</sup> bid date.

*Port Road Improvements: Periodic teleconferences with the ADOT planning team continue to occur to discuss progress on the scope of work/design based on the City's priorities for this project. Construction is scheduled for FY2018, based on STIP funding. We have requested the State provide an updated cost-share agreement and timeline.*

*West Nome Tank Farm (WNTF): The USAF is completing their final report to EPA, USACE and ADEC to reflect the environmental work done to meet federal/state requirements. The City should receive notice in spring 2017 to discuss terms with the USAF on an interim lease that will facilitate final transfer of the property.*

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#### **External Facilities:**

Seawall Erosion Repair: Orion completed the Seawall Project in early June, both ahead of schedule and 3% under budget. The as-built drawings are complete, with an elevation report in drafting. This will provide a base line for monitoring the structure for the future and will be provided to the USACE for the historical record.

##### Cape Nome:

The Cape Nome Jetty Repair Project is underway with the contractor, Knik Construction, actively sorting and stockpiling armor stone by size as per project specifications and scope of the awarded Base Bid. A sub-contractor is also performing survey work to establish a revetment template as required by Additive Alternate No 1, also part of the initial award. Final material quantities are required to be stockpiled by June 30, 2017, with rock placement anticipated to occur throughout the season.

City of Nome  
Revenues with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

		Budget	Period ACT	YTD ACT	Unearned	Pcnt
	<u>CAUSEWAY FACILITY</u>					
80.3111.2001	Causeway Dockage	75,000.00	19,668.13	73,503.39	1,496.61	98.0
80.3111.2002	Causeway Wharfage - Dry	225,000.00	24,457.16	72,731.71	152,268.29	32.3
80.3111.2003	Causeway Wharfage - Fuel	250,000.00	80,597.71	216,483.04	33,516.96	86.6
80.3111.2004	Causeway Wharfage - Gravel	300,000.00	34,981.35	198,742.42	101,257.58	66.3
80.3111.2005	Causeway Storage Rental	25,000.00	521.60	3,078.82	21,921.18	12.3
80.3111.2006	Causeway Utility Sales	25,000.00	4,244.59	30,180.09	( 5,180.09)	120.7
80.3111.2007	Causeway Misc Term Revenue	45,000.00	19,009.59	198,954.54	( 153,954.54)	442.1
	Total CAUSEWAY FACILITY	945,000.00	183,480.13	793,674.01	151,325.99	84.0
	<u>HARBOR FACILITY</u>					
80.3211.1001	Harbor Seasonal Dock Permit	130,000.00	1,747.03	88,579.05	41,420.95	68.1
80.3211.2001	Harbor Dockage	45,000.00	18,523.70	40,556.53	4,443.47	90.1
80.3211.2002	Harbor Wharfage - Dry	85,000.00	21,871.63	46,477.29	38,522.71	54.7
80.3211.2003	Harbor Wharfage - Fuel	70,000.00	27,460.35	44,295.21	25,704.79	63.3
80.3211.2004	Harbor Wharfage - Gravel	10,000.00	1,912.50	3,825.00	6,175.00	38.3
80.3211.2005	Harbor Storage Rental	40,000.00	5,733.00	13,563.99	26,436.01	33.9
80.3211.2006	Harbor Utility Sales	6,500.00	1,827.03	4,574.89	1,925.11	70.4
80.3211.2007	Harbor Misc Term Revenue	4,000.00	.00	1,600.40	2,399.60	40.0
80.3211.2008	Leases, Rentals, Land, Bldgs	102,000.00	8,563.21	69,265.97	32,734.03	67.9
	Total HARBOR FACILITY	492,500.00	87,638.45	312,738.33	179,761.67	63.5
	<u>INDUSTRIAL PARK FACILITY</u>					
80.3411.2005	Industrial Park Storage Rental	200,000.00	6,021.14	77,032.75	122,967.25	38.5
80.3411.2008	Leases, Rentals, Land, Bldgs	160,000.00	35,619.52	75,672.29	84,327.71	47.3
	Total INDUSTRIAL PARK FACILITY	360,000.00	41,640.66	152,705.04	207,294.96	42.4
	<u>OTHER MISC REVENUE</u>					
80.3511.0001	Copies, Fax, Publications	.00	.00	4.00	( 4.00)	.0
80.3511.0002	Banking / NSF Check Fee	.00	15.00	16.00	( 16.00)	.0
80.3511.0003	Credit Card Service Fees	.00	149.04	194.25	( 194.25)	.0
80.3511.0004	Resale-Hats,Charts,Spills,Appl	5,000.00	239.00	1,014.25	3,985.75	20.3
80.3511.0005	Other Port Revenue	75,000.00	.00	.00	75,000.00	.0
	Total OTHER MISC REVENUE	80,000.00	403.04	1,228.50	78,771.50	1.5

City of Nome  
Revenues with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

		Budget	Period ACT	YTD ACT	Unearned	Pcnt
	<u>INTEREST EARNINGS</u>					
80.3611.2001	Interest Earnings Port Op	5,500.00	321.11	717.64	4,782.36	13.1
80.3611.2002	Interest Earnings Causeway	5,000.00	524.88	926.46	4,073.54	18.5
80.3611.2003	Investment Earnings	.00	.00	4,536.40	( 4,536.40)	.0
	Total INTEREST EARNINGS	10,500.00	845.99	6,180.50	4,319.50	58.9
	Total Fund Revenue	1,888,000.00	314,008.27	1,266,526.38	621,473.62	67.1



City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

	Budget	Period ACT	YTD ACT	YTD ENC	Unexpended	Pcnt
** CAUSEWAY FACILITY **						
80.6111.1101 Salaries - Causeway Maint	19,433.00	189.70	515.93	.00	18,917.07	2.7
80.6111.1102 Salaries - Causeway Operations	26,700.00	2,980.58	10,069.51	.00	16,630.49	37.7
80.6111.1103 Salaries - Causeway Admin	46,730.00	.00	.00	.00	46,730.00	.0
80.6111.1411 Accrued Personal Leave - Cswy	1,404.00	.00	.00	.00	1,404.00	.0
80.6111.1421 Health Insurance - Cswy	10,309.00	1,052.17	3,257.48	.00	7,051.52	31.6
80.6111.1431 Life Insurance - Cswy	112.00	11.85	36.74	.00	75.26	32.8
80.6111.1441 FICA/Medicare - Cswy	6,930.00	242.54	809.81	.00	6,120.19	11.7
80.6111.1461 PERS - Cswy	14,048.00	697.51	2,339.39	.00	11,708.61	16.7
80.6111.1471 Workers' Comp Ins - Cswy	2,417.00	.00	.00	.00	2,417.00	.0
80.6111.1530 Property/Building Insurance	29,071.00	.00	28,437.50	.00	633.50	97.8
80.6111.1803 Prof Svcs - Middle Dock	1,500.00	.00	.00	.00	1,500.00	.0
80.6111.1804 Prof Svcs - Arctic Deep Draft	1,500.00	.00	.00	.00	1,500.00	.0
80.6111.1810 Audit/Accounting	17,500.00	.00	.00	.00	17,500.00	.0
80.6111.1820 Engineering/Architectural Svcs	75,000.00	.00	.00	.00	75,000.00	.0
80.6111.1830 Legal Services	500.00	.00	.00	.00	500.00	.0
80.6111.1870 Other Professional/Contract Sv	.00	.00	.00	500.00	( 500.00)	.0
80.6111.2010 Communications	1,500.00	169.20	871.05	.00	628.95	58.1
80.6111.2012 Computer Network/Hardware/Soft	500.00	.00	.00	.00	500.00	.0
80.6111.2071 Operating & Repair Supplies	5,000.00	83.37	1,074.79	5.99	3,919.22	21.6
80.6111.4010 Gas & Oil Supplies	.00	.00	104.71	27.68	( 132.39)	.0
80.6111.4020 Vehicle/Boat/Eq Parts & Supply	1,000.00	.00	.00	.00	1,000.00	.0
80.6111.4030 Vehicle/Boat/Eq Maintenance	1,500.00	.00	.00	.00	1,500.00	.0
80.6111.4050 Small Tools & Equipment	2,500.00	.00	.00	.00	2,500.00	.0
80.6111.4060 Tools & Eq Repair & Maint	500.00	.00	.00	.00	500.00	.0
80.6111.4080 Road Maintenance Materials	10,000.00	.00	744.03	.00	9,255.97	7.4
80.6111.4090 Docks & Foundations	15,000.00	.00	.00	.00	15,000.00	.0
80.6111.4100 Fuel Lines Maintenance	50,000.00	.00	.00	2,835.50	47,164.50	5.7
80.6111.7005 Building Maintenance Contracts	100.00	.00	.00	.00	100.00	.0
80.6111.7010 Bldg Maint Materials & Supply	150.00	.00	929.00	.00	( 779.00)	619.3
80.6111.7021 Utilities - Electric	2,000.00	273.43	502.72	.00	1,497.28	25.1
80.6111.7023 Utilities - Sewer	4,000.00	.00	500.00	750.00	2,750.00	31.3
80.6111.7024 Utilities - Garbage	5,000.00	490.93	1,617.43	.00	3,382.57	32.4
80.6111.7026 Utilities - Resale	2,500.00	6,124.02	7,176.55	.00	( 4,676.55)	287.1
80.6111.7510 Debt Interest Payment	158,000.00	.00	24,118.48	.00	133,881.52	15.3
80.6111.8030 Machinery & Equipment	5,000.00	.00	.00	.00	5,000.00	.0
Total ** CAUSEWAY FACILITY **	517,404.00	12,315.30	83,105.12	4,119.17	430,179.71	16.9

City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

	Budget	Period ACT	YTD ACT	YTD ENC	Unexpended	Pcnt
<u>** HARBOR FACILITY **</u>						
80.6211.1101 Salaries - Harbor	19,433.00	.00	459.49	.00	18,973.51	2.4
80.6211.1411 Accrued Personal Lv - Harbor	1,254.00	.00	.00	.00	1,254.00	.0
80.6211.1421 Health Insurance - Harbor	4,873.00	42.68	1,065.37	.00	3,807.63	21.9
80.6211.1431 Life Insurance - Harbor	46.00	.75	15.81	.00	30.19	34.4
80.6211.1441 FICA/Medicare - Harbor	1,691.00	103.35	425.39	.00	1,265.61	25.2
80.6211.1461 PERS - Harbor	4,662.00	297.13	1,223.26	.00	3,438.74	26.2
80.6211.1471 Workers' Comp Ins - Harbor	1,958.00	.00	.00	.00	1,958.00	.0
80.6211.1530 Property/Building Insurance	17,740.00	.00	20,964.50	.00	( 3,224.50)	118.2
80.6211.1803 Prof Svcs - Snake River	15,000.00	.00	.00	.00	15,000.00	.0
80.6211.1807 Prof Svcs - Seawall Repairs	10,000.00	.00	.00	.00	10,000.00	.0
80.6211.1820 Engineering/Architectural Svcs	30,000.00	289.75	412.00	.00	29,588.00	1.4
80.6211.2010 Communications	650.00	56.40	169.00	.00	481.00	26.0
80.6211.2071 Operating & Repair Supplies	10,000.00	83.37	983.37	.00	9,016.63	9.8
80.6211.4010 Gas & Oil Supplies	.00	.00	104.71	27.68	( 132.39)	.0
80.6211.4020 Vehicle/Boat/Eq Parts & Supply	1,500.00	.00	.00	.00	1,500.00	.0
80.6211.4030 Vehicle/Boat/Eq Maintenance	1,500.00	.00	.00	.00	1,500.00	.0
80.6211.4050 Small Tools & Equipment	3,500.00	.00	.00	.00	3,500.00	.0
80.6211.4080 Road Maintenance Materials	2,000.00	.00	.00	.00	2,000.00	.0
80.6211.4090 Docks & Foundations	10,000.00	.00	.00	.00	10,000.00	.0
80.6211.7010 Bldg Maint Materials & Supply	2,000.00	1,350.58	5,100.92	.00	( 3,100.92)	255.1
80.6211.7021 Utilities - Electric	4,000.00	311.28	704.05	.00	3,295.95	17.6
80.6211.7022 Utilities - Water Meter	3,800.00	308.91	811.67	.00	2,988.33	21.4
80.6211.7023 Utilities - Sewer	3,500.00	67.66	1,872.98	1,940.00	( 312.98)	108.9
80.6211.7024 Utilities - Garbage	15,000.00	3,436.51	11,322.01	.00	3,677.99	75.5
80.6211.7025 Utilities - Heat	3,000.00	.00	.00	.00	3,000.00	.0
80.6211.7560 Payment in Lieu of Tax	21,000.00	.00	.00	.00	21,000.00	.0
80.6211.8010 Land/Buildings	15,000.00	.00	.00	.00	15,000.00	.0
80.6211.8030 Machinery & Equipment	15,000.00	.00	.00	.00	15,000.00	.0
Total ** HARBOR FACILITY **	218,107.00	6,348.37	45,634.53	1,967.68	170,504.79	21.8

City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

		<u>Budget</u>	<u>Period ACT</u>	<u>YTD ACT</u>	<u>YTD ENC</u>	<u>Unexpended</u>	<u>Pcnt</u>
	<u>** CAPE NOME FACILITY **</u>						
80.6311.1820	Engineering/Architectural Svcs	10,000.00	.00	.00	.00	10,000.00	.0
	Total ** CAPE NOME FACILITY **	10,000.00	.00	.00	.00	10,000.00	.0

City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

	Budget	Period ACT	YTD ACT	YTD ENC	Unexpended	Pcnt
** INDUST PARK FACILITY **						
80.6411.1101 Salaries - Industrial Park	19,433.00	189.70	189.70	.00	19,243.30	1.0
80.6411.1411 Accrued Personal Leave - IP	1,254.00	.00	.00	.00	1,254.00	.0
80.6411.1421 Health Insurance - IP	4,873.00	.00	.00	.00	4,873.00	.0
80.6411.1431 Life Insurance - IP	46.00	.00	.00	.00	46.00	.0
80.6411.1441 FICA/Medicare - IP	1,691.00	14.52	14.52	.00	1,676.48	.9
80.6411.1461 PERS - IP	4,662.00	41.77	41.77	.00	4,620.23	.9
80.6411.1471 Workers' Comp Ins - IP	1,958.00	.00	.00	.00	1,958.00	.0
80.6411.1530 Property/Building Insurance	657.00	.00	610.00	.00	47.00	92.9
80.6411.1820 Engineering/Architectural Svcs	50,000.00	.00	.00	41,245.00	8,755.00	82.5
80.6411.1870 Other Professional/Contract Sv	.00	( 1,080.00)	500.00	.00	( 500.00)	.0
80.6411.2071 Operating & Repair Supplies	.00	83.37	409.94	.00	( 409.94)	.0
80.6411.4050 Small Tools & Equipment	500.00	.00	.00	.00	500.00	.0
80.6411.4080 Road Maintenance Materials	25,000.00	.00	.00	.00	25,000.00	.0
80.6411.4100 Fuel Lines Maintenance	15,000.00	.00	.00	2,835.50	12,164.50	18.9
80.6411.7010 Bldg Maint Materials & Supply	20,000.00	.00	.00	.00	20,000.00	.0
80.6411.7020 Utilities	2,200.00	.00	.00	.00	2,200.00	.0
80.6411.7021 Utilities - Electric	3,500.00	283.88	716.98	.00	2,783.02	20.5
80.6411.7023 Utilities - Sewer	.00	.00	500.00	750.00	( 1,250.00)	.0
80.6411.7560 Payment in Lieu of Taxes	20,000.00	.00	.00	.00	20,000.00	.0
Total ** INDUST PARK FACILITY **	170,774.00	( 466.76)	2,982.91	44,830.50	122,960.59	28.0

City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

PORT OPERATING FUND

	Budget	Period ACT	YTD ACT	YTD ENC	Unexpended	Pcnt
<u>** PORT ADMIN OFFICE **</u>						
80.6711.1101 Salaries - Port Admin	137,273.00	6,413.00	21,554.00	.00	115,719.00	15.7
80.6711.1102 Salaries - Port Staff	160,901.00	25,729.06	66,395.47	.00	94,505.53	41.3
80.6711.1201 Salaries - Overtime	9,500.00	2,227.90	12,963.70	.00	( 3,463.70)	136.5
80.6711.1301 Stipends - Port Commission	3,360.00	280.00	840.00	.00	2,520.00	25.0
80.6711.1411 Accrued Personal Lv - Port Adm	5,778.00	.00	.00	.00	5,778.00	.0
80.6711.1421 Health Insurance - Port Adm	34,512.00	2,572.76	11,209.66	.00	23,302.34	32.5
80.6711.1431 Life Insurance - Port Adm	397.00	22.88	110.31	.00	286.69	27.8
80.6711.1441 FICA/Medicare - Port Adm	21,501.00	2,629.31	7,719.80	.00	13,781.20	35.9
80.6711.1461 PERS - Port Adm	58,015.00	4,312.43	11,032.01	.00	46,982.99	19.0
80.6711.1471 Workers' Comp Ins - Port Adm	8,925.00	( 3,969.10)	5,210.19	.00	3,714.81	58.4
80.6711.1520 Vehicle/Boat Insurance	3,300.00	.00	3,807.00	.00	( 507.00)	115.4
80.6711.1530 Property/Building Insurance	200.00	.00	181.00	.00	19.00	90.5
80.6711.1810 Audit/Accounting	17,500.00	.00	.00	.00	17,500.00	.0
80.6711.1820 Engineering/Architectural Svcs	.00	.00	92.50	.00	( 92.50)	.0
80.6711.1830 Legal Services	.00	.00	202.50	.00	( 202.50)	.0
80.6711.1850 Lobbying	102,500.00	.00	6,219.34	21,500.00	74,780.66	27.0
80.6711.1870 Other Professional/Contract Sv	40,000.00	1,051.22	3,817.41	10,324.00	25,858.59	35.4
80.6711.1940 Advertising	10,000.00	.00	.00	.00	10,000.00	.0
80.6711.2010 Communications	3,500.00	86.82	701.97	.00	2,798.03	20.1
80.6711.2012 Computer Network/Hardware/Soft	9,000.00	959.00	1,230.00	.00	7,770.00	13.7
80.6711.2020 Dues & Memberships	250.00	.00	185.00	.00	65.00	74.0
80.6711.2030 Travel, Training & Related Cost	20,000.00	2,566.62	5,478.88	5,797.42	8,723.70	56.4
80.6711.2070 Office Supplies	.00	.00	779.00	213.04	( 992.04)	.0
80.6711.2071 Operating & Repair Supplies	5,000.00	59.23	729.79	430.79	3,839.42	23.2
80.6711.2073 Resale Supplies	5,000.00	.00	4,786.65	.00	213.35	95.7
80.6711.4010 Gas & Oil Supplies	2,500.00	.00	1,881.20	.00	618.80	75.3
80.6711.4020 Vehicle/Boat/Eq Parts & Supply	4,160.00	.00	119.74	500.00	3,540.26	14.9
80.6711.4030 Vehicle/Boat/Eq Maintenance	5,000.00	.00	.00	.00	5,000.00	.0
80.6711.4040 Vehicle/Boat Regis & Permits	40.00	.00	10.00	.00	30.00	25.0
80.6711.7010 Bldg Maint Materials & Supply	.00	386.77	5,150.64	1,100.00	( 6,250.64)	.0
80.6711.7011 Janitorial Services & Supplies	.00	22.59	109.54	.00	( 109.54)	.0
80.6711.7540 Banking/Credit Card Fees	.00	.00	23.99	.00	( 23.99)	.0
80.6711.8820 Transfer Out - Other Funds	45,000.00	.00	.00	.00	45,000.00	.0
Total ** PORT ADMIN OFFICE **	713,112.00	45,350.49	172,541.29	39,865.25	500,705.46	29.8

City of Nome  
Expenditures with Comparison to Budget  
For the 3 Months Ending September 30, 2016

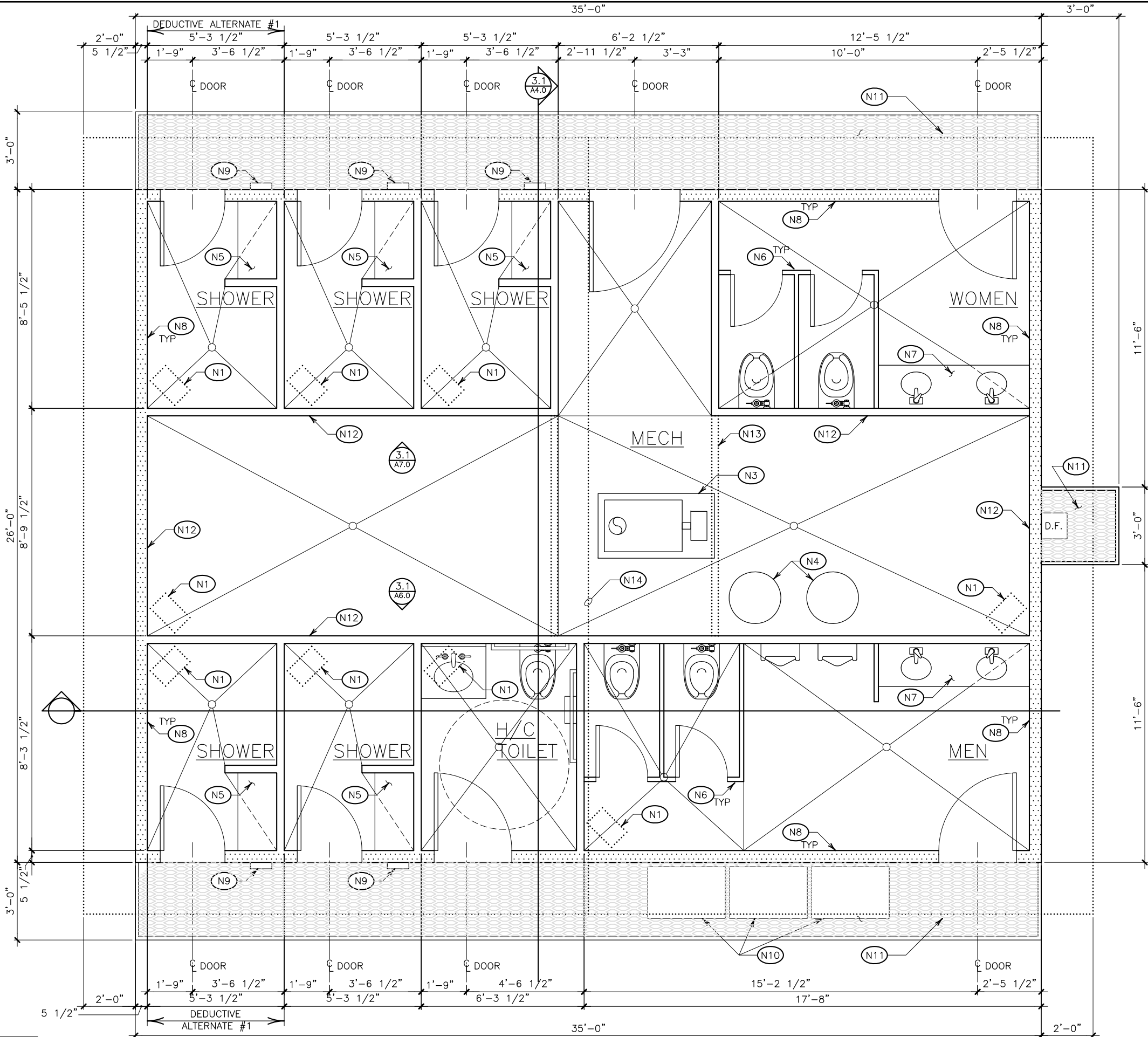
PORT OPERATING FUND

		<u>Budget</u>	<u>Period ACT</u>	<u>YTD ACT</u>	<u>YTD ENC</u>	<u>Unexpended</u>	<u>Pcnt</u>
	<u>Department 6911</u>						
80.6911.9700	Contingency	258,603.00	.00	.00	.00	258,603.00	.0
	Total Department 6911	258,603.00	.00	.00	.00	258,603.00	.0
	Total Fund Expenditures	1,888,000.00	63,547.40	304,263.85	90,782.60	1,492,953.55	20.9
	Net Revenue Over Expenditures	.00	250,460.87	962,262.53	( 90,782.60)	( 871,479.93)	.0

NOTES (FOR THIS PLAN)

- INDICATES 2X6 FRAMED WALL  
- FRP OVER 1/2" CEMENT BOARD IN WET  
AREAS - OTHERWISE 5/8" GYP BOARD
- INDICATES 3-1/2" METAL STUD WALL  
- 3-1/2" METAL STUDS AT 16" O.C.  
- FRP OVER 1/2" CEMENT BOARD IN WET  
AREAS - OTHERWISE 5/8" GYP BOARD

- N1 FAN COIL UNIT WITH WIRE CAGE  
N2 SAND TRAP FOR GREY WATER  
N3 BOILER  
N4 WATER MAKER  
N5 BENCH - CLEAR 2X6'S - URETHANE FINISH  
N6 TOILET PARTITIONS - METAL  
N7 LAMINATED PLASTIC PRE FORMED TOP WITH ENAMELED  
STEEL SINKS  
N8 FRP - ALL WET AREAS  
N9 COIN-OP MACHINE  
N10 VENDING MACHINE (NIC)  
N11 PPT WOOD FRAME WITH GRIP-STRUT FULL WIDTH  
N12 GYPSUM BOARD  
N13 GLU-LAM BEAM  
N14 RIDGE LINE



3.1 FLOOR PLAN  
PLAN01 (24) A

Scale  
0 1' 2'

EEIS File: A1-0.DWG Date: 07-Jun-2000 14:17:16

ELEVATIONS

DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

revisions  
preliminary  
released for  
review  
release date  
5-24-00  
sheet

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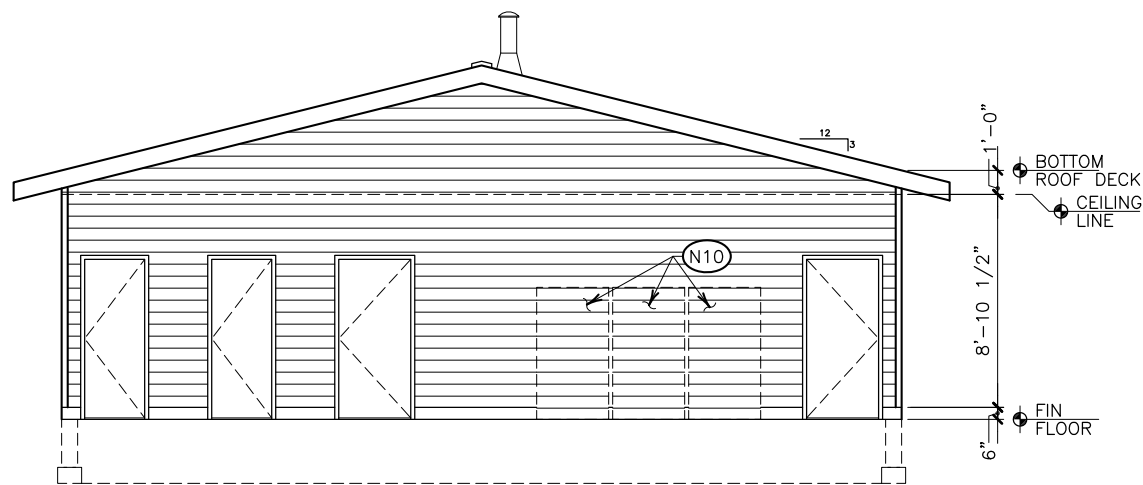
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P.O. Box 92169 Anchorage, Alaska 99509-2169 (907)268-3231

1.1

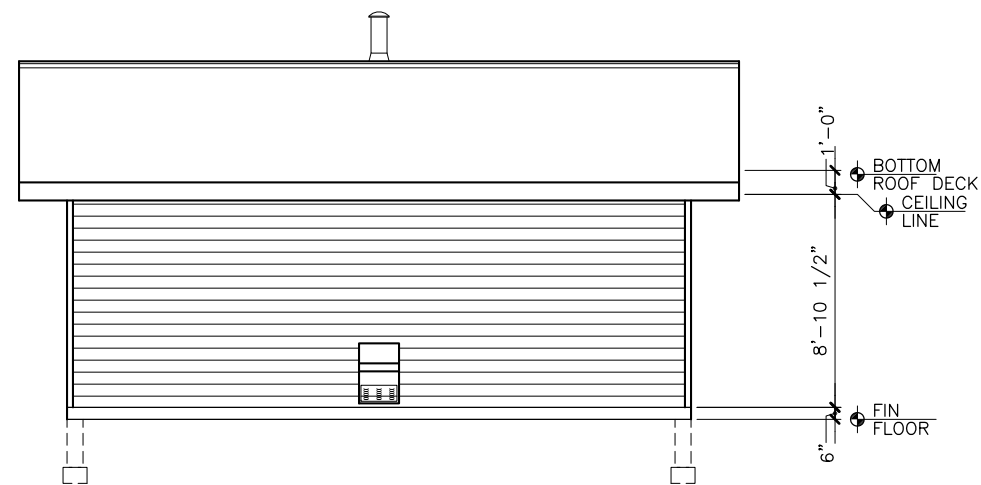
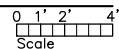
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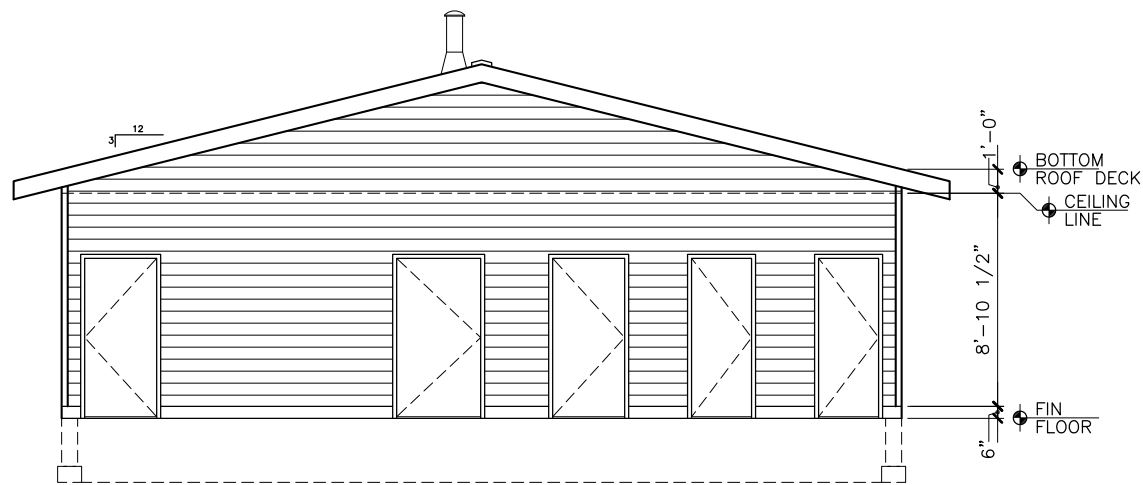
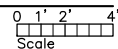
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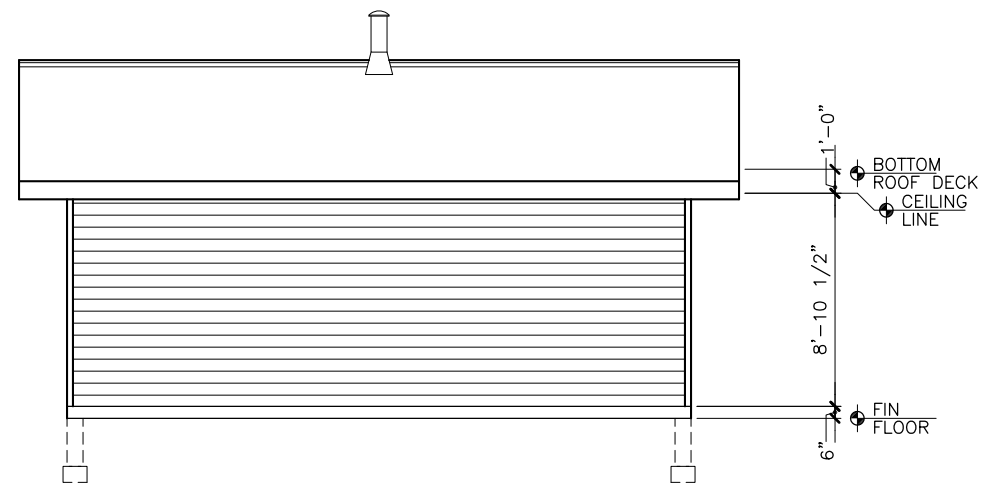
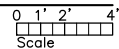
2.1 FRONT ELEVATION  
ELV01 (48) A



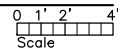
2.3 RIGHT ELEVATION  
ELVA (48) A



3.1 REAR ELEVATION  
ELV02 (48) A



3.3 LEFT ELEVATION  
ELVB (48) A



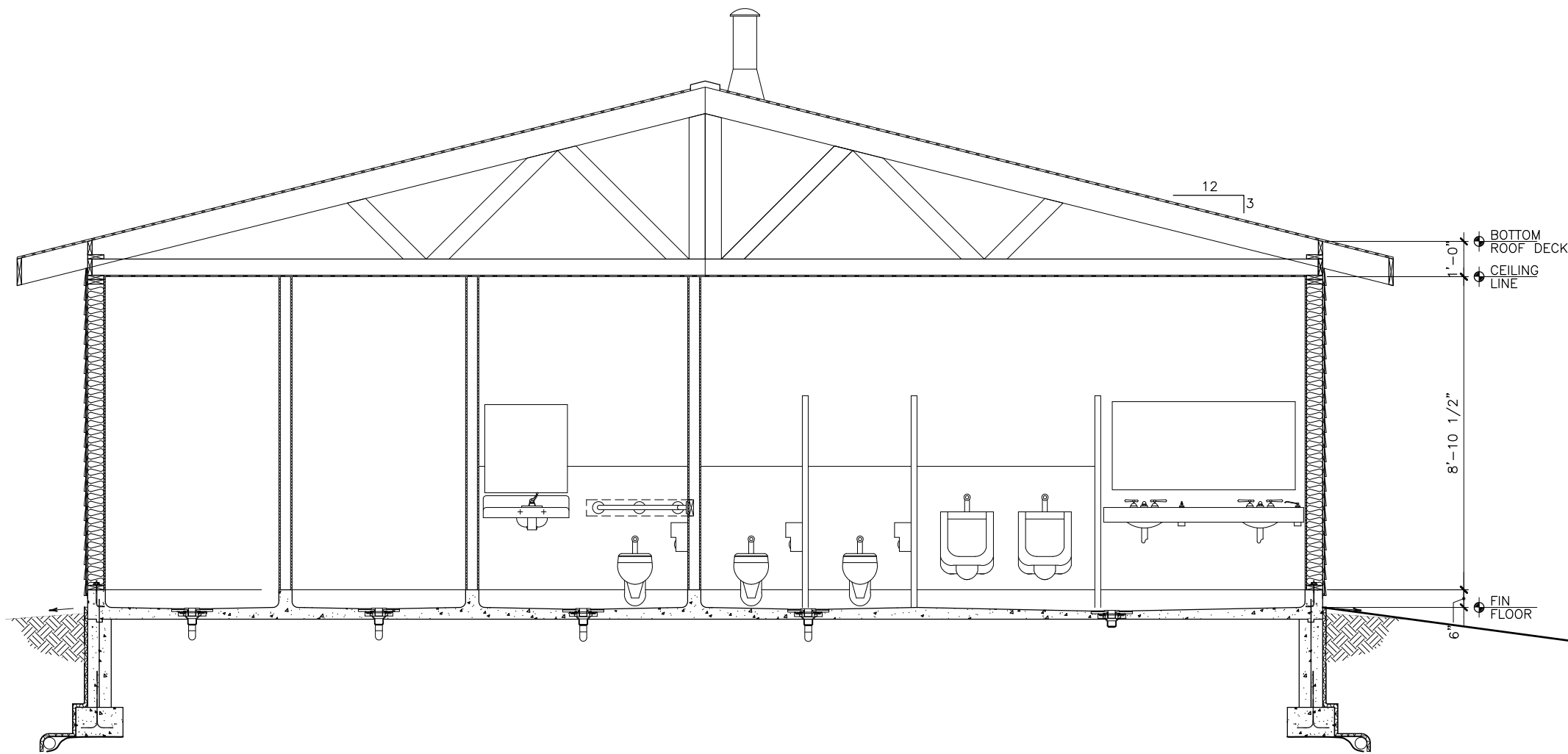


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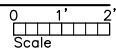
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3.1 SECTION THRU BATH HOUSE  
SCT01 (24) A



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SECTIONS

DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

revisions  
preliminary  
released for  
review

release date  
5-24-00

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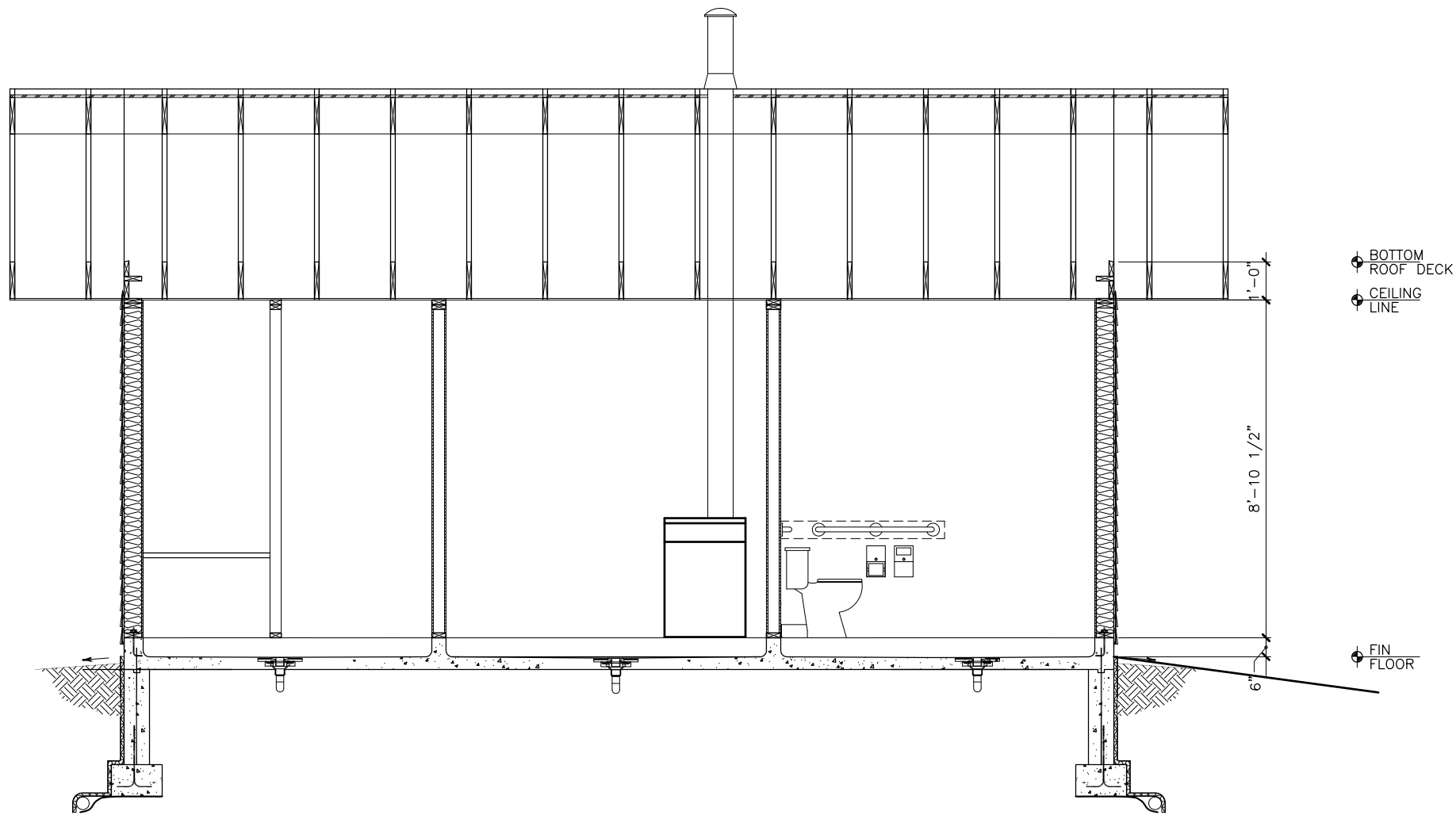
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P.O. Box 92169 Anchorage, Alaska 99509-2169 (907)258-3231

1.1

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1.3

1.4



3.1 SECTION THRU BATH HOUSE  
SCT02 (24) A

0 1' 2'  
Scale

EEIS File: A4-0.DWG Date: 07-Jun-2000 14:16:02

SECTIONS

DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

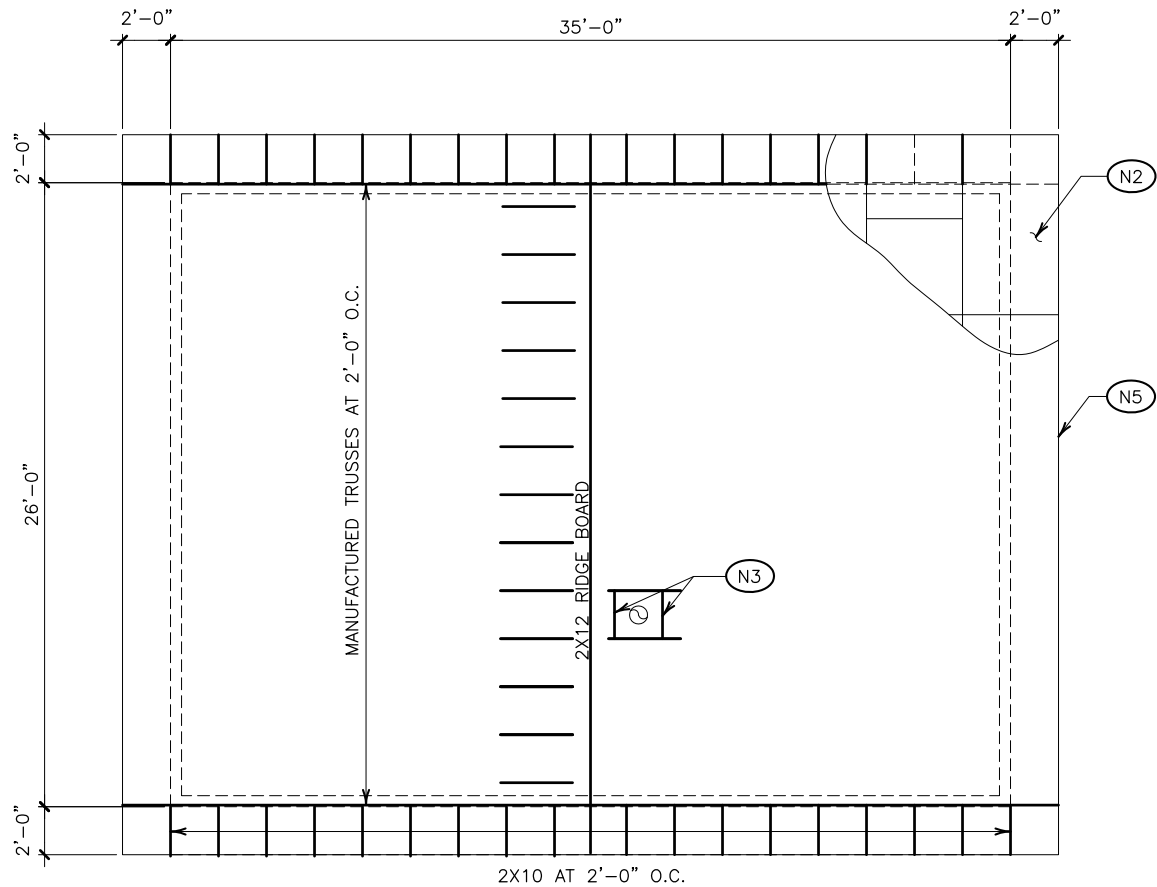
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preliminary  
released for  
review  
release date  
5-24-00  
sheet

A4.0

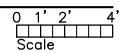
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NOTES (FOR THIS PLAN)

- N1 6X10 HEADERS OVER WINDOWS AND DOOR UNLESS NOTED OTHERWISE
- N2 TYPICAL PLYWOOD PATTERN
- N3 FRAME AROUND OPENING FOR FLUE AT CEILING AND ROOF. INSTALL WEB STIFFENERS IN JOISTS AND FRAME.
- N4 2X10 FACIA
- N5 GABLE FACIA – 2X4 AND 2X12
- N6 SIMPSON A35



3.1 ROOF FRAMING PLAN  
DILLINRP (48) A



1.3

1.4

2.3

2.4

3.3

3.4

EEIS File: A5-0.DWG Date: 07-Jun-2000 14:16:18

SECTIONS

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preliminary
released for review
release date
5-24-00
sheet

A5.0

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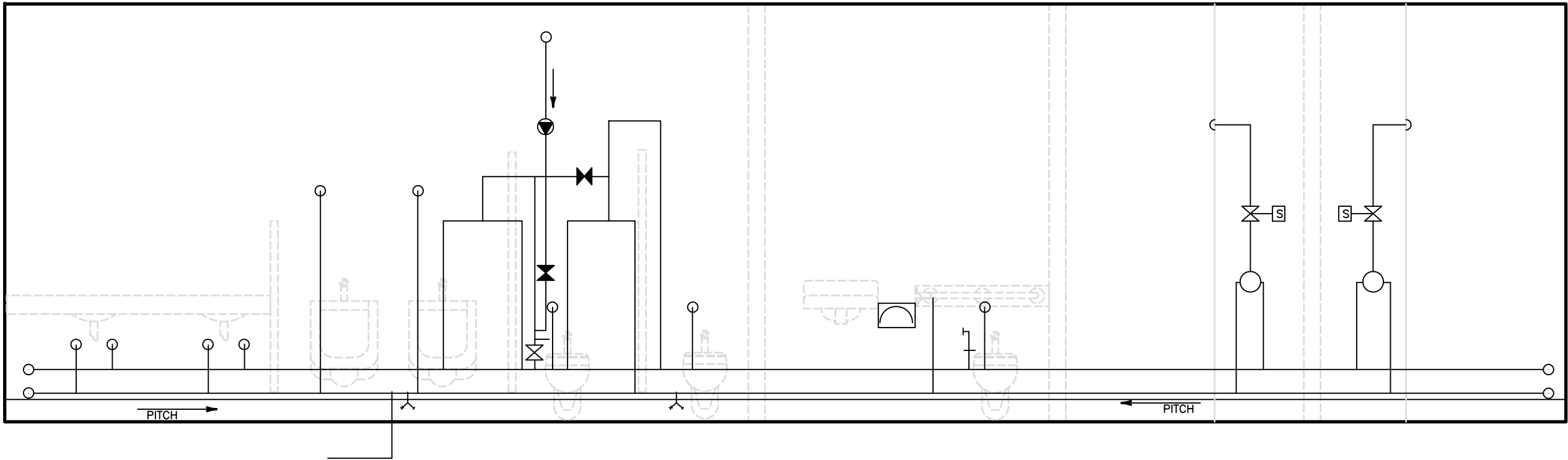
DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

1.1

1.2

1.3

1.4



3.1 ELEVATION IN MECHANICAL ROOM  
MECHLV1 (16) A

0 8" 1'-4"  
Scale 12"

EEIS File: A6-OR14.DWG Date: 19-Jun-2000 14:25:15

MECHANICAL ELEVATIONS

DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

revisions  
PRELIMINARY  
released for  
REVIEW  
release date  
5-24-00  
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ENGINEERS, INC.  
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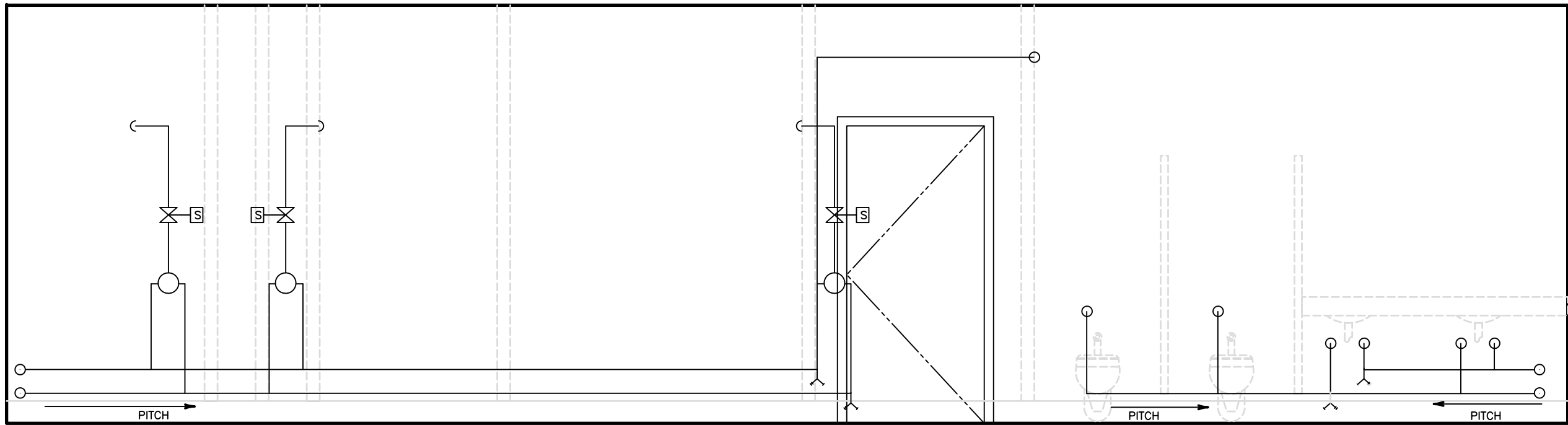
PROGRESS  
PRINT

1.1

1.2

1.3

1.4



CEILING LINE

FLOOR

3.1 ELEVATION IN MECHANICAL ROOM  
MECHELV2 (16) A

0 8" 1'-4"  
Scale 12"

EEIS File: A7-OR14.DWG Date: 19-Jun-2000 14:24:19

MECHANICAL ELEVATIONS

DILLINGHAM BATH HOUSE  
DILLINGHAM, ALASKA  
EEIS PROJECT #200013.BG1

revisions  
PRELIMINARY  
released for  
REVIEW  
release date  
5-24-00  
sheet

A7.0

PROGRESS  
PRINT

EEIS CONSULTING  
ENGINEERS, INC.  
P.O. Box 92169 Anchorage, Alaska 99509-2169 (907)266-3231

Mrs. Joy Baker  
PO Box 281  
City of Nome  
Nome, Alaska 99762

September 23, 2016

Re: Nome Inner Harbor *Low Ramp* Anchors

PND 16A-150

Dear Mrs. Baker,

PND Engineers, Inc., (PND) is pleased to submit this proposal in response to the request by the City of Nome (City) to provide schematic level design, and ROM costs for anchors to be located upland of the concrete low ramp.

### Background

The following is some of the information that I found while doing research for this proposal. It appears that one of the larger boats to be pulled out is the Jay Cashman which is 600 tons. The current ramp is at a 12% grade. The theoretical pull for 600 tons would be about 75 tons. To pull it up the ramp they reportedly used a Cat 349, which has a drawbar pull of 37 tons, and a D8, which appears to have 75 ton capacity. This would total about 112 tons lateral pulling capacity.



Photo - The Jay Cashman being pulled up the Low Ramp, photo courtesy Earl Brock



With the load levels we are at we would recommend providing multiple anchors which should allow a reduction in the load demand on any individual anchor, provide redundancy and allow better control and redirection of the load where required.

## Options

The most viable options for this anchor appear to be:

### 1. Construct a dead-man

Because we are limited to a depth of about 10 feet due to the water table depth we are somewhat restricted in capacity for a constructed, dug-in, dead-man which would require a wider effective width than a pile solution to achieve the same capacity. A dead man would be constructed by digging a trench down to the water table and installing a dead man and then burying it. The dead man could be a cast-in place concrete wall or constructed of left over z-pile or pipe pile. A bottom sill beam may be included to both increase the capacity as well as prevent frost jacking. For the steel solutions we would likely need a horizontal cap beam to distribute forces to a pad-eye or other connection.

### 2. Drive piles

Piles could be driven to achieve the required capacity and they are not limited by the water table. However pile driving would incur the expense of mobilizing a pile driving hammer to the site. Piles could be Z-sheet or pipe pile. A horizontal wale beam or cap would be required to distribute the loads to a pad-eye or other connection.

### 3. Install drilled in anchors

A drilled in anchor could take the form of several drilled in helical anchors that would be connected to a common cap constructed of cast-in place concrete or prefabricated steel, that would include a pad-eye or other connection. The anchors could be shipped in or flown in depending upon the timing of the project. The installation drill could be flown in and installed on a local piece of equipment rented for the job. There are a number of manufacturers of these anchors and there are several contractors in state that could perform this work. An advantage of these anchors is that they can be removed and moved to a new location if necessary.

## Scope

With this background and list of viable options we have prepared an anticipated scope:

1. PND will provide concept level design and ROM cost estimate for two of the options recommended by the City of Nome with a short letter report.
2. PND will develop final design drawings, technical specifications and a ROM cost estimate adequate for bidding purposes. Drawings will include:
  - a. Plan locations and details of the anchors, caps and a preferred connection,
  - b. A new grading plan and profile providing a larger vertical curve between the concrete ramp and the upland staging area.
3. PND can provide bidding assistance, submittal reviews, inspections and other Construction Assistance on a T&M basis.

## Assumptions

It is assumed that the City of Nome will:

1. Determine the preferred solution to be progressed for final design,
2. Continue to assist PND in further defining the intended ships or barges these anchors will be designed for,
3. Assist in determining what preferred connection is best suited for their users,
4. Assist in defining what materials may be available in Nome for repurposing.

Further it is assumed that:

1. The existing grades have not changed substantively since the 2013 high ramp design (see attached),
2. The grades were constructed according to the plan,
3. No new design surveying will be required,
4. No utility work or other site work will be required of PND.

If the grading was not performed according to plan or has changed since the original design we will need to acquire additional survey, which is not currently included in the fee proposal or schedule.

This work does not currently include review of the loads on the ramp and their effects or any modifications to the ramp. It does not currently provide any rigging or other elements beyond the preferred connection point.

## Schedule

Stamped drawings will be provided within 4 weeks following NTP and receipt of information required for finalizing the design.

## Fee

PND proposes to provide the design scope described above for a **Fixed Fee of \$18,500**. Any additional services can either be negotiated or provided on a Time and Material basis.

If you have any questions or comments please contact myself or Bryan Hudson.  
Thank you for considering PND Engineers for this work.

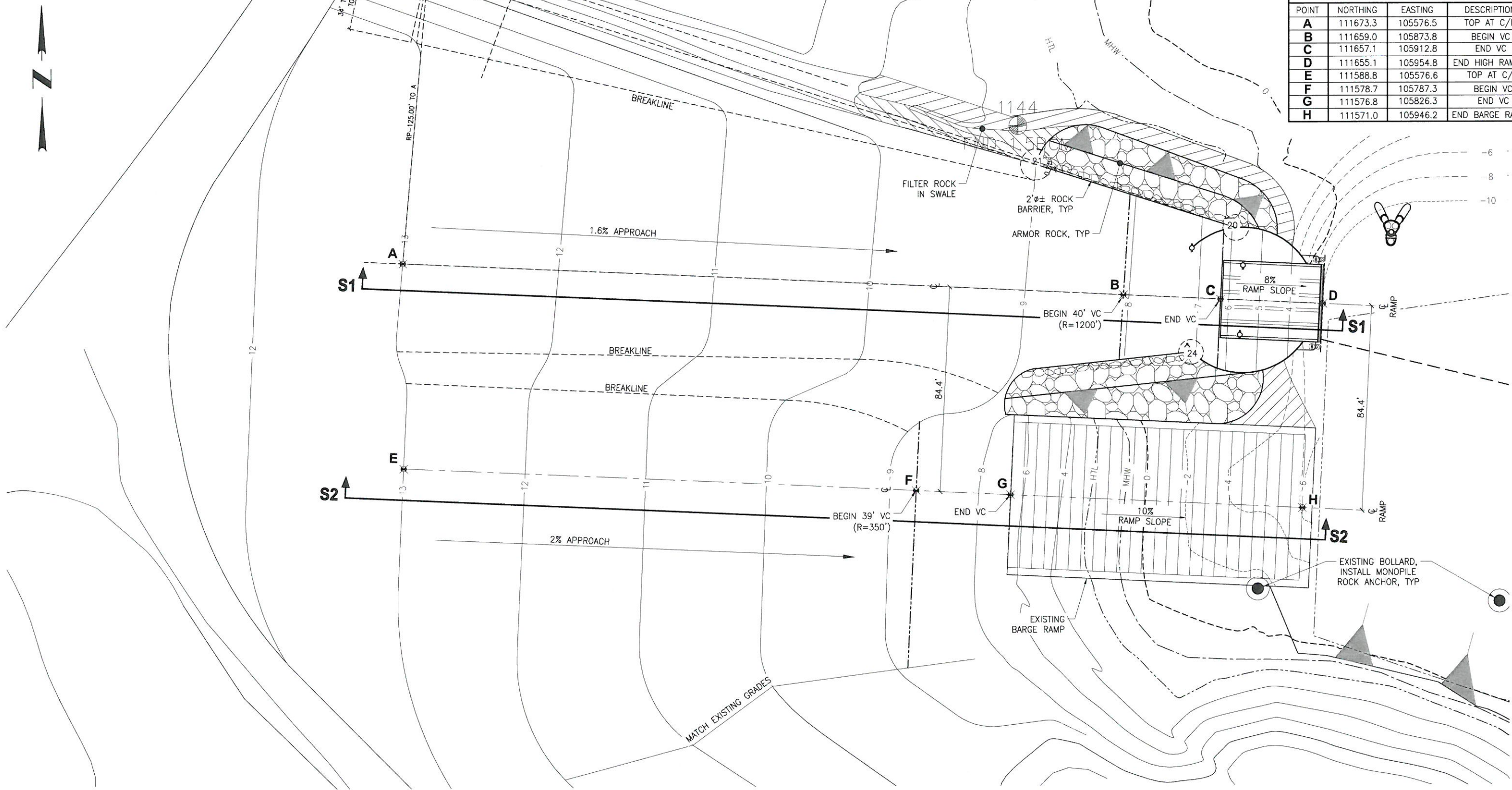
Sincerely,  
PND Engineers Inc. Anchorage Office

  
Garth Howlett, PE SE  
Principal/Senior Engineer

Attached: Grading plan from (2013) Inner Harbor High Ramp design drawing



J:\2011\1115 Nome Snake River Float\Drawings\Nome Inner Harbor High Ramp Cell Drawings 101053\07\_9 Grading Plan & Sections fix slopes.dwg, 07, 9/23/2016 5:12:30 PM, Garth, 12



VERTICAL CURVE AND CENTERLINE COORDINATES			
POINT	NORTHING	EASTING	DESCRIPTION
A	111673.3	105576.5	TOP AT C/L
B	111659.0	105873.8	BEGIN VC
C	111657.1	105912.8	END VC
D	111655.1	105954.8	END HIGH RAMP
E	111588.8	105576.6	TOP AT C/L
F	111578.7	105787.3	BEGIN VC
G	111576.8	105826.3	END VC
H	111571.0	105946.2	END BARGE RAMP



### GRADING PLAN

OPEN CELL® AND OPEN CELL SHEET PILE®  
ARE REGISTERED TRADEMARKS OF PND ENGINEERS, INC.  
THE OPEN CELL SYSTEM IS PATENTED  
PATENT - US 6,715,964 B2  
PATENT - US 7,018,141 B2  
PATENT - US 7,488,140 B2

**DRAFT**  
8/22/2014

PND Engineers, Inc. is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

REV	DATE	DESCRIPTION

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

1506 West 36th Avenue  
Anchorage, Alaska 99503  
Phone: 907.561.1011  
Fax: 907.563.4220  
www.pndengineers.com

**P | N | D**  
ENGINEERS, INC.

PROJECT: CITY OF NOME HARBOR IMPROVEMENTS INNER HARBOR HIGH RAMP & FLOAT PHASING			
TITLE: GRADING PLAN			
DESIGNED BY: SD	DATE: 4/15/13	SHEET NO. <b>7</b> OF <b>18</b>	
CHECKED BY: GH	PROJECT NO: 101053		