

City Manager
Tom Moran

Port Director
Joy Baker

Harbormaster
Lucas Stotts



Nome Port Commission
Jim West, Jr., Chairman
Charlie Lean, Vice Chairman
Doug Johnson
Derek McLarty
Shane Smithhisler
Scot Henderson
Denise Michels

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**NOME PORT COMMISSION
WORK SESSION & REGULAR MEETING AGENDA
THURSDAY, AUGUST 17, 2017 @ 5:30/6:30 PM
COUNCIL CHAMBERS IN CITY HALL**

WORK SESSION – 5:30PM:

Capital Improvements Plan – Review/Discuss User Survey Responses on Facility Needs

REGULAR MEETING – 6:30PM:

- I. ROLL CALL**
- II. APPROVAL OF AGENDA**
- III. APPROVAL OF MINUTES**
 - 06.15.17 Regular Meeting
- IV. CITIZEN’S COMMENTS**
- V. COMMUNICATIONS**
 - 06.20.17 Letter from Steve Pomrenke on barge haulout
 - 06.26.17 Funding request to AOOS on wave/current sensor buoy
 - 08.06.17 Alaska Designs Newsletter on Alaska Port Infrastructure
- VI. CITY MANAGER REPORT**
 - 17-08-11 City Manager Report
- VII. HARBORMASTER REPORT**
 - Verbal Update on Dock Operations/Schedule – Maintenance
- VIII. PORT DIRECTOR REPORT/PROJECTS UPDATE**
 - 17-08-11 Port Director/Projects Status Report
 - Expanded layout of TBS Site Development
- IX. OLD BUSINESS**
 - None
- X. NEW BUSINESS**
 - EEIS Nome Bathhouse Project – 35% Narrative, Cost Estimate & Drawings
- XI. CITIZEN’S COMMENTS**
- XII. COMMISSIONER COMMENTS**
- XIII. NEXT REGULAR MEETING**
 - September 21, 2017 - 5:30 pm
- XIV. ADJOURNMENT**

Port of Nome Work Session – Capital Improvements Plan - August 17, 2017

Purpose:

The purpose of this work session is to review survey responses from the recent request to Port and Small Boat Harbor users for feedback on the Capital Improvements Plan for the Port of Nome and to seek input from the Port Commission on the path forward.

- Outline/review survey summary (Lorraine)
- Complete Worksheet #1 for previously identified Capital Improvements
- Complete Worksheet #2 for additional items identified in survey
- Discussion of potential financing options
- Complete Worksheet #3 for existing assets about to be fully depreciated
- Summarize work session results and discuss need for additional work session.

Port of Nome Capital Improvements Plan Summary Survey Results

Cordova Consulting

1191 South Lower Road
Palmer, AK 99645
(907) 957-0581

AUGUST 2017

Introduction

The Port of Nome survey was emailed to 228 current and former users of the Port. Emails were provided by the Port of Nome. We received 20 completed surveys representing a range of Port users from research vessels to cargo ships to mining and fishing vessels. There were 191 valid email addresses so the rate of response for this survey was 10%. Using a 90% confidence level, the margin of error for this small sample size is about 11%. Following are the results of the survey questions.

Survey Results Summary

1. *Do you currently use the Port of Nome?*

Eighteen of the 20 respondents indicated that they currently use the Port of Nome.

2. *Do you have multiple vessels using the Port of Nome?*

Thirteen of the 18 respondents currently using the Port of Nome have more than one vessel.

3. *If yes, how many vessels does your company currently have visiting the Port of Nome?*

One respondent has 10 vessels currently using the Port. The average number for all respondents was 4 vessels. A total of 50 vessels were represented by the survey respondents.

4. *On average, how many times a year does your company use the Port of Nome and how long do your vessels typically stay?*

Eight of the respondents are long-term users of the Port. Low usage from one respondent was an annual visit for about 2 days. The highest usage amount outside of the long-term users was 26 to 30 times a year staying for approximately one day.

5. *If no, what are your reasons for not using the Port of Nome?*

- New Arctic rules make it impossible for our ship to work in the Arctic
- Inadequate depth and Port is sometimes too congested
- We are based out of Emmonak and generally pull our boats out of the water here. Last winter we pulled out one boat in Nome. Great facility and service and would use again if we need to pull a boat elsewhere than our own yard.
- Inadequate berth length for large cruise ships
- Vessels requesting fuel don't meet draft or length requirements, congestion at fuel docks prohibitive costs at Port (tariffs, taxes) compared to offshore fueling alternatives.

6. *Please select the vessel type that best describes your operations:*

Number	Vessel Type
2	gravel
5	cargo
2	fishing vessel
4	mining vessel
4	research vessel
2	landing craft
4	tug
1	passenger/cruise
1	freight

Several respondents provided information on more than one vessel so the types of vessels will exceed the total survey responses. Of note here, however, is that the survey respondents represent a good mix of the vessel types currently using the Port of Nome.

7. Please indicate your vessel specifications:

Vessel lengths overall were somewhat balanced with about a third of the vessels under 100-feet, another third in the 100 to 200-feet category, and the balance greater than 200-feet. The shortest length vessel was 20 feet and the longest length vessel was 820 feet. The beam for vessels calling at the Port of Nome had a wide range with 5-feet as the smallest and 106-feet as the widest. Most vessels fell in the 21 to 50-foot beam category. Vessel drafts range from 1 foot to 25-feet with almost half of the vessels falling in the greater than 12-foot draft category.

Vessel Dimensions Summary

Category/ # Vessels	Vessel Size	Most/Least	Feet
LOA			
18	Vessels under 100-feet	Longest length:	820
14	Vessels 100 to 200-feet	Shortest length:	16
14	Vessels greater than 200-feet		
Beam			
8	Vessels under 20-feet	Greatest beam:	106
25	Vessels 21 to 50-feet	Least beam:	5
9	Vessels greater than 50-feet		
Draft			
16	Vessels under 7-feet	Greatest draft:	25
9	Vessels 8 to 12-feet	Least draft:	1
21	Vessels greater than 12-feet		

The following capital improvements are currently under construction at the Port of Nome:

- Security camera system
- 18-acre parcel for uplands storage (9 acres in 2017)
- Snake River dredging to -8-feet MLLW
- Dead-man mechanism for equipment and vessel haul-outs

8. *The Port of Nome also has the following capital improvements projects pending on its Ports/Harbors list. Please rank these projects in order of importance for your business operations with “1” being most important and “14” being least important.*

Pending Capital Improvement	Ranking: (one vote per survey)
Better dock protection for inclement weather operations	1
Waste oil/bilge pumpout	2
Port expansion to deeper water	3
Port Ship's Waste Reception Facility	4
Electrical shore power in harbor	5
Outer harbor dolphins	6
Fueling station in small boat harbor	7
Communications connection on the Causeway	8
Causeway shore power	9
Snake River Moorage Development	10
7-acre parcel for vessel storage near existing launch ramps	11
Disembarking floats for cruise ship tenders in SE corner of harbor	12
Shower facilities	13
GARCO building upgrade	14

The 14 items listed in the pending capital improvements have been previously identified by the harbor staff and Port and Small Boat Harbor users. The ranking in this table shows that “better dock protection for inclement weather operations” and “waste oil/bilge pumpout” was of the most importance to the Port of Nome users. “Shower facilities” and “GARCO building upgrades” were least favored by the current users.

9. ***What other port improvements at Nome would make your operations more efficient or make you want to use the Port of Nome more frequently? Please list the improvements in order of your preference with "1" being the most important.***

Other Port Improvements desired fell into the general categories of Causeway infrastructure, small boat harbor infrastructure, management techniques, assistance with inclement weather conditions and include: (Responses here are listed in their entirety without editing)

Causeway Infrastructure:

Widen entrance so there is not a need for an assist boat
 Break wall in front of entrance to knock down swell in inclement weather
 Being able to moor large/deep draft vessels at the Outer Cell
 Turning basin dredged to deeper level
 Turning basin expanded
 Rubber fendering to protect sheet piling
 Second fuel header on Causeway for large vessels (outbound)

Small Boat Harbor Infrastructure:

More dock space
 Provide more docking space and control in harbor for seasonal users, allow larger vessels to have wall space for repairs and fueling, with smaller vessels handled by docking or docks
 More docking space for mining vessels
 Provide ladders for seasonal users, and control areas people can park in.
 Capacity of Snake River Bridge

Management Techniques:

Assist tug near port
 Assist tug available 24 X 7
 Please do not further limit full time users for once in a while users. i.e. occasional cruise ship float. This would take up additional wall space that is so badly needed for every day users. Rather reform the current fuel dock with a walkway to unload cruise passengers on that would have them walk up to the top of the current gravel ramp, via steps and a walkway

Assistance with Inclement Weather:

Wintertime snow removal from vessel storage lots
 More protection from the weather

Other Services:

The ability to discharge regulated garbage at Port of Nome
 Number of docking cells expanded to decrease schedule conflicts
 The Port of Nome should purchase a fork lift or mobile crane
 A floating dry dock or graving dock
 Vessel lift for larger vessels
 Free Wi Fi

10. Would you be willing to pay a small fee on top of your moorage/dockage to support capital improvements at the Port of Nome?

Eleven of the 19 respondents (55%) answering this question indicated they would be willing to pay a fee to support capital improvements at the Port of Nome. Eight respondents indicated they would not be willing to pay an additional fee.

11. If yes, what amount would you be willing to pay in addition to your moorage/dockage and other fees at the Port? Please indicate amount that you would be willing to pay each visit or an amount up to annually.

This question asked users if they would be willing to pay a fee per visit or an annual fee. Of the respondents indicating they would be willing to pay a fee, the high amount per each visit was \$50 and the low amount was \$20 per visit. For those indicating a willingness to pay an annual fee, the low amount was \$50 and the high amount was \$2,000 annually.

12. Other comments or information you would like to share with the Port of Nome: (these comments are listed in their entirety without editing)

- Frankly, the deficit now showing in the port report that was provided by your firm??? Is skewed. Showing depreciation as a tangible deduct item in the report is misleading as to the actual costs and projected costs to run the port, and projected port deficits. The basis used is not correct, thereby, there will be extra funds left for capital improvements if the report is used as gospel. You should correctly show the accounting in the proper format so as not to be misleading.
- We already pay such high prices for our usage in such a crowded port, I would figure there would be enough money to make improvements with what is already being collected without further raising prices. It is packed in the harbor.
- Please note that the above is submitted on behalf of the Cruise ships Silver Discoverer, Bremen, Crystal Serenity, and Le Boreal which will be the 4 cruise vessels calling at Port of Nome in 2017. Note that Crystal Serenity and Le Boreal must conduct their calls at anchor due to insufficient berth size.
- Additional 2% sales tax during summer months s/b used to support port improvements, not tariff or fee increases. The Port needs to develop an asset replacement schedule to determine appropriate planning and funding requirements for improvements and repairs of existing infrastructure.

Worksheet #1

<i>Pending Capital Improvements (Ranked in order of survey responses)</i>	<i>Short ¹ (1 -2 years)</i>	<i>Mid ¹ (3 - 5 years)</i>	<i>Long ¹ (more than 5 years)</i>	<i>Potential for financing ²</i>	<i>Estimated Cost ³</i>
Better dock protection for inclement weather operations					
SBH Waste oil/bilge pumpout					
Port Deep Water Expansion					\$300,000,000
Port Ship's Waste Reception Facility					
SBH Electrical Shore Power					
Outer harbor dolphins					
SBH Fueling Station					
Causeway Communications connection					
Causeway Electrical Shore Power					
Snake River Moorage Development					\$ 13,000,000
7-acre parcel development for vessel storage (WNTF)					
Cruise Ship Tender Floats in SBH					
Harbor Bathhouse/Laundry facilities					\$ 805,000
GARCO building upgrade					\$ 550,000

Pending capital improvements have been previously identified by harbor staff and port users as needed. These are ranked in order of importance based on survey responses.

1. Indicate if these improvements should be considered in the short, mid, or long-term.
2. **City, State, Federal, grant** funds, or **user fees** for potential financing. To be determined in the future.
3. If cost estimate known, please fill in. Engineering estimates will be completed at later date.

Worksheet #2

<i>Requests from survey respondents</i>	<i>Short¹ (1 -2 years)</i>	<i>Mid¹ (3 - 5 years)</i>	<i>Long¹ (more than 5 years)</i>	<i>Potential for financing²</i>	<i>Estimated Cost³</i>
Causeway turning basin expansion					
Causeway turning basin dredged deeper					
Rubber fendering on sheetpile					
Second fuel header at Causeway					
Additional dock space in small boat harbor					
Provide additional ladders for seasonal users in small boat harbor					
Ability to discharge regulated garbage					
PON purchase of fork lift or mobile crane					
Floating dry-dock or graving dock					
Vessel lift for larger vessels					
Wintertime snow removal from vessel storage lots					
WiFi free to Port users					

This worksheet includes additional items identified by survey respondents as needed/desired at the Port and Small Boat Harbor facilities. These are in no particular order.

1. Indicate if these improvements should be considered in the short, mid, or long-term.
2. **City, State, Federal, grant** funds, or **user fees** for potential financing. To be determined in the future.
3. If cost estimate known, please fill in. Engineering estimates will be completed at later date.

Worksheet #3

Description of Asset	Initial Cost	Current Book Value	Replacement ¹ (yes/no)	Major rehab ¹ (yes/no)	Potential for financing ²	Estimated Cost ³
<i>Fully depreciated in 2018</i>						
Buildings – Garco Garage	\$ 151,200	\$ -				\$ 500,000
Cswy Fuel Discharge Hose	\$ 6,908	\$ -				\$ -
2005 Chevrolet Trailblazer	\$ 28,669	\$ -				\$ 30,000
Boston Whaler Trailer 24'	\$ 8,000	\$ -				\$ 15,000
<i>Fully depreciated in 2019 to 2021</i>						
2002 Ford F350 Flatbed	\$ 18,000	\$ 7,082				\$ -
<i>Fully depreciated 2022 and beyond</i>						
Garco Building - Lighting Upgrade	10,000	6,378				\$ -
Harbor Master Office Additions	152,646	80,514				\$ -
Shoreside Lighting	96,897	24,224				\$ -

This table includes assets already owned by the Port, the initial cost, and the current book value. Some of these items can undergo repair and maintenance to continue functioning into the future.

1. Indicate if replacement needed or if major rehabilitation would suffice once the asset is fully depreciated.
2. **City, State, Federal, grant** funds, or **user fees** for potential financing. To be determined in the future.
3. If cost estimate known, please fill in. Engineering estimates will be completed at later date.

**MINUTES
NOME PORT COMMISSION
REGULAR MEETING
June 15th, 2017**

The Regular Meeting of the Nome Port Commission was called to order at 5:30pm by Chairman West in Council Chambers at City Hall, located at 102 Division Street.

OATH OF OFFICE

Commissioner Denise Michels was sworn into office.

ROLL CALL

Members Present: C. Smithhisler; C. Lean; C. West Jr.; C. Henderson, C. Johnson; C. Michels;
C. McLarty

Also Present: Lucas Stotts, Harbormaster; Tom Moran, City Manager; Joy Baker, Port
Director (telephonically)

In the audience: Sandra Medearis, Arctic News;

APPROVAL OF AGENDA

Chairman West asked for a motion to approve the agenda.

A motion was made by C. Michels to approve the agenda as amended, and seconded by C. Lean.

At the Roll Call:

Ayes: Lean, West, Henderson, Johnson, Michels, McLarty,
Smithhisler

Nays:

Abstain:

The motion **CARRIED**.

APPROVAL OF MINUTES

May 18, 2017 Regular Meeting

A motion was made by C. Lean and seconded by C. McLarty to approve the minutes – with a minor amendment added by McLarty, requesting “ly” is added to “significant” in the last sentence on page one. Amendment was accepted by Lean.

At the Roll Call:

Ayes: West, Henderson, Johnson, McLarty, Smithhisler, Lean

Nays:

Abstain: Michels

The motion **CARRIED**.

CITIZENS’ COMMENTS

There were none.

COMMUNICATIONS

- 05.19.17 Letter to Mayor Beneville on Municipal Infrastructure Projects
- 06.01.17 Port of Nome: Rescoping and Moving Forward – Alaska Business Monthly
- 06.09.17 Letter to AK DMVA Commissioner Hummel from Mayor on Infrastructure
- USCG D17 Arctic Shield Environmental Assessment

Discussion: None

CITY MANAGER'S REPORT (06/09/17 Written)

Manager Moran expanded slightly on the USCG meeting in his written report; expressing the need to routinely update new command staff with Nome's ongoing discussions and requests regarding USCG Arctic operations and Nome's capabilities.

Discussion:

Commissioner Lean commented that there is long history for many agencies that have had staff rotate into Nome for only brief periods, resulting in little to no development of corporate memory of Nome's capabilities, at the agency level. History is now being repeated with the USCG, and perhaps that point needs to be made in writing. Manager Moran concurred and indicated the City continues to drive the message of traffic growth and increased activity at every possible opportunity, both in written and verbal form.

HARBORMASTER'S REPORT (Verbal)

Corps maintenance dredging is actively working in the entrance channel, and communicating with vessels for navigation adjustments. Crowley has conducting their initial lightering operations to get product into their harbor tanks, gravel staging started at the Causeway for project exports. Staffing is now up to full levels with both field assistants and office manager in place. This will allow the final season opening tasks to be completed in the next week, with larger projects scheduled with Public Works. Public Auction will be held tomorrow for the remaining unpaid items on the impound list.

Discussion:

Commissioner McLarty inquired about the survey that was completed and whether that will indicate what was accomplished in the river over the winter? HM Stotts replied that the pre-dredge survey is for the Corps project and will be compared against a post-dredge once dredging is complete. PD Baker clarified that the Snake River "post-dredge" survey is scheduled to be done when Hughes returns for the Corps interim survey after the channel work is finished. Commissioner Lean said he thought the river post-dredge survey was supposed to indicate whether the suction dredger was to recover the remaining sediment in the river under the project. PD Baker replied that was the plan after the excavation portion was completed, but as the ice became unstable earlier than anticipated, the remainder of the excavation work is now pushed to spring of 2018, so the need for any cleanup work won't be known until that time.

Commissioner West inquired about the status of the fresh water line. HM Stotts advised that NJUS has blown the water line and only had one dock line that remained frozen until yesterday. Water samples have been sent out for testing, and we hope to have results back by next week to allow us to begin selling water to vessels. There is consideration underway of installing heat trace to eliminate any future issues with lines freezing.

Port Director Report / Projects Update (06.08.17 Port Director/Projects Status Report)

PD Baker spoke briefly on the 5/19 letter to the Mayor requesting submissions on local Municipal Infrastructure Projects. Staff is currently updating drawings and cost estimates on the development along the Snake River to submit as one of the City's proposals, as it qualifies as shovel-ready.

Orion Marine is actively working on the concrete ramp extension as well as removing some anodes on the Mid Dock that were damaged by the ice. Q Trucking is currently building the runoff berm along the City/BFI property line, with pad fill to begin in a couple of weeks, followed by crushed. The Knik barge is due at the Cape tomorrow with project equipment, and they anticipate commencing rock placement within a few days.

Discussion:

Commissioner Michels stated that Craig Fleener spoke during the Arctic Ministerial in Fairbanks, indicating that he was gathering projects across Alaska for the next 50 years, do you know if the Hozey letter ties in with that effort? PD Baker responded that she was unaware if there was any connection but would inquire. Commissioner McLarty inquired about what was happening with the plan for the additional ladders on the South Wall? PD Baker replied that that PND had provided a suggested layout and that staff had requested an alternate design similar to the Causeway ladders and we are contemplating the number to be ordered. McLarty added consideration needs to be given to the handrails.

OLD BUSINESS

Port & Harbor Development Analysis (Final) Draft – Cordova Consulting

Manager Moran opened the discussion in an effort to bring the group up to speed, on the plan having been through several iterations and that staff is now hoping the Port Commission will concur to recommend the plan to the Council for adoption.

Discussion: None

Motion:

The following motion was moved by Michels and seconded by Lean

Recommend the Nome Common Council adopt the Nome Port & Harbor Development Analysis – by Cordova Consulting.

At the Roll Call:

Ayes: Henderson, Johnson, Michels, McLarty, Smithhisler,
Lean, West

Nays:

Abstain:

The motion **CARRIED.**

NEW BUSINESS

Waste Reception Facility Feasibility Proposal – Bristol Engineering

PD Baker explained that the proposal actually provided an extensive amount of feasibility detail, thereby escalating into the \$80-100K cost range, per Bristol's estimates. Baker highlighted some tasks that could serve as a Phase 1 portion at a lower cost. Phase 1 results would dictate additional efforts needed and the next phased costs could be identified.

Discussion:

Commissioner Lean commented that although the least glamorous of all projects, this facility would go a long way in attracting port facility users as we'd be the only place in Western Alaska where ships could dispose of their waste, and as a consequence vessels would be stopping. Another benefit is it would essentially supplement the City's existing infrastructure which is aging. A question for Joy, this is one of those things where we could propose to the state for projects to fund....is this on the list? Manager Moran responded that since it's a new project it has not made it on the City's priority list yet or been submitted for funding, but it should be added to our State Priorities. Commissioner Michels added that this is a priority of the Arctic Council's Executive Committee, especially the Pacific side; they'd be very excited about this. PD Baker added that she has discussed the PAME research and how this ties into the results of their work Waste Reception Facilities in the Arctic.

Discussion continued on proposed locations for handling additional waste between the port and the existing lagoons, as well as adding to the existing infrastructure and if we're already operating at capacity. Commissioner Lean suggested including condition of facilities in 2c under Phase 1 as that's an important part of the initial evaluation – PD Baker agreed that could be included at a general level without a great deal of detail to keep the costs manageable. Commissioner Michels indicated that 3d is identified in the 2009 AMSA shipping report – PD Baker replied, yes and also in the PAME report. Lean added that it's important to include the international perspective in the feasibility report.

PD Baker will make suggested additions to proposal and ask Bristol to price highlighted sections.

CITIZENS' COMMENTS - None

COMMISSIONERS' COMMENTS

C. McLarty – welcome to Denise.

C. Lean – thanks for getting the Port ship/shape, and welcome Denise. We go way back on stuff. Also, lost a friend to a drowning in the last couple days – he's one that always wore a life vest, except this one time. ALWAYS were one, as it could be the day you'll need it.

C. Johnson – welcome Denise.

C. Henderson – think the Cordova Consulting study is really good start for getting a better grip on what the future needs are and looking forward to Phase 2. Is there a way to cost effectively track how the projects/assumptions worked out?

C. Smithhisler – glad to have Denise onboard, she always has good information. Today I was working near the barge ramp and noticed there's a great deal happening there and noticed staff does a great job in managing all that is happening there.

C. Michels – went on the Resource Guide, and noticed it is the version from 2015, it has a USCG bulletin link that has been cancelled, and the link to the state's information shows very outdated information. Thank you, and looking forward to serving.

C. West - always glad to have Denise onboard as she has a wealth of information. She always has the heart of the port in mind. Looking forward to a busy season, start up is moving right along and things are already busy.....with the exception of fishing which should be moving soon. Yes, we've had 6 drownings, and there are jackets available, Kid's Don't Float jackets are available – grab one.

SCHEDULE OF NEXT MEETING

The next meeting: July 20, 2017 at 5:30PM.

ADJOURNMENT

Motion was made by C. Michels for adjournment – meeting adjourned at 6:39 PM.

APPROVED and **SIGNED** this 20 day of July, 2017.

Jim West, Chairman

ATTEST:

Joy Baker, Port Director

To: Port of Nome and Port Commission

From: Pomrenke Mining

Date: June 20, 2017

We are planning to bring a barge to Nome in about 10 days to 2 weeks that is 160' long x 44' wide with approximate 15' sideshell. Our plan is to own and operate this barge out of Nome as a cargo or mining barge depending on the need for region. We would like to request authorization to haul out at the ramp each fall on air bags for winter storage.

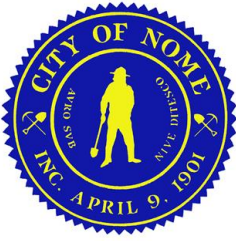
The barge does not have any internal fuel or ballast tanks, so would not pose a hazard during haulout or launch. Our existing vessel insurance would be extended to cover the barge during summer and winter, and we would be renting air bags from the local company that has made them available to several large vessel owners.

We are planning to request dockage space in the harbor in the most convenient location until we can facilitate haul out. We appreciate the opportunity to continue working with the Port of Nome and support the ongoing efforts to expand and develop the facility.

Thank you.

Steve Pomrenke
320-630-7260

A handwritten signature in black ink, appearing to read "Steve Pomrenke", written in a cursive style.



DATE: June 26, 2017

TO: Alaska Ocean Observing System (AOOS)

FROM: Joy Baker, Port Director

RE: **PORT OF NOME – WAVE AND CURRENT SENSOR BUOY**

I request AOOS fund the installation of a current and wave sensor buoy at the entrance to the Port of Nome to provide accurate real time environmental information to mariners aiding maritime safety and efficiency. The estimated cost of procuring the hardware and software for the requested buoy sensor and installation of the same is \$107,000. Ongoing support, annual servicing and deployment will be borne by the Port of Nome.

The safe and efficient operation of the Port of Nome is important to the communities in northwest Alaska. The increased maritime activity at the port is presenting an elevated risk of a marine casualty that could disrupt cargo operations negatively impacting neighboring communities. A recent study of the port's maritime operations identified a need for accurate wind, current and wave information be provided to mariners to aid vessels safe entry and departure through the narrow breakwater opening to the outer port.

Providing accurate ocean observations to mariners comports with AOOS' mission to aid maritime safety and efficiency as decisions on arriving, entering and departing the port from the Bering Sea are based on the nearby sea state, currents and winds. The cross current at the breakwater entrance and wave heights have been risk factors of concern to mariners calling on the port. Accurate information on these environmental factors will aid mariners in addressing these elevated risks. The data received from the requested wave and current buoy will be disseminated to mariners via the cell network and web site provided by MXAK as well as by AOOS' integrated environmental display.

Amplifying information on this request is attached. The Port of Nome has a vessel that is presently used to set and recover navigational buoys that can be used to deploy and recover the requested wave/current buoy.

Submitted

Joy Baker
Port Director

Port of Nome Wave and Current Sensor Buoy

The attached documents present information on the requested wave and current buoy that would be deployed near the entrance to the Nome outer harbor to aid maritime safety and efficiency.

The Marine Exchange of Alaska (MXAK) has been contracted by the Port of Nome to identify technologies and cost of the same to enhance the safety and efficiency of port operations. MXAK presently has installed AIS receivers and transmitters in Nome and in the process of installing a weather sensor at the end of the causeway that will provide weather information to mariners that can be received and displayed via smart phones and AIS receivers. MXAK will incorporate current and wave information provided by the requested buoy into their system as they have done for the Port of Juneau.

Costs of the wave and current buoy include MXAK personnel travel to AXYS, the buoy manufacturer for training, AXYS representatives travel to Nome for the installation, shipping of equipment, MXAK tech support and procurement of ground tackle to moor the buoy.

These costs are as outlined below;

Wave and Current Buoy Platform:	\$ 72,952
Shipping and Handling:	\$ 2,500
Ground Tackle	\$ 2,100
AXYS Tech Travel to Nome to Assist Installation	\$ 11,000
MXAK Tech Travel to Nome to Assist Installation	\$ 5,800
MXAK Software Engineering for Dissemination of Data	\$ 3,000
Indirect/Admin Costs (10%)	\$ 9,735
Total	\$ 107,087



Technical Proposal

February 1, 2017

TRIAXYS Wave & Current Buoy





Alaska Designs

Volume 40, No. 6, August 2017

The Official Newsletter of the Alaska Professional Design Council

Focus on Ports & Harbors

ASCE Report Card on Infrastructure: C- Composite

Editor's Note: The Alaska Section of ASCE issued its first report card on Alaska's infrastructure, covering nine critical infrastructure categories, in February 2017. Using ASCE's methodology, the composite grade came to a C minus. This is the third in a series of articles exploring each of the nine categories.

By Carl Uchtyl, P.E.

At the February roll-out of the inaugural Alaska ASCE Report Card, Ports & Harbors mustered just a grade of D+. This is distressing as no other state is more dependent on maritime traffic and associated infrastructure than the 49th State. According to a Northern Economic study commissioned by the Alaska Association of Harbormasters & Port Administrators (AAHPA), in 2015, \$28B and 40.8 million tons of goods/product were moved via marine transport out; and, \$4.8B and 3.4 million tons of goods/product moved into the state. The top exporting facilities include Valdez (TAPS), Kivalina (Red Dog Mine), and Nikiski (Tesoro refinery). The Port of Anchorage is the recipient of 85% of all consumer goods inbound, which are distributed to three-quarters of the state's population.

Harbors ensure a thriving commercial fishing industry exists with over \$1.7B of fish product landed in Alaska in 2014, including six of the top 10 fishing ports by volume in the U.S. Additionally, tourism plays a significant role in several communities with a record 1.06 million passengers anticipated to arrive via

cruise ships in 2017.

The ASCE Report Card noted lack of "capacity" as a limitation. With 33,000 miles of coastline, more than the combined shoreline of the continental U.S., there are only approximately 125 ports and harbors within the state providing services that support critical economic activities. Alaska is dependent upon resource extraction, including fisheries, but lacks infrastructure to support vessels operating in Alaska. As a result, there is an estimated \$5B lost revenue opportunity to Puget Sound harbors and boatyards. Juneau recently recapitalized its cruise ship berths with a \$71M expansion project enabling its port to handle four neo-panamax size cruise ships. However, the cruise industry does not have sufficient shore-side facilities elsewhere in Southeast Alaska that would provide needed growth opportunities in tourism.

The existing "condition" of Alaska small boat harbors is a concern, primarily for municipally owned infrastructure, with great variance depending on the ability of the local government to generate revenue. The majority of harbors were maintained by the state until 2000, when the Alaska Department of Transportation and Public Facilities (ADOT) began a program of divestiture to local municipalities. This effort has created a wide range of facility conditions throughout the 100 municipal harbors and the 24 state-managed harbors. These facilities play a vital role in the communities they serve by providing local employment op-

portunities, promoting economic diversification and meeting cultural and subsistence lifestyles.

The Port of Anchorage structure condition remains precarious as the dock facility has exceeded its useful life and severe piling corrosion threatens to impact port operations serving the majority of the Alaska population, including military facilities of national significance. An estimated \$400 million is necessary to accomplish replacement and modernization of the facility with only a quarter of the funding currently secured. Anchorage budgets more than \$5 million annually to maintain operational capacity of existing wharf piles and other aging port infrastructure, but this work does little to enhance the facility's earthquake resilience. The current band-aid approach is not sustainable and funding strategies must be realized.

Continued on Page 2

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ASCE Report Card: Focus on Ports and Harbors

Continued from Page 1

The ASCE Report Card also considered the future needs for the state. Rising to the top in this category is the requirement to develop a deep-water Arctic port. An emerging Arctic Ocean poses both opportunity and risk for trans-shipment to the region. Smart, well planned developments that enhance port infrastructure – including deep-draft port facilities currently unavailable north of Unalaska/Dutch Harbor – would meet the state’s goal of encouraging economic development in remote areas and provide local and regional economic development opportunities (resource extraction, tourism, and research).

There are several recommendations that would raise the grade of D+ for Ports & Harbors:

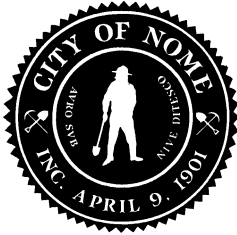
1. Given limited federal opportunities to fund small boat harbor recapitalization projects, it is imperative that the State of Alaska prioritize legislative appropriations and its matching ADOT Harbor Facility grant opportunities to the maximum extent allowable. Without safe and efficient access to ports and the ocean, the main regional economic driver in many of our communities will be lost.
2. The Port of Anchorage, which provides 85% of all consumer goods to three-quarters of the state’s population, is in desperate need of capital infusion to rebuild aging infrastructure and construct resilient facilities. Funding \$300M through state legislative appropriations or bonds is necessary to realize the port needs in Alaska’s largest city.
3. Several federal waterways are maintained by the US Army Corps of Engineers through dredging and breakwaters

projects within Alaska. Annual dredging at ports such as Dillingham and Ninilchik is necessary to maintain economic vitality for their rural regions. Other Army Corps projects include dredging on a 10-year cycle for the Cook Inlet Navigation Channel, Bethel, Ketchikan and Seward. The recent 2017 passage of the Waterways Infrastructure Improvement for the Nation (WIIN) Act will positively impact Alaska harbors directly by permanently requiring 10% of the annual Harbor Maintenance Trust Fund be directed to emerging ports. It is highly recommended that all Alaska communities support future reauthorizations of the Water Resources Development Act (WRDA) providing resources

- and authorities to the US Army Corps of Engineers for capital project investments.
4. That the State of Alaska and the federal government work in concert to develop the necessary infrastructure and governance to meet the economic opportunity that a Deep Draft Arctic Port would provide to this Nation.
5. That the State and local cruise ship ports continue to collect Commercial Passenger Vessel Excise Tax and local “head tax” for passengers disembarking Alaska port facilities. To mitigate the impacts caused by increased tourism, the state and local ports must leverage funds to build infrastructure that improves safety and efficiency for the cruise ships and its passengers. ❖



Mike Pusich Douglas Harbor Reconstruction 2017. Photo by Lance Greer. More harbor photos on pages 6, 7.



CITY OF NOME

City Manager's Office

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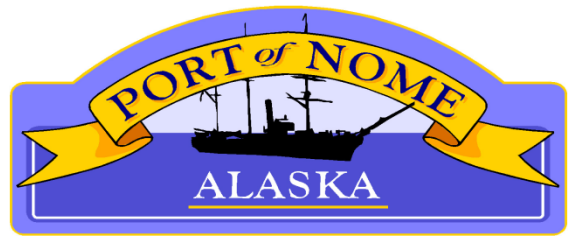
City Manager's Report

From: Tom Moran, City Manager
Reporting Period: July 24 – August 11, 2017

- Please see the attached 4th Quarter Report from the Museum. *Attachment 1.*
- Please see the attached 4th Quarter Report from the Convention and Visitors Bureau. *Attachment 2.*
- Please see the attached 4th Quarter Report from the Fire Department. *Attachment 3.*
- Please see the attached Port Projects Status Report for August. *Attachment 4.*
- After struggling with the process for a few years, the City is finally able to accept online credit card payments. At the present time, however, only property taxes and port fees are eligible.
- Please stop by and welcome back Deputy Clerk Jill Nederhood who returned from maternity leave on Monday, July 24th. While you're there, please also welcome the newest addition to the Clerk's Office, Dorothy Canarelli. Caitlin LeClair's last day was Friday, July 21st.
- A good time was had by all AMLJIA Board Members and Staff who attended the Summer Quarterly Board Meeting in Nome on July 25th and 26th. Special thanks to Mayor Beneville, Utility Manager Handeland, and Clerk Hammond for orchestrating a group trip to Pilgrim Hot Springs. Thanks also go out to Councilmen Andersen and Tobin for helping to entertain the Board afterwards.
- DEC was in town on Wednesday, July 27th for the annual Landfill and Monofill inspections. City Engineer John Bles coordinated the inspections with Solid Waste Program Specialist Neil Lehner. Mr. Lehner seemed impressed, and his report is forthcoming.
- Also on July 27th, a large City/Port/Utility contingent met with DOT and PDC Engineers to discuss improvement plans for Seppala Drive and Port Road. Unfortunately, the work isn't scheduled to begin for a few years.
- To wrap up a busy day, the Museum and Library Commission also met on the evening of Wednesday, July 27th to continue deliberation of properties in town that could be suitable for the National Register of Historic Places. Once the final Museum exhibit is installed, the Commission will return to a quarterly meeting schedule. Welcome aboard to new Commissioners John Handeland and Lucas Sawyer.

- On Monday, July 31st, the Building Inspector and the City's Building Maintenance Department conducted a walkthrough inspection of the Nome-Beltz apartment building/Anvil City Science Academy/DOT offices. A follow-up inspection of the high school has been scheduled for Monday, August 14th at 1:00.
- Congratulations to our July Employee of the Month, Dawn Ubelaker (Animal Control Officer). Though Dawn is technically an independent contractor, her stellar performance simply couldn't be ignored. Keep up the good work, Dawn!
- Sales tax auditor Rod Hutchings (from Sramek Hightower CPAs in Anchorage) was in town from Monday, July 31st until Friday, August 4th. Mr. Hutchings audited twenty local businesses and his findings should be available soon.
- The Planning Commission met on Tuesday, August 1st to begin the process of making recommendations for the next round of building abatements. Their final list should be approved at the September meeting so that the Council can complete its own process prior to snowfall.
- The Utility Manager and I met with NHTI (the subcontractor for the Quintillion fiber project) on Wednesday, August 2nd to discuss granting a property easement for buried fiber at East End Park. In more exciting news, we have been repeatedly assured that the fiber will be lit by Christmas.
- On Thursday, August 3rd, Rural Cap was in town to discuss acquiring lots that we recently completed tax foreclosures on. Rural Cap is interested in bringing what's called a "sweat equity" program to Nome. They're also interested in the vacant lots along Greg Kruschek Avenue, despite the fact that utilities and fill aren't present.
- Our 2nd Annual Summer Cleanup is now officially in the books. The event kicked off at the Nome Municipal Cemetery on Sunday, August 6th with twelve volunteers (six City employees, five Seaside residents, and one "Good Samaritan"). As requested, we'll also hold a "U-Call, We Haul" event in early October before snowfall.
- On Tuesday, August 8th, a structural engineer from Bristol was in town to begin preparing bid documents for both the Mini Convention Center's roof replacement and the Public Works Garage's floor replacement. While he was here, we asked him to perform a cursory inspection of the Nome-Beltz high school and apartment complex. His report should be available soon, and the project bid documents are due out by the end of the month.
- On Wednesday, August 9th, Mayor Beneville, Port Director Baker, Harbormaster Stotts, and I all met with the U.S. Department of Transportation Marine Administration (MARAD) to continue discussions on the eventual construction of a deep water port in the Arctic.
- The Finance Director and I met with representatives from Northrim Bank on Thursday, August 10th. On the heels of the recent decision by NJUS (through the Council) to use Northrim to finance the fuel loan, the City's accounts have become a hot commodity. No official proposal from Northrim has been submitted yet.

- And just like that, election season is upon us! The following seats will be on the ballot in this year's municipal election: Mayor Beneville, Councilman Sparks, Councilman Green, Utility Board Member Knodel, Utility Board Member Emmons, School Board Member Reader, and School Board Member Arrington. Candidacy opens on August 21st and closes on September 12th. The election will be held on Tuesday, October 3rd.
- Lieutenant Governor Byron Mallot is planning a trip to Nome and Elim on the weekend of Friday, August 18th. Please keep your schedules free on Friday night, as the City will most likely host a meet-and-greet at the Richard Foster Building.
- The Crystal Serenity has set its return date to Nome as Sunday, August 20th. The 2nd Annual Nome Berry Festival (music, games, speakers, and vendors) is slated for Anvil City Square from 11:00 until 6:00. This year, the rain contingency plan is the Rec Center instead of the Mini.
- Per the Council's request, a work session on battling public inebriation with Behavioral Health Services (BHS), the Nome Emergency Shelter Team (NEST), and the Community Alcohol Safety Team (CAST) has been scheduled for Monday, August 28th at 5:30.
- Please see the attached inspection report of the City Hall and Rec Center boilers. *Attachment 5.*
- Please see the attached inspection report of the auxiliary building (Anvil City Science Academy, AKDOT Offices, and apartment/dormitory complex) on the Nome-Beltz campus. *Attachment 6.*
- As requested by Councilman Andersen, please see the attached minutes from the Museum & Library Commission meetings that have occurred since the Richard Foster Building's Grand Opening last October. *Attachment 7.*



Memo

To: Tom Moran – City Manager
From: Joy L. Baker – Port Director *JLB*
CC: Mayor & Nome Common Council
Nome Port Commission
Date: 8/11/2017
Re: Port & Harbor Report/Projects Update – August 2017

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

Administrative:

Port personnel remain busy meeting the demands of heavy Port traffic which this year is leaning towards an increase in the research vessel category. Harbor congestion remains a consistent problem with numerous cargo/fuel barges and research/sailing vessels mixing with a growing fishing tender fleet and larger mining barges. Small maintenance items are ongoing with a mixture of Public Works and Port staff, as well as the final planning for two larger projects scheduled for late August at the barge ramp pad.

The F17 Port Budget at 11 Aug 2017 shows revenue at 32.7% – with 12.8% expended. All 4 Port vehicles remain in service and are currently operating with no deficiencies.

Causeway:

Arctic Deep Draft Port (ADDP) Study:

Discussions are ongoing with the Alaska District regarding a potential path forward under a WRRDA 2014 Section 2105, which would allow for the completion of the study and development of a Chief's Report on an ADDP at Nome. The final report would be submitted to Congress for authorization and funding. We are waiting for a draft scope and budget for this path to determine the practicality of this option.

The project is once again back on the radar of numerous federal agencies, as we continue to receive calls and visits from our friends back east looking for updates on vessel traffic and site visits to understand the project scope. We are hopeful this means that the increasing Arctic activity and critical need for infrastructure is gaining more awareness at the federal agency and congressional levels.

Port Industrial Pad:

Industrial Pad Development:

The final quantities of the post-dredge survey for the winter river excavation have been crunched, and show approximately 60% of the material was captured last spring, with 40% or 4,960 CY remaining for spring 2018.

Progress on the Thornbush site continues with Q Trucking hauling borrow material into the pad as weather and schedules allow. Adjustments to the project material quantities are currently being made to increase the borrow fill to allow for a larger footprint during this initial construction, which will also extend the final completion date out to 30 September 2017.

External Facilities:

Cape Nome:

Knik continued with rock production through the end of July and early August, with the equipment operator and project inspector returning to the site on 10 August 2017 to resume placement of stone on the jetty. Barring any significant weather events, the project could see completion by the end of August.

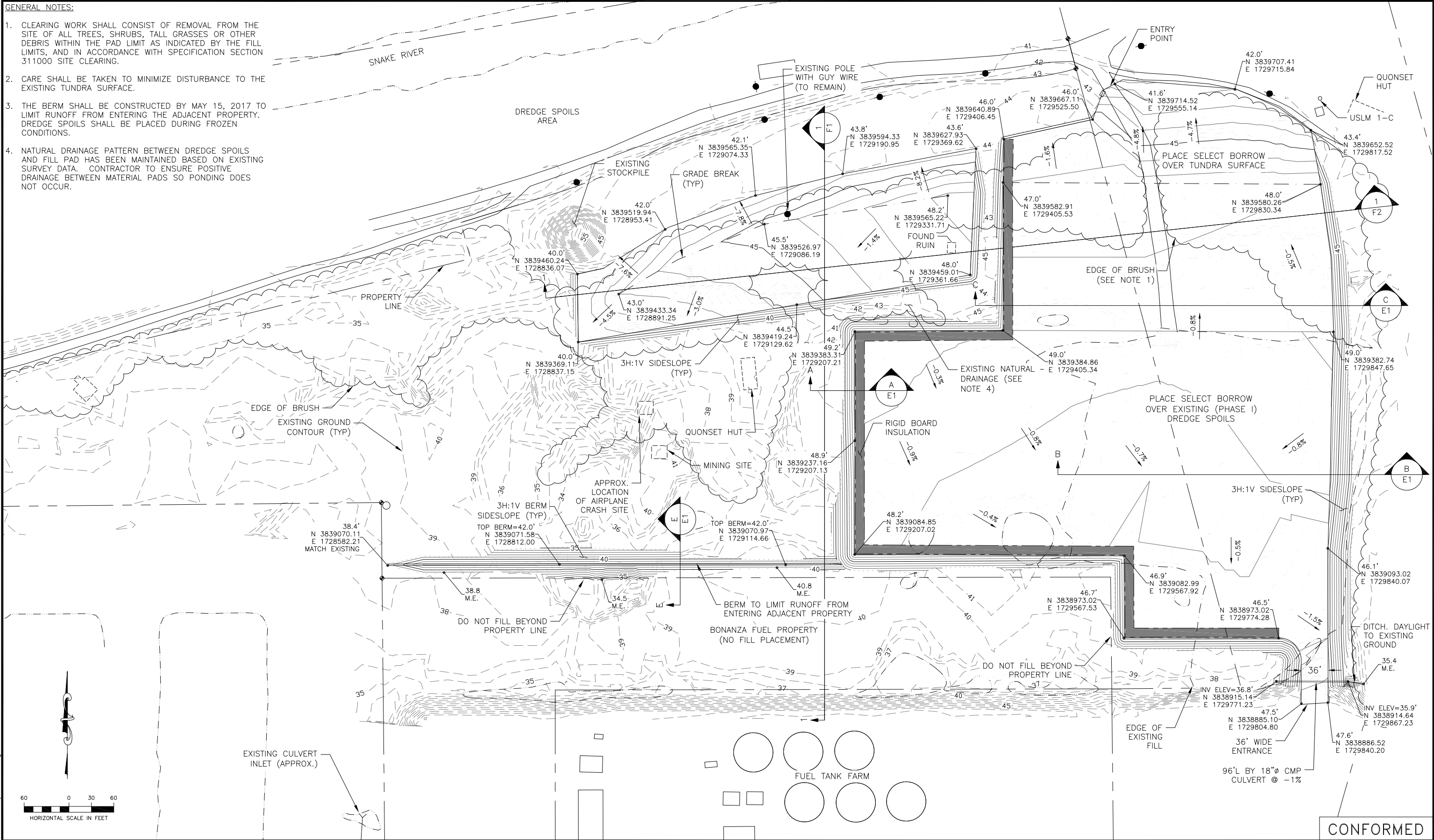
We are still awaiting the formalized PW17 and award package revision from DHS, that was reviewed and approved by FEMA to account for redesign and reduced quantities on the project.

Port Security Cameras:

Arctic Fire & Security (AFS) is in the process of procuring cameras, servers, workstations and related equipment to complete the project. The City is in the process of procuring the associated materials to connect the cameras into the existing fiber network, and NJUS has scheduled installation of a few new poles, as well as coordinating with AFS for line truck use for camera installs. The project is on schedule with an anticipated completion date of 15 September 2017.

Additional information on any of these projects is available upon request.

User: DTANNAHILL Aug 09, 2017 - 1:25pm
Drawing: K:\JOBS\32114030 PORT PAD EXP\ACAD-DESIGN\CIVIL DESIGN\32114030_D1_CONFORMED-REV2.DWG - Layout: D1
Xrefs: (DIESEL evaluation failed) - Images: CITY_NOME_SEAL_COLOR.JPG



NOME BATH HOUSE

ARCHITECTURAL DESIGN NARRATIVE

PROJECT SUMMARY

The building will provide a facility for public access to bathing, restrooms and a laundry. It is intended to be available for use from late spring to early fall season. During the remainder of the year, only minimal temperature will be maintained in the mechanical area.

DESIGN CRITERIA

Project design is in accordance with latest adopted codes and standards including:

- International Building Code
- International Mechanical Code
- Uniform Plumbing Code
- ASHRAE 62.2-2010

DESIGN DESCRIPTION

The facility will consist of 690 square feet concrete structure (walls and floor) with a wood framed roof/ceiling system. The roof will consist of a plywood deck, mylar/bitumastic membrane, 1x4 furring and 24 gauge flouro-coated metal roofing panels, trim and soffit. The ceiling will consist of 10 mil polyethylene vapor retarder, 5/8" cement fiber "type X" rated ceiling board and FRP finish material. The exterior wall will consist of the concrete structure, 4" furring with the cavity space filled with fiberglass batt insulation, exterior sheating, Vaproshield wicking membrane, 1" airspace furring and intergrated color heavy thickness vinyl siding.

Interior finishes will consist of Natatorium-rated polyurethane coatings. The floor coating will have non-skid texture material integrated into the material. Colors will be light toned picked by the owner from the manufacturer's color pallat.

All doors and frames will be galvanized and coated with polyurethane finish. Hardware will be Grade 1, brushed stainless steel for exterior applications. Latch sets will have lever handles and keyed to owner's requirements.

See attached plans for floor plan options.

EEIS CONSULTING ENGINEERS, INC.
NOME BATH HOUSE

STRUCTURAL NARRATIVE

Codes and References

Design of the building structural will follow the architectural concept and will conform to the latest adopted editions of the following building codes with amendments and revisions as adopted by the authority having jurisdiction.

IBC 2012	International Building Code
ASCE 7-10	Minimum Design Loads for Buildings
ACI 318-11	Building Code Requirements for Structural Concrete
NDS 2012	National Design Specification for Wood Construction

Structural Loads

Dead	50 psf Concrete walls 10 psf wood walls 15 psf roof
Snow	50 psf
Wind	160 mph Exposure D
Seismic	$C_s = 12.3\%$ $S_{DS} = 0.490$
Soil Brg	4000 psf net effective at 42" depth

Structural System Concept

The structure has been determined to consist of an 8" reinforced concrete foundation wall on continuous reinforced concrete footings at the building perimeter. All walls above grade, both exterior and interior, will be 4" reinforced concrete. The exterior walls will be furred out with 2x6 studs and plywood to hold insulation and cement board siding. The interior reinforced concrete walls will stand directly on the 4 inch floor slab. The top of the exterior wall will have a PT 4x10 plate anchored to the concrete wall. The roof system will consist of pre-engineered trusses and a 3/4 inch plywood deck. There will be a three foot overhang at both the eaves and the gable end.

For Further Design

The remainder of the design process will refine the structural system. Details will be developed which give specifics about concrete reinforcement and wood connections. The roof will be designed to resist wind uplift. Concrete shearwall details will be shown in elevation view. In combination with architectural design, details around openings will be refined. Material specifications and general notes will be refined.

NOME BATH HOUSE

MECHANICAL DESIGN NARRATIVE

MECHANICAL SYSTEM SUMMARY

The building will be provided with water heater, electric radiant heat panels, individual exhaust, and powder coated stainless steel plumbing fixtures. The building is intended to have seasonal operation.

The building heat will include electric radiant panels for each shower, toilet room and laundry room.

Ventilation system will consist of individual exhaust fans for each toilet room, and shower.

Domestic water heating will be two oil fired water heaters with 125 gallon storage tanks.

The building will not be sprinklered.

Controls will be electric/electronic for equipment and zone control.

DESIGN CRITERIA

Project design is in accordance with latest adopted codes and standards including:

- International Building Code
- International Mechanical Code
- Uniform Plumbing Code
- ASHRAE 62.2-2010

DESIGN CONDITIONS

Climate Zone 8 per International Energy Conservation Code. Winter Outdoor design temperature -28 degrees F per 2013 ASHRAE Handbook of Fundamentals. Seasonal low outdoor temperature is 28°F per May Monthly Climatic Design Conditions.

Monthly Climatic Design Conditions per 2013 ASHRAE Handbook of Fundamentals

	May	June	July	August	September
Average	36.8°F	47.8°F	52.1°F	50.3°F	43.0°F
Temperature					
Standard	8.35°F	6.78°F	5.53°F	4.93°F	6.74°F
Deviation					

Indoor heating design temperature 72 degrees F.

Heat loss calculations will be performed per 2013 ASHRAE Handbook of Fundamentals.

UTILITY REQUIREMENTS

Water: A 1-1/2" water service is required for domestic purposes. Domestic water is estimated to be 45 GPM. Water pressure available to the site is estimated to be at least 45 psi static.

Sanitary Sewer: A 4" sanitary sewer is required for the project which will discharge to city sewer.

COOLING

Mechanical cooling is not required or provided for this project.

VENTILATION

Mechanical ventilation is not required or provided for this project except for exhaust as discussed below.

EXHAUST VENTILATION

Exhaust ventilation systems will be as follows:

- 50 CFM exhaust fan with timer switch.
- Each shower room and toilet room will have an individual exhaust fan.

SUPPLY AIR SYSTEMS

Mechanical room combustion air through gravity openings.

Laundry makeup through screened louvers in door.

HEATING

Each shower and toilet room will have a 750 watt 24x48 electric radiant panel.

Laundry room shall be heated by a 5 KW ceiling mounted cabinet unit heater.

Mechanical room will be heater by a 5 KW unit heater.

TEMPERATURE CONTROLS

Factory analog electric/electronic controls for heating units and timer switches for exhaust fans.

PLUMBING

Total domestic water demand is 45 GPM requiring a 1-1/2" domestic service. The water pressure available is 45 psi. Domestic water mains and connections to public fixtures will be Type L copper.

Sanitary soil, waste and vent piping will be cast iron with no-hub fittings.

Water closets and lavatories will be stainless steel penal-ware. Lavatories will be provided with individual thermostatic mixing valves. Floor drains will be provided in mechanical room, laundry room, toilet rooms and shower rooms. Showers will have coin operated timers.

Domestic hot water will be generated with two fuel oil fired water heaters, equal to PVI Maxim 20L 125A-MXO, 199 MBH, 125 gallons storage. Water heater will be provided with expansion tank, thermostatic mixing.

Hot water will be insulated with 1/2 inch insulation. Cold water will be insulated with 1 inch insulation and vapor barrier jacket.

Air compressor for seasonal blow down of piping.

FUEL PIPING

All fuel piping shall be above ground, provide Schedule 40 ASTM A53 steel piping.

Provide Tigerloop Ultra de-aerator with filter for each water heater.

Above-ground 500 gallon double wall fuel tank and 25 gallon day tank with duplex pumps.

FIRE PROTECTION

The building will not be sprinklered.

ELECTRICAL NARRATIVES

Codes and References

Design of electrical power and lighting will conform to the latest adopted editions of the following building codes with amendments and revisions as adopted by the authority having jurisdiction.

NFPA 70 – National Electrical Code
NFPA 72 – National Fire Alarm Code
NFPA 101 – Life Safety Code
IEEE NESC National Electrical Safety Code
Illuminating Engineering Society of North America (I.E.S.N.A.) Lighting Handbook
IBC - International Building Code
IMC - International Mechanical Code
NESC – National Electrical Safety Code

Electrical Service and Distribution

Load calculations based on the proposed equipment show that a service rating of 240VAC 200A is required to provide 22% spare capacity for the Nome Bathhouse/Laundry. This load is calculated using worst case mechanical loads and the washer and dryer loads. If the laundry is not selected then the connected load would be less, however we still recommend a 200 Amp, 240 Vac service for either design.

General Power

Branch Circuit Grounding will be provided by separate grounding conductor runs in the same conduit with branch circuit conductors. Minimum requirements for interior branch circuits will be #12 wire. #10 wire will be provided for 20 amp circuits, with radial lengths in excess of 75 feet.

IMC conduit with a minimum size of ½" will be used for interior branch circuits. The final connection to mechanical equipment will consist of 3' of flexible metallic conduit. Connections to pumps or other mechanical equipment in areas that may be subject to water spray will be provided with liquid tight flexible metallic conduit.

20 amp, heavy duty receptacles will be provided throughout the building at 24 inches above the finished floor as required for convenience or to serve specific appliances and as shown on the drawings. Additionally USB charging ports are recommended in the receptacle adjacent to the waiting area in the laundry.

GFCI receptacles with 5mA ground fault trip ratings will be provided for interior receptacles adjacent to a water source and on the building exterior, we have accounted for one exterior receptacle to power the change machine. Exterior GFCI receptacles will be mounted in cast boxes, listed for wet locations, with spring loaded "in-use" covers with rubber gaskets.

Receptacles for other than 20 amp, 120 volt circuits will be provided from dedicated circuits, with ampere ratings, voltage ratings and grounding configurations to meet the specific requirements of the equipment to be connected such as the washers and dryers.

Lighting

Switches will be 20 amp, heavy duty, silent type located at entries inside the controlled area at a height of 48" above the floor. Switches at doors will be located adjacent to the open swing. We recommend a standard snap switch to control the lights in the mechanical/electrical space and prison grade occupancy sensors located in the bathrooms and showers. Note the exhaust fans will be controlled with the lighting with a delayed off.

Currently our plan shows exterior LED wall packs located over each door.

General area illumination will be provided with surface mounted LED fixtures with a color rendering index greater than 80. Interior lighting levels will be provided in accordance with IESNA guidelines.

Exterior fixtures will be building-mounted, photocell-controlled, wet and salt spray rated, LED with a cutoff distribution to control glare. We provided enough exterior lighting to illuminate the path of egress.

Emergency lighting in will be provided by wall mounted fixtures with twin lamp heads and nickel cadmium back-up batteries in the mechanical/electrical space and emergency ballast fixtures in the bathrooms and showers. In the event of a power outage, emergency lighting fixtures will provide an average illumination of 1 f.c. and a minimum illumination of 0.1 f.c. along routes of building egress.

Egress routes and building exits will be indicated by illuminated exit signs. Exit signs will be furnished with battery back-up and Light Emitting Diodes. In accordance with current IBC, a remote emergency lamp connected to an interior mounted battery back-up unit will be provided to illuminate the exterior immediately outside of the building exit.

Telecommunications

Conduit and wiring for Communications/Data System to Category 5e standards will be designed and terminated back at a common terminal board.

Security:

We are showing locations for four IP CCTV cameras that will be terminated back at a common terminal board shown adjacent to the panelboard

35% DESIGN SUBMITTAL
CONSTRUCTION COST ESTIMATE

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA

PREPARED FOR:

EEIS Consulting Engineers, Inc.
624 West International Airport Road, Suite 104
Anchorage, Alaska 99518

June 20, 2017



NOTES REGARDING THE PREPARATION OF THIS ESTIMATE

DRAWINGS AND DOCUMENTS

Level of Documents: (15) 35% design drawings and systems narratives
Date: June 14, 2017
Provided By: EEIS Consulting Engineers, Inc. and MBA Consulting Engineers, Inc. of Anchorage, Alaska

RATES

Pricing is based on current material, equipment and freight costs.

Labor Rates: A.S. Title 36 working 60 hours per week
Premium Time: 16.70%

BIDDING ASSUMPTIONS

Contract: Standard construction contract without restrictive bidding clauses
Bidding Situation: Competitive bids assumed
Bid Date: April 2018
Start of Construction: June 2018
Contract Time: (5) months, including submittals, procurement, etc.
Months to Complete: (4) months

EXCLUDED COSTS

1. A/E design fees
2. Administrative and management costs
3. Contaminated soils remediation, if found during construction
4. Any other work not related to this project

NOTES REGARDING THE PREPARATION OF THIS ESTIMATE (Continued)

GENERAL

When included in HMS Inc.'s scope of services, opinions or estimates of probable construction costs are prepared on the basis of HMS Inc.'s experience and qualifications and represent HMS Inc.'s judgment as a professional generally familiar with the industry. However, since HMS Inc. has no control over the cost of labor, materials, equipment or services furnished by others, over contractor's methods of determining prices, or over competitive bidding or market conditions, HMS Inc. cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from HMS Inc.'s opinions or estimates of probable construction cost.

This estimate assumes normal escalation based on the current economic climate. While the global economic downturn appears to be moderating, it remains unclear how its effects and subsequent economic recovery will affect construction costs. HMS Inc. will continue to monitor this, as well as other international, domestic and local events, and the resulting construction climate, and will adjust costs and contingencies as deemed appropriate.

GROSS FLOOR AREA

Bath House and Laundry Area	<u>690 SF</u>
-----------------------------	---------------

HMS Project No.: 17068

35% DESIGN COST SUMMARY

	<i>Material</i>	<i>Labor</i>	<i>Total</i>
01 - SITE WORK			
Site Preparation and Improvements	\$ 11,899	\$ 11,344	\$ 23,243
Site Mechanical	22,981	19,934	42,915
Site Electrical	1,704	3,361	5,065
02 - SUBSTRUCTURE	19,125	18,072	37,197
03 - SUPERSTRUCTURE	27,083	34,661	61,744
04 - EXTERIOR CLOSURE	24,985	14,176	39,161
05 - ROOF SYSTEMS	10,198	7,838	18,036
06 - INTERIOR CONSTRUCTION	8,477	9,916	18,393
07 - CONVEYING SYSTEMS	0	0	0
08 - MECHANICAL	53,464	44,011	97,475
09 - ELECTRICAL	35,065	31,265	66,330
10 - EQUIPMENT	10,040	770	10,810
11 - SPECIAL CONSTRUCTION	0	0	0
<i>SUBTOTAL DIRECT WORK:</i>	<i>\$ 225,021</i>	<i>\$ 195,348</i>	<i>\$ 420,369</i>
12 - GENERAL REQUIREMENTS			291,125
<i>SUBTOTAL:</i>			<i>\$ 711,494</i>
13 - CONTINGENCIES			94,002
TOTAL ESTIMATED CONSTRUCTION COST (BID SPRING 2018):			\$ 805,496
COST PER SQUARE FOOT:			\$ 1,167.39 /SF
GROSS FLOOR AREA:			690 SF

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA
35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 5

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Preparation and Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE \$	TOTAL \$	RATE \$	TOTAL \$	UNIT RATE \$	MATERIAL/LABOR \$
Site survey and staking	0.11	AC	1000.00	110	7000.00	770	8000.00	880
Erosion and pollution control	4,060	SF	0.03	122	0.07	284	0.10	406
Temporary nylon construction fencing and posts	290	LF	3.90	1,131	2.50	725	6.40	1,856
Traffic control (minimal)	1	LOT	150.00	150	250.00	250	400.00	400
Grade existing site pad	4,750	SF			0.18	855	0.18	855
Average 6" gravel fill to raise elevation	106	CY	38.00	4,028	10.00	1,060	48.00	5,088
Finish grade parking area	4,060	SF			0.20	812	0.20	812
4" mesh reinforced concrete apron around building	620	SF	4.70	2,914	4.25	2,635	8.95	5,549
Cut and patch road for utilities	300	SF	3.70	1,110	4.20	1,260	7.90	2,370
ADA parking sign	1	EA	165.00	165	130.00	130	295.00	295
6'0" fencing at fuel tank	33	LF	43.00	1,419	20.00	660	63.00	2,079
5'0"x6'0" gate	1	EA	750.00	750	280.00	280	1030.00	1,030
SUBTOTAL:				\$ 11,899		\$ 9,721		\$ 21,620
Labor Premium Time	16.70%					1,623		1,623
TOTAL ESTIMATED COST:				\$ 11,899		\$ 11,344		\$ 23,243

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 6

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

WATER

12" insulated CMP jacket with 4" diameter carrier pipe and 2" diameter HDPE water line	56	LF	43.00	2,408	48.50	2,716	91.50	5,124
12"x4"x2" fittings/couplings	4	EA	140.00	560	175.00	700	315.00	1,260
2" fitting and connection to existing 10" diameter water main, including NJUS connection fee	1	LOT	1500.00	1,500	500.00	500	2000.00	2,000
2" gate valve and box	1	EA	380.00	380	255.00	255	635.00	635
12"x4"x2" building connection and sleeve	1	LOT	185.00	185	220.00	220	405.00	405
Test and disinfect piping	1	LOT	50.00	50	175.00	175	225.00	225

SEWER

14" insulated CMP jacket with 6" diameter carrier pipe and 4" diameter HDPE sewer line	46	LF	47.00	2,162	52.00	2,392	99.00	4,554
14"x6"x4" fittings/couplings	4	EA	170.00	680	210.00	840	380.00	1,520
4" fitting and connection to 8" diameter sewer main, including NJUS connection fee	1	EA	1200.00	1,200	500.00	500	1700.00	1,700
4" cleanout, tee, and box	1	EA	370.00	370	255.00	255	625.00	625
14"x6"x4" building connection and sleeve	1	EA	210.00	210	235.00	235	445.00	445
Pressure test piping	1	LOT	50.00	50	150.00	150	200.00	200

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 7

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FUEL OIL

500 gallon, double wall, skid mounted fuel tank complete with vents, manholes, etc.	1	EA	3475.00	3,475	950.00	950	4425.00	4,425
Warning labels and signs	1	LOT	100.00	100	50.00	50	150.00	150
Fill fuel tank with #2 fuel	500	GALS	3.00	1,500			3.00	1,500
1/2" to 3/4" diameter fuel lines and brackets (2)	30	LF	8.70	261	12.50	375	21.20	636
1/2" to 3/4" diameter valves and flexible connections	2	EA	57.00	114	75.00	150	132.00	264
Tank and building connections	4	EA	28.00	112	45.00	180	73.00	292
Test system	1	LOT	50.00	50	150.00	150	200.00	200

TRENCHING FOR WATER AND SEWER MAINS

Excavate and dispose	160	CY			10.00	1,600	10.00	1,600
Bedding material	13	CY	38.00	494	10.00	130	48.00	624
Native NFS backfill, compacted	177	CY	17.00	3,009	8.50	1,505	25.50	4,514
6" PVC marker tape (2)	90	LF	0.32	29	0.23	21	0.55	50
Dewatering allowance (15% of trenching)	24	CY	10.50	252	7.75	186	18.25	438

SUBTOTAL:				\$ 19,151		\$ 14,235		\$ 33,386
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PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 8

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					2,377		2,377
SUBTOTAL:				\$ 19,151		\$ 16,612		\$ 35,763
Subcontractor's Overhead and Profit on Material and Labor	20.00%			3,830		3,322		7,152
TOTAL ESTIMATED COST:				\$ 22,981		\$ 19,934		\$ 42,915

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 9

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

POWER

200 amp, 3 wire overhead power to building from existing pole	50	LF	6.50	325	8.70	435	15.20	760
Pole connections and surge arrestors	3	EA	150.00	450	225.00	675	375.00	1,125
Building weatherhead connection	1	EA	50.00	50	110.00	110	160.00	160

TELECOMMUNICATIONS

Overhead telecommunications cables to building from existing pole (2)	100	LF	3.70	370	5.50	550	9.20	920
Pole connections	1	LOT	75.00	75	120.00	120	195.00	195
Building weatherhead connection	1	LOT	50.00	50	110.00	110	160.00	160

MISCELLANEOUS

Test and tag electrical system	1	LOT	100.00	100	400.00	400	500.00	500
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SUBTOTAL:				\$ 1,420		\$ 2,400		\$ 3,820
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Labor Premium Time	16.70%					401		401
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SUBTOTAL:				\$ 1,420		\$ 2,801		\$ 4,221
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HMS Project No.: 17068

01 - SITE WORK Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Subcontractor's Overhead and Profit on Material and Labor	20.00%	284	560	844
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TOTAL ESTIMATED COST:	\$ 1,704	\$ 3,361	\$ 5,065
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HMS Project No.: 17068

02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FOUNDATIONS

Excavate and backfill for foundations	78	CY	17.00	1,326	10.50	819	27.50	2,145
4,000 psi concrete strip footings, including waste, direct poured	5	CY	375.00	1,875	120.00	600	495.00	2,475
8" concrete foundation walls, direct poured	9	CY	375.00	3,375	135.00	1,215	510.00	4,590
Bar reinforcement	1,700	LBS	0.75	1,275	0.70	1,190	1.45	2,465
Formwork to footings	175	SF	2.10	368	5.20	910	7.30	1,278
Formwork to walls	668	SF	2.90	1,937	6.15	4,108	9.05	6,045
5/8"x12" 'J' embedded anchor bolts, 16" o/c	80	EA	8.50	680	15.00	1,200	23.50	1,880
Membrane waterproofing	456	SF	1.75	798	2.20	1,003	3.95	1,801
2" rigid insulation	456	SF	0.90	410	0.50	228	1.40	638
1/8"x14"x22 gauge insulation protection cover	105	LF	2.15	226	1.50	158	3.65	384

SLAB ON GRADE

6" NFS fill under slab, compacted	14	CY	22.00	308	8.50	119	30.50	427
4" concrete slab, including waste, direct poured	9	CY	375.00	3,375	115.00	1,035	490.00	4,410
Extra for thickened slab at interior walls	2	CY	375.00	750	130.00	260	505.00	1,010

HMS Project No.: 17068

02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SLAB ON GRADE (Continued)

Extra for drain slopes	240	SF			1.50	360	1.50	360
Cure and finish slab	619	SF	0.30	186	1.25	774	1.55	960
Extra for non-skid floor coating integrated into slab	619	SF	2.70	1,671	1.50	929	4.20	2,600
6"x6"-W1.4x1.4 mesh reinforcement	619	SF	0.55	340	0.40	248	0.95	588
1/2"x4" construction joints	150	LF	1.50	225	2.20	330	3.70	555
SUBTOTAL:				\$ 19,125		\$ 15,486		\$ 34,611
Labor Premium Time	16.70%					2,586		2,586

TOTAL ESTIMATED COST:	\$ 19,125	\$ 18,072	\$ 37,197
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PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

INTERIOR AND EXTERIOR CONCRETE WALLS

4" concrete walls, including waste, direct poured	22	CY	375.00	8,250	140.00	3,080	515.00	11,330
Bar reinforcement	2,750	LBS	0.75	2,063	0.70	1,925	1.45	3,988
Formwork to each side (3 uses)	3,602	SF	2.20	7,924	5.50	19,811	7.70	27,735
Extra for door blocking	136	LF	1.55	211	2.70	367	4.25	578

ROOF STRUCTURE

4'0" peak x 2" pre-engineered wood trusses, 24" o/c (15)	515	LF	9.20	4,738	3.50	1,803	12.70	6,541
3/4" CDX plywood sheathing	1,093	SF	1.05	1,148	0.90	984	1.95	2,132
2"x blockings	205	LF	0.70	144	1.50	308	2.20	452
Vent baffles, 24" o/c	52	EA	16.00	832	20.00	1,040	36.00	1,872

MISCELLANEOUS

Special inspections of structure	1	LOT	1500.00	1,500			1500.00	1,500
Temporary shoring	1,093	SF	0.25	273	0.35	383	0.60	656

SUBTOTAL:				\$ 27,083		\$ 29,701		\$ 56,784
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HMS Project No.: 17068

03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					4,960		4,960

HMS Project No.: 17068

04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

EXTERIOR WALLS/SOFFITS

2"x6" treated wood sill plate anchored to concrete foundation wall	81	LF	2.70	219	1.75	142	4.45	361
2"x6" top plate	105	LF	1.50	158	1.60	168	3.10	326
3"x10" wood wall cap	105	LF	4.50	473	2.25	236	6.75	709
2"x6" studs, 16" o/c at walls and gables	810	LF	1.10	891	1.25	1,013	2.35	1,904
6 mil vapor retarder	1,085	SF	0.07	76	0.10	109	0.17	185
6" R-19 batt insulation	1,085	SF	0.80	868	0.45	488	1.25	1,356
5/8" CDX plywood sheathing	1,085	SF	0.75	814	0.70	760	1.45	1,574
Frog skin vapor retarder	1,085	SF	0.18	195	0.22	239	0.40	434
Royal AlumiPro aluminum siding and trims (net area)	917	SF	8.45	7,749	3.50	3,210	11.95	10,959
22 gauge prefinished metal soffit fixed to truss tails	263	SF	5.20	1,368	2.70	710	7.90	2,078
10" metal fascias	122	LF	2.55	311	1.90	232	4.45	543
Extra for cutting mechanical vent openings (13)	10	SF			7.50	75	7.50	75

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA
35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

DOORS

3'0"x7'0" insulated galvanized steel frames anchored to concrete walls	8	EA	195.00	1,560	110.00	880	305.00	2,440
3'0"x7'0"x1 3/4" insulated galvanized steel, polyurethane coated single doors	8	EA	385.00	3,080	70.00	560	455.00	3,640
Single door hardware to mechanical room	1	EA	520.00	520	295.00	295	815.00	815
Single door hardware to showers and laundry with panic hardware	7	EA	770.00	5,390	340.00	2,380	1110.00	7,770

MISCELLANEOUS

2"x12" high 'Bath House' letters mounted to exterior walls	18	EA	48.50	873	25.00	450	73.50	1,323
1"x4" door name plate signs	8	EA	55.00	440	25.00	200	80.00	640

SUBTOTAL:				\$ 24,985		\$ 12,147		\$ 37,132
Labor Premium Time	16.70%					2,029		2,029

TOTAL ESTIMATED COST:				\$ 24,985		\$ 14,176		\$ 39,161
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PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA
35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Note: Above soffit insulation with Interior Construction.

Ice/water shield (assumed)	1,093	SF	0.75	820	0.70	765	1.45	1,585
Prefinished standing seam metal roofing	1,093	SF	5.80	6,339	3.50	3,826	9.30	10,165
12" wide ridge vent with filter fabric	30	LF	6.75	203	3.80	114	10.55	317
Eave/gable flashings	122	LF	2.20	268	1.70	207	3.90	475
Snow guards at mechanical vents (3)	3	SF	75.00	225	50.00	150	125.00	375
12" diameter x 18" flue flashing	1	EA	60.00	60	75.00	75	135.00	135
6" diameter x 12" vent flashings	2	EA	42.00	84	70.00	140	112.00	224

MISCELLANEOUS

Temporary fall protection railings	128	LF	3.90	499	2.50	320	6.40	819
SUBTOTAL:				\$ 8,498		\$ 5,597		\$ 14,095
Labor Premium Time	16.70%					935		935
SUBTOTAL:				\$ 8,498		\$ 6,532		\$ 15,030
Subcontractor's Overhead and Profit on Material and Labor	20.00%			1,700		1,306		3,006
TOTAL ESTIMATED COST:				\$ 10,198		\$ 7,838		\$ 18,036

HMS Project No.: 17068

06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Concrete partitions	1	LOT						With Element 03
Doors	1	LOT						None

FINISHES

Floors

Floor coating	619	SF						With Element 02
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Walls

Polyurethane coating to concrete walls (sub)	2,489	SF	0.30	747	1.75	4,356	2.05	5,103
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Ceilings

12" R-30 fiberglass insulation above ceiling	689	SF	1.15	792	0.60	413	1.75	1,205
6 mil vapor retarder	689	SF	0.07	48	0.10	69	0.17	117
5/8" FRP panels and trims at ceilings	689	SF	3.95	2,722	2.50	1,723	6.45	4,445
Paint door frames (sub)	136	LF	0.80	109	3.50	476	4.30	585

Note: Doors are factory finished.

SPECIALTIES

Vandal Proof Toilet Accessories

Twin roll toilet paper holders	2	EA	43.00	86	25.00	50	68.00	136
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HMS Project No.: 17068

06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SPECIALTIES (Continued)

Vandal Proof Toilet Accessories (Continued)

18"x30" stainless steel mirrors	2	EA	152.00	304	45.00	90	197.00	394
42" grab bars and blockings	2	EA	58.00	116	35.00	70	93.00	186
30" grab bars and blockings	6	EA	45.00	270	30.00	180	75.00	450
Sanitary napkin disposal	1	EA	48.00	48	20.00	20	68.00	68
Paper towel dispensers	2	EA	67.00	134	25.00	50	92.00	184
Soap dispensers	6	EA	28.00	168	15.00	90	43.00	258
Twin coat hooks at toilets	2	EA	13.00	26	10.00	20	23.00	46

MISCELLANEOUS

18" deep x 36" wall mounted stainless steel benches at showers	4	EA	545.00	2,180	150.00	600	695.00	2,780
4-hook, 30" clothes pegs	4	EA	58.00	232	30.00	120	88.00	352
18" deep x 60" laundry room counter	1	EA	365.00	365	120.00	120	485.00	485
10# bracket mounted fire extinguishers	2	EA	65.00	130	25.00	50	90.00	180

SUBTOTAL:

\$ 8,477

\$ 8,497

\$ 16,974

TOTAL ESTIMATED COST:	\$ 8,477	\$ 9,916	\$ 18,393
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HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

PLUMBING

Note: All fixtures are penal ware type.

P-1: Elongated bowl barrier free water closets with concealed lever flush valve	2	EA	845.00	1,690	230.00	460	1075.00	2,150
P-2: Wall mounted lavatories with dual temperature pneumatic mixing valve, thermostatic mixing valve, drains, and faucets	2	EA	670.00	1,340	195.00	390	865.00	1,730
P-3: Shower heads with temperature balance mixing valve	4	EA	345.00	1,380	170.00	680	515.00	2,060
P-4: Washer box assemblies recessed in concrete wall	2	EA	85.00	170	60.00	120	145.00	290
FD-1: 2"x6" round top floor drains with sediment bucket	3	EA	165.00	495	150.00	450	315.00	945
FD-2: 2"x6" round top floor drains with sediment bucket, including hair trap at showers	4	EA	190.00	760	165.00	660	355.00	1,420
FD-3: 4" mechanical room drains (assumed)	2	EA	170.00	340	155.00	310	325.00	650
HB-1: 3/4" lockable non-frost hose bibbs	2	EA	170.00	340	225.00	450	395.00	790
WH-1 and 2: PV Model Maxim 20L-125A, 125 gallon, 199 MBH fuel fired water heater and controls	2	EA	3850.00	7,700	930.00	1,860	4780.00	9,560

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

PLUMBING (Continued)

5" diameter stack through roof	24	LF	23.50	564	17.00	408	40.50	972
Stack caps	2	EA	130.00	260	105.00	210	235.00	470
Hot and cold water connections to washers	2	EA	70.00	140	120.00	240	190.00	380
ET-1: 14 gallon Amtrol expansion tank and valves	1	EA	570.00	570	190.00	190	760.00	760
Plumbing rough-ins to fixtures	8	LOTS	875.00	7,000	1050.00	8,400	1925.00	15,400
Plumbing rough-ins to drains, etc.	3	EA	520.00	1,560	750.00	2,250	1270.00	3,810
Water service entrance assembly with valves and gauges	1	EA	1850.00	1,850	1400.00	1,400	3250.00	3,250
Test and disinfect plumbing	1	LOT	100.00	100	500.00	500	600.00	600

HVAC

EF-1: 50 CFM, fractional HP exhaust fans with timer switch	6	EA	220.00	1,320	115.00	690	335.00	2,010
CUH-1: 300 CFM, 5 KW electric cabinet unit heater	1	EA	565.00	565	180.00	180	745.00	745
UH-1: 350 CFM, 5 KW electric cabinet unit heater	1	EA	640.00	640	210.00	210	850.00	850

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HVAC (Continued)

RP-1: 4'0"x2'0"x0.75 KW radiant heat ceiling panels and valves	6	EA	655.00	3,930	220.00	1,320	875.00	5,250
EF-1: Wall caps	6	EA	67.00	402	75.00	450	142.00	852
6" diameter insulated ducts connected to EF-1 and wall caps (6)	56	LF	9.40	526	6.50	364	15.90	890
6" wall sleeves	6	EA	38.00	228	47.00	282	85.00	510
4" diameter clothes dryer vents (2)	24	LF	5.70	137	3.50	84	9.20	221
4" roof caps	2	EA	55.00	110	65.00	130	120.00	240
4" vent connections to dryers	2	EA	35.00	70	50.00	100	85.00	170
12"x12"x24" combustion air boot inside building	1	EA	95.00	95	75.00	75	170.00	170
12"x12" motor operated damper	1	EA	135.00	135	70.00	70	205.00	205
12"x12"x24" outside air hood with bird screen	1	EA	165.00	165	120.00	120	285.00	285

CONTROLS, TEST, AND BALANCE

Thermostats, including wiring and T-stat lockable boxes	8	EA	93.00	744	75.00	600	168.00	1,344
Electric/electronic controls	18	PTS	290.00	5,220	170.00	3,060	460.00	8,280

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

CONTROLS, TEST, AND BALANCE (Continued)

Test and balance system	16	HRS			160.00	2,560	160.00	2,560
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FIRE PROTECTION None

SPECIAL SYSTEMS

ACC-1: 6 gallon, 1.5 HP, single stage air compressor with control and hose for seasonal piping blow down	1	EA	940.00	940	360.00	360	1300.00	1,300
25 gallon fuel day tank with 3/4 HP pump at controls	1	EA	2475.00	2,475	750.00	750	3225.00	3,225
Tiger loops to burner with deaerators	2	LOTS	137.00	274	155.00	310	292.00	584
1/2" diameter fuel oil piping	30	LF	5.20	156	8.50	255	13.70	411
Burner and day tank connections	4	EA	28.00	112	45.00	180	73.00	292
Test special systems	1	LOT	50.00	50	300.00	300	350.00	350

SUBTOTAL:					\$ 44,553	\$ 31,428		\$ 75,981
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Labor Premium Time	16.70%					5,248		5,248
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SUBTOTAL:					\$ 44,553	\$ 36,676		\$ 81,229
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HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Subcontractor's Overhead and Profit on Material and Labor	20.00%			8,911		7,335		16,246
TOTAL ESTIMATED COST:				\$ 53,464		\$ 44,011		\$ 97,475

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 26

DATE: 6/20/2017

HMS Project No.: 17068

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SERVICE AND DISTRIBUTION

200 amp meter base and socket	1	EA	870.00	870	355.00	355	1225.00	1,225
200 amp disconnect switch	1	EA	520.00	520	170.00	170	690.00	690
240 amp, 32 circuit, 3 wire, 1 phase panel board and directory	1	EA	2125.00	2,125	950.00	950	3075.00	3,075
1 1/4" diameter EMT conduit	20	LF	3.20	64	6.65	133	9.85	197
#3/0 conductors (4)	80	LF	3.40	272	1.85	148	5.25	420
Equipment grounding	1	LOT	170.00	170	225.00	225	395.00	395
Test and tag service and distribution	1	LOT	50.00	50	175.00	175	225.00	225

LIGHTING AND POWER

Note: All fixtures LED type.

Type A/40: 24" long, wall mounted fixtures, wet label, 2,968 LM	4	EA	275.00	1,100	110.00	440	385.00	1,540
Type AE/40: 24" long, wall mounted fixtures with emergency ballast, wet label, 2,968 LM	4	EA	355.00	1,420	125.00	500	480.00	1,920
Type B/70: 48" long wall/ceiling mounted fixtures, 6,541 LM	4	EA	335.00	1,340	120.00	480	455.00	1,820

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA
35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 27

DATE: 6/20/2017

HMS Project No.: 17068

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LIGHTING AND POWER (Continued)

Type C/30: 48" long, surface mounted fixtures, 2,000 LM	6	EA	305.00	1,830	110.00	660	415.00	2,490
Type EM: Twin head, impact resistant emergency lights with battery back-up	3	EA	295.00	885	125.00	375	420.00	1,260
Type EX: Single face exit sign	1	EA	160.00	160	80.00	80	240.00	240
Type EX: Double face exit sign	1	EA	195.00	195	95.00	95	290.00	290
Type X/30: Low profile, wall mounted, weatherproof exterior fixtures, 2,529 LM	13	EA	435.00	5,655	150.00	1,950	585.00	7,605
Photocell and contactor	1	EA	285.00	285	170.00	170	455.00	455
Occupancy sensor	1	EA	115.00	115	75.00	75	190.00	190
Single pole switches	2	EA	12.00	24	45.00	90	57.00	114
Occupancy sensor switches	6	EA	27.00	162	52.00	312	79.00	474
Duplex receptacles	7	EA	12.00	84	45.00	315	57.00	399
Duplex receptacles, GFCI	8	EA	27.00	216	58.00	464	85.00	680
Quadruplex receptacle	1	EA	32.00	32	65.00	65	97.00	97
Special purpose outlets	2	EA	48.00	96	65.00	130	113.00	226

HMS Project No.: 17068

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LIGHTING AND POWER (Continued)

Radiant heat panel connections	6	EA	35.00	210	60.00	360	95.00	570
Thermal switch and mechanical equipment connections	3	EA	78.00	234	120.00	360	198.00	594
1" diameter IM conduit	150	LF	2.30	345	6.10	915	8.40	1,260
3/4" to 1/2" diameter IM conduit	700	LF	1.70	1,190	5.10	3,570	6.80	4,760
#10 wiring (3)	450	LF	1.10	495	5.20	2,340	6.30	2,835
#12 wiring (3)	2,100	LF	0.17	357	0.60	1,260	0.77	1,617
Test and tag lighting and power	1	LOT	150.00	150	450.00	450	600.00	600

SPECIAL SYSTEMS

4'0"x4'0"x3/4" plywood telephone terminal board with duplex receptacle	1	EA	145.00	145	180.00	180	325.00	325
3/4" diameter EMT conduit with pull wires	20	LF	1.30	26	5.70	114	7.00	140
Exterior building mounted IP-CCTV cameras in heated enclosures	4	EA	1645.00	6,580	550.00	2,200	2195.00	8,780
Surveillance recording equipment	1	LOT	1050.00	1,050	370.00	370	1420.00	1,420
1" diameter IM conduit	125	LF	2.10	263	7.20	900	9.30	1,163

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SPECIAL SYSTEMS (Continued)

Power and signal wiring (3)	375	LF	0.75	281	1.20	450	1.95	731
Camera and panel connections	5	EA	35.00	175	50.00	250	85.00	425
Test and tag special systems	1	LOT	50.00	50	250.00	250	300.00	300
SUBTOTAL:				\$ 29,221		\$ 22,326		\$ 51,547
Labor Premium Time	16.70%					3,728		3,728
SUBTOTAL:				\$ 29,221		\$ 26,054		\$ 55,275
Subcontractor's Overhead and Profit on Material and Labor	20.00%			5,844		5,211		11,055

TOTAL ESTIMATED COST:				\$ 35,065		\$ 31,265		\$ 66,330
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PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 30

DATE: 6/20/2017

HMS Project No.: 17068

10 - EQUIPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Top loading commercial clothes washers	2	EA	2750.00	5,500	180.00	360	2930.00	5,860
Front loading commercial clothes dryers	2	EA	2270.00	4,540	150.00	300	2420.00	4,840
Furniture and furnishings	1	LOT						By Owner
SUBTOTAL:				\$ 10,040		\$ 660		\$ 10,700
Labor Premium Time	16.70%					110		110
TOTAL ESTIMATED COST:				\$ 10,040		\$ 770		\$ 10,810

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 6/20/2017

HMS Project No.: 17068

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

MOBILIZATION

Mobilization/demobilization and set-up	1	LOT	1500.00	1,500	3500.00	3,500	5000.00	5,000
Barge freight FOB site	28	TONS	575.00	16,100	100.00	2,800	675.00	18,900
Miscellaneous air freight	750	LBS	1.25	938	0.25	188	1.50	1,126

OPERATION COSTS

Project manager (part time)	160	HRS			115.00	18,400	115.00	18,400
Superintendent/working foreman	5	MOS	150.00	750	7000.00	35,000	7150.00	35,750
Quality control	4	MOS						By Superintendent
Field engineering	24	HRS			95.00	2,280	95.00	2,280
Expediting (part time)	4	MOS	150.00	600	2850.00	11,400	3000.00	12,000
Scheduling and estimating (part time)	3	MOS	150.00	450	3200.00	9,600	3350.00	10,050
Clerical/time keeper (minimal)	4	MOS	100.00	400	1500.00	6,000	1600.00	6,400
Site offices and equipment (minimal)	0	MOS						Not Required
Materials storage van (1)	4	MOS	500.00	2,000			500.00	2,000
Consumables (minimal)	4	MOS	350.00	1,400			350.00	1,400

HMS Project No.: 17068

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

OPERATION COSTS (Continued)

Miscellaneous construction equipment, pick ups, etc.	4	MOS	3200.00	12,800	500.00	2,000	3700.00	14,800
Tools, etc.	4	MOS	1500.00	6,000	200.00	800	1700.00	6,800
Fuel, oil, and gas for equipment (350 gallons per month)	4	MOS	1250.00	5,000			1250.00	5,000
Temporary utilities - power, lighting, water, sewer, etc.	4	MOS	750.00	3,000	150.00	600	900.00	3,600
Communications, faxes, etc.	4	MOS	350.00	1,400			350.00	1,400
Daily loading/unloading (minimal)	4	MOS	125.00	500	525.00	2,100	650.00	2,600
Dumpster (1)	4	MOS	450.00	1,800			450.00	1,800
Porta cans and maintenance (2)	4	MOS	200.00	800	50.00	200	250.00	1,000
Temporary barriers, protection, signage, etc. (minimal)	1	LOT	250.00	250	350.00	350	600.00	600
As-builts, schedules, submittals, etc.	1	LOT	150.00	150	1850.00	1,850	2000.00	2,000
Regular clean-up	4	MOS	50.00	200	250.00	1,000	300.00	1,200
Regular debris disposal and dump fee	4	MOS	150.00	600	250.00	1,000	400.00	1,600

[illegible]OPERATION COSTS (Continued)

Final clean-up, punch list and trade damage repairs	690	SF	0.30	207	0.55	380	0.85	587
Building permits	1	LOT						By Owner
Plan check fees	1	LOT	800.00	800			800.00	800
Miscellaneous materials testing	1	LOT						By Owner
Alaska Dept. of Labor contract labor filing fee (1% of labor)	1	LOT	1900.00	1,900			1900.00	1,900
Per diem (prime and subs, imported trades)	250	MD	160.00	40,000			160.00	40,000
Travel cost	10	RT	475.00	4,750			475.00	4,750
<i>SUBTOTAL:</i>				<i>\$ 104,295</i>		<i>\$ 99,448</i>		<i>\$ 203,743</i>
Home Office	3.00%							18,723
Overhead and Profit	8.50%							54,641
Bonds	0.85%							5,929
Insurances	1.15%							8,089
<i>TOTAL ESTIMATED COST:</i>								<i>\$ 291,125</i>

HMS Project No.: 17068

13 - CONTINGENCIES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ESTIMATOR'S CONTINGENCY

The estimator's allowance for architectural and engineering requirements that are not apparent at an early level of design documentation

10.00%

\$ 71,149

ESCALATION CONTINGENCY

The allowance for escalation from the date of estimate to the proposed bid date of April 2018 at the rate of 3.50% per annum (10 months)

2.92%

\$ 22,853

TOTAL ESTIMATED COST:

\$ 94,002

NOME BATHHOUSE

NOME, ALASKA

DRAWING INDEX

DWG#	DRAWING TITLE	REV#	DATE
G1.0	GENERAL	A	06-14-17
G2.0	GENERAL NOTES	A	06-14-17
C1.0	SITE LAYOUT	A	06-14-17
L1.0	FLOOR PLAN	A	06-14-17
L1.5	FLOOR PLAN - OPTION B	A	06-14-17
L2.0	ELEVATIONS	A	06-14-17
L4.0	ROOF PLAN	A	06-14-17
L3.0	SECTIONS	A	06-14-17
S5.0	WALL DETAILS	A	06-14-17

ATTACHMENTS

DOCUMENT
QUADRA - WATER & SEWER - PLAN & PROFILE
SITE SATELLITE IMAGE

ABBREVIATIONS

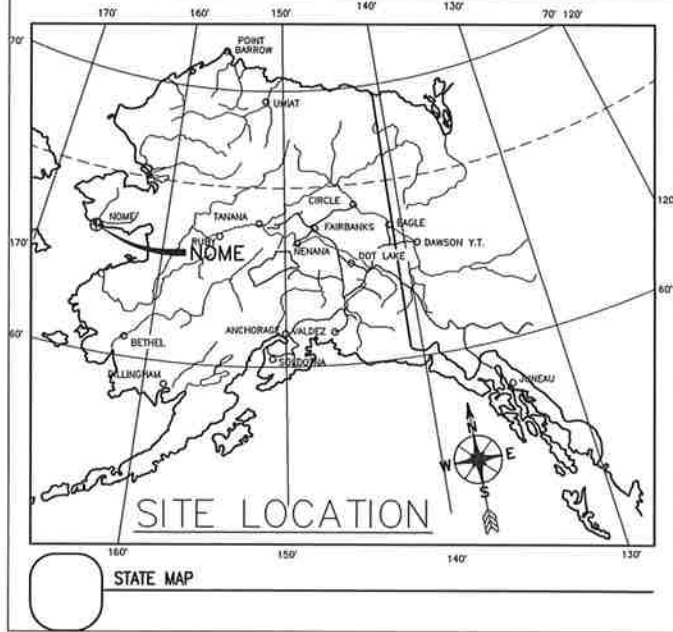
AFF	ABOVE FINISHED FLOOR
ADJ.	ADJUSTABLE
AND	AND
A.B.	ANCHOR BOLT
L	ANGLE
@	AT
BM.	BEAM
BRG.	BEARING
BLK.	BLOCK
BLKG.	BLOCKING
BD.	BOARD
B.O.	BOTTOM OF
BTU	BRITISH THERMAL UNIT
CAB.	CABINET
CPT.	CARPET
CTR	CENTER
C.L.	CENTER LINE
C.	CHANNEL
CLR.	CLEAR
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CMP	CORRUGATED METAL PIPE
DIA.	DIAMETER
DIM.	DIMENSION(S)
DBL	DOUBLE
DR	DOOR
DN.	DOWN
E.W.	EACH WAY
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXP.	EXPANSION
EXT.	EXTERIOR
F.O.C.	FACE OF CHANNEL
F.V.	FIELD VERIFY

F.O.S.	FACE OF STUD
FIN.	FINISHED
F.F.	FINISHED FLOOR
F.E.	FIRE EXTINGUISHER
FR	FIRE RETARDANT
F.F.L.	FINISH FLOOR LINE
FLASH.	FLASHING
FL.	FLOOR
F.D.	FLOOR DRAIN
FLUOR.	FLUORESCENT
FTG.	FOOTING
GALV.	GALVANIZED
GA.	GAUGE
G.L.	GLULAMINATED
GYP, GWB	GYPSUM BOARD
HC	HANDICAPPED
HD.	HEAD
HRV	HEAT RECOVERY VENTILATOR
H.M.	HOLLOW METAL
HD.	HOLD DOWN
INFO.	INFORMATION
INS.	INSULATION
INT.	INTERIOR
IBC	INTERNATIONAL BUILDING CODE
JT.	JOINT
LAM.	LAMINATE
LAV.	LAVATORY
MAINT.	MAINTENANCE
MFGR.	MANUFACTURER
MBR.	MASTER BEDROOM
MAT'L.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.L.	MICROLAM
NFS	NON-FROST SUSCEPTIBLE

N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
#	NUMBER
O.C.	ON CENTER
PR.	PAIR
PL	PLATE
PLYWD.	PLYWOOD
P.L.F.	POUNDS PER LINEAL FOOT
PPT	PRESSURE PRESERVATIVE TREATED
PSF	POUNDS PER SQUARE FOOT
REFRIG.	REFRIGERATOR
REQD.	REQUIRED
REQMTS.	REQUIREMENTS
REINF.	REINFORCED
REV.	REVERSE
RM.	ROOM
R.O.	ROUGH OPENING
SCHED.	SCHEDULE
SHT.	SHEET(S)
SIM	SIMILAR
SV	SHEET VINYL
S.D.	SOAP DISPENSER
SQ FT	SQUARE FEET
STD.	STANDARD
STL.	STEEL
STG.	STORAGE
S.D.	STORM DRAIN
SUSP.	SUSPENDED
SS	STAINLESS STEEL
STRUC.	STRUCTURAL
T&G	TONGUE & GROOVE
TEMP.	TEMPERED
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
WBM	WIDE FLANGE BEAM

SYMBOLS

	SECTION CUT SECTION IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
	DETAIL SECTION IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
	MEMBER CALL OUT
	2A 10BC FIRE EXTINGUISHER
	EMERGENCY EXIT SIGN
	EMERGENCY/EGRESS LIGHT



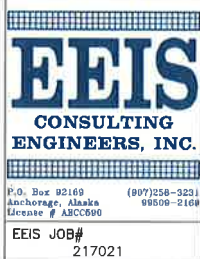
INSURANCE CONSULTANT

ALASKA NATIONAL INSURANCE COMPANY
SENIOR CLAIM EXAMINER
7001 JEWEL LAKE ROAD
ANCHORAGE, AK 99502
(907) 266-9290
CONTACT - FERD LASINSKI

PRIME CONSULTANT

EEIS CONSULTING ENGINEERS, INC
PO BOX 92169
ANCHORAGE, ALASKA 99509
(907) 258-3231
CONTACT - RICK BUTTON

WORK IN PROGRESS



35%
TITLE
NOME BATHHOUSE
GENERAL
GENERAL

DATE 06-14-17	EEIS DWG. NO.	REVISION A
SCALE AS NOTED	EEIS DWG. NO.	

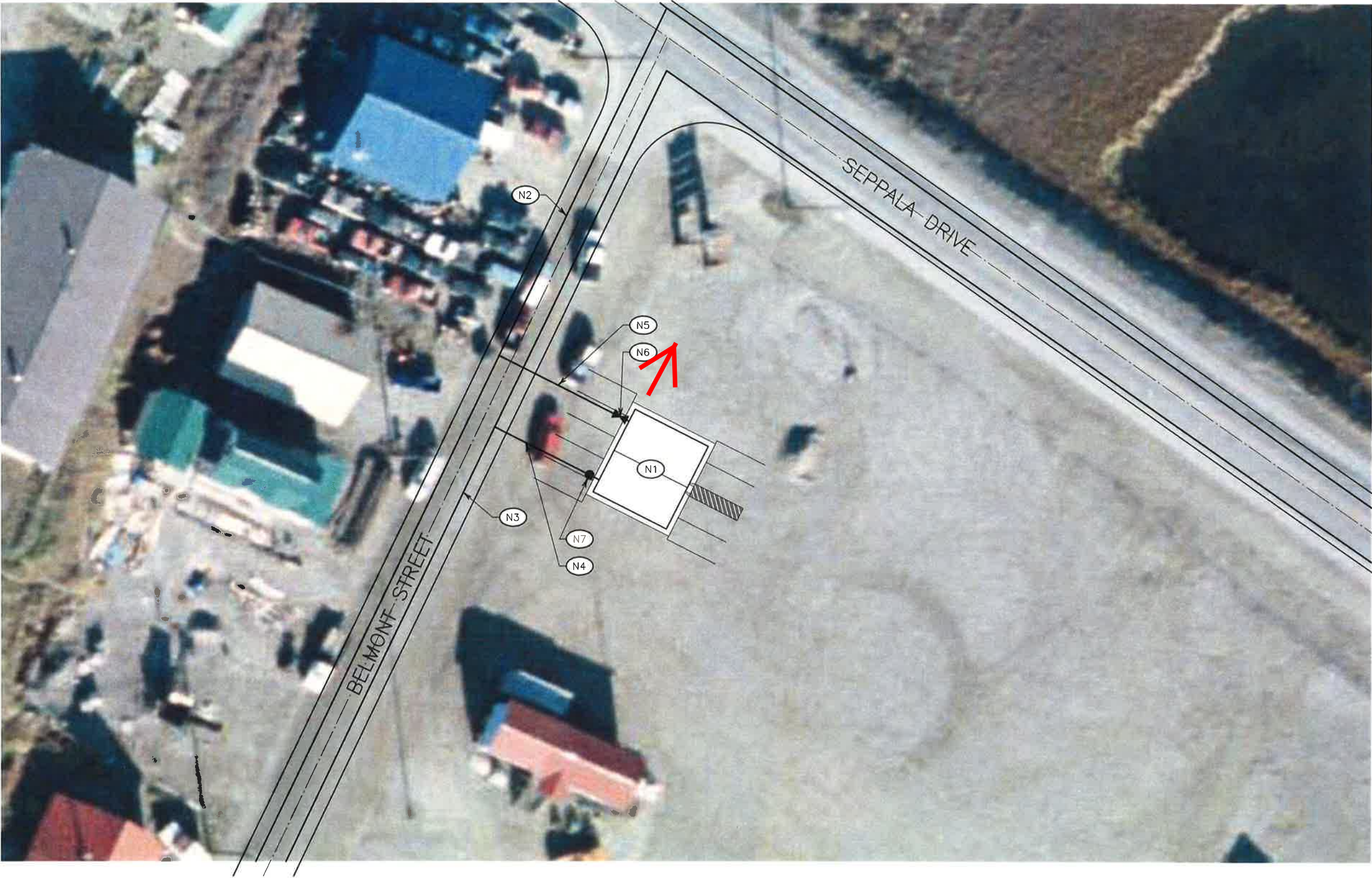
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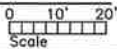
217021

CLIENT DOC#

- NOTES (FOR THIS SHEET)
- N1 NEW NOME BATHHOUSE
 - N2 NOME 10" WATER LINE STEEL
 - N3 8" SEWER LINE
 - N4 4" INSULATED HDPE WASTE LINE
 - N5 2" INSULATED HDPE WATER LINE
 - N6 SERVICE SHUT-OFF VALVE
 - N7 CLEANOUT



2.1 SITE PLAN
S(240) G(A) P(H) D(EEIS)



WORK IN PROGRESS

DWG.No.	TITLE	No.	DATE	DESCRIPTION	ISSUES / REVISIONS	DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
		A	06-14-17	CLIENT REVIEW		NA	RB	RB	RB	RB	

EEIS
CONSULTING
ENGINEERS, INC.

P.O. Box 92169
Anchorage, Alaska
License # ABC0090

(907) 258-3231
907-909-2169

EEIS JOB# 217021

CLIENT DOC#

35%
NOME BATHHOUSE
SITE LAYOUT
CIVIL

DATE 06-14-17
SCALE AS NOTED

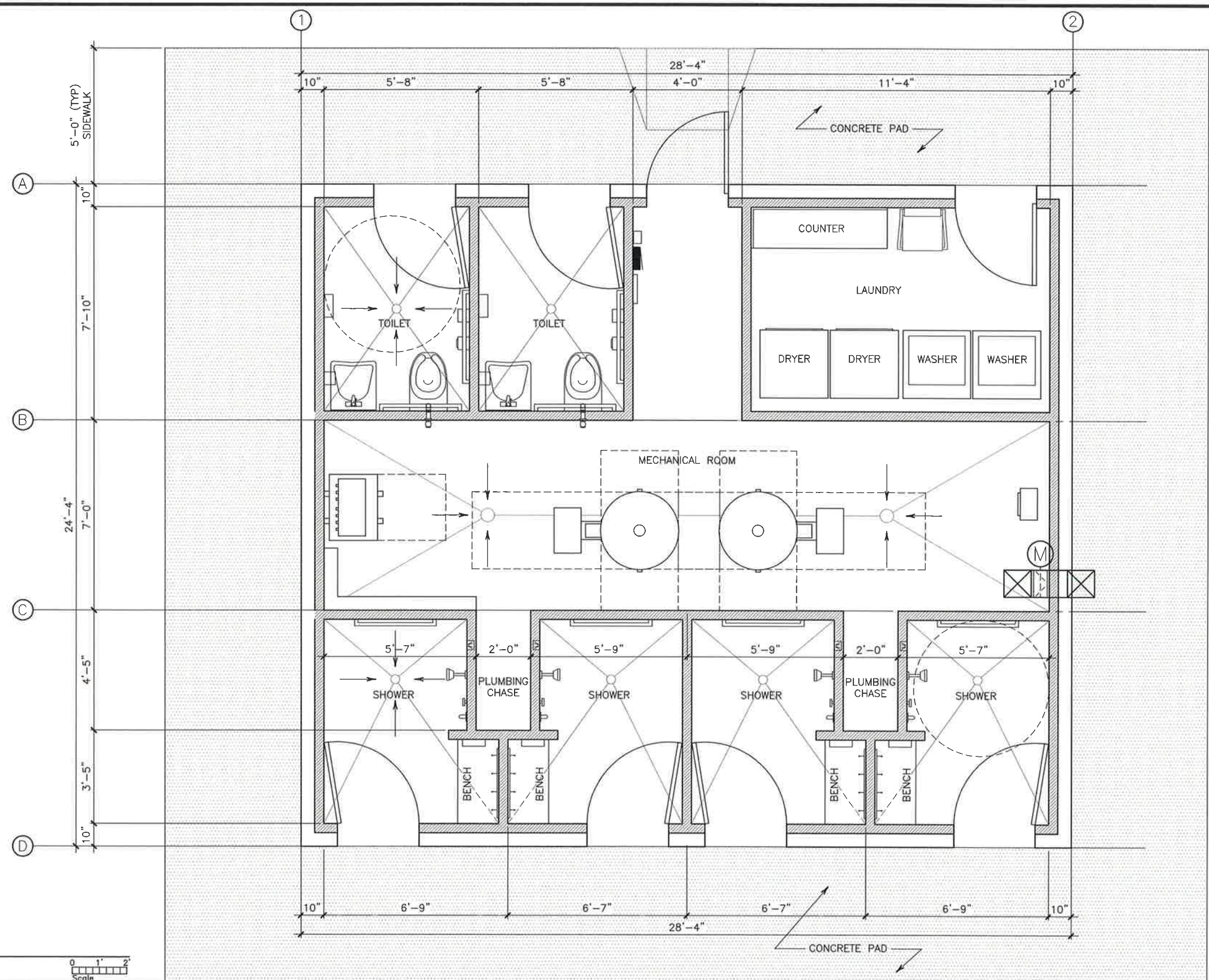
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EEIS DWG. NO. A

REVISION

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PlotStyle: NCS 4.0.ctb - Page Setup: XEROX (11x17) - LTScale: 1 - DimScale: 1 - VisRetain: 0



2.1 OPTION - A
FLOOR PLAN
S(24) G(A) P(H) D(EEIS)

WORK IN PROGRESS

DWG.No.	TITLE	REFERENCE DRAWINGS	ISSUES / REVISIONS	ENGINEERING APPROVALS	CLIENT
A	05-16-17	CLIENT REVIEW	NA RB RB RB RB	DWN. CHK'D D. ENG P. ENG P. MGR	

EEIS
CONSULTING
ENGINEERS, INC.

P.O. Box 90189 Anchorage, Alaska License # ABCE0005

(907)256-3231 (907)256-3231 (907)256-3231

EEIS JOB# 217021

35%

TITLE
NOME BATHHOUSE
FLOOR PLAN
LAYOUT

DATE
05-16-17

SCALE
AS NOTED

EEIS DWG. NO. 217021

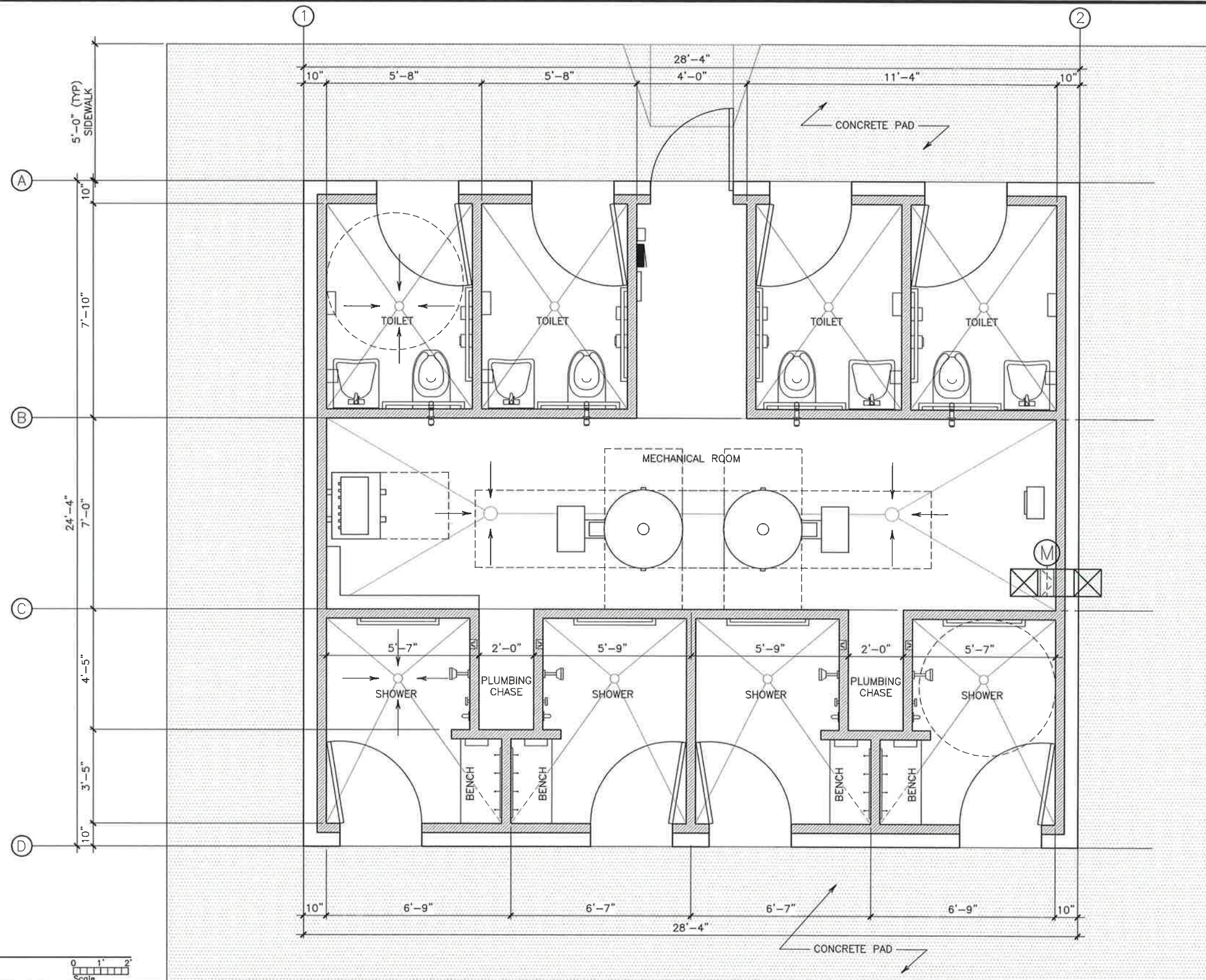
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REVISION
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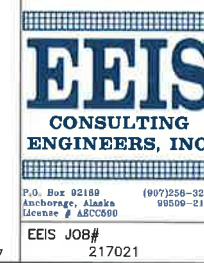
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S(24) G(A) P(H) D(EEIS)



WORK IN PROGRESS

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No.	DATE	DESCRIPTION				DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
ISSUES / REVISIONS						ENGINEERING APPROVALS					



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CLIENT DOC#

35%

NOME BATHHOUSE
FLOOR PLAN - OPTION B

LAYOUT

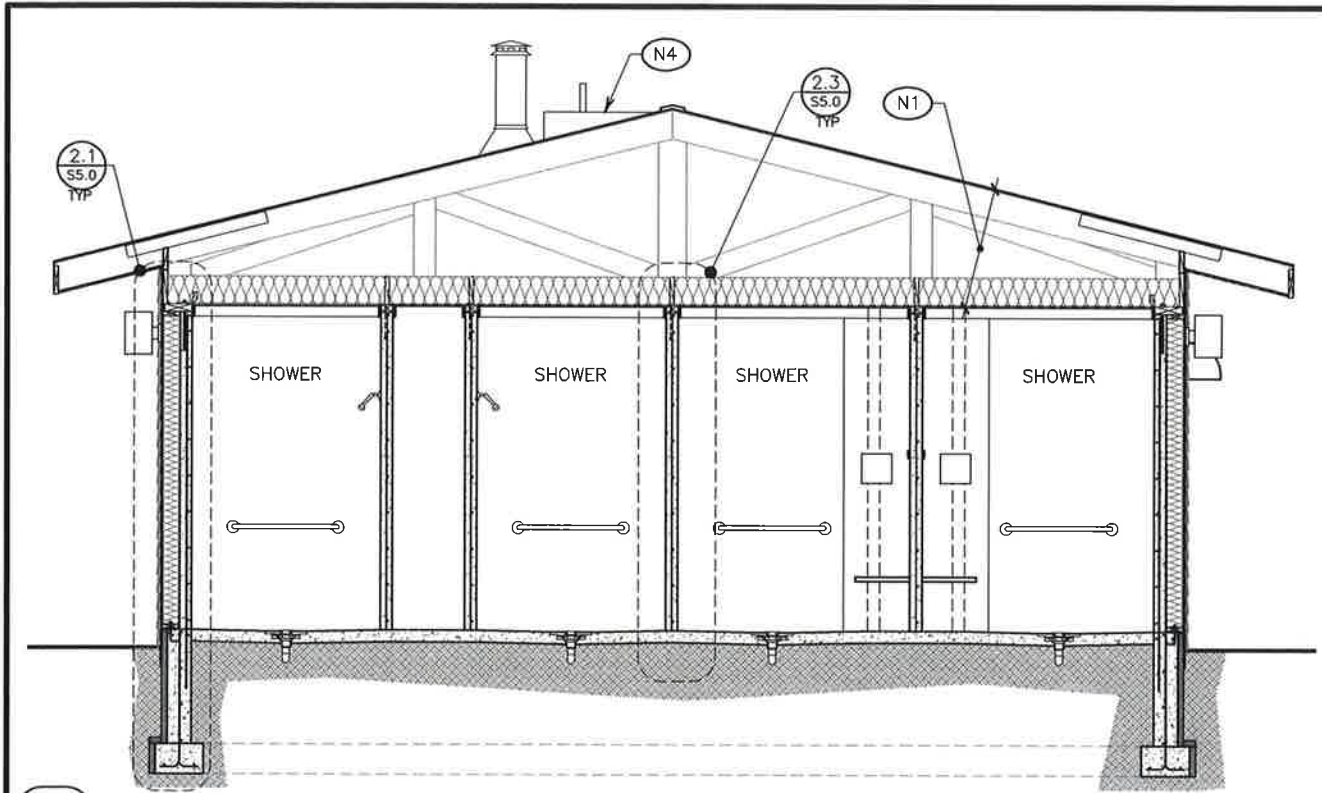
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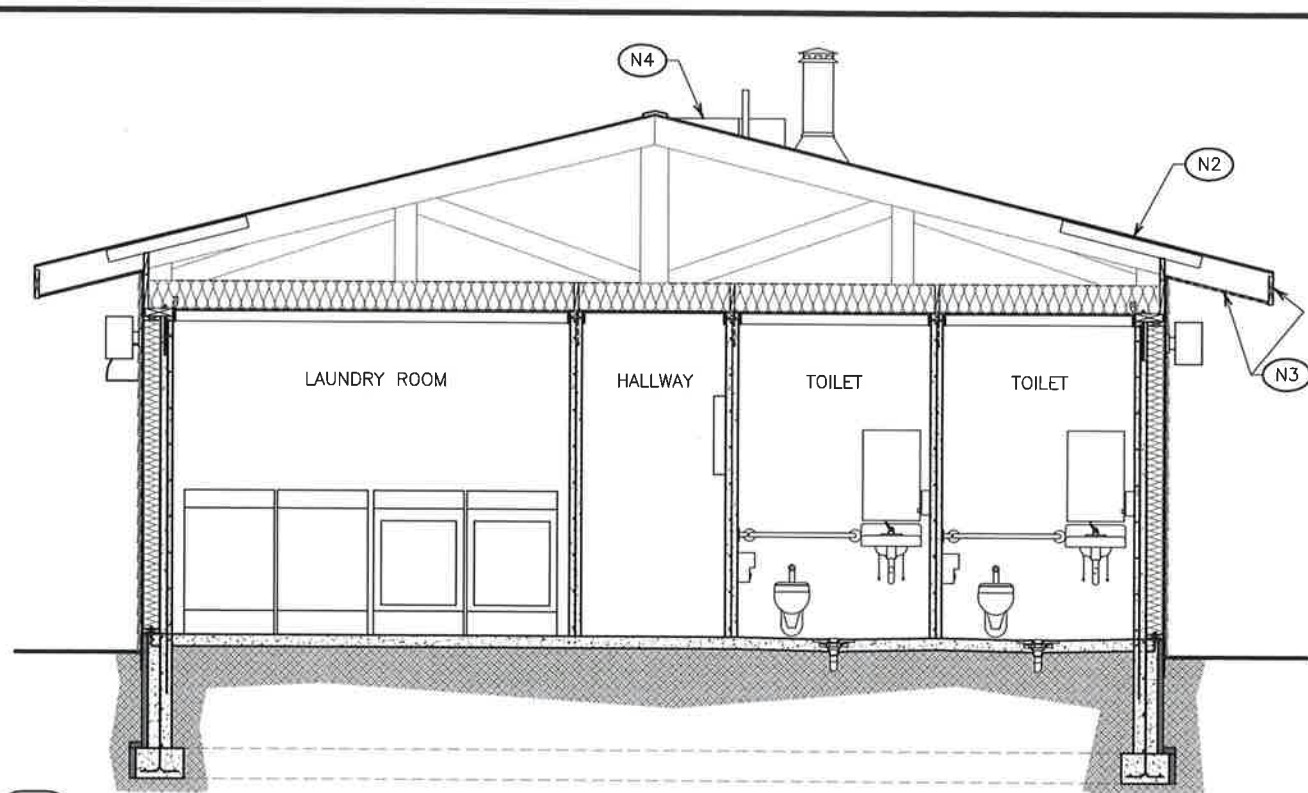
REVISION

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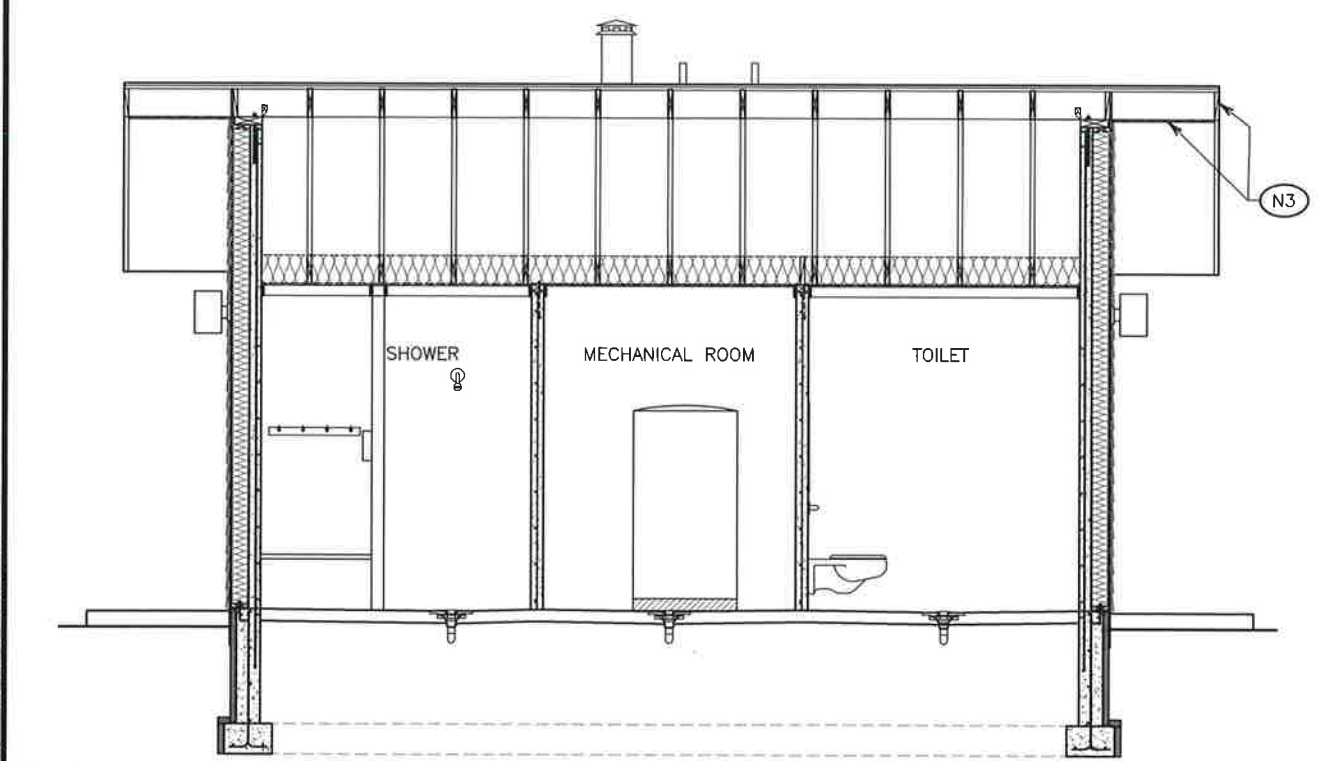
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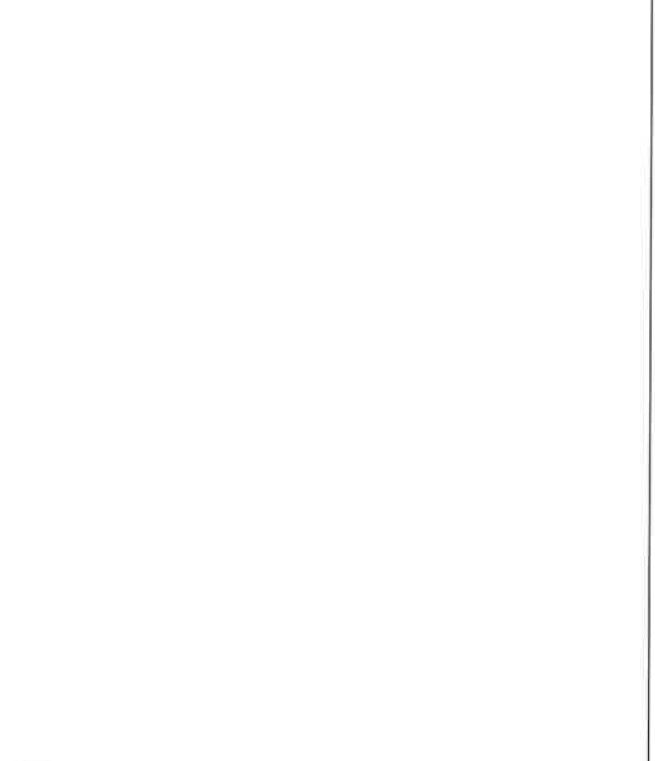
1.1 BUILDING SECTION
S(32) G(A) P(H) D(EEIS)
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1.3 BUILDING SECTION
S(32) G(A) P(H) D(EEIS)
Scale 0 1' 2'-8"



2.1 BUILDING SECTION
S(32) G(A) P(H) D(EEIS)
Scale 0 1' 2'-8"



2.3 NOT USED
S(1) G(A) P(H) D(EEIS)



2.4 NOT USED
S(1) G(A) P(H) D(EEIS)

- NOTES (FOR THIS SHEET)
- N1 ROOFING ASSEMBLY
 - STANDING SEAM METAL ROOF PANEL
 - 3/4" CDX T&G PLYWOOD
 - ROOF TRUSSES @ 2'-0" O.C.
 - FIBERGLASS BATT INSULATION - R-30
 - 6 MIL POLYETHYLENE
 - FRP PANELS AND TRIM
 - N2 VENT BAFFLE
 - N3 22 GAGE METAL FACIA AND SOFFIT COVER
 - N4 SNOW GUARD
 - N5 ALL FIXTURES TO BE PRISON GRADE STAINLESS STEEL, INCLUDING MIRRORS
 - N6 EAVES VENT W/ INSET SCREEN AND FILTER FABRIC

WORK IN PROGRESS

DWG.No. TITLE

REFERENCE DRAWINGS

No. DATE DESCRIPTION

ISSUES / REVISIONS

No. DATE DESCRIPTION

NA	RB	RB	RB	RB	
DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT

ENGINEERING APPROVALS

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P.O. Box 92189 Anchorage, Alaska License # ABC0590

(907)558-9231 (907)559-2169

EEIS JOB# 217021

CLIENT DOC#

DATE 06-13-17

SCALE AS NOTED

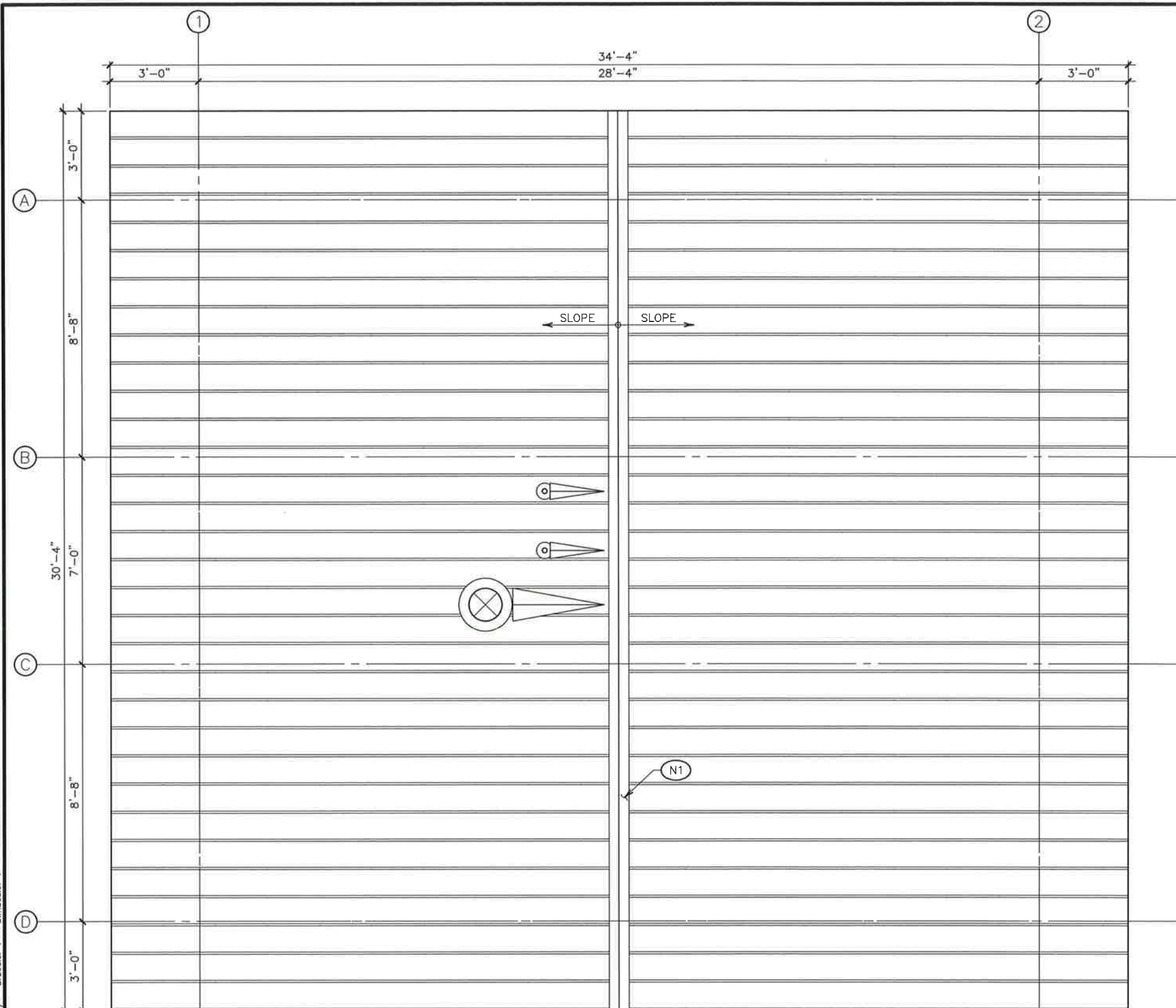
35% NOME BATHHOUSE SECTIONS LAYOUT

REVISION

L3.0 A

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LAST SAVED BY: NABUAN - 15 June 2017 - Plotted: 6/15/2017 1:32 PM - User: Nathaniel Y. Abuan

(N1) RIDGE VENT W/ FILTER FABRIC OVER VENT SPACES



1.4 NOT USED


2.4 NOT USED
S(1) G(A) P(H) D(EFIS)

2.1 ROOF PLAN

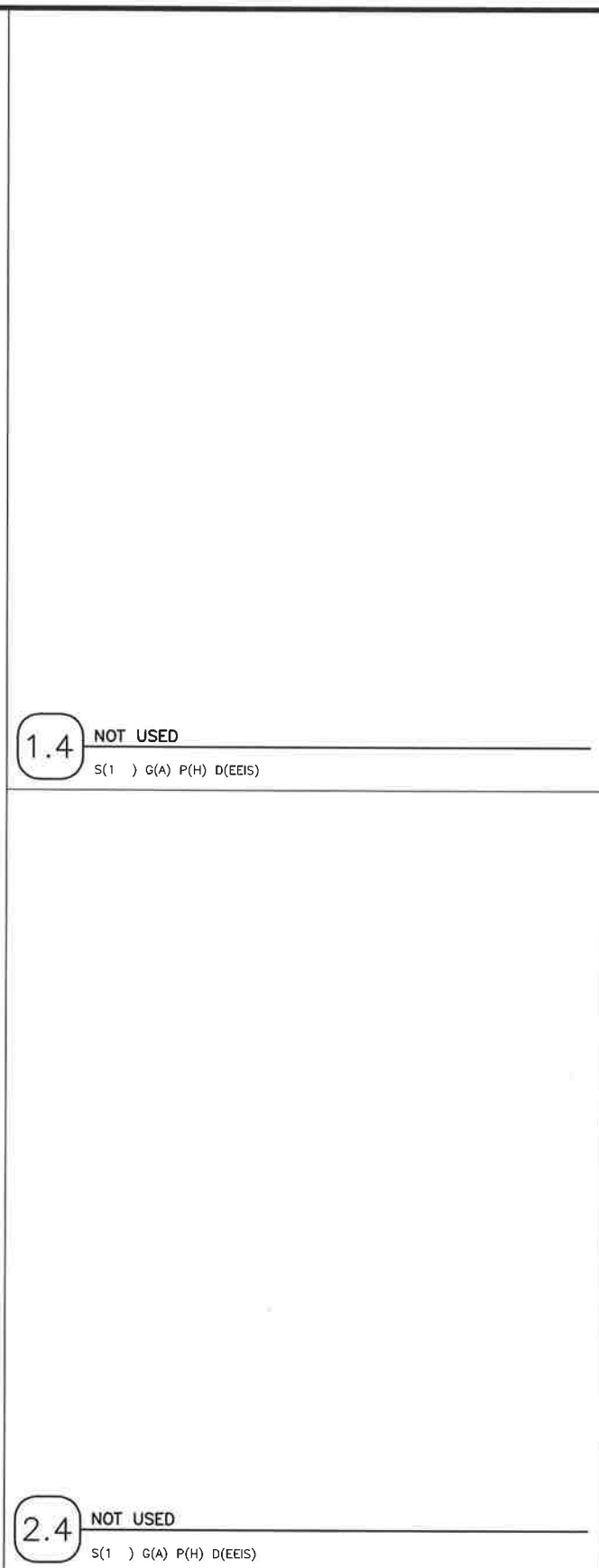
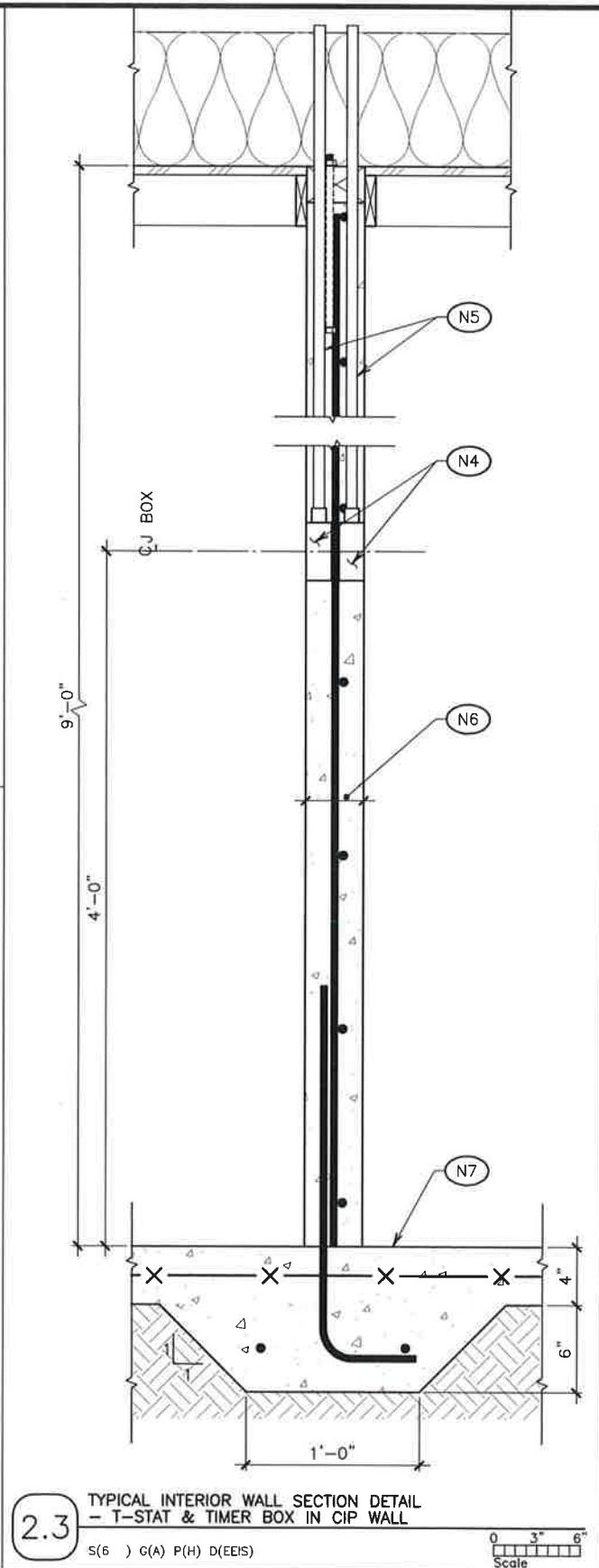
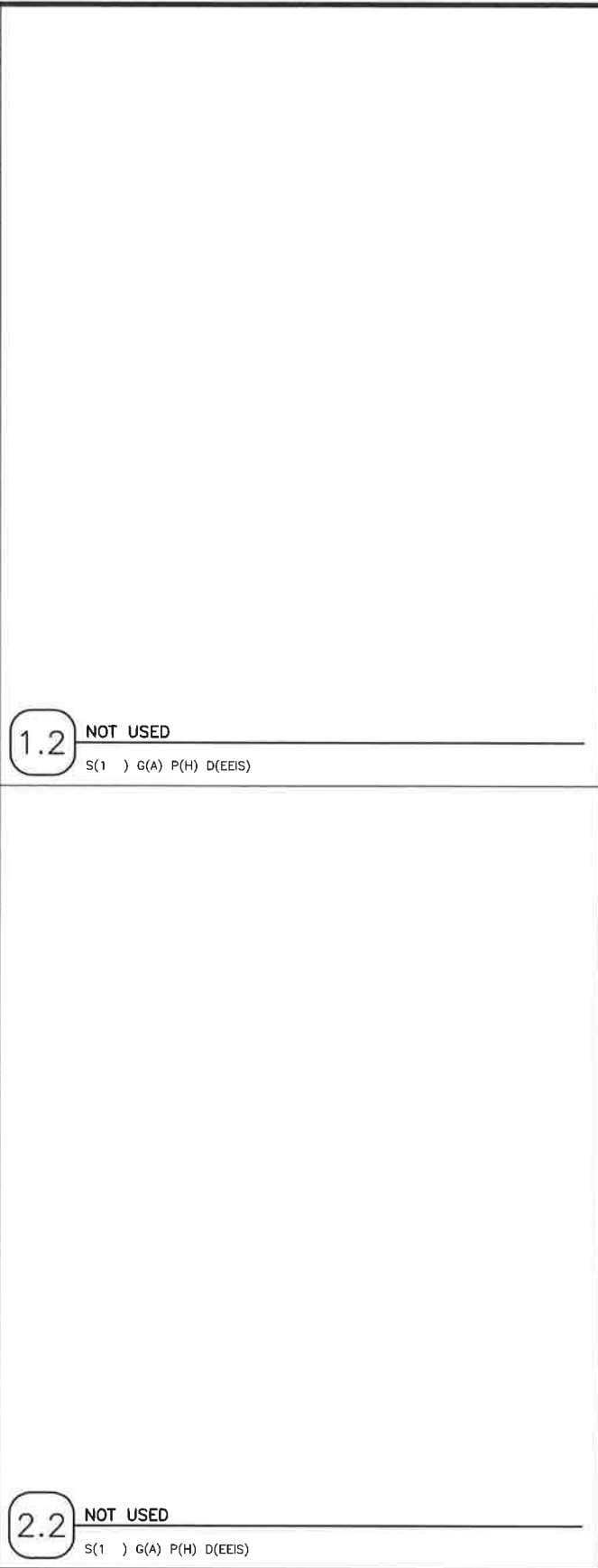
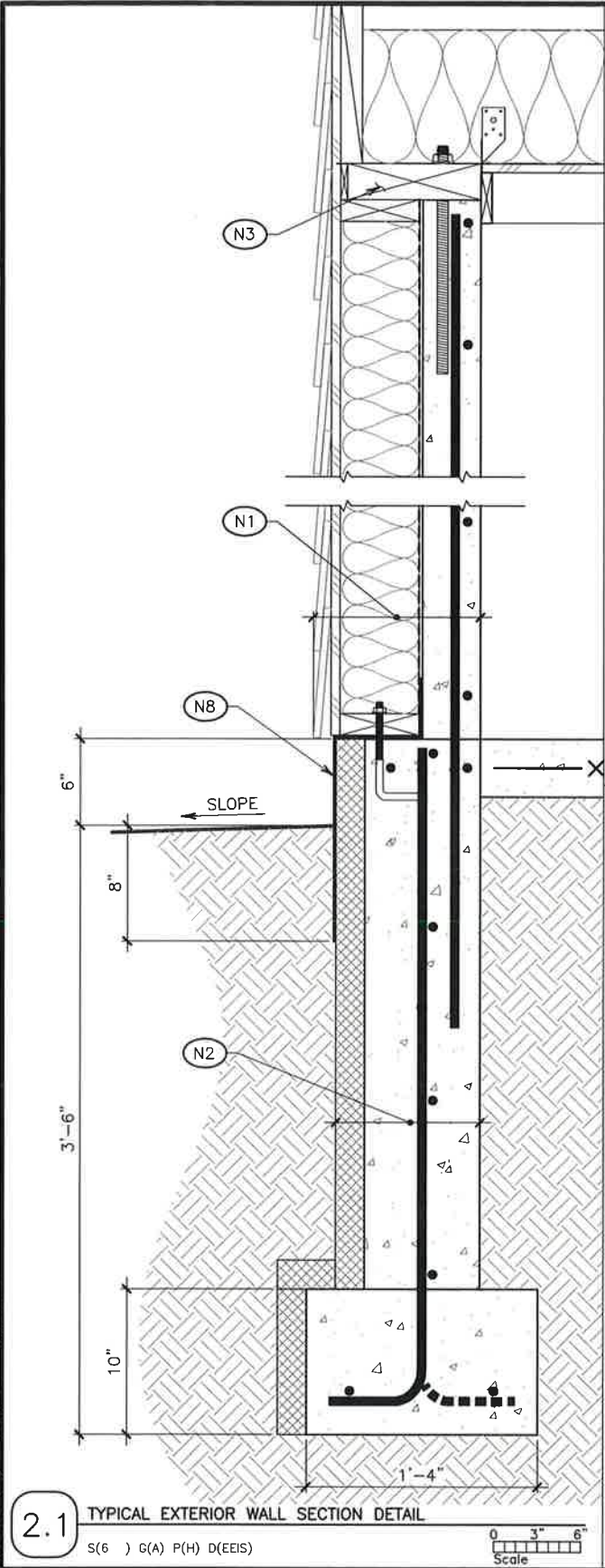
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DWG.No.	TITLE	A	06-13-17	CLIENT REVIEW						NA	RB	RB	RB	RB	
		No.	DATE	DESCRIPTION						DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
		ISSUES / REVISIONS						ENGINEERING APPROVALS							



DATE		E&S DWG. NO.		REVISION	
06-13-17					
SCALE		E&S DWG. NO.		L4.0	
AS NOTED				A	

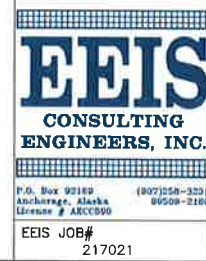
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- NOTES (FOR THIS SHEET)
- N1 EXTERIOR WALL
 - D-4 ROYAL ALUMIPRO ALUMINUM SIDING W/ TRIMS FROM ROYAL BUILDING PRODUCTS - WWW.ROYALBUILDINGPRODUCTS.COM / 1-800-232-5690
 - FROG SKIN DRAFT/ VAPOR STOP
 - 5/8" CDX PLYWOOD
 - 2X6 @ 16" O.C.
 - R-19 FIBERGLASS INSULATION
 - 6 MIL POLYETHYLENE VAPOR RETARDER
 - 4" REINFORCED CONCRETE WALL W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N2 R-12 RIGID INSULATION
 - N3 8" REINFORCED CONCRETE W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N4 PT 3X10 WALL CAP
 - N5 4x4 METAL BOX FOR T-STAT OR TIMER SET IN CONCRETE WALL
 - N6 3/4" Ø CONDUIT - EXTENDED ABOVE INSULATION
 - N7 4" REINFORCED CONCRETE INTERIOR WALL W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N8 4" CONCRETE SLAB W/ 6X6 W1.4XW1.4 STEEL REINFORCEMENT MATT. THICKEN FOOTINGS UNDER INTERIOR WALLS AS SHOWN. REINFORCED THICKENED FOOTING W/ (2) #5 REINFORCING BARS
 - N9 22 GAGE PROTECTIVE COVER FOR INSULATION

WORK IN PROGRESS

DWG.No.		TITLE		REFERENCE DRAWINGS		ISSUES / REVISIONS		ENGINEERING APPROVALS		CLIENT	
A		06-13-17		CLIENT REVIEW		NA		RB		RB	
No.		DATE		DESCRIPTION		DWN.		CHK'D		P. ENG	



35% NOME BATHHOUSE WALL DETAILS STRUCTURAL		DATE 06-13-17 SCALE AS NOTED		E.E.I.S. DWG. NO. E.E.I.S. DWG. NO.		REVISION A	
TITLE		DATE		E.E.I.S. DWG. NO.		REVISION	
TITLE		DATE		E.E.I.S. DWG. NO.		REVISION	
TITLE		DATE		E.E.I.S. DWG. NO.		REVISION	

(N1) CONNECT EF1 TO TURN ON WITH LIGHTS.



S(24) G(A) P(H) D(EEIS)

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A	06-02-17	TEAM COORDINATION									
No.	DATE	DESCRIPTION									
ISSUES / REVISIONS			ENGINEERING APPROVALS								
			OWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT			

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DATE	06-02-17
SCALE	AS NOTED

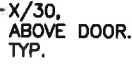
NO.	EEIS
DWG.	
NO.	

NO.	EEIS
DWG.	
NO.	

E2.0

A

(N1) CONNECT EF1 TO TURN ON WITH LIGHTS.



3.1

OPTION - B
FLOOR PLAN

S(24) G(A) P(H) D(EFIS)

WORK IN PROGRESS

A	06-02-17	TEAM COORDINATION	SNS	EWC	EWC	EWC	EWC	
No.	DATE	DESCRIPTION	DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
		ISSUES / REVISIONS	ENGINEERING APPROVALS					

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CLIENT DOC#

35%

NOME BATHHOUSE
ELECTRICAL FLOOR PLAN
OPTION - B
ELECTRICAL

DATE	06-02-17
SCALE	AS NOTED

EEIS
DWG.
NO.

REVISION

A

E3.0

A

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ABBR.	EXPLANATION	SYMBOL
A	AIR – COMPRESSED	
	AIR FLOW MEASURING DEVICE	
	AIR FOIL TURNING VANES	
AAV	AUTOMATIC AIR VENT	
AFF	ABOVE FINISHED FLOOR	
BDD	BACKDRAFT DAMPER	
BD	BALANCING DAMPER	
	BALANCING/ISOLATION VALVE	
	BALL VALVE	
CC	COOLING COIL	
CFM	CUBIC FEET/MINUTE	
CO	CLEANOUT	
CV	CHECK VALVE	
CW	COLD WATER	
DD	DUCT DETECTOR	
	DUCT IDENTIFICATION SYMBOL	
(E)	EXISTING	
E/A	EXHAUST AIR	
	EXPANSION COMPENSATOR	
FCO	FLOOR CLEANOUT	
FD	FIRE DAMPER	
FD	FLOOR DRAIN	
	FLEXIBLE CONNECTION	
	FLEXIBLE DUCT	
	FLOW CONTROL VALVE	
FOS	FUEL OIL SUPPLY	
FOR	FUEL OIL RETURN	
HB	HOSE BIBB	
HC	HEATING COIL	
HW	HOT WATER	
HWC	HOT WATER CIRCULATION	
MOD	MOTOR OPERATED DAMPER	
MOV	2-WAY MOTOR OPERATED VALVE	
MOV	3-WAY MOTOR OPERATED VALVE	
NIC	NOT IN CONTRACT	
O/A	OUTSIDE AIR	
	PIPE ANCHOR	
	PIPE GUIDE	
POC	POINT OF CONNECTION	
	PRESSURE GAGE	
PRV	PRESSURE RELIEF VALVE	
PW	PUMPED WASTE	
R/A	RETURN AIR	
RV	RELIEF VALVE	
	RETURN AIR SLOT	
	RETURN/EXHAUST AIR REG. OR GRILLE	
S	SANITARY SOIL	
S/A	SUPPLY AIR	
SS	STAINLESS STEEL	
	STRAINER WITH DRAIN VALVE	
SL	ACOUSTICALLY LINED DUCT	
	STATIC PRESSURE SENSOR	
	SUPPLY AIR SLOT W/FLEX DUCT	
	SUPPLY AIR REG. GRILLE, OR DIFFUSER	
TW	TEMPERED WATER	
	THERMALLY INSULATED DUCT OR PIPE	
	THERMOMETER	
T'STAT	THERMOSTAT	
T'STAT	RETURN AIR THERMOSTAT	
	UNION	
V	VENT	
VTR	VENT THRU ROOF	
WCO	WALL CLEANOUT	
W	WASTE	

WORK IN PROGRESS

SYMBOL	FIXTURE	SOIL	WASTE	VENT	H.W.	C.W.	DESIGN BASIS PRODUCT (AS SPECIFIED, OR EQUAL)
P-1	WATER CLOSET	4"		2"		1"	ACORN PENAL-WARE 1680, ELONGATED BOWL, WALL HUNG, CONCEALED LEVER FLUSH VALVE - ACORN FLV, SS FINISH
P-2	LAVATORY		1-1/2"	1-1/2"	1/2"	1/2"	ACORN PENAL-WARE 1652LRB, WALL HUNG, BARRIER-FREE MOUNTING HEIGHT, 14 x12 x4.5" BOWL W/ OVERFLOW SPOUT, DUAL TEMP METERING PNEUMATIC VALVE - ACORN 04-M, ASSE 1070 THERMOSTATIC MIXING VALVE - ACORN S170 1/2 NPT, WALL SLEEVE - SW
P-3	SHOWER	2"	FD-2	2"	1/2"	1/2"	ACORN LOGAN SHOWER HEAD WITH MOUNTING FLANGE, TAMPER-RESISTANT SCREWS, TEMPERATURE-PRESSURE BALANCING ASSE 1016 TRI-LEVER HANDLE - ACORN TYPE 8 MIXING VALVE
P-4	WASHER BOX		2"		1/2"	1/2"	WATER TITE MODEL 8570B CENTER DRAIN OUTLET BOX W/ WATER HAMMER ARRESTORS
FD-1	FLOOR DRAIN		2"	2"			SMITH 2010, ROUND TOP SEDIMENT BUCKET, BRONZE BODY & STRAINER, PRIMER FITTING
FD-2	FLOOR DRAIN		2"	2"			SMITH 2010, ROUND TOP SEDIMENT BUCKET, BRONZE BODY & STRAINER
HB-1	HOSE BIBB					3/4"	NON-FREEZE INT. VACUUM BRKR, BRONZE NICKEL PLATED, 1/4 TURN - HANDLE KEY LOCK, CONCEALED CHROME PLATED SS BOX, 3/4" HOSE, SMITH 5509-QT.

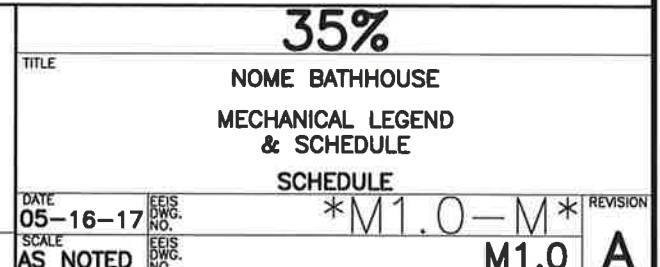
SYMBOL	TYPE	FLUID (%)	STORAGE (GAL)	FUEL	INPUT (GPH) (MBH)	RECOVERY (GPH) AT 100°F RISE	CONTROLLER / MOTOR		DESIGN BASIS PRODUCT
							AMPS	VOLTS/PH	
WH-1	FIRE TUBE		125	#2 FUEL	1499	200	2	120/1	PVI MODEL MAXIM 201-125A-MXO
WH-2							0.5HP	120/1	DUPLEX SS TANK, FIBERGLASS INSULATION, SPARK IGNITION, ELEC CONTROL, POWER BURNER

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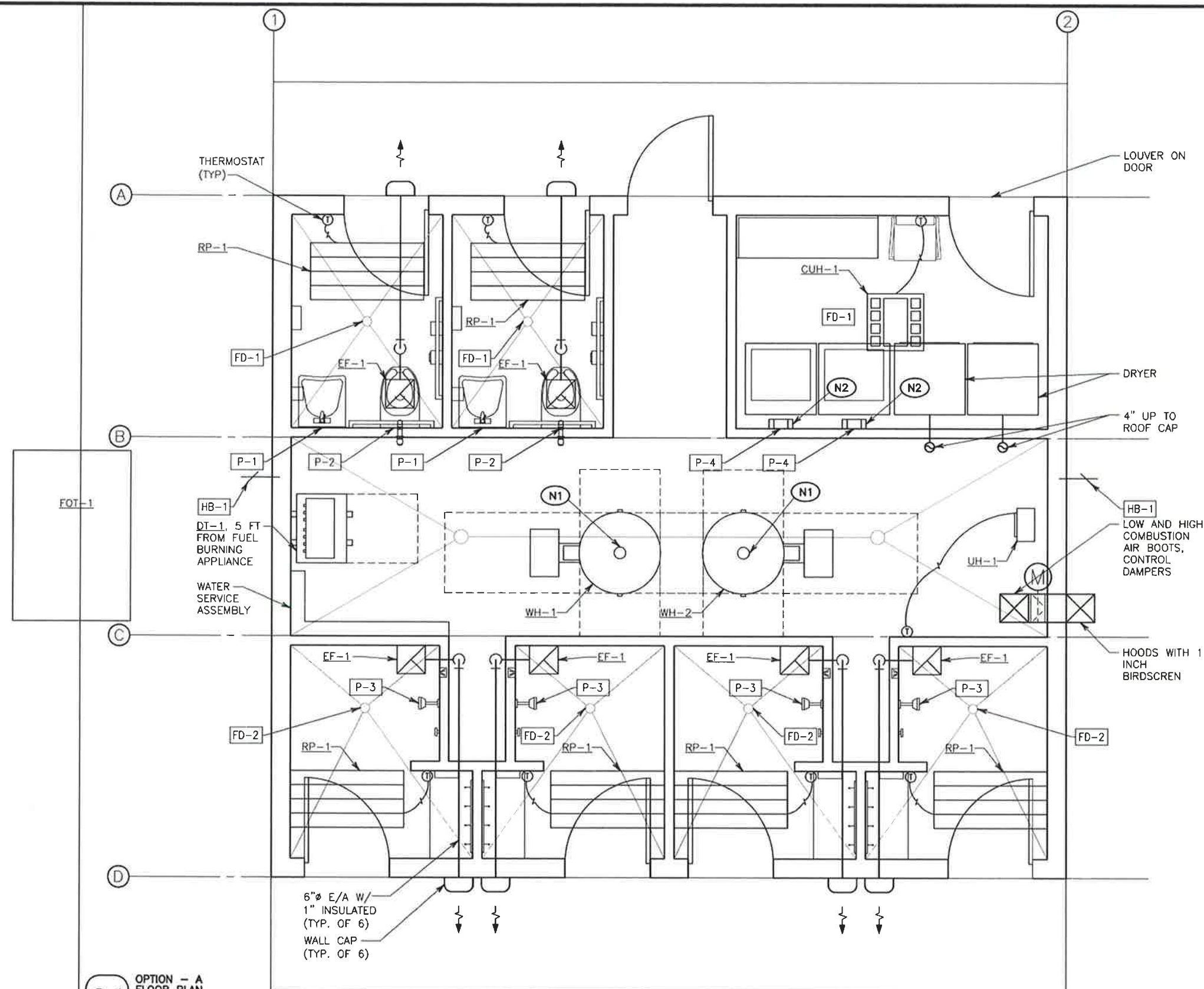
SYMBOL	FUNCTION	MEDIUM	TOTAL VOLUME GALLONS	MATERIALS	LABEL	DESIGN BASIS PRODUCT
DT-1	DAYTANK	FUEL OIL	150	STEEL	UL	SIMPLEX MODEL SST-25, WITH 2 GPM DUPLEX PUMPS (1/3 HP, 120V, 1Ø) - HAND PUMP, RUPTURE BASIN
ET-1	DOMESTIC HW EXPANSION	WATER	14	STEEL/ BUTYL	IAPMO	AMTROL MODEL ST-30V-C, ASME TANK ACCEPTANCE VOLUME = 10.5
FOT-1	FUEL OIL STORAGE	FUEL OIL	500	STEEL	UL	ANCHORAGE TANK MODEL AT5CULAG DOUBLE WALL ABOVEGROUND TANK

SYMBOL	TYPE	STAGE COUNT	STORAGE (GAL) STYLE	MAX PRESS. (PSI)	BASIS PRESS. (PSI)	BASIS FLOW (SCFM)	ELECTRICAL		DESIGN BASIS PRODUCT
							AMPS HP	VOLTS/PH	
ACU-1	OIL FREE	SINGLE	6 GAL HORIZONTAL	150	90	2.6	12 A 1.5 HP	120/1	RIGID PANCAKE COMPRESSOR, 1/4" COUPLER, REGULATOR, PORTABLE

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A	06-02-17	TEAM COORDINATION				
No.	DATE	DESCRIPTION	MSM DWN.	SCH CHK'D	MSM D. ENG P.	MSM MGR CLIENT
			ENGINEERING APPROVALS			



- NOTES (FOR THIS SHEET)
- N1 5" SCHED. P2 STACK UP THROUGH ROOF. TERMINATE 3 FT ABOVE ANY PORTION OF THE ROOF WITHIN 10 FT.
- N2 PROVIDE 20 GAUGE METAL ENCLOSURE AROUND P-4 WASHER BOX.
3. PROVIDE LOW POINT DRAINS ON ALL PLUMBING LINES FOR SEASONAL DRAIN DOWN. PROVIDE AIR LINE QUICK CONNECTS WITH ISOLATION AND CHECK VALVES TO BLOW OUT PIPE.
4. PROVIDE METAL LOCKING GUARD ON THERMOSTATS.



2.1 OPTION - A
FLOOR PLAN
S(24) G(A) P(H) D(EIIS)

WORK IN PROGRESS

DWG.No. TITLE

REFERENCE DRAWINGS

A 06-02-17 TEAM COORDINATION

No. DATE DESCRIPTION

ISSUES / REVISIONS

MSM SCH MSM MSM SCH
DWN. CHK'D D. ENG P. ENG P. MGR CLIENT

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TITLE

35%
NOME BATHHOUSE
MECHANICAL FLOOR PLAN
OPTION - A
LAYOUT

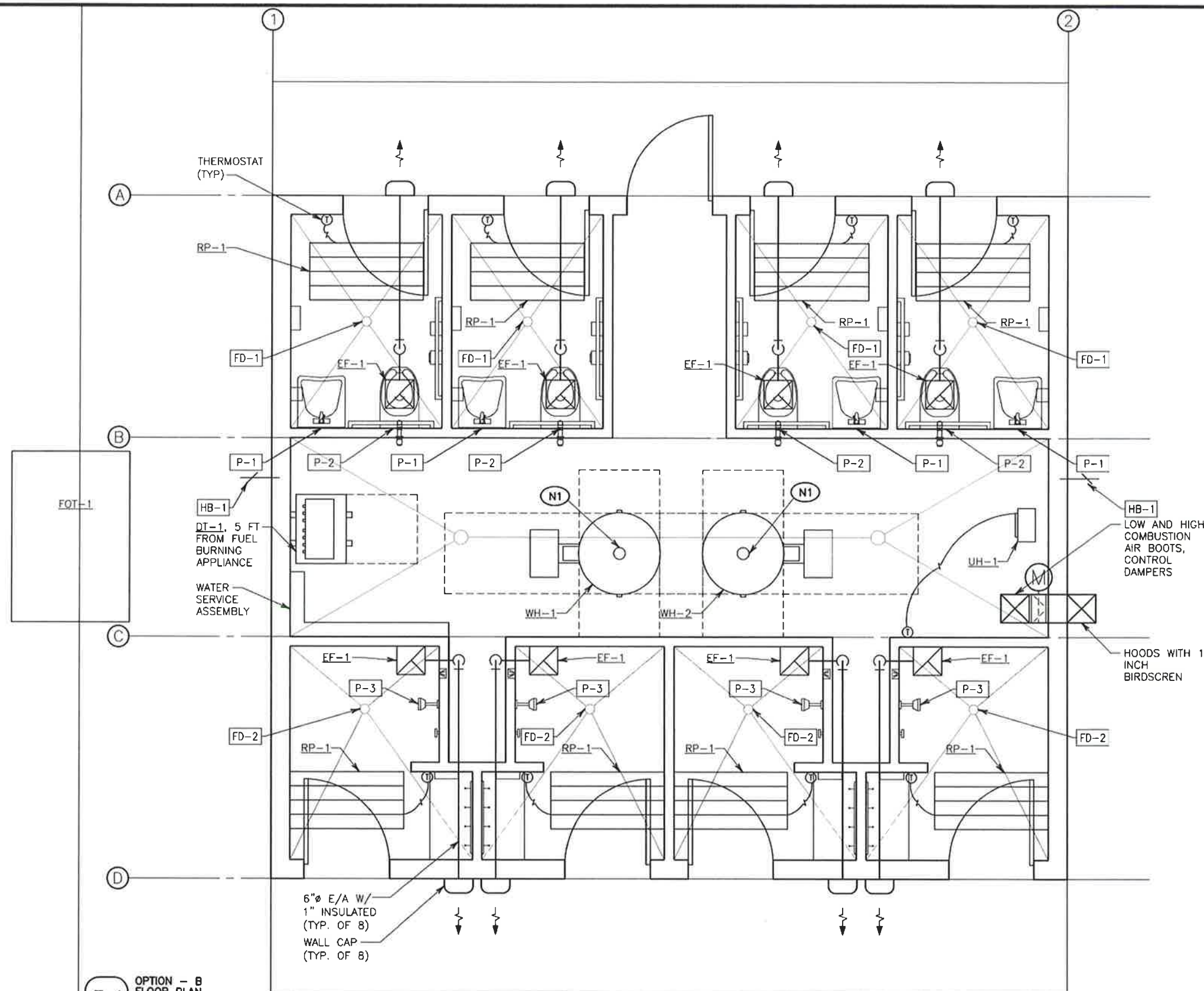
DATE
05-16-17
SCALE
AS NOTED

EEIS
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M2.0-M
M2.0

REVISION
A

- NOTES (FOR THIS SHEET)
- 5" SCHEBLER P2 STACK UP THROUGH ROOF. TERMINATE 3 FT ABOVE ANY PORTION OF THE ROOF WITHIN 10 FT.
 - PROVIDE LOW POINT DRAINS ON ALL PLUMBING LINES FOR SEASONAL DRAIN DOWN. PROVIDE AIR LINE QUICK CONNECTS WITH ISOLATION AND CHECK VALVES TO BLOW OUT PIPE.
 - PROVIDE METAL LOCKING GUARD ON THERMOSTATS.



WORK IN PROGRESS

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(907) 550-3031
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EEIS JOB# 217021

CLIENT DOC#

TITLE		35% NOME BATHHOUSE MECHANICAL FLOOR PLAN OPTION - B LAYOUT	
DATE	05-16-17	EEIS DWG. NO.	REVISION
SCALE	AS NOTED	EEIS DWG. NO.	A
		M3.0-M	
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