City Manager Tom Moran

Port Director Joy Baker

Harbormaster Lucas Stotts



Nome Port Commission Jim West, Jr., Chairman Charlie Lean, Vice Chairman Derek McLarty Shane Smithhisler Scot Henderson Russell Rowe Gay Sheffield

102 Division St. • P.O. Box 281 Nome, Alaska 99762 (907) 443-6619 Fax (907) 443-5473

NOME PORT COMMISSION WORK SESSION AGENDA THURSDAY, AUGUST 2, 2018 @ 5:30 PM COUNCIL CHAMBERS IN CITY HALL

WORK SESSION - 5:30 PM:

Discussion with PND Engineers and City Engineer on Concrete Barge Ramp Repair Strategy

- Repair methodology
- Project schedule options
- Bid pricing approach

BARGE RAMP REPAIR STRATEGY NOME PORT COMMISSION – WORK SESSION GENERAL DISCUSSION

- Most effective condition assessment requires some type of dewatering barrier:
 - Sheetpile easier to permit, but requires crane/pile hammer and likely a barge unless reachable from shore
 - Gravel harder to permit and water could infiltrate, can be installed and removed from shore but footprint width would exceed 50 feet and extend into federal dredge limits
 - Water bags (Bryan can explain)
 - Removing the water from the contained area will require a pump/filter process approved under the Corps permit
- Construction period options:
 - Winter plan would allow dewatering, damage assessment & removal of damaged planks before hard freeze, with subsurface work, form building and plank install or slab pour in spring (May)
 - Summer plan would require taking ramp out of service approximately July 15, then dewater, remove or demo, subsurface work, frame reinforcement, and plank install or slab pour – ramp back in service Sept 1-15 window
- Material options:
 - Panels could be shipped in from Seattle or formed/poured in Nome, with a certain quantity available prior to dewatering phase. If assessment determines more panels are needed, local option would allow additional panels to be made timely
 - If some panels determined salvageable after dewatering assessment, all reusable planks could be set at lower level with remaining ramp slope constructed as single slab, with form built on top of reinforced I-beam frame. The new frame could consist of both horizontal and vertical beams welded into ladder formation, and slab poured locally (this requires summer plan)
 - Are current 1 foot thick concrete planks too thin?













Cost Breakdown Structure (CBS) Register

PND ENGINEERING, INC

181033 - Barge Ramp Repairs--Nome Barge Ramp Repairs

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
ЈОВ	JOB				
1	Option 1 - Repair Existing Barge Ramp	1.00	LS	\$1,954,576.72	\$1,954,576.72
1.1	Mobilization and Demobilization	1.00	LS	\$400,000.00	\$400,000.00
1.2	Salvage and Reinstall Existing Armor Rock	1.00	LS	\$85,176.24	\$85,176.24
1.3	Sheet Pile Cofferdam	1.00	LS	\$497,628.68	\$497,628.68
1.4	Demolish and Replace 30% of Planks and Timbers	1.00	LS	\$276,403.62	\$276,403.62
1.5	Field Personnel Housing, Per Diem, Transportation	20.00	Day	\$3,630.00	\$72,600.00
1.6	Contingency (15%)	1.00	LS	\$198,000.00	\$198,000.00
1.7	Additive 1 - Demolish and Replace 50% of Planks	1.00	LS	\$212,384.09	\$212,384.09
1.8	Additive 2 - Demolish and Replace 70% of Planks	1.00	LS	\$212,384.09	\$212,384.09
2	Option 2 - Demolish and Install New Barge Ramp	1.00	LS	\$1,376,510.47	\$1,376,510.47
2.1	Mobilization and Demobilization	1.00	LS	\$300,000.00	\$300,000.00
2.2	Salvage and Reinstall Existing Armor Rock	1.00	LS	\$85,176.24	\$85,176.24
2.3	Demolish Planks and Timbers	1.00	LS	\$44,836.05	\$44,836.05
2.4	Install New Barge Ramp	1.00	LS	\$693,898.18	\$693,898.18
2.5	Field Personnel Housing, Per Diem, Transportation	20.00	Day	\$3,630.00	\$72,600.00
2.6	Contingency (10%)	1.00	LS	\$180,000.00	\$180,000.00

PORT OF NOME BARGE RAMP REPAIRS

NOME, ALASKA MAY 2018



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REPAIR DETAILS	7



DRAFT DRAFT	PND Eng program construct Where s specifico Drawings intended Drawings would c	gineers, In s, method ction of th specification ations shal s are for d for reuse s are also onstitute of	cc. is not responsible for safety is or procedures of operation, or the e design shown on these drawings. Ins are general or not called out, the Il conform to standards of industry. use on this project only and are not e without written approval from PND. o not to be used in any manner that a detriment directly or indirectly to PND.			1506 West 36th Avenue Anchorage, Alaska 99503 Phone: 907.561.1011	PN
5115120						Fax: 907.563.4220 www.pndengineers.com	ENGINEERS,
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PORT OF NOME BARGE RAMP REPAIRS

COVER & INDEX

				SHEET NO:		
DESIGNED BY:	BH	DATE:	5/15/18	1		-
CHECKED BY:	DK	PROJECT NO:	181033		OF	1

GENERAL NOTES

STEEL PLATE -ASTM A36

BOLTS -ASTM A307

GALVANIZING -

ALL PLATE, REINFORCING, AND PIPE SHALL BE GALVANIZED PER ASTM A123. ALL BOLTS AND HARDWARE SHALL BE GALVANIZED PER ASTM A153.

CONCRETE PLANKS -

CONCRETE FOR PLANKS SHALL CONFORM TO THE FOLLOWING:

TOLERANCE NOT MORE THAN 1/4" VARIATION IN DIMENSION OR TWIST.

CONCRETE SHALL CONFORM TO ASTM C15	0 TYPE I OR III WITH TRI-CALCIUM
ALUMINATE CONTENT BELOW 8%.	
(94 LB SACKS/CY)	6.0 MIN
SILICA FUME IN LBS/CY	50
PLASTICIZER	SUBMIT FOR APPROVAL
SLUMP RANGE IN INCHES (AFTER PLASTICI	ZER) 6" MAX
(SLUMP SHALL BE NOT MORE THA	AN 1" BEFORE ADDING PLASTICIZER
JUST BEFORE PLACING CONCRETE)
ENTRAINED AIR RANGE IN PERCENTAGE	5-7% PER ASTM C33
MAX AGGREGATE SIZE	3/4"

MINIMUM DESIGN STRENGTH, PSI (f'c) 6,000

MIX AND PLACE PER ASTM C94, RAKE FINISH AFTER VIBRATING AND SCREEDING. COVER AND WET CURE 5 DAYS MINIMUM.

TIMBER -

TIMBER SLEEPERS SHALL BE SURFACED FOUR SIDES (S4S) AND SHALL BE GRADED IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU STANDARD NO. 17. MEETING DOUGLAS FIR NO. 1 GRADE, INCISED AND PRESSURE TREATED AFTER ALL FABRICATION WITH ACZA PER AWPA C-18 TO A MINIMUM RETENTION OF 2.5 POUNDS PER CUBIC FOOT.

GALVANIZED REINFORCING -

GALVANIZED REINFORCING STEEL SHALL CONFORM TO ASTM A767, CLASS I WITH CHROMATING REQUIREMENTS OF SECTION 4.3 OMITTED, WITH STEEL CONFORMING TO: ASTM A706 GRADE 60 FOR BENT OR WELDED BARS; AND ASTM A615 FOR STRAIGHT BARS. GALVANIZING SHALL BE PERFORMED AFTER FABRICATION.

BARS SHALL BE SUPPORTED ON APPROVED CHAIRS. REINFORCING STEEL SHALL BE DETAILED, BENT, AND PLACED IN ACCORDANCE WITH THE LATEST ACI 318. REINFORCEMENT SHALL BE LAP-SPLICED PER ACI 318 FOR TENSION UNLESS OTHERWISE NOTED ON THE DRAWINGS. STAGGER SPLICES BY 40 BAR DIAMETERS. BARS SHALL BE CLEAN AND FREE FROM CUTTING OIL OR OTHER DELETERIOUS MATERIAL. REINFORCING STEEL SHOP DRAWINGS SHALL BE PREPARED ACCORDING TO ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT "

GRAVEL BEDDING -

12 X 12 TIMBERS SHALL BE BEDDED IN COARSE GRAVEL MEETING THE FOLLOWING GRADATION:

% PASSING BY WEIGHT	SIZE
100%	2"
40% TO 60%	1"
10% TO 20%	#4
LESS THAN 8%	#8

SUBMITTALS -

PROVIDE CERTIFICATIONS OR TESTS FOR APPROVAL AS FOLLOWS:

- CONCRETE MIX DESIGN AND 28-DAY COMPRESSION TEST CYLINDER RESULTS BEFORE CASTING AND AT LEAST SIX 28-DAY COMPRESSION TESTS FROM PLANK CONCRETE.
- REINFORCING STEEL
- BOLTS AND WASHERS .
- ٠ GAI VANIZING REBAR SHOP DRAWINGS .
- STRUCTURAL STEEL ٠
- TIMBER AND TREATMENT
- GRAVEL BEDDING

THE CITY OF NOME MAY PERIODICALLY INSPECT THE WORK FOR CONFORMANCE WITH PLANS AND SPECIFICATIONS. WORK DETERMINED TO BE DEFECTIVE SHALL BE CORRECTED WITHOUT CHARGE. WORK NOT SPECIFICALLY SPECIFIED SHALL MEET GENERALLY ACCEPTED INDUSTRY STANDARDS.

	ESTIMATE OF QUANTITIE	S		
WORK ITEM	PAYITEM	UNIT	ESTIMATED QUANTITY	NOTE
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D	-
2a	PROVIDE TYPE S PLANK	EACH	20	-
2b	PROVIDE TYPE L PLANK	EACH	20	-
3a	PROVIDE TIMBER FOR SLEEPERS (12x12x18')	LINEAR FOOT	1,116	1
Зb	PROVIDE TIMBER STOP BLOCK (4x12x6')	LINEAR FOOT	504	2
4	PROVIDE GRAVEL BEDDING	CUBIC YARD	170	3
5	PROVIDE HARDWARE (BOLTS, SPIKES, PLATES, ANGLES, ETC)	LUMP SUM	ALL REQ'D	4
6a	REMOVE & REINSTALL TYPE S PLANK – ZONE I	EACH	6	5
6b	REMOVE & REINSTALL TYPE L PLANK – ZONE I	EACH	6	5
6c	REMOVE & REINSTALL TYPE S PLANK – ZONE II	EACH	11	5
6d	REMOVE & REINSTALL TYPE L PLANK – ZONE II	EACH	11	5
6e	REMOVE & REINSTALL TYPE S PLANK – ZONE III	EACH	6	5
6f	REMOVE & REINSTALL TYPE L PLANK – ZONE III	EACH	6	5
7	REMOVE & REPLACE EXISTING TIMBER SLEEPERS	LINEAR FOOT	345	6
8	INSTALL INTERMEDIATE TIMBER SLEEPERS	LINEAR FOOT	621	3
9	INSTALL TIMBER STOP BLOCKS (TOP & BOTTOM)	PAIR	36	7
10	REGRADE & COMPACT NEW/EXISTING GRAVEL BEDDING	SQUARE YARD	460	3

NOTES:

- 1) INCLUDES SUPPLY OF 15% ADDITIONAL SLEEPER MATERIALS ABOVE INSTALL QUANTITY
- 2) INCLUDES SUPPLY OF 15% ADDITIONAL STOPBLOCK MATERIALS ABOVE INSTALL QUANTITY
- 3) ASSUMES GRAVEL BEDDING AND INTERMEDIATE SLEEPERS ARE INSTALLED ANYTIME PLANKS ARE REMOVED
- 4) HARDWARE QUANTITIES (IN MTO) DO NOT INCLUDE SPARE PARTS. CONTRACTOR TO DETERMINE ADDITIONAL CONTINGENCY PARTS AND SUPPLY AS REQUIRED AT NO ADDITIONAL COST. SHIM MATERIALS SUPPLY AND INSTALLATION IS INCIDENTAL
- 5) ITEMS 6a THRU 6f INCLUDE WORK TO REMOVE EXISTING PLANK AND
- REPLACE w/ NEW PLANK OR REINSTALL SALVAGED EXISTING PLANK 6) ASSUMES 50% OF SLEEPERS UNCOVERED DURING PLANK REMOVAL ARE REPLACED
- 7) ASSUMES FOUR (4) "FULL WIDTH" REPAIRS.

HARDWARE MTO*	
PAYITEM	ESTIMATED QUANTITY
PLANK LAGS BOLTS	360
PLANK THRU BOLTS**	90
SIDE PLATES	120
SLEEPER THRU BOLTS	240
STOP BLOCK LAGS	288

* PROVIDE ASSOCIATED NUTS AND WASHERS FOR ALL BOLTS

** PLANK THRU BOLTS ARE PROVIDED TO FILL HOLES IN PLANKS THAT ARE NOT USED IF INTERMEDIATE SLEEPERS ARE NOT INSTALLED.

DRAFT	PND Engineers, Inc. is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.			1506 West 36th Avenue Anchorage, Alaska 99503 Phone: 907.561.1011	PN
E115120				Fax: 907.563.4220	ENGINEER
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DESCRIPTION











BAR I D IIII: RS, INC.

PORT OF NOME BARGE RAMP REPAIRS

PLANK DETAILS

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