Agency: Department of Transportation and Public Facilities

Project Title: **Project Type:** Planning and Research

Planning and Design of a New Ocean Going Vessel To Replace the F/V Tustumena

State Funding Requested: $10,000,000 **House District:** Statewide (1-40)
One-Time Need

Brief Project Description:

Feasibility analysis to begin the planning process for replacement of M/V Tustumena, the Alaska Marine Highway's oldest vessel.

Funding Plan:

Total Project Cost:	$10,000,000
Funding Already Secured:	($0)
FY2014 State Funding Request:	($10,000,000)
Project Deficit:	$0

Funding Details:
None to date.

Detailed Project Description and Justification:

Planning and design for the AMHS M/V Tustumena vessel replacement. The Tustumena is 50 years old and has had a hard life servicing the Kodiak and Aleutian communities for the past several decades. She provides year-round service to the Kodiak area, and journeys out the Aleutian Chain 10 times each year, economically and otherwise benefiting each community to which she sails.

Recently, vessel aging problems have created significant recurring service disruptions in the region. leading to significant recent service disruptions. The vessel is at the top of the queue in the AMHS vessel replacement fund, and is waiting for allocation dollars to start the feasibility and design process of a new ocean going vessel to serve the Southwest region.

Please see attached for early community support resolutions. More are expected to come in throughout the 2013 legislative session.

Project Timeline:

Expenditures will occur within approximately one year of funds receipt.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Department of Transportation

Contact Name: Astrid Rose
Contact Number: 907.465.3271

For use by Co-chair Staff Only:
$10,000,000
Approved
2:02 PM 5/9/2013

Grant Recipient Contact Information:

Name:	.
Title:	.
Address:	.
	., Alaska 99615
Phone Number:	(907)465-3271
Email:	.

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

For use by Co-chair Staff Only:

2:02 PM 5/9/2013

Contact Name: Astrid Rose
Contact Number: 907.465.3271

SWAMC
Southwest Alaska Municipal Conference
3300 Arctic Boulevard, Suite 203 Anchorage, AK 99503 p: 907.562.7380 f: 907.562.0438 www.swamc.org
Alaska Peninsula
Aleutian Chain
Bristol Bay
Kodiak Island
Pribilof Islands

SOUTHWEST ALASKA MUNICIPAL CONFERENCE
RESOLUTION 2013-06

A RESOLUTION OF SUPPORT TO MAINTAIN THE M/V TUSTUMENA AT THE TOP OF ALASKA'S VESSEL REPLACEMENT SCHEDULE, AND URGING THE DEPARTMENT OF TRANSPORATION TO BEGIN THE DESIGN PROCESS OF A REPLACEMENT VESSEL AS SOON AS POSSIBLE.

WHEREAS, the Alaska Marine Highway System (AMHS) provides vital goods and services and a reliable transportation link to the 11 serviced communities of Southwest Alaska, stretching from Kodiak to Unalaska on the Aleutian Chain ; and

WHEREAS, the Tustumena vessel provides year-round service to the Kodiak area and makes the journey out the Aleutian Chain 10 times per year and continues to benefit the region economically; and

WHEREAS, the rough and exposed waters of the Aleutians can accelerate the deterioration of any vessel servicing the region; and

WHEREAS, the M/V Tustumena was built in 1964 is approaching its 50th year of service; and

WHEREAS, it is becoming apparent to the communities in Southwest Alaska who depend upon and travel on the M/V Tustumena that it is having an increase in serious maintenance issues and has been out of service since October 2012 and may not come back into service until June 2013, a period of eight (8) months; and

WHEREAS, the AMHS vessel M/V Kennicott also serves Southwest Alaska but cannot dock at many of the communities located in this area which depend upon ferry service; and

WHEREAS, the Marine Transportation Advisory Board, created in 2003 as a local planning and advisory body for the AMHS, has recommended the Tustumena as the top vessel in the queue of the State's vessel replacement fund; and

WHEREAS, the Alaska Legislature has appropriated $50 million to the state's vessel replacement fund, but has not authorized spending from that fund toward another vessel; and

WHEREAS, design work on a ocean-class vessel that can navigate the waters of Southwest Alaska – and importantly the Aleutian Chain – and accommodate its unique port requirements needs to begin as soon as possible to accelerate the Tustumena replacement.

BE IT RESOLVED that the Southwest Alaska Municipal Conference supports maintaining the M/V Tustumena at the top of Alaska's vessel replacement schedule, and urges the Department of Transportation to begin the design process of a replacement vessel as soon as possible; and

BE IT FURTHER RESOLVED that the Southwest Alaska Municipal Conference requests that a collective effort by the legislators whose communities are served by the Tustumena work to identify capital

project dollars in this fiscal year to start a feasibility study on replacing the M/V Tustumena as soon as possible; and

AND BE IT FURTHER RESOLVED that the Southwest Alaska Municipal Conference strongly requests that the State of Alaska makes replacing the M/V Tustumena a transportation priority for the State of Alaska.

PASSED AND ADOPTED by the Southwest Alaska Municipal Conference Membership this 22nd Day of February, 2013.

IN WITNESS THERETO:

Shirley Marquardt, President

ATTEST:

Andy Varner, Executive Director

CITY OF OUZINKIE
RESOLUTION 2013-02

A RESOLUTION REQUESTING THE SOUTHWEST ALASKA MUNICIPAL CONFERENCE (SWAMC) PROMOTE AND SUPPORT REPLACEMENT OF THE ALASKA MARINE HIGHWAY VESSEL "M/V TUSTUMENA" AS A TRANSPORTATION PRIORITY FOR THE STATE OF ALASKA.

WHEREAS, the City of Ouzinkie is an incorporated Second Class City recognized by the State of Alaska and located within the Kodiak Island Borough; and

WHEREAS, the City of Ouzinkie is a coastal community and coastal communities throughout Southwest Alaska depend upon the Alaska Marine Highway to provide for a regular, safe, and cost effective means of transportation, and

WHEREAS, the M/V Tustumena is the longest serving vessel in the Alaska Marine Highway Fleet and serves communities from Prince William Sound to the Aleutian Chain continuously throughout the year with the exception of maintenance down times, and

WHEREAS, the Alaska Marine Highway and in particular the M/V Tustumena transports passengers and freight throughout Southwest Alaska which has a major economic impact on all segments of coastal communities and the loss of this service would be devastating to the health and welfare of these communities, and

WHEREAS, the Community of Ouzinkie has received ferry service since 2012 through the Alaska Marine Highway Vessel, M/V Tustumena and is scheduled to continue to receive service from this vessel, and

WHEREAS, it is becoming apparent to the communities in Southwest Alaska who depend upon and travel on the M/V Tustumena that it is having an increase in serious maintenance issues and has been out of service since October of 2012 and may not come back into service until June of 2013 , a period of 8 months, and

WHEREAS, the Alaska Marine Highway Vessel, M/V Kennicott also serves Southwest Alaska but cannot land at many of the communities located in this area which depend upon Ferry Service.

NOW THEREFORE BE IT RESOLVED, that the City Council of the City of Ouzinkie hereby requests the Board of the Southwest Alaska Municipal Conference (SWAMC) prepare and move forward a Resolution which strongly requests that the State of Alaska makes replacing the Alaska Marine Highway Vessel M/V Tustumena a transportation priority for the State of Alaska and that funding be allocated towards this replacement in the FY 14 Budget Cycle in the form of design funding,

AND BE IT FURTHER RESOLVED, that the Resolution prepared by SWAMC be sent to the Governor's Office, the Alaska Commissioner of Transportation and Public Facilities and the Deputy Commissioner of Alaska, DOT&PF in charge of the Alaska Marine Highway,

AND BE IT FINALLY RESOLVED, that the Resolution also be distributed to communities throughout Southwest Alaska and their legislative representation with requests of support of the Resolution from each community and legislator.

PASSED AND APPROVED by a duly constituted quorum of the Ouzinkie City Council. Adopted this 14 day of February, 2013. This Resolution becomes effective upon the date of adoption.

Signed:_____
Dan Clarion, Mayor

Attest: Linda Getz
Linda Getz, City Clerk

City of Chignik

PO Box 110
Chignik, AK 99564

Phone (907) 749-2280
Fax (907) 749-2300
cityoffice@chignik.org

February 16, 2013

To: Liz Clement

From: Richard Sharpe

RE: Capital Request

In answer to your question in your E-mail, I will try to answer to the best of by Knowledge:

1. Legal name; City of Chignik
2. EIN: 92-0094970
3. Physical Location: Anchorage Bay within The City of Chignik boundaries
4. Project Description: the project consists of a regional dock facility that would serve 5 communities within the Chignik area. Chignik, Chignik Lagoon, Chignik Lake, Perryville, and Ivanoff Bay. The primary purpose is for a dock to facilitate ferry service to the area as the present dock which is owned by Trident Sfds is disrepair. This dock would also accommodate a floating processor to be able to come in the season for Cod and Crab which Trident does not process in Chignik but has them delivered to Sand Point. The dock site encompasses about 7 acres of raw land which could entice business such as Hydraulic shop, Welding, boat repair, and a hardware supplier if there was a 10 month season instead of 3 as it is now. This has been a work in progress since 1994 or sooner.
5. Project Cost: Total Cost since inception is about 15 million. The Lake and Peninsula Borough put in 1 million to get a berm built in order to fill the site. When the Chignik Boat Harbor was built, the dredge spoils were used to fill the site with a savings to the dock site about 2 million. There are remaining spoils to be used for filling the Sheet pile portion. The remaining cost of about 12 million will be constructing a sheet pile dock to accommodate AMHS ferries and also a boat lift to handle 150 ton boats.
   Note: this request is for 7.6 million for a phase 1 sheet pile dock large enough to accommodate Tustemena.
6. Funding already secured: ?
7. Other funding requests: 90,000 CDBG GRANT for engineering. + city funds of 130,000 as match for engineering. Design should be at 100% by end of month per mPND
8. FY-14 Request: 7.6 million

9. Other requests: possibly Lake and Peninsula for 2 million grant
10. Public Review: Yes
11. Project time line: If funded, bid process in July 2013, construction fall 2013 or spring 2014
12. Responsible party: city of Chignik
13. Contact Info: Richard Sharpe/Mayor, city of Chignik, PO Box 110, Chignik, AK 99564 Phone: 907-749-2280, Fax 907-749-2300, email- dick.sharpe@yahoo.com
14. See attached from PND

Note:

The Lake and Peninsula Borough may possibly put this is as one of their grant requests.

PND ENGINEERS, INC.

City of Chignik
Chignik Dock - Phase I
95% Design ROM Cost Estimate Summary

111095
1/18/13

Description	Total Cost
Chignik Dock - Phase I	**$7,889,000**
Mobilization and Demobilization	$702,000
Provide and Install Sheet Pile Bulkhead	$3,523,000
Provide and Install Anodes	$166,000
Dock Face Beam	$235,000
Vibracompaction	$256,000
Provide and Install Ladders	$83,000
Provide and Install Chain Curtain	$25,000
Provide and Install Bent Pipe Rail	$81,000
Fender System	$741,000
Mooring Bollards	$84,000
Provide and Place Fill Material	$244,000
Indirects and Support Equipment	$759,000
Construction Administration and Inspection	$290,000
10% Contingency	$700,000

Notes:
1) Costs are based on 95% level design and quantites
2) Costs are presented in current (January 2013) dollars and do not include escalation.
3) Indirect costs are approximate and will depend to construction duration.

PND ENGINEERS, INC.

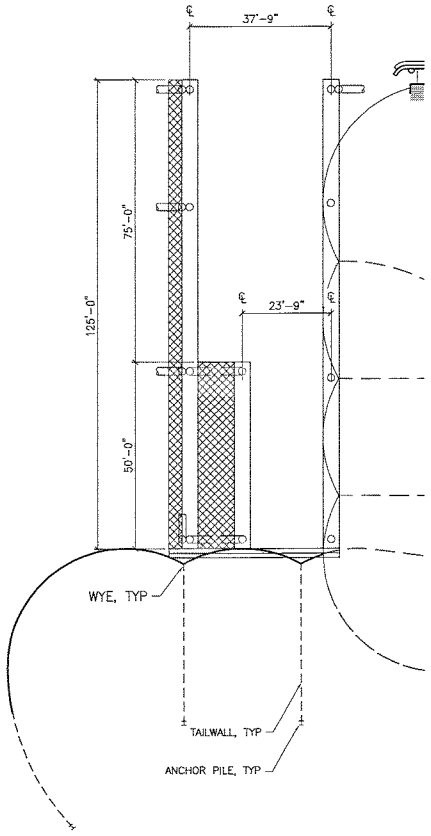
City of Chignik
Chignik Dock - Phase I
95% Design ROM Cost Estimate

111095
1/18/13

Item No.	Description	Material Quantity	Unit of Measure	Unit Cost	Total Cost
1	**Chignik Dock - Phase I**	**1**	**LS**	**$7,889,000**	**$7,889,000**
1.1	**Mobilization and Demobilization**	**1**	**LS**	**$702,000**	**$702,000**
1.1.1	Mobilization	1	LS	$351,000	$351,000
1.1.2	Demobilization	1	Each	$351,000	$351,000
1.2	**Provide and Install Sheet Pile Bulkhead**	**1**	**LS**	**$3,523,000**	**$3,523,000**
1.2.1	Provide Sheet Piles	2,015,000	Pound	$1.21	$2,438,000
1.2.2	Set Template and Temporary Supports (Per Cell)	11	EA	$11,727	$129,000
1.2.3	Stab and Drive Sheet Piles	813	EA	$1,077	$876,000
1.2.4	Cut Off Sheet Piles and Weld Interlocks	298	EA	$268	$80,000
1.3	**Provide and Install Anodes**	**37**	**EA**	**$4,486**	**$166,000**
1.4	**Dock Face Beam**	**250**	**LF**	**$940**	**$235,000**
1.4.1	Provide Face Beam Materials (Dlb HP14x89)	46,800	Pound	$2.88	$135,000
1.4.2	Install Face Beam	210	LF	$362	$76,000
1.4.3	Provide and Install Bullrail	210	LF	$114	$24,000
1.5	**Vibracompaction**	**143**	**EA**	**$1,790**	**$256,000**
1.5.1	Vibracompaction Probing	143	EA	$1,517	$217,000
1.5.2	Vibracompaction Fill	1,001	CY	$39	$39,000
1.6	**Provide and Install Ladders**	**5**	**Each**	**$16,600**	**$83,000**
1.7	**Provide and Install Chain Curtain**	**220**	**LF**	**$114**	**$25,000**
1.8	**Provide and Install Bent Pipe Rail**	**260**	**LF**	**$312**	**$81,000**
1.9	**Fender System**	**4**	**EA**	**$185,250**	**$741,000**
1.9.1	Provide Fender Pin Piles (24x0.75")	134,208	Pound	$1.51	$203,000
1.9.2	Install Fender Pin Pile	8	EA	$3,375	$27,000
1.9.3	Provide and Install Fender Unit	4	EA	$127,750	$511,000
1.10	**Mooring Bollards**	**4**	**EA**	**$21,000**	**$84,000**
1.10.1	Provide Pipe Bollard Materials	37,440	Pound	$1.52	$57,000
1.10.2	Install Bollard	4	EA	$6,750	$27,000
1.11	**Provide and Place Fill Material**	**1**	**LS**	**$244,000**	**$244,000**
1.11.1	Place Fill	39,000	CY	$4.41	$172,000
1.11.2	Layer Compact Fill	19,000	CY	$2.26	$43,000
1.11.3	Provide and Place Surface Course	600	CY	$48	$29,000
1.12	**Indirects and Support Equipment**	**1**	**LS**	**$759,000**	**$759,000**
1.12.1	Contractor Pre-Planning	30	Day	$1,000	$30,000
1.12.2	Lodging and Per Diem	1	LS	$120,000	$120,000
1.12.3	Support Labor and Equipment	100	Day	$2,950	$295,000
1.12.4	Salaried Indirect Staff	100	Day	$1,900	$190,000
1.12.5	Construction Survey	30	Day	$3,267	$98,000
1.12.6	Small Tools	13,000	Hour	$2.00	$26,000
1.13	**Construction Administration and Inspection**	**1**	**LS**	**$290,000**	**$290,000**
1.13.1	Bid Support	1	LS	$15,000	$15,000
1.13.2	Onsite Inspection (Assumes Owner Provides Lodging and Vehicle)	1	LS	$189,000	$189,000
1.13.3	Submittal Review	1	LS	$15,000	$15,000
1.13.4	Fabrication Inspection	1	LS	$20,000	$20,000
1.13.5	Office Support During Construction	1	LS	$51,000	$51,000
1.14	**10% Contingency**	**1**	**LS**	**$700,000**	**$700,000**

Notes:

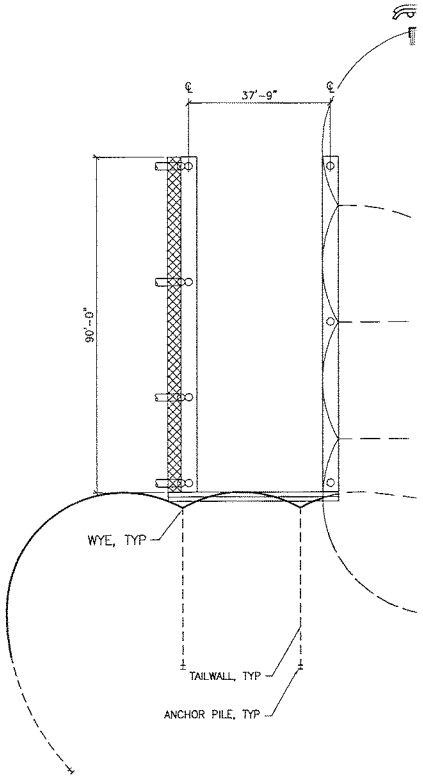
1) **Costs are based on 95% level design and quantities**
2) **Costs are presented in current (January 2013) dollars and do not include escalation.**
3) **Indirect costs are approximate and will depend to construction duration.**



OPTION 1

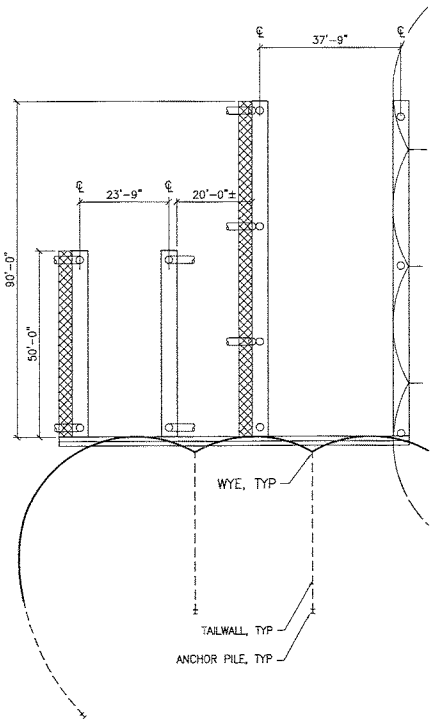
DUAL USE
150/50-TON LIFT

NOTE:
150-TON LIFT AND/OR 50-TON LIFT SHORTER THAN RECOMMENDED LENGTH



OPTION 2

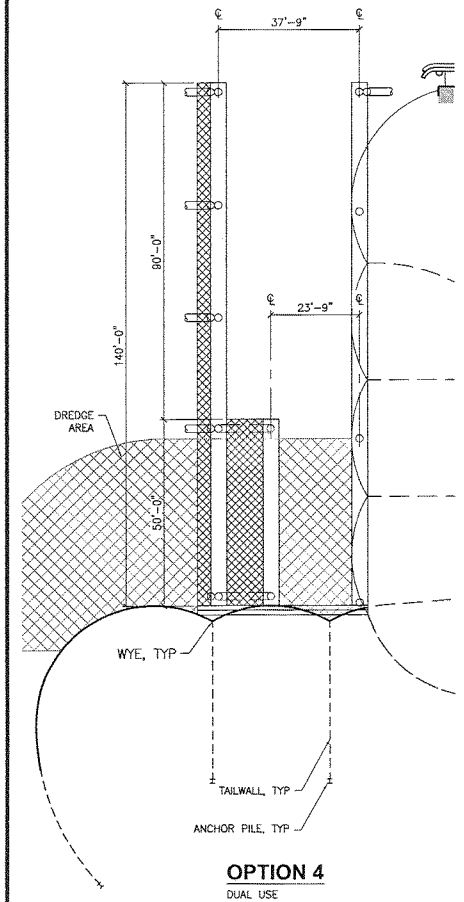
STAND ALONE
150-TON LIFT



OPTION 3

SEPARATE 150 &
50-TON LIFTS.

NOTE:
REQUIRES EXTENSION OF BULKHEAD CELLS



OPTION 4

DUAL USE
150/50-TON LIFT

NOTE:
REQUIRES DREDGING FOR 50 TON LIFT

FOR INFORMATION
JANUARY 2013

REV	DATE	DESCRIPTION

DATE: _____

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

P N D
ENGINEERS, INC.

PROJECT:
CHIGNIK DOCK PHASE III

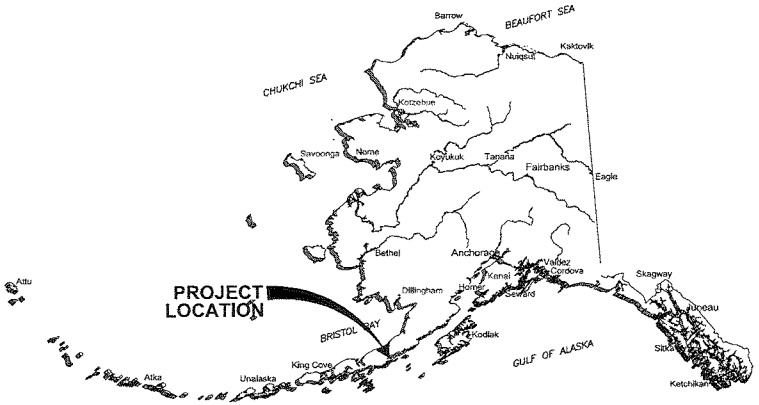
TITLE:
BOAT LIFT LAYOUT OPTIONS

DESIGNED BY:	CC	DATE:	JANUARY 2013
CHECKED BY:	JWP	PROJECT NO:	111095

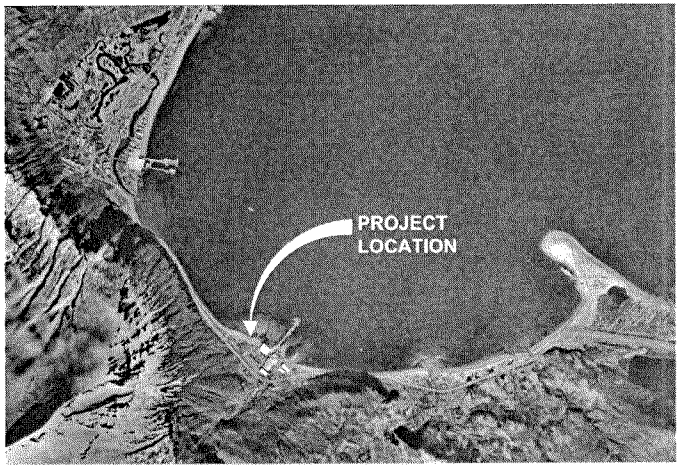
SHEET NO.
1 OF 1

CHIGNIK DOCK PHASE I

JANUARY 2013
CHIGNIK, ALASKA



STATE OF ALASKA



CHIGNIK VICINITY

SHEET INDEX

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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

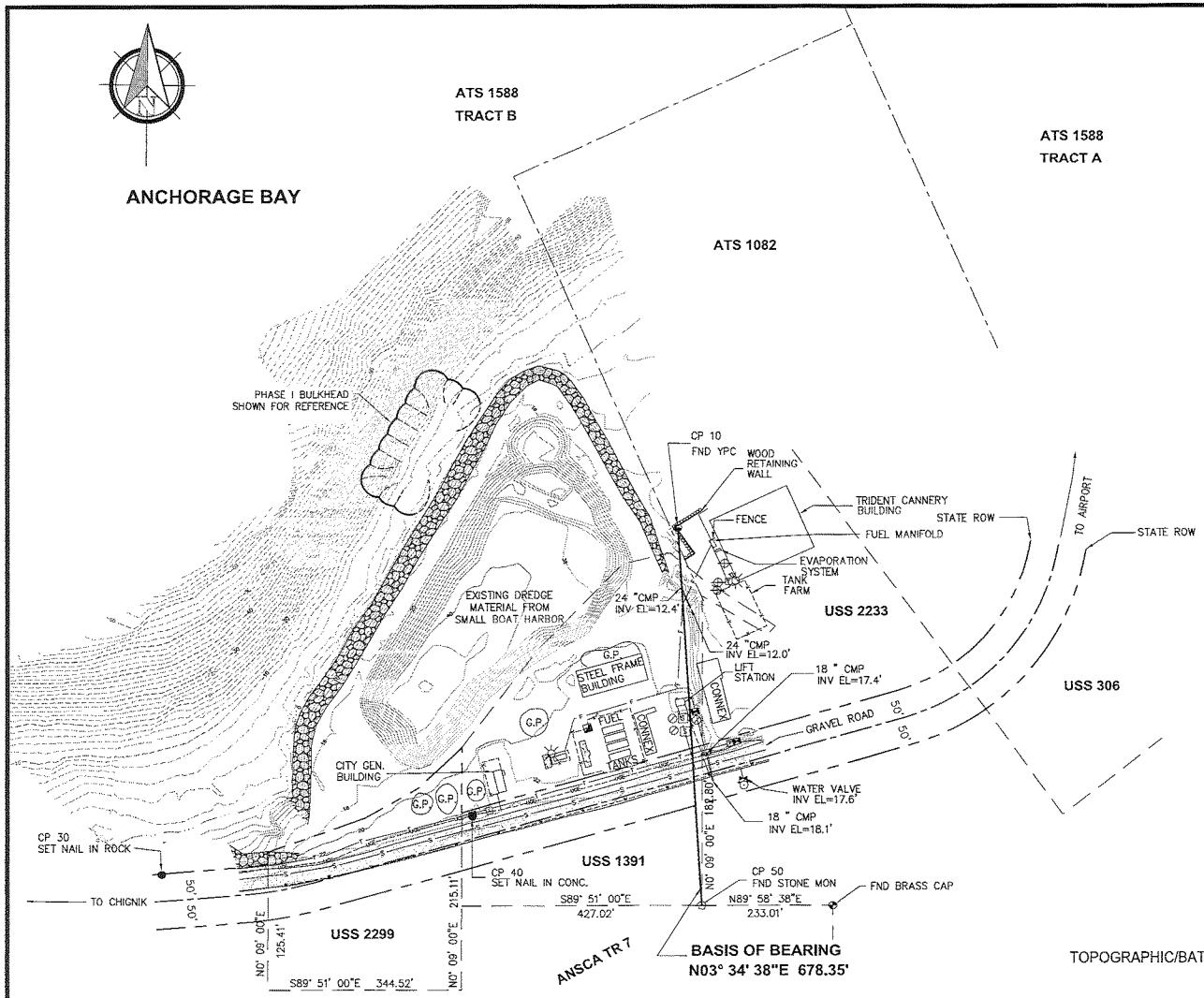
P N D
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: TITLE SHEET & INDEX

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 1 OF 23



LEGEND

- FOUND MONUMENT
- FOUND YPC
- SET NAIL
- FOUND STONE MONUMENT
- ELECTRIC METER
- MONITOR WELL
- WATER VALVE
- PHONE PED
- HYDRANT
- SANITARY SEWER STAND PIPE
- G.P. MISC. GRAVEL PILES
- METAL BOLLARD
- TRANSFORMER ON CONC PAD
- CONCRETE
- GRAVEL ROAD
- RIP RAP
- UGE — UNDERGROUND ELECTRIC LOCATE
- W — WATER LOCATE
- F — UNDERGROUND FUEL LINE LOCATE
- S — SANITARY SEWER FORCED MAIN
- X — CHAINLINK FENCE
- T — UNDERGROUND PHONE LOCATE
- LIGHT POLE

NOTES:

1) BASIS OF VERTICAL DATUM FOR THIS SURVEY IS MLLW, BASED ON A FOUND YPC, WITH AN ELEVATION OF 17.46', CP 10 THIS DRAWING, SET BY TWA SURVEYING, CP 2, AS REFERENCED IN A DRAWING TITLED, "TOPO AND HYDROGRAPHIC SURVEY PUBLIC DOCK FACILITY", DATED 9-25-02.
2) BASIS OF BEARING FOR THIS SURVEY IS A COMPUTED BEARING AND DISTANCE OF N03° 34' 38"E, 678.35', BETWEEN CP 10 (SEE NOTE 1) AND CP50, A FOUND STONE MONUMENT, WHICH ARE BOTH REFERENCED ON TWA'S DRAWING (SEE NOTE 1).
3) UNDERGROUND UTILITIES WERE LOCATED WITH THE AID OF THE CITY OF CHIGNIK PUBLIC UTILITY EMPLOYEES.
4) CONTOURS ARE IN FEET, WITH TWO FOOT INTERVALS.
5) FIELD SURVEY PERFORMED SEPTEMBER 22-26, 2011.
6) ALL ATS, USS AND DOT RIGHT OF WAY PROPERTY BOUNDARIES SHOWN AS WELL AS THE BATHYMETRIC CONTOURS ARE BASED ON A DRAWING TITLED, "TOPO AND HYDROGRAPHIC SURVEY PUBLIC DOCK FACILITY", COMPLETED BY TWA SURVEYING, ANCHORAGE, ALASKA, ON 9-25-02, FOR THE CITY OF CHIGNIK. NO PROPERTY SURVEY WAS PERFORMED AT THIS TIME.

COORDINATE TABLE

PT #	NORTHING	EASTING	ELEVATION	DESCRIPTOR
10	10677.0345	9957.7751	17.46	FND YPC
30	10057.9489	9038.7855	20.34	SET NAIL IN ROCK
40	10161.3772	9591.6746	25.65	SET NAIL IN CONC.
50	10000.0000	10000.0000	77.05	FND STONE MON.

GRAPHIC SCALE IN FEET
100 0 100 200 300

TOPOGRAPHIC/BATHYMETRIC SURVEY

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE:

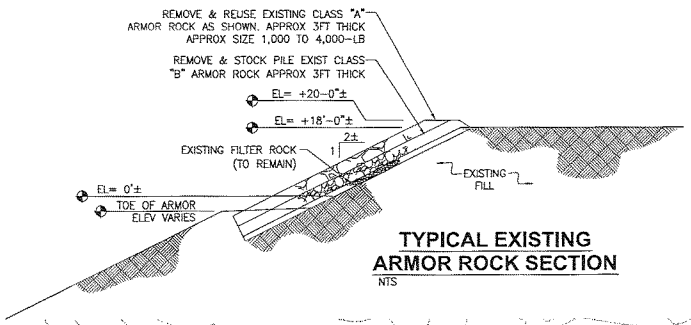
1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
Fax: 907.563.4220
www.pndengineers.com
P N D ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: SURVEY CONTROL

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 2 OF 23



TYPICAL EXISTING ARMOR ROCK SECTION

NTS

POINTS TABLE			
POINT #	NORTHING	EASTING	DESCRIPTION
120	10640.21	9506.94	SOUTH ARMOR ROCK REMOVAL EXTENTS
121	10922.58	9681.28	NORTH ARMOR ROCK REMOVAL EXTENTS
B1	10721.98	9389.86	2002 BOREHOLE
B2	10930.20	9515.01	2002 BOREHOLE
B4	10858.69	9514.26	2002 BOREHOLE

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

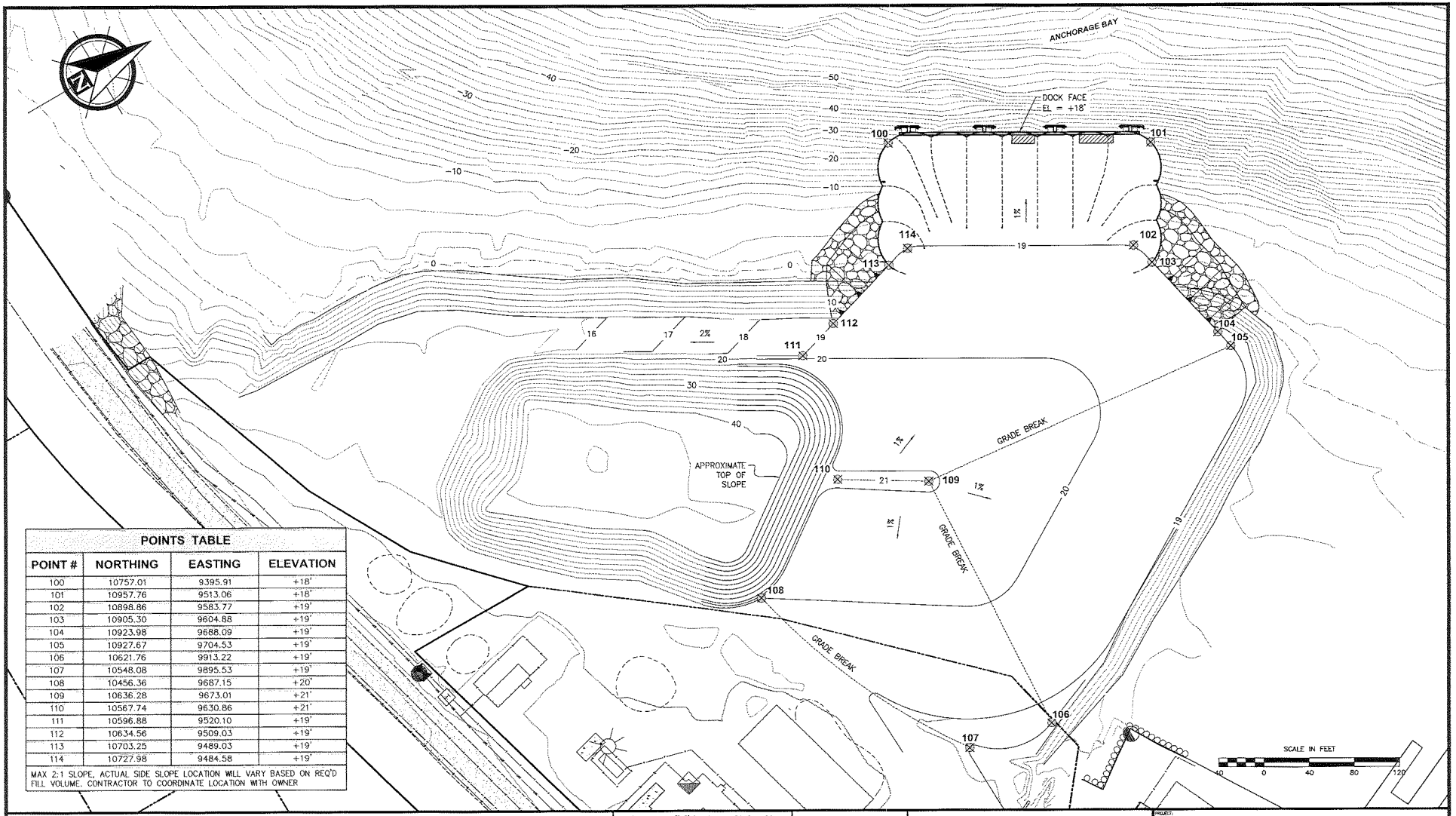
1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
Fax: 907.563.4220
www.pndengineers.com

P N D
ENGINEERS, INC.

PROJECT:
CHIGNIK DOCK PHASE I

TITLE:
EXISTING CONDITIONS AND DEMOLITION

DESIGNED BY:	CC	DATE:	1/18/12	SHEET NO: 3 OF 23
CHECKED BY:	JWP	PROJECT NO:	111095	



POINTS TABLE			
POINT #	NORTHING	EASTING	ELEVATION
100	10757.01	9395.91	+18'
101	10957.76	9513.06	+18'
102	10898.86	9583.77	+19'
103	10905.30	9604.88	+19'
104	10923.98	9688.09	+19'
105	10927.67	9704.53	+19'
106	10621.76	9913.22	+19'
107	10548.08	9895.53	+19'
108	10456.36	9687.15	+20'
109	10636.28	9673.01	+21'
110	10567.74	9630.86	+21'
111	10596.88	9520.10	+19'
112	10634.56	9509.03	+19'
113	10703.25	9489.03	+19'
114	10727.98	9484.58	+19'

MAX 2:1 SLOPE, ACTUAL SIDE SLOPE LOCATION WILL VARY BASED ON REQ'D FILL VOLUME. CONTRACTOR TO COORDINATE LOCATION WITH OWNER

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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

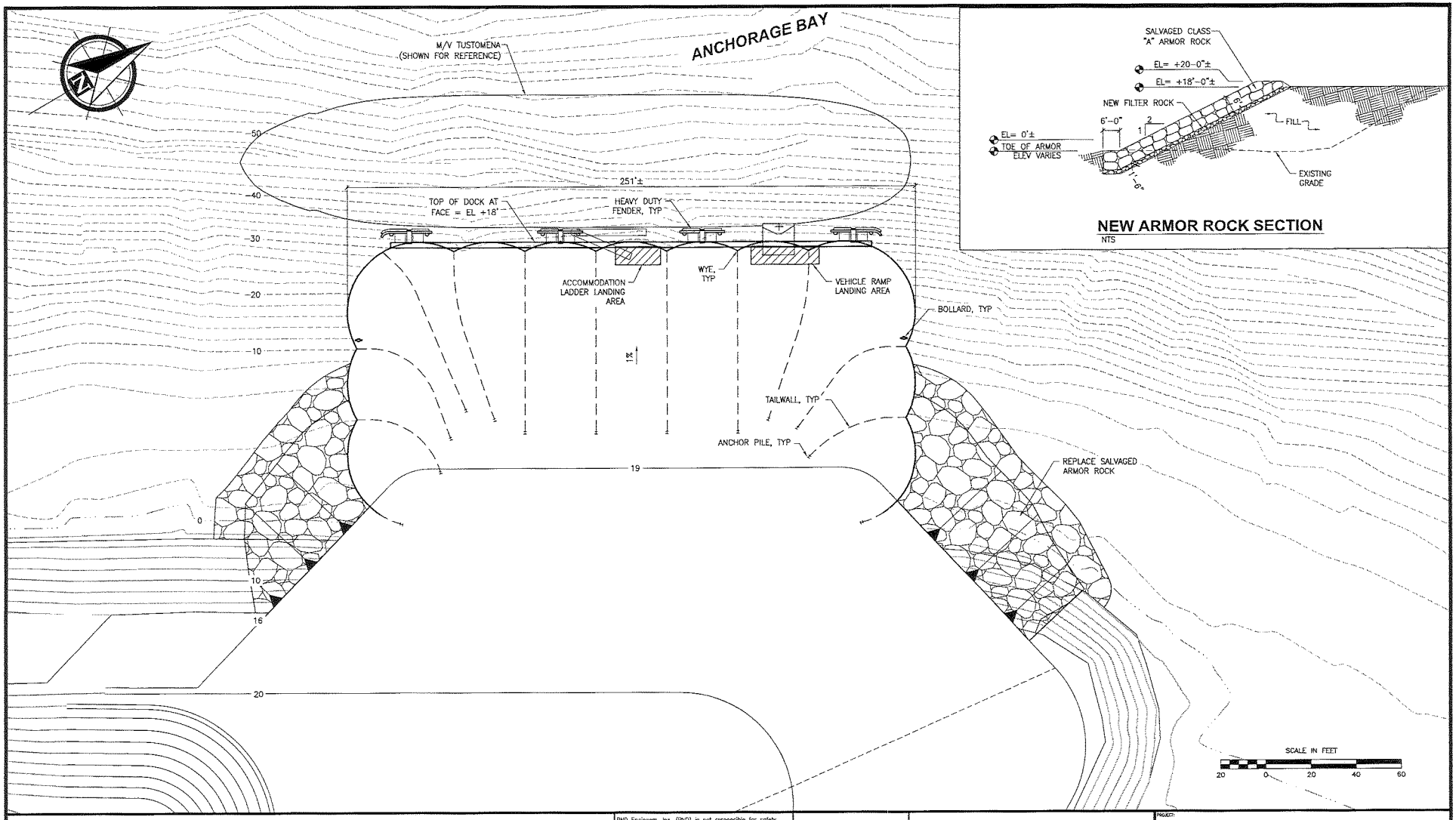
P N D
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: **SITE GRADING PLAN**

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO. 4 OF 23



NEW ARMOR ROCK SECTION
NTS

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

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

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1506 West 36th Avenue
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Phone: 907.561.1011
Fax: 907.563.4220
www.pndengineers.com

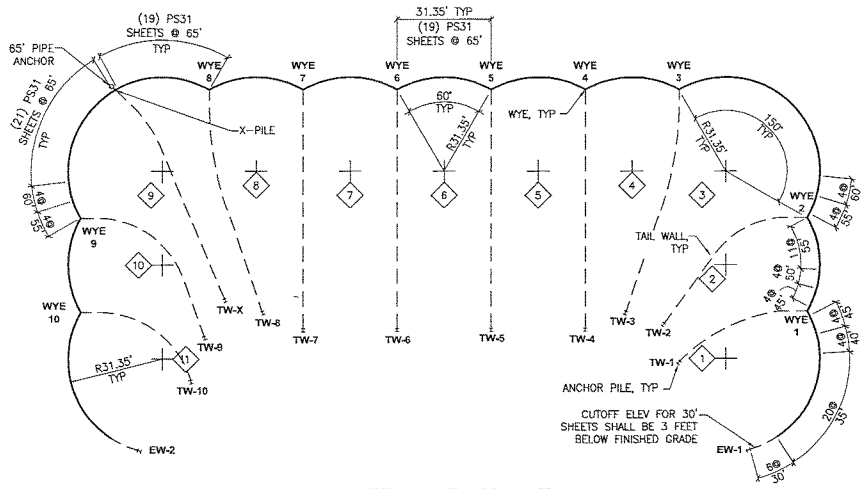
P N D
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: **DOCK GRADING PLAN**

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: **5** OF 23

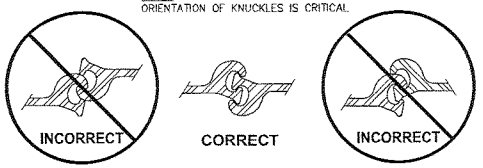


SHEET PILE LAYOUT
NTS

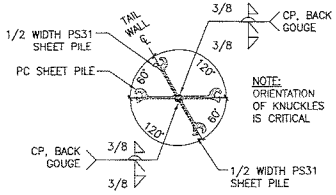
PILE LOCATIONS			
WYE	NORTHING	EASTING	LENGTH
1	10927.19	9575.34	45'
2	10942.99	9548.26	55'
3	10927.59	9489.69	65'
4	10900.51	9473.89	65'
5	10873.44	9458.08	65'
6	10846.36	9442.28	65'
7	10819.28	9426.48	65'
8	10792.21	9410.68	65'
9	10733.63	9426.08	55'
10	10717.83	9453.16	45'
X--PILE	10765.13	9394.88	65'

PILE QUANTITIES		
PILE TYPE	LENGTH	#PILES
PS31	65'	176
PS31	60'	8
PS31	55'	30
PS31	50'	8
PS31	45'	16
PS31	40'	8
PS31	35'	40
PS31	30'	12
PS27.5	70'	28
PS27.5	65'	56
PS27.5	60'	56
PS27.5	55'	225
PS27.5	45'	16
PS27.5	35'	68
PS27.5	30'	42
ANCHOR	70'	7
ANCHOR	35'	2
ANCHOR	30'	4
X--PILE	65'	1
EXTRA PS31	65'	20

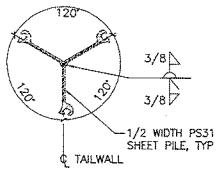
NOTE:
ORIENTATION OF KNUCKLES IS CRITICAL



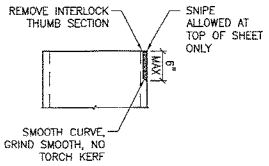
SHEET PILE INTERLOCK TYPICAL DETAIL
NTS



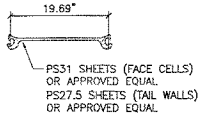
X-PILE SECTION
PS31 SHEET PILE NTS



WYE SECTION
PS31 SHEET PILE NTS



SHEET SNIPING DETAIL
NTS



SHEET PILE SECTION
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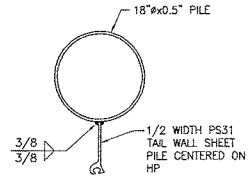
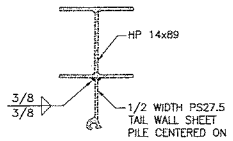


PIPE PILE ANCHOR
NTS



ANCHOR PILE SECTION
NTS

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

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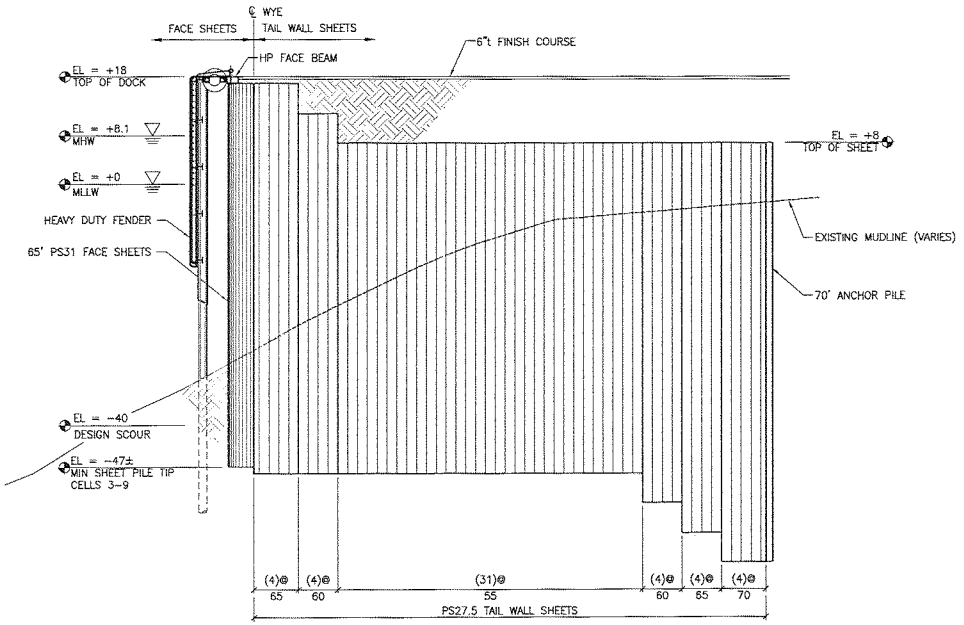
P N D
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: SHEETPILE LAYOUT AND DETAILS

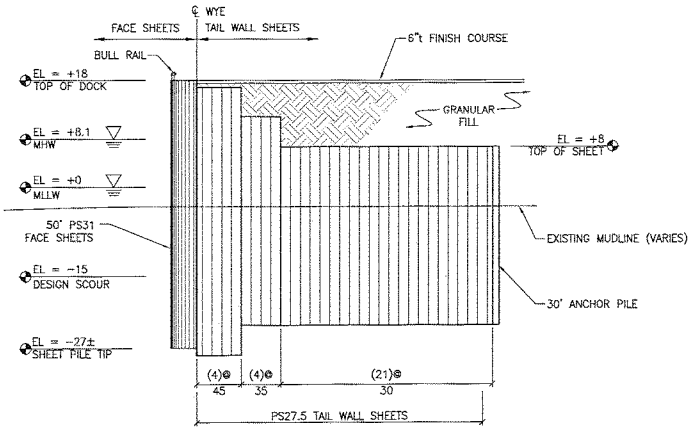
DESIGNED BY:	CC	DATE:	1/16/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 6 OF 23



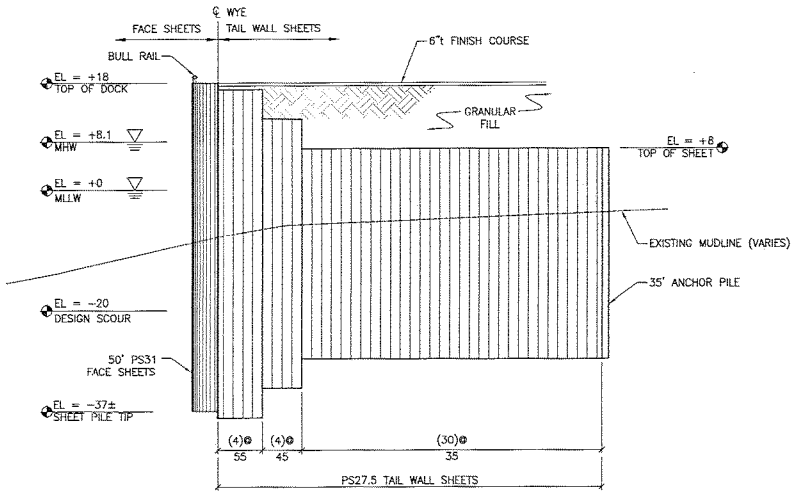
TYPICAL TAILWALL SECTION (TW-3 TO TW-8, TW-X)

NTS



TW-1 & TW-10 SECTION

NTS



TW-2 & TW-9 SECTION

NTS

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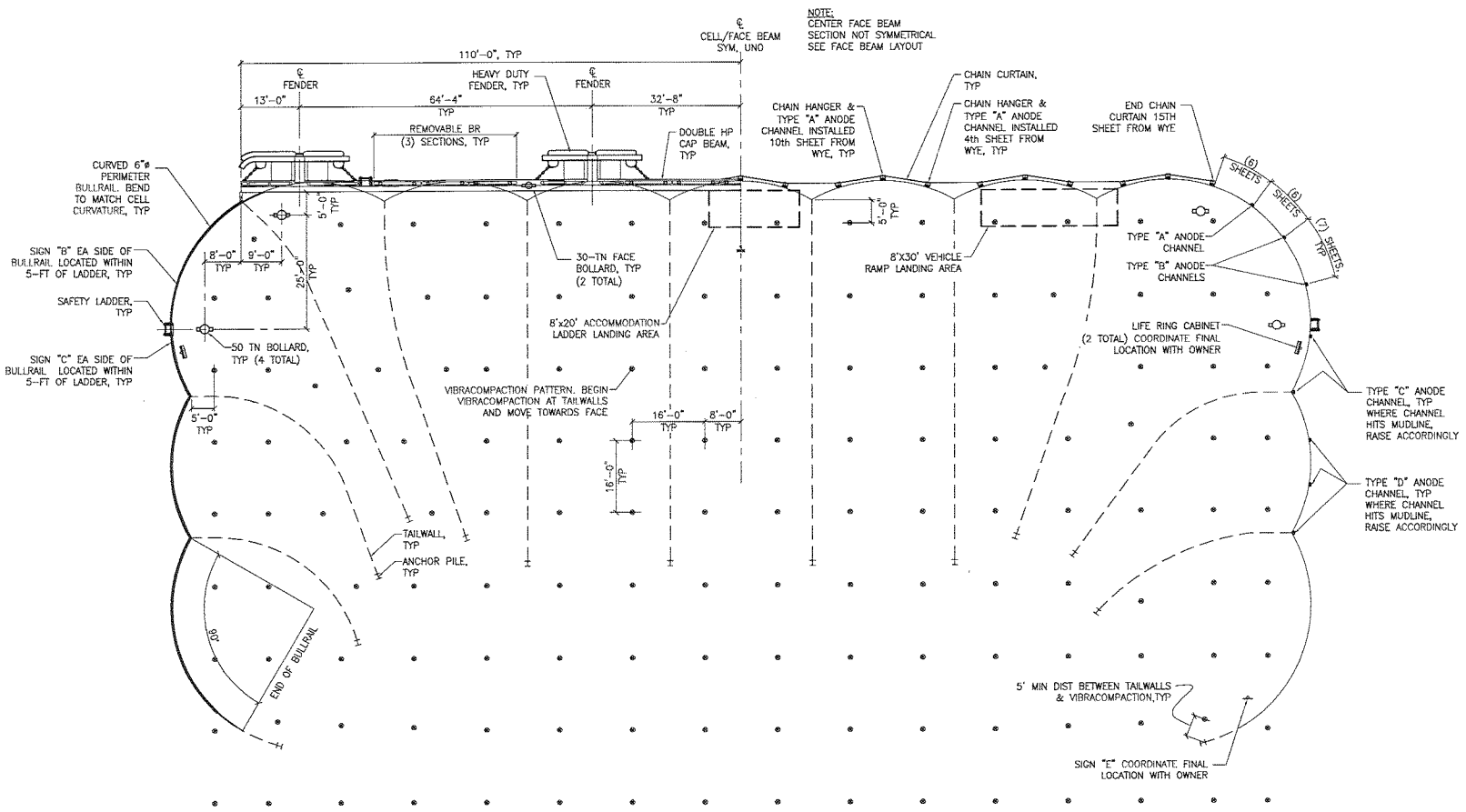
P N D
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: TAILWALL SECTIONS

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 7 OF 23



DOCK LAYOUT

NTS

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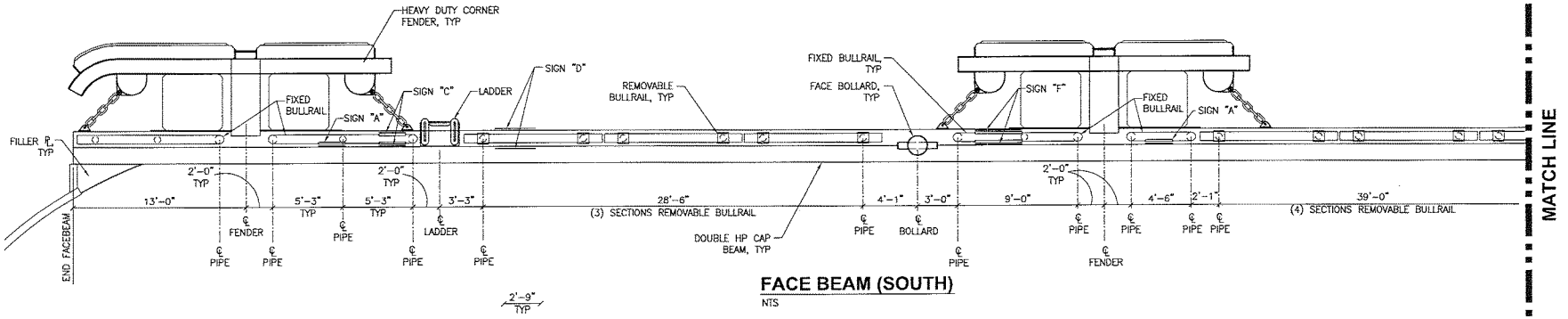
P N D
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: DOCK LAYOUT

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 8 OF 23

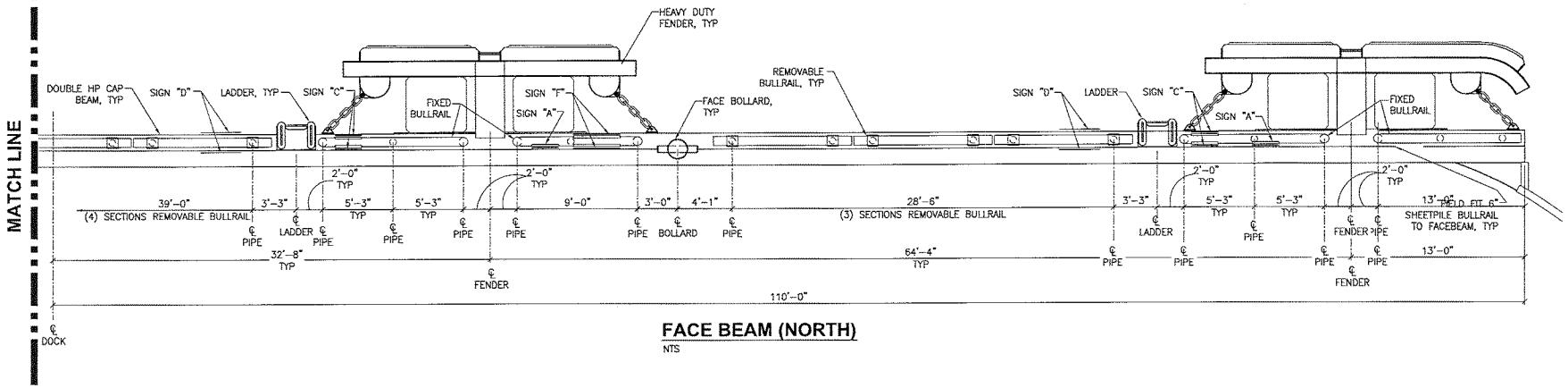


FACE BEAM (SOUTH)

NTS

MATCH LINE

MATCH LINE



FACE BEAM (NORTH)

NTS

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JANUARY 2012

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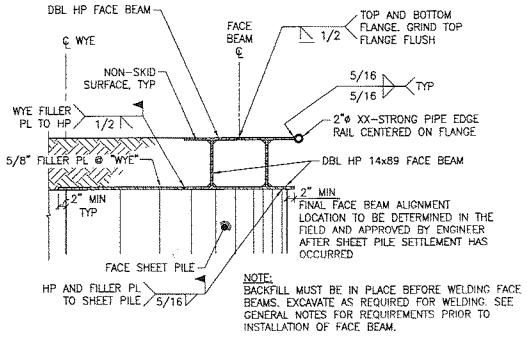
P N D
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

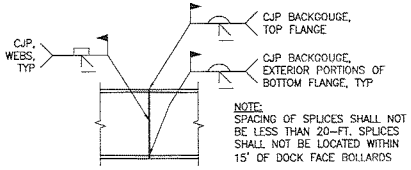
TITLE: FACEBEAM LAYOUT

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

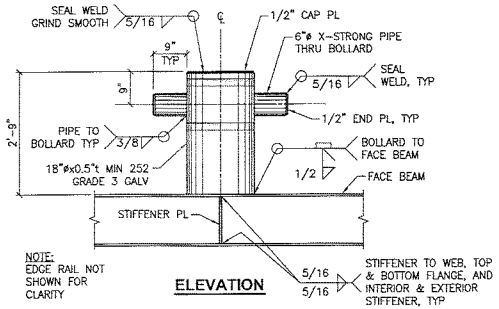
SHEET NO. 9 OF 23

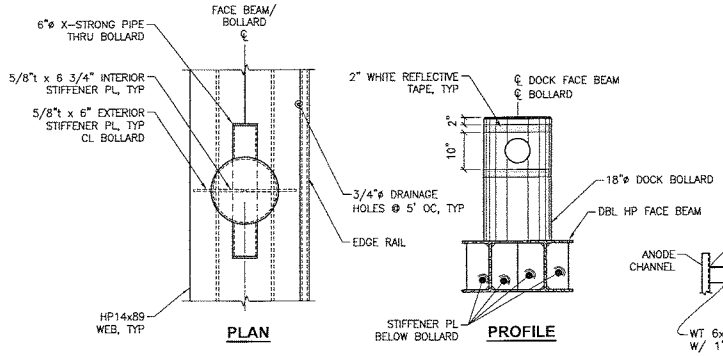


FACE BEAM DETAIL
NTS

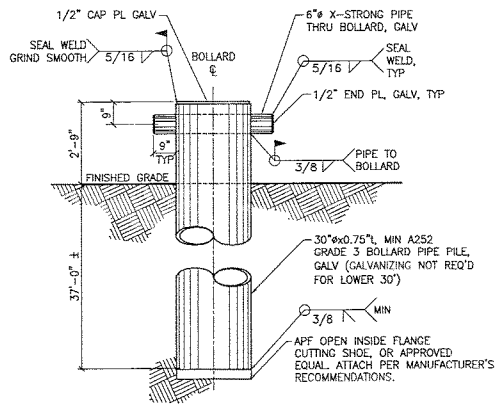


FACE BEAM SPLICE
NTS

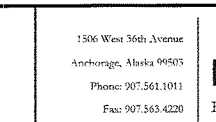




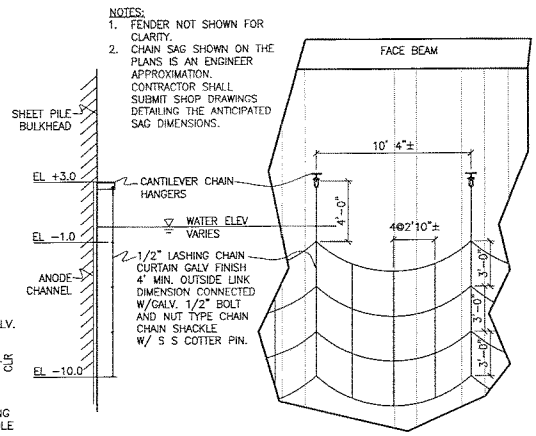
DOCK FACE BOLLARD
NTS (30 TON RATING)



50-TON BOLLARD
NTS



HANGER DETAIL



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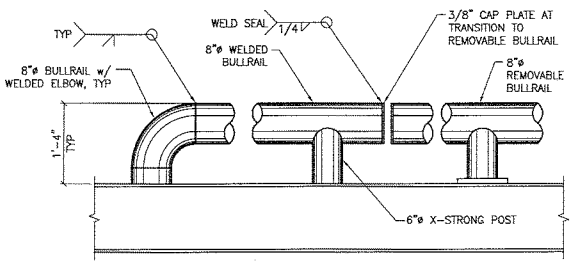
PROJECT: CHIGNIK DOCK PHASE I

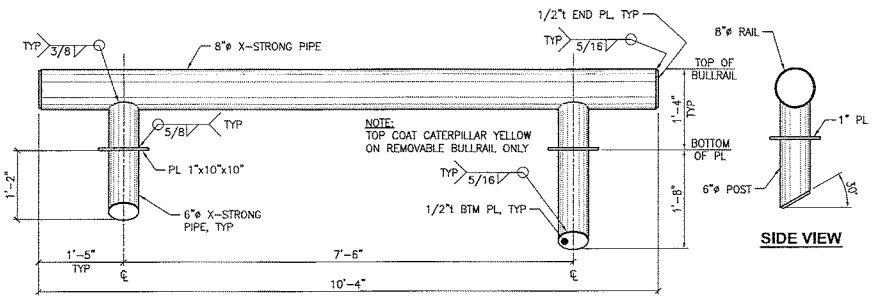
TITLE: DOCK DETAILS (1 OF 4)

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 10 OF 23

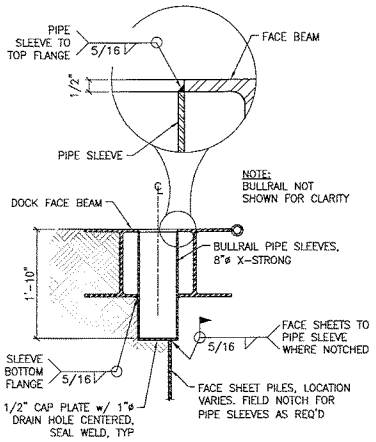


FIXED BULLRAIL DETAILS
NTS

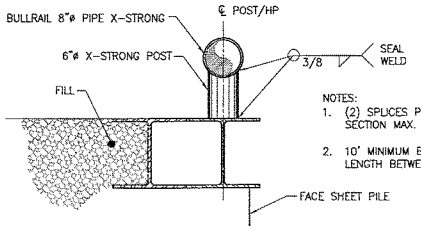


REMOVABLE BULLRAIL
NTS

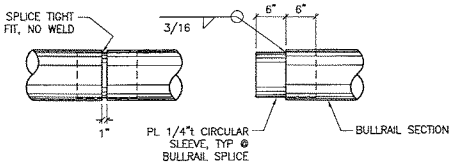
SIDE VIEW



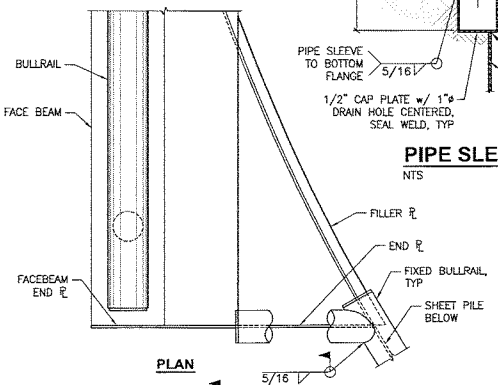
PIPE SLEEVE
NTS



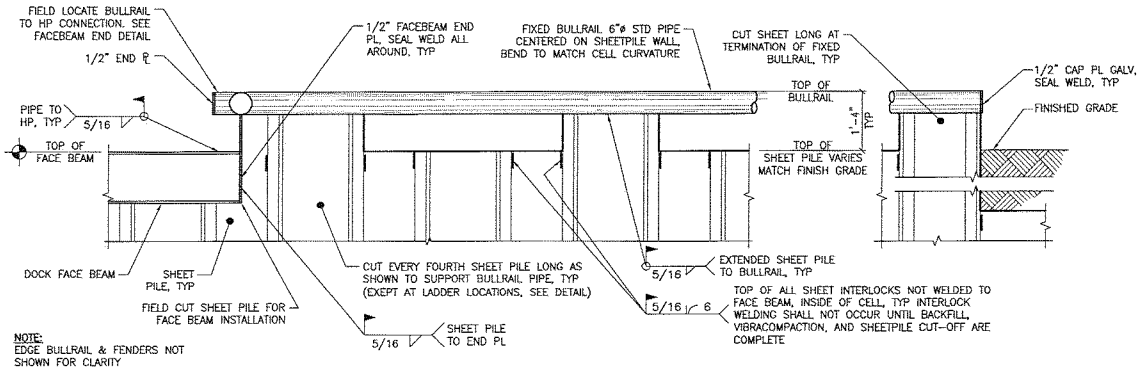
FIXED BULLRAIL SECTION
NTS



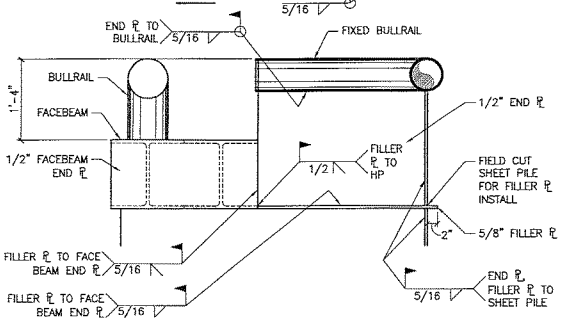
BULLRAIL SPLICE
NTS



PLAN



PIPE RAIL ELEVATION
NTS



FACE BEAM END
NTS

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

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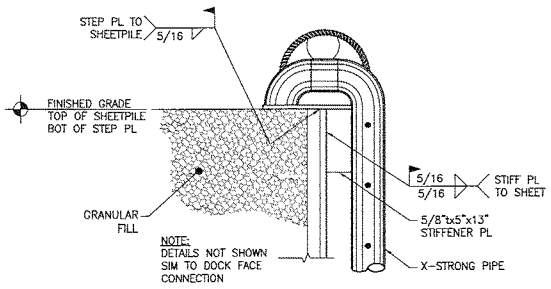
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: DOCK DETAILS (2 OF 4)

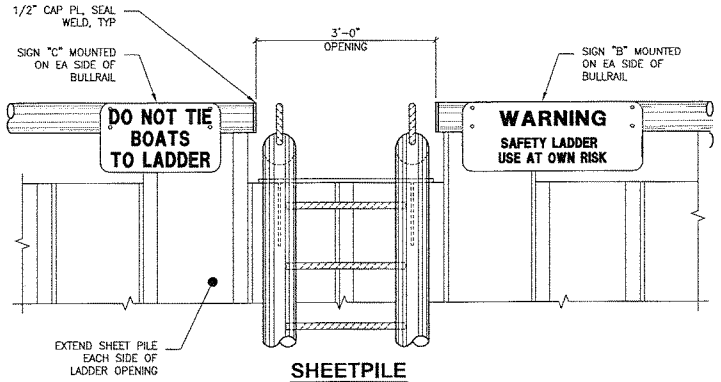
DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 11 OF 23



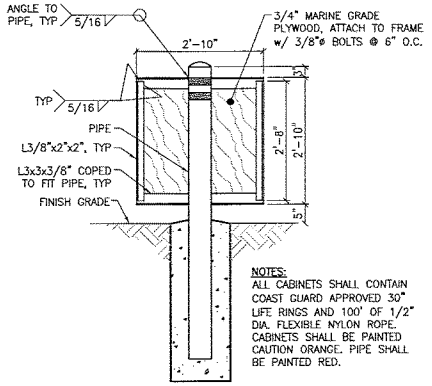
SHEETPILE LADDER DETAIL

NTS

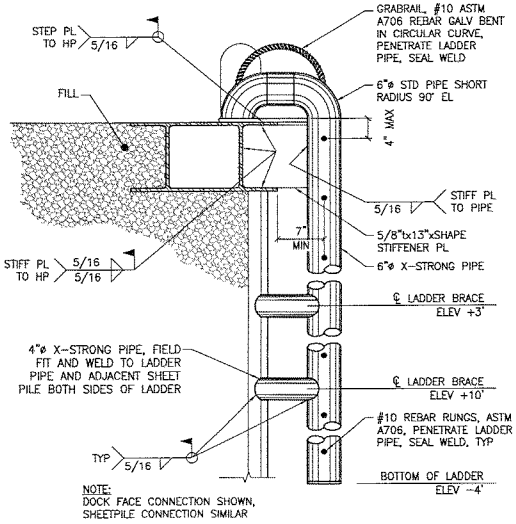


SHEETPILE LADDER DETAIL

NTS

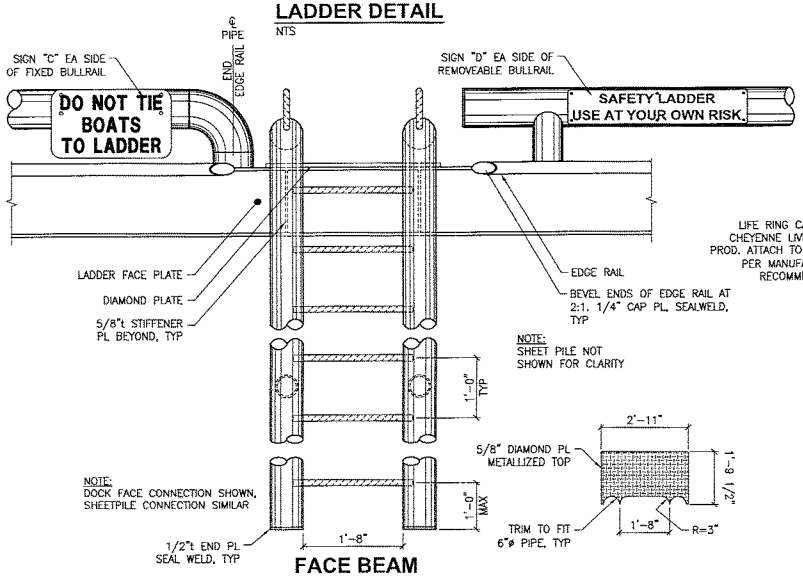


BACK ELEVATION



LADDER ELEVATION

NTS

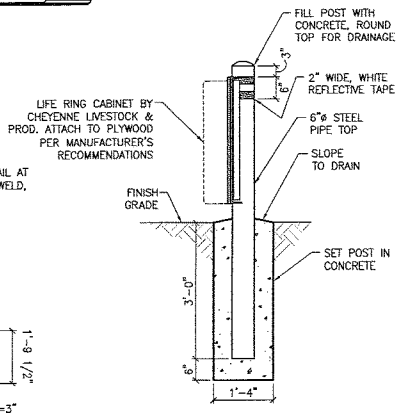


FACE BEAM LADDER DETAIL

NTS

STEP PLATE

NTS



SIDE ELEVATION

LIFE RING STAND (2 TOTAL)

NTS

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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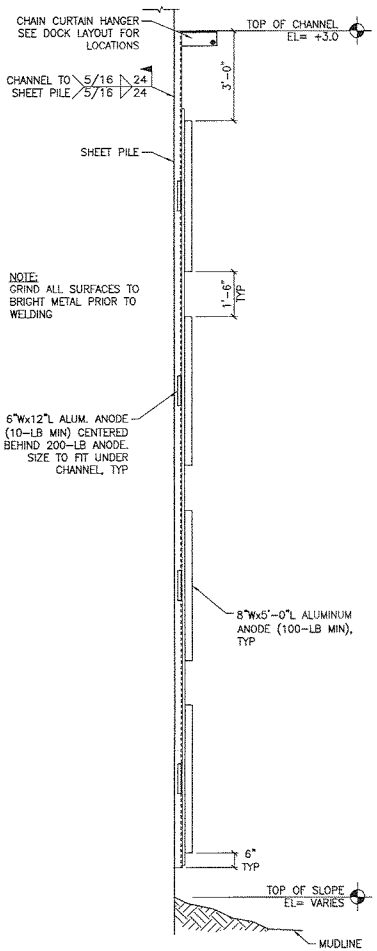
PND ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: DOCK DETAILS (3 OF 4)

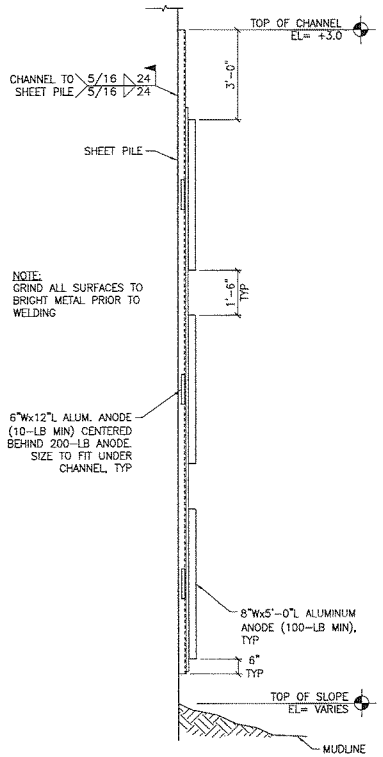
DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 12 OF 23



ANODE CHANNEL TYPE A

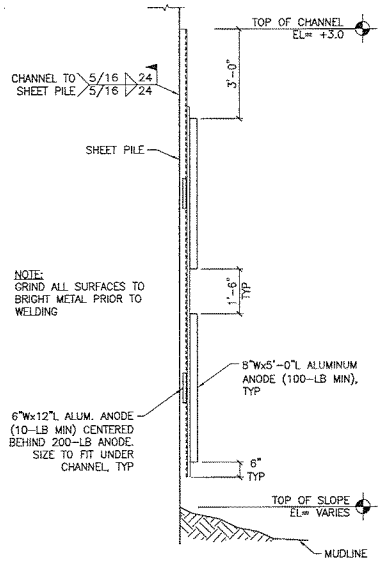
NTS



ANODE CHANNEL TYPE B

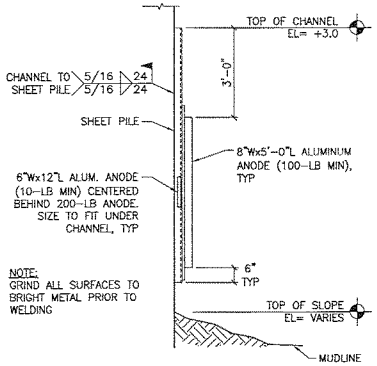
NTS

TYPE	100-LB ANODES	10-LB ANODES	CHANNEL LENGTH	QTY
"A"	4 EA	4 EA	28'-0"	23 EA
"B"	3 EA	3 EA	21'-6"	4 EA
"C"	2 EA	2 EA	15'-0"	4 EA
"D"	1 EA	1 EA	9'-6"	6 EA



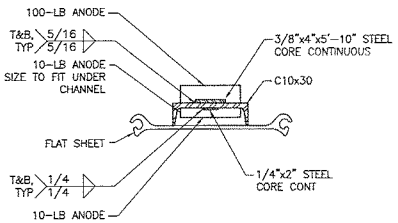
ANODE CHANNEL TYPE C

NTS



ANODE CHANNEL TYPE D

NTS



ANODE CHANNEL SECTION

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PATENT – US 7,018,141 B2
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95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

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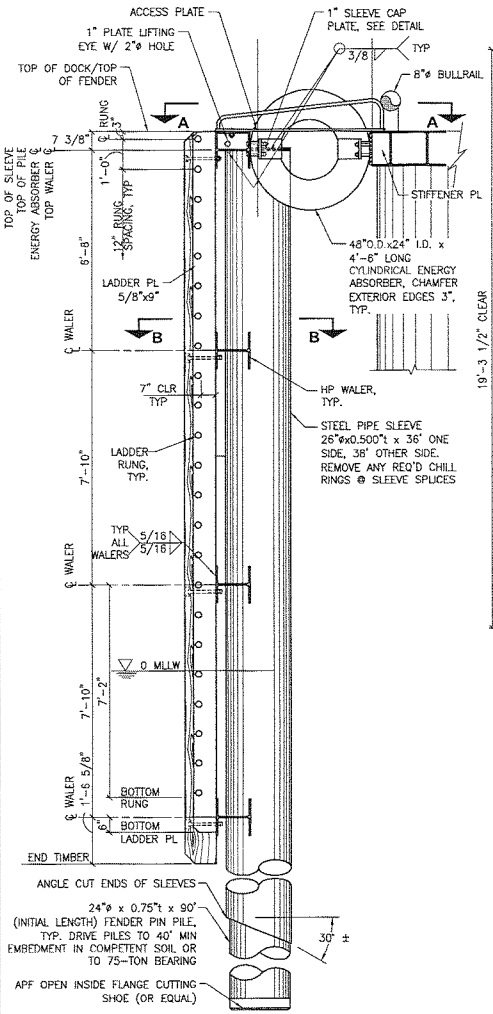
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: DOCK DETAILS (4 OF 4)

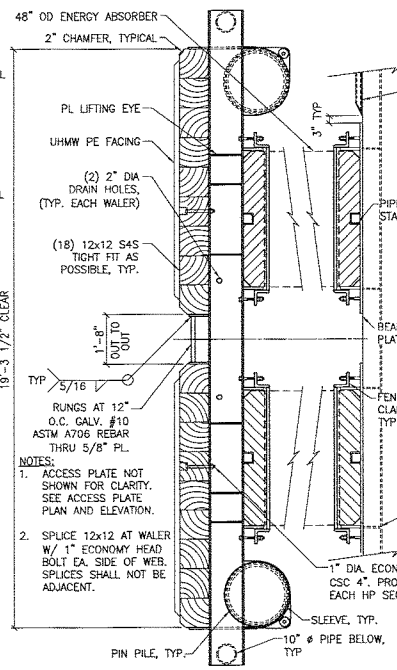
DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 13 OF 23



HEAVY DUTY FENDER SECTION

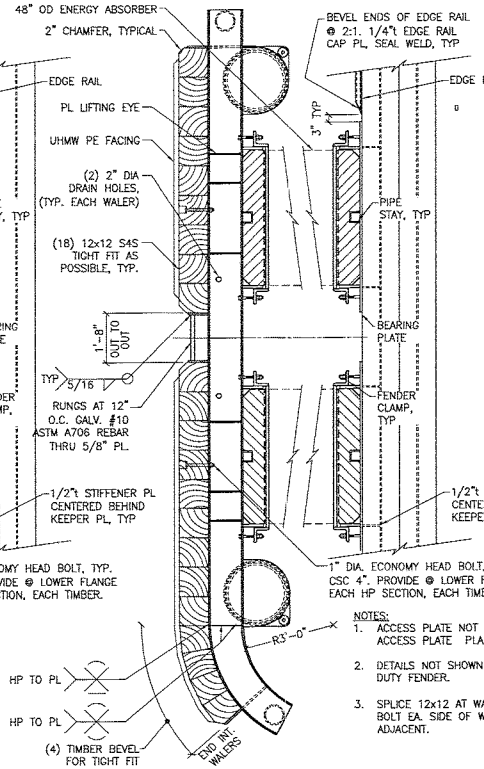
NTS



NOTES:
1. ACCESS PLATE NOT SHOWN FOR CLARITY. SEE ACCESS PLATE PLAN AND ELEVATION.
2. SPLICE 12x12 AT WALER W/ 1" ECONOMY HEAD BOLT EA. SIDE OF WEB. SPLICES SHALL NOT BE ADJACENT.

VIEW A-A TYPICAL HEAVY DUTY FENDER

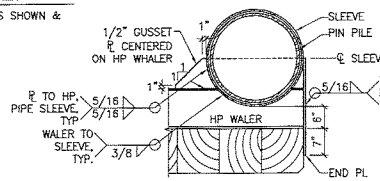
NTS



NOTES:
1. ACCESS PLATE NOT SHOWN FOR CLARITY. SEE ACCESS PLATE PLAN AND ELEVATION.
2. DETAILS NOT SHOWN IDENTICAL TO TYPICAL HEAVY DUTY FENDER.
3. SPLICE 12x12 AT WALER W/ 1" ECONOMY HEAD BOLT EA. SIDE OF WEB. SPLICES SHALL NOT BE ADJACENT.

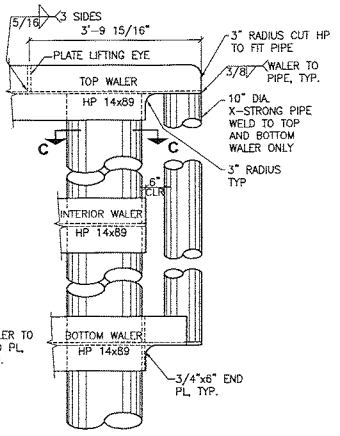
CORNER FENDER

NTS PROVIDE (1) AS SHOWN & (1) OPPOSITE HAND



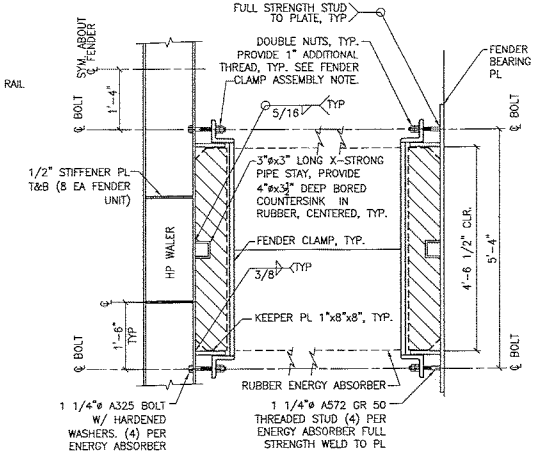
SECTION C-C

NTS



WALER/SLEEVE ELEVATION

NTS



HEAVY DUTY FENDER ATTACHMENT PLAN

NTS

SHEET NOTES
1. RUBBER ENERGY ABSORBER MUST BE HELD BY CLAMPS IN A POSITION CENTERED ON SUPPORTS AND WALERS. BOLTS FOR CLAMPS SHALL HAVE LONG THREAD LENGTHS CAPABLE OF TIGHTENING UNTIL RUBBER IS DEFORMED AROUND CLAMPS AS APPROVED BY THE ENGINEER. BOLTS SHALL BE TIGHTENED IN AN ALTERNATING SEQUENCE SUCH THAT THE CLAMP IS EVENLY TIGHT IN FINAL POSITION. AFTER TIGHTENING, A SECOND NUT SHALL BE INSTALLED AGAINST THE FIRST NUT.
2. NOTE: WELD ALL COMPONENT JOINTS W/ 5/16" FILLET WELD OR EQUIVALENT SEAL WELD ALL AROUND OR AS OTHERWISE DETAILED.

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JANUARY 2012

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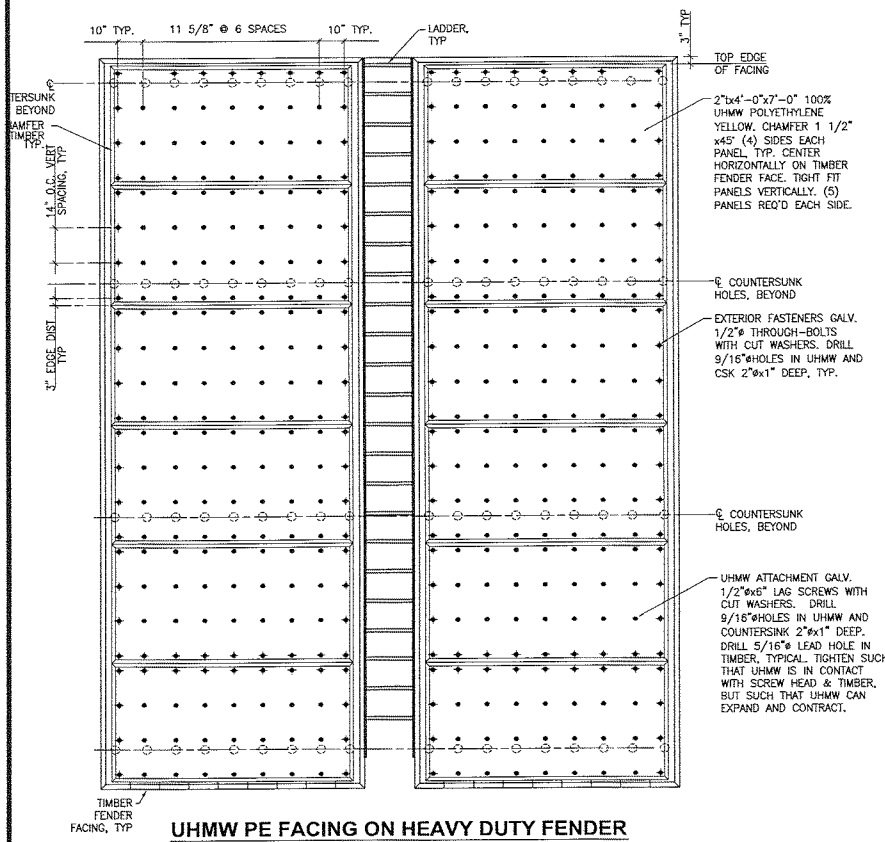
DATE: _____

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

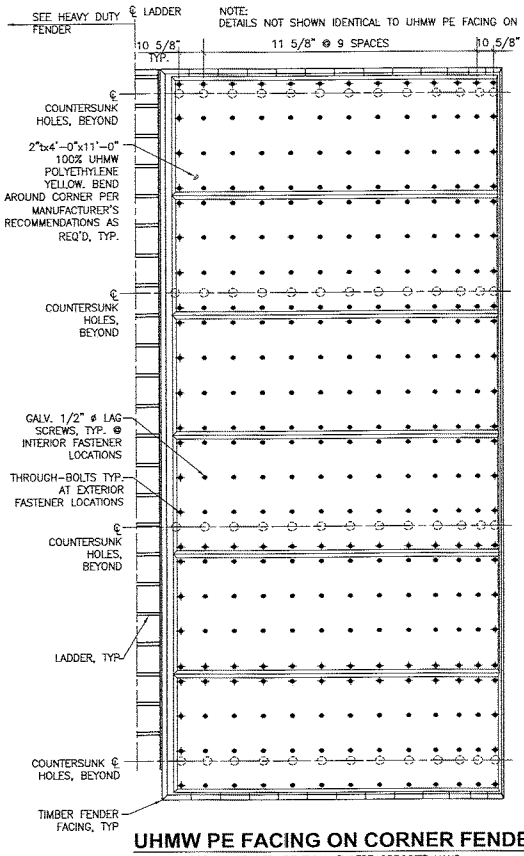
PROJECT: CHIGNIK DOCK PHASE I

TITLE: FENDER DETAILS (1 OF 3)

DESIGNED BY:	CC	DATE:	1/18/12	SHEET NO.
CHECKED BY:	JWF	PROJECT NO:	111085	14 OF 23

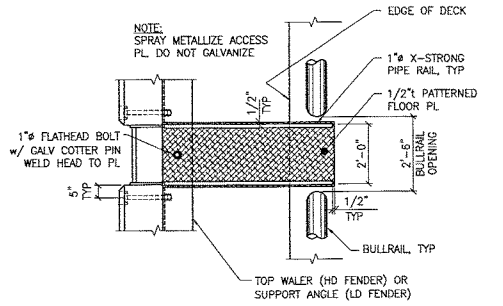


UHMW PE FACING ON HEAVY DUTY FENDER



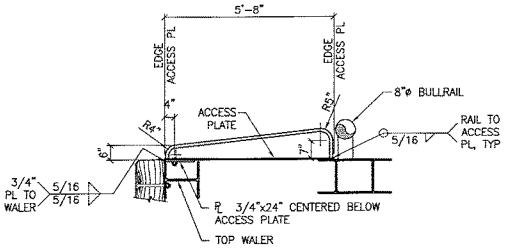
UHMW PE FACING ON CORNER FENDER

CORNER FENDER IDENTICAL EXCEPT OPPOSITE HAND



TYPICAL ACCESS PLATE PLAN

NTS



HEAVY DUTY FENDER ACCESS PLATE ELEVATION

NTS

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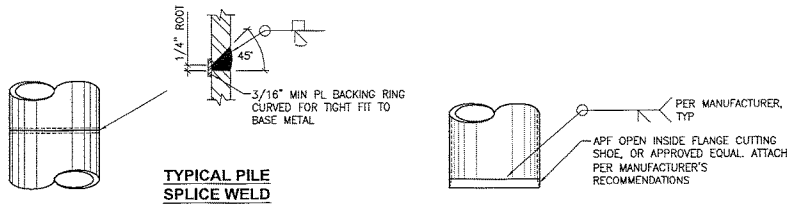
P N D ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: FENDER DETAILS (2 OF 3)

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 15 OF 23



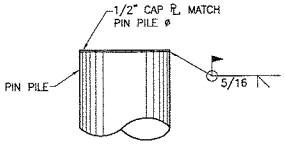
TYPICAL PILE SPLICE WELD

PIN PILE CAP

TYPICAL FOR ALL FIELD PIPE PILE SPLICES (SHOP WELDS, IF REQ'D. SIMILAR) – NTS

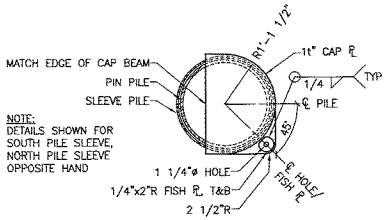
SLEEVE CAP PLATE

TYPICAL FOR ALL PIPE PILES – NTS



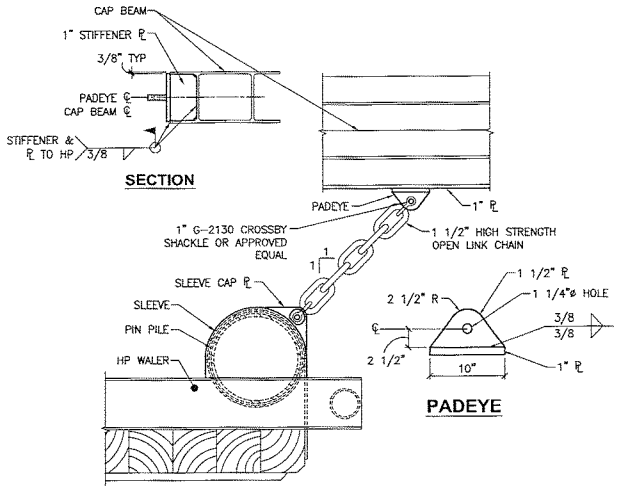
PIN PILE CAP

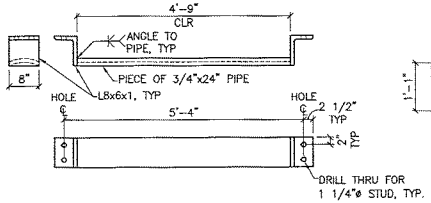
NTS



SLEEVE CAP PLATE

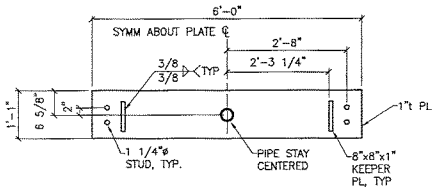
NTS





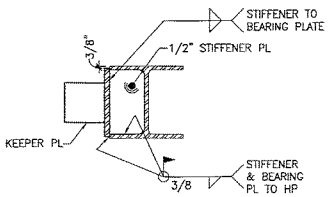
FENDER CLAMP

NTS



FENDER BEARING PLATE

NTS



FENDER BEARING PLATE CONNECTIONS

NTS

FENDER CHAIN CONNECTION

NTS

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THE OPEN CELL SYSTEM IS PATENTED
PATENT – US 6,715,964 B2
PATENT – US 7,018,141 B2
PATENT – US 7,488,140 B2

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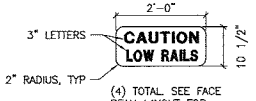
P N D ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: FENDER DETAILS (3 OF 3)

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO. 16 OF 23

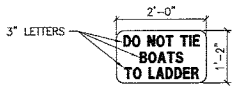


(4) TOTAL. SEE FACE BEAM LAYOUT FOR LOCATIONS

SIGN "A"
NTS

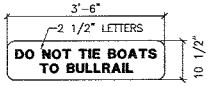
(4) TOTAL. SEE DOCK LAYOUT FOR LOCATIONS

SIGN "B"
NTS



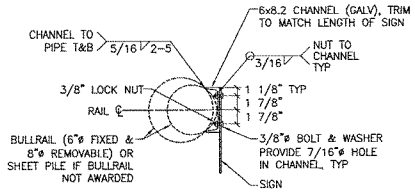
(10) TOTAL. SEE DOCK AND FACE BEAM LAYOUT FOR LOCATIONS

SIGN "C"
NTS

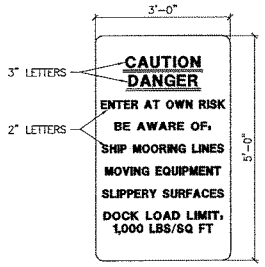


SIGN "F"
NTS

(4) TOTAL. SEE FACE BEAM LAYOUT FOR DETAILS

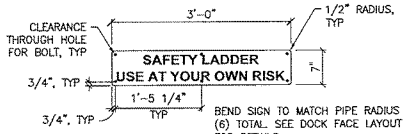


TYPICAL BULLRAIL SIGN MOUNT SECTION
NTS



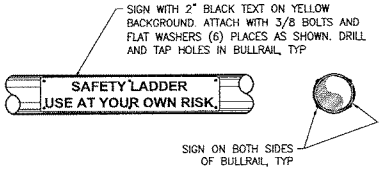
(1) TOTAL. SEE DOCK LAYOUT FOR LOCATION

SIGN "E"
NTS

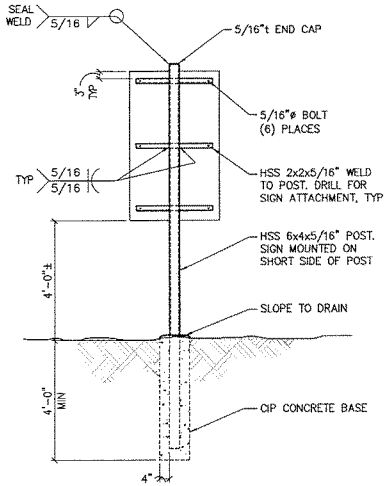


BEND SIGN TO MATCH PIPE RADIUS (6) TOTAL. SEE DOCK FACE LAYOUT FOR DETAILS

SIGN "D"
NTS



SIGN "D" BULLRAIL CONNECTION
NTS



SIGN POST FOR SIGN "E"
NTS

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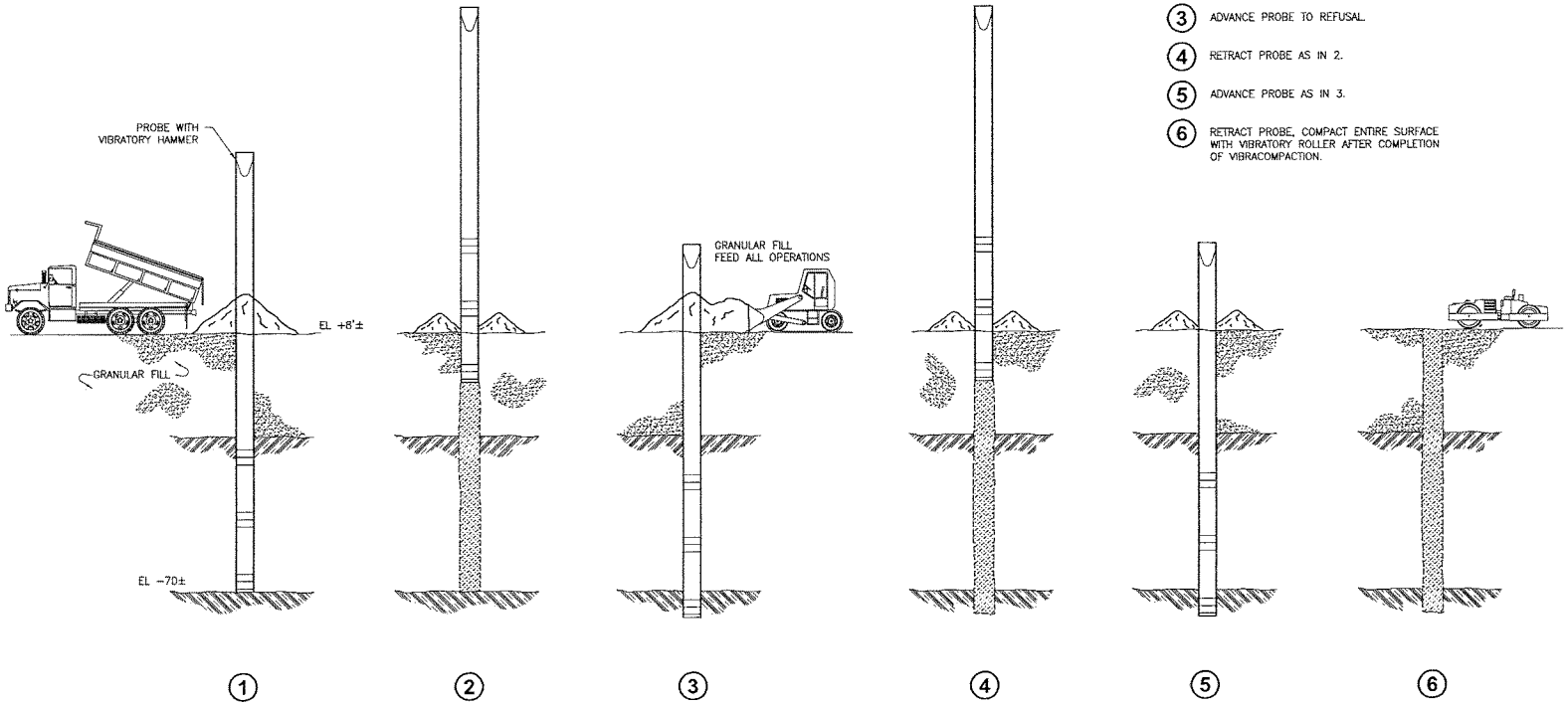
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: SIGNAGE DETAILS

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

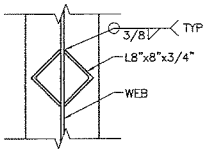
SHEET NO: 17 OF 23



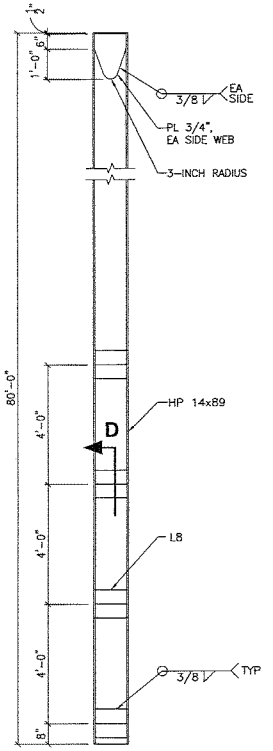
1. ADVANCE PROBE TO APPROXIMATE ELEVATION -70 FEEDING SHOT ROCK FILL.
2. RETRACT PROBE TO ABOVE CENTER OF FILL.
3. ADVANCE PROBE TO REFUSAL.
4. RETRACT PROBE AS IN 2.
5. ADVANCE PROBE AS IN 3.
6. RETRACT PROBE, COMPACT ENTIRE SURFACE WITH VIBRATORY ROLLER AFTER COMPLETION OF VIBRACOMPACTION.

VIBRACOMPACTION PROCEDURE

MODIFY AS REQUIRED BY ENGINEER IN FIELD



SECTION D



VIBRACOMPACTION PROBE

NTS

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REV	DATE	DESCRIPTION

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P N D ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: VIBRACOMPACTION DETAILS

DESIGNED BY:	CC	DATE:	1/19/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 18 OF 23

SOILS CLASSIFICATION, CONSISTENCY AND SYMBOLS

CLASSIFICATION: Identification and classification of the soil is accomplished in general accordance with the ASTM version of the Unified Soil Classification System (USCS) as presented in ASTM Standard D 2487–93. The standard is a qualitative method of classifying soil into the following major divisions (1) coarse grained (2) fine–grained, (3) highly organic soils. Classification is performed on the soils passing the 75 mm (3 inch) sieve and if possible the amount of oversize material (> 75 mm particles) is noted on the soil logs. This is not always possible for drilled test holes because the oversize particles are typically too large to be captured in the sampling equipment. Oversize materials greater than 300 mm (12 inches) are termed boulders, while materials between 75 mm and 300 mm are termed cobbles. Coarse grained soils are those having 50% or more of the non–oversize soil retained on the No. 200 sieve; if a greater percentage of the coarse grains is retained on the No. 4 sieve the coarse grained soil is classified as gravel, otherwise it is classified as sand. Fine grained soils are those having more than 50% of the non–oversize material passing the No. 200 sieve; these may be classified as silt or clay depending their Atterberg liquid and plastic limits or observations of field consistency. Refer to ASTM D 2487–93 for a complete discussion of the classification method.

SOIL CONSISTENCY – CRITERIA: Soil consistency as defined below and determined by normal field and laboratory methods applies only to non–frozen material. For these materials, the influence of such factors as soil structure, i.e. fissure systems, shrinkage cracks, slicken sides, etc., must be taken into consideration in making any correlation with the consistency values listed below. In permafrost zones, the consistency and strength of frozen soils may vary significantly and unexplainably with ice content, thermal regime and soil type.

Relative Density of Sands According to results of Standard Penetration Test		
	N*(bpf)	Relative Density
Loose	0 – 10	0 – 40%
Medium Dense	10 – 30	40 – 70%
Dense	30 – 60	70 – 90%
Very Dense	> 60	90 – 100%

Consistency of Clay in Terms of Unconfined Compressive Strength (tsf)	
Very Soft	0 – 0.25
Soft	0.25 – 0.5
Stiff	0.5 – 1.0
Firm	1.0 – 2.0
Very Firm	2.0 – 4.0
Hard	> 4.0

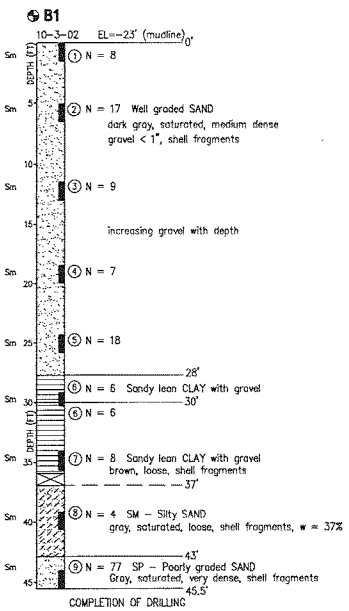
* Standard Penetration, "N": Blows per foot of a 140–pound hammer falling 30 inches on a 1.4" ID split–spoon sampler except where noted.

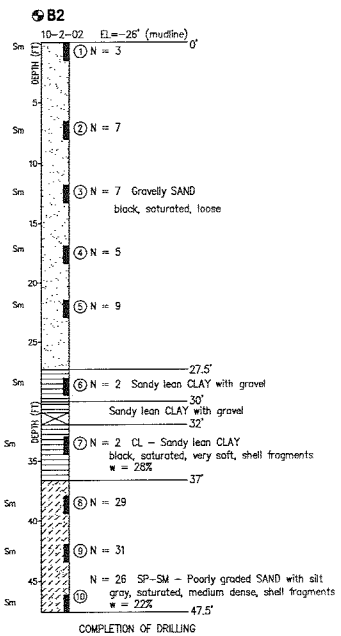
SAMPLER TYPE SYMBOLS

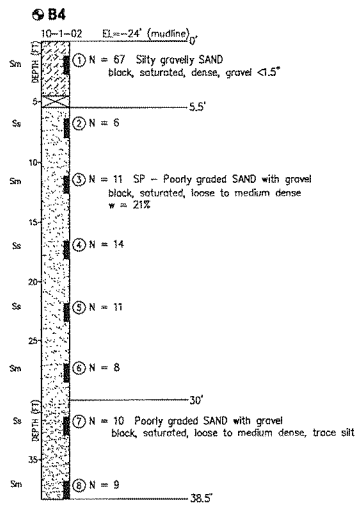
Ts .... Shelby Tube
Ss .... 1.4" Split Spoon W/ 140# Hammer
Cs .... Core Barrel W/ Single Tube
Sm.... 2.5" Split Spoon W/ 300# Hammer
S_{500}.... 2.5" Split Spoon W/ 500# Hammer
G .... Grab Sample

NOTES:

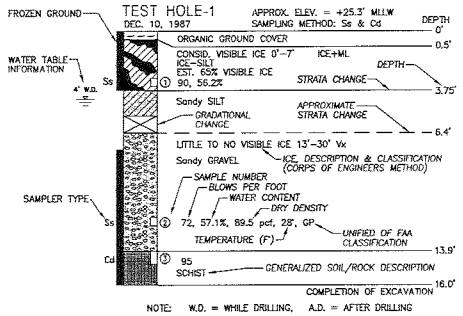
1. SAMPLER TYPES ARE EITHER NOTED ABOVE THE BORING LOG OR ADJACENT TO IT AT THE RESPECTIVE DEPTH.
2. SPLIT SPOON SAMPLER SIZES PRESENTED ABOVE REFER TO THE INSIDE DIAMETER OF THE SAMPLER.
3. SEE EXISTING CONDITIONS SHEET FOR TEST HOLE LOCATIONS.







TYPICAL BORING LOG



NOTE: W.D. = WHILE DRILLING, A.D. = AFTER DRILLING

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JANUARY 2012

REV	DATE	DESCRIPTION

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P N D ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: BORE HOLE LOGS

DESIGNED BY:	CC	DATE:	1/18/12	SHEET NO.
CHECKED BY:	JWP	PROJECT NO:	111095	19 OF 23

GENERAL NOTES:

OWNER –CITY OF CHIGNIK

ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, SPECIFICATIONS, SITE CONDITIONS, AND THESE NOTES SHALL BE REPORTED TO THE ENGINEER AT ONCE. ANY FURTHER WORK DONE BY THE CONTRACTOR AFTER FINDING SUCH DISCREPANCIES SHALL BE DONE AT HIS OWN RISK.

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

APPLICABLE CODES –
ALL LOCAL CODES PLUS THE FOLLOWING SPECIFICATIONS, STANDARDS AND CODES ARE PART OF THESE GENERAL NOTES:
1. INTERNATIONAL BUILDING CODE, 2009 EDITION
2. AWS D1.1 STRUCTURAL WELDING CODE – CURRENT EDITION
3. ASTM SPECIFICATIONS

IN THE EVENT THAT THERE IS A CONFLICT BETWEEN THE ABOVE REFERENCES AND THESE GENERAL NOTES THE FOLLOWING PRIORITY WILL BE FOLLOWED:
1. ALL PROJECT PERMIT REQUIREMENTS.
2. THESE GENERAL NOTES AND PLANS.
3. LOCAL CODES (& ADOT/PF SPECIFICATIONS WHERE REFERENCED).
4. THE SPECIFICATIONS, STANDARDS AND CODES LISTED ABOVE IN ORDER OF PRECEDENCE.

STRUCTURAL DESIGN CRITERIA –
DOCK DESIGN LIFE – 30 YEARS
DOCK LIVE LOADS – 1,000 PSF UNIFORM SURCHARGE
EARTHQUAKE – SEISMIC PEAK HORIZONTAL GROUND ACCELERATIONS (PHGA)
OPERATIONAL PHGA = 0.136g
CONTINGENCY PHGA =0.252g.
SMALL DEFORMATIONS SHOULD BE EXPECTED UNDER HIGH SEISMIC ACCELERATION.
DOCK BOLLARDS – 60,000 LB LOAD IN ANY HORIZONTAL DIRECTION
MOORING BOLLARDS – 100,000 LB LOAD IN ANY HORIZONTAL DIRECTION
DESIGN VESSEL – M/V TUSTUMENA (3087 DISPLACEMENT LONG TONS)
BERTHING CRITERIA – M/V TUSTUMENA APPROACHING AT 10 DEGREES AT 1.0 FT/SEC

TIDE LEVELS – ELEVATION DATUM FOR THIS PROJECT IS 0.0 MEAN LOWER LOW WATER
MEAN HIGHER HIGH WATER (MHHW) +8.9
MEAN HIGH WATER (MHW) +8.1
MEAN LOW WATER (MLW) +1.4
MEAN LOWER LOW WATER (MLLW) 0.0

CATHODIC PROTECTION DESIGN CRITERIA –

DESIGN REFERENCE:	DNV–RP–B401 "CATHODIC PROTECTION DESIGN" OCTOBER 2010 (APRIL 2011 AMENDMENTS)
PROTECTION VOLTAGE:	–800 mV (Ag/AgCl)
CURRENT DENSITIES:	0.225 A/m² (20.9 mA/ft²) INITIAL 0.110 A/m² (10.2 mA/ft²) MEAN 0.150 A/m² (13.9 mA/ft²) FINAL
WATER RESISTIVITY:	25 Ω–cm (ESTIMATED)
ANODE MATERIAL:	ALUMINUM ALLOY
ANODE POTENTIAL:	–1.05 V (Ag/AgCl)
ANODE CONSUMPTION RATE:	3.4 KG/A–YR (7.6 LBS/A–YR)

CATHODIC PROTECTION (CP) IS DESIGNED TO PROTECT AREAS BELOW MLLW. ESTIMATED ANODE LIFE IS 13 YEARS

OWNER SHOULD PERFORM CORROSION INSPECTIONS AT THE INTERVALS RECOMMENDED BELOW. SEE NACE SP0176 FOR CP POTENTIAL SURVEY REQUIREMENTS.

INTERVAL	INSPECTION REQUIRED
3–YR	ABOVE–WATER VISUAL INSPECTION
	CP POTENTIAL SURVEY
	ABOVE–WATER THICKNESS MEASUREMENTS
6–YR	ALL 3–YR INSPECTION ITEMS (ABOVE)
	BELOW–WATER THICKNESS MEASUREMENTS
	BELOW–WATER VISUAL INSPECTION

SURVEY–
ALL CONSTRUCTION SURVEYS SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A SURVEYOR LICENSED IN THE STATE OF ALASKA.

AN ACCURATE METHOD OF HORIZONTAL CONTROL SHALL BE ESTABLISHED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER BEFORE CONSTRUCTION BEGINS. THE CONTRACTOR SHALL MAINTAIN THE CONTROL SYSTEM THROUGHOUT THE PROJECT. IF AT ANY TIME THE METHODS UTILIZED FAIL TO PROVIDE ACCURATE LOCATION THE CONTRACTOR MAY BE REQUIRED TO SUSPEND WORK. THE CONTRACTOR SHALL LAY OUT THE WORK FROM OWNER ESTABLISHED VERTICAL CONTROL POINTS AND CONTRACTOR ESTABLISHED HORIZONTAL CONTROL POINTS AND SHALL BE RESPONSIBLE FOR ALL REQUIRED MEASUREMENTS TAKEN FROM THESE POINTS.

THE CONTRACTOR SHALL FURNISH AT ITS OWN EXPENSE ALL STAKES, TEMPLATES, PLATFORMS, EQUIPMENT, RANGE MARKERS, AND LABOR AS MAY BE REQUIRED TO LAY OUT THE WORK FROM THE CONTROL POINTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE CONTROL POINTS UNTIL AUTHORIZED TO REMOVE THEM. IF SUCH POINTS ARE DESTROYED OR DISTURBED THEY SHALL BE REESTABLISHED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

MATERIALS

GENERAL –
ALL MATERIALS SHALL BE NEW AND PROVIDED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

MATERIALS NOT SPECIFICALLY NOTED IN THESE GENERAL NOTES OR ELSEWHERE ON THE DRAWINGS SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL. APPROVAL WILL BE BASED ON CONFORMANCE TO CURRENT STANDARDS UTILIZED BY THE OWNER. ALL MATERIALS MUST CONFORM TO GOOD WORKMANSHIP, ACCEPTABLE INDUSTRY STANDARDS AND MANUFACTURERS RECOMMENDATIONS.

TIMBER –
ALL SAWN TIMBER SHALL BE S4S, UNLESS OTHERWISE NOTED IN THE PLANS, AND CONFORM TO NO. 1 AND BETTER COAST REGION DOUG FIR ACCORDING TO WCLIB GRADING RULES, PRESSURE TREATED. NO INDIVIDUAL PLANK SHALL FALL OUTSIDE U1 & T1 SPECIFIED GRADE.

TIMBER PRESSURE TREATMENT –
ALL TIMBER, SHALL BE INCISED AND PRESSURE TREATED ACCORDING TO CURRENT AWPA U1 & T1 SPECIFICATIONS TO:

1) A MINIMUM RETENTION OF CREOSOTE OF 25 PCF PER UCSA.

ALL TIMBER MEMBERS BEING MANUFACTURED SHALL BE PRODUCED IN ACCORDANCE WITH THE CURRENT INDUSTRY BEST MANAGEMENT PRACTICES (BMP) SET FORTH BY THE WESTERN WOOD PRESERVERS INSTITUTE (WWPI).

THE CONTRACTOR SHALL HIRE AN INDEPENDENT AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARD COMMITTEE TO INSPECT TIMBER MEMBERS. INSPECTION PROCEDURES SHALL BE PERFORMED IN ACCORDANCE TO AWPA M2. THE INSPECTOR SHALL REPORT ALL FINDINGS DIRECTLY TO THE OWNER'S REPRESENTATIVE ON THE DAY OF INSPECTION. THE OWNER RESERVES THE RIGHT TO DO ADDITIONAL TESTING AT OWNER'S OWN EXPENSE.

THE MANUFACTURER SHALL NOTIFY THE INSPECTOR OF ALL PRESSURE TREATING DAYS AND TIMES A MINIMUM OF 24–HOURS IN ADVANCE. THE MANUFACTURER WILL AID THE INSPECTOR WITH OBTAINING SAMPLE TIMBERS AND PROVIDING LOCATION FOR TESTING.

EXCESSIVE EXTERIOR CREOSOTE RESIDUE, AS DICTATED BY THE INDUSTRY BMP, SHALL NOT BE ALLOWED AND MUST BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.

EXCESSIVE INCISING THAT CAUSES STRUCTURAL DAMAGE TO THE TIMBER SHALL BE REJECTED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. "EXCESSIVE INCISING" IS DEFINED AS UNDUE INCISION DEPTHS AND INCISION DENSITY PER AREA OF TIMBER WHEN PRESERVATIVE RETENTION HAS BEEN ACHIEVED. EVIDENCE OF EXCESSIVE INCISING SHALL BE TIMBER FLAKING OR CHIPPING DUE TO LIGHTLY SCUFFING THE TIMBER SURFACE. IN NO CASE SHALL INCISING EXCEED THE MAXIMUMS ALLOWED BY NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, SECTION 2.3.11.

TIMBER COMPONENTS SHALL BE CUT TO LENGTH, DRILLED, DAPPED, AND SHAPED BEFORE PRESSURE TREATING. ANY FIELD FABRICATION OR DAMAGE SHALL BE REPAIRED PER AWPA M4.

GRANULAR FILL –
GRANULAR FILL SHALL BE FREE OF ORGANICS, ICE, SNOW, AND OTHER DELETERIOUS MATERIALS. GRANULAR FILL SHALL BE CLEAN AND WELL–GRADED MATERIAL WITH NOT MORE THAN 8% BY WEIGHT PASSING THE NO. 200 SIEVE, 20–70% BY WEIGHT PASSING THE NO. 4 SIEVE. MATERIAL SHALL NOT BE LARGER THAN 12 INCHES AND NOT LARGER THAN 6 INCHES WITHIN 3 FOOT OF FINISH GRADE. IT IS ASSUMED THAT THE MATERIAL STOCKPILED ON THE DOCK UPLANDS WILL MEET THESE REQUIREMENTS. IF UNSUITABLE MATERIAL IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THEN ENGINEER IMMEDIATELY.

FINISH COURSE –
FINISH COURSE MATERIAL SHALL CONSIST OF 1 INCH MINUS, WELL GRADED CRUSHED GRAVEL CONFORMING TO THE REQUIREMENTS OF ADOT/PF SPECIFICATIONS 703–2.03 AND SHALL MEET THE GRADATION REQUIREMENTS FOR BASE AND SURFACE COURSE GRADATION "E–1", WITH 8 TO 15% PASSING THE #200 SIEVE.

ARMOR ROCK –
ARMOR ROCK SHALL BE SALVAGED FROM THE EXISTING SHORE PROTECTION TO BE REMOVED AS PART OF THIS PROJECT. ARMOR SHALL BE SORTED AND STOCKPILED AS CLASS "A" MATERIAL THAT MEETS THE SIZE REQUIREMENTS BELOW AND CLASS "B" MATERIAL THAT DOES NOT MEET SPECIFICATIONS. CLASS "A" ARMOR ROCK SHALL BE WELL GRADED WITH WEIGHTS OF INDIVIDUAL STONES RANGING FROM AT LEAST 1000 POUNDS TO 4000 POUNDS, WITH AT LEAST 50 PERCENT OF THE INDIVIDUAL STONES WEIGHING MORE THAN 2300 POUNDS.IF AVAILABLE MATERIAL DOES NOT MEET THESE SPECIFICATIONS NOTIFY THE ENGINEER IMMEDIATELY.

FILTER ROCK –
FILTER ROCK SHALL BE WELL GRADED WITH WEIGHT OF INDIVIDUAL STONES RANGING FROM AT LEAST 10 POUNDS TO 300 POUNDS WITH AT LEAST 50 PERCENT OF THE INDIVIDUAL STONES WEIGHING MORE THAN 25 POUNDS.

FLAT SHEET PILE MATERIALS –
ALL FLAT SHEET PILES SHALL BE NEW PS31 AND PS27.5 AS SHOWN ON THE DRAWINGS. ALL FLAT SHEET PILES SHALL BE UNCOATED. ALL FLAT SHEET PILE SHALL MEET THE REQUIREMENTS OF ASTM A328 OR A572 GRADE 50 WITH A MAXIMUM CARBON EQUIVALENCY (CE) OF 0.44, CALCULATED PER THE LATEST EDITION OF AWS D1.1, AND BE INSTALLED FULL LENGTH WITHOUT SPLICES. MINIMUM INTERLOCK TENSILE STRENGTH SHALL BE 20,000 LBS PER INCH, AND ALLOWABLE FLAT SHEET INTERLOCK SWING ANGLE SHALL BE 7° MINIMUM FROM CENTER, EACH WAY.

FLAT SHEET PILE FABRICATION –
WYE AND ANCHOR PILES SHALL BE FABRICATED SUCH THAT THE FINISHED SHEET PILE CAMBER DOES NOT VARY BY MORE THAN 1/8 INCH IN ANY 10–FEET LENGTH, AND THE FINISHED SHEET PILE SWEEP DOES NOT VARY BY MORE THAN 1/8 INCH IN ANY 5–FEET LENGTH. CONTROL HEAT INPUT TO MINIMIZE DISTORTION. HEAT STRAIGHTEN PER ASIC AS REQUIRED. FABRICATOR SHALL SUBMIT A DETAILED WYE PILE FABRICATION AND QUALITY CONTROL PLAN FOR APPROVAL PRIOR TO FABRICATION.

FLAT SHEET PILE HANDLING –
SHEET PILE SHALL BE STORED AND HANDLED PER MANUFACTURER RECOMMENDATIONS TO PREVENT DEFLECTION, DISTORTION AND DAMAGE TO THE PILING. PILES SHALL BE LOADED, TRANSPORTED AND UNLOADED IN A HORIZONTAL POSITION, AS SINGLE UNITS OR IN BUNDLES UP TO FOUR UNITS ACCORDING TO THE PILE LENGTH AND THE LIFTING CAPACITY OF THE HOISTS. PILES UP TO 40–FEET IN LENGTH SHALL BE TRANSPORTED BY LIFTING AT LEAST TWO POINTS. THE POINTS SHALL BE NOT MORE THAN 16 FEET FROM THE ENDS OF THE PILES. SHEET PILE MAY BE STACKED ON TOP OF EACH OTHER PROVIDED THEY ARE OFFSET SIDEWAYS SO THAT THE INTERLOCKS ARE SITUATED ALTERNATELY IN THE SAME VERTICAL PLANE. STACKING OF SHEET PILE SHALL BE SEPARATED BY SQUARE TIMBER PLACED PER MANUFACTURER ALONG THE LENGTH OF THE PILE TO LIMIT DEFORMATION. THE END OVERHANG SHALL NOT BE OVER 5 FEET, SPACING OF TIMBERS SHALL NOT BE OVER 10 FEET.

PIPE PILES –
PIPE FOR PILES SHALL BE ASTM A252 GRADE 3 WITH WELDABLE CHEMISTRY (CE=0.45 MAX). SPIRAL WELD PIPE SHALL NOT BE USED. PIPE PILES SHALL BE GALVANIZED OR METALIZED UNLESS NOTED OTHERWISE.

PILE SPLICES SHALL BE AS SHOWN IN THE DRAWINGS AND PER AWS SPECIFICATIONS. CARE SHALL BE TAKEN THAT PILING REMAINS IN STRAIGHT ALIGNMENT THROUGH SPLICES. NO PIECE OF PILE LESS THAN 10 FEET LONG SHALL BE SPLICED INTO A PILE.

STRUCTURAL STEEL –
ASTM A572 GRADE 50, A36 FOR PLATE AND FLAT BAR, OR ENGINEER APPROVED ALTERNATE UNLESS NOTED OTHERWISE. ALL STEEL FABRICATION AND ERECTION SHALL BE PER THE LATEST AISC SPECIFICATIONS. SHEAR STUDS SHALL CONFORM TO ASTM A108 GRADE 1015. STRUCTURAL STEEL SHALL BE GALVANIZED OR SPRAY METALIZED UNLESS NOTED OTHERWISE.

MISCELLANEOUS PIPE –
ASTM A53 GRADE B, OR ASTM A252 GRADE 2 OR 3, AND GALVANIZED OR SPRAY METALIZED UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL WELDING –
ALL WELDING SHALL BE PERFORMED PER LATEST AWS D1.1 BY WELDERS QUALIFIED PER AWS FOR THE TYPE AND POSITION OF THE WELDS. ALL FILLER METAL SHALL MEET CHARPY IMPACT CRITERIA OF 20 FT.–LB. AT –20°F AND SHALL HAVE A MAXIMUM CARBON CONTENT OF 0.20%. ELECTRODES SHALL BE PROPERLY CONDITIONED E7018 OR E71T8–NI 1%. SUBMIT WELDER QUALIFICATIONS AND WELDING PROCEDURES TO ENGINEER FOR APPROVAL AT LEAST 15 DAYS PRIOR TO WELDING.

THE CONTRACTOR SHALL PROVIDE A CERTIFIED WELDING INSPECTOR TO INSPECT ALL SHOP WELDS. ALL WELDS SHALL BE 100% VISUALLY INSPECTED. IN ADDITION 10% OF ALL CJP SHOP WELDS SHALL BE TESTED BY UT EXAMINATION OR OTHER NDT METHODS APPROVED BY ENGINEER BY AN INDEPENDENT CERTIFIED WELDING INSPECTOR.

ANY WELD FAILING INSPECTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, WHICH WILL INCLUDE THE COST FOR RETESTING. THE OWNER MAY PROVIDE ADDITIONAL INSPECTION OF SHOP AND FIELD WELDS AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED AS A RESULT OF ADDITIONAL OWNER INSPECTIONS.

ACCEPTANCE CRITERIA FOR ALL WELD INSPECTIONS SHALL CONFORM TO AWS D1.1 CRITERIA FOR STATICALLY LOADED STRUCTURES.

GALVANIZING –
ALL STEEL, PILE AND HARDWARE SHALL BE HOT–DIPPED GALVANIZED PER ASTM A385 A123 OR A153 AFTER FABRICATION UNLESS OTHERWISE NOTED. DAMAGED GALVANIZING, INCLUDING THAT REMOVED FOR WELDING SHALL BE REPAIRED BY THE CONTRACTOR PER THE PROJECT SPECIFICATION.

GALVANIZING/METALIZING REPAIR –
CONTRACTOR SHALL TAKE NECESSARY MEANS TO PROTECT COATINGS DURING TRANSPORTATION, HANDLING, WELDING, CUTTING AND INSTALLATION. DAMAGED GALVANIZING INCLUDING THAT REMOVED FOR WELDING, WELDS, CUTS, GOUGES OR OTHER HOLIDAYS IN THE COATINGS SHALL BE REPAIRED BY THE CONTRACTOR.

SHOP REPAIR OF GALVANIZING/METALIZING SHALL BE DONE BY MEANS OF SPRAY METALLIZING. FIELD REPAIR DAMAGED GALVANIZING BY SPRAY METALLIZING IF OVER 100 SQUARE INCHES BY SPRAY METALLIZING. "GALV STICK" OR ENGINEER APPROVED EQUAL MAY BE USED FOR FIELD REPAIR UNDER 100 SQUARE INCHES. CONTRACTOR SHALL SUBMIT REPAIR MATERIALS AND METHODS OF REPAIRS TO ENGINEER FOR REVIEW AND APPROVAL.

GALV–STICK –
GALV–STICK SHALL BE ZINC OR ALUMINUM ALLOY. PREPARE DAMAGED GALVANIZING WITH A GRINDER AND THEN ABRADE THE ENTIRE SURFACE WITH A WIRE BRUSH WHERE APPLICATION OF THE GALVANIZING REPAIR IS REQUIRED. CLEAN THE SURFACE TO REMOVE ALL GREASE, OIL, AND SURFACE DEPOSITS. HEAT LOCAL AREA TO MANUFACTURER SUGGESTED TEMPERATURE AND APPLY GALV–STICK IN MANNER TO ACHIEVE MINIMUM 10 MIL TOTAL FINAL THICKNESS. AFTER COOLING, APPLY 2 COATS OF ZINC–RICH PAINT. ALLOW EACH COATING TO DRY THOROUGHLY BETWEEN APPLICATIONS.

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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P N D
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: GENERAL NOTES (1 OF 4)

DESIGNED BY:	CC	DATE:	1/19/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO 20 OF 23

GENERAL NOTES (CONT.)

SPRAY METALLIZING AND NON-SKID SURFACING –
ALL SPRAY METALLIZING SHALL BE PERFORMED AWS C2.23-2003. STEEL SUBSTRATE SHALL BE PREPARED TO SSPC-SP/NACE NO.1 WHITE METAL BLAST FINISH WITH A MINIMUM ANGULAR PROFILE DEPTH OF 2.5 MILS. BLAST MEDIA SHALL BE KLEEN BLAST SIZE 16-30 AS MANUFACTURED BY KLEEN INDUSTRIAL SERVICES (800-227-1134) OR ENGINEER APPROVED EQUAL. AFTER BLASTING REMOVE DUST AND SPENT ABRASIVE FROM THE SURFACE BY USING OIL-FREE PRESSURIZED AIR, BRUSHING, OR VACUUM CLEANING. THE STEEL SURFACE TEMPERATURE SHALL BE AT LEAST 5 DEGREES F ABOVE THE DEW POINT OF THE AMBIENT AIR TEMPERATURE. FOR FLAMESPRAYING THE INITIAL STARTING AREA SHALL BE PREHEATED TO 250 DEGREES F. FEEDSTOCK SHALL BE 85/15 ALUMINUM/ZINC APPLIED IN SEVERAL PASSES (APPROXIMATELY 2-4 MILS/PASS) TO A MINIMUM DRY COATING FILM THICKNESS OF 12 MILS. DURING APPLICATION, SPRAY GUN SHALL BE HELD PERPENDICULAR TO THE SUBSTRATE AT A STAND-OFF DISTANCE OF 6 TO 10 INCHES. THE CONTRACTOR SHALL PERIODICALLY VERIFY PASS AND TOTAL COATING THICKNESS. TENSILE BOND STRENGTH SHALL MEASURED PER ASTM D4541 AT THE START OF EACH SHIFT, AFTER ANY CHANGE TO THE APPLICATION METHOD, OR EVERY 500 SF. THE MINIMUM TENSILE BOND SHALL BE 700 PSI. FIELD METALLIZING SHALL BE BOND TESTED BY AN OWNER'S REPRESENTATIVE WITH THE CONTRACTOR'S ASSISTANCE. CONTRACTOR SHALL SUBMIT METALLIZING EQUIPMENT, BLAST MEDIA, FEEDSTOCK MATERIAL CERTIFICATION, APPLICATION AND QUALITY CONTROL METHOD FOR ENGINEER REVIEW AND APPROVAL.

NON-SKID PRODUCT SHALL BE DURALCAN 90/10 OR 60/40 AS MANUFACTURED BY ALCOTEC. APPLY PER MANUFACTURER'S RECOMMENDATIONS. SUBMIT SAMPLE OF SURFACE TEXTURE TO ENGINEER FOR APPROVAL. SURFACES NOTED SHALL BE SPRAYED TO ACHIEVE A NON-SKID SURFACE WITH A PEAK TO VALLEY THICKNESS OF 75 TO 15 MILS.

STEEL WALKING SURFACES: ALL STEEL WALKING SURFACES (I.E. TOP SURFACE OF FACE BEAM, FENDER PILE TOP PLATE, LADDERS, TOP SURFACE OF DOLPHIN, ETC) SHALL BE SPRAY METALLIZED WITH NON-SKID PRODUCT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

BOLTS –
ALL BOLTS CONNECTING STEEL TO STEEL OR STEEL TO CONCRETE SHALL BE ASTM A325, GALVANIZED, UNLESS OTHERWISE NOTED. ALL A325 BOLTS SHALL BE INSTALLED PER AISC TURN-OF-THE-NUT TIGHTENING, OR OTHER ENGINEER APPROVED METHODS UNLESS OTHERWISE NOTED.

ALL OTHER BOLTS SHALL BE ASTM A307, GALVANIZED, UNLESS OTHERWISE NOTED. GALVANIZED WASHERS SHALL BE USED IN ALL AREAS WHERE THE BOLT HEAD OR NUT SHALL BEAR AGAINST TIMBER OR CONCRETE OR AGAINST OVERSIZED HOLES IN STEEL (I.E. MORE THAN 1/16 IN. LARGER THAN BOLT DIAMETER). GALVANIZED NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATION FOR THE CORRESPONDING BOLT. GALVANIZED MALLEABLE IRON WASHERS OR ECONOMY HEADS ARE REQUIRED WHEREVER BOLT HEADS OR NUTS BEAR AGAINST WOOD.

RUBBER FENDERS –
BLACK SBR WITH ASTM DESIGNATION D-2000 4AA 720A(13), B(13), C(12), EA(14), F(17), Z(1), AND Z(2) OR APPROVED EQUAL WITH DUROMETER HARDNESS OF 70± 10 (ASTM D2240) AND A MINIMUM ELONGATION OF 300% (ASTM D412).

OVERALL DIMENSIONS OF THE RUBBER FENDER MAY VARY FROM SPECIFIED AS FOLLOWS:

1. OUTSIDE DIAMETER – ± 1.0 INCHES.
2. INSIDE DIAMETER – ± 0.5 INCHES
3. LENGTH – ± 0.5 INCHES

ALL EDGES SHALL BE PROVIDED WITH A 2 INCH CHAMFER.

THE 48-INCH DIAMETER CYLINDER SHALL ABSORB A MINIMUM OF 32-FT-KIPS PER FT OF FENDER WITH A DEFLECTION OF 24 INCHES AND A MAXIMUM OF 40 KIPS PER FT OF FENDER AT 24 INCHES DEFLECTION

UHMW PE FENDER FACING
PROTECTIVE FACING SHALL BE YELLOW IN COLOR, MADE OF 100% UHMW POLYETHYLENE WITH 2.5% BY WEIGHT UV-STABILIZATION COMPOUND, SHALL BE PARTIALLY OR FULLY CROSSLINKED, HAVE UV-STABILIZING DYES, AND CONFORM TO THE FOLLOWING SPECIFICATIONS:

PROPERTY	TEST METHOD	ACCEPTANCE REQUIREMENT
MOLECULAR WEIGHT MILLION, MIN.		3.0
ULTIMATE TENSILE STRENGTH PSI, MIN.	ASTM D638	4,000
IZOD IMPACT, DOUBLE NOTCH FT.-LBS/IN., MIN.	ASTM D256A	18
ABRASION INDEX (CARBON STL=100)	SAND SLURRY	18 MAX.
WATER ABSORPTION	ASTM D570	NIL
COEFFICIENT OF FRICTION MAX.	ASTM D1894	0.20

SIGNS –
ALL SIGNS, UNLESS OTHERWISE NOTED, SHALL BE ALUMINUM SHEET WITH THICKNESS OF 0.080 IN. ALL SIGNS SHALL HAVE BLACK LETTERING ON YELLOW BACKGROUND. SIGNS SHALL BE LETTERED WITH BLOCK STYLE LETTERING AS SHOWN ON THE PLANS. SIGNS SHALL BE MOUNTED AS SHOWN ON THE PLANS WITH STAINLESS STEEL SCREWS, UNLESS NOTED OTHERWISE.

REFLECTIVE TAPE –
2 INCH WIDE PRISMATIC REFLECTIVE TAPE. WHITE OR RED IN COLOR, SEE PLANS. UV STABILIZED AND DESIGNED TO WITHSTAND MARINE ENVIRONMENTS AND EXTREME COLD.

SUBMIT SAMPLES WITH MANUFACTURES SPECIFICATION TO ENGINEER FOR APPROVAL.

ANODES –
ANODES SHALL BE ALUMINUM ALLOY OF THE SPECIFIED WEIGHT AND NOMINAL DIMENSIONS SHOWN ON THE PLANS AND HAVE THE FOLLOWING PROPERTIES:

- ELECTROCHEMICAL CAPACITY GREATER THAN OR EQUAL TO 1,150 A-HR/LB
- CONSUMPTION RATE LESS THAN OR EQUAL TO 7.6 LBS/A-YR
- OPEN CIRCUIT POTENTIAL MORE ELECTRONEGATIVE THAN OR EQUAL TO -1.05 V (Ag/AgCl)

ANODES SHALL CONFORM TO NACE RP0387 AND THE COMPOSITION SPECIFIED IN THE FOLLOWING TABLE. SUBMIT A MANUFACTURER'S CERTIFICATE OF CONFORMITY.

ELEMENT	PERCENT BY WEIGHT
ZINC (Zn)	2.5 – 5.75%
SILICON (Si)	0.08 – 0.12%
IRON (Fe)	0.09% MAXIMUM
CADMIUM (Cd)	0.002% MAXIMUM
MERCURY (Hg)	0.001% MAXIMUM
TIN (Sn)	0.001% MAXIMUM
INDIUM (In)	0.015 – 0.020%
COPPER (Cu)	0.003% MAXIMUM
LEAD (Pb)	N/A
ALUMINUM (Al)	REMAINDER BALANCE

THE RECOMMENDED ALUMINUM ANODE MANUFACTURERS/TYPES ARE ALOLINE (FARWEST CORROSION CONTROL CO.), GALVALUME III, OR CORRPRO ALLOY 2, BUT OTHERS MAY BE USED. SUBMIT FOR APPROVAL.

THE STEEL CORE FOR ANODES SHALL BE ASTM A36 OR OTHER ENGINEER-APPROVED EQUAL. FOR MILD STEEL BAR STOCK. THE CORE SHALL BE PLACED LONGITUDINALLY IN THE ANODE MATERIAL AND BE ABRASIVE BLASTED TO NEAR-WHITE FINISH IN ACCORDANCE WITH SSPC SP-10/NACE No. 2. THE CORE SHALL BE CAST WITH THE ANODE MATERIAL WITHIN FOUR (4) HOURS OF BLASTING.

IF ANODES ARE NOT STORED INSIDE A BUILDING, TARPS OR SIMILAR PROTECTION SHALL BE USED TO PROTECT ANODES FROM INCLEMENT WEATHER.

PAINT –
ALL PAINTED SURFACES SHALL BE TWO-MIL COATS OF ZINC OXIDE PAINT. TOP COAT SHALL BE "CATERPILLAR YELLOW" OR OTHER SUITABLE BRIGHT SAFETY YELLOW UNLESS OTHERWISE NOTED.

LIFE RINGS
THE CONTRACTOR SHALL PROVIDE AND INSTALL U.S. COAST GUARD APPROVED 30-IN. DIAMETER, ORANGE LIFE RINGS WITH 100 FT. OF 1/2 IN. DIAMETER FLEXIBLE NYLON ROPE AND LIFE RING CABINETS. RING CABINETS SHALL BE MANUFACTURED BY CHEYENNE LIVESTOCK & PRODUCTS, INC. (800-424-7575) OR ENGINEER APPROVED EQUAL AND SHALL BE PAINTED ORANGE. STENCIL WITH 3 INCH TALL BLOCK STYLE LETTERING "CHIGNIK ALASKA", AND BLACK IN COLOR. LOCATE STAND AS SHOWN ON THE PLANS.

BOLLARD AND SIGN POST CONCRETE –
SHALL BE SAKRETE HIGH STRENGTH CONCRETE MIX, OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

CONSTRUCTION

IN-WATER WORK RESTRICTIONS –
AS REQUIRED BY THE COE PERMIT NO IN-WATER WORK SHALL TAKE PLACE IN THE PERIODS OF MARCH 20 THROUGH MAY 15, JULY 30 THROUGH SEPTEMBER 10, OR IN THE PRESENCE OF STELLER'S EIDER, ESTIMATED AS NOVEMBER 15 THROUGH FEBRUARY 28.

OPEN CELL FLAT SHEET PILE DRIVING –
CONTRACTOR'S FIELD PILE DRIVING SUPERINTENDENT AND PROJECT MANAGER FOR THIS PROJECT SHALL HAVE EXPERIENCE WITH INSTALLATION OF AT LEAST 3 OPEN CELL OR CLOSED CELL BULKHEADS OF SIMILAR MAGNITUDE WITHIN THE LAST SEVEN (7) YEARS. SUBMIT QUALIFICATIONS AND RESUME DURING BIDDING, UPDATED RESUMES SHALL BE PROVIDED PRIOR TO MOBILIZATION.

SHEET PILES SHALL BE DRIVEN FULL LENGTH WITH A VIBRATORY AND/OR IMPACT HAMMER BY METHODS WHICH WILL ACHIEVE PENETRATION WITHOUT PILE DAMAGE. ALL SHEET PILE DRIVING METHODS AND EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BEFORE DRIVING STARTS. ALL DRIVING SHALL BE DONE WITH THE ENGINEER PRESENT.

PILES SHALL BE DRIVEN SUCH THAT THE TIPS OF ADJACENT PILES DO NOT VARY MORE THAN 5-FOOT. NO FACE SHEET PILE IN ANY CELL UNIT SHALL BE DRIVEN MORE THAN 5-FOOT BEYOND ANY OTHER SHEET IN THAT CELL UNIT. IN INSTANCES OF HARD DRIVING, THIS DISTANCE SHALL BE REDUCED TO 2 FT. HARD DRIVING OF SHEET PILE SHALL BE DEFINED AS A PILE ADVANCEMENT RATE OF LESS THAN 6-INCHES PER MINUTE OR WHEN INTERLOCKS BECOME OVERHEATED (150°F). ADDITIONAL ASSISTIVE METHODS SUCH AS: CHANGING OF VIBRATORY HAMMER FREQUENCY, PILE PROBING, PRE-DRILLING, EXCAVATION, OR WATER JET MAY BE REQUIRED DURING HARD DRIVING. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF HARD DRIVING IS ENCOUNTERED.

IT IS RECOMMENDED THAT A SHEET PILE THREADER (STAB CAT® OR SIMILAR) BE USED DURING THREADING OF ALL SHEET PILE. SNIPING OF SHEET PILE SHALL ONLY OCCUR AT THE TOP OF THE SHEET PILE WITHIN THE PORTION OF SHEET ABOVE FINAL CUTOFF ELEVATION PER THE PROVIDED DETAIL. TEMPORARY WELDS SHALL NOT BE PERFORMED ON SHEET PILE INTERLOCKS WITHOUT ENGINEER APPROVAL. TEMPORARY WELDS LOCATED ON THE SHEET PILE SHALL BE REMOVED BY GRINDING AND SHALL BE FLUSH WITH THE ORIGINAL SURFACE. TEMPORARY WELDS SHALL NOT BE INTENTIONALLY BROKEN (I.E. DRIVEN THROUGH) DURING SHEET PILE DRIVING. COATING SHALL BE REPAIRED WHERE THEY WILL BE EXPOSED AFTER CONSTRUCTION IS COMPLETE.

CONTRACTOR SHALL PROVIDE A REGISTERED SURVEYOR TO CONFIRM CELL LAYOUT PRIOR TO INSTALLING SHEET PILE AND PROVIDE PERIODIC CHECKS OF LAYOUT AND ALIGNMENT DURING INSTALLATION.

FLAT SHEET PILE INSTALLATION TOLERANCE –
FACE AND ENDWALL SHEET PILES AND SHALL BE DRIVEN USING A TEMPLATE. CONTRACTOR SHALL SUBMIT TEMPLATE SHOP DRAWINGS FOR REVIEW PRIOR TO DRIVING SHEETS. FACE SHEET PILES SHALL NOT BE DRIVEN MORE THAN 3 INCHES FROM PLAN LOCATION AT CUTOFF ELEVATION, NOR MORE THAN A 1/4-INCH-PER-FOOT LENGTH OUT OF PLUMB IN ANY DIRECTION. FACE AND ENDWALL SHEETS SHALL BE DRIVEN AND LEFT 1 FOOT ABOVE PLANNED CUT-OFF ELEVATION AND MONITORED AS DESCRIBED BELOW BEFORE CUT-OFF.

TAILWALL SHEET PILES SHALL BE DRIVEN IN A STRAIGHT LINE OR SMOOTH CURVE AS SHOWN, WITH PILES NOT MORE THAN 2 FEET FROM PLAN LOCATION, NOR MORE THAN A 1/2-INCH PER FOOT LENGTH OUT OF PLUMB IN ANY DIRECTION. DRIVING OF TAILWALL SHEETS SHALL BE DRIVEN FROM THE MOST CONSTRAINED END TOWARDS THE FREE END (I.E. FROM WYE TOWARDS ANCHOR).

WYE PILES SHALL BE DRIVEN NOT MORE THAN 2 INCHES FROM PLAN LOCATION AT THE TOP, AND NOT MORE THAN 1/4-INCH PER FOOT OF LENGTH OUT OF PLUMB. THE PLAN DISTANCE FROM CENTERLINE TO CENTERLINE OF WYE SECTIONS AT THE TOP SHALL BE MAINTAINED WITH RIGID BRACING, AFTER DRIVING AND DURING FILL OPERATIONS. THE PLAN WYE DRIVING LOCATION SHALL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AS THE COMPLETED CELLS ARE EXPECTED TO MOVE OUTWARDS 6 INCHES OR MORE AS THE CELL EXPANDS.

OBSTRUCTIONS –
IF OBSTACLES ARE ENCOUNTERED ALONG THE CELL FACE THAT WOULD INTERFERE WITH SHEET DRIVING, THE DEBRIS SHALL BE EXCAVATED, REMOVED, AND THE SUBSEQUENT VOID REFILLED. IF OBSTACLES ARE ENCOUNTERED ALONG THE TAIL WALL, THE DEBRIS WILL BE REMOVED AS PREVIOUSLY STATED, OR THE WALL ALIGNMENT SHALL BE CURVED AWAY FROM THE OBSTACLE IN A SMOOTH CURVE AS APPROVED BY THE ENGINEER. IN SUCH EVENTS, THE ENGINEER SHALL BE CONTACTED IN ADVANCE OF REMOVING THE OBSTACLE OR REALIGNING THE TAILWALL. SHOULD SOFT SOILS BE ENCOUNTERED, FACE SHEETS MAY REQUIRE SUPPORT FROM THE TEMPLATE BEFORE FILLING CELL. CONTRACTOR'S SHALL DEVELOP METHOD NECESSARY TO EMBED SHEET PILES AS IDENTIFIED IN THE DRAWINGS.

POST DRIVING –
AFTER DRIVING ALL SHEETS WITHIN A CELL TO REQUIRED ELEVATION AND PRIOR TO BACKFILLING, THE CONTRACTOR SHALL PULL AND RE-DRIVE A MINIMUM OF 10% OF THE SHEETS WITHIN THE CELL TO VERIFY PROPER INTERLOCK CONNECTION AND ALIGNMENT BETWEEN SHEETS. THE SHEET PILE SHALL BE PULLED TO AN ELEVATION SUCH THAT 15-FOOT +/- 2 FOOT OF THE SHEET REMAINS THREADED BETWEEN THE ADJACENT SHEETS. PULLING AND RE-DRIVING OF SHEETS SHALL BE PERFORMED WITH THE OWNER'S REPRESENTATIVE PRESENT.

TIDAL VARIATION –
TIDAL VARIATION WILL AFFECT SHEET PILE CONSTRUCTION. RESULTING POTENTIAL DIFFERENTIAL WATER HEADS INSIDE AND OUTSIDE CELL CONSTRUCTION MUST BE MINIMIZED. TO ACCOMPLISH THIS, HOLES UP TO 12 INCHES IN DIAMETER MAY BE CUT THROUGH TAIL WALLS AT LOCATIONS APPROVED BY THE ENGINEER.

VIBRACOMPACTION –
VIBRACOMPACTION SHALL BE USED THROUGHOUT THE SHEET PILE CELL AREA TO COMPACT THE NEW FILL MATERIAL AND THE UNDERLYING SOIL. VIBRACOMPACTION SHALL BE PERFORMED AROUND THE ENTIRETY OF THE SHEET PILE WALL STRUCTURES IN THE AREAS DESIGNATED ON THE PLANS.

VIBRACOMPACTION SHALL CONSIST OF DRIVING A STEEL PILE PROBE WITH A VIBRATORY HAMMER ON A 16-FT x 16-FT GRID THROUGHOUT THE DESIGNATED AREA. THE PROBE SHALL BE AS DETAILED & UTILIZED FOLLOWING THE PROCEDURE ON THE PLANS.

VIBRACOMPACTION SHALL BE PERFORMED ONCE FILL HAS REACHED THE ELEVATION SHOWN ON THE VIBRACOMPACTION DETAILS SHEET AND BEFORE THE DOCK FACE BEAM IS INSTALLED.

THE VIBRATORY HAMMER UTILIZED FOR VIBRACOMPACTION SHALL HAVE A MINIMUM HORSEPOWER OF 300 H.P. AND MINIMUM ECCENTRIC MOMENT OF 2,000 IN.-LBS. OR AS OTHERWISE APPROVED BY THE ENGINEER.

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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P N D ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: GENERAL NOTES (2 OF 4)

DESIGNED BY:	CC	DATE:	1/19/12
CHECKED BY:	JWP	PROJECT NO:	111085

SHEET NO. 21 OF 23

GENERAL NOTES (CONT.)

OPEN CELL SHEET PILE FILLING –

FILL WITHIN THE SHEET PILE CELLS SHALL CONSIST OF MATERIALS AS INDICATED IN THE PLANS. THE INITIAL FILL FROM EXISTING MUDLINE TO ELEVATION +5 MLLW SHALL NOT BE DUMPED INTO FINAL POSITION, BUT SHALL BE DUMPED ON TOP OF THE EMBANKMENT AND PUSHED INTO PLACE IN A MANNER THAT WILL INSURE PROPER PLACEMENT SUCH THAT VOIDS, POCKETS, SEGREGATION AND BRIDGING WILL BE REDUCED TO A MINIMUM.

FILL SHALL BE PLACED IN 12–INCH THICK MAXIMUM HORIZONTAL LIFTS ABOVE ELEVATION +5 MLLW. EACH LIFT SHALL BE COMPACTED BY NO LESS THAN 5 PASSES OF A 10–TON VIBRATORY ROLLER. SMALLER COMPACTORS AND ADDITIONAL CARE SHALL BE USED TO COMPACT WITHIN 5 FEET OF THE DOCK FACE SHEET PILES TO PREVENT DAMAGE OR DISTORTION TO THE BULKHEAD FACE. SPECIAL CARE SHALL ALSO BE USED TO OBTAIN THOROUGH COMPACTION AGAINST TAIL WALL SHEET PILES.

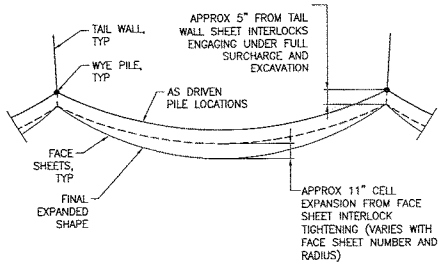
FILL SHALL BE PLACED AS FOLLOWS AROUND SHEET PILE CELLS TO PREVENT DISTORTION OF THE BULKHEAD. ALL FACE AND ADJACENT TAIL WALL SHEETS IN A CELL SHALL BE INSTALLED TO REQUIRED ELEVATION PRIOR TO PLACING FILL AGAINST THE FACE OF THE CELL. TEMPORARY WORK PADS SHALL BE PLACED SUCH THAT NO, SOIL PRESSURE IS APPLIED TO SHEET PILE FACE. PLACE FILL IN APPROXIMATELY LEVEL LIFTS ACROSS THE ENTIRE CELL AREA.

FILL AROUND TAIL WALL SHEETS FIRST, THEN FILL AGAINST FACE SHEETS. THE ELEVATION OF FILL BETWEEN ADJACENT CELLS SHALL NOT DIFFER BY MORE THAN 3 FEET. THE CONTRACTOR SHALL USE RIGID BRACING BETWEEN WYES THAT SHALL BE INSTALLED PRIOR TO CELL FILLING. THE CONTRACTOR IS CAUTIONED THAT UNEVEN FILLING OF CELLS OR FAILURE TO MAINTAIN PLAN DISTANCE BETWEEN WYES WILL RESULT IN UNDESIRABLE DISTORTIONS OF THE SHEET PILE WALL WHICH THE CONTRACTOR SHALL BE REQUIRED TO CORRECT. MATERIAL THAT IS LOST TO TIDE OR WAVE ACTION SHALL NOT BE CONSIDERED A PAY ITEM BUT SHALL BE INCIDENTAL TO THE CONTRACT SUM.

OPEN CELL BULKHEAD STABILIZATION & PRELOADING –

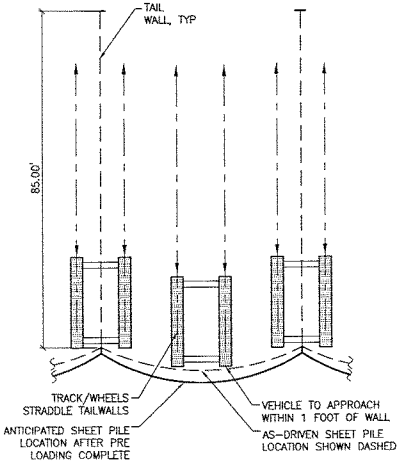
DURING AND AFTER FILLING, THE BULKHEAD FACE IS EXPECTED TO MOVE 6 INCHES OR MORE OUTWARD AND TO SETTLE VERTICALLY. AFTER FILLING TO WITHIN 2 FOOT OF FINISHED GRADE, THE FILLING SHALL BE DISCONTINUED AND THE DOCK FACE WILL BE PRELOADED (SEE PRELOADING PLAN). AFTER SURVEY DATA INDICATES PRELOAD MOVEMENT IS COMPLETE, THE VERTICAL AND HORIZONTAL MOVEMENT OF THE CELLS WILL CONTINUE TO BE MEASURED BY THE CONTRACTOR EVERY THREE DAYS UNTIL THE CELL SETTLEMENT HAS STABILIZED.

CELL SETTLEMENT MAY BE CONSIDERED STABILIZED WHEN SHEET PILE WYE DIRECTIONAL MOVEMENT (HORIZONTAL AND/OR VERTICAL) RATES SLOW TO A 7–DAY AVERAGE OF 0.05 FOOT OR LESS PER WEEK (7 DAYS) AS DETERMINED BY THE ENGINEER. AFTER STABILIZATION, SHEET PILE CUTOFF, SHEET PILE INTERLOCK WELDING, FACE BEAM INSTALLATION AND FILLING TO FINISH ELEVATION CAN BEGIN. ADDITIONAL GRADING MAY BE REQUIRED TO COMPENSATE FOR BULKHEAD SETTLEMENT AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT SUM.



ANTICIPATED CELL MOVEMENT

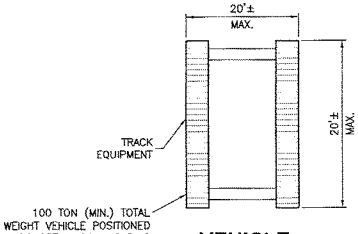
NTS



PRELOADING PLAN

SEQUENCE

1) LOAD TAILWALL WITH 2 TRANSITS.
2) LOAD CENTERLINE CELL WITH 2 TRANSITS.
3) CONTINUE WITH ALL TAILWALLS, CENTERLINE CELLS AND END CELLS.
4) SURVEY MONITORING POINTS.
5) REPEAT STEPS 1 TO 4 UNTIL SHEET MOVEMENT STOPS. ALLOW TWO FULL COMPACTION CYCLES



VEHICLE REQUIREMENTS

ALTERNATE VEHICLE CONFIGURATIONS ALLOWED SUBJECT TO ENGINEER APPROVAL

FACE BEAM ALIGNMENT –

AFTER CELL SETTLEMENT HAS STABILIZED AS DEFINED IN "OPEN CELL BULKHEAD STABILIZATION", THE CONTRACTOR SHALL PROVIDE AN AS–BUILT SURVEY OF THE CONSTRUCTED SHEET PILE DOCK SPECIFICALLY IDENTIFYING ALL FINAL WYE LOCATIONS AND THE SEAWARD CELL APEX OF EACH CELL TO THE ENGINEER. A FINAL FACE ALIGNMENT SHALL BE ESTABLISHED AND APPROVED BY THE ENGINEER TO WHICH THE FACE BEAM SHALL BE ALIGNED. THE FACE BEAM SHALL BE INSTALLED AFTER A FINAL DOCK FACE ALIGNMENT HAS BEEN ESTABLISHED BY THE ENGINEER.

PIPE PILE DRIVING –

ALL PILES SHALL BE DRIVEN. THE CONTRACTOR SHALL SUBMIT A PLAN FOR PILE DRIVING. THE PLAN SHALL CONTAIN HAMMER TYPE AND DRIVING METHOD FOR ALL PILE TYPES. THE CONTRACTOR SHALL NOT MOBILIZE HAMMERS AND RELATED EQUIPMENT PRIOR TO RECEIVING WRITTEN APPROVAL OF THE PLAN. THE CONTRACTOR SHOULD ALLOW ONE WEEK FOR REVIEW OF THE PLAN BY THE ENGINEER. ALL PILE DRIVING METHODS SHALL MEET THE REQUIREMENTS OF THE PERMITS ISSUED FOR THIS PROJECT. IMPACT HAMMERS SHALL NOT BE USED FOR PIPE PILE DRIVING WITHOUT REVIEW AND APPROVAL FROM THE ENGINEER. ANY HAMMER THAT CAUSES DAMAGE TO THE PILES DURING DRIVING OPERATIONS SHALL BE SUBSTITUTED WITH AN ACCEPTABLE ALTERNATE HAMMER AT NO ADDITIONAL EXPENSE TO THE OWNER. IMPACT HAMMERS SHALL BE SUPPLIED WITH NEW CAPBLOCK CUSHIONS, WHICH SHALL BE CHANGED AT THE MANUFACTURER'S RECOMMENDED CYCLE. THE CONTRACTOR'S DRIVING PLAN SHALL INCLUDE MANUFACTURER'S RECOMMENDATIONS AND INFORMATION ON HAMMER CUSHION.

DRIVING METHODS FOR ALL PILES SHALL UTILIZE A DRIVING TEMPLATE.

PILES SHALL BE PLACED WITHIN 1% OF SPECIFIED VERTICAL ALIGNMENT AND WITHIN 2 INCHES OF SPECIFIED LOCATION AT CUTOFF. PILES HITTING OBSTACLES PRIOR TO REFUSAL AND MISALIGNED PILES SHALL BE PULLED BY THE CONTRACTOR WITH A VIBRATORY HAMMER AND RE–DRIVEN AT NO ADDITIONAL COST TO THE OWNER. A VIBRATORY HAMMER WITH MINIMUM OF 300 HORSEPOWER AND MINIMUM ECCENTRIC MOMENT OF 2,200 IN.–LBS. SHALL BE AVAILABLE AND ON SITE DURING ALL PIPE PILE DRIVING OPERATIONS.

ALL PILE INSTALLATION SHALL BE CONDUCTED WITH ENGINEER PRESENT.

THE CONTRACTOR SHALL ASSIST ENGINEER IN MONITORING THE PILE DRIVING. THE CONTRACTOR SHALL MARK EACH PILE WITH ONE–FOOT INCREMENTS WITH EVERY FIVE–FOOT INCREMENT NUMBERED. FOR DETERMINATION OF PILE REFUSAL OR CAPACITY, THE CONTRACTOR SHALL MARK THE PILES WITH ONE–INCH INCREMENTS DURING THE FINAL DRIVE. THE MARKS SHALL BE VISIBLE/READABLE FROM ALL SIDES OF THE PILE.

ALL STEEL PIPE PILE CUTOFFS ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE PIPE FROM THE PROJECT SITE.

FILL PLACEMENT –

GRANULAR FILL MATERIAL SHALL BE PLACED IN LIFTS THAT DO NOT EXCEED A THICKNESS OF 12–INCHES MEASURED AFTER COMPACTION. FINISH COURSE FILL MATERIAL SHALL BE PLACED IN LIFTS THAT DO NOT EXCEED A THICKNESS OF 6–INCHES MEASURED AFTER COMPACTION. EACH LIFT OF FILL MATERIAL PLACED SHALL BE COMPACTED BY NO LESS THAN 5 PASSES OF A 10–TON ROLLER. ONE PASS SHALL CONSIST OF THE COMPACTOR TRAVELING OVER AN AREA ONCE WITH THE VIBRATORY SYSTEM OPERATING AND AT LESS THAN 2.0 FT/SEC (1.5 MPH). FILL MATERIALS SHALL BE WATERED OR AERATED AS NECESSARY TO PROVIDE THE APPROXIMATE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

ARMOR ROCK INSTALLATION–

THE ARMOR LAYER SHALL BE A MINIMUM OF 6.0 FEET THICK AND AT LEAST TWO (2) STONES THICK. STONE SHALL BE PLACED SUCH THAT A WELL KEYED, STABLE ROCK MASS WITH A RELATIVELY REGULAR SURFACE IS OBTAINED. PLACING STONE THROUGH CHUTES, DROPPING STONE MORE THAN 4 FEET, AND OTHER METHODS WHICH SEGREGATE OR DAMAGE THE STONE WILL NOT BE PERMITTED. THE FINISHED REVETMENT SURFACE SHALL BE FREE FROM POCKETS OF STONE LESS THAN AVERAGE SIZE. INDIVIDUAL STONES SHALL NOT PROTRUDE MORE THAN 12 INCHES ABOVE THE AVERAGE LEVEL OF THE SLOPE.

FILTER ROCK –

FILTER ROCK SHALL BE PLACE IN AN EVEN COURSE TO THE DESIGN THICKNESS IN SUCH A MANNER AS TO PREVENT SEGREGATION

SILT CURTAIN –

AS SPECIFIED IN THE COE PERMIT, THE CONTRACTOR IS REQUIRED TO HAVE A SILT CURTAIN ON–SITE AT ALL TIMES DURING FILLING OPERATIONS. THE THE CONTRACTOR SHALL INSTALL THE SILT CURTAIN AROUND THE AREA BEING FILLED AND/OR THE TEMPORORY STORM DRAIN DISCHARGES AND/OR ELSEWHERE AS MAY BE REQUIRED TO CONTROL SEDIMENTATION CAUSED BY CONSTRUCTION. THE CONTRACTOR SHALL TAKE CARE TO PROTECT THE CURTAIN DURING INSTALLATION AND REMOVAL AND TO REPAIR OR REPLACE DAMAGE TO THE SILT CURTAIN AS REQUIRED.

FIELD TESTING –

THE CONTRACTOR SHALL PERFORM THE FOLLOWING FIELD TESTS:

A. GRADATION TESTS SHALL BE PERFORMED ON ALL TYPES OF FILL AND SURFACING MATERIAL. AT LEAST ONE TEST SHALL BE PERFORMED INITIALLY TO VERIFY GRADATION AND FURTHER TESTS WHEN MATERIAL SUBSTANTIALLY CHANGES, AS DETERMINED BY THE ENGINEER.

B. STANDARD PROCTOR TESTS SHALL BE PERFORMED INITIALLY ON ALL MATERIAL TYPES, AND WHEN MATERIAL SUBSTANTIALLY CHANGES, AS DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE ALL SOIL SAMPLING AND TESTING EQUIPMENT NECESSARY TO PERFORM THE FIELD TESTS LISTED ABOVE. ALL FIELD TESTING SHALL BE PERFORMED BY A QUALIFIED INDIVIDUAL. THE FIELD ENGINEER SHALL BE PERMITTED TO OBSERVE ALL TESTING. ALL TEST RESULTS SHALL BE MADE AVAILABLE TO THE ENGINEER.

95% DESIGN
JANUARY 2012

REV	DATE	DESCRIPTION

DATE: _____

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P N D
ENGINEERS, INC.

PROJECT: **CHIGNIK DOCK PHASE I**

TITLE: GENERAL NOTES (3 OF 4)

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO. **22** OF 23

GENERAL NOTES (CONT.)

SUBMITTALS

SUBMITTALS –
THE ENGINEER'S REVIEW OF SUBMITTALS WILL BE FOR GENERAL CONFORMANCE ONLY AND IT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO ALL REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. ANY INTENDED DEVIATION FROM THE PLANS AND SPECIFICATIONS MUST BE SPECIFICALLY IDENTIFIED BY THE CONTRACTOR AND SPECIFICALLY APPROVED BY THE ENGINEER TO BE ACCEPTABLE.

THE CONTRACTOR SHALL FULLY REVIEW AND STAMP SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING DRAWINGS TO THE ENGINEER. SHOP DRAWINGS OF ALL FABRICATED MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL PRIOR TO FABRICATION OR MOBILIZATION OF ANY ITEM. THE CONTRACTOR SHOULD ALLOW TWO WEEKS FROM THE TIME OF RECEIPT FOR REVIEW OF SUBMITTALS BY THE ENGINEER FOR A REASONABLE NUMBER OF DRAWINGS. THE CONTRACTOR AND FABRICATOR ARE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS THAT ACCURATELY SHOW THE APPROPRIATE DETAILS, DIMENSIONS, ASSEMBLY, MATERIAL REQUIREMENTS, AND OTHER REQUIREMENTS NECESSARY TO FABRICATE AND ERECT COMPONENTS OF THE STRUCTURE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. AT THE JUDGMENT OF THE ENGINEER, SHOP DRAWINGS SHALL BE REJECTED WHEN THEY EITHER DEVIATE SIGNIFICANTLY FROM THE CONTRACT REQUIREMENTS WITHOUT THE ENGINEER'S PRIOR APPROVAL, OR ARE UNACCEPTABLE DUE TO INCOMPLETENESS, LEGIBILITY, OR NUMBER OF ERRORS.

CERTIFICATIONS, MANUFACTURER'S DATA AND OTHER INFORMATION FOR ALL MATERIALS, INCLUDING THOSE NOT SPECIFICALLY SHOWN IN THESE NOTES OR ON INDIVIDUAL DRAWINGS, SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL TO VERIFY CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. IN THE EVENT THAT THE PLANS OR SPECIFICATIONS DO NOT SPECIFICALLY REFERENCE A MATERIAL, THE APPROVAL OF MATERIALS WILL BE BASED ON ITS CONFORMANCE TO THE INTERNATIONAL BUILDING CODE. ALL METHODS AND MATERIALS SHALL CONFORM TO THESE GENERAL NOTES, GOOD WORKMANSHIP, GENERALLY ACCEPTED INDUSTRY STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS.

WORK PERFORMED BY THE CONTRACTOR PRIOR TO RECEIVING OWNER/ENGINEERS WRITTEN APPROVAL OF REQUIRED SUBMITTALS SHALL BE AT THE CONTRACTORS OWN RISK. ANY SUCH WORK REQUIRED BY THE OWNER/ENGINEER TO BE REMOVED AND/OR REPLACED SHALL BE AT THE EXPENSE OF THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

THE FOLLOWING IS A PARTIAL LIST OF REQUIRED SUBMITTALS FOR THIS PROJECT. THIS DOES NOT CONSTITUTE A COMPLETE LIST AS IT WILL VARY DEPENDING UPON THE CONTRACTOR'S METHODS.

CONSTRUCTION PLANS (INCLUDES PLAN DRAWINGS AND WRITTEN DESCRIPTION OF METHODS):

1. SHEET PILE FABRICATION PLAN
2. SURVEY PLAN AND UPDATES
3. DEMOLITION PLAN
4. GENERAL WORK PLAN SEQUENCING
5. PILE DRIVING PLAN AND EQUIPMENT
6. DETAILED CONSTRUCTION SCHEDULE USING CRITICAL PATH METHOD

SHOP DRAWINGS AND MATERIAL CERTIFICATION

1. STEEL MATERIAL CERTIFICATIONS
2. GALVANIZING CERTIFICATION AND/OR METALLIZING CERTIFICATION
3. METALLIZING REPAIR METHOD AND MATERIALS
4. AWS WELDING CERTIFICATION FOR ALL WELDERS UTILIZED ON THE PROJECT
5. WELDING PROCEDURES FOR ALL SHOP AND FIELD WELDS
8. STEEL FABRICATION DRAWINGS
9. DRIVING TEMPLATE SHOP DRAWINGS
10. VIBRACOMPACTION PROBE SHOP DRAWINGS
11. STEEL PILE SHOES
12. TIMBER GRADING AND PRESSURE TREATMENT CERTIFICATIONS
13. TIMBER SHOP DRAWINGS
14. UHMW MATERIAL CERTIFICATIONS
15. UHMW SHOP DRAWINGS
16. SIGN SHOP DRAWINGS
17. RUBBER FENDER PRODUCT INFORMATION
18. ANODE MATERIAL CERTIFICATION
19. ANODE SHOP DRAWINGS
20. LIFE RING MATERIAL CERTIFICATIONS
21. CHAIN AND SHACKLE MATERIAL CERTIFICATIONS
22. CHAIN CURTAIN SHOP DRAWINGS
23. SOIL TEST RESULTS
24. RED-LINED AS-BUILT DRAWINGS

AS-BUILT PLANS –
THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT PLANS IN THE ONSITE PROJECT OFFICE. THE AS-BUILT PLANS SHALL BE KEPT UP TO DATE THROUGHOUT THE PROJECT WITH THE LATEST AS-BUILT DIMENSIONS AND DETAILS AS APPROVED BY THE ENGINEER AND SHALL BE SUBMITTED TO THE OWNER AT THE END OF THE PROJECT. FINAL PROJECT PAYMENT SHALL NOT BE MADE TO THE CONTRACTOR UNTIL RED-LINED AS-BUILT DRAWINGS HAVE BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER/ENGINEER.

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JANUARY 2012

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DATE: _____

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P N D
ENGINEERS, INC.

PROJECT: CHIGNIK DOCK PHASE I

TITLE: GENERAL NOTES (4 OF 4)

DESIGNED BY:	CC	DATE:	1/18/12
CHECKED BY:	JWP	PROJECT NO:	111095

SHEET NO: 23 OF 23

City of Chignik

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cityoffice@chignik.org

February 16, 2013

To: Liz Clement

From: Richard Sharpe

RE: Capital Request

In answer to your question in your E-mail, I will try to answer to the best of by Knowledge:

1. Legal name; City of Chignik
2. EIN: 92-0094970
3. Physical Location: Anchorage Bay within The City of Chignik boundaries
4. Project Description: the project consists of a regional dock facility that would serve 5 communities within the Chignik area. Chignik, Chignik Lagoon, Chignik Lake, Perryville, and Ivanoff Bay. The primary purpose is for a dock to facilitate ferry service to the area as the present dock which is owned by Trident Sfds is disrepair. This dock would also accommodate a floating processor to be able to come in the season for Cod and Crab which Trident does not process in Chignik but has them delivered to Sand Point. The dock site encompasses about 7 acres of raw land which could entice business such as Hydraulic shop, Welding, boat repair, and a hardware supplier if there was a 10 month season instead of 3 as it is now. This has been a work in progress since 1994 or sooner.
5. Project Cost: Total Cost since inception is about 15 million. The Lake and Peninsula Borough put in 1 million to get a berm built in order to fill the site. When the Chignik Boat Harbor was built, the dredge spoils were used to fill the site with a savings to the dock site about 2 million. There are remaining spoils to be used for filling the Sheet pile portion. The remaining cost of about 12 million will be constructing a sheet pile dock to accommodate AMHS ferries and also a boat lift to handle 150 ton boats.
   Note: this request is for 7.6 million for a phase 1 sheet pile dock large enough to accommodate Tustemena.
6. Funding already secured: ?
7. Other funding requests: 90,000 CDBG GRANT for engineering. + city funds of 130,000 as match for engineering. Design should be at 100% by end of month per mPND
8. FY-14 Request: 7.6 million

9. Other requests: possibly Lake and Peninsula for 2 million grant
10. Public Review: Yes
11. Project time line: If funded, bid process in July 2013, construction fall 2013 or spring 2014
12. Responsible party: city of Chignik
13. Contact Info: Richard Sharpe/Mayor, city of Chignik, PO Box 110, Chignik, AK 99564 Phone: 907-749-2280, Fax 907-749-2300, email- dick.sharpe@yahoo.com
14. See attached from PND

Note:

The Lake and Peninsula Borough may possibly put this is as one of their grant requests.

NATIVE VILLAGE OF PORT LIONS
PORT LIONS TRADITIONAL TRIBAL COUNCIL

RESOLUTION NO. 2013-02R

A RESOLUTION REQUESTING THE SOUTHWEST ALASKA MUNICIPAL CONFERENCE (SWAMC) PROMOTE AND SUPPORT REPLACEMENT OF THE ALASKA MARINE HIGHWAY SYSTEM VESSEL "M/V TUSTUMENA" AS A TRANSPORTATION PRIORITY FOR THE STATE OF ALASKA.

WHEREAS, the "Native Village of Port Lions" is a federally recognized Indian Tribe as defined in Section 3 (c) of the Alaska Native Claims Settlement Act as amended; and

WHEREAS, the Port Lions Traditional Tribal Council is the governing body of the Native Village of Port Lions; and

WHEREAS, Port Lions is a coastal community and coastal communities throughout Southwest Alaska depend upon the Alaska Marine Highway System to provide for a regular, safe and cost effective means of transportation; and

WHEREAS, the M/V Tustumena is the longest serving vessel in the Alaska Marine Highway System Fleet and serves communities from Prince William Sound to the Aleutian Chain continuously throughout the year with the exception of maintenance down times; and

WHEREAS, the Alaska Marine Highway System and in particular the M/V Tustumena transports passengers and freight throughout Southwest Alaska which has a major economic impact on all segments of coastal communities and the loss of this service would be devastating to the health and welfare of these communities; and

WHEREAS, the Community of Port Lions has received ferry service since 1965 through the Alaska Marine Highway System Vessel, M/V Tustumena and continues to receive service from this vessel 48 years later; and

WHEREAS, it is becoming apparent to the communities in Southwest Alaska who depend upon and travel on the M/V Tustumena that it is having an increase in serious maintenance issues and has been out of service since October 2012 and may not come back into service until June of 2013, a period of eight (8) months; and

WHEREAS, the Alaska Marine Highway System Vessel, M/V Kennicott also serves Southwest Alaska but cannot land at many of the communities located in this area which depend upon Ferry Service.

NOW THEREFORE BE IT RESOLVED, that the Native Village of Port Lions hereby requests the Board of the Southwest Alaska Municipal Conference (SWAMC) prepare and move forward a Resolution which strongly requests that the State of Alaska makes replacing the Alaska Marine Highway System Vessel M/V Tustumena a transportation priority for the State of Alaska and that funding be allocated towards this replacement in the FY 2014 Budget Cycle in the form of design funding;

AND BE IT FURTHER RESOLVED, that the Resolution prepared by SWAMC be sent to the Governor's Office, the Alaska Commissioner of Transportation and Public Facilities and the Deputy Commissioner of Alaska, DOT&PF in charge of the Alaska Marine Highway System;

AND BE IT FINALLY RESOLVED, that the Resolution also be distributed to communities throughout Southwest Alaska and their legislative representation with requests of support of the Resolution from each community and legislator.

CERTIFICATION:
We, the undersigned members of the Port Lions Traditional Council, do hereby certify that the foregoing resolution was duly adopted by the council on the 12th day of February, 2013 with a quorum present and 4 votes for and 0 votes against.

RICHARD PESTRIKOFF, VICE PRESIDENT

ROBERT KNAGIN, COUNCIL MEMBER