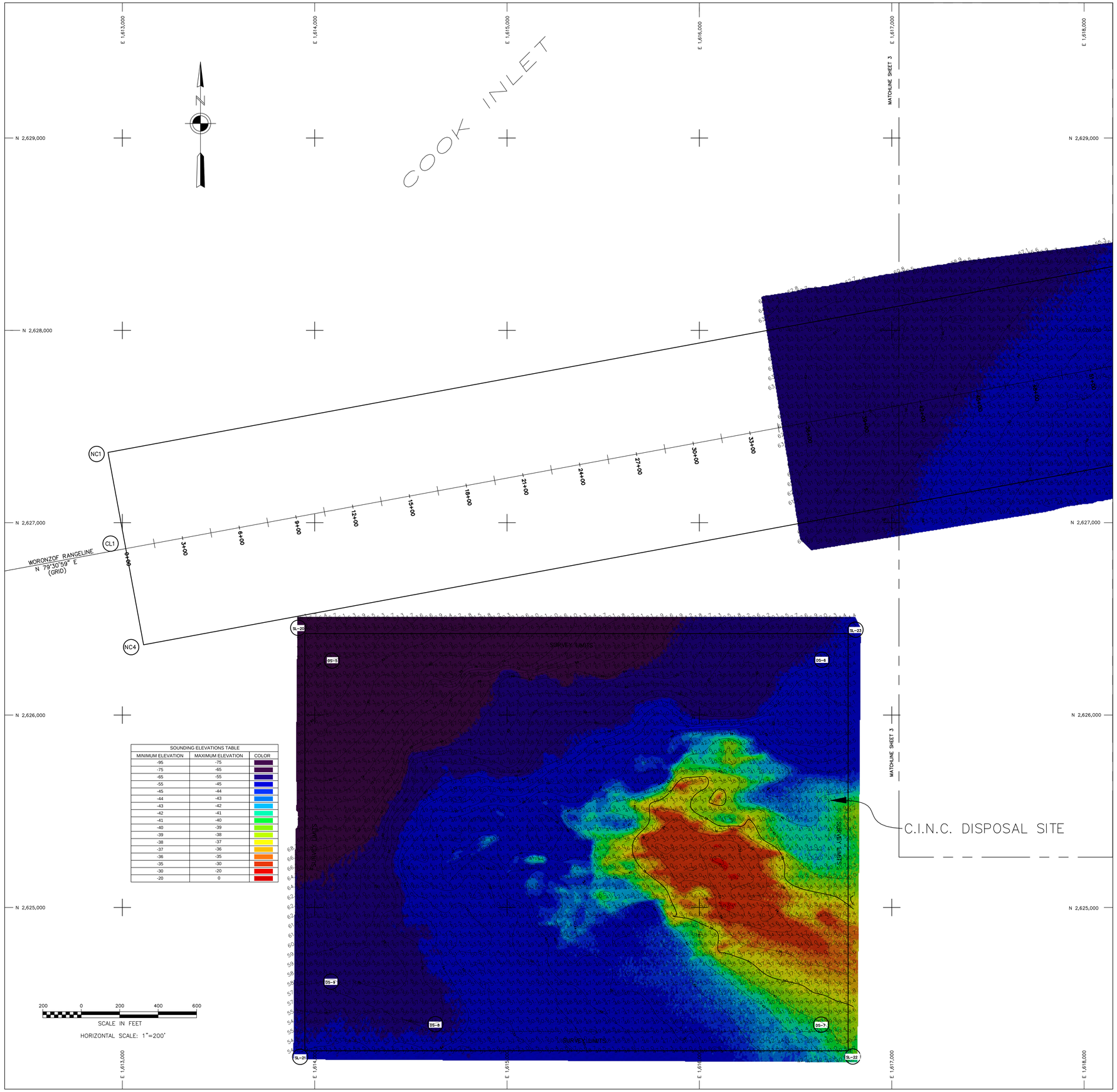

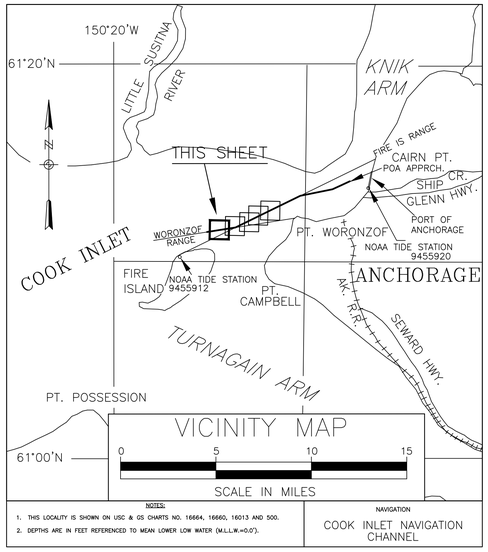

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Corner #	Northing	Easting
DL-24	2628708.65	1619570.25
DL-25	2627809.70	1620045.97
DL-28	2632462.12	1628828.90
DL-29	2633360.88	1628352.82

DREDGE LIMITS - AREA D		
Corner #	Northing	Easting
DL-25	2627809.70	1620045.97
DL-26	2627635.79	1620138.09
DL-27	2632288.21	1628921.02
DL-28	2632462.12	1628828.90

CINC DISPOSAL SITE		
Corner #	Northing	Easting
DS-5	2626323.49	1614048.61
DS-6	2626323.49	1616673.28
DS-7	2624354.99	1616673.28
DS-8	2624354.99	1614619.08
DS-9	2624587.68	1614048.61

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SL-17	2627313.36	1619743.03
SL-18	2632433.89	1629409.67
SL-19	2633683.29	1628747.85
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VOLUME COMPUTATIONS	
DREDGE AREA C	CUBIC YARDS
VOLUME AVAILABLE ABOVE -38' MLLW	0
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VOLUME AVAILABLE ABOVE -43' MLLW	146,423
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STATE OF ALASKA 49TH
(Lewis J. Epps)
04/27/15
No. 3510
REGISTERED PROFESSIONAL LAND SURVEYOR

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THSOA CERTIFIED HYDROGRAPHER

David R. Neff CH(275)

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-15-C-0006
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Symbol	Action	Description	Date	Approval

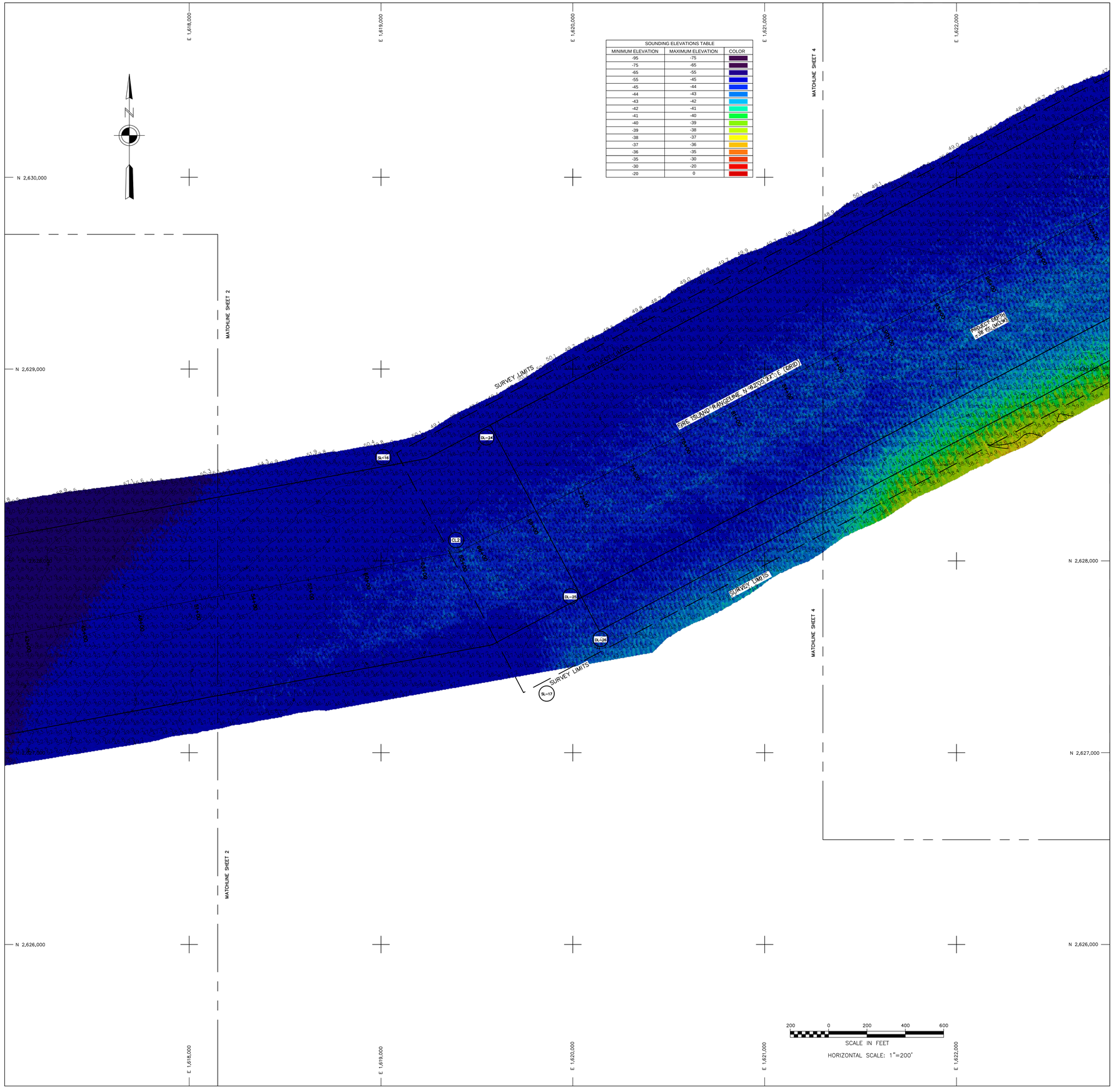
Date: 04/27/15
Dwg Scale: 1" = 200'
Plot Scale: 1:1
File: PRE_20150416_FINAL.dwg
Section:
Branch:
Designed: M. TENCZA
Drawn: M. TENCZA
Reviewed: J. ANDERSON
Chief
Submitted: A. CHURCHILL
Chief
USACE Survey No:
3258-15

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

COOK INLET, ALASKA
COOK INLET NAVIGATION CHANNEL
PRE-DREDGE SURVEY
APRIL 16, 2015

Reference number:
V-107
Sheet 7 of 11

CORPS OF ENGINEERS



SOUNDING ELEVATIONS TABLE		
MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
-95	-75	
-75	-65	
-65	-55	
-55	-45	
-45	-44	
-44	-43	
-43	-42	
-42	-41	
-41	-40	
-40	-39	
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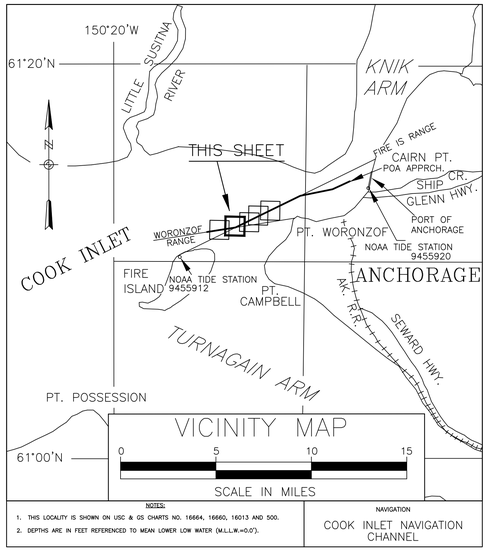
-30	-20	
-20	0	



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NAVIGATION

COOK INLET NAVIGATION CHANNEL

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CITY SEATTLE STATE WA
Recommended: Approved: Date:
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Sym	Action	Description	Date	Approd

Date: 04/27/15
Dwg Scale: 1" = 200'
Plot Scale: 1:1
File: PRE_20150416_FINAL.dwg

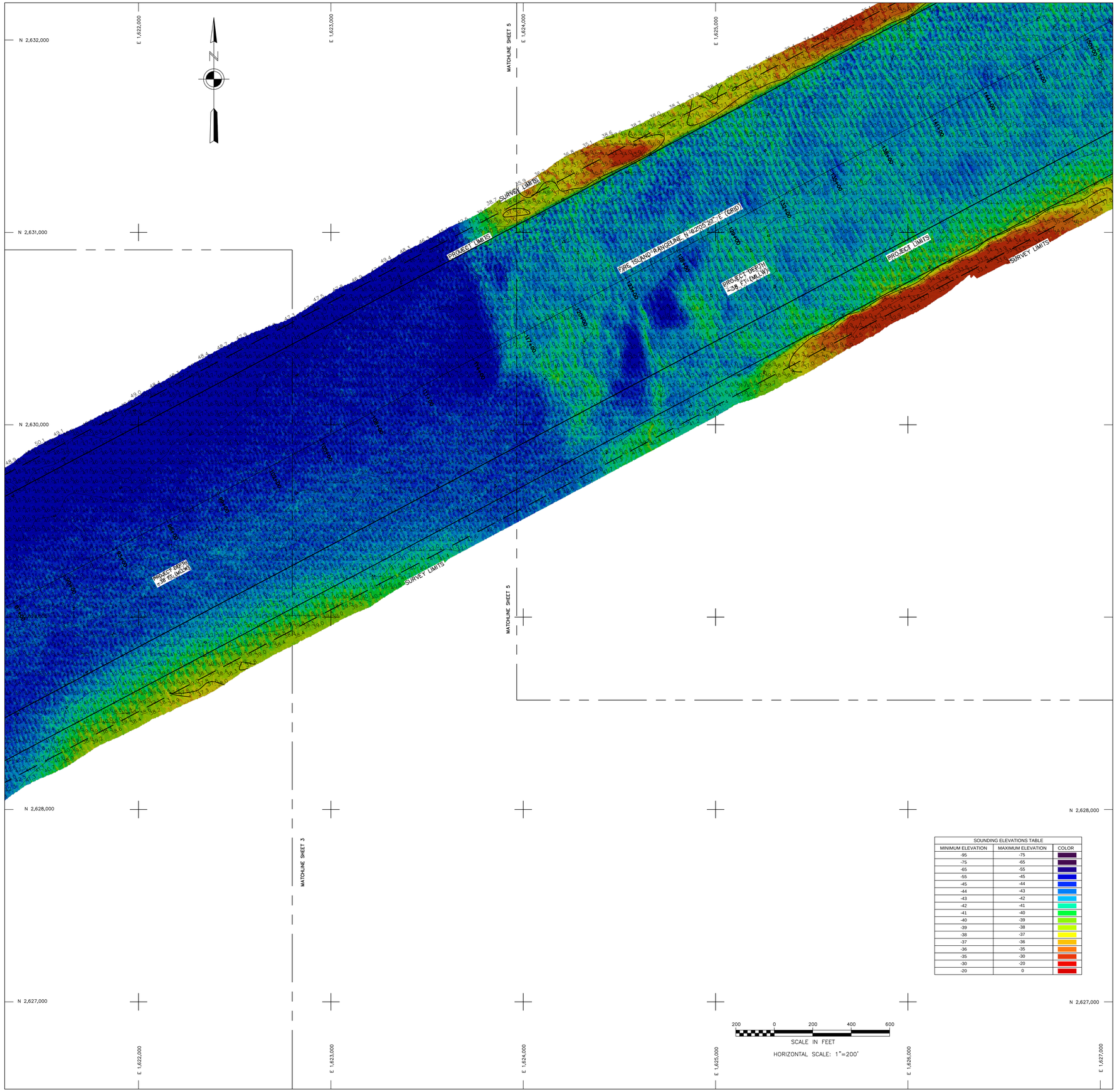
Designed: M. TENCZA
Drawn: M. TENCZA
Reviewed: J. ANDERSON
Chief Section
Submitted: A. CHURCHILL
Chief Branch
USACE Survey No: 3258-15

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

COOK INLET, ALASKA
COOK INLET NAVIGATION CHANNEL
PRE-DREDGE SURVEY
APRIL 16, 2015

Reference number:
V-108
Sheet 8 of 11

CORPS OF ENGINEERS



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-38	-37	
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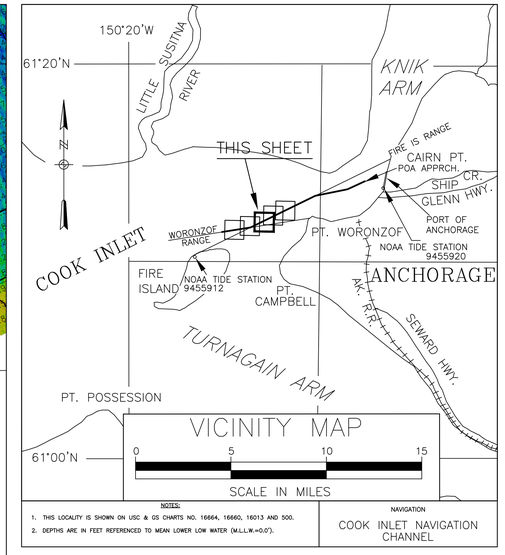
-36	-35	
-35	-30	
-30	-20	
-20	0	



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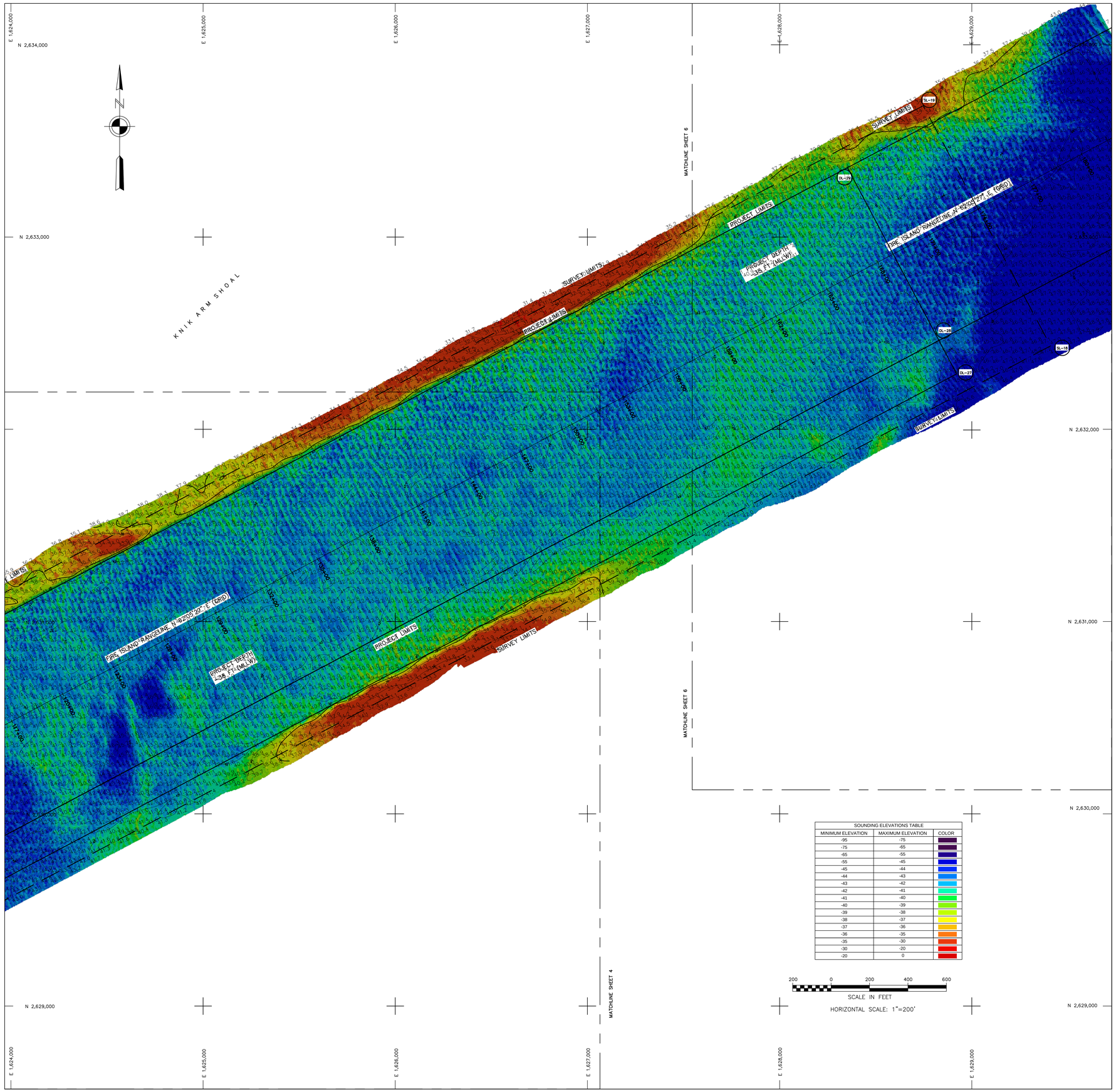
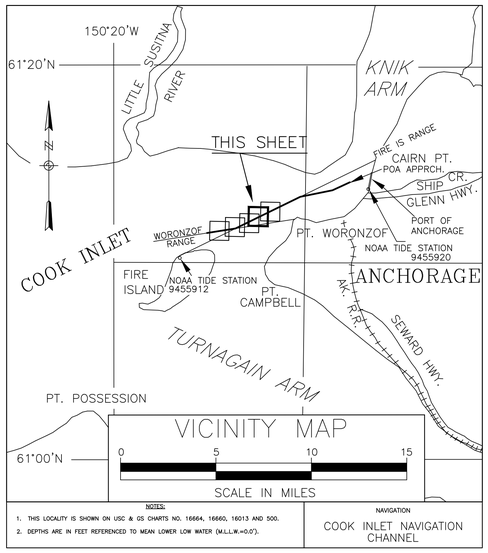
V-109
Sheet 9 of 11

CORPS OF ENGINEERS





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DREDGE LIMITS - AREA C		
Corner #	Northing	Easting
DL-24	2628708.65	1619570.25
DL-25	2627809.70	1620045.97
DL-28	2632462.12	1628828.90
DL-29	2633360.88	1628352.82

CINC DISPOSAL SITE		
Corner #	Northing	Easting
DS-5	2626323.49	1614048.61
DS-6	2626323.49	1616673.28
DS-7	2624354.99	1616673.28
DS-8	2624354.99	1614619.08
DS-9	2624587.68	1614048.61

DREDGE LIMITS - AREA D		
Corner #	Northing	Easting
DL-25	2627809.70	1620045.97
DL-26	2627635.79	1620138.09
DL-27	2632288.21	1628921.02
DL-28	2632462.12	1628828.90

CINC SURVEY LIMITS		
Corner #	Northing	Easting
SL-16	2628562.99	1619081.63
SL-17	2627313.36	1619743.03
SL-18	2632433.89	1629409.67
SL-19	2633683.29	1628747.85
SL-20	2626423.49	1613948.61
SL-21	2624254.99	1613948.61
SL-22	2624254.99	1616773.28
SL-23	2626423.49	1616773.28

CONTROL DATA				
POINT ID	NORTHING	EASTING	ELEV. (MLLW)	DESCRIPTION
BM 12 1974	2,620,563.82	1,604,566.35	27.63	Brass Cap
BM 5934 F	2,655,203.73	1,655,049.51	36.48	Brass Cap
CRAIG	2,642,635.95	1,661,029.47	44.95	Brass Cap
ETRAC-1	2,646,395.57	1,660,814.72	38.34	Brass Cap
ETRAC-2	2,644,443.04	1,660,120.66	36.38	Brass Cap
MIKE	2,645,987.73	1,661,875.48	48.67	Brass Cap
NORTH END	2,646,649.84	1,660,584.80	41.56	USACE SBC 1978
PORT 1989	2,639,934.29	1,656,925.43	39.55	Almon
PORT MAC	2,655,563.46	1,654,968.22	41.51	Brass Cap
RIFE 1960	2,620,502.19	1,604,162.70	29.99	Brass Cap
SOUTH END	2,644,296.27	1,659,728.03	40.58	USACE SBC 1978
TERRA 11 ARP	2,644,969.84	1,660,159.24	80.48	Antennae Reference Point
TERRA 12 ARP	2,644,990.65	1,660,166.56	81.21	Antennae Reference Point
5920 THERMO 1 1988	2,642,784.70	1,660,183.87	37.32	Almon

SOUNDING ELEVATIONS TABLE		
MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
-95	-75	
-75	-65	
-65	-55	
-55	-45	
-45	-44	
-44	-43	
-43	-42	
-42	-41	
-41	-40	
-40	-39	
-39	-38	
-38	-37	
-37	-36	
-36	-35	
-35	-30	
-30	-20	
-20	0	

200 0 200 400 600
SCALE IN FEET
HORIZONTAL SCALE: 1"=200'

VOLUME COMPUTATIONS	
DREDGE AREA C	CUBIC YARDS
VOLUME AVAILABLE ABOVE -38' MLLW	0
VOLUME AVAILABLE ABOVE -40' MLLW	289
VOLUME AVAILABLE ABOVE -43' MLLW	146,423
DREDGE AREA D	CUBIC YARDS
VOLUME AVAILABLE ABOVE -38' MLLW	0
VOLUME AVAILABLE ABOVE -40' MLLW	470
VOLUME AVAILABLE ABOVE -43' MLLW	60,515
DISPOSAL AREA	CUBIC YARDS
FILL VOLUME AVAILABLE BELOW -45' MLLW	1,595,788

STATE OF ALASKA 49TH
(Lewis J. Epps)
04/27/15
No. 3510
REGISTERED PROFESSIONAL LAND SURVEYOR

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THSOA CERTIFIED HYDROGRAPHER

David R. Neff CH(275)

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-15-C-0006
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WA
Recommended: — PRIME CONTRACTOR
Approved: — RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Approd

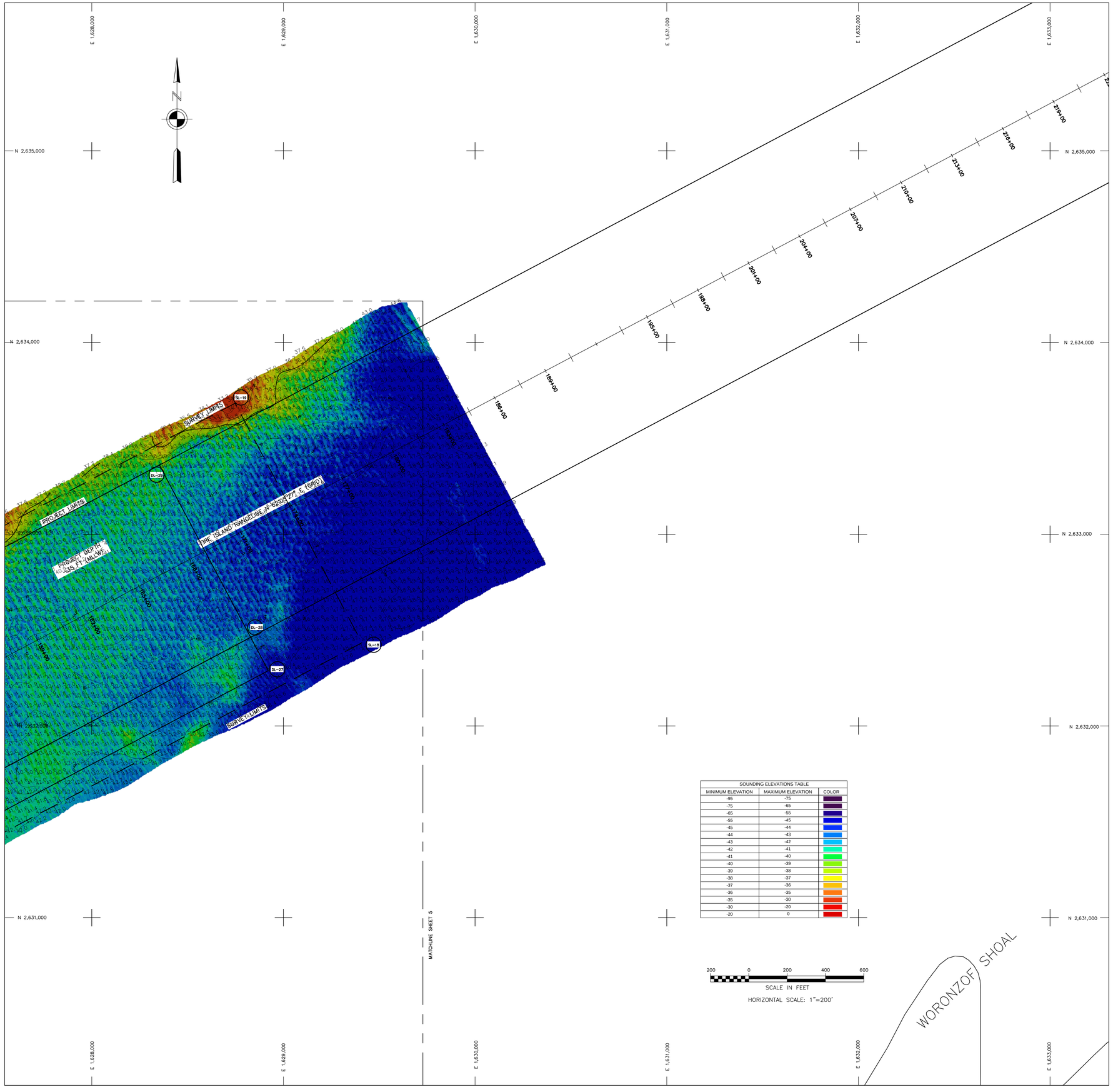
Designed: M. TENCZA
Drawn: M. TENCZA
Reviewed: J. ANDERSON
Chief: SecCon
Submitted: A. CHURCHILL
Chief: Branch
Date: 04/27/15
Dwg Scale: 1" = 200'
Plot Scale: 1:1
File: PRE_20150416_FINAL.dwg
USACE Survey No: 3258-15

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

COOK INLET, ALASKA
COOK INLET NAVIGATION CHANNEL
PRE-DREDGE SURVEY
APRIL 16, 2015

Reference number:
V-110
Sheet 10 of 11

CORPS OF ENGINEERS



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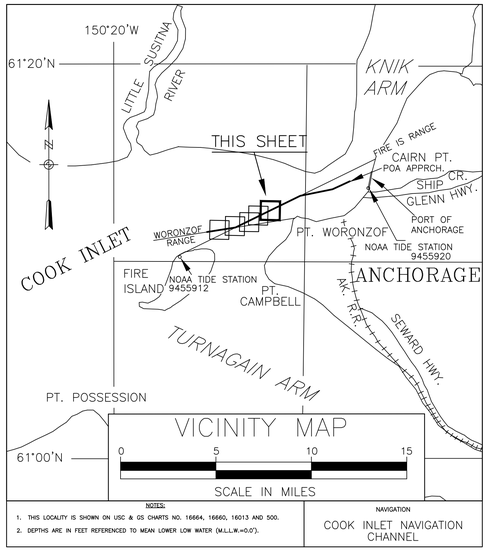
-40	-39	
-39	-38	
-38	-37	
-37	-36	
-36	-35	
-35	-30	
-30	-20	
-20	0	

200 0 200 400 600

SCALE IN FEET

HORIZONTAL SCALE: 1"=200'



NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE "TERRA 11" AS N 2,644,969.84, E 1,660,159.24.
2. VERTICAL CONTROL: ELEVATIONS ARE MEAN LOWER LOW WATER (MLLW) TIDAL DATUM EPOCH 1983–2001, EXPRESSED IN US SURVEY FEET. PRELIMINARY ELEVATIONS WERE ACQUIRED IN REFERENCE TO A SINGLE BENCHMARK HOLDING USACE "TERRA 11" AS 80.48 FEET MLLW. FINAL DATA WERE ADJUSTED BASED ON THE C.I.N.C. CUSTOM MLLW PLANE DETERMINED FROM THE DOWL C.I.N.C. CONTROL SURVEY CONDUCTED IN FEBRUARY, 2013.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
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Sym	Action	Description	Date	Approd

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Designed: M. TENCZA
Drawn: M. TENCZA
Reviewed: J. ANDERSON
Chief Section
Submitted: A. CHURCHILL
Chief Branch
USACE Survey No: 3258-15

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

COOK INLET, ALASKA
COOK INLET NAVIGATION CHANNEL
PRE-DREDGE SURVEY
APRIL 16, 2015

Reference number:
V-111
Sheet 11 of 11