

NOTES

- LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83, IN US SURVEY FEET BASED ON NGS PUBLISHED VALUES, HOLDING USACE SBC "DILL 1998" AS N 1,840,505.33, E 1,550,674.26, AND USACE SBC "PICKEL 1998" AS N 1,841,509.51, E 1,550,437.81.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0'), BASED ON THE NOAA'S TIDAL BENCH MARK LIST: "946 5374, SNAGGAK BAY, DILLINGHAM, ALASKA" PUBLISHED 04/29/2013. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA'S TIDAL BENCH MARK "5374 D 2007" AS 60.45' AND NOAA'S TIDAL BENCH MARK "5374 C 2007" AS 52.69'. 5374 D IS A DISK SET FLUSH IN A CONCRETE PATIO BETWEEN THE NORTH SIDE OF THE CITY HALL BUILDING AND 5374 C IS A DISK SET IN A CONCRETE GARAGE DOORWAY IN DILLINGHAM, ALASKA.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 ELEVATIONS HOLDING NOAA'S TIDAL BENCH MARK "5374 B 2007" (PID BBF17/M/18352) AS 18.46'.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY FOR THIS PRE DREDGE SURVEY WAS CONDUCTED ON APRIL 28-29, 2016 BY HUGHES & ASSOCIATES, WASILLA, AK. SOUNDINGS WERE COLLECTED USING AN RESON SAUNDERS 210 PRECISION DEPTH SOUNDER WITH A 200KHZ, 3-DEGREE BEAM-WIDTH TRANSDUCER. SOUNDER CALIBRATION WAS PERFORMED USING A DIGIBATH PRO SOUND VELOCITY PROBE. POSITIONING AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE R8 RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT CONTROL STATION, "1277-C". VESSEL NAVIGATION, DATA COLLECTION AND PROCESSING WERE PERFORMED USING HYDRACK 2016 INTEGRATED SOFTWARE. SURVEY CONTROL DATA TABLE BELOW WAS UPDATED DURING 2016 PRE DREDGE SURVEY. HORIZONTAL AND VERTICAL CONTROL WERE VERIFIED PRIOR TO THE 2016 PRE DREDGE SURVEY.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
- MAP SOUNDINGS ARE SORTED ON 12 FOOT CENTERS. VOLUME SOUNDINGS ARE SORTED ON 1 FOOT CENTERS.

SURVEY CONTROL DATA				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
1277-1 1984	1,841,622.39	1,550,745.71	32.29	3.25 INCH USACE SBC
1277-2 1984	1,840,494.00	1,550,879.74	30.91	3.25 INCH USACE SBC
1277-3 1984	1,840,427.98	1,550,887.60	30.24	3.25 INCH USACE SBC
5374 D 2007			60.45	NOAA'S TIDAL BM
5374 E 2007			43.79	NOAA'S TIDAL BM
DILL 1998	1,840,505.33	1,550,674.26	29.78	3.25 INCH FLAT ALCAP
DILLINGHAM 1947	1,849,383.08	1,551,809.45		3.5 INCH USCS SBC
DILLINGHAM AZ MK	1,841,347.21	1,553,844.91		2 INCH USCS IRON PIPE
PICKEL 1998	1,841,509.51	1,550,437.81	28.88	3.25 INCH FLAT ALCAP
WDS-2 2001	1,841,419.33	1,549,910.66	22.77	3.25 INCH DOMED ALCAP

DISPOSAL AREA			DISPOSAL AREA		
CORNER#	NORTHING	EASTING	CORNER#	NORTHING	EASTING
DS-1	1,839,502.58	1,551,238.87	DS-3	1,839,644.47	1,550,875.05
DS-2	1,839,739.66	1,551,159.55	DS-4	1,839,407.39	1,550,954.38

PROJECT LIMITS			PROJECT LIMITS		
CORNER#	NORTHING	EASTING	CORNER#	NORTHING	EASTING
DL-1	1,840,656.89	1,550,430.66	DL-6	1,840,930.19	1,550,305.22
DL-2	1,840,645.10	1,550,447.69	DL-7	1,840,662.40	1,550,337.15
DL-3	1,840,669.87	1,550,654.63	DL-8	1,840,575.05	1,550,329.96
DL-4	1,841,364.89	1,550,571.44	DL-9	1,840,571.77	1,550,369.82
DL-5	1,841,318.54	1,550,184.21	DL-10	1,840,653.73	1,550,376.57

SURVEY LIMITS			SURVEY LIMITS		
CORNER#	NORTHING	EASTING	CORNER#	NORTHING	EASTING
SL-1	1,840,569.77	1,550,449.36	SL-9	1,840,909.22	1,550,207.01
SL-2	1,840,610.25	1,550,787.66	SL-10	1,840,362.44	1,550,272.21
SL-3	1,841,437.06	1,550,688.69	SL-11	1,840,362.44	1,550,449.36
SL-4	1,841,461.80	1,550,593.75	SL-12	1,839,293.60	1,551,455.40
SL-5	1,841,405.12	1,550,578.98	SL-13	1,840,166.00	1,551,455.40
SL-6	1,841,432.20	1,550,396.29	SL-14	1,840,166.00	1,550,359.57
SL-7	1,841,432.01	1,550,133.89	SL-15	1,839,293.60	1,550,359.57
SL-8	1,841,362.83	1,550,065.66			

VOLUME COMPUTATIONS		
DILLINGHAM HARBOR	MLLW	CU. YD.
VOLUME AVAILABLE TO REQUIRED DEPTH (RD)	0.0	74,740
VOLUME AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MPD)	-2.0	17,598
VOLUME AVAILABLE TO SIDE SLOPES (SS) AT 8:1	VARIABLES	39,802
TOTAL VOLUME AVAILABLE REMOVED (MP + SS)		132,140
OVER-DREDGE VOLUME WITHIN HARBOR BASIN		N/A
OVER-DREDGE VOLUME WITHIN SIDE SLOPES		N/A

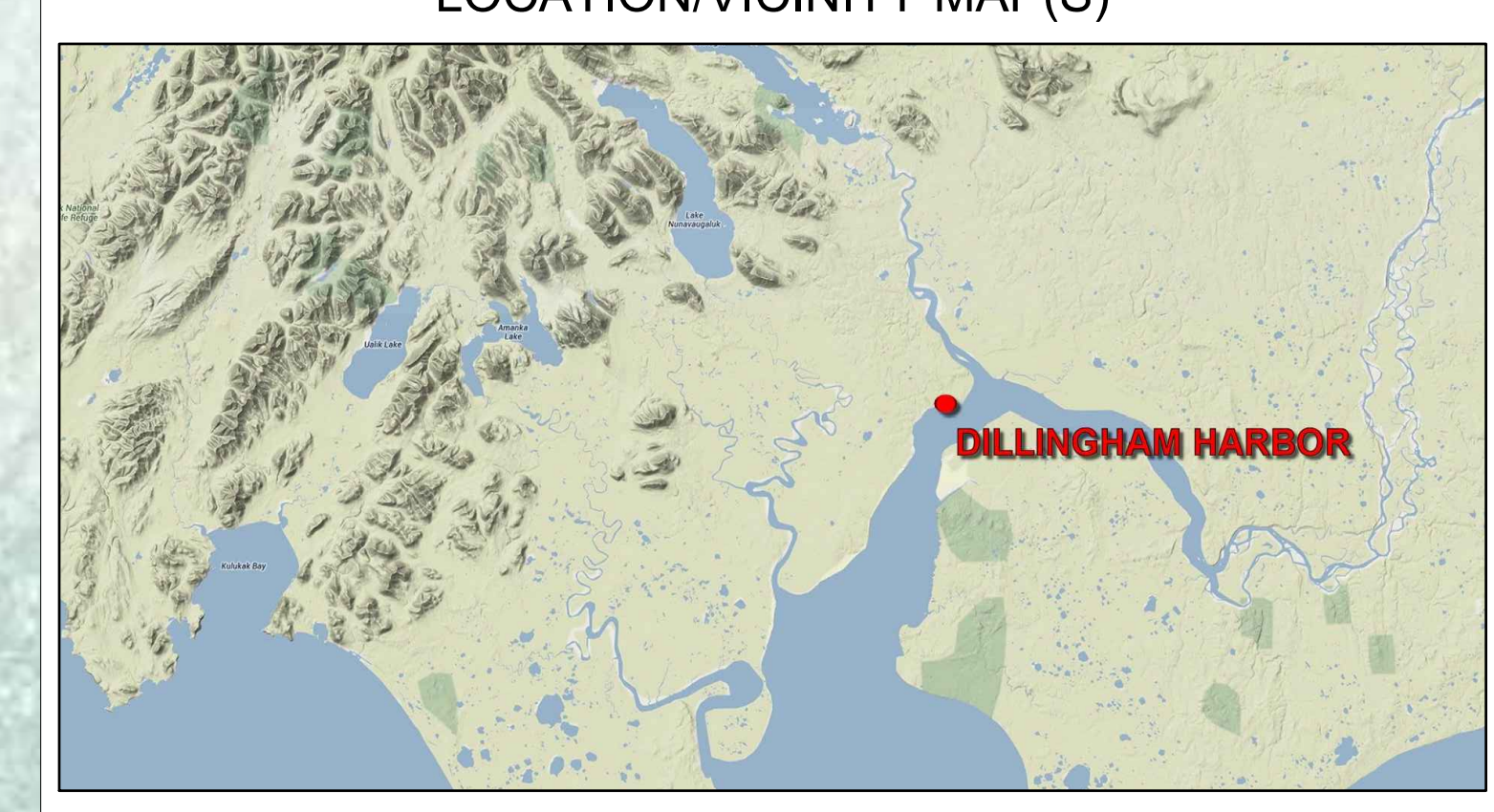
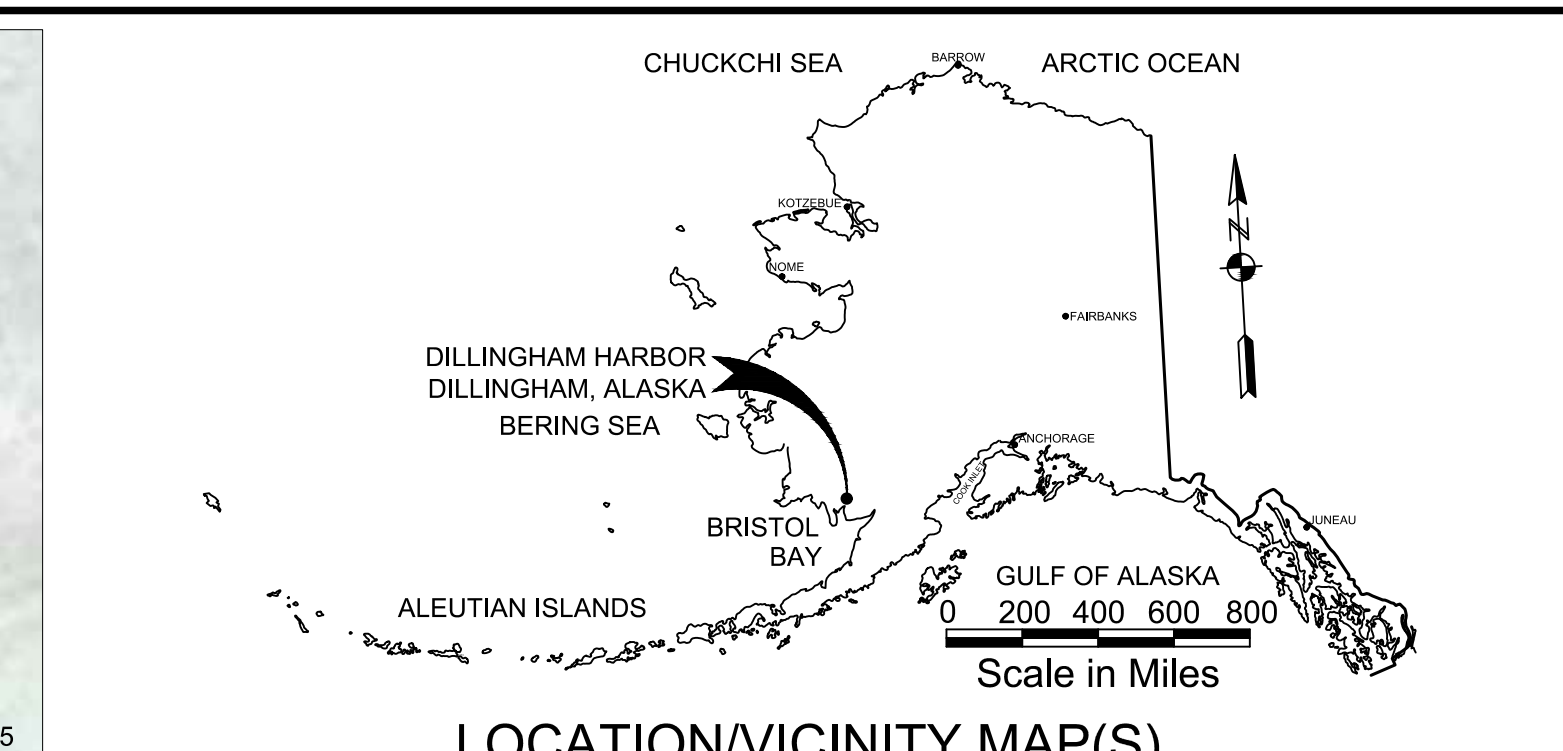
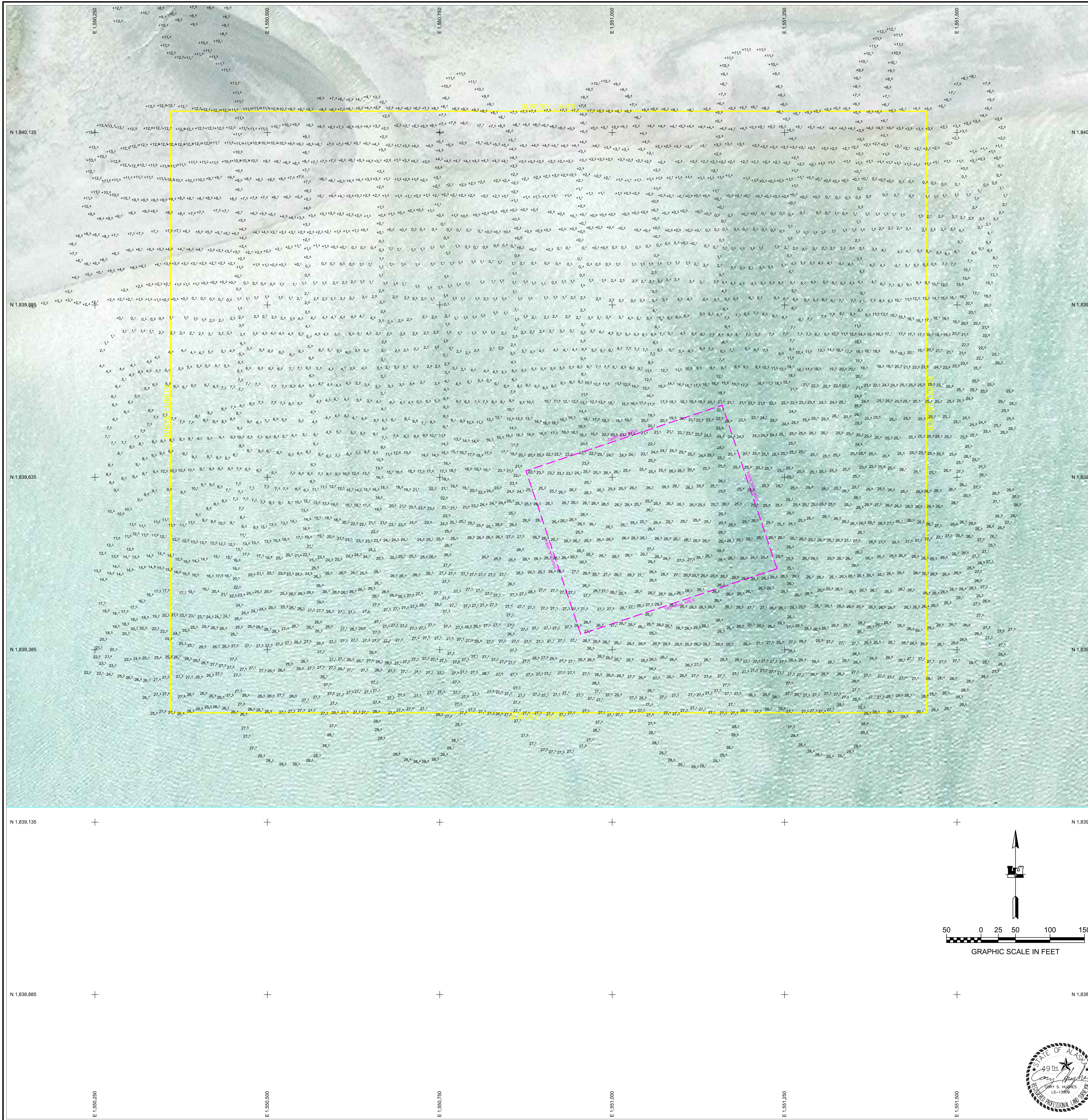
US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. W11P6AC0001
 CONTRACTOR: ALASKA MARINE EXAMINATION LLC
 CITY: ANCHORAGE
 STATE: ALASKA
 DATE: 04/29/2016
 APPROVED: [Signature]
 RECOMMENDED: [Signature]
 CHECKED: [Signature]

DATE: 04/29/2016
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 FILE NAME: [Signature]
 SCALE: [Signature]
 SIZE: [Signature]

DILLINGHAM, ALASKA
 DILLINGHAM HARBOR
 PRE DREDGE HYDROGRAPHIC SURVEY
 APRIL 28-29, 2016

SHEET IDENTIFICATION
 V-101
 Sheet 1 of 9



- ### NOTES
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U.S. Army Corps of Engineers
ALASKA DISTRICT

DILLINGHAM, ALASKA
DILLINGHAM HARBOR
PRE DREDGE HYDROGRAPHIC SURVEY
APRIL 28-29, 2016

SHEET IDENTIFICATION
V-102
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