



NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83 (NSRS2007) IN U.S. FEET. BASIS OF COORDINATES IS NATIONAL GEODETIC SURVEY (NGS) CONTROL STATIONS "OME A" (PID DF3651), AS N 3,841,096.47 AND E 1,728,070.64 AND "OME B" (PID DF3652), AS N 3,842,264.55 AND E 1,729,661.41. MONUMENTS ARE SECONDARY AIRPORT CONTROL STATIONS (SACS) AT NOME AIRPORT, ALASKA.
- LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83, IN US SURVEY FEET HOLDING USACE SBC "KMV-1" AS N 3,837,168.87, E 1,729,283.15 AND USACE SBC "NH-04" AS N 3,837,212.71, E 1,731,266.48.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW) 0.0, BASED ON THE NOAA'S TIDAL BENCH MARK LIST "946 8756 NOME, NORTON SOUND, ALASKA" PUBLISHED 02/29/2009. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING USACE/NOAA TIDAL BENCH MARK "946 8756 SHEET PILE B" (VMF12149) AS 16.407' AND NOAA/USACE TIDAL BENCH MARK "9756 E 1992" (VMF12152) AS 16.719'.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 (GEOID 12B) ELEVATIONS HOLDING NOAA/USACE TIDAL BENCH MARK "946 8756 G 1992" (PID BBB24 / VMF12154) AS 15.42 FEET.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY WAS COLLECTED JUNE 25 & JULY 15, 2016. SOUNDINGS WERE COLLECTED USING A "RESON 210" SOUNDER WITH A 3" SINGLE BEAM TRANSDUCER, SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DIGIBAR PRO SOUND VELOCITY PROBE. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A "TRIMBLE R8 RTK" SYSTEM. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING "KMV-1" & "NH-04". DATA WAS COLLECTED AND FIELD PROCESSED USING "HYDRAK 01H" SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A "TRIMBLE R8 RTK" SYSTEM AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
- MAP SOUNDINGS ARE SORTED AT 12 FEET AND ARE SHOAL BIASED. VOLUME SOUNDINGS FOR THE JUNE 25 SURVEY ARE SORTED AT 1 FOOT AND ARE SHOAL BIASED. VOLUME SOUNDINGS FOR THE JULY 15 SURVEY ARE SORTED AT 3 FEET AND ARE SHOAL BIASED.

SURVEY CONTROL DATA (US FT)

STATION	NORTHING	EASTING	MLLW	DESCRIPTION
39+71	3,834,957.98	1,729,422.33	16.88	BRASS CAP
53+68	3,834,888.51	1,728,762.20	14.36	BRASS CAP
BOOTSTRAP	3,838,021.15	1,730,359.97	6.84	BRASS CAP
CELL	3,835,965.94	1,729,122.26	12.91	ALUMINUM MON
DINGO	3,836,890.97	1,732,407.19	19.48	BRASS CAP
KMV-1	3,837,168.87	1,729,283.15	16.63	BRASS CAP
NH-02	3,838,272.50	1,731,835.01	12.59	BRASS CAP
NH-03	3,837,585.34	1,730,864.94	14.01	BRASS CAP
NH-04	3,837,212.71	1,731,266.48	15.44	BRASS CAP
OME A	3,841,096.47	1,728,070.64		BRASS CAP
OME B	3,842,264.55	1,729,661.41		BRASS CAP
PUMP	3,837,605.19	1,731,631.48	9.32	BRASS CAP
SHEET	3,837,882.85	1,731,533.69	11.84	ALUMINUM MON

NAVIGATION AIDS (US FT)

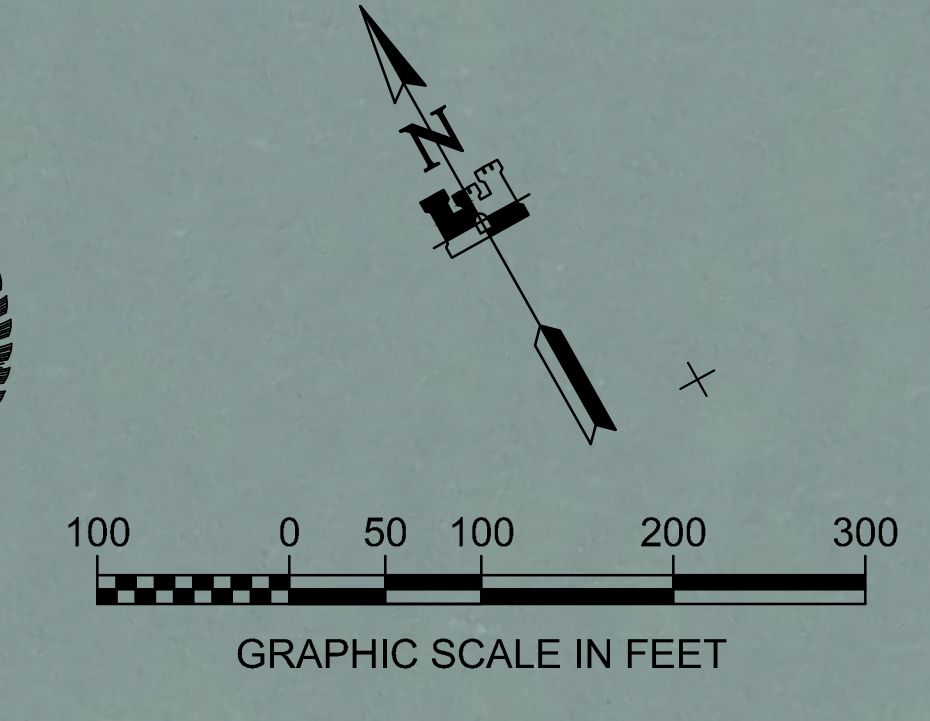
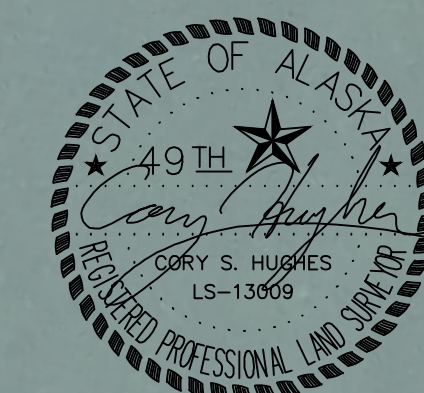
USCG NO.	NORTHING	EASTING	DESCRIPTION
27962	3,834,922	1,729,388	ENTRANCE LIGHT 2
27963	3,834,844	1,728,782	ENTRANCE LIGHT 1
27964	3,836,250	1,729,618	BUOY 1
27965	3,836,070	1,729,925	BUOY 2
27966	3,836,541	1,729,900	BUOY 3

NAVIGATION AIDS (US FT)

USCG NO.	NORTHING	EASTING	DESCRIPTION
27967	3,836,470	1,730,030	BUOY 4
27968	3,838,033	1,730,848	BUOY 5
27969	3,837,935	1,731,111	BUOY 7
27970	3,837,678	1,731,012	BUOY 8
27971	3,837,805	1,731,401	BUOY 9

VOLUME COMPUTATIONS

AREA	DESCRIPTION	DEPTH (FT)	CU. YD.
AREA A: OUTER ENTRANCE CHANNEL	REMOVED TO REQUIRED DEPTH (RD)	-22.0	15,690
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-23.0	12,716
	REMOVED SIDE SLOPES (SS) (SLOUGH) 67.5' WIDE	VARIES	3,063
AREA B: TRANSITION -22FT TO -12FT	REMOVED TO REQUIRED DEPTH (RD)	VARIES	322
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	VARIES	268
	REMOVED SIDE SLOPES (SS) (SLOUGH) 25' WIDE	VARIES	2,848
AREA C: INNER ENTRANCE CHANNEL	REMOVED TO REQUIRED DEPTH (RD)	-12	2,857
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-13	3,972
	REMOVED SIDE SLOPES (SS) (SLOUGH) 25' WIDE	VARIES	2,848
AREA D: MANEUVERING AREA (9+00 TO 14+79)	REMOVED TO REQUIRED DEPTH (RD)	-10	1,005
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-11	445
	REMOVED SIDE SLOPES (SS) 13+00 - 13+00 (3:1) 25' WIDE	VARIES	1,590
AREA E: SMALL BOAT HARBOR	REMOVED TO REQUIRED DEPTH (RD)	-10	N/A
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-11	N/A
	REMOVED SIDE SLOPES (SS) 25' WIDE	VARIES	N/A
AREA F: EAST SEDIMENT TRAP	REMOVED TO REQUIRED DEPTH (RD)	-22	19,435
	REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-23	281
	REMOVED SIDE SLOPES (SS) (SLOUGH) 92' TO 67.5' WIDE	VARIES	2,159
AREA G: SEDIMENT TRAP CHANNEL	REMOVED TO REQUIRED DEPTH (RD)	-7	161
	REMOVED TO MAX PAY DEPTH (MP)		
TOTAL MAXIMUM VOLUME REMOVED (RD + MP + SS)			67,543
TOTAL OVERDREDGE VOLUME			6,693



**US Army Corps of Engineers
ALASKA DISTRICT**

CONTRACT NO. W11H6151-0-007 CONTINUATION ALASKA MARINE ENGINEERING LLC CITY ANCHORAGE STATE ALASKA RECOMMENDATION APPROVED BY: _____ DATE: _____ DRAWN BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____	PROJECT NO. W11H6151-0-007 SHEET NO. 6-NOM-92-07-54 SHEET TITLE: POST-DREDGE HYDROGRAPHIC SURVEY 1 & 2 DATE: JUNE 25 & JULY 15, 2016
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**U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0898**

**NOME, ALASKA
NOME HARBOR
POST-DREDGE HYDROGRAPHIC SURVEY 1 & 2
JUNE 25 & JULY 15, 2016**

SHEET IDENTIFICATION

6-NOM-92-07-54

Sheet 1 of 5



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U.S. Army Corps of Engineers
ALASKA DISTRICT
JBER, ALASKA 99506-0898

DATE: 15 June 2016
DRAWN BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

FILE NAME: [Signature]
SCALE: 1" = 100'
PAGE: [Signature]

U.S. Army Corps of Engineers
ALASKA DISTRICT
JBER, ALASKA 99506-0898

CONTRACT NO. W11H1615-1-0007
CONTINUATION: ALASKA MARINE ENGINEERING LLC
CITY: ANCHORAGE
STATE: ALASKA
APPROVED: [Signature]
DATE: [Signature]

NOME, ALASKA
NOME HARBOR
POST-DREDGE HYDROGRAPHIC SURVEY 1 & 2
JUNE 25 & JULY 15, 2016

SHEET IDENTIFICATION
6-NOM-92-07-54
Sheet 2 of 5



NOTES

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U.S. Army Corps of Engineers - ALASKA DISTRICT

CONTRACT NO. W11H6151-C-0007
 CONTINUATION: ALASKA MARINE ENGINEERING LLC
 CITY: ANCHORAGE STATE: ALASKA
 APPROVED: [Signature] DATE: [Date]

DESIGNED BY: [Name] DATE: [Date]
 CHECKED BY: [Name] DATE: [Date]
 DRAWN BY: [Name] DATE: [Date]
 APPROVED BY: [Name] DATE: [Date]

FILE NAME: [Name]
 SIZE: [Size]
 DATE: [Date]

U.S. ARMY CORPS OF ENGINEERS
 ALASKA DISTRICT
 JBER, ALASKA 99506-0898

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 NOME HARBOR
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- BATHYMETRY WAS COLLECTED JUNE 25 & JULY 15, 2016. SOUNDINGS WERE COLLECTED USING A "RESON 210" SOUNDER WITH A 3" SINGLE BEAM TRANSDUCER, SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DIGIBAR PRO SOUND VELOCITY PROBE. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A "TRIMBLE R8 RTK" SYSTEM. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING "KMJV-1" & "NH-04". DATA WAS COLLECTED AND FIELD PROCESSED USING "HYDRACK 2016" SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A "TRIMBLE R8 RTK" SYSTEM AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
- MAP SOUNDINGS ARE SORTED AT 12 FEET AND ARE SHOAL BIASED. VOLUME SOUNDINGS FOR THE JUNE 25 SURVEY ARE SORTED AT 1 FOOT AND ARE SHOAL BIASED. VOLUME SOUNDINGS FOR THE JULY 15 SURVEY ARE SORTED AT 3 FEET AND ARE SHOAL BIASED.

SURVEY CONTROL DATA (US FT)				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
39+71	3,834,957.98	1,729,422.33	16.88	BRASS CAP
53+68	3,834,888.51	1,728,762.20	14.36	BRASS CAP
BOOTSTRAP	3,838,021.15	1,730,359.97	6.84	BRASS CAP
CELL	3,835,965.94	1,729,122.26	12.91	ALUMINUM MON
DINGO	3,836,890.97	1,732,407.19	19.48	BRASS CAP
KMJV-1	3,837,168.87	1,729,283.15	16.63	BRASS CAP
NH-02	3,838,272.50	1,731,835.01	12.59	BRASS CAP
NH-03	3,837,585.34	1,730,864.94	14.01	BRASS CAP
NH-04	3,837,212.71	1,731,266.48	15.44	BRASS CAP
OME A	3,841,096.47	1,728,070.64		BRASS CAP
OME B	3,842,264.55	1,729,661.41		BRASS CAP
PUMP	3,837,605.19	1,731,631.48	9.32	BRASS CAP
SHEET	3,837,882.85	1,731,533.69	11.84	ALUMINUM MON

NAVIGATION AIDS (US FT)			
USCG NO.	NORTHING	EASTING	DESCRIPTION
27962	3,834,922	1,729,388	ENTRANCE LIGHT 2
27963	3,834,844	1,728,782	ENTRANCE LIGHT 1
27964	3,836,250	1,729,618	BUOY 1
27965	3,836,070	1,729,925	BUOY 2
27966	3,836,541	1,729,900	BUOY 3

NAVIGATION AIDS (US FT)			
USCG NO.	NORTHING	EASTING	DESCRIPTION
27967	3,836,470	1,730,030	BUOY 4
27968	3,838,033	1,730,848	BUOY 5
27969	3,837,935	1,731,111	BUOY 7
27970	3,837,678	1,731,012	BUOY 8
27971	3,837,805	1,731,401	BUOY 9

VOLUME COMPUTATIONS		
AREA	DEPTH (FT)	CU. YD.
AREA A: OUTER ENTRANCE CHANNEL		
REMOVED TO REQUIRED DEPTH (RD)	-22.0	15,500
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-23.0	12,716
REMOVED SIDE SLOPES (SS) (SLOUGH) 67.5' WIDE	VARIES	3,063
AREA B: TRANSITION -22FT TO -12FT		
REMOVED TO REQUIRED DEPTH (RD)	VARIES	322
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	VARIES	268
AREA C: INNER ENTRANCE CHANNEL		
REMOVED TO REQUIRED DEPTH (RD)	-12	2,857
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-13	3,972
REMOVED SIDE SLOPES (SS) (SLOUGH) 25' WIDE	VARIES	2,848
AREA D: MANEUVERING AREA (9+00 TO 14+79)		
REMOVED TO REQUIRED DEPTH (RD)	-10	1,005
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-11	445
REMOVED SIDE SLOPES (SS) 9+00 - 13+00 (3' 11" 25' WIDE)	VARIES	1,590
REMOVED SIDE SLOPES (SS) 13+00 - 14+79 (SLOUGH) 25' WIDE	VARIES	721
AREA E: SMALL BOAT HARBOR		
REMOVED TO REQUIRED DEPTH (RD)	-10	N/A
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-11	N/A
REMOVED SIDE SLOPES (SS) 25' WIDE	VARIES	N/A
AREA F: EAST SEDIMENT TRAP		
REMOVED TO REQUIRED DEPTH (RD)	-22	19,455
REMOVED BETWEEN RD AND MAX PAY DEPTH (MP)	-23	281
REMOVED SIDE SLOPES (SS) (SLOUGH) 52' TO 67.5' WIDE	VARIES	2,159
AREA G: SEDIMENT TRAP CHANNEL		
REMOVED TO MAX PAY DEPTH (MP)	-7	161
TOTAL MAXIMUM VOLUME REMOVED (RD + MP + SS)		67,543
TOTAL OVERDREDGE VOLUME		6,693

**US Army Corps of Engineers
of Engineers
ALASKA DISTRICT**

CONTRACT NO. W19HRS15-C-0007 CONTINUATION ALASKA MARINE ENGINEERING LLC CITY ANCHORAGE STATE ALASKA Recommendation: _____ Approved: _____ Date: _____	SHEET NO. _____ OF _____ DATE: _____ BY: _____ CHECKED BY: _____ DATE: _____
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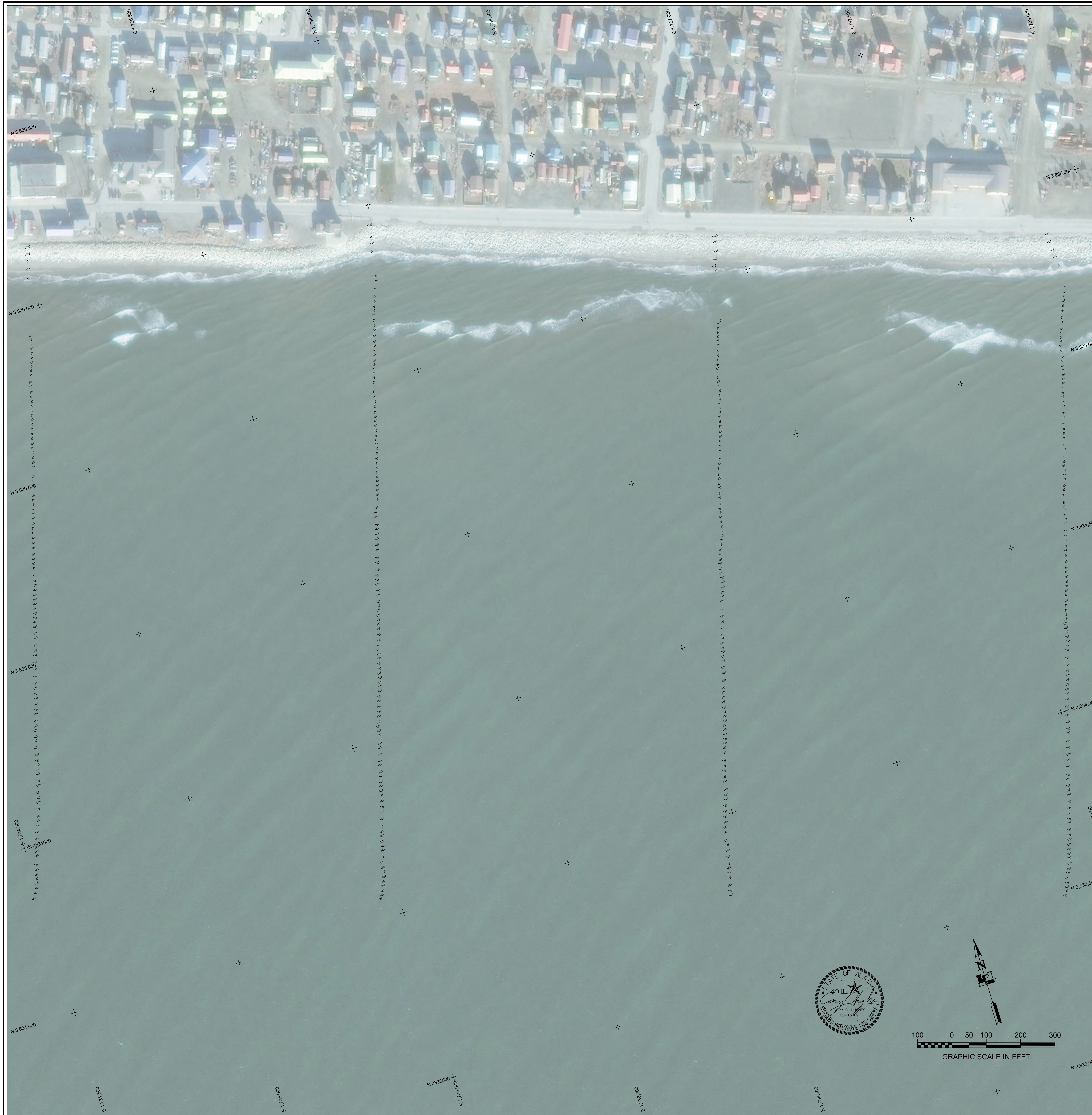
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U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0888

**NOME, ALASKA
NOME HARBOR
POST-DREDGE HYDROGRAPHIC SURVEY 1 & 2
JUNE 25 & JULY 15, 2016**

SHEET IDENTIFICATION
6-NOM-92-07-54
Sheet 4 of 5



NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83 (NSRS2007) IN U.S. FEET. BASIS OF COORDINATES IS NATIONAL GEODETIC SURVEY (NGS) CONTROL STATIONS "OME A" (PID DF3651), AS N 3,841,096.47 AND E 1,728,070.64 AND "OME B" (PID DF3652), AS N 3,842,264.55 AND E 1,729,661.41. MONUMENTS ARE SECONDARY AIRPORT CONTROL STATIONS (SACS) AT NOME AIRPORT, ALASKA.
LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83, IN US SURVEY FEET HOLDING USACE SBC "KMJV-1" AS N 3,837,168.87, E 1,729,283.15 AND USACE SBC "NH-04" AS N 3,837,212.71, E 1,731,266.48
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW+0.0), BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST "946 8756 NOME, NORTON SOUND, ALASKA" PUBLISHED 02/29/2009. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING USACE/NOAA TIDAL BENCH MARK "946 8756 SHEET PILE B" (VM#12149) AS 16.40' AND NOAA/USACE TIDAL BENCH MARK "9756 E 1992" (VM#12152) AS 16.719'.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 (GEOID 128) ELEVATIONS HOLDING NOAA/USACE TIDAL BENCH MARK "946 8756 G 1992" (PID BBBD24 / VM#12154) AS 16.42 FEET
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US Army Corps of Engineers - ALASKA DISTRICT

CONTRACT NO. W11H6R15-C-007
 CONTINGENT ALASKA MARINE ENGINEERING LLC
 CITY AND/OR POINT STATE ALASKA
 Recommended Approved
 REVISIONS: DATE BY DESCRIPTION

NO.	DATE	BY	DESCRIPTION

DATE: 30 Jun 2016
 U.S. ARMY CORPS OF ENGINEERS
 ALASKA DISTRICT
 JBER, ALASKA 99506-0888

DESIGNED BY: [Blank]
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 APPROVED BY: Thomas A. Stein, Chief, Operations Section
 FILE NAME: [Blank]
 SIZE: 11" x 17"
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 NOME HARBOR
 POST-DREDGE HYDROGRAPHIC SURVEY 1 & 2
 JUNE 25 & JULY 15, 2016**

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 Sheet 5 of 5