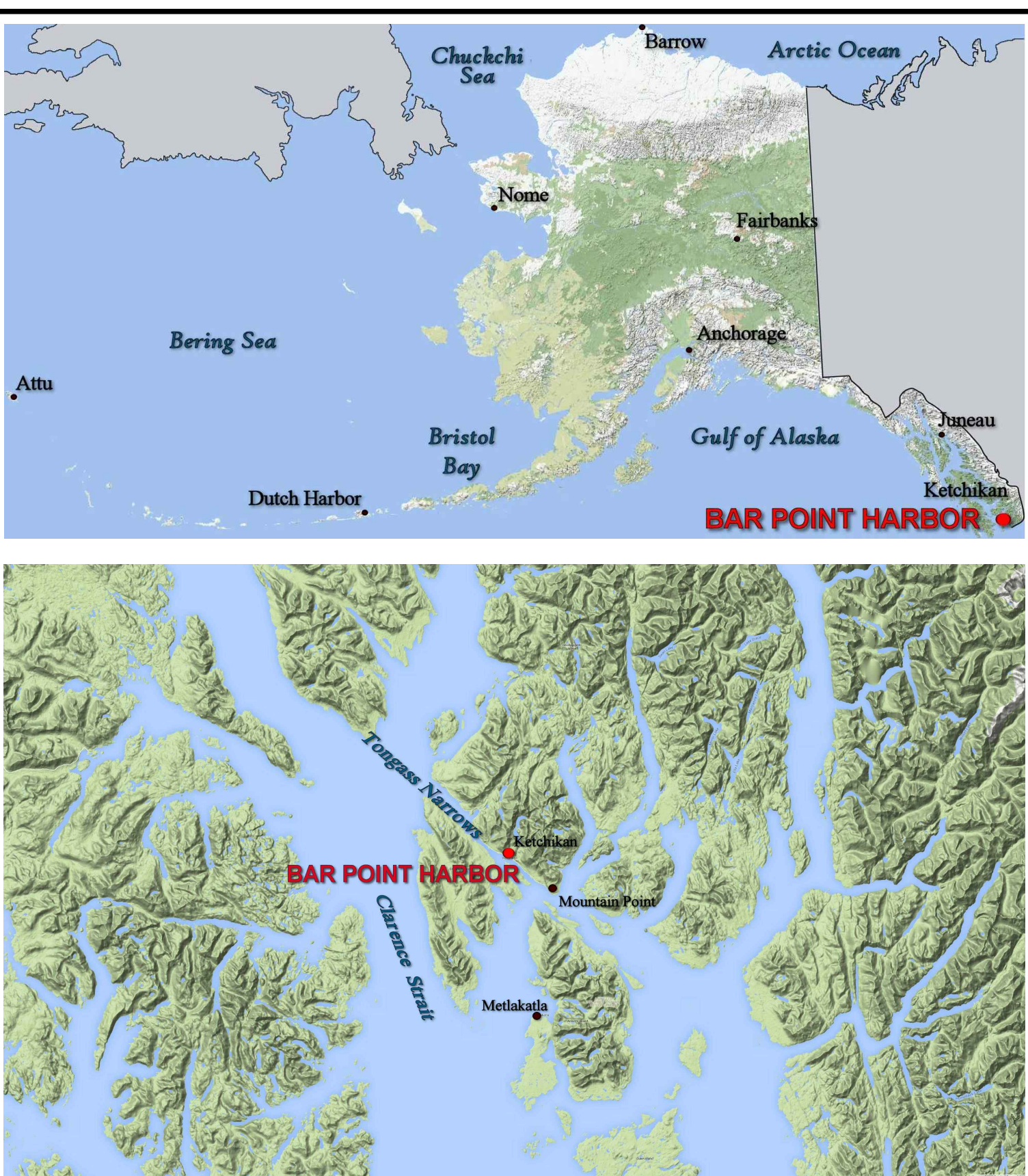


VOLUME COMPUTATIONS		
AREA A: BASIN	MLLW	CU. YD.
AVAILABLE TO PROJECT DEPTH (PD)	-15.0	1,581
AVAILABLE TO MAX PAY DEPTH (MP)	-16.0	3,674
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE	VARIES	1,232
AREA B: BASIN		
AVAILABLE TO PD	-10.0	4,011
AVAILABLE TO MP	-11.0	5,927
AVAILABLE SS AT 3:1 (H:V) & 25' WIDE	VARIES	3,607
TOTAL MAXIMUM VOLUME AVAILABLE (MP + SS)		14,440

OBSTRUCTION DATA				
ID	NORTHING	EASTING	DEPTH	APPROX SIZE (FEET)
OBST-1	1,290,307.7	3,098,551.4	-19.6	25X8X4.0
OBST-2	1,289,157.1	3,099,653.8	-20.6	5X5X3.0
OBST-3	1,289,685.1	3,099,620.0	-11.4	15X8X4.0
OBST-4	1,289,809.3	3,099,290.1	-12.2	10X3X2.7
OBST-5	1,289,827.5	3,099,277.6	-12.3	4X5X2.0
OBST-6	1,289,802.0	3,099,636.8	-14.3	5X7X2.0



- ### NOTES
- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83 (CORS96), IN U.S. SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83 (CORS96) 2010.00 EPOCH VALUES OF NGS CORS STATIONS: "ANNETTE ISLAND 5 CORS ARP" (AIS5 - PID DK6482), "KAWOKWAKAIRAK2006 CORS ARP" (AB49 - PID DM7451) AND "LEVEL ISLAND 6 CORS ARP" (LEV6 - PID DJ3035).
  - LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FEET HOLDING USACE SBC "BPB-1 1998" AS N 1,290,101.69, E 3,099,574.62.
  - VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW+0.0), BASED ON THE NOAA'S TIDAL BENCH MARK LIST: "945 0405 KETCHIKAN, TONGASS HARBOR, ALASKA" PUBLISHED 08/27/2011. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA'S TIDAL BENCH MARK "NO 37 1956" (PID: A14914 / VM# 1170) AS 35.09.
  - VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 ELEVATIONS HOLDING USACE BENCH MARK "NO 37 1956" (PID A14914 / VM# 1170) AS 31.27.
  - SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
  - BATHYMETRY WAS COLLECTED AUGUST 1-2, 2015. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2002 MULTIBeam ECHOSOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE K SOUND VELOCITY PROBE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMV OCEANMASTER V5 SYSTEM. DATA WAS COLLECTED USING QINSY 8.1 SOFTWARE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMV OCEANMASTER V5 SYSTEM.
  - TERRESTRIAL LASER SCANNING DATA COLLECTED AUGUST 01-02, 2015. DATA WAS COLLECTED USING A REIGL VZ400 3D LASER SCANNER. MOBILE SCANNING WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMV OCEANMASTER V5 SYSTEM.
  - THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
  - MAP SOUNDINGS ARE BINNED AT 24 FEET AND ARE SHAL-BIASED. CONTOURS ARE BASED ON 12 FEET BINNED SHAL-BIASED SOUNDINGS. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE MEAN VALUE SOUNDINGS.

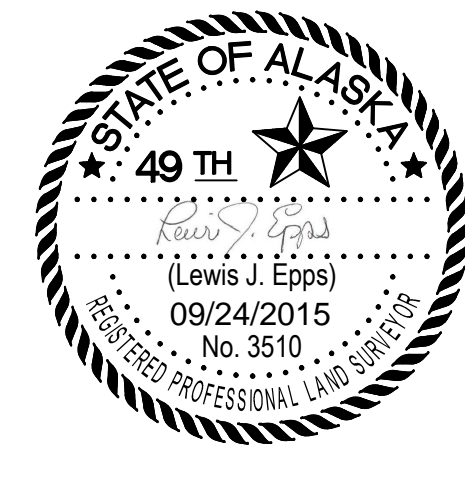
SURVEY CONTROL DATA				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
BAR-2 1972	1,289,295.61	3,099,769.18	21.03	3.5" DOMED USACE BC
BAR-4 1972	1,289,552.31	3,098,796.18	21.0	3.5" DOMED USACE BC
BPB-1 1998	1,290,101.69	3,099,574.62	22.22	3.25" DOMED SBC
BPB-2 1998	1,289,530.10	3,099,011.94	19.4	3.25" DOMED SBC
BPB-3 2001	1,289,759.16	3,099,834.79	22.90	3.25" DOMED SBC
BPB-4 2001	1,290,602.71	3,098,428.97	23.1	3.25" DOMED SBC
BPB-6 2012	1,291,023.25	3,097,826.79	22.58	3.25" DOMED SBC

\*Bench marks with elevation precision of 0.1" were measured by RTK GNSS.

NAVIGATION AIDS			
USCG NO.	NORTHING	EASTING	DESCRIPTION
22200	1,289,300	3,099,773	SOUTH ENTRANCE LIGHT 2S FL. RED
22205	1,289,468	3,099,593	SOUTH ENTRANCE DAYBEACON 3S
22210	1,289,717	3,098,314	ENTRANCE LIGHT 2
22215	1,290,075	3,098,276	ENTRANCE DAYBEACON 3
22220	1,290,548	3,097,441	NORTH ENTRANCE LIGHT 2N

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
1	1,289,357.00	3,099,723.00
2	1,289,447.00	3,099,837.00
3	1,289,732.00	3,099,690.00
4	1,290,027.00	3,099,688.00
5	1,290,565.00	3,098,666.00
6	1,290,481.00	3,098,622.00
7	1,290,203.00	3,099,152.00

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
8	1,290,015.00	3,099,150.00
9	1,290,433.00	3,098,597.00
10	1,289,880.00	3,098,566.00
11	1,289,622.00	3,098,832.00
12	1,289,532.00	3,099,667.00
13	1,289,427.00	3,099,668.00



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

*David R. Neff*  
David R. Neff C.H. (275)

US Army Corps of Engineers  
ALASKA DISTRICT

CONTRACT NO. W11H14-14-0013.0008  
CONTRACTOR: ETIEME, INC.  
CITY: SAN RAFAEL  
STATE: CALIFORNIA  
DATE: 09/24/2015  
APPROVED: MICHAEL E. NEFF  
DESIGNED: MICHAEL E. NEFF  
DRAWN: MICHAEL E. NEFF

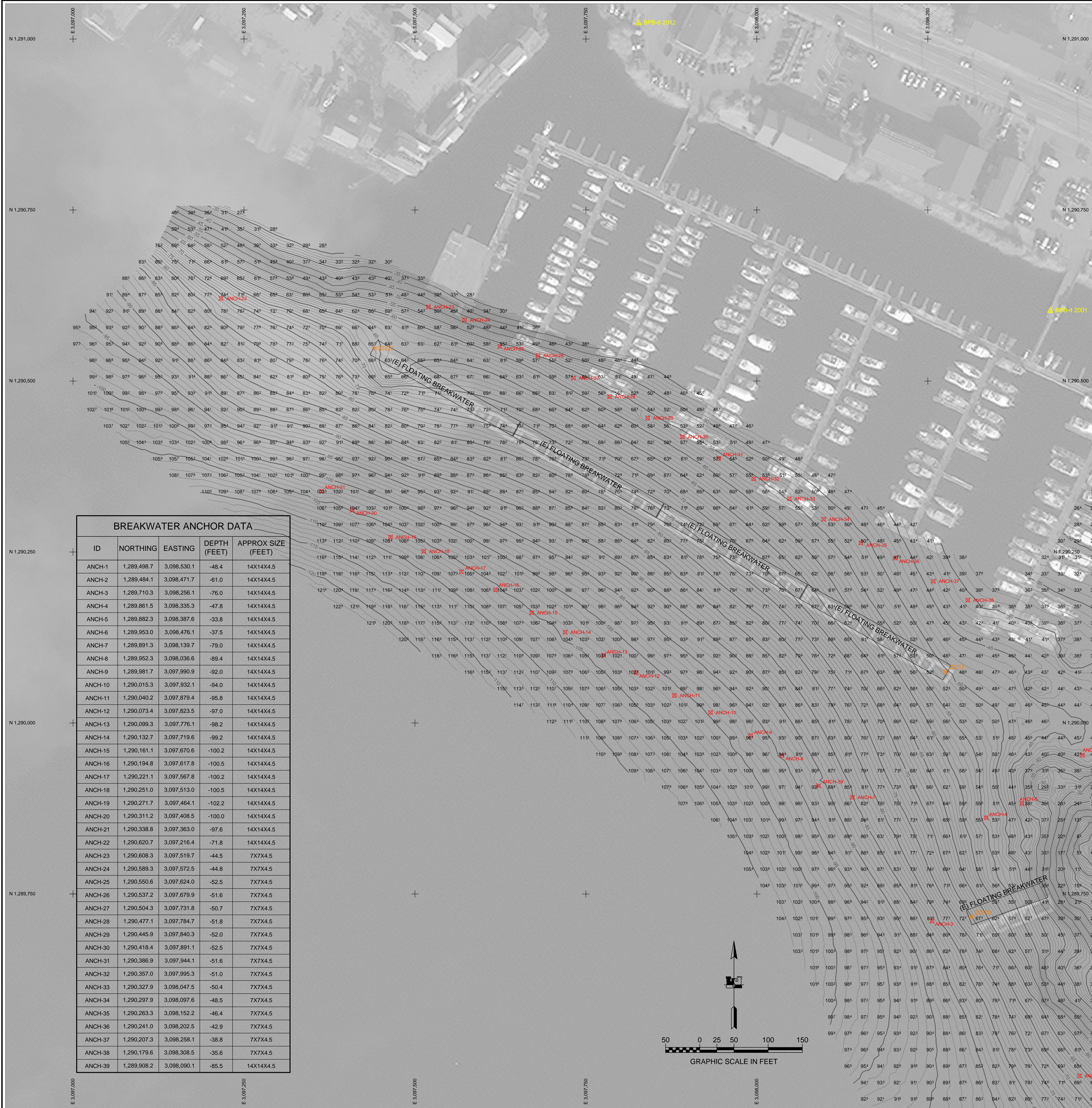
DATE: 09/24/2015  
DRAWN BY: MICHAEL E. NEFF  
CHECKED BY: MICHAEL E. NEFF  
APPROVED BY: MICHAEL E. NEFF  
FILE NAME: 14-0013.0008  
SCALE: 1" = 100'  
SHEET: 1 OF 4

U.S. ARMY CORPS OF ENGINEERS  
ALASKA DISTRICT  
JBER, ALASKA 99505-0888  
637 E. Fireline Rd., Ste. 100  
San Rafael, CA 94901

KETCHIKAN, ALASKA  
BAR POINT HARBOR  
PROJECT CONDITION SURVEY  
JULY 28 - AUGUST 03, 2015

SHEET IDENTIFICATION  
1-KET-92-07-23  
Sheet 1 of 4





BREAKWATER ANCHOR DATA				
ID	NORTHING	EASTING	DEPTH (FEET)	APPROX SIZE (FEET)
ANCH-1	1,289,498.7	3,098,530.1	-48.4	14X14X4.5
ANCH-2	1,289,484.1	3,098,471.7	-61.0	14X14X4.5
ANCH-3	1,289,710.3	3,098,256.1	-76.0	14X14X4.5
ANCH-4	1,289,861.5	3,098,335.3	-47.8	14X14X4.5
ANCH-5	1,289,882.3	3,098,387.6	-33.8	14X14X4.5
ANCH-6	1,289,953.0	3,098,476.1	-37.5	14X14X4.5
ANCH-7	1,289,891.3	3,098,139.7	-79.0	14X14X4.5
ANCH-8	1,289,952.3	3,098,036.6	-89.4	14X14X4.5
ANCH-9	1,289,981.7	3,097,990.9	-92.0	14X14X4.5
ANCH-10	1,290,015.3	3,097,932.1	-94.0	14X14X4.5
ANCH-11	1,290,040.2	3,097,879.4	-95.8	14X14X4.5
ANCH-12	1,290,073.4	3,097,823.5	-97.0	14X14X4.5
ANCH-13	1,290,099.3	3,097,776.1	-98.2	14X14X4.5
ANCH-14	1,290,132.7	3,097,719.6	-99.2	14X14X4.5
ANCH-15	1,290,161.1	3,097,670.6	-100.2	14X14X4.5
ANCH-16	1,290,194.8	3,097,617.8	-100.5	14X14X4.5
ANCH-17	1,290,221.1	3,097,567.8	-100.2	14X14X4.5
ANCH-18	1,290,251.0	3,097,513.0	-100.5	14X14X4.5
ANCH-19	1,290,271.7	3,097,464.1	-102.2	14X14X4.5
ANCH-20	1,290,311.2	3,097,408.5	-100.0	14X14X4.5
ANCH-21	1,290,338.8	3,097,363.0	-97.6	14X14X4.5
ANCH-22	1,290,620.7	3,097,216.4	-71.8	14X14X4.5
ANCH-23	1,290,608.3	3,097,519.7	-44.5	7X7X4.5
ANCH-24	1,290,589.3	3,097,572.5	-44.8	7X7X4.5
ANCH-25	1,290,550.6	3,097,624.0	-52.5	7X7X4.5
ANCH-26	1,290,537.2	3,097,679.9	-51.6	7X7X4.5
ANCH-27	1,290,504.3	3,097,731.8	-50.7	7X7X4.5
ANCH-28	1,290,477.1	3,097,784.7	-51.8	7X7X4.5
ANCH-29	1,290,445.9	3,097,840.3	-52.0	7X7X4.5
ANCH-30	1,290,418.4	3,097,891.1	-52.5	7X7X4.5
ANCH-31	1,290,386.9	3,097,944.1	-51.6	7X7X4.5
ANCH-32	1,290,357.0	3,097,995.3	-51.0	7X7X4.5
ANCH-33	1,290,327.9	3,098,047.5	-50.4	7X7X4.5
ANCH-34	1,290,297.9	3,098,097.6	-48.5	7X7X4.5
ANCH-35	1,290,263.3	3,098,152.2	-46.4	7X7X4.5
ANCH-36	1,290,241.0	3,098,202.5	-42.9	7X7X4.5
ANCH-37	1,290,207.3	3,098,258.1	-38.8	7X7X4.5
ANCH-38	1,290,179.6	3,098,308.5	-35.6	7X7X4.5
ANCH-39	1,289,908.2	3,098,090.1	-85.5	14X14X4.5



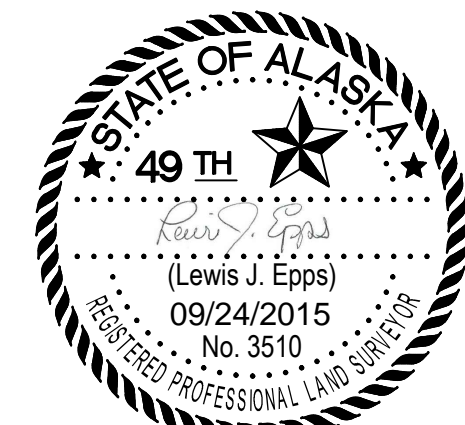
- ### NOTES
- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83 (CORS96), IN U.S. SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83 (CORS96) 2010.00 EPOCH VALUES OF NGS CORS STATIONS: "ANNETTE ISLAND 5 CORS ARP" (AIS5 - PID DK6482), "KLAWOCKAIRAK2006 CORS ARP" (AB49 - PID DM7451) AND "LEVEL ISLAND 6 CORS ARP" (LEV6 - PID DJ3035).
  - LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FEET HOLDING USACE SBC "BPB-1 1998" AS N 1,290,101.69, E 3,099,574.62.
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  - SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
  - BATHYMETRY WAS COLLECTED AUGUST 1-2, 2015. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2002 MULTIBEAM ECHOSOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X SOUND VELOCITY PROBE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMV OCEANMASTER V5 SYSTEM. DATA WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING RTK GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING DIFFERENTIAL LEVELING TECHNIQUES.
  - TERRESTRIAL LASER SCANNING DATA COLLECTED AUGUST 01-02, 2015. DATA WAS COLLECTED USING A REIGL V2400 3D LASER SCANNER. MOBILE SCANNING WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMV OCEANMASTER V5 SYSTEM.
  - THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
  - MAP SOUNDINGS ARE BINNED AT 24 FEET AND ARE SHOAL-BIASED. CONTOURS ARE BASED ON 12 FEET BINNED SHOAL-BIASED SOUNDINGS. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE MEAN VALUE SOUNDINGS.

SURVEY CONTROL DATA				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
BAR-2 1972	1,289,295.61	3,099,769.18	21.03	3.5" DOMED USACE BC
BAR-4 1972	1,289,552.31	3,098,796.18	21.0	3.5" DOMED USACE BC
BPB-1 1998	1,290,101.69	3,099,574.62	22.22	3.25" DOMED SBC
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BPB-4 2001	1,290,602.71	3,098,428.97	23.1	3.25" DOMED SBC
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\*Bench marks with elevation precision of 0.1" were measured by RTK GNSS.

NAVIGATION AIDS			
USCG NO.	NORTHING	EASTING	DESCRIPTION
22200	1,289,300	3,099,773	SOUTH ENTRANCE LIGHT 2S FL. RED
22205	1,289,468	3,099,593	SOUTH ENTRANCE DAYBEACON 3S
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22215	1,290,075	3,098,276	ENTRANCE DAYBEACON 3
22220	1,290,548	3,097,441	NORTH ENTRANCE LIGHT 2N

PROJECT LIMITS			PROJECT LIMITS		
CORNER#	NORTHING	EASTING	CORNER#	NORTHING	EASTING
1	1,289,357.00	3,099,723.00	8	1,290,015.00	3,099,150.00
2	1,289,447.00	3,099,837.00	9	1,290,433.00	3,098,597.00
3	1,289,732.00	3,099,690.00	10	1,289,880.00	3,098,566.00
4	1,290,027.00	3,099,688.00	11	1,289,622.00	3,098,832.00
5	1,290,565.00	3,098,666.00	12	1,289,532.00	3,099,667.00
6	1,290,481.00	3,098,622.00	13	1,289,427.00	3,099,668.00
7	1,290,203.00	3,099,152.00			



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

David R. Neff C.H. (275)

US Army Corps of Engineers  
ALASKA DISTRICT

CONTRACT NO. W01H014-00011.0028

CONTRACTOR: ETIEME INC.

CITY: SAN RAFAEL STATE: CALIFORNIA

APPROVED: MICHAEL E. NEFFER

DATE: 09/24/2015

NO.	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	07/28/2015

U.S. ARMY CORPS OF ENGINEERS  
ALASKA DISTRICT  
JBER, ALASKA 99505-0988

DESIGNED BY: JBER, ALASKA 99505-0988

APPROVED BY: JBER, ALASKA 99505-0988

FILE NAME: 1-KET-92-07-23

DATE: 07/28/2015

6710 E. 1st Ave., Ste. 100  
San Rafael, CA 94901

KETCHIKAN, ALASKA  
BAR POINT HARBOR  
PROJECT CONDITION SURVEY  
JULY 28 - AUGUST 03, 2015

SHEET IDENTIFICATION

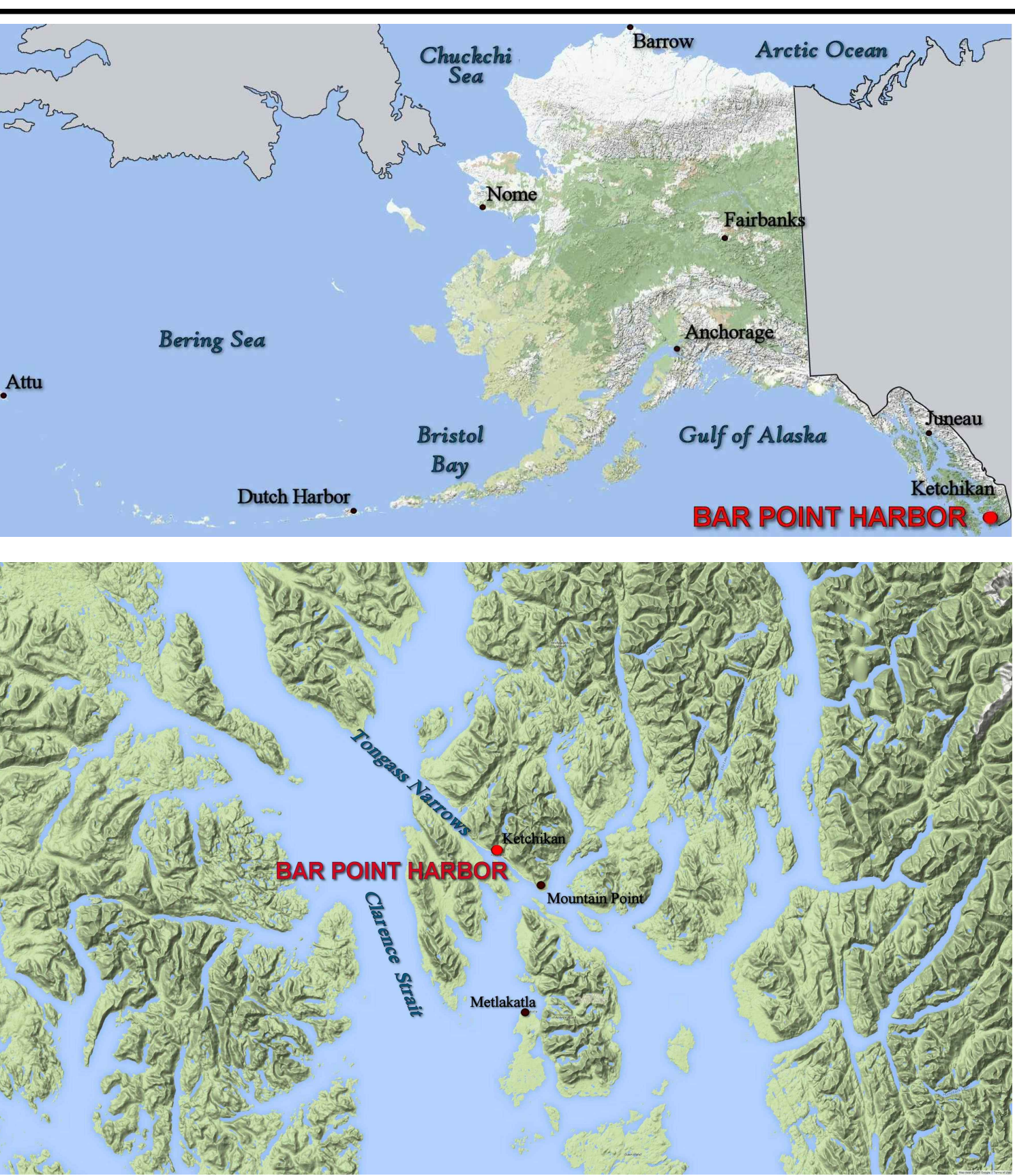
1-KET-92-07-23

Sheet 2 of 4









PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83 (CORS98). IN US SURVEY FEET BASED ON A FULLY CONstrained STATION GPS NETWORK HOLDING THE PUBLISHED NAD83 (CORS) DATUM TO THE COORDINATE VALUES OF NOS CORRS STATIONS. "ANNETTE ISLAND & CORS ARP" (AISG - PID DK6482), "KLAWOKKAIKARAKOZS CORS ARP" (AB49 - PID DM7451) AND "LEVEL ISLAND 6 CORS ARP" (LEV6 - PID J0303).

LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83. IN U.S. SURVEY FEET HOLDING SURFACE SBC "BPS-1 1998" AS N 1,290,101.67 M, E 3,099,574.62.

VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW+0.0). BASED ON THE NOAA/NOS TIDAL BENCH MARK (TBM) "NORTH BEACH TIDE GAUGE" (NOBG-1) PUBLISHED 02/27/2011. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOS TIDAL BENCH MARK "NO 37 1956" (PID: AA4914 / VMW 1170) AS 35.09'.

VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 ELEVATIONS HOLDING SURFACE BENCH MARK "NO 37 1956" (PID: AA4914 / VMW 1170) AS 31.27'.

SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.

BATHYMETRY WAS COLLECTED AUGUST 1-2, 2015. SOUNDINGS WERE COLLECTED USING AN RSONIC ZETA MULTIBeam ECHeSOundER OPERATING AT 200 KHz. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED USING AN APPLAnIX POSMV OCEANMASTER VS SYSTEM. DATA WAS COLLECTED AND PROCESSED USING QINSy 8.1 SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING RTK GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING DIFFERENTIAL LEVELING TECHNIQUES.

TERRESTRIAL LASER SCANNING DATA COLLECTED AUGUST 01-02, 2015. DATA WAS COLLECTED USING A REIGL ZV400 3D LASER Scanner. MOBILE ScANNING WAS COLLECTED AND PROCESSED USING QINSy 8.1 SOFTWARE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLAnIX POSMV OCEANMASTER VS SYSTEM.

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MAP SOUNDINGS ARE BINNET AT 24 FEET AND ARE SHOAL-BASED. CONTOURS ARE BASED ON 12 FOOT BIN SHOAL-BASED SOUNDINGS. VOLUME SOUNDINGS ARE BINNET AT 3 FEET AND ARE MEAN VALUE SOUNDINGS.

BREAKWATER ANCHOR DATA				
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ANCH-5	1,289,862.3	3,098,387.6	-33.8	14X14X4.5
ANCH-6	1,289,953.0	3,098,476.4	-37.5	14X14X4.5
ANCH-7	1,289,891.3	3,098,139.7	-79.0	14X14X4.5
ANCH-8	1,289,952.3	3,098,036.6	-89.4	14X14X4.5
ANCH-9	1,289,981.7	3,097,990.9	-92.0	14X14X4.5
ANCH-10	1,289,015.3	3,097,932.1	-94.0	14X14X4.5
ANCH-11	1,290,040.2	3,097,879.4	-95.8	14X14X4.5
ANCH-12	1,290,073.4	3,097,823.5	-97.0	14X14X4.5
ANCH-13	1,290,099.3	3,097,776.1	-98.2	14X14X4.5
ANCH-14	1,290,132.7	3,097,719.6	-99.2	14X14X4.5
ANCH-15	1,290,161.1	3,097,670.6	-100.2	14X14X4.5
ANCH-16	1,290,194.8	3,097,617.8	-100.5	14X14X4.5
ANCH-17	1,290,221.1	3,097,567.8	-100.2	14X14X4.5
ANCH-18	1,290,251.0	3,097,513.0	-100.5	14X14X4.5
ANCH-19	1,290,271.7	3,097,464.1	-102.2	14X14X4.5
ANCH-20	1,290,311.2	3,097,408.5	-100.0	14X14X4.5
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ANCH-22	1,290,620.7	3,097,216.4	-71.8	14X14X4.5
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ANCH-26	1,290,537.2	3,097,679.9	-51.6	7X7X4.5
ANCH-27	1,290,504.3	3,097,731.8	-50.7	7X7X4.5
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ANCH-31	1,290,386.9	3,097,944.1	-51.6	7X7X4.5
ANCH-32	1,290,357.0	3,097,995.3	-51.0	7X7X4.5
ANCH-33	1,290,327.9	3,098,047.5	-50.4	7X7X4.5
ANCH-34	1,290,297.9	3,098,097.6	-48.5	7X7X4.5
ANCH-35	1,290,263.3	3,098,152.2	-46.4	7X7X4.5
ANCH-36	1,290,241.0	3,098,202.5	-42.9	7X7X4.5
ANCH-37	1,290,207.3	3,098,258.1	-38.8	7X7X4.5
ANCH-38	1,290,179.6	3,098,308.5	-35.6	7X7X4.5
ANCH-39	1,289,908.2	3,098,090.1	-85.5	14X14X4.5

#	MIN. ELEV.	MAX. ELEV.	COLOR
1	-130.0	-34.0	
2	-34.0	-30.0	
3	-30.0	-26.0	
4	-26.0	-22.0	
5	-22.0	-18.0	
6	-18.0	-16.0	
7	-16.0	-15.0	
8	-15.0	-14.0	
9	-14.0	-12.0	
10	-12.0	-10.0	
11	-10.0	-8.0	
12	-8.0	-6.0	
13	-6.0	-4.0	
14	-4.0	-2.0	
15	-2.0	0.0	
16	0.0	2.0	

SURVEY CONTROL DATA				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
BAR-2 1972	1,289,295.61	3,099,769.18	21.03	3.5" DOMED USACE BC
BAR-4 1972	1,289,552.31	3,098,796.18	21.0	3.5" DOMED USACE BC
BPB-1 1998	1,290,101.69	3,099,574.62	22.22	3.25" DOMED SBC
BPB-2 1998	1,289,530.10	3,099,011.94	19.9	3.25" DOMED SBC
BPB-3 2001	1,289,759.16	3,099,834.79	22.90	3.25" DOMED SBC
BPB-4 2001	1,290,602.71	3,098,428.97	23.1	3.25" DOMED SBC
BPB-6 2012	1,291,023.25	3,097,826.79	22.58	3.25" DOMED SBC


NAVIGATION AIDS			
USCG NO.	NORTHING	EASTING	DESCRIPTION
22200	1,289,300	3,099,773	SOUTH ENTRANCE LIGHT 2S FL. RED
22205	1,289,468	3,099,593	SOUTH ENTRANCE DAYBEACON 3S
22210	1,289,717	3,098,314	ENTRANCE LIGHT 2
22215	1,290,075	3,098,276	ENTRANCE DAYBEACON 3
22220	1,290,548	3,097,441	NORTH ENTRANCE LIGHT 2N

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
1	1,289,357.00	3,099,723.00
2	1,289,447.00	3,099,837.00
3	1,289,732.00	3,099,690.00
4	1,290,027.00	3,099,688.00
5	1,290,565.00	3,098,666.00
6	1,290,481.00	3,098,622.00
7	1,290,203.00	3,099,152.00

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
8	1,290,015.00	3,099,150.00
9	1,290,433.00	3,098,597.00
10	1,289,880.00	3,098,566.00
11	1,289,622.00	3,098,832.00
12	1,289,532.00	3,099,667.00
13	1,289,427.00	3,099,668.00



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



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David R. Neff C.H. (275)