



Elevations Table				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-301.05	-280.00	559629.67	Dark Purple
2	-280.00	-260.00	160172.35	Dark Blue
3	-260.00	-240.00	140877.40	Blue
4	-240.00	-220.00	155333.46	Light Blue
5	-220.00	-200.00	180206.36	Very Light Blue
6	-200.00	-180.00	376501.84	Cyan
7	-180.00	-160.00	506771.87	Teal
8	-160.00	-140.00	299550.76	Green
9	-140.00	-120.00	335143.86	Light Green
10	-120.00	-100.00	696485.52	Yellow-Green
11	-100.00	-80.00	737417.85	Yellow
12	-80.00	-60.00	620238.47	Orange
13	-60.00	-40.00	540193.68	Dark Orange
14	-40.00	-20.00	308007.05	Red-Orange
15	-20.00	0.00	1329.84	Red
16	0.00	3.81	0.00	Dark Red



- NOTES**
- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN US SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83 (CORS) 2010.00 EPOCH VALUES OF NGS CORS STATIONS: "GUSTAVUS 5 CORS ARP" (GUS5 - PID DK0229) AS N 58 25 02.941 W 135 41 50.351 (GEOGRAPHIC 1983) AND "JUNEAU WAAS 1 CORS ARP" (JUN1 - PID DF4807) AS N 58 21 45.252 W 134 35 08.456 (GEOGRAPHIC 1983) AND "BIORKA ISLAND 5 CORS ARP" (BIS5 - PID DK6423) N 56 51 16.164 W 135 32 21.388 (GEOGRAPHIC 1983). RESULTANT COORDINATES AT PRIMARY HARBOR CONTROL HOLD ALUMINUM CAP "WHN-1 1997" AS N 1,965,058.30, E 2,309,223.94 AND ALUMINUM CAP "WHN-2 1997" AS N 1,960,858.74, E 2,310,036.80.
 - VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW-G.O.), BASED ON THE NOAA NOS TIDAL BENCH MARK LIST: "945 1853 SERGIUS NARROWS, ALASKA", PUBLISHED 03/04/2009. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOS TIDAL BENCHMARK "1853 B" AS 15.19' AND NOS TIDAL BENCHMARK "SHOAL 2 1950" AS 10.06'.
 - VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 ELEVATIONS HOLDING NOAA NOS TIDAL BENCHMARK "XXXXX" (PID XXXXXVIMXXXXX) AS XXX.XX'.
 - SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
 - THE EXISTING PROJECT CONSISTS OF SERGIUS NARROWS LOCATED IN NEVA STRAIT, ALASKA.
 - THE SURVEY WAS CONDUCTED ON APRIL 28, 2013. HYDROGRAPHIC SOUNDING DATA WAS COLLECTED USING AN ODOM ES3 MULTI-BEAM ECHOSOUNDER (200KHZ, 120-DEGREE SWATH-WIDTH WITH 120, 0.75 DEGREE BEAMS). POSITIONING AND VESSEL ATTITUDE WERE PROVIDED IN REAL TIME USING A TRIMBLE 461 RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTORS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT CONTROL STATION, "WHN-2 1997". SOUND VELOCITY PROFILE WAS PROVIDED USING AN ODOM DIGI-BAR PRO, AND WAS PROVIDED IN REAL TIME AT THE SOUNDER HEAD USING AN ODOM DIGI-BAR V. DATA COLLECTION AND NAVIGATION WERE PERFORMED USING HYPACK HYSWEEP (2013) SOFTWARE. MULTI-BEAM SURVEY DATA WAS POST-PROCESSED USING HYPACK HYSWEEP (2013) SOFTWARE.
 - THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
 - MAP SOUNDINGS ARE BINNED AT 60 FEET AND ARE NEAREST CELL CENTER VALUE. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE AVERAGE CELL VALUE.

SURVEY CONTROL DATA				
* Horizontal Control Values Not Updated				
** Vertical Control Values Not Updated				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
1853 A	2,299,661.44	2,041,932.66	14.27	3.25 INCH DOMED BRASS CAP
1853 B	2,299,842.26	2,041,954.84	13.19	3.25 INCH DOMED BRASS CAP
BM 4 (SHOAL 2 1950)	2,299,928.26	2,041,993.70	9.44	USCGS TRI STA SBC *
BM 5 (SHOAL 2 NO 2 1950)	2,299,932.00	2,041,990.00	13.78	USCGS REF. MARKER SBC *
BM 6 (SHOAL 2 NO 1 1950)	2,299,926.00	2,041,990.00	13.49	USCGS REF. MARK SBC */**
BOON 2 1950	2,294,415.57	2,040,628.84	13.63	USCGS TRI STA SBC
FJERN 2001	2,293,136.81	2,037,810.46	12.71	3.25 INCH DOMED BRASS CAP
NFS 1305-84	2,298,288.28	2,039,912.14		USACE SBC * / **
SARAH	2,300,022.45	2,042,261.85	15.19	3.25 INCH DOMED BRASS CAP
SERGIUS 2 1950	2,297,998.06	2,041,225.33	12.78	USCGS TRI STA SBC *
SN-1	2,297,683.31	2,041,628.09	15.07	3.25 INCH DOMED BRASS CAP *
STROP 1950	2,298,659.02	2,041,320.73	12.91	USCGS TRI STA SBC
TIDAL 2001	2,299,963.15	2,042,029.17	11.84	3.25 INCH DOMED BRASS CAP * / **

NAVIGATION AIDS			
USCG NO.	NORTHING	EASTING	DESCRIPTION
25190	2,296,710.00	2,040,189.00	WEST FRANCIS ROCK LIGHTED BUOY 6 - RED
25195	2,298,505.00	2,040,860.00	SERGIUS NARROWS BUOY 8 - RED NUN.
25200	2,298,666.00	2,041,322.00	SERGIUS NARROWS LIGHT 9 - SG
25205	2,299,078.00	2,041,062.00	WAYANDA LEDGE BUOY 10 - RED NUN.

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
1	2,299,961.00	2,041,141.00
2	2,298,347.00	2,040,681.00
3	2,296,403.00	2,038,168.00
4	2,296,325.00	2,036,964.00
5	2,295,876.00	2,036,944.00
6	2,296,058.00	2,040,497.00
7	2,299,961.00	2,041,609.00

VOLUME COMPUTATIONS		
PROJECT DEPTH -24.0'		
AVAILABLE TO PROJECT DEPTH (-24.0')		204 CY
AVAILABLE BETWEEN PROJECT DEPTH (-24.0') AND MAX PAY DEPTH (-25.0')		294 CY
AVAILABLE ALONG SIDE SLOPES (3 : 1)		196 CY
TOTAL MATERIAL AVAILABLE		695 CY

US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. _____
CONTRACTOR _____
CITY _____ STATE _____
RECOMMENDED _____
DATE _____

DATE: 2013
SURVEY NO.: XXXXX
DRAWN BY: JBER, ALASKA 89506-0988
CHECKED BY: JBER, ALASKA 89506-0988
DATE: 2013
SCALE: 1"=1000'
FILE NAME: SERGIUS NARROWS 2013.DWG
PLOT DATE: 2013
PLOT BY: JBER, ALASKA 89506-0988
PLOT DATE: 2013
PLOT BY: JBER, ALASKA 89506-0988

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 89506-0988
HUGHES & ASSOCIATES
Vashli, Alaska 99554

PERIL STRAIT, ALASKA
SERGIUS NARROWS
PROJECT CONDITION SURVEY
MAY 28, 2013

SHEET IDENTIFICATION
V-102
Sheet 2 of 2