

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 (CORS96) 2002.00 EPOCH VALUES OF NGS CORS STATIONS: "GUSTAVUS 5 CORS ARP" (GUSS - PID DK6229) AS N 2,410,505.75, E 2,296,637.78 (ALASKA STATE PLANE, ZONE 1, NAD 83) AND "JUNEAU WAS 1 CORS ARP" (JUNU1 - PID DF4367) AS N 2,385,816.86, E 2,509,443.55 (ALASKA STATE PLANE, ZONE 1, NAD 83) AND "CAPESPECK2007 CORS ARP" (AB43 - PID DM7445) N 2,337,377.43, E 2,112,364.37 (ALASKA STATE PLANE, ZONE 1, NAD 83). CORS STATIONS STATE PLANE COORDINATES ARE CONVERTED FROM LAT/LONG USING NGS PROGRAM SPCS83(V2.1). RESULTANT COORDINATES AT PRIMARY HARBOR CONTROL HOLD USACE DOMED BC "PH-5 2007" AS N 2,245,958.53, E 2,188,826.15 AND USACE DOMED BC "PH-2 1999" AS N 2,247,120.16, E 2,188,112.71.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLW=0.0'), BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST: "9462811, PELICAN HARBOR, LISIANSKI INLET, ALASKA", PUBLISHED 09/19/2010. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOS TIDAL BENCHMARK "2611 G 2009" AS 19.42' AND NOS TIDAL BENCHMARK "2611 J 2009" AS 17.61'. ALSO PROVIDED ARE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVDB88) EQUIVALENTS, HOLDING PH-5 2007 AS 18.83, BASED ON GPS OBSERVATIONS FROM JULY 19 & 20, 2011.
- THE SURVEY WAS CONDUCTED ON JULY 18-20, 2011. HYDROGRAPHIC SOUNDING DATA WAS COLLECTED USING AN ODOM E53 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 5700 RTK BASE RECEIVER SET AT CONTROL STATION, "PH-3 2003". 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 (2010) SOFTWARE. MULTI-BEAM SURVEY DATA WAS POST-PROCESSED USING HYPACK HYSWEEP (2010) SOFTWARE.
- HORIZONTAL AND VERTICAL COORDINATES FOR SAND 1917 WERE NOT UPDATED THIS SURVEY.
- SOUNDING VALUES SHOWN ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- THIS DRAWING IS INDICATIVE OF GENERAL SEAFLOOR CONDITIONS ON THE DATES OF SURVEY.
- THIS SURVEY WAS CONDUCTED BY HUGHES AND ASSOCIATES, WASILLA, AK.

CONTROL DATA					
STATION	NORTHING	EASTING	ELEV. (MLW)	ELEV. (NAVDB88)	DESCRIPTION
SAND 1917	2,243,868.24	2,189,674.02			USCGS SBC
TN-3 1960	2,245,617.07	2,188,546.59	18.70	18.00	USACE SBC
PH-1 1999	2,246,305.07	2,189,097.34	19.02	18.32	USACE DOMED BC
PH-2 1999	2,247,120.16	2,188,112.71	48.58	47.88	USACE DOMED BC
PH-3 2003	2,246,082.69	2,188,687.32	17.90	17.20	USACE DOMED BC
PH-4 2007	2,246,482.49	2,188,974.50	7.96	7.26	USACE DOMED BC
PH-5 2007	2,245,958.53	2,188,826.15	19.53	18.83	USACE DOMED BC

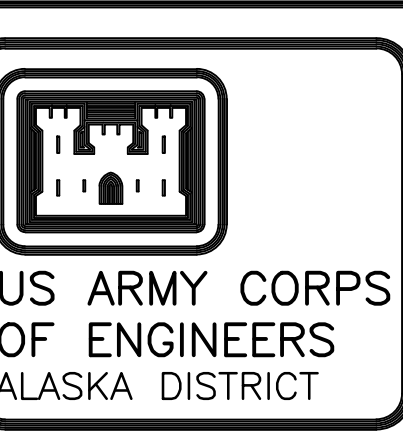
SEE NOTE 2 AND 4 FOR CONTROL DATA DETAILS.

PROJECT LIMITS		
CORNER	NORTHING	EASTING
1	2,245,730.53	2,188,435.95
2	2,246,061.55	2,188,685.92
3	2,246,650.55	2,188,629.87
4*	2,246,636.34	2,188,480.54
5*	2,245,820.92	2,188,316.25

*NOTE: CORNERS 4 AND 5 WERE CREATED FOR VOLUME COMPUTATION PURPOSES ONLY. THEY ARE NOT USACE DREDGE LIMITS.

NAVIGATION AIDS			
USCG No.	DESCRIPTION	NORTHING	EASTING
-	1 - DOLPHIN	2,246,134.4	2,188,676.1
-	2 - DOLPHIN	2,246,071.8	2,188,613.3
-	3 - DOLPHIN	2,246,004.3	2,188,620.3
-	4 - DOLPHIN	2,246,055.4	2,188,498.3
-	5 - DOLPHIN	2,245,963.8	2,188,535.1

VOLUME COMPUTATIONS		
PROJECT DEPTH -12.0'		
AVAILABLE TO PROJECT DEPTH (-12.0')		72 cy
AVAILABLE BETWEEN PROJECT DEPTH (-12.0') AND MAX PAY DEPTH (-13.0')		115 cy
AVAILABLE ALONG SIDE SLOPES		197 cy
TOTAL MATERIAL AVAILABLE		384 cy



CONTRACT NO. W911JB-10-D-0005-0005
CONTRACTOR HUGHES AND ASSOCIATES
CITY WASILLA STATE AK
Recommended: Approved: Date:
Resident Engineer: Project Engineer: Date: Approval:

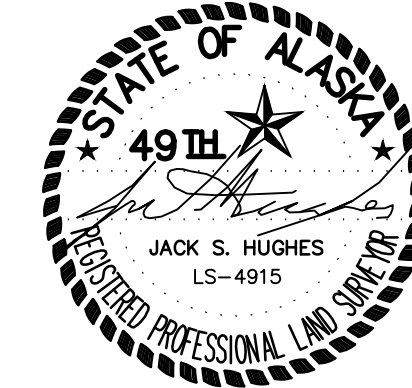
Sheet	Description	Date	Approval
1			
2			
3			
4			
5			
6			



Date: 11/17/11
Dwg. Scale: 1" = 50'
Plot Scale: 1" = 50'
File: 2949-11
Section: 1
Submitted: 11/17/11
Branch: 2949-11
Designed: TNL
Drawn: TNL
Reviewed: CSH
Chief: 2949-11

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

PELICAN, ALASKA
PELICAN HARBOR
CONDITION SURVEY
JULY 18-20, 2011

Reference number:
V-101
Sheet 1 of 2



 <p>US ARMY ENGINEER DISTRICT OF ENGINEERS ANCHORAGE, ALASKA</p>		Designed: _____ Drawn: TNL Reviewed: CSH Chief: _____ Submitted: _____ Chief: _____	Date: 11/17/11 Dwg Scale: 1" = 50' Plot Scale: _____ Title: _____ Drawing #: 2949-11
 <p>PELICAN, ALASKA PELICAN HARBOR CONDITION SURVEY JULY 18-20, 2011</p>			
Reference number: V-102			
Sheet 2 of 2			