

NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83 IN US SURVEY FEET LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83, IN US SURVEY FEET HOLDING CHIG-2 2004 AS N 841,021.81', E 1,563,477.47'.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0 FT), BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST "CHIGNIK, ANCHORAGE BAY, ALASKA", PUBLISHED 03/22/2005. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOS TIDAL BENCH MARK "945 8917
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 (GEOID 12B) ELEVATION HOLDING USCGS STANDARD BENCH MARK BRASS CAP, "945 8917 COR 4 1964" (NGS PID
- SOUNDINGS ARE IN US SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY WAS COLLECTED MAY 26, 2017. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2022 MULTIBEAM ECHOSOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X SOUND VELOCITY PROBE. POSITIONING AND VESSEL ORIENTATION WERE MEASURED USING AN APPLANIX POS OCEANMASTER V5 SYSTEM. DATA WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING STATIC GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING DIFFERENTIAL
- MOBILE TERRESTRIAL LASER SCANNING DATA WAS COLLECTED USING A REIGL VZ400 LASER SCANNER. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLANIX POSMV OCEANMASTER V5 RECEIVING RTK CORRECTIONS FROM A TRIMBLE SPS855 GPS RECEIVER SET AT CONTROL STATION "CHIG-2". MOBILE SCANNING WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. STATIC SCANNING DATA WAS COLLECTED AND PROCESSED USING RIEGL RISCAN PRO 1.8 SOFTWARE.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
- MAP SOUNDINGS ARE BINNED AT 24 FEET AND ARE SHOAL BIASED. CONTOURS AND SOUNDINGS ARE BASED ON 12 FEET BINNED SHOAL - BIASED SOUNDINGS. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND

,750	SURVEY CONTROL DATA							
A Section of the Sect	STATION	NORTHING	EASTING	MLLW	DESCRIPTION			
	CHIG-1 2004	842,276.72	1,563,296.54	16.64	USACE SBC			
	CHIG-2 2004	841,021.81	1,563,477.47	17.13	USACE SBC			
	CHIG-3 2010	841,847.01	1,563,253.55	18.28	3.25 INCH SBC			
	CHIG-4 2010	841,134.45	1,563,047.13	18.81	3.25 INCH SC			

	PROJECT LIMITS			PROJECT LIMITS			
	CORNER#	NORTHING	EASTING		CORNER#	NORTHING	EASTING
	1	841,663.97	1,562,953.88		8	841,920.12	1,563,197.07
0	2	841,913.98	1,562,992.29		9	842,127.10	1,563,285.08
	3	841,937.96	1,563,079.92	-	10	842,076.32	1,563,655.08
	4	842,059.51	1,563,195.01		11	842,072.63	1,563,664.07
	5	842,019.53	1,563,482.15			12	841,534.11
	6	841,769.92	1,563,448.69		13	841,589.15	1,563,156.07
	7	841,786.39	1,563,330.57		14	841,651.54	1,563,180.76
				'			

	NAVIGATION AIDS					
	USCG NO.	NORTHING	EASTING	DESCRIPTION		
	27061	842,018	1,563,012	HARBOR ENTRANCE LIGHT 1 FI G 4S		
	27062	841,857	1,563,270	HARBOR ENTRANCE LIGHT 2		

VOLUME COMPUTATIONS	3
AREA A: ENTRANCE CHANNEL	Λ

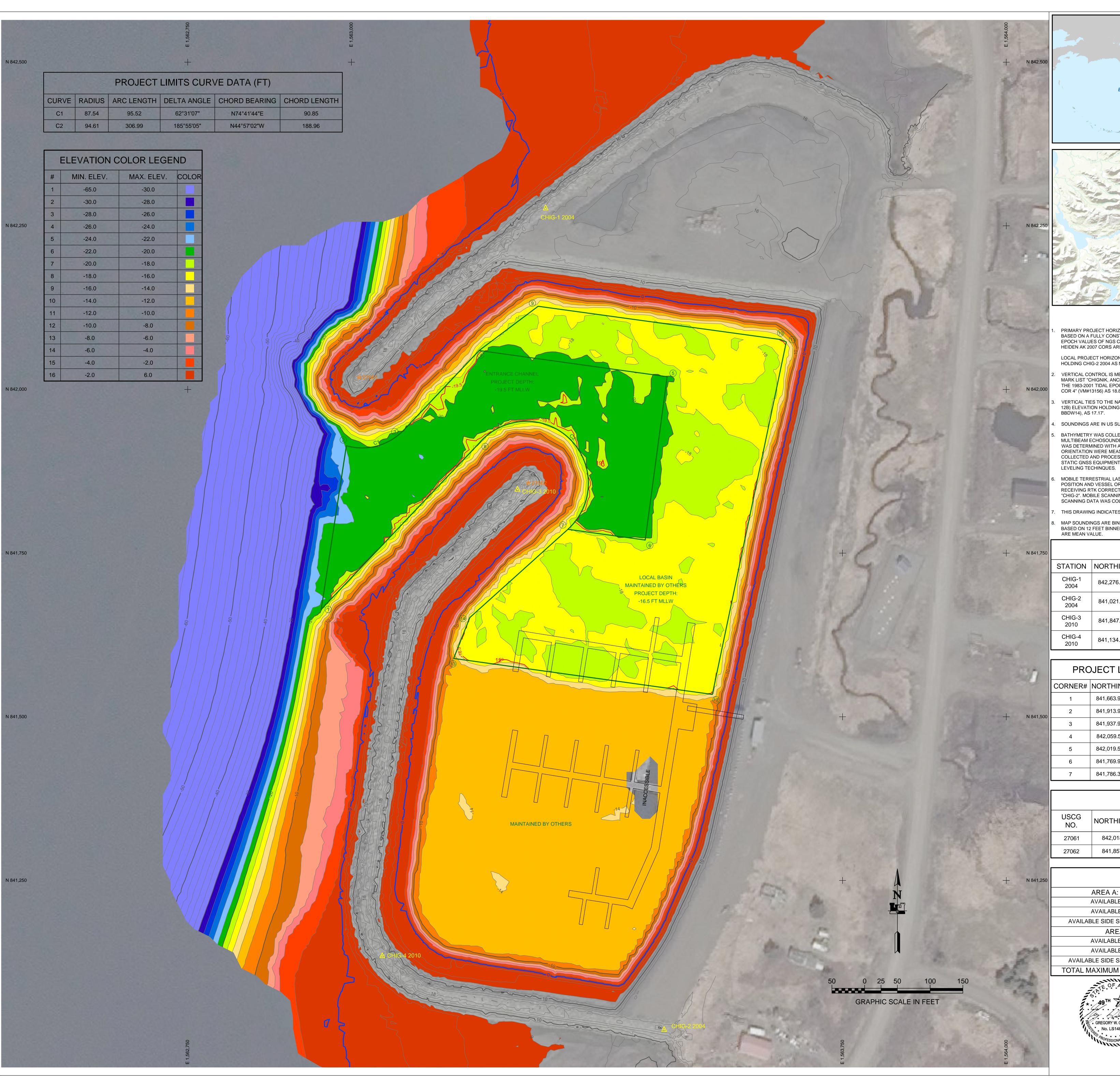
AREA A: ENTRANCE CHANNEL	MLLW=0	CU. YD.
AVAILABLE TO PROJECT DEPTH (PD)	-19.5	39
AVAILABLE TO MAX PAY DEPTH (MP)	-20.5	366
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE	VARIES	1,378
AREA B: LOCAL BASIN		
AVAILABLE TO PROJECT DEPTH (PD)	-16.5	19
AVAILABLE TO MAX PAY DEPTH (MP)	-17.5	266
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE	VARIES	1,045
TOTAL MAXIMUM VOLUME AVAILABLE (MP + SS)		3,055



THIS HYDROGRAPHIC SURVEY WAS COMPLETED CERTIFIED HYDROGRAPHER

David R. Neff C.H. (275)

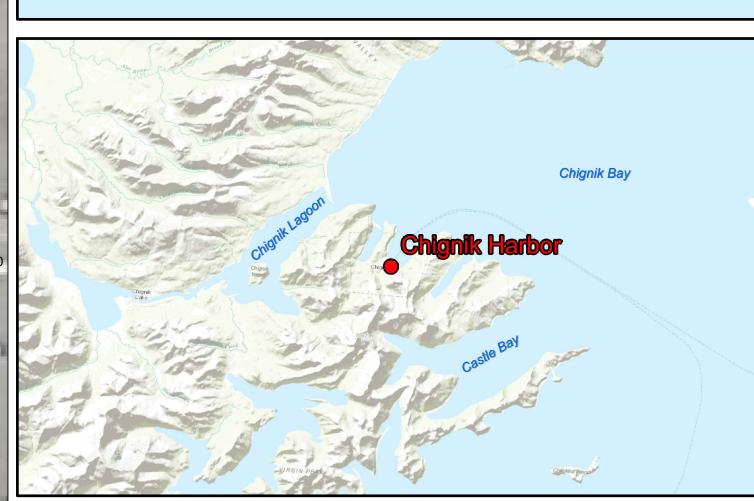
IDENTIFICATION 5-CHI-92-07-03





US Army Corps

of Engineers ® ALASKA DISTRICT



NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83 IN US SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83(CORS) 2003.00 EPOCH VALUES OF NGS CORS STATIONS: "SANDPOINT_AK 2004 CORS ARP" (AB07 - PID DL7635), "PORT HEIDEN AK 2007 CORS ARP" (AC40 - PID DL6447) AND "PILOT POINT AK 2007 CORS ARP" (AC52 - PID DL7671) LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83, IN US SURVEY FEET HOLDING CHIG-2 2004 AS N 841,021.81', E 1,563,477.47'.
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- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 (GEOID 12B) ELEVATION HOLDING USCGS STANDARD BENCH MARK BRASS CAP, "945 8917 COR 4 1964" (NGS PID
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THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THSOA CERTIFIED HYDROGRAPHER

David R. Neff C.H. (275)

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