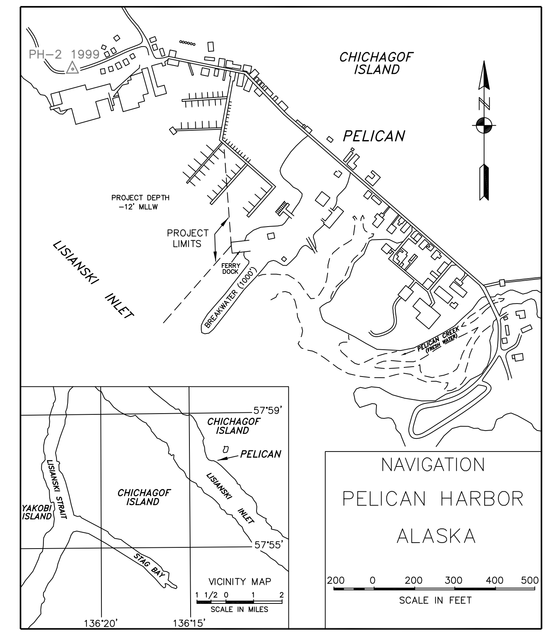
MLLW ELEVATION AND ELLIPSOID HEIGHT COMPARISON				
	2003		2007	
STATION	MLLW	EHT	MLLW	EHT
TN-3 1960	17.56'	28.27'	17.56'	28.40'
PH-1 1999	17.88'	28.63'	17.88'	28.74'



NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83(CORS96), IN US SURVEY FEET, BASED ON A 2003 STATIC GPS NETWORK HOLDING THE NGS EPOCH 2003.00 CORS L1 PHASE CENTER VALUES FIXED FOR "LEVEL ISLAND 1" (NGS PID AJ4431), "BIORKA ISLAND 1" (NGS PID AI5023) AND "GUSTAVUS 2" (NGS PID AJ7921). HARBOR CONTROL WAS TRANSFORMED INTO THE NGS EPOCH 2003.00 DATUM HOLDING USACE SBC "TN-3 1960" AS N 2,245,617.11, E 2,188,546.96 AND USACE DOMED BC "PH-1 1999" AS N 2,246,305.04, E 2,189,097.66.

2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER DATUM, IN US SURVEY FEET (MLLW=0.0') HOLDING USACE SBC "TN-3 1960" AS 17.56'. TIDAL DATUM IS BASED ON USCGS TIDAL BENCH MARK LIST "SOUTHEAST ALASKA – 201, MINER ISLAND, LISIANSKI INLET, PUBLISHED 6/7/61", HOLDING USCGS "BENCH MARK B 1917" AS 12.97'. THIS TIDAL DATUM IS ALSO KNOWN AS NOAA/NOS HISTORICAL STATION 945 2633.

3. SOUNDINGS ARE IN US SURVEY FEET AND ARE MINUS UNLESS INDICATED OTHERWISE.

4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.

5. SURVEY DATA ACQUISITION WAS PERFORMED MAY 18–21, 2007. SOUNDINGS WERE COLLECTED USING AN ODOM HYDROTRAC PRECISION DEPTH SOUNDER WITH A 200KHZ, 3 DEGREE BEAM-WIDTH, SINGLE-BEAM TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE 4000SSI RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSE RECEIVER SET AT USACE DOMED BC "PH-3 2003". NAVIGATION, DATA COLLECTION AND DATA PROCESSING WERE PERFORMED USING HYPACK MAX INTEGRATED SOFTWARE. SOUNDINGS WERE CORRECTED FOR TIDE USING 1HZ RTK DATA. REDUNDANT WATER LEVEL DATA COLLECTED USING A DAA WATERLOG H-500XL RECORDER AND H-310 PRESSURE TRANSDUCER SET BY TERRASOND, LTD THIS SURVEY. HORIZONTAL CONTROL WAS SURVEYED USING CONVENTIONAL EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES. PLANIMETRIC FEATURES WERE SURVEYED USING OPTICAL INSTRUMENTS, CONVENTIONAL LAND-SURVEYING TECHNIQUES AND RTK GPS.

6. STATIC GPS SESSIONS OF 2+ HOURS WERE OBSERVED AT "TN-3 1960" AND "PH-1 1999". ELLIPSOID HEIGHTS WERE PROCESSED USING THE NGS ONLINE POSITIONING USER SERVICE (OPUS) HOLDING NAD83 (CORS96), EPOCH 2003.00 VALUES FOR "BIORKA ISLAND 1 CORS ARP" (NGS PID AI5022), "LEVEL ISLAND 1 CORS ARP" (NGS PID AJ4430) AND "GUSTAVUS 2 CORS ARP" (NGS PID AF9622). ELLIPSOID HEIGHTS AND MLLW ELEVATIONS ARE SHOWN IN THE "MLLW ELEVATIONS AND ELLIPSOID HEIGHT COMPARISONS" TABLE. ALL MLLW ELEVATIONS ARE BASED ON THE MOST CURRENT TIDAL DATUM AND EPOCH AS DESCRIBED IN NOTE 2.

VOLUME COMPUTATIONS	
Project Depth –12' MLLW	CUBIC YARDS
MINIMUM PAY LINE (–12' MLLW)	34
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (–13' MLLW)	30
VOLUME AVAILABLE ALONG SIDESLOPES (3:1, H:V)	92
TOTAL	156

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
SAND 1917	2,243,868.24	2,189,674.02	–	USCGS SBC
TN-3 1960	2,245,617.11	2,188,546.96	17.56	USACE SBC
PH-1 1999	2,246,305.04	2,189,097.66	17.88	USACE DOMED BC
PH-2 1999	2,247,120.30	2,188,113.02	47.37	USACE DOMED BC
PH-3 2003	2,246,082.74	2,188,687.67	16.70	USACE DOMED BC
PH-4 2007	2,246,482.51	2,188,974.86	6.79	USACE DOMED BC
PH-5 2007	2,245,958.54	2,188,826.49	18.39	USACE DOMED BC
TIDAL BM MOLLY	VERTICAL ONLY		15.63	USACE DOMED BC

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

NAVIGATION AIDS			
USCG No.	DESCRIPTION	NORTHING	EASTING
–	1 – DOLPHIN	2,246,003.6	2,188,629.6
–	2 – DOLPHIN	2,246,057.6	2,188,491.4
–	3 – DOLPHIN	DESTROYED	
–	4 – DOLPHIN	2,246,134.4	2,188,676.1

CONTRACT NO. W911KB-04-D-0006-0016
CONTRACTOR TERRA SURVEYS, LLC
CITY PALMER STATE ALASKA

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: CDK/CRR
DRAWN: LES
CHECKED: KDW
SUBMITTED:

PELICAN, ALASKA

PELICAN HARBOR
PROJECT CONDITION SURVEY
MAY 18–21, 2007

RECOMMENDED: PROJECT MANAGER
APPROVED: CHIEF OPERATIONS–READINESS BRANCH
DATE:

SURVEY NO. 2458–07
SCALE: 1" = 50'
SHEET 1 OF 1