

NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 1, IN FEET, NORTH AMERICAN DATUM OF 1983, HOLDING USACE PC-DH-4-1998, AS N 2,354,138.78, E 2,546,753.71 AND USACE SBC-DH-A 1998, AS N 2,353,386.88, E 2,547,706.60.
- VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW = 0.07), HOLDING USACE SBC RAMP 1975, AS 21.72' ABOVE MLLW WATER, AS GIVEN BY NOAA LIST DATED 4/10/75.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY WAS COLLECTED JUNE 26-29, 2004. SOUNDINGS WERE COLLECTED USING AN "INNERSPACE 448" SOUNDING WITH A 3" SINGLE BEAM TRANSDUCER. SOUNDING POINTS THROUGH THE WATER COLUMN WERE DETERMINED WITH AN ODOM DISBUR PRO SONAR. PROJECT DEPTH, POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND A TRIMBLE 5700 RTK SYSTEM AND VERTICAL CONTROL WAS DETERMINED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES. THE ELEVATIONS WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND VERTICAL CONTROL WAS DETERMINED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES. THE ELEVATIONS WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND VERTICAL CONTROL WAS DETERMINED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS SURVEY INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.

VOLUME COMPUTATIONS

Project Depth -12' MLLW

Project Depth (-10' MLLW) 2975 (cubic yards)

Between PROJECT DEPTH and MAXIMUM PAY LINE (-11' MLLW) 2882 (cubic yards)

SURFACES (3-1) 1898 (cubic yards)

TOTAL 7435 (cubic yards)

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
DA-1-1972	2,353,862.61	2,547,203.99	22.80	USACE SBC 4" SO. OF RANGE LIGHT
DA-1-1977	2,353,922.25	2,546,409.53	13.70	USACE SBC SET IN LARGE BOLLARD
DA-1-1978	2,353,648.92	2,547,765.28	63.02	USACE SBC FLAGPOLE IN CONCRETE
RAMP 1975	2,353,046.34	2,547,441.83	21.72	USACE SBC W. SIDE RAMP END PAVT
RAMP 1975	2,353,546.69	2,546,547.06	16.41	USACE SBC SET IN LARGE BOLLARD
DA-6 1998	2,354,138.78	2,546,753.71	22.86	3 1/4" B.C. IN CONCRETE BLOCK
DA-6 2000	2,353,386.88	2,547,706.60	24.39	3 1/4" B.C. IN ASPHALT SIDEWALK
DA-1-2000	2,353,101.14	2,547,129.34	24.10	3 1/4" B.C. IN ASPHALT SIDEWALK

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,354,142.60	2,547,028.57	6	2,353,715.80	2,547,212.58
2	2,353,889.78	2,547,028.42	7	2,353,855.35	2,547,130.85
3	2,353,391.72	2,547,585.82	8	2,353,699.49	2,547,150.46
4	2,353,391.72	2,547,585.82	9	2,353,593.19	2,547,150.46
5	2,353,499.63	2,547,584.56			

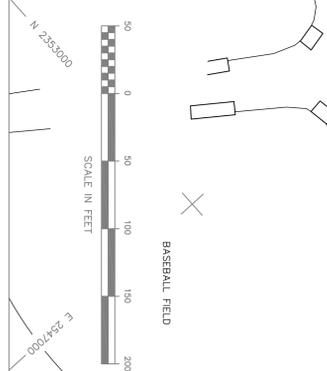
NAVIGATION AIDS

DESCRIPTION	USCG No.	NORTHING	EASTING
DOUGLAS BOAT HARBOR LIGHT ID	23880	2,353,872.2	2,547,205.1

CONTRACTOR HUGHES AND ASSOCIATES
CITY PALMER
STATE ALASKA

CONTRACT NO. WHTK804-D-0007
DESCRIPTION ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

DATE JUNE 29, 2004
PROJECT CONDITION SURVEY



SURVEY NO. 2153-04
SHEET 1 OF 1