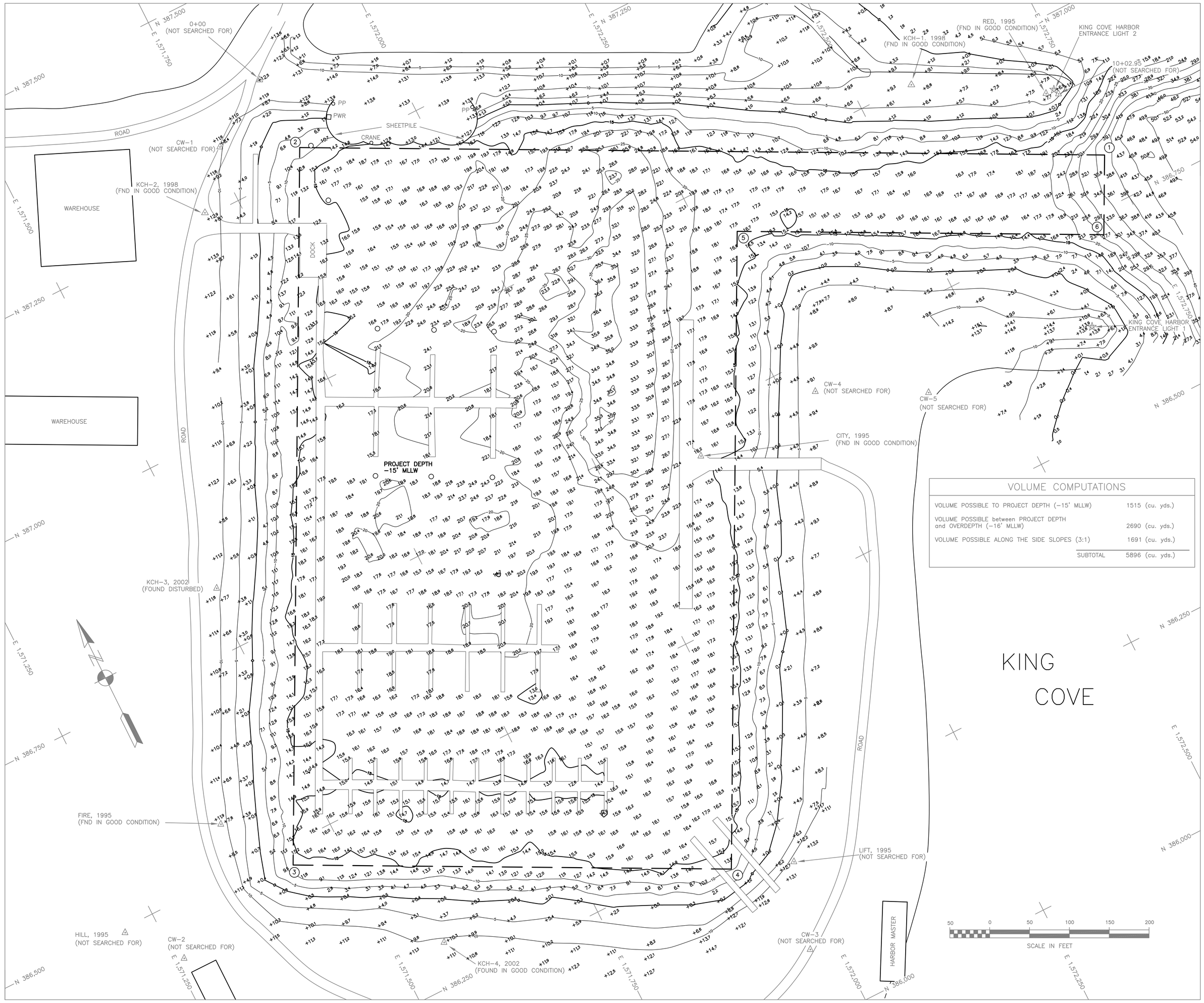

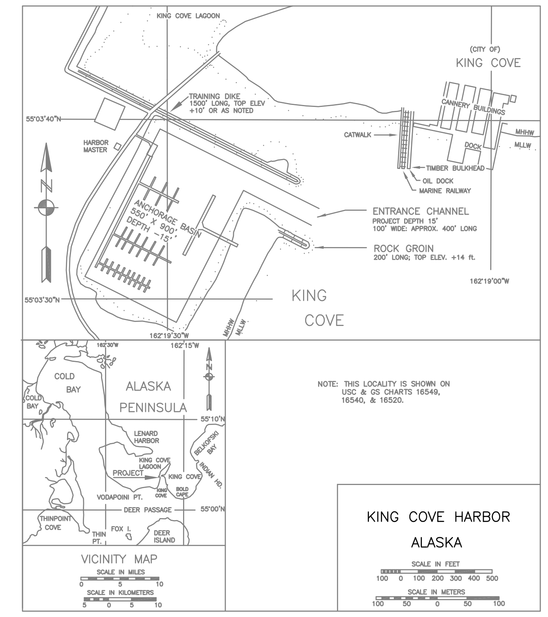

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 7, NAD83, IN US SURVEY FEET, HOLDING DOMED BC "KCH-4, 2002" AS N 386,302.89, E 1,571,560.83 AND ALUM. CAP "FIRE, 1995" AS N 386,561.50, E 1,571,377.73.
2. VERTICAL CONTROL IS IN FEET, REFERING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING DOMED BC "KCH-4, 2002" AS 10.48' ABOVE MLLW.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. SOUNDING OPERATIONS WERE CONDUCTED ON JUNE 18, 2006 USING AN INNERSPACE 448 DEPTH SOUNDER WITH A 200KHZ, 3 DEGREE BEAM-WIDTH, SINGLE-BEAM TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE 5700 RECEIVER OPERATING ON RTK CORRECTIONS BROADCAST FROM A TRIMBLE 5700 BASE STATION SET AT DOMED BC "HH-1 1998". NAVIGATION, DATA COLLECTION AND DATA PROCESSING WERE PERFORMED USING HYPACK MAX INTEGRATED SOFTWARE. TIDE CORRECTIONS WERE PROVIDED BY TRIMBLE 5700 RTK GPS RECEIVER AND CHECKED THROUGH CONVENTIONAL METHODS.
6. VERTICAL CONTROL WAS SURVEYED JUNE 19, 2006 USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES. HORIZONTAL CONTROL WAS SURVEYED JUNE 16-17, 2006 USING BOTH STATIC AND REAL-TIME-KINEMATIC GPS EQUIPMENT AND TECHNIQUES. ALL BREAKWATERS, BASINS, AND SURROUNDING AREAS WERE SURVEYED USING A TRIMBLE 5700 RTK SURVEY ROVER.

VOLUME COMPUTATIONS

VOLUME POSSIBLE TO PROJECT DEPTH (-15' MLLW)	1515 (cu. yds.)
VOLUME POSSIBLE between PROJECT DEPTH and OVERDEPTH (-16' MLLW)	2690 (cu. yds.)
VOLUME POSSIBLE ALONG THE SIDE SLOPES (3:1)	1691 (cu. yds.)
SUBTOTAL	5896 (cu. yds.)

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
0+00	387,372.79	1,571,842.53	10.98	NOT SEARCHED FOR
10+02.95	386,904.99	1,572,729.13	6.16	PK NAIL IN S. COR. OF NAV. LIGHT
CW-3	386,087.70	1,571,966.86	–	COPPERWELD 1 IN. BELOW GRND.
CW-4	386,709.42	1,572,288.28	–	NOT SEARCHED FOR
CW-5	386,644.13	1,572,414.60	–	NOT SEARCHED FOR
RED, 1995	386,912.47	1,572,715.25	7.02	1.5" ALCAP FLUSH
LIFT, 1995	386,195.10	1,571,998.25	13.28	NOT SEARCHED FOR
FIRE, 1995	386,561.50	1,571,377.73	12.43	1.5" ALCAP FLUSH
HILL, 1995	386,494.28	1,571,209.08	37.27	NOT SEARCHED FOR
CITY, 1995	386,701.94	1,572,123.65	12.47	1.5" ALCAP FLUSH
KCH-1, 1998	386,998.60	1,572,569.29	9.65	3.25" DOMED BC
KCH-2, 1998	387,255.12	1,571,705.77	12.75	3.25" DOMED BC
KCH-3, 2002	386,828.01	1,571,506.54	11.84	FOUND DISTURBED
KCH-4, 2002	386,302.89	1,571,560.83	10.48	3.25" DOMED BC
*KCH-5, 2006	385,708.61	1,571,759.67	16.27	SET 3.25" FLAT BC IN ROCK
*KCH-6, 2006	385,666.92	1,572,615.93	12.46	SET 3.25" FLAT BC IN ROCK

NOTE: MONUMENTS WITH AN ASTERISK (*) WERE SET THIS SURVEY.

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	386,810.57	1,572,745.98	4	386,222.44	1,571,923.92
2	387,274.51	1,571,848.82	5	386,933.09	1,572,291.31
3	386,475.05	1,571,435.43	6	386,721.78	1,572,699.99

NAVIGATION AIDS

DESCRIPTION	USCG NO.	NORTHING	EASTING
KING COVE HARBOR ENTRANCE LIGHT 1	27185	386,625	1,572,635
KING COVE HARBOR ENTRANCE LIGHT 2	27190	386,912	1,572,726

CONTRACT NO. W911KB-04-D-0007
CONTRACTOR HUGHES & ASSOCIATES
CITY WASILLA STATE AK

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: CSH
DRAWN: REH
CHECKED: JSH
SUBMITTED:

KING COVE, ALASKA
KING COVE HARBOR
CONDITION SURVEY
JUNE 16-21, 2006

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

SURVEY NO. 2340-06
SCALE: 1"= 50'
SHEET 1 OF 1