



NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 1, NAD83, IN US SURVEY FEET, HOLDING CROSS HAIR BRASS CAP MET 4 1972 AS N 1,209,954.47, E 3,124,641.84, USACE STANDARD BRASS CAP MET 4 1972 AS N 1,209,954.47, E 3,124,641.84.
2. VERTICAL CONTROL IS BASED ON MEAN-LOWER-LOW-WATER DATUM, IN US SURVEY FEET (MLLW=0) BRASS CAP MET 4 1972 AS 21.55'.
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. SOUNDING OPERATIONS WERE CONDUCTED ON MAY 29, 2007 USING AN INTERFERE 448 SOUND SOUNDER WITH A 200 KHZ, 3 DEGREE BEAM-WIDTH SINGLE-BEAM TRANSDUCER. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DEBAR PRO SOUND VELOCITY PROVIDED USING A TRIMBLE 5700 RECEIVER OPERATING ON RTK CORRECTIONS BROADCAST FROM A TRIMBLE 5700 BASE STATION SET AT USACE DODGED BRASS CAP MONUMENT MOH-1 1989. A 2 INTERFERE 448 SOUND SOUNDER WAS USED TO VERIFY THE SOUND VELOCITY. THE SOUND VELOCITY INTERFERED SOFTWARE, THE CORRECTIONS WERE PROVIDED BY TRIMBLE 5700 RTK GPS RECEIVER AND CHECKED THROUGH CONVENTIONAL METHODS.
6. HORIZONTAL GPS EQUIPMENT AND TECHNIQUES ALL BREAKWATERS, BINS, HARBOR LEAGLINE SPOUNERS AND SURROUNDING AREAS WERE SURVEYED USING A TRIMBLE 5700 RTK SURVEY ROVER.

VOLUME COMPUTATIONS

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION	CUBIC YARDS
MET 4 1972	1,209,954.47	3,124,641.84	21.55	USACE SBC	150
BM 13 1989	1,209,958.53	3,124,922.11	24.08	USACE BENCH MARK BC	151
MCH-1 1989	1,209,955.79	3,124,708.87	23.57	USACE DODGED BC	152
MCH-2 1989	1,209,958.23	3,124,732.87	22.45	USACE DODGED BC	153
MCH-3 1989	1,209,954.47	3,124,641.84	21.55	USACE DODGED BC	154
MCH-4 2003	1,209,958.86	3,124,500.42	20.46	USACE DODGED BC	155

PROJECT LIMITS

USCC No.	DESCRIPTION	NORTHING	EASTING
22090	METLAKATLA BREAKWATER LIGHT 1	1,209,988.9	3,124,628.0

CONTRACTOR

HUGHES & ASSOCIATES
 STATE ALASKA
 ANCHORAGE, ALASKA

PROJECT

METLAKATLA, ALASKA
 METLAKATLA OLD HARBOR
 PROJECT CONDITION SURVEY
 MAY 27-30, 2007

SURVEY NO. 2452-07

SCALE: 1" = 50'

SHEET 1 OF 1