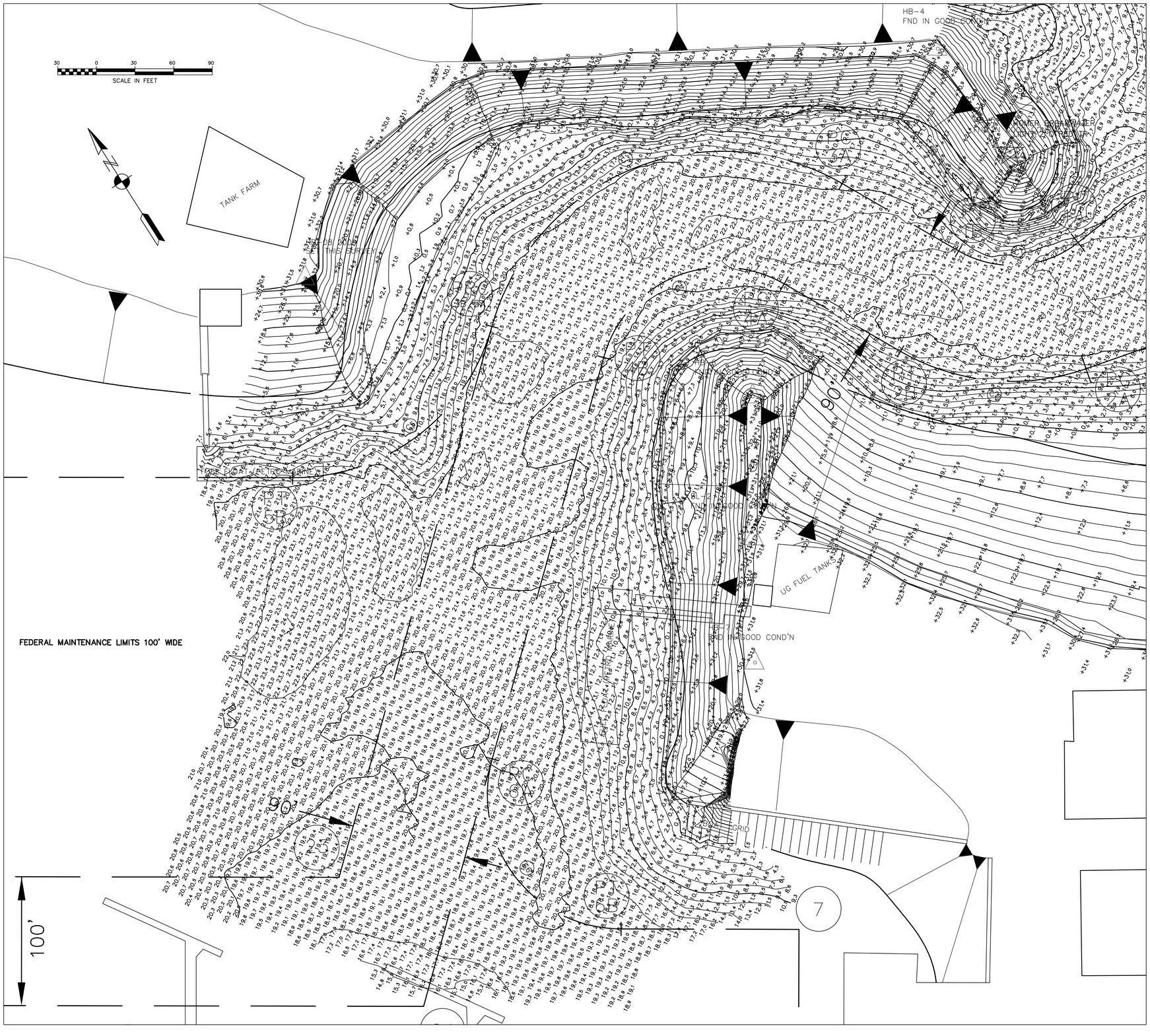
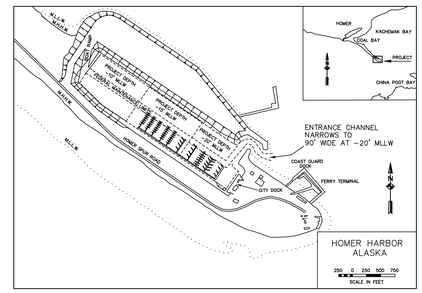
CORPS OF ENGINEERS U. S. ARMY





NOTES

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3. VERTICAL CONTROL WAS SURVEYED 4 SEPTEMBER, 2009 USING CONVENTIONAL (OPTICAL) EQUIPMENT AND DIFFRENTIAL LEVELING TECHNIQUES. HORIZONTAL CONTROL WAS SURVEYED 5 SEPTEMBER, 2009 USING A COMBINATION OF STATIC GPS AND CONVENTIONAL TRAVERSE PROCEDURES. LONG-PERIOD STATIC GPS DATA WAS COLLECTED USING A PAIR OF LIECA RX1200 SERIES RECIEVERS. THE CONVENTIONAL TRAVERSE WAS CONDUCTED USING A TOPCON GTS-4 TOTAL STATION, ADJUSTED TO ATMOSPHERIC CONDITIONS. TOPOGRAPHIC DATA WAS COLLECTED ON 6-7 SEPTEMBER, 2009 USING A PAIR OF LIECA RX1200 GPS RECIVERS AND REAL-TIME-KINEMATIC PROCEDURES WITH THE RTK BASE STATION LOCATED AT USACE SBC, "BL-2-A 1989". GPS DATA WAS PROCESSED USING TRIMBLE GEOMATICS OFFICE (V1.6.3).
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5. SOUNDING VALUES SHOWN ARE IN FEET AND MINUS UNLESS NOTED OTHERWISE.
6. THIS DRAWING IS INDICATIVE OF GENERAL SEAFLOOR CONDITIONS ON THE DATES OF SURVEY.

CONTROL DATA					
STATION	NORTHING	EASTING	MLLW	NAVD88	DESCRIPTION
BL-2-A 1989	2,049,793.81	1,378,015.52	32.49'	27.66'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 4 1965	2,050,038.11	1,378,340.09	31.28'	26.45'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 5 1965	2,049,940.32	1,378,344.30	30.87'	26.04'	4" USACE SBC "TRAVERSE STATION"
HOMER BASIN 6 1965	2,049,887.28	1,378,073.96	31.21'	26.38'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 7 1965	2,049,712.22	1,377,964.36	31.46'	26.63'	3-1/4" USACE SBC "SURVEY MARK"
AUDREY	2,051,507.88	1,375,406.60	33.31'	28.48'	1-1/2" ALUMINUM CAP
BOLL 1996	2,050,682.88	1,375,195.75	35.48'	30.65'	3-1/4" FLAT BRASS CAP
HB-08 2009	2,050,150.78	1,377,830.73	31.92'	27.09'	3-1/4" DOMED ALUMINUM CAP
HB-09 2009	2,051,199.61	1,375,120.24	32.01'	27.18'	3-1/4" DOMED ALUMINUM CAP
C 103 1965	--	--	26.95'	22.12'	3-1/4" USCGS SBC "BENCH MARK"
BM NO 6 1965	--	--	27.28'	22.45'	3-1/4" USCGS SBC "BENCH MARK"

☆ NAVIGATION AIDS ☆			
USCG NO.	DESCRIPTION	NORTHING	EASTING
26210	HOMER BREAKWATER LIGHT 2	2,049,940.1	1,378,350.7
26216	SOUTH LIGHTED MOORING BUOY	2,050,010.95	1,378,528.53

VOLUME COMPUTATIONS FOR HARBOR ENTRANCE CHANNEL	
VOLUME AVAILABLE TO PROJECT DEPTH (-20 FT)	1447 CY
VOLUME AVAILABLE BETWEEN PROJECT DEPTH(-20 FT) AND MAX-PAY DEPTH (-22 FT)	6507 CY
VOLUME AVAILABLE ALONG THE SIDE-SLOPES (3:1 @ 25' CUT-OFF)	2308 CY
TOTAL VOLUME AVAILABLE	10,262 CY

VOLUME COMPUTATIONS FOR USCG BERTH	
VOLUME AVAILABLE TO PROJECT DEPTH (-22 FT)	363 CY
VOLUME AVAILABLE BETWEEN PROJECT DEPTH(-22 FT) AND MAX-PAY DEPTH (-24 FT)	603 CY
VOLUME AVAILABLE ALONG THE SIDE-SLOPES (3:1 @ 25' CUT-OFF)	1076 CY
TOTAL VOLUME AVAILABLE	2,042 CY

CURVE DATA – HOMER SMALL BOAT HARBOR				
CURVE NO.	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT
1	82.86'	98.65'	68-13-09	56.12'
2	172.86'	149.28'	49-28-56	79.66'
3	185.62'	338.80'	104-34-53	240.08'
4	95.62'	174.53'	104-34-53	123.67'
5	160.19'	208.50'	74-34-41	121.98'
6	104.07'	191.43'	105-23-29	136.59'

PROJECT LIMITS – USCG BERTH (USCGC "HICKORY")					
CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
CG1	2,049,621.31	1,379,028.43	CG4	2,049,481.24	1,378,801.20
CG2	2,049,755.11	1,378,885.74	CG5	2,049,443.37	1,378,852.25
CG3	2,049,654.76	1,378,791.65			

CONTRACT NO. W911KB-08-D-0002-0010
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: JCM/DSM
DRAWN: LEP
CHECKED: KDW
SUBMITTED:

HOMER, ALASKA
HOMER HARBOR AND USCG DOCK
POST-DREDGE
SEPTEMBER 12-13, 2008

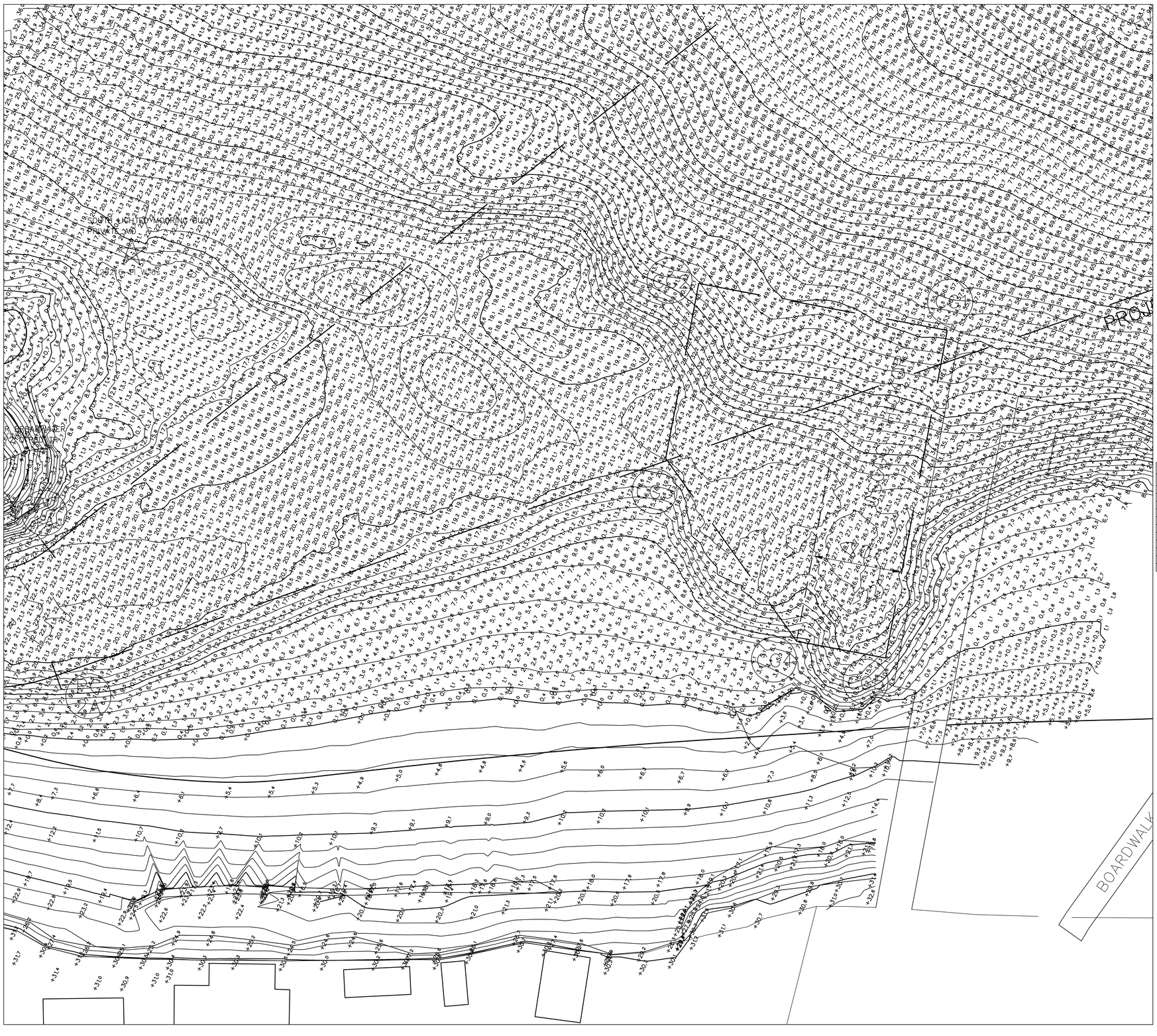
RECOMMENDED: PROJECT MANAGER
APPROVED: CHIEF OPERATIONS-READINESS BRANCH
DATE:

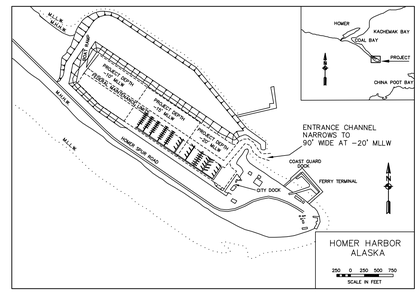
SURVEY NO.
PRELIMINARY

SCALE:

SHEET 2 OF 5

CORPS OF ENGINEERS U. S. ARMY





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