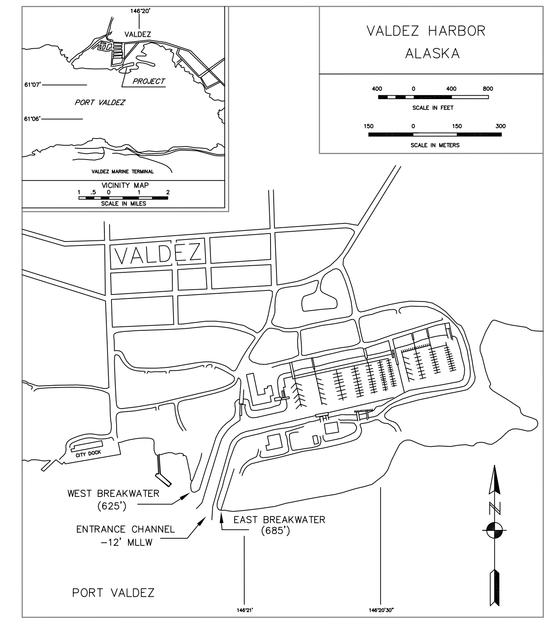

NOTES

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3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
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5. SOUNDING OPERATIONS WERE CONDUCTED ON MAY 10, 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 "VH-2 1997". 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 MAY 6, 2006 USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES. HORIZONTAL CONTROL WAS SURVEYED MAY 7-9, 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.

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
PC 1	2,603,103.58	1,577,876.01	PT 8	2,603,245.12	1,578,205.20
PC 2	2,603,322.01	1,578,063.74	PC 9	2,603,063.59	1,577,989.15
PT 3	2,603,400.29	1,578,116.13	PC 10	2,603,083.58	1,577,932.58
COR LT	2,603,532.03	1,578,128.72	PT 11	2,603,304.29	1,578,195.26
COR RT	2,603,525.81	1,578,193.85	COR 1	2,603,773.16	1,578,570.59
PC 4	2,603,492.40	1,578,190.64	COR 2	2,603,983.57	1,579,822.90
PT 5	2,603,383.86	1,578,306.71	COR 3	2,603,529.72	1,579,899.19
PC 6	2,603,421.09	1,578,528.33			
PT 7	2,603,536.27	1,578,610.38			

CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD LENGTH	TANGENT
C1	278.00'	295.97'	60°59'59"	282.19'	163.75'
C2	338.00'	359.85'	60°59'59"	343.09'	199.10'
C3	398.00'	294.71'	42°25'36"	288.03'	154.48'
C4	100.00'	98.07'	56°11'31"	94.19'	53.39'
C5	100.00'	183.67'	105°14'06"	158.92'	130.88'
C6	100.00'	157.08'	89°59'53"	141.42'	100.00'

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BOAT 1965	2,603,324.29	1,579,853.30	71.50	USACE SBC
BREAK 1965	2,602,778.40	1,578,004.01	17.83	USACE SBC
TMP-1 1982	2,603,279.58	1,579,007.64	23.21	USACE SBC
VH-1 1997	2,603,041.62	1,577,733.30	17.80	USACE DOMED BC
VH-2 1997	2,603,735.17	1,578,537.86	20.54	USACE DOMED BC
VH-3 2000	2,603,370.87	1,579,485.71	21.26	USACE DOMED BC
VH-4 2000	2,603,143.65	1,578,247.91	21.95	USACE DOMED BC
VH-5 2003	2,604,218.21	1,580,381.00	16.85	USACE DOMED BC
VH-6 2003	2,603,739.74	1,580,594.97	17.66	USACE DOMED BC
*VH-7 2006	2,603,960.25	1,579,020.41	21.28	SET 3 1/4" DOMED BC IN CONCRETE
*VH-8 2006	2,604,074.95	1,579,772.55	17.46	SET 3 1/4" DOMED BC IN CONCRETE
NI-3 2000	2,602,429.48	1,577,946.62	20.04	USACE SBC
4240 N 1982	–	–	16.61	NOS TIDAL BENCH MARK
NO 21 1966	–	–	20.57	NOS TIDAL BENCH MARK

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

NAVIGATION AIDS

USCG No.	DESCRIPTION	NORTHING	EASTING
25815	VALDEZ BOAT HARBOR LIGHT 2 RED	2,602,427.1	1,577,865.8
25820	VALDEZ BOAT HARBOR LIGHT 3 GREEN	2,602,636.5	1,577,603.2

VOLUME COMPUTATIONS

Project Depth -12' MLLW	CUBIC YARDS
MINIMUM PAY LINE (-12' MLLW)	4,017
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (-13' MLLW)	6,423
VOLUME AVAILABLE ALONG SIDESLOPES (3:1, H:V)	5,910
TOTAL	16,350

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

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

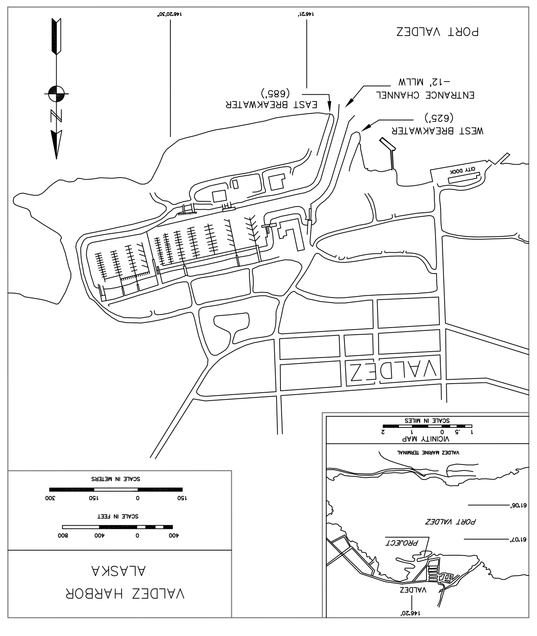
SURVEYED: CSH
DRAWN: REH
CHECKED: JSH
SUBMITTED:

VALDEZ, ALASKA
VALDEZ HARBOR
PROJECT CONDITION SURVEY
MAY 5-10, 2006

STATE OF ALASKA 49TH JACK S. HUGHES LS-4915 REGISTERED PROFESSIONAL LAND SURVEYOR

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

SURVEY NO. 2319-06
SCALE: 1" = 50'
SHEET 1 OF 3



NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 3, NAD83, IN US SURVEY FEET, HOLDING DONED BC VH-2 1997" AS N 2,603,753.17, E 1,578,537.86 AND DONED BC VH-5 2003" AS N 2,604,218.31, E 1,580,394.97.
2. VERTICAL CONTROL IS MEAN LOWER LOW WATER DATUM, IN US SURVEY FEET (MLLW=0'). HOLDING USCGS TIDAL BENCH MARK "NO 21 1966" AS 2057", TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH FROM NOAA/NOS TIDAL BENCH MARK LIST, "9454240 VALDEZ, PRINCE WILLIAM SOUND, ALASKA", PUBLISHED 05/04/2005.
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 MAY 10, 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 DONED BC "VH-2 1997". 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.
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⚓ NAVIGATION AIDS ⚓			
USCG No.	DESCRIPTION	NORTHING	EASTING
25815	VALDEZ BOAT HARBOR LIGHT 2 RED	2,602,427.1	1,577,865.8
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VOLUME COMPUTATIONS	
Project Depth -12' MLLW	CUBIC YARDS
MINIMUM PAY LINE (-12' MLLW)	
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (-13' MLLW)	6,423
VOLUME AVAILABLE ALONG SIDESLOPES (3:1, H:V)	5,910
TOTAL	16,350

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

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: CSH
DRAWN: REH
CHECKED: JSH
SUBMITTED:

VALDEZ, ALASKA
VALDEZ HARBOR
PROJECT CONDITION SURVEY
MAY 5-10, 2006

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

SURVEY NO. 2319-06
SCALE: 1" = 50'
SHEET 2 OF 3

⚓ CONTROL DATA ⚓				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BOAT 1965	2,603,324.29	1,579,853.30	71.50	USACE SBC
BREAK 1965	2,602,778.40	1,579,004.01	17.83	USACE SBC
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VH-4 2000	2,603,143.65	1,579,247.91	21.95	USACE DOMED BC
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VH-6 2003	2,603,739.74	1,580,594.97	17.66	USACE DOMED BC
VH-7 2006	2,603,860.25	1,579,020.41	21.28	SET 1 1/4" DOMED BC IN CONCRETE
VH-8 2006	2,604,074.95	1,579,777.55	17.46	SET 1 1/4" DOMED BC IN CONCRETE
NI-3 2000	2,602,429.48	1,577,946.67	20.04	USACE SBC
NO 21 1966	–	–	20.57	NOS TIDAL BENCH MARK
4240 N 1982	–	–	16.61	NOS TIDAL BENCH MARK

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

PROJECT LIMITS			
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PC 1	2,603,103.58	1,577,876.01	PT 8	2,603,245.12	1,578,205.20
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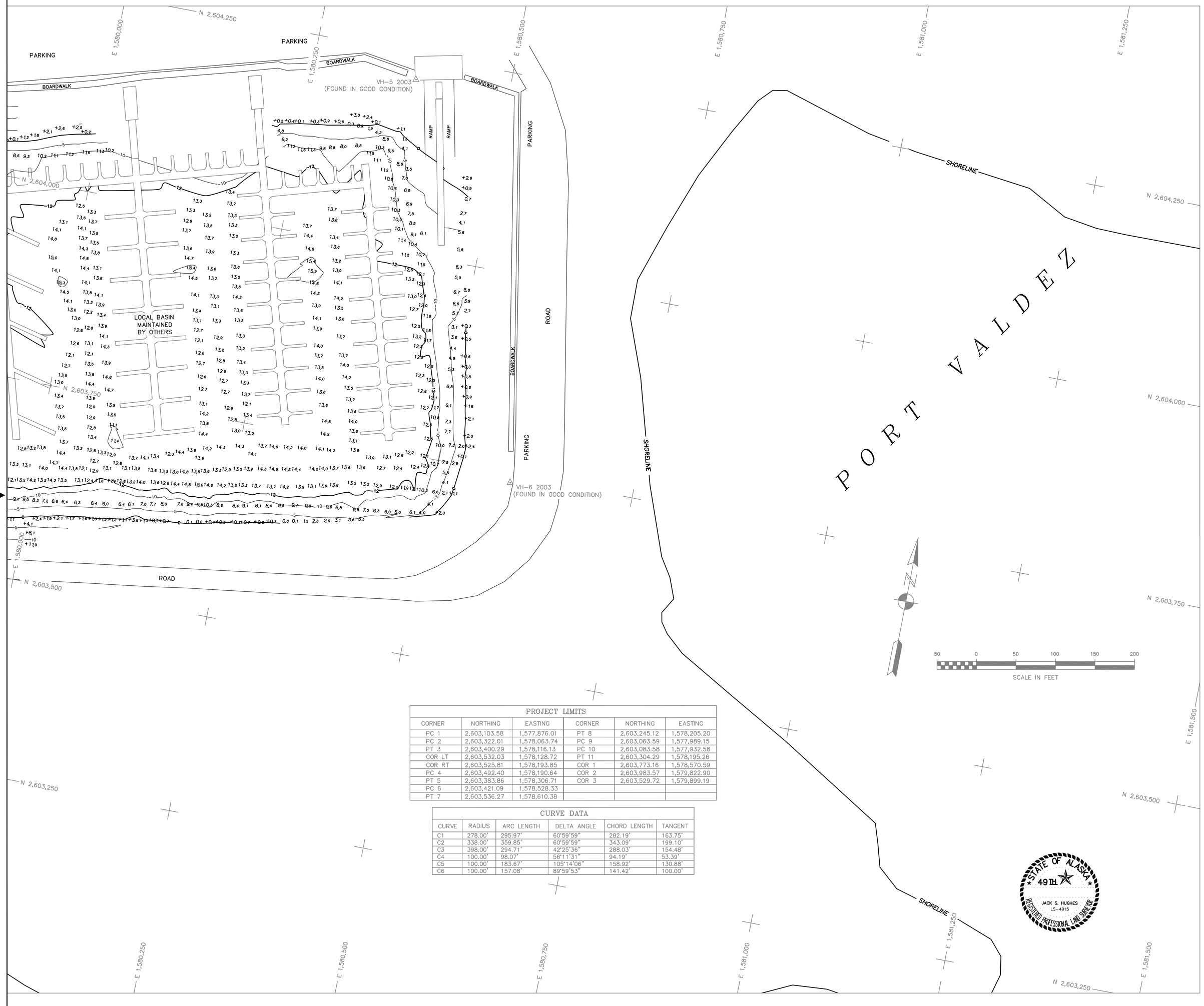
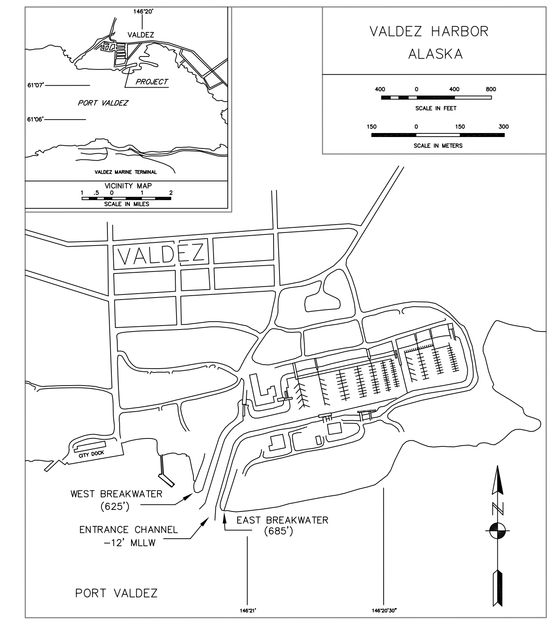
STATE OF ALASKA 49TH
JACK S. HUGHES
LS-4915
REGISTERED PROFESSIONAL LAND SURVEYOR

U. S. ARMY
CORPS OF ENGINEERS





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49TH
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LS-4915
REGISTERED PROFESSIONAL LAND SURVEYOR

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

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: CSH
DRAWN: REH
CHECKED: JSH
SUBMITTED:

VALDEZ, ALASKA
VALDEZ HARBOR
PROJECT CONDITION SURVEY
MAY 5-10, 2006

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

SURVEY NO. 2319-06
SCALE: 1" = 50'
SHEET 3 OF 3