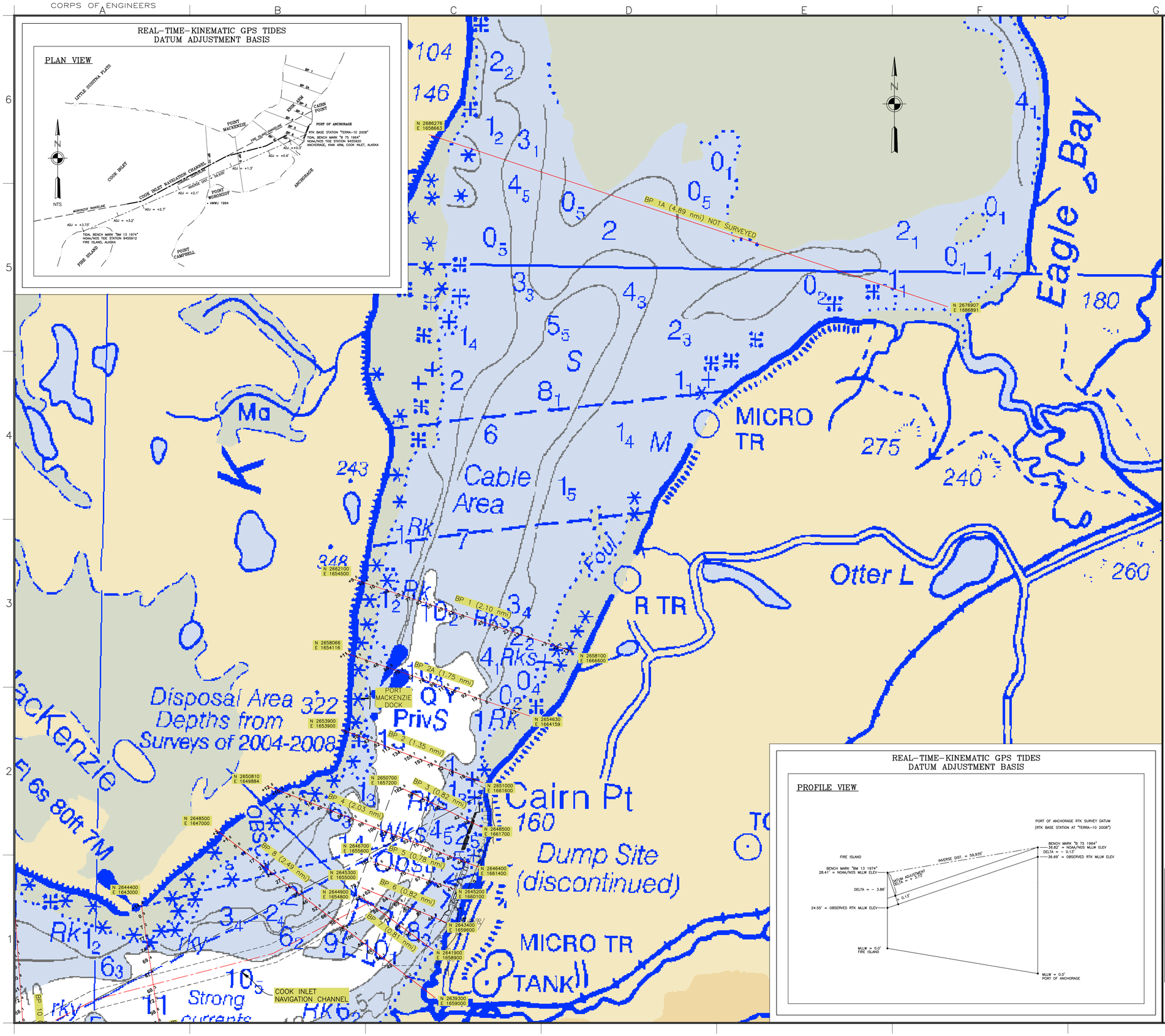
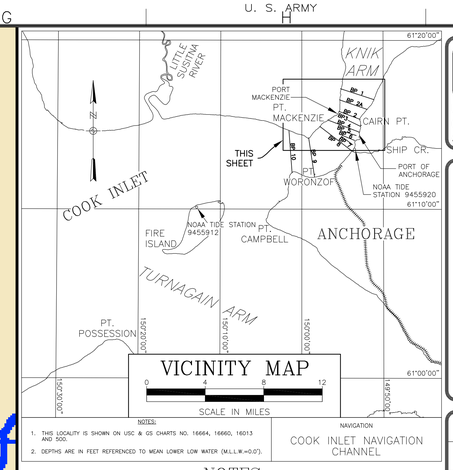
CORPS OF ENGINEERS — U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009a). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009a AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY. AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

STATE OF ALASKA 49TH — KARL D. WOODS No.10950 — REGISTERED PROFESSIONAL ENGINEER

NOVEMBER 30, 2010

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON DEPICT THE DEPTHS AS SURVEYED OCTOBER 28–30, 2010, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

⚠ CONTROL COORDINATES ⚠				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

2000 0 2000 4000 6000

SCALE IN FEET
HORIZONTAL SCALE: 1"=2000'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

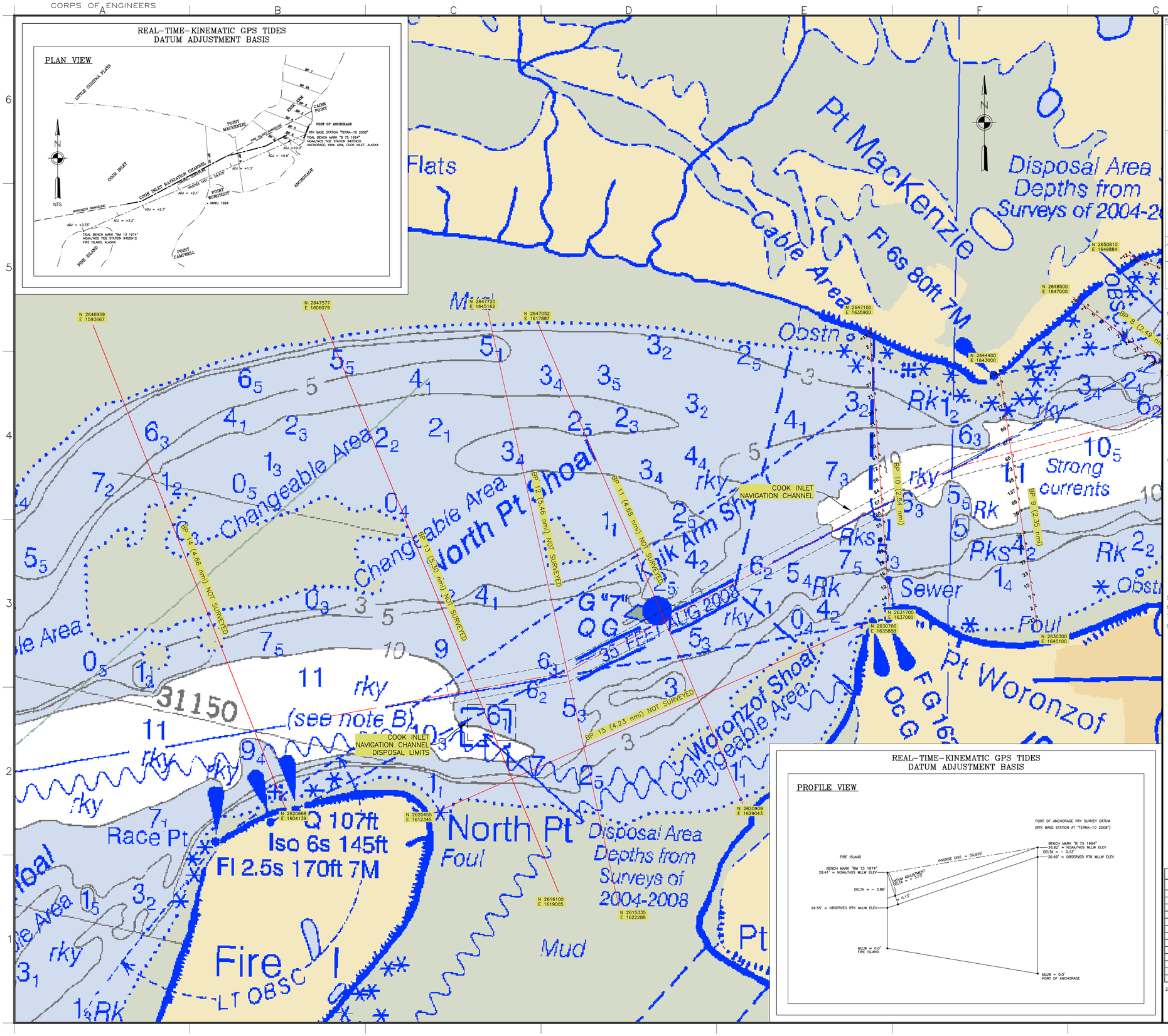
Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2848-10
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: Section
Submitted: A. CHURCHILL
Chief Operations: Branch
USACE Survey No.:

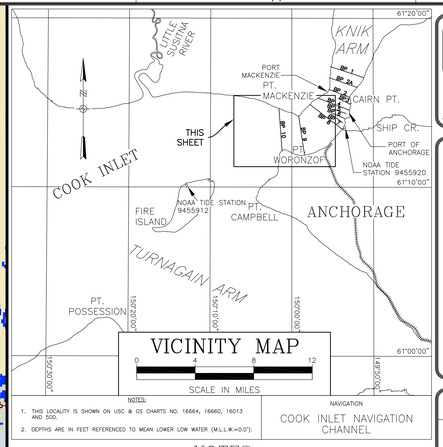
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010
COVERSHEET

Reference number:
V-101
Sheet 1 of 14

CORPS OF ENGINEERS — U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NAVIGATION
COOK INLET NAVIGATION CHANNEL

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009a). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009a AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY. AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

2000 0 2000 4000 6000
SCALE IN FEET
HORIZONTAL SCALE: 1"=2000'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2848-10
Chief Operations, Section
USACE Survey No.: Branch
Submitted: A. CHURCHILL
Reviewed: KDW
Drawn: KNB/LEP
Designed: JEA

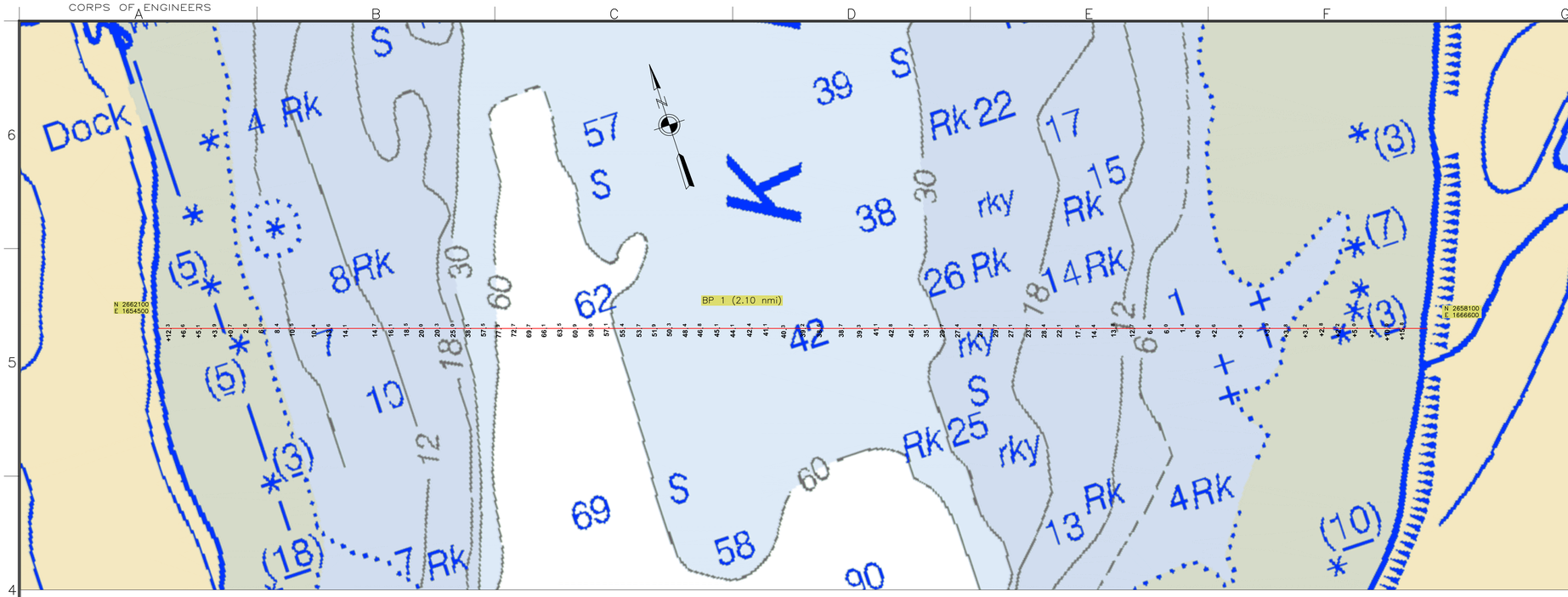
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

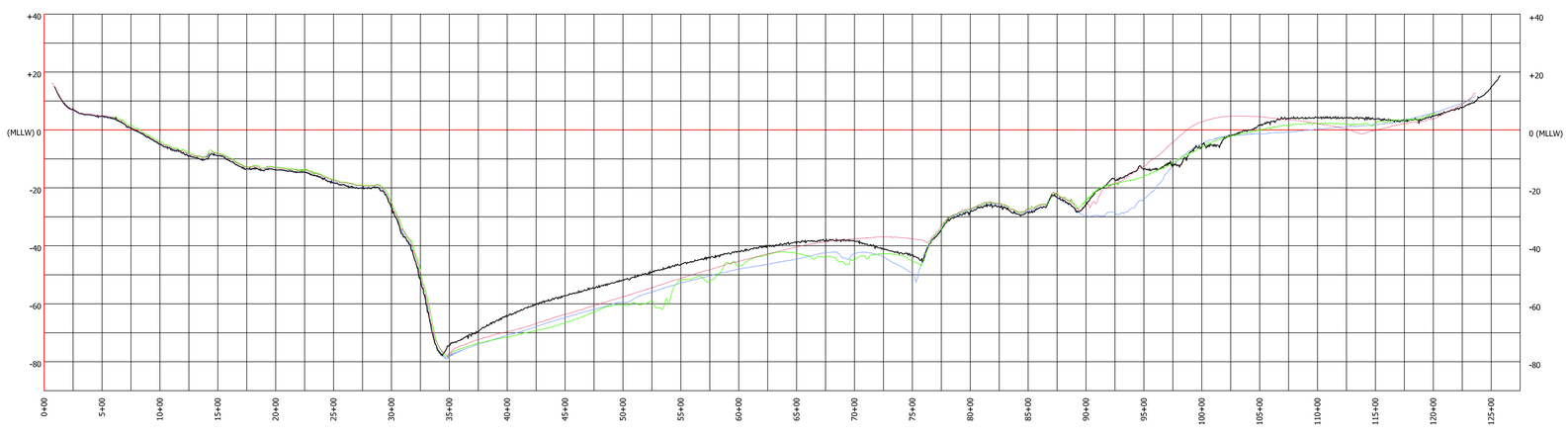
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010
COVERSHEET

Reference number:
V-102
Sheet 2 of 14

CORPS OF ENGINEERS

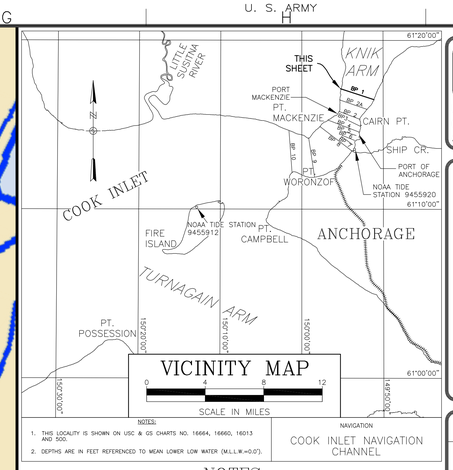
U. S. ARMY





PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004



NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV–100 SINGLE–FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4–DEGREE BEAM–WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL–TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA–10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ–1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI–STA SBC

500 0 500 1000 1500

SCALE IN FEET

HORIZONTAL SCALE: 1"=500'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–08–D–0002–0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: Section
Submitted: A. CHURCHILL
Chief Operations: Branch
Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
USACE Survey No.: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

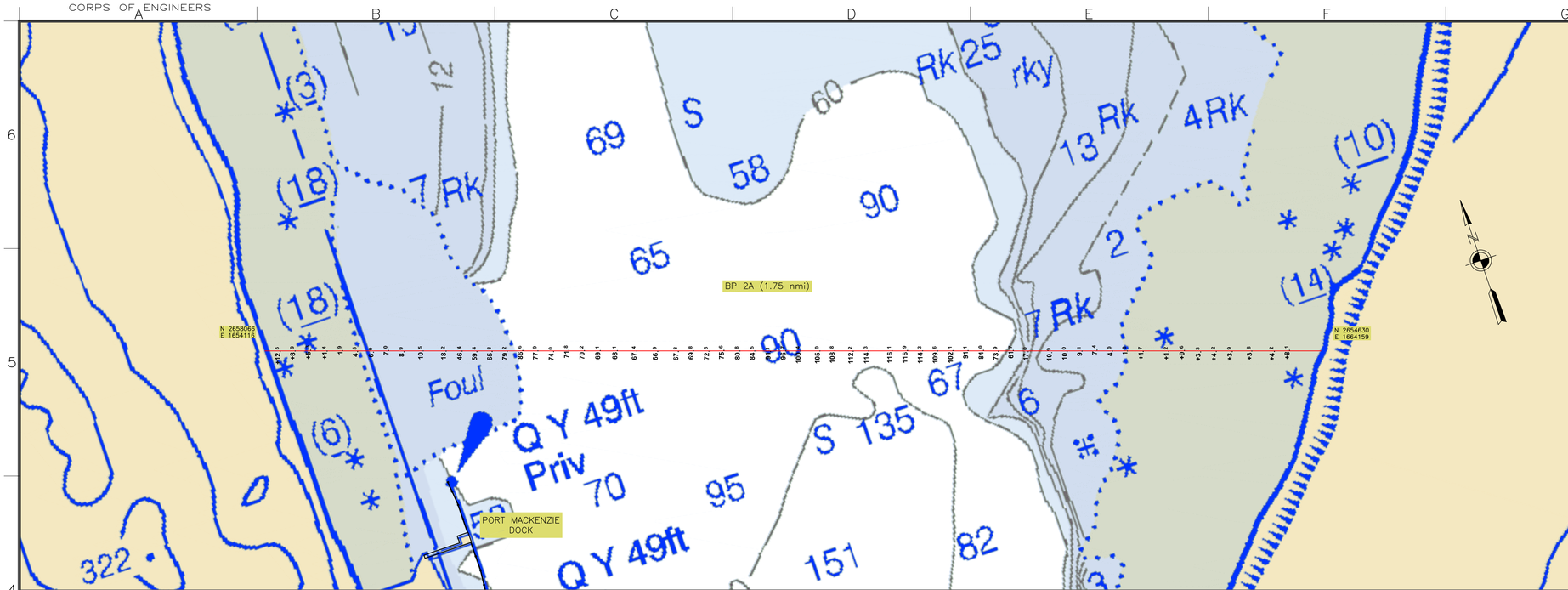
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

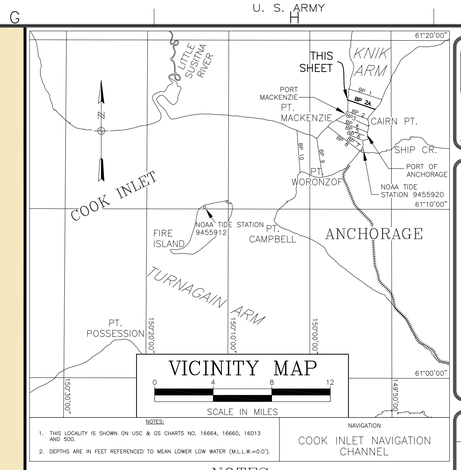
BASELINE PROFILE 1

Reference number:
V-103
Sheet 3 of 14

CORPS OF ENGINEERS

U. S. ARMY



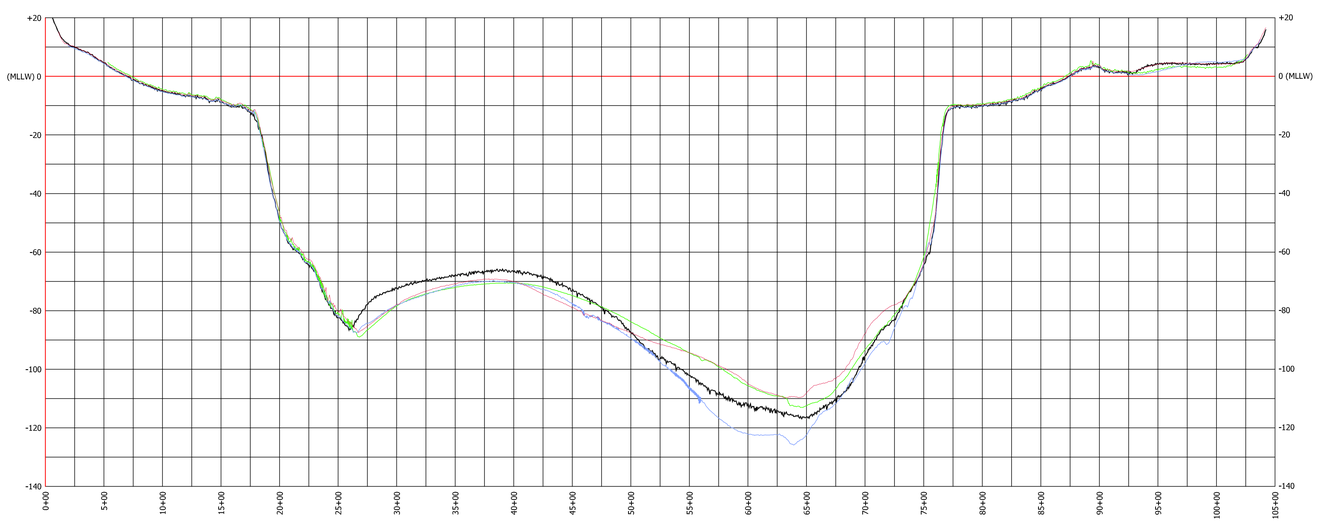


NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV–100 SINGLE–FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4–DEGREE BEAM–WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL–TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA–10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ–1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI–STA SBC

500 0 500 1000 1500

SCALE IN FEET

HORIZONTAL SCALE: 1"=500'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–08–D–0002–0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: A. CHURCHILL
Submitted:
Chief Operations:
USACE Survey No.: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

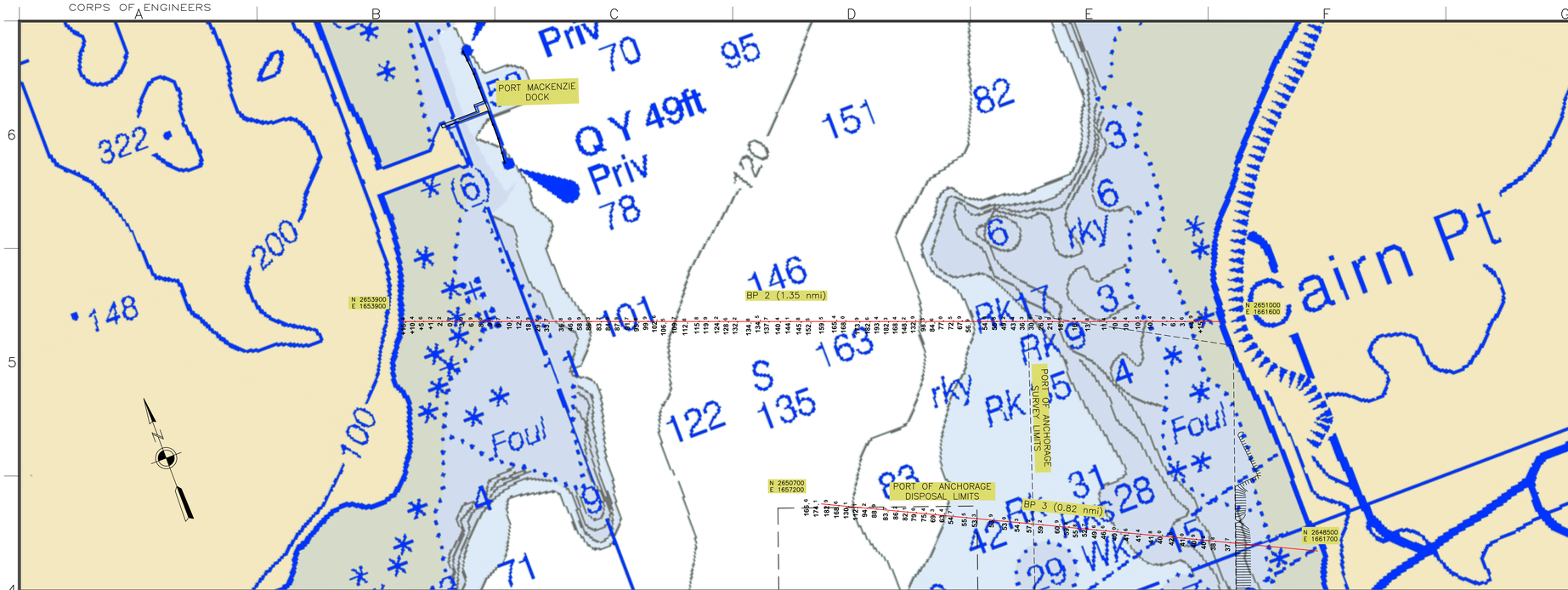
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

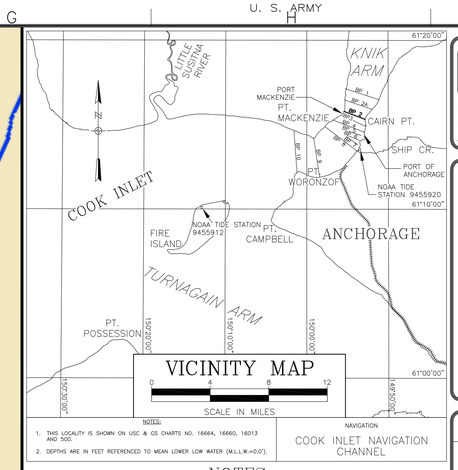
BASELINE PROFILE 2A

Reference number:
V-104
Sheet 4 of 14

CORPS OF ENGINEERS

U. S. ARMY





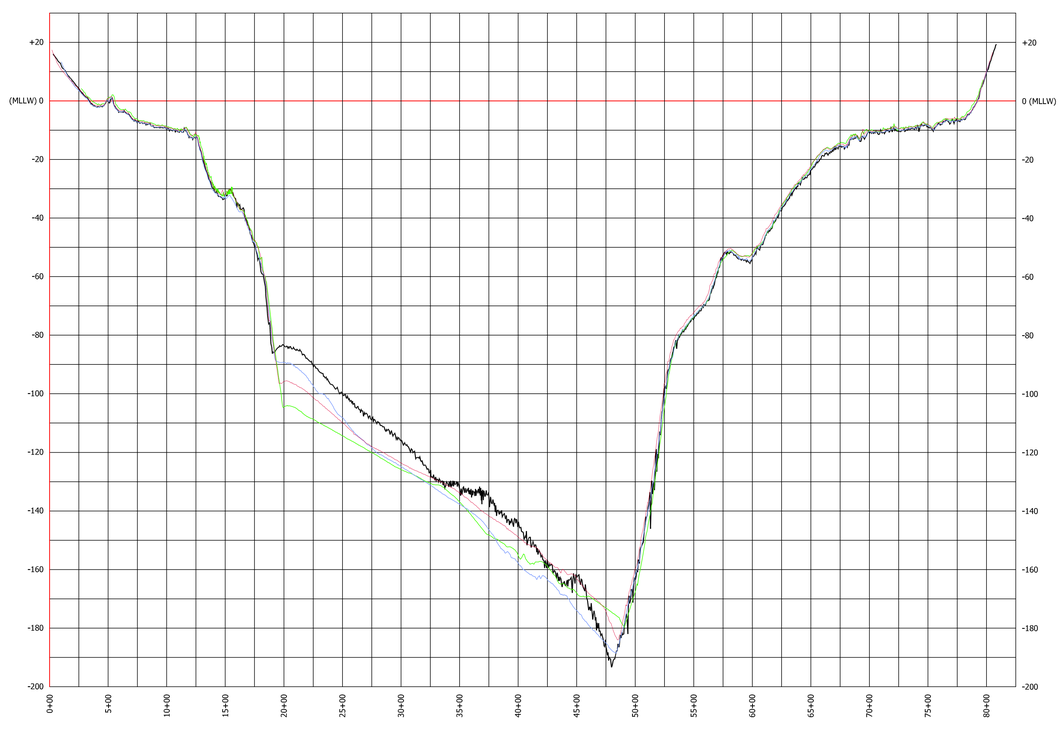
US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY; AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

500 0 500 1000 1500
SCALE IN FEET
HORIZONTAL SCALE: 1"=500'

BATHYMETRY

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: Section
Submitted: A. CHURCHILL Branch
Chief Operations:
USACE Survey No.: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

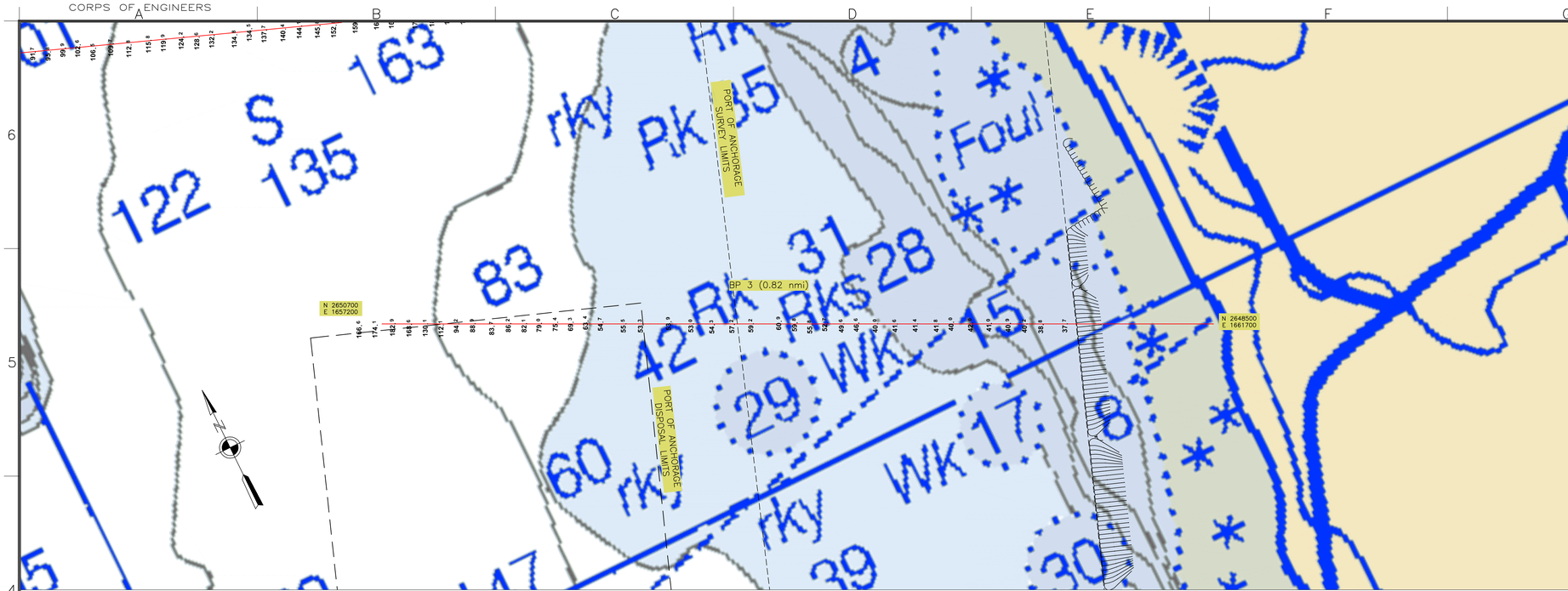
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

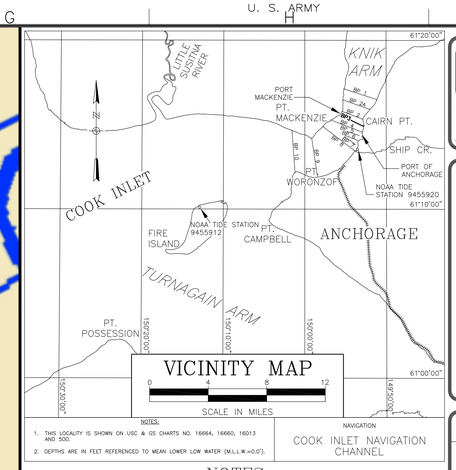
BASELINE PROFILE 2

Reference number:
V-105
Sheet 5 of 14

CORPS OF ENGINEERS

U. S. ARMY





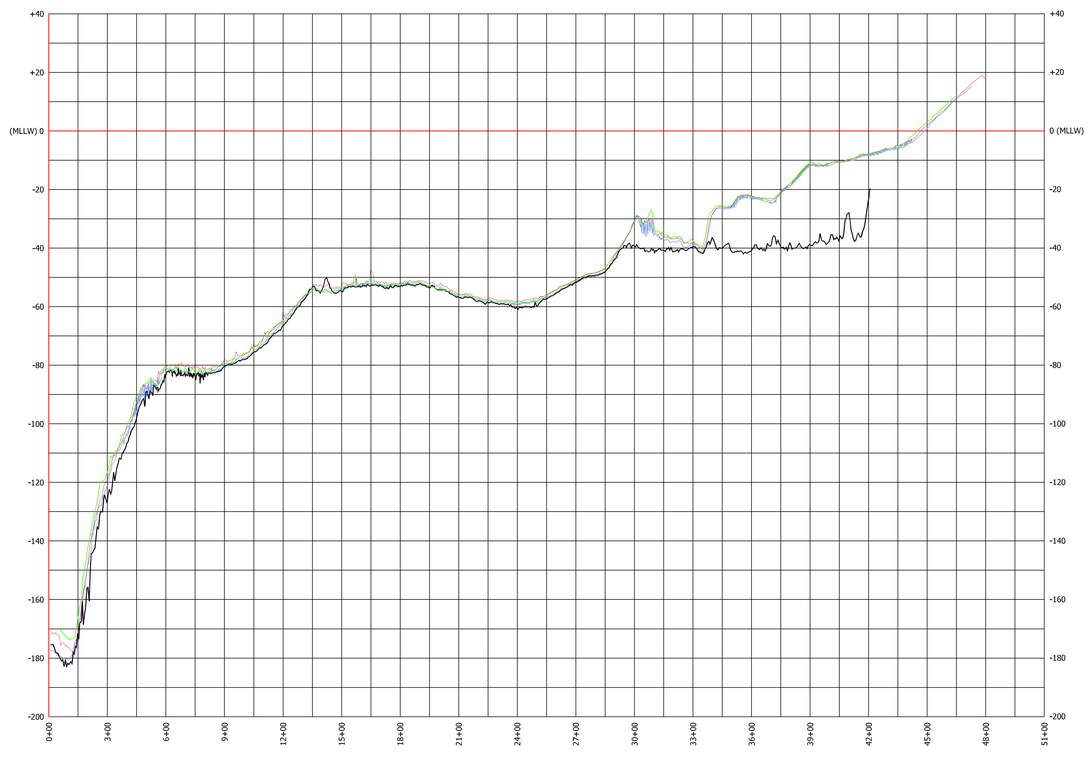
US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Symb.	Action	Description	Date	Approval

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV–100 SINGLE–FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4–DEGREE BEAM–WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL–TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY. AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA–10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ–1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI–STA SBC

300 0 300 600 900
SCALE IN FEET
HORIZONTAL SCALE: 1"=300'

BATHYMETRY

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: A. CHURCHILL
Submitted:
Chief Operations:
USACE Survey No.: 2848-10

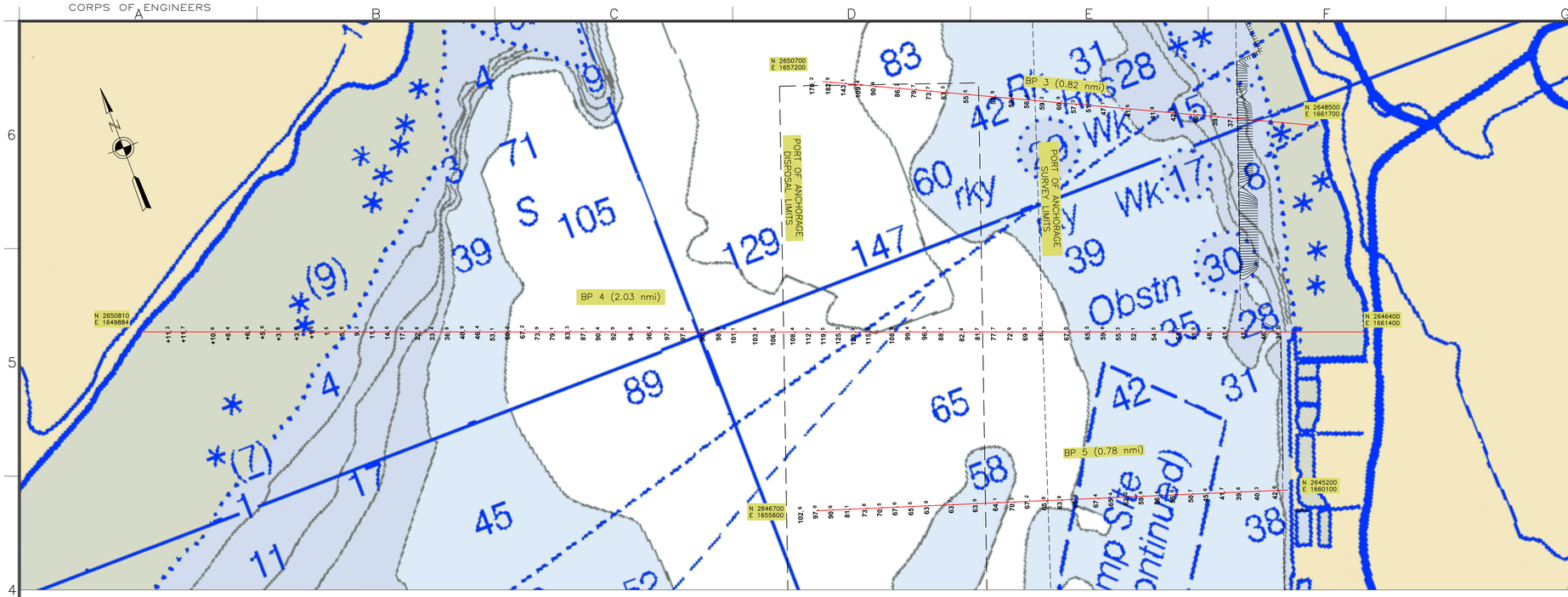
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

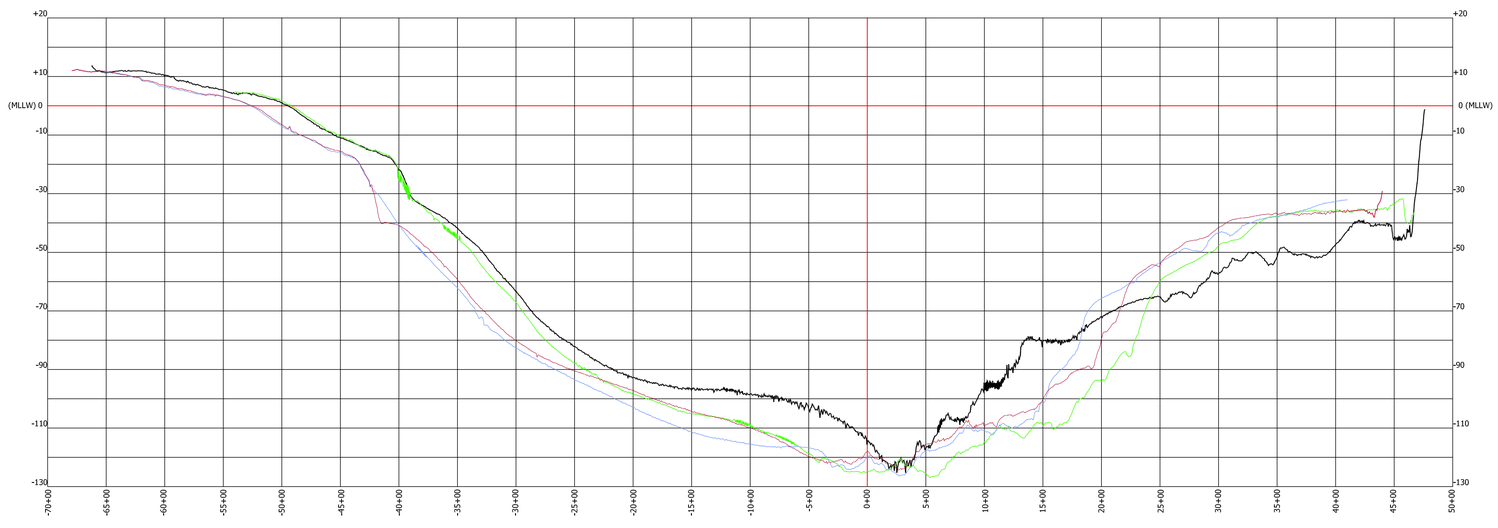
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010
BASELINE PROFILE 3

Reference number:
V-106
Sheet 6 of 14

CORPS OF ENGINEERS

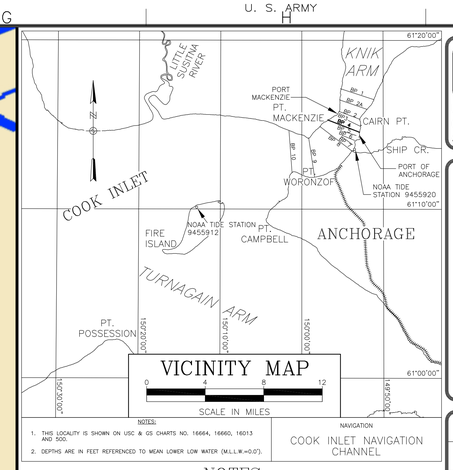
U. S. ARMY





PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004



NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

500 0 500 1000 1500

SCALE IN FEET

HORIZONTAL SCALE: 1"=500'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Section
Drawing #
Branch
2848-10

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: A. CHURCHILL
Submitted:
Chief Operations:
USACE Survey No.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

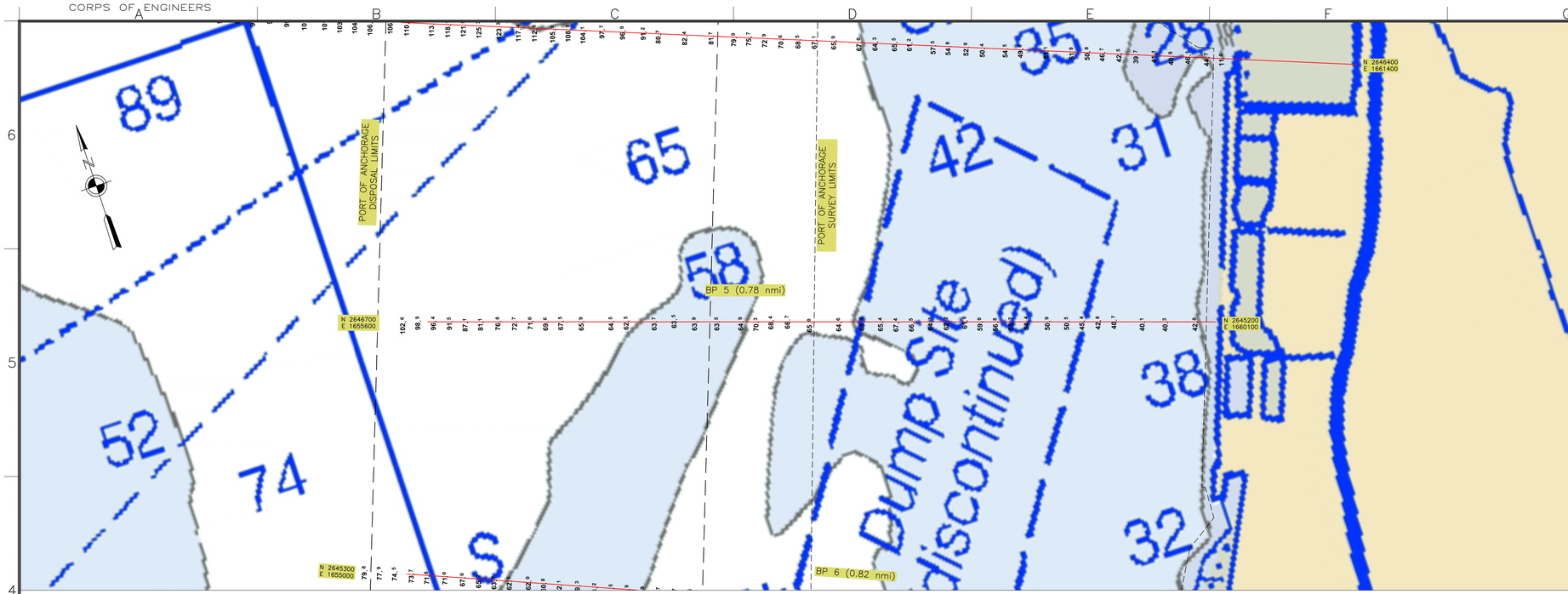
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

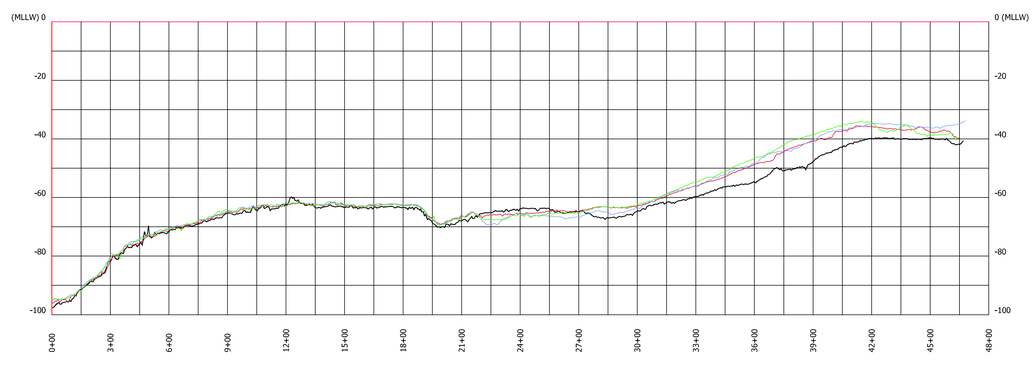
BASELINE PROFILE 4

Reference number:
V-107
Sheet 7 of 14

CORPS OF ENGINEERS

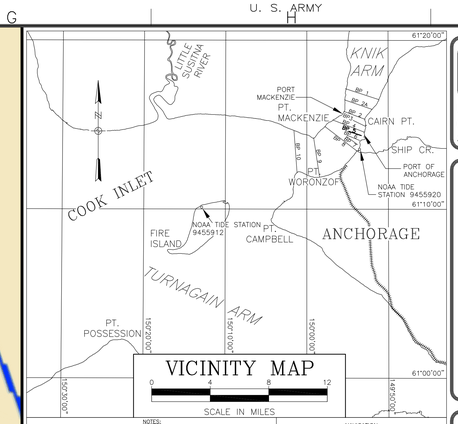
U. S. ARMY





PROFILE LEGEND

- Oct 28–31, 2010
- Sept 18–19, 2002
- July 15–16, 2002
- May 15–17, 2002



NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NAVIGATION

COOK INLET NAVIGATION CHANNEL

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV–100 SINGLE–FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4–DEGREE BEAM–WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL–TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY; AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1.658.900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA–10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ–1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI–STA SBC

300 0 300 600 900

SCALE IN FEET

HORIZONTAL SCALE: 1"=300'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–08–D–0002–0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg. Scale: AS NOTED
Plot. Scale:
File:
Section
Branch
Drawing #: 2848-10

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: A. CHURCHILL
Submitted:
Chief Operations:
USACE Survey No.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

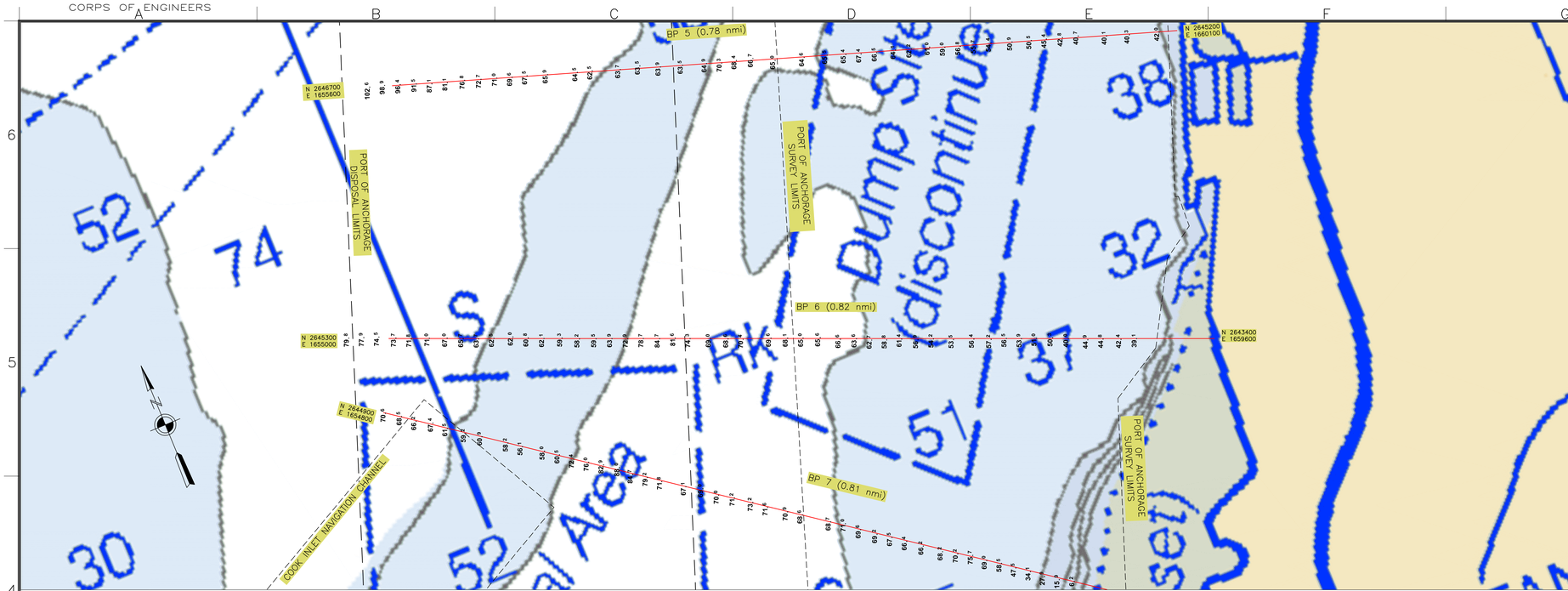
BASELINE PROFILE 5

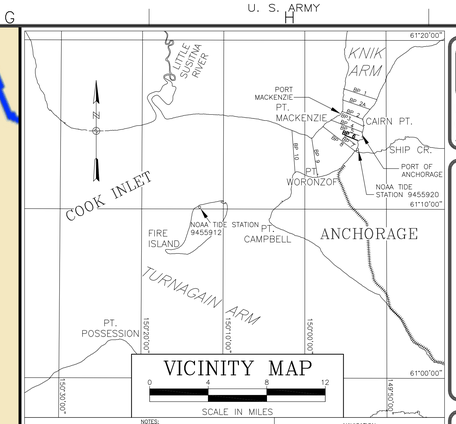
Reference number:
V-108

Sheet 8 of 14

CORPS OF ENGINEERS

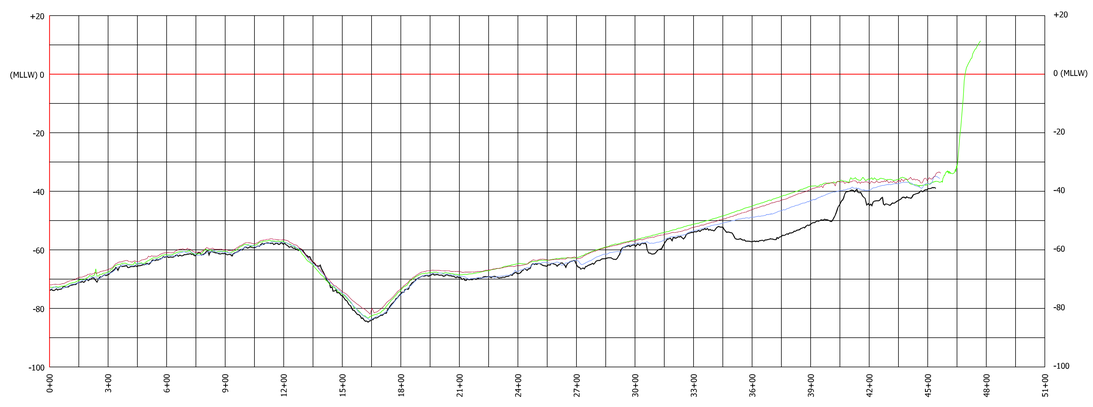
U. S. ARMY





NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1.658.900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

300 0 300 600 900

SCALE IN FEET

HORIZONTAL SCALE: 1"=300'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys:
Submitted: A. CHURCHILL
Chief Operations:
USACE Survey No.: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

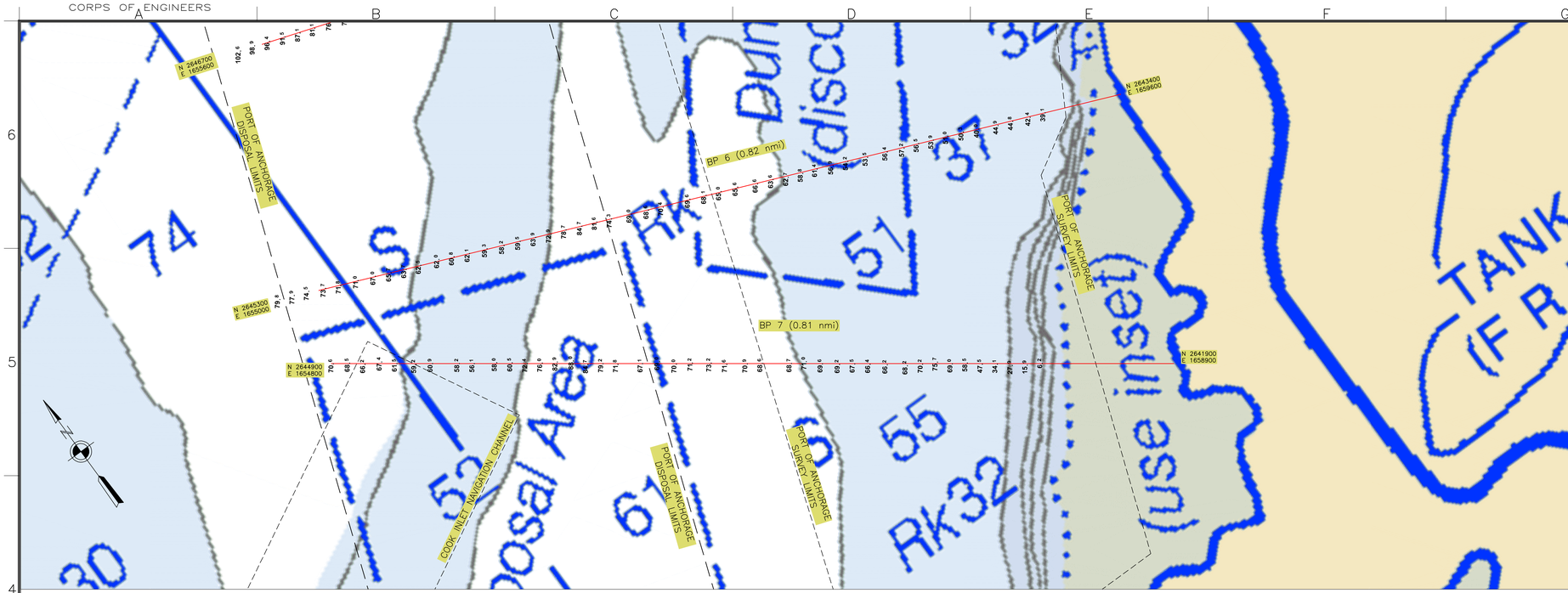
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

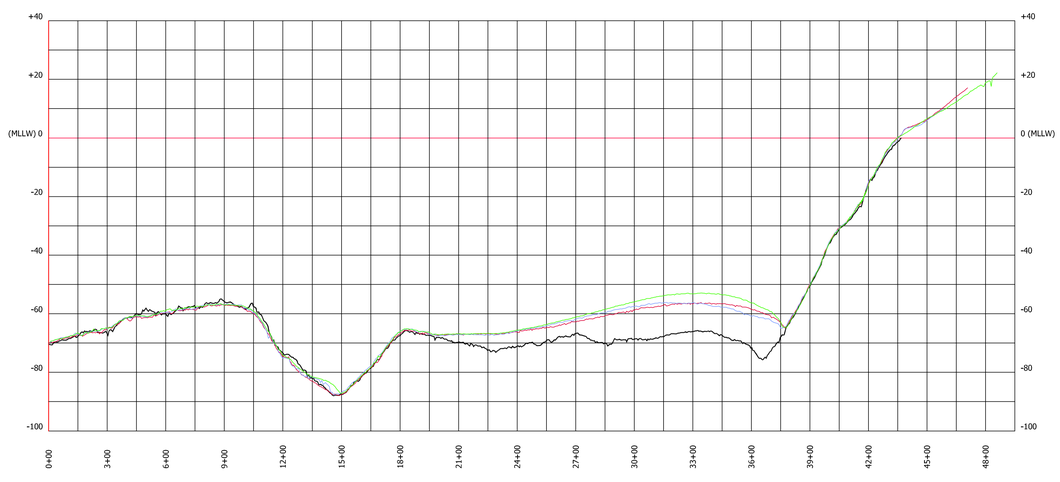
BASELINE PROFILE 6

Reference number:
V-109
Sheet 9 of 14

CORPS OF ENGINEERS

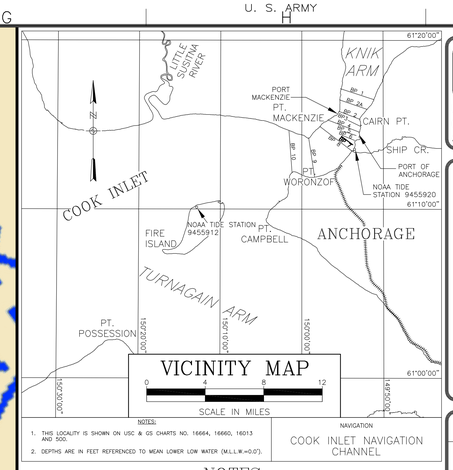
U. S. ARMY





PROFILE LEGEND

- Oct 28–31, 2010
- Sept 18–19, 2002
- July 15–16, 2002
- May 15–17, 2002



NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV–100 SINGLE–FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4–DEGREE BEAM–WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL–TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY; AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V–101 AND V–102 AND 16665 (9TH ED., MAR/06) SHEETS V–103 – V–113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA–10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ–1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI–STA SBC

300 0 300 600 900

SCALE IN FEET

HORIZONTAL SCALE: 1"=300'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–08–D–0002–0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: Section
Submitted: A. CHURCHILL
Chief Operations: Branch
USACE Survey No.:
Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

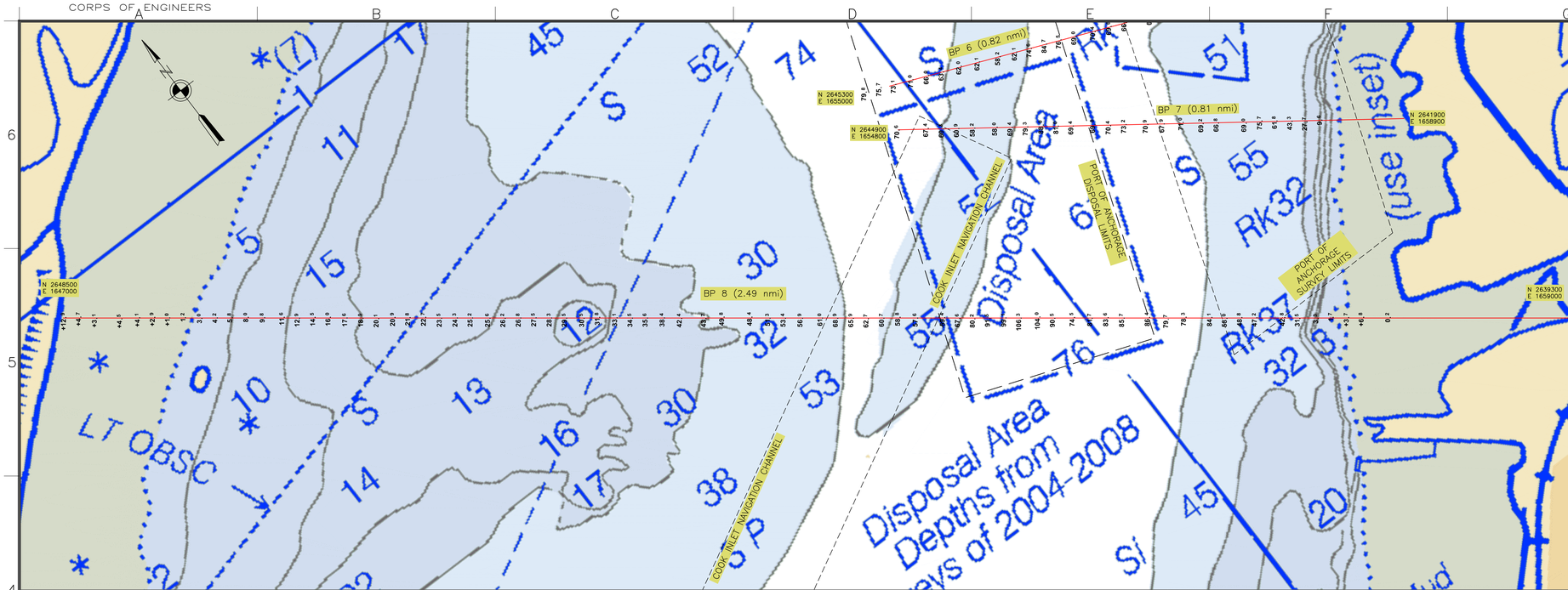
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

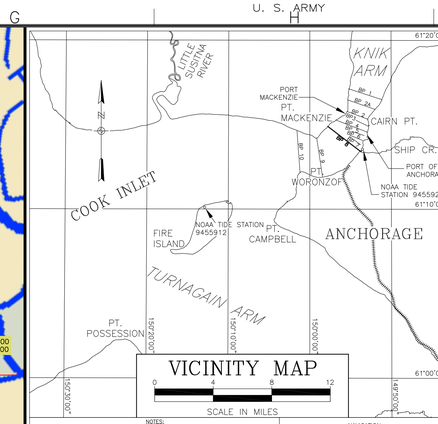
BASELINE PROFILE 7

Reference number:
V-110
Sheet 10 of 14

CORPS OF ENGINEERS

U. S. ARMY





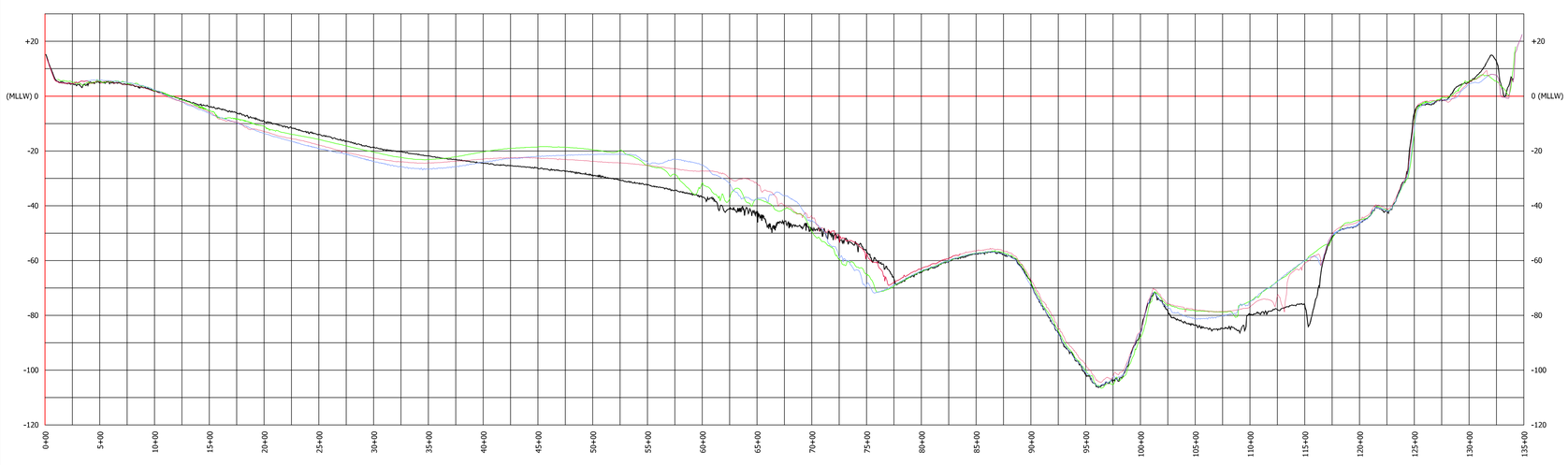
US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1.658.900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

500 0 500 1000 1500
SCALE IN FEET
HORIZONTAL SCALE: 1"=500'

BATHYMETRY

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Section
Branch
Drawing #:
2848-10

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys:
Submitted: A. CHURCHILL
Chief Operations:
USACE Survey No.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

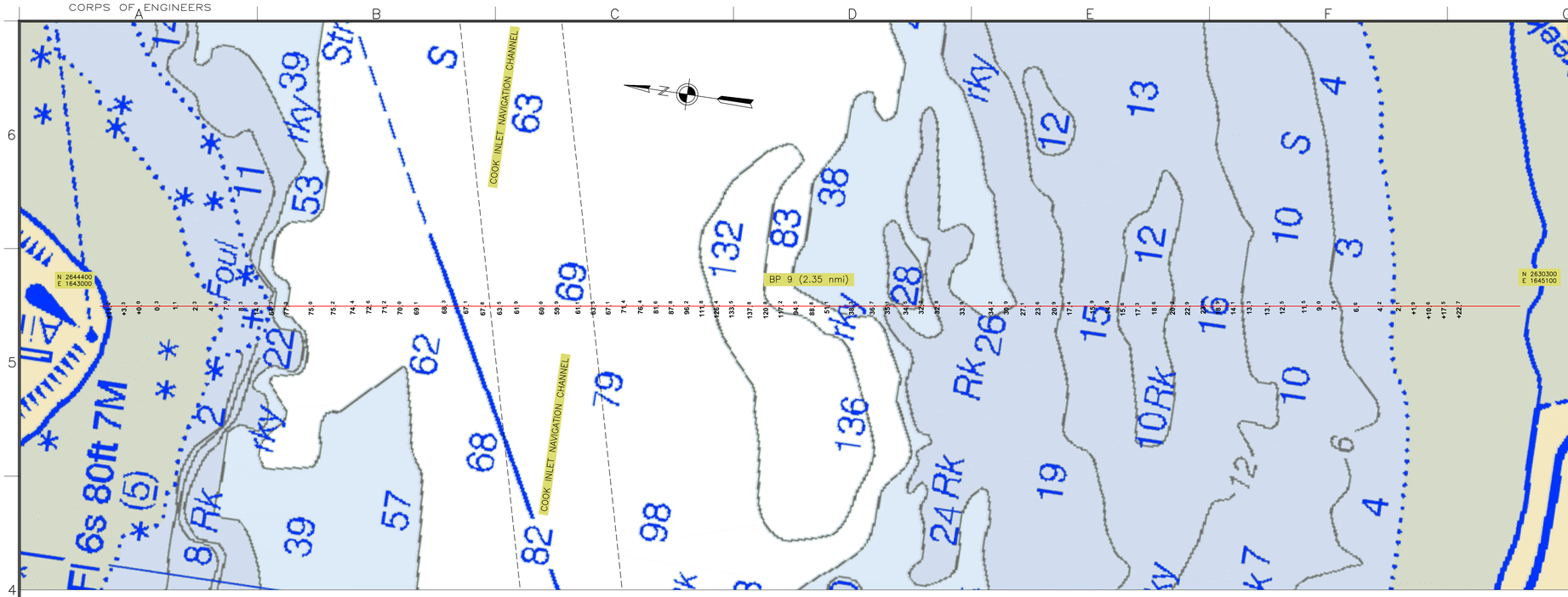
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

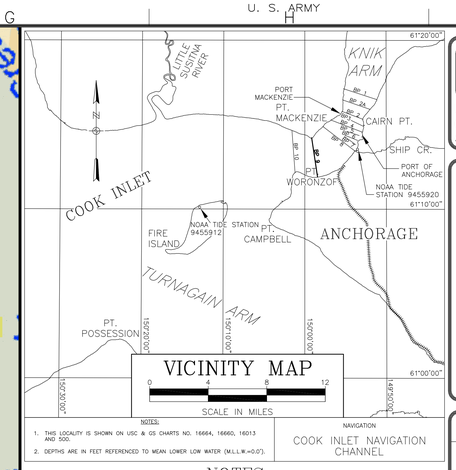
BASELINE PROFILE 8

Reference number:
V-111
Sheet 11 of 14

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

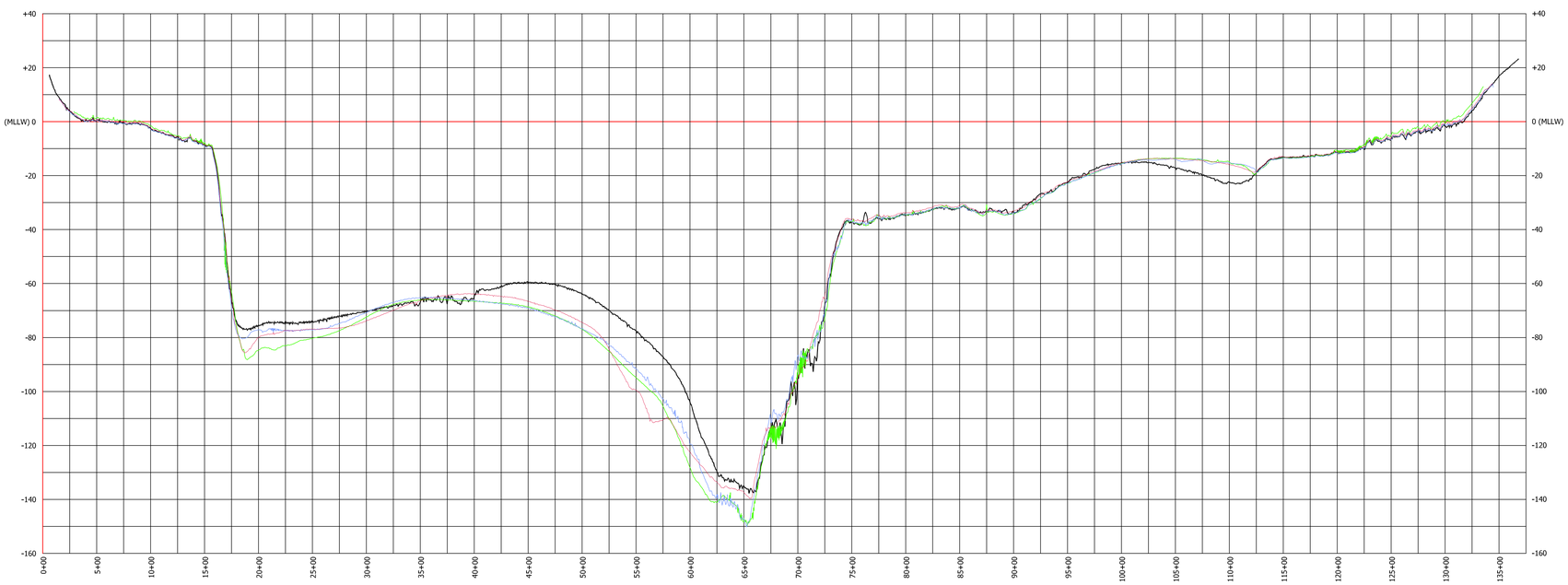
US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009a). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009a AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.



PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

500 0 500 1000 1500
SCALE IN FEET
HORIZONTAL SCALE: 1"=500'

BATHYMETRY

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys:
Submitted: A. CHURCHILL
Chief Operations:
USACE Survey No: 2848-10

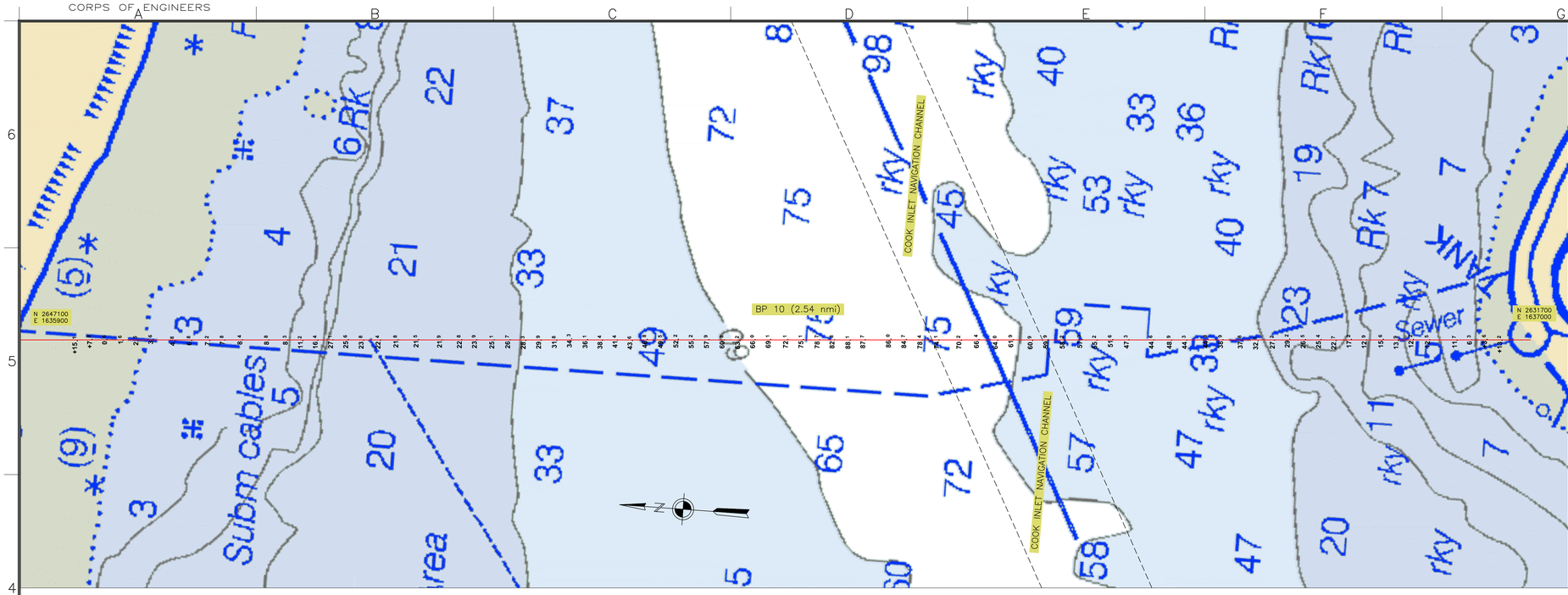
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

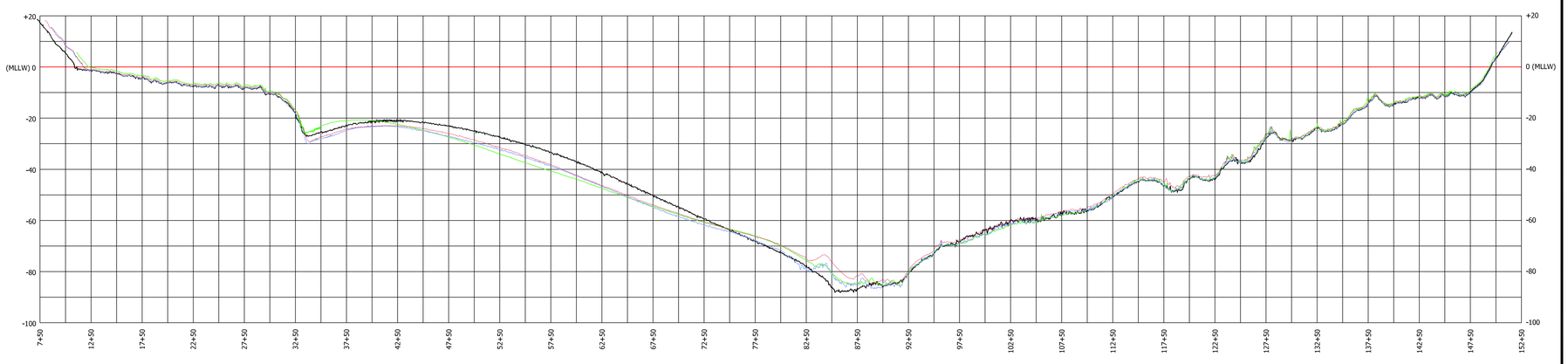
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010
BASELINE PROFILE 9

Reference number:
V-112

CORPS OF ENGINEERS

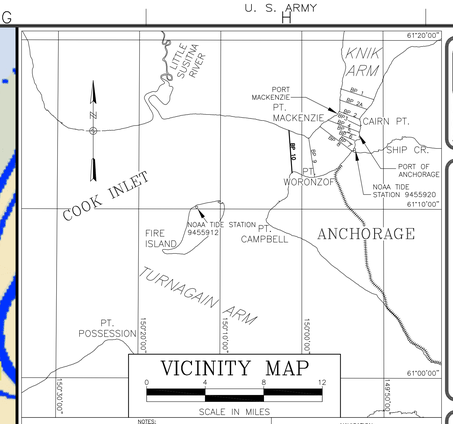
U. S. ARMY





PROFILE LEGEND

- Oct 28–31, 2010
- Sept 29–Oct 6, 2005
- May 24–June 2, 2005
- Sept 16–21, 2004



NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009a). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009a AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS -3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY, AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

500 0 500 1000 1500

SCALE IN FEET

HORIZONTAL SCALE: 1"=500'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief Surveys: A. CHURCHILL
Submitted:
Chief Operations:
USACE Survey No.: 2848-10

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

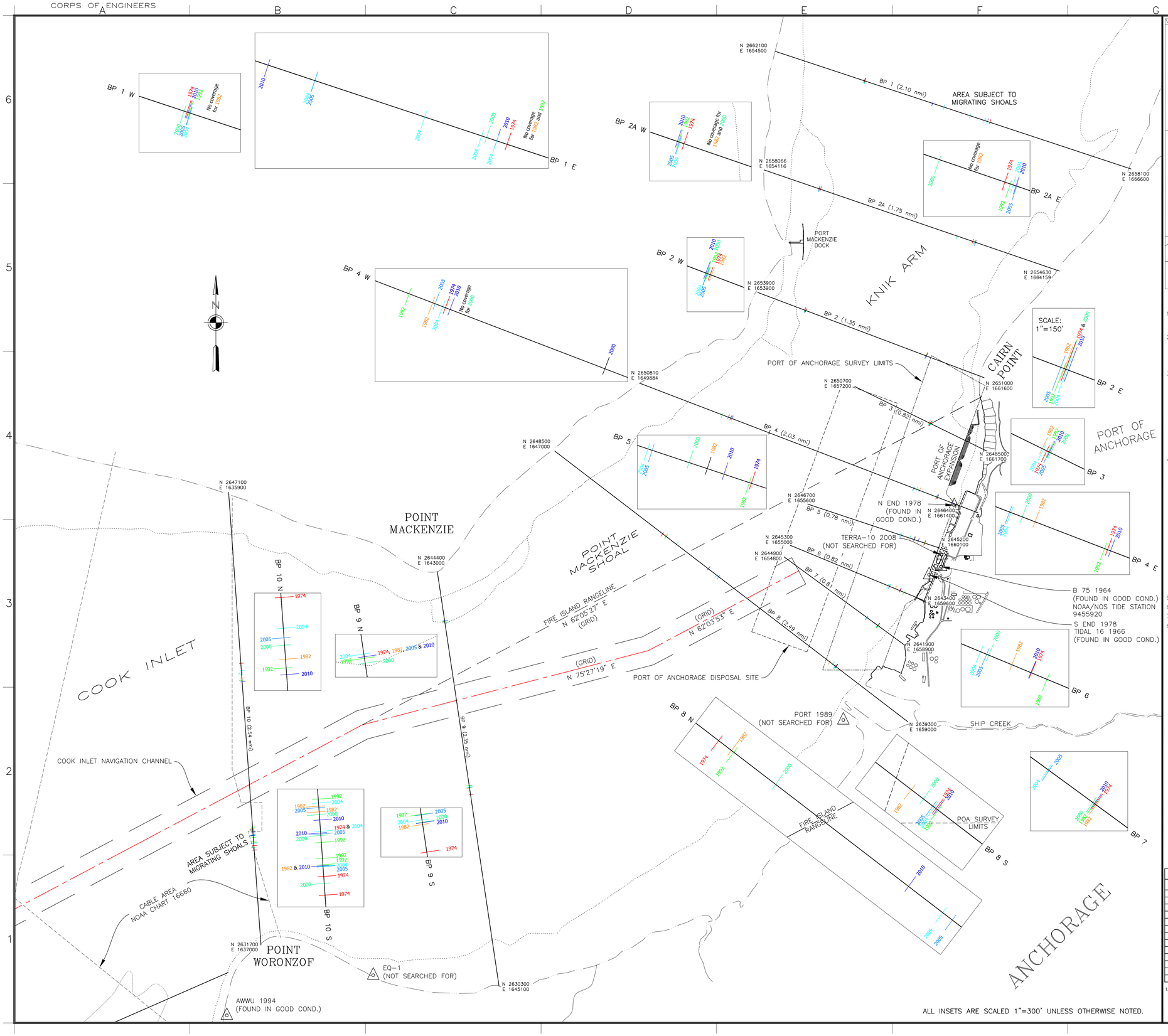
ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010

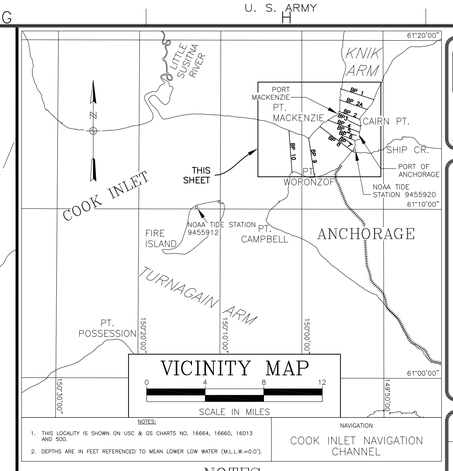
BASELINE PROFILE 10

Reference number:
V-113
Sheet 13 of 14

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (M.L.L.W.=0.0').

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN U.S. SURVEY FEET HOLDING USACE SBC "N END 1978" AS N 2,646,652.19, E 1,660,582.43 AND USACE SBC "S END 1978" AS N 2,644,298.25, E 1,659,725.47.
2. VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER (MLLW = 0.0') IN U.S. SURVEY FEET BASED ON NOAA/NOS TIDAL DATUM "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA", PUBLISHED 04/21/2003, HOLDING USCGS SBC "B 75 1964" AS 36.82' AND NOAA/NOS TIDAL DATUM "9455912 FIRE ISLAND, ALASKA", PUBLISHED 05/21/2004, HOLDING NOS SBC "BM 13 1974" AS 28.41'. (SEE NOTE 4)
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. BETWEEN OCTOBER 28–31, 2010. SOUNDINGS WERE COLLECTED USING AN ODOM ECHOTRAC CV-100 SINGLE-FREQUENCY ECHO SOUNDER WITH AN AIRMAR 200kHz, 4-DEGREE BEAM-WIDTH TRANSDUCER. VESSEL POSITIONING AND REAL-TIME TIDE VALUES WERE PROVIDED USING A LEICA 1230+ GNSS ROVING RECEIVER OPERATING ON KINEMATIC GPS CORRECTORS BROADCAST FROM A TRIMBLE NET-RS GPS RECEIVER SET AT CONTROL STATION, "TERRA-10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL-TIME-KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE (V2009g). DATA PROCESSING WAS PERFORMED USING A COMBINATION OF HYPACK 2009g AND CARIS HIPS SOFTWARE (V7.0).
4. THIS SURVEY AND THE THREE PRIOR HISTORIC BASELINE PROFILE SURVEYS (SEP 2004, MAY 2005 AND SEP 2005) ARE BASED ON RTK MLLW TIDE DATUM AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AS NOTED ABOVE. OF THESE SURVEYS, PROFILES 1, 2A AND 2 REMAIN RELATIVE TO THIS PLANAR DATUM. THE SURVEY DATASETS FOR PROFILES 3–10 WERE ADJUSTED TO REFLECT THE DIFFERENCE IN TIDE DATUM VALUES AT THE PORT OF ANCHORAGE (NOAA/NOS 9455920) AND THE TIDE DATUM VALUES AT FIRE ISLAND (NOAA/NOS 9455912). THIS "TILTED PLANE" ADJUSTMENT WAS PERFORMED TO REFLECT A UNIFORM MLLW BASED APPROACH FROM THE WEST END OF THE "COOK INLET NAVIGATION CHANNEL PROJECT" INTO THE PORT OF ANCHORAGE. THE ADJUSTMENT IS BASED ON OBSERVED RTK HEIGHT VALUES MEASURED AT BOTH NOAA/NOS TIDE STATIONS LISTED ABOVE. THE OBSERVED RTK DIFFERENTIAL SHOWS THE PORT OF ANCHORAGE AS 0.0' AND FIRE ISLAND AS –3.73' RELATIVE TO MLLW. THE DATA ADJUSTMENT WAS PERFORMED USING CARIS BASE EDITOR V2.1 RAISING ALL SOUNDINGS PROPORTIONATELY ALONG THE LINEAR DISTANCE BETWEEN THE TIDAL BENCH MARKS UTILIZED TO DEFINE THE VERTICAL DATUM. THE ADJUSTMENT AT THE PORT OF ANCHORAGE IS 0.0' EXTENDING TO AN ADJUSTMENT OF +3.73' AT FIRE ISLAND (SEE DIAGRAM SHEET 1). THE HISTORIC NOAA DATA SETS SHOWN FOR 1974, 1982 & 1992 WERE NOT ADJUSTED FOR THE MLLW TIDAL DIFFERENTIAL ON THIS SURVEY. AS PROVIDED, NOAA HYDROGRAPHIC DATA WAS PROCESSED AND ADJUSTED FOR TIDAL DIFFERENTIALS USING TIME AND RANGE CORRECTIONS.
5. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
6. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
7. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
8. BACKGROUND IMAGES ARE COMPRISED OF NOAA NAUTICAL CHARTS 16660 (30TH ED., JUN/06) SHEETS V-101 AND V-102 AND 16665 (9TH ED., MAR/06) SHEETS V-103 – V-113. DIGITAL RASTER IMAGES OF THESE CHARTS WERE TRANSLATED INTO PROJECT HORIZONTAL DATUM USING BLUE MARBLE GEOGRAPHICS AND COLOR MODIFICATIONS MADE WITH COREL SOFTWARE.

–45 CONTOUR CHANGE

1974 · 1982 · 1992 · 2000 · 2004 · 2005 · 2010

BASELINE PROFILE COORDINATES

BASELINE PROFILE	BEGINNING NORTHING	BEGINNING EASTING	ENDING NORTHING	ENDING EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2A	2,658,066.00	1,654,116.00	2,654,630.00	1,664,159.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,650,810.00	1,649,884.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00

CONTROL COORDINATES

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC
S END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC
TERRA-10 2008	2,644,971.79	1,660,156.85	80.39	PORT OFFICE ANT. MOUNT
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC
EQ-1	2,629,995.41	1,643,787.75	–	–
VAN DUSEN GPS 1986	2,621,198.82	1,648,753.69	–	NGS SBC
AWWU 1994	2,629,310.76	1,635,837.68	–	3" ALCAP
NOAA/NOS TIDAL BENCH MARKS AT THE PORT OF ANCHORAGE 9455920				
TIDAL 16 1966	2,644,293	1,659,727	40.53	USCGS BENCH MARK SBC
B 75 1964	2,644,598	1,660,095	36.82	USCGS BENCH MARK SBC
NOAA/NOS TIDAL BENCH MARKS AT FIRE ISLAND 9455912				
BM 13 1974	2,620,685	1,605,138	28.41	NOS TIDAL BENCH MARK SBC
RIFE 1960	2,620,520	1,604,180	29.99	USCGS TRI-STA SBC

1250 0 1250 2500 3750

SCALE IN FEET
HORIZONTAL SCALE: 1"=1250'
UNLESS NOTED OTHERWISE

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-08-D-0002-0013
CONTRACTOR TERRASOND LIMITED
CITY PALMER STATE ALASKA
Recommended: Approved: Date:
FIRM CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date	Approd

Date: 11/03/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2848-10

Designed: JEA
Drawn: KNB/LEP
Reviewed: KDW
Chief, Survey Section
Submitted: A. CHURCHILL
Chief, Operations Branch
USACE Survey No.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

ANCHORAGE, ALASKA
ANCHORAGE BASELINE PROFILES
OCTOBER 28–31, 2010
–45 CONTOUR CHANGES ALONG HISTORIC BASELINE PROFILES

Reference number:
V-114
Sheet 14 of 14