



KOTZEBUE AIRPORT RSA IMPROVEMENTS

Kotzebue, Alaska

CLIENT

Department of Transportation and Public Facilities, Northern Region

CONTACT

Ryan Anderson
(907) 451-5129

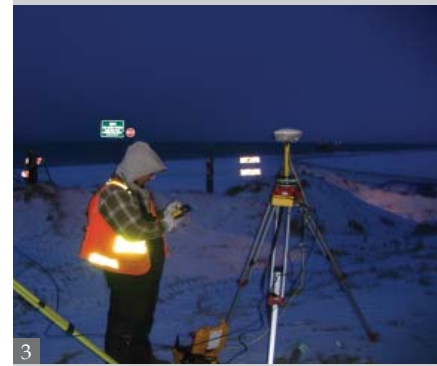
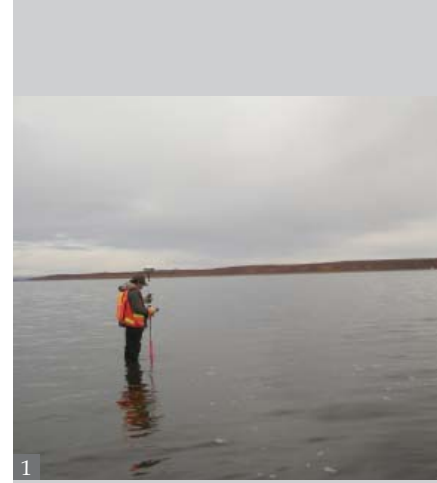
YEAR COMPLETED

2009

In 2009 USKH's survey department was contracted to perform the control, topographic, bathymetric, and aeronautical survey tasks for the Kotzebue Airport's RSA Improvement project. USKH's extensive static GPS control network covered an area of the Kotzebue Sound approximately 40 miles wide x 60 miles long and included the verification of the Primary and Secondary Airport Control Stations in accordance with FAA Advisory Circular (AC) 150/5300-18B. This control network served as the basis for all surveys being performed on this project. RTK GPS techniques were utilized to perform the topographic survey of the existing runways, taxiways, and other places of interest totaling an area of about 200 acres. This survey was suitable to generate a topographic map with a 1 foot contour interval.

In support of the coastal engineering assessment and design efforts needed to extend the existing runway into the Kotzebue Sound, USKH performed an extensive cross sectional survey of the sound. Over 120 linear miles of cross sectional data was gathered with the average cross section being between 15-20 miles long. Along with the cross sectional survey a more traditional bathymetric survey covering approximately 42 acres was required to produce a 1 foot contour map of the sea floor for the proposed runway design into the sound. USKH utilized Trimble R8 GPS units for navigation and tides while a 200khz 3 degree shallow water transducer connected to a Ross 960 echo sounder with Hypack software was used to collect the sounding data with GPS time-syncing.

The aeronautical survey is one of the first being performed in Alaska following the standards set forth in FAA AC's 150/5300-16A, 150/5300-17B, and 150/5300-18B. This includes the verification of existing geodetic control with ties to the National Spatial Reference System (NSRS), collection of aerial imagery, and the location of all airport obstructions and features in accordance with Table 2.1 of AC 150/5300-18B. USKH performed all of the control and ground surveying tasks for the aeronautical survey. USKH sub-contracted MLA Inc. for aerial imagery acquisition and remote sensing activities.



1. Topographic survey, Kotzebue Sound
2. Level loop, Kotzebue, Alaska
3. USKH Party Chief setting base station