



AKUN ISLAND AIRPORT SURVEY

Akun, Alaska

CLIENT
HDR, Inc.

CONTACT
Scott Wharton, P.E.
(907) 644-2046

YEAR COMPLETED
2008

AWARD
2009 Highlights in
Surveying Winner -
Point of Beginning



In 2008 USKH’s survey department was contracted to facilitate the survey efforts required to design and build an airport on a remote island in the Aleutian Island chain, and the required hovercraft and barge landing sites needed to access this airport. The proposed airport site was on Akun Island, which is located approximately 750 miles southwest of Anchorage, Alaska. This airport’s primary function is to service the City of Akutan, which is located on the neighboring island of Akutan. Due to terrain and lack of space on Akutan Island, the proposed airport would be built on Akun Island with a hovercraft and barge system developed to transport people and equipment back and forth across Akun Strait.

This project included control, bathymetric, topographic, glide slope, precision approach path indicator (PAPI), Interferometric Synthetic Aperture Radar (IFSAR) ground truthing, and ROW surveying and mapping. USKH established an extensive control network that included setting Primary and Secondary Airport Control Stations. These control points were set in accordance to the National Geodetic Survey (NGS) and Federal Aviation Administration (FAA) standards, which were published by NGS in September 2008.

Due to the unique tidal influences of the area USKH set three H350XL/H355 “Bubbler” tide gauges to establish the Mean Low Low Water Elevation, which was the basis of the vertical control for this project. USKH performed five different bathymetric surveys around the two islands to assist in the selection and design of the hovercraft and barge landing sites. Trimble R8 GPS units were used 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. In addition to the control and bathymetric survey effort, USKH performed an upland topographic survey of the areas for the proposed runway, access road, and barge landing site infrastructure that totaled approximately 1,100 acres.

The survey of this mountainous area was suitable to generate a topographic map with a 1-foot contour interval. USKH also located and recovered all the Public Land Survey System monuments in the area for use in ROW mapping and acquisition.



1. Static survey, Akun Island
2. Static survey, North Surf Bay