Direct Point Positioning Surveys
For State of Alaska Patents

CACFA Meeting – January 29, 2016

Michael Schoder, BLM Alaska Chief Cadastral Surveyor
Comparison of the Statutory Language

Statehood Act

“…..the Secretary of the Interior shall survey the exterior boundaries of the area requested without any interior subdivision thereof and shall issue a patent for such selected area in terms of the exterior boundary survey”

vs.

ANCSA

“The Secretary…..shall monument only exterior boundaries of the selected or designated areas at angle points and at intervals of approximately two miles of straight lines.”
“Status Quo” Method of Survey and Platting

- Set monuments approx. every two miles on all township lines
- Produce a plat with no sections or section corner coordinates
TOWNSHIP 2 NORTH, RANGE 6 EAST, OF THE UMIAT MERIDIAN, ALASKA

This plat and field notes represent the survey of the north topographical and the corners of Township 2 North, Range 6 East, Umiat Meridian, Alaska.

This survey was executed by Charles P. Allen, Jr., Registered Alaska Land Surveyor No. 330397, for the Division of Land Surveying, Alaska Department of Natural Resources, Tract 4, filed December 7, 2006, and recorded by the Recorder of Umiat, Alaska, on October 2, 2006.

The hydrograph shown on this plat identifies the streams and the line of ordinary high water of winter illegal, aggregated from the land area. The survey was made using a standard level and a transit, and the results thereof are represented in the plat.

Acceptance of this plat does not purport to transfer any interest in submerged lands to which the survey is applied, which are controlled under the Water Under Title Act of 1994, P.L. 103-306, maintaining the use, condition, or absence of mineral rights to said water bodies.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Anchorage, Alaska

This plat is strictly conformable to the approved field notes and the survey, having been properly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

For the Director,
Deputy State Director for Sukakpak Survey, Alaska
DPPS Approach
of Survey and Platting

- Survey only the exterior boundary of the ownership pattern
- Set necessary control (monuments)
- Monument the angle points
- Produce a plat with coordinates for all section corners using DPPS methods
Future Survey with Legacy survey record

Traditional Twp. (1973 MOU) Survey Work Subsequent to ORIGINAL SURVEY Approval

NE 1/4, Sec. 16

TOWNSHIP 15 NORTH, RANGE 25 EAST, OF THE KATEEL RIVER MERIDIAN, ALASKA

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Original Corner (Recovered)  X COMPUTED CORNER  O SET CORNER

LEGEND
Future Survey with DPPS survey record

Proposed Twp. Survey Work Subsequent to ORIGINAL SURVEY Approval

NE ¼, Sec. 16
Considerations

• There are no technical issues with BLM’s DPPS Approach

• The approach is not unproven and un-tested. The State DOT&PF has been performing similar surveys and records for legal highway ROWs for over 10 years: examples are DPPS-like surveys for Denali Highway, Taylor Highway, Dalton Highway

• Maintenance and destruction of monuments a long –term liability and future expense for the State

• The GNSS system (more than just GPS) is mature and will be supported in the future. The demand for accurate location by satellite systems is insatiable.
Opportunities

• The State has the opportunity to leverage the DPPS approach in future legal land surveys and parcel descriptions for the State by following the lead of BLM’s DPPS to provide advantages such as:

  • Ease of unofficial location of boundaries on the ground by using satellite positioning in mobile devices for groups like miners, oil and gas lessees, recreational users, prospective land owners, etc.
  • More economical future legal surveys when the need arises to mark the corners of property boundaries
  • A clear plan for future surveys that will allow efficient procedures for private land surveyors.
  • Reduced boundary uncertainty and costs due to monument destruction or disturbance.
  • Compatible and accurate boundary framework for GIS and other geospatial databases.
Quotes from Governor Walker’s 2016 State of the State address closing

• We must take Bold Steps
• We the people can create solutions
• We are all in the same boat.
• We have the guts to take ahold of the wheel with 2 strong hands
• We need to put aside the politics of usual
• We must pull Alaska into the prosperous and sustainable future
Questions?