



**SEWARD HIGHWAY RIGHT OF WAY STUDY
MP 99.5-105
PROJECT No. 59765**

BOUNDARY RESOLUTION

CENTERLINE

The project centerline was computed from milepost (MP) 97 through 109 and submitted to AKDOT&PF on December 2, 2013. It is based on record data from AK DOT&PF projects F-031-2(55) and NH-0A3-1(28)/54433. It was created from tied monuments in the centerline of the highway. The monuments were held to fix the tangents and the record radii was held to create the curves. In areas where the ROW lines were not defined, the centerline was offset 150 feet to establish the ROW line. ROW lines were computed holding just the 1981 Project No. F-031-2(55) Right of Way maps and As-built plans. The only major discrepancy found was in the Bird Creek area and is shown on the ROW map.

RAILROAD

U.S. Surveys 9012 and 9013 were used to compute the existing Right of Way of the Alaska Railroad. The Right of Way lines were computed using a combination of found monumentation and grant boundary adjustment. The curves were set by holding the tangents and the record radii. The length of tangent and curve were then checked. In areas where the record curve data did not work and could not be recomputed, non-tangential curves were created holding the record radius from computed PC's or PT's.

The meanders were computed using the grant boundary adjustment method as stated above. The seaward lots were created holding the lot configuration and grant adjusting the position along the meanders. The record data (including area) was checked after the lot was computed.

The curve adjacent to U.S. Survey 3200 would not fit the found monuments or the platted dimensions if the record radius was held. The tangents could not be held because the computed PC and PT did not fit the found monuments. The record radius was changed to fit the existing monumentation and the curve was computed non-tangentially between found monuments.

PROTRACTED TOWNSHIP

The record NAD 1927 protracted drawing of T10N R1W was rotated and scaled between the found monument for the WCMC of sections 25 and 30 on the east boundary of the township and the WP of sections 1 and 6 on the west boundary of the township.

USS 3680

Corner No. 1 was established from the original reference monument refurbished by BLM with USS 9012. Corner No. 2 was established proportionately between the original reference monuments. Corner No. 3 was established proportionately between computed corner 2 and the original monument at the northwest corner of lot 17 USS 3201. The computed inverse distance from corner 2 USS 3680 and the NW corner of lot 17 USS 3201 is 8.77 feet short of the record distance. The distance from NW corner of lot 17 USS 3201 and the NW corner of lot 1 USS 3201 is 1.82 feet short of the record distance. The monuments are straight along this line. The check angle from Corner 3 to corner 4 is within 0.43 feet. The distance between



them is 3.53 feet short. The plat record and the found monuments don't match in this area. Setting the SW corner of lot 32 by proportion is the best method.

Corner No. 4 is the original brass cap.

Corner No. 9 was established from the original reference monument.

Corner No. 10 was computed using record dimensions from the BLM USS 9012 resurvey of USS 3680 and then grant adjusted between found monuments.

The line from corner 9 to 10 represents the as-built centerline of the Seward Highway from USS 3680. The curve west of corner 10 could not be computed tangentially and still pass through corners 1 and 2. It was computed with the three point method through points 1, 2 and 10 and is non-tangential. The offset ROW line to the south is also non-tangential.

USS 3201 AND 3202

The bearing for the long tangent on the south boundary/ROW line was established between the original monument at the SE corner of lot 19 USS 3202 and the rebar at the SW corner of lot 26 USS 3201. The SW corner of lot 28 USS 3201 was computed along said ROW line from the SW corner of lot 26 with the record distance being scaled using a computed local scale factor created measured/record between select found monuments.

The check angle from The SW corner of lot 28 to SE corner of lot 31 is within 0.8 feet. The distance between them is 1.09 feet long.

The SE corner of lot 31 is the original brass cap.

The corner of lots 29 and 30 was set proportionate between the two original reference monuments. The distance to the computed SW corner of Lot 28 is 0.90 short. The distance to the computed SE corner of lot 31 is 2.03 feet long. The distance to the corner of lots 13, 14, 19, 20 is 4.98 feet short of record.

The SW corner of lot 32 (Corner No. 3 USS 3680) was computed proportionately between the computed corner 2 of USS 3680 and the original monument at the NW corner of lot 17 USS 3201. The inverse distance between corner 3 of USS 3680 and the NW corner of lot 17 USS 3201 is 8.77 feet short of the record distance. The distance from the NW corner of lot 17 of USS 3201 and the NW corner of lot 1 USS 3201 is 1.82 feet short of the record distance. The monuments are straight along this line. The check angle from the SW corner of lot 32 to SE corner of lot 31 is 3.97 feet off. The distance between them is 5.15 feet short. The plat record and the found monuments don't match in this area. Setting the SW corner of lot 32 by proportion is the best method.

INDIAN VALLEY ALASKA SUBD.

The south boundary/ROW line of Indian Valley Subd. was created by the 3 point curve method holding the aluminum cap at the PC at Lot 12, the plastic cap at the SE corner of Lot 2 and the copperweld at the SE corner of Lot 6. The curve is non-tangential. There were sufficient property corners recovered to delineate the ROW but the mathematics of the plat did not match them.

CHUGACH PARK VIEW SUBD.

BLM reset the south corners of USS 1868 (the Parent Parcel) with USS 9012. The Chugach View plat notes that the ROW was set from the AKDOT F-031-2(55) ROW maps. The offsets match the maps but not the stations. The centerline monuments don't match the computed PC and the PT of the curve by ± 3 feet. The original Alaska Road Commission case files from 1949 for the original 50 foot ROW purchase were obtained. The acquisition boundary on the map supplied did not close on itself by 1.4 feet. The Chugach View plat distances did match the distances on the 1949 map within a foot. The Chugach View plat boundary was held as the ROW.