

From: John Bennett
To: [Brian Meyers](#)
Subject: RE: Kivalina Survey Report
Date: Wednesday, July 25, 2018 3:59:00 PM

Brian, here my attempt to address the acreage issue.

“I am also interested in an analysis of area. I understand the record area is from the BLM protraction diagram. What is the relationship between the protracted area from the BLM protraction diagram and area from the protracted section corners? Explain if there are differences.”

The areas shown on the BLM rectangular survey plans and protraction diagrams are either based on 1950's vintage aerial photography developed for preparation of USGS Quadrangle maps or high altitude NASA infra-red photography. A comparison with the project LiDar water boundaries indicates that any area calculations based on this mapping to be approximate and ever changing estimates. Statement of the remainder area on ROW Acquisition plans are generally for valuation and local government tax assessment purposes. The Kivalina ROW Plans do not provide parcel remainder areas for two primary reasons:

1. We have insufficient data to accurately calculate the positions of every protracted township corner, the MHW meanders of Kivalina Lagoon and the OHW lines for the navigable waters claimed by the State of Alaska to the northwest and southeast of the project corridor. The Summary of Boundary Problems report notes on page 3 that a modified computational method had to be employed due to a lack of corner positions. Given the rural nature of the lands it is unlikely that any of the originally monumented BLM corners have been obliterated by human activity. While the section line computations based on an incomplete corner recovery are more than sufficient for large parcel ROW definition, they may not be considered adequate for a subdivision platting application. The OHW meanders of the Wulik River and the unnamed tidal slough between USS 6820 and the ROW corridor would have to be determined by survey to accurately account for acreage under State of Alaska ownership and area under ownership by Native Allotees in the US Surveys adjoining these water bodies. These areas would then both be deducted from the area of each section to determine the acreage remaining in Nana ownership. R&M was able to use prior survey data to determine the MHW tidal boundary for parcels 2, 3 & 4 in the immediate vicinity of the ROW corridor. To provide an accurate remainder area for the parcels would require far more extensive MHW meanders than are available. To avoid an impression of accuracy beyond what can be reasonably supported, the remainders are shown as “Large” and no area is specified.
2. The DOT&PF Northern Region ROW mapping standard allows for a remainder area of “Large” where the remaining area is not reasonably definite and where the remainder does not lend itself to damages due to size, shape, access limitations or zoning. A few examples of NR projects using “Large” as the remainder include:
 - a. Project 61759 – Road to Tanana Tofty to Yukon River – Sheet 6 of 36 – Parcel 1C.
 - b. Project 76745 – Nome Snake River Bridge – Sheet 5 of 9 – Parcel 10
 - c. Project REH-HHE-OA4-3(16)/61277 – Parks Highway MP 194 Broad Pass – Sheet 6 of 9 – Parcels 2 & 3

- d. Project STP-NH-TEA-065-5(5)/67018 – Dalton Highway MP 274-289 Rehab – Sheet 12 of 19 – Parcel 2
- e. Project STP-0002(214)/77248 – Plack Road Bike/Ped Facility – Sheet 6 of 16 – Parcel E5
- f. Project 0617003/Z632130000 – University Avenue – Sheet 8 of 32 – Parcel 15

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Innovating Today for Alaska's Tomorrow

From: Brian Meyers
Sent: Wednesday, July 25, 2018 1:23 PM
To: John Bennett
Subject: FW: Kivalina Survey Report

FYI.

I'll call you in a bit to discuss the area question.

Brian R. Meyers, PLS, CFedS *Senior Land Surveyor*

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Innovating Today for Alaska's Tomorrow

From: Kelley, Kathleen A (DOT) [<mailto:kathy.kelley@alaska.gov>]
Sent: Wednesday, July 25, 2018 11:09 AM
To: Brian Meyers <bmeyers@rmconsult.com>
Subject: Kivalina Survey Report

Brian,

I am interested in the survey report defining how each protracted section corner position was computed with reference to the 1973 BLM manual or other computational source/resource. I suggest adding the sketch with the point numbers and including the point numbers in the report. Since R&M has a proprietary software how do you check your work? How you suggest I check the work?

I am also interested in an analysis of area. I understand the record area is from the BLM protraction diagram. What is the relationship between the protracted area from the BLM protraction diagram and area from the protracted section corners? Explain if there are differences.

Let me know you got this email and a schedule for return comments when you have that.

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