

# ROW Mapping Case Studies

"The Older I Get, the Less I Know..."



Alaska Surveying & Mapping Conference 2015

## "The Older I Get, the Less I Know..."

- This is not always a bad thing!

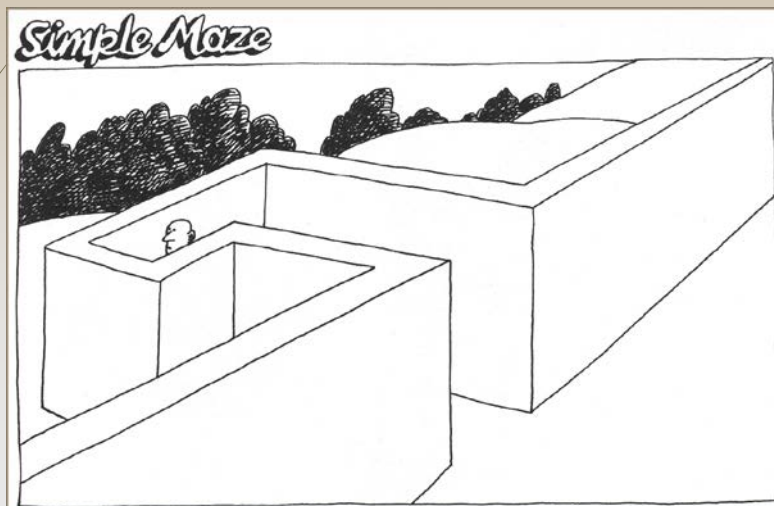


## "The Older I Get, the Less I Know..."

- This is not a bad thing!
- We grow in experience & education
- Unlike our kids, we never know everything!
- The more we know what we don't know
- So relax and peel back another layer of the "Onion"

## A Surveyor's Dilemma...

- What does a surveyor know about ROW?  
Retracement: Locate existing ROW  
Subdivision: Establish new ROW



# A Surveyor's Dilemma...

- What does a surveyor know about ROW?  
Retracement: Locate existing ROW  
Subdivision: Establish new ROW
- Existing ROW is anything but uniform!  
Authorities vary  
Interests vary  
Widths vary
- "A Patchwork Quilt of Title Interests..."



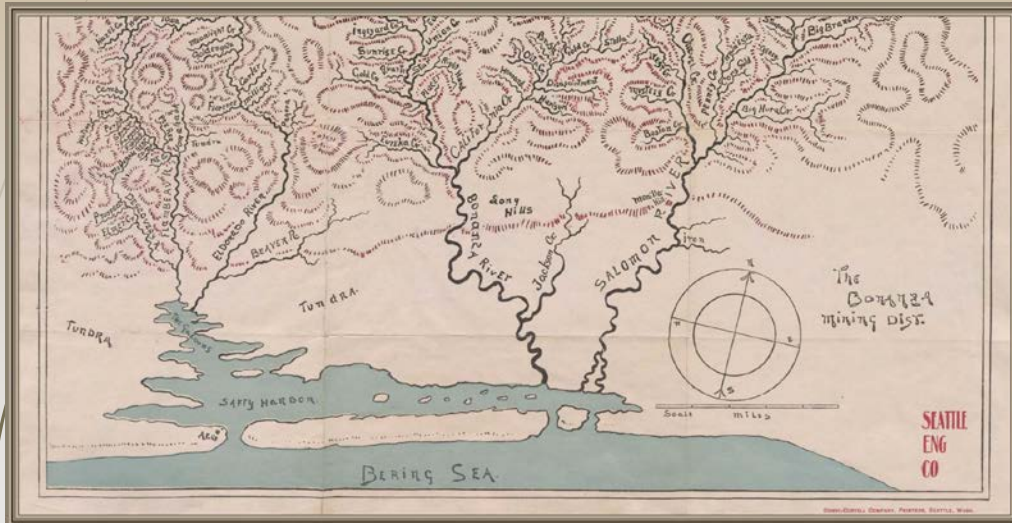
## Nome-Council Road MP 14-32

~

## Mapping the Right-of-Way at Statehood

# Getting Started

- This mapping project a long time in the making



1899 Map of Nome Mining District

# Getting Started

- This mapping project a long time in the making
- Why so long? Title transferred in 1959...
- ROW mapping was not considered a priority
- Portions of primary system still without mapping
- MP 14-32 – Last gap on Nome-Council road
- Storm damage resulted relocation of road
- 2011 “Snowicane” – Equal to Cat 4 Hurricane
- Where is the ROW?...no...Where is the road?
- Federal funds require ROW “certification”
- ER funds waiver if road reconstructed in original location
- Continual lobbying for mapping funds
- Too much money....too little time

# Getting Started

- Mapping funded as a part of “Nome Sea Storm Permanent Repairs – November 2011”



**1913 Nome Storm**

Courtesy of Carrie M. McLain Memorial Museum



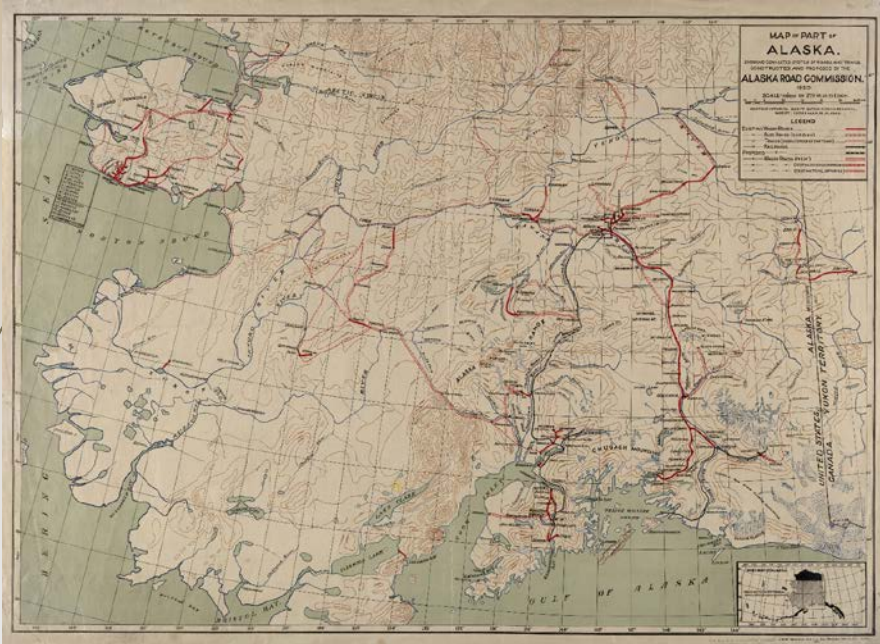
**2004 Nome Storm**

# Getting Started

- Mapping funded as a part of “Nome Sea Storm Permanent Repairs – November 2011”
- Issued to R&M Consultants under DOT&PF Northern Region Survey Term Contract
- NTP issued August 2013
- Aerial Photography & Field Surveys complete by end of the year
  
- Retired in May 2014 – 29 years with Dept. of Highways and DOT&PF
- Joined R&M Consultants – Fairbanks
- Great opportunity to see project taken to completion

# Finding the Historic ROW

- Mapping PLO ROW – Best Evidence



1920 Alaska Road Commission

# Finding the Historic ROW

- Mapping PLO ROW – Best Evidence
- Locate Centerline: By Survey or Photography
- Has Centerline Moved Since Statehood?
- Fit Geometry: Tangents & Curves
- Offset PLO Right-of-Way Width
- Ties to Adjoining Surveys & Boundaries
- What is Senior? PLO or Prior Land Actions
- Lands: State, Federal, ANCSA, Private & N/A
- Prior Mapping: USGS Quad - 1950
  - Scale – 1:63,360
  - Quality of Photography
  - Cartographic License

# Research Elements

- Nome-Council Road (Current)
  - Area History
  - Aerial Photography
  - Construction & Maintenance Records
  - Other Public Mapping Records
  - Background Interviews
  - Public Land Orders
  - Public Easements by Prescription
  - Floating Easements
  - Federal Right-of-Way Grants
  - Native Allotment Use & Occupancy

# Research Elements

- Nome-Council Road (Old Loop)
  - Public Land Orders
  - Omnibus Act Quitclaim Deed Issues
  - ROW Jurisdiction & Management
  - RS-2477 Trails & Territorial Act of 1917
  - Other Public Mapping Records

# Research Elements

- ROW Issue Qualifiers
  - Context – What were they thinking?
  - Location – Where is it at?
  - Width – Specified or?
  - Interest – Easement, fee, or?
  - Policy – Agency Position
  - !!! – Holy Cow! This was kind of cool!!!

# Area History

- 1898 Gold Discovery in Council Initiates Road
- 1904 Road & Bridge to MP3 Private Toll Facilities
- 1905 Alaska Road Commission Established
- Extensive ARC Maintenance in Support of Mining





# Area History

- 1913 storm destroys Nome in part, all of Solomon, large sections of the road and all of the bridges!
- 100 years later, Mother Nature still in control...
- If anyone sees Wyatt, tell him to stop in Juneau on his way home to pick up his pistol!!!!



# Aerial Photography




Photogrammetry by Kodiak Mapping, Inc.

# Aerial Photography

- Photogrammetry by Kodiak Mapping, Inc.
- 2013 photos acquired for as-built & design
- Existing road edge digitized with centerline splits established every 500 feet
- Best fit centerline to DOT&PF 95/5 standard
- 1950 Army Map Service for historical photos – basis of USGS Solomon B-6 Quad
- 1962 BLM photos: better imagery & date – clearly reflects realignment and old loop

# Construction & Maintenance Records



KEY MAP

**STATE OF ALASKA  
DEPARTMENT OF HIGHWAYS**


**PLAN AND PROFILE  
PROPOSED HIGHWAY PROJECT**

**SAFETY SOUND BRIDGE  
& APPROACHES**

**RS-S-0130(15)**  
*AS-BUILTS*

Sheet No.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION
3-4	MATERIAL SOURCES & DETAILS
5	ESTIMATE OF QUANTITIES
6-7	PLAN & PROFILE
8-17	BRIDGE PLANS (S-155 / S-156)
18	STD. G-010 MODIFIED

*Contractor: Green Const Co*  
*Proj. Engr: B. Gant 6-22-77, 6-29-78*  
*H. Springer 7/7/78*  
*Construction Began: 6-30-77*  
*Construction Completed: 9-28-78*



NORTON SOUND

**PROJECT SUMMARY**

LENGTH OF BRIDGE	110.00	SPR. WALLS
LENGTH OF APPROACH	100.00	SPR. WALLS
LENGTH OF PROJECT	210.00	SIG. WEIR

**PROJECT DESIGNATION**

ADD BRIDGE - 50  
ADD BRIDGE - 100

DRW - 20  
D - 30-70  
T - 8%  
V - 234.00

WESTERN DISTRICT  
RECOMMENDED FOR APPROVAL

DISTRICT HIGHWAY ENGINEER

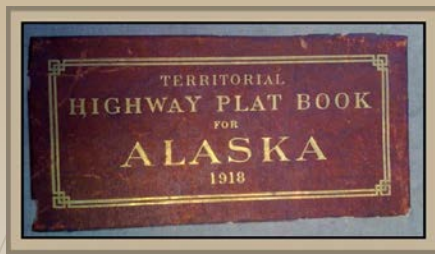
STATE OF ALASKA  
DEPARTMENT OF HIGHWAYS

APPROVED

COMMISSIONER OF HIGHWAYS

As-builts, ROW Plans, Reports, Control Surveys

# Historical Archives



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
ALASKA ROAD COMMISSION  
JUNEAU, ALASKA  
Nome District

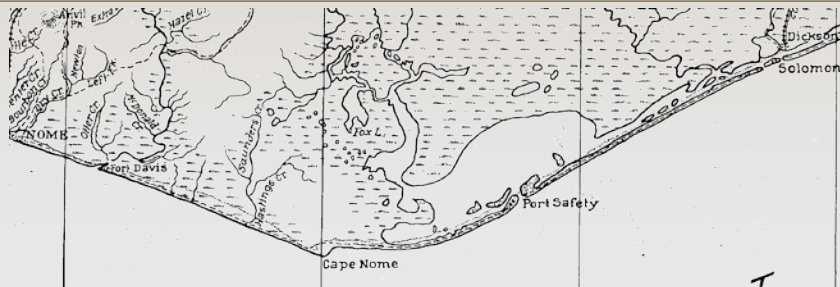
December 22, 1949

Col. N  
IPT  
AFG

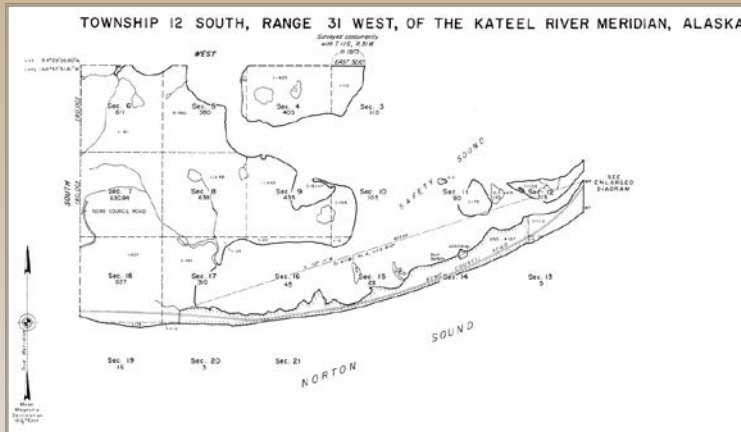
A.R.C. ORDER NO. 40 February 6, 1951

SUBJECT: Numbering System for Alaska Roads

A.R.C. Order No. 34, dated September 15, 1950 is hereby revoked in its entirety, and is superseded by the provisions of this order.



## Mapping Records - Federal



RECEIVED  
S.G.O.  
OCT 8 1900  
ANSWERED  
*Recorded*

FIELD NOTES  
of  
THE HOMESTEAD CLAIM OF  
DAN MARK  
situate  
At Entrances and on West Bank  
of  
PORT SAFETY HARBOR  
Near Cape Nome  
District of Alaska.

As Surveyed by  
Geo. V. Ashford,  
U. S. Deputy Surveyor.



- Rectangular Surveys
- U.S. Surveys
- Field Notes

# Land Records - Federal

F-14908-B

## The United States of America

To all to whom these presents shall come, Greeting:

WHEREAS

Sitnasuak Native Corporation

is entitled to a Land Patent pursuant to Sec. 14(a) of the Alaska Native Claims Settlement Act of December 18, 1971 (43 U.S.C. 1601, 1613(a)), for the surface estate in the following described lands:

WAR DEPARTMENT,  
WASHINGTON,

J.A.G.O.  
(18575)

September 16, 1905.

THE PRESIDENT:

I have the honor to recommend the reservation, for military purposes, subject to private rights, of all public lands at Safety Harbor and Old Woman, Alaska, included within boundaries described, respectively, as follows, viz:

1. ---At SAFETY HARBOR: Starting from an initial stake marked "No. 1, N.E. cor. U.S.M.R." true West

- Land Reservations
- ANCSA Patents
- Allotment Certificates

Fairbanks 031650

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

NATIVE ALLOTMENT

IT IS HEREBY CERTIFIED that pursuant to the authority delegated to him by Bureau Order No. 701, as amended December 16, 1964 (29 F.R. 18393) of the Director of the Bureau of Land Management, the Land Office Manager, Anchorage Land Office on October 25, 1974, approved the application, Fairbanks Serial Number F-031650, of John H. Bahke of Nome, Alaska, filed pursuant to the Act of May 17, 1906 (34 Stat. 197; 48 U.S.C. 357), as amended, for:

Lot 87, U.S. Survey No. 4107, Alaska, situated on a split of land between Norton Sound and Safety Sound.

Containing 3.65 acres:

Therefore, let it be known that pursuant to the said Act of May 17, 1906, as amended, the land above described shall be deemed the homestead of the allottee and his heirs in perpetuity, and shall be inalienable and nontaxable until otherwise provided by Congress or until the Secretary of the Interior or his delegate, pursuant to the provisions of the said Act of May 17, 1906, as amended, approves a deed of conveyance vesting in the purchaser a complete title to the land.

# Public Land Records

2014-000531-0

Recording District 201 Name  
05/23/2014 11:34 AM Page 1 of 3



078 2744

F-17807A

DEED

THIS DEED, made and entered into this 27<sup>th</sup> day of August, Two Thousand and Thirteen, by and between Emerson Conger, Alaska Native of PO Box 1333, Nome, AK 99762, Grantor, and Alaska Missions and Retreats, an Alaskan Non Profit Corporation, of PO Box 230851, Anchorage, AK 99523, Grantee. This conveyance is made pursuant to the Native Allotment Act of May 17, 1906 (34 Stat. 197), as amended by the Act of August 2, 1956 (70 Stat. 954) and 25 CFR 152.25(d).

WITNESSETH, that Grantor, for and in consideration of the sum of Twenty Thousand and no/100 Dollars (\$20,000.00), in hand paid, the receipt of which is hereby acknowledged, does hereby convey and warrant unto said Grantee the following described real estate and premises in the State of Alaska, and more particularly described as follows:

Lot Forty Nine A (49A), Nook 1993 Subdivision, within T. 12 S., R. 31 W., Sections 15 and 16, Kateel River Meridian, U.S. Survey No. 4107, containing 1.31 Acres (more or less), according to Plat 94-7, as filed in the Cape Nome Recording District.

## A PLAT OF NOOK 1993 SUBDIVISION

A REPLAT OF  
LOTS 46, 47, 48 AND 49 OF U.S. SURVEY NO. 4107  
Near Port Safety, Alaska  
LYING WITHIN

PROTRACTED SECTION 15, TOWNSHIP 12 SOUTH,  
RANGE 31 WEST, KATEEL RIVER MERIDIAN, ALASKA

CAPE NOME RECORDING DISTRICT  
THE WHOLE THEREOF CONTAINING 16.42 ACRES, MORE OR LESS

Alaska Rim Engineering  
Engineers Planners Surveyors

P.O. BOX 2749  
PALMER, ALASKA 99645  
PHONE (907) 745-0222  
FAX (907) 746-0222

W.O. 93-N02022 DATE: SEP. 1993 SCALE: 1" = 100'  
DRAWN BY: J.M.C. CHECKED BY: [Signature] SHEET 1 OF 1

COMMISSIONER'S DEED OF VACATION BOOK 288 PAGE 791  
Nome Recording District

The Grantor, State of Alaska, acting by and through its Department of Highways acting under the authority of the Alaska Statutes, Section 19.05.070, conveys, quitclaims and otherwise vacates unto Valerie Sobocienski all interest of whatsoever nature which it has, in the following described real property situated in the State of Alaska, to wit:

A tract of land situate in the existing right of way of the Nome-Council Road in U.S. Survey 480 in Protracted Sections 6

- Deeds
- Vacations
- Subdivisions

## Background Interviews



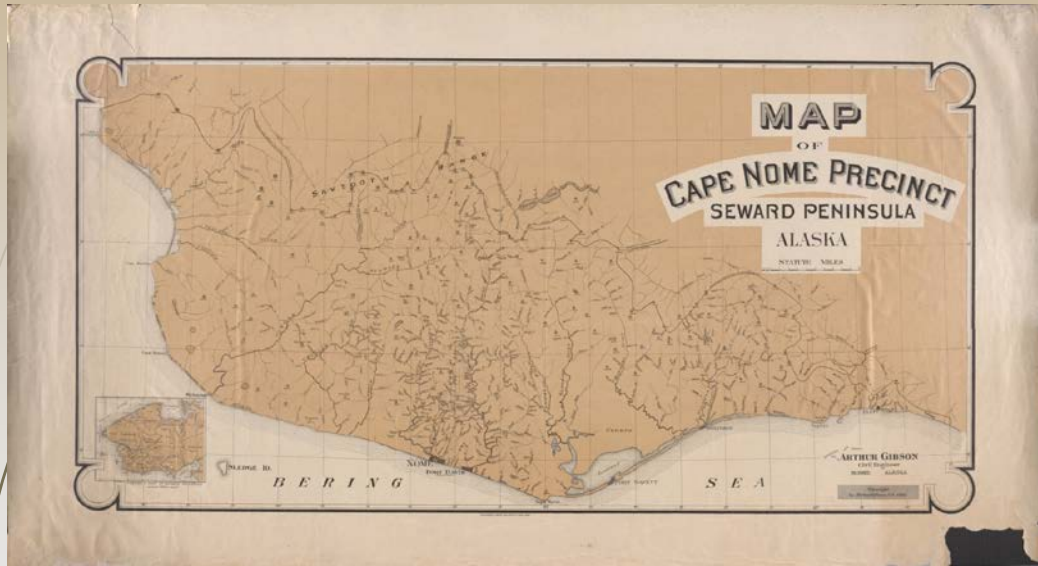
- May help to fill in some historical gaps
- Evan Booth: *"Yes, the ferry was in operated by the Dept. of Highways until the bridge opened. I was 8 years old when I first crossed."*

## Nome-Council Road (Current)



Train to Nowhere

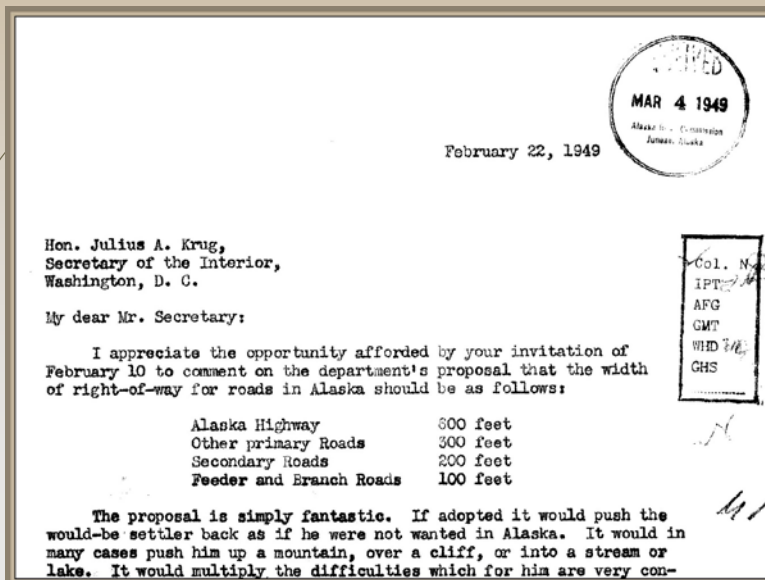
# Public Land Orders



Arthur Gibson Map - 1904

# Public Land Orders

- The easy part – Most Omnibus QCD ROW are PLO based due to large federal land holdings



# Public Land Orders

- The easy part – Most Omnibus QCD ROW are PLO based due to large federal land holdings
- Prior to PLO, primary basis for ROW was RS-2477
- PLO 601- August 10, 1949 - Withdrawals
  - Classified: “Through”, “Feeder” & “Local”
  - Location: centerline based
  - Widths: 300’, 200’ or 100’
  - Subject to valid existing rights
- SO 2665 – 1951- Feeder/Local now easements
- Federal/State/ANCSA generally subject to PLO
- Homestead, mineral and other federal patents & native allotments require more analysis
- 200’ PLO ROW applied to most of project

# Public Easements by Prescription

- When the road footprint is outside of the ROW

## **adn.com**

Anchorage Daily News

### **Senate passes bill to stop 'legal thievery' of property**

**SQUATTERS: Measure would stop them from gaining title to land.**

The Associated Press

*(Published: May 14, 2003)*

KENAI -- The Alaska Senate has passed a bill that would wipe the 800-year-old common law doctrine of adverse possession from Alaska law.

Senate Bill 93, sponsored by Sen. Tom Wagoner, R-Kenai, repeals Alaska's adverse possession law. The doctrine, which first was established in the Middle Ages, could allow squatters on private property to legally assume ownership of that property under certain well-defined conditions.

Wagoner said it is a doctrine the state should abandon.

## Public Easements by Prescription

- When the road footprint is outside of the ROW
- Adverse Possession – By long public use
- For a “prescribed” period of time
- Creates an easement for public access
- No compensation required
- Inverse condemnation
  - By agency with eminent domain authority
  - Inadvertent taking by errant construction
  - Taking by agency representations
  - Generally, the only issue is compensation

## Public Easements by Prescription

- Is this a viable tool? Maybe not!





## Public Easements by Prescription

- Is this a viable tool? Maybe not!
- ANCSA Lands
  - Federal protection against adverse possession for undeveloped ANCSA lands
  - Inverse Condemnation not prohibited
- Native Allotments
  - No adverse possession against trust lands
  - Inverse condemnation not applicable
- Federal & State lands: adverse possession
  - Case law and statutory prohibitions
- ANCSA lands and allotments may be condemned with payment of just compensation

## Floating Easements

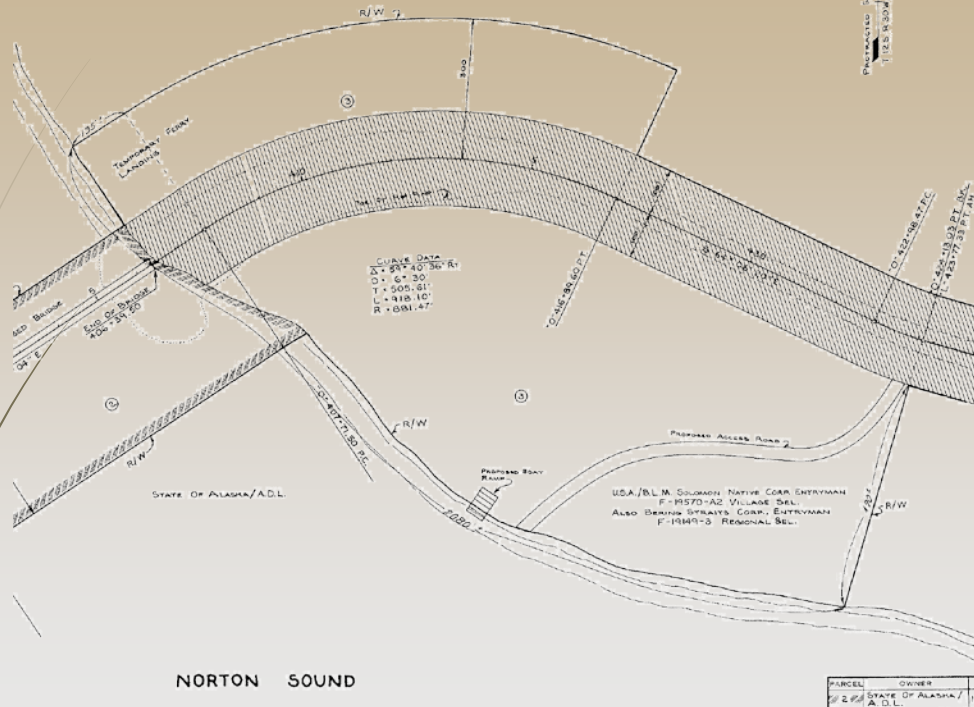
- An easement with no fixed location or width



# Floating Easements

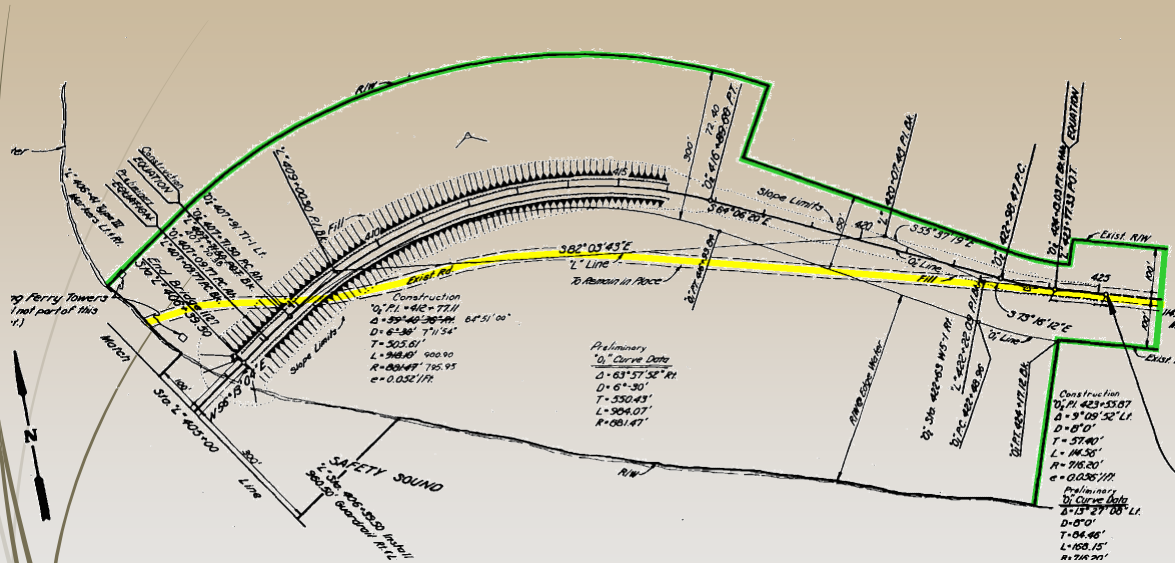
- An easement with no fixed location or width
- Similar to a “blanket” easement in that they tend to hinder development due to their location and size being indefinite and uncertain
- SO 2665 easements for new construction and ‘47 Act reservations would be considered to be “floating easements” (ROW Act of 1966)
- The Safety Sound Bridge ROW plans applied the 200’ wide PLO ROW as a “floating easement

# Floating Easements



Safety Sound ROW plans – note cross hatching

# Floating Easements



Safety Sound Bridge As-Built – Note location of existing highway

# Floating Easements

- The proposed centerline is x-hatched as the existing PLO ROW
- 1971 – DOH Commissioner and BLM Director agree to consider PLO easement as “floating” to minimize the paperwork required to acquire new ROW and vacate old
- 1976 – BLM to DOH: Stop doing that!
- In recognition of NEPA & ANCSA
- ROW mappers “didn’t get the memo...”
- As new project ROW was acquired under BLM Grant, “floating easement” was not an issue

# Federal Right of Way Grants

- East approach to Safety Sound Bridge

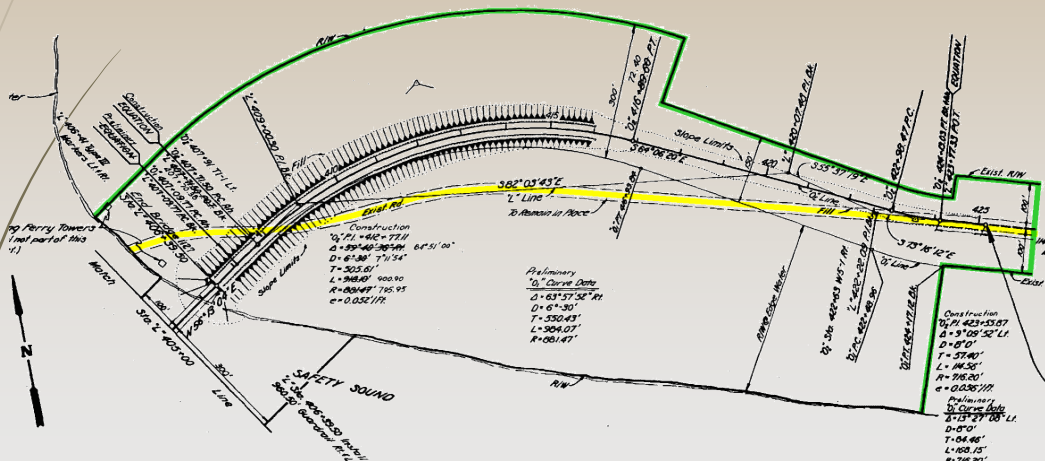


USGS Solomon 1955



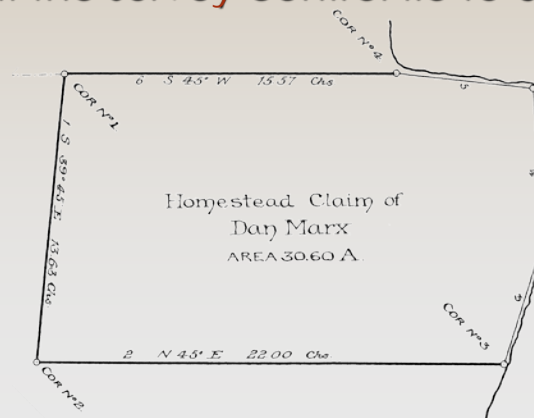
# Federal Right of Way Grants

- East approach to Safety Sound Bridge
- Construction staff found alignment problem



# Federal Right of Way Grants

- East approach to Safety Sound Bridge
- Construction staff found alignment problem
- Planned geometry would fall almost 100' to the north of the existing road
- Did designer use ROW as the centerline tie?
- Or was it the survey control tie to USS 480?



# Federal Right of Way Grants

- East approach to Safety Sound Bridge
- Construction staff found alignment problem
- Planned geometry would fall almost 100' to the north of the existing road
- Did designer use ROW as the centerline tie?
- Or was it the survey control tie to USS 480?
- Did construction surveyor use wrong control?
- How should it be solved?
  - Acquire more ROW
  - Field adjust centerline curve to fit
- Ultimately, the survey & mapping errors were absorbed by holding the BLM Grant description and controlling it with the bridge

## Use & Occupancy Native Allotments



## Use & Occupancy

- PLO subject to valid existing rights
- U&O dates preceded PLO 601 on 8 allotments
- Did Omnibus QCD create a cloud on N/A title?
- Aguilar v. United States 1979 Native Allotments
- U.S. obligated to recover title for allottee
- Omnibus QCD interests subject to Aguilar title recovery process
- DNR can negotiate title recovery process
  - Title recovery request may be rejected
  - May be subject to easements
- U.S. can and may sue to recover title
- Policy: Assert as valid until shown the contrary

# Old Nome-Council Road



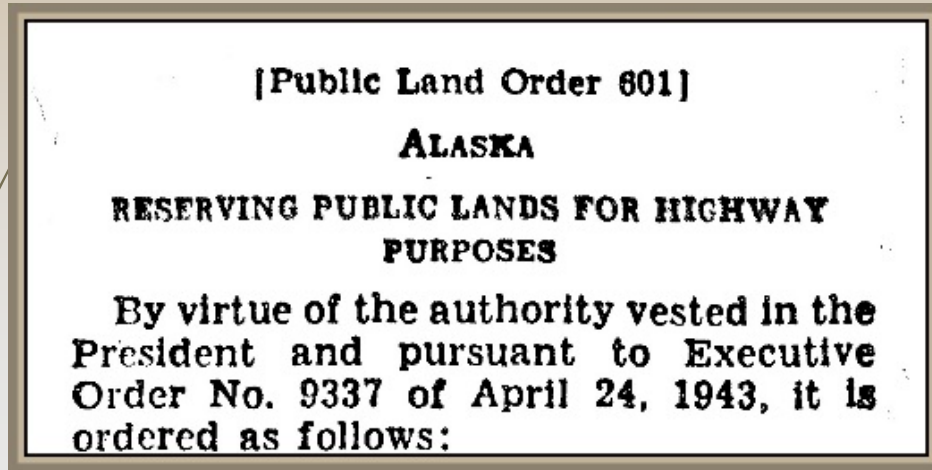
Corner Ties at Safety Sound

# Old Nome-Council Road

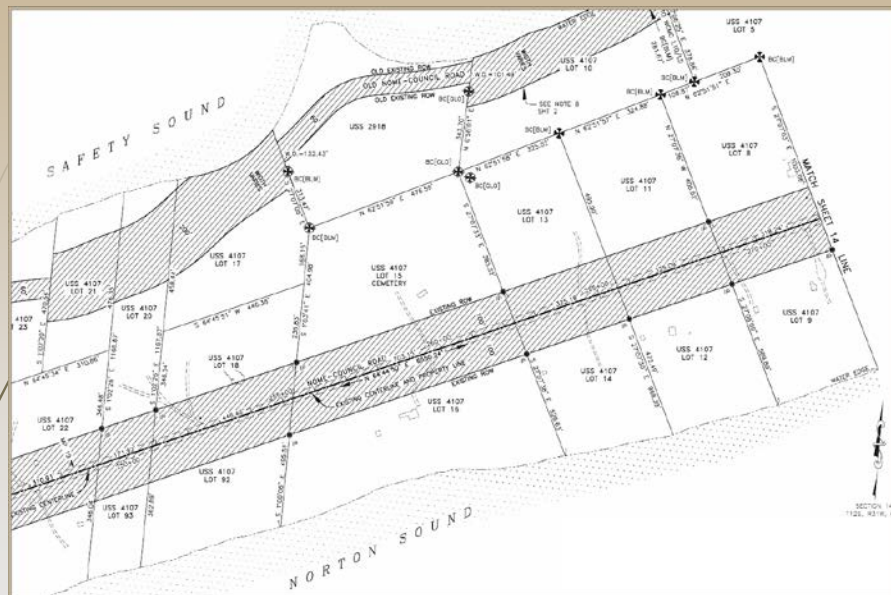
- 1953 realignment resulted in 2.5 mile loop
- The loop was not assigned a route number
- The loop was not named in the Omnibus QCD
- Status of Old Nome-Council Road?
  - Is it a public right-of-way?
  - Is it the 200-foot wide PLO ROW?
  - If not, what is the basis and width?
  - Does DOT own and manage the road?
  - Other title & policy issues?

# Public Land Orders

- Initial ROS showed Old Nome-Council road crossing 30 separate parcels



# Public Land Orders



PLO 200' ROW applied to old and new roads



# Public Land Orders

- Initial ROS showed Old Nome-Council road crossing 30 separate parcels
- PLO 200' ROW applied to old and new roads
- PLO not applied to 3 allotments with use & occupancy dates prior to PLO 601

# Omnibus Quitclaim Deed Issues

- Should both old & new routes be 200' ROW?

LIANA Recording District  
BOOK 330 PAGE 27  
Seward Recording District

LIANA Recording District  
BOOK 90 PAGE 24

SEWARD  
Serial No. 69-687

QUITCLAIM DEED

BOOK 391 PAGE 12  
Seward Recording District

Alutian Islands Recording District  
BOOK 14 PAGE 136

LIANA Recording District  
BOOK 101 PAGE 112

Serial No. 70-19  
LHIANA  
Serial No. 70-6  
McCARTHY

KNOW ALL MEN BY THESE PRESENTS that the Secretary of Commerce, United States Department of Commerce, Grantor, under and pursuant to the authority contained in Section 21 of the Act approved by the President on June 25, 1959 (75 Stat. 141), does hereby devise, release, and quitclaim unto the State of Alaska, Grantee, its successors and assigns, subject to the condition set forth below, all rights, title, and interest of the Department of Commerce in

# Omnibus Quitclaim Deed Issues

- Should both old & new routes be 200' ROW?
- "Through" & "Feeder" routes have been realigned with "Local" status assigned to old alignment...then named in Omnibus QCD
  - Tok-Cutoff: Route 8921 - Mentasta Spur
  - Richardson: Route 6851 - Old Richardson

*Fairbanks Recording District*

*BOOK 398 PART 62*  
*Anchorage Recording District*

*BOOK PAGE 142*  
*Rampart Recording District*

*BOOK PAGE 53*  
*Tanana Recording District*

Book 8 Page 52  
 Manley Hot Springs Recording District  
 ALASKA

BOOK PAGE 138  
 Fort Gibbon Recording District

FEDERAL-AID SECONDARY HIGHWAY SYSTEM, CLASS "B" ROUTES 3-27

FAS Route No.	Name	Description	Highway District No.	Constructed Mileage	System Mileage
6804	Manley Hot Springs-Tofty Manley Hot Springs Land- ing-Eureka	From Manley Hot Springs northeasterly through the Eureka mining area to FAS Route 680, with a branch near milepost 1 leading northwesterly to Tofty.	20	43.7	43.7
6851	Old Richardson Hwy.	From FAP Route 62 approximately 33 miles from Fairbanks northwesterly through a homesite area to the Tanana River.	20	7.0	7.0

# Omnibus Quitclaim Deed Issues

- Should both old & new routes be 200' ROW?
- "Through" & "Feeder" routes have been realigned with "Local" status assigned to old alignment...then named in Omnibus QCD
  - Tok-Cutoff: Route 8921 - Mentasta Spur
  - Richardson: Route 6851 - Old Richardson
- Should assertion be limited to 100-feet?
  - Clearly meets requirements for PLO ROW
  - No written DOT&PF Policy
  - Discussed in prior correspondence with BLM
  - DOT accepted recommendation of 100' ROW
  - Quasi Estoppel would lock in assertion

# ROW Jurisdiction & Management

- The old loop is subject to a 100' PLO ROW



OR



# ROW Jurisdiction & Management

- The old loop is subject to a 100' PLO ROW
- Not conveyed by Omnibus QCD to the State
- What is ROW where allotment use & occupancy precedes PLO 601 date?
- No "Aguilar" allotment reconveyance issue
- Old loop is effectively an "orphan" road
  - Similar to roads in Unorganized Borough
  - Or Boroughs without road powers (FNSB)
  - Outside of city jurisdiction
  - Outside of Service district
- Management may be assumed at later date by an authorized entity

# Patent Reservations

- Conflicting reservation in allotment certificate

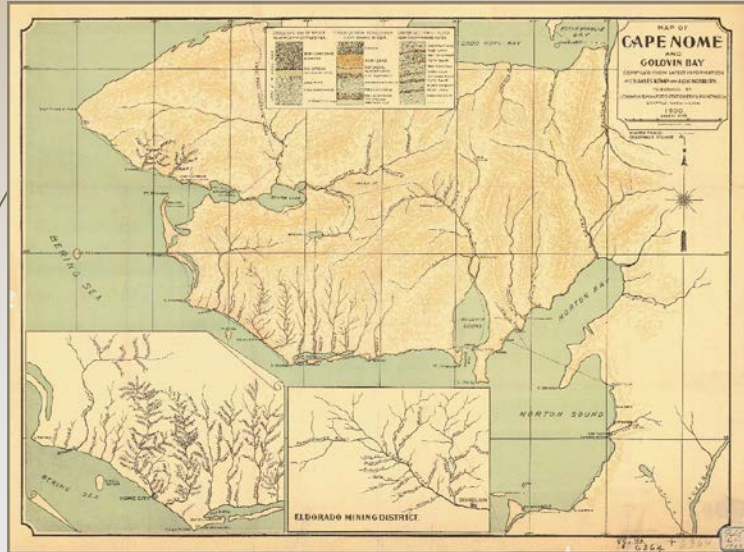


# Patent Reservations

- Conflicting reservation in allotment certificate
- *"This allotment is subject to an easement for highway purposes, extending 100 feet each side of the centerline of the old Nome-Council Road and transferred to the State of Alaska pursuant to the quitclaim deed dated June 20, 1959."*
- "subject to" can create problems in deeds
- Often confused with intent to reserve a right
- Does it create a right in this conveyance...or is it just an error?
- Methonen v. Stone Alaska 1997 – intention must be clear...ambiguities resolved in favor of land use free of easements.
- PLO assertion was limited to 100-feet

# RS-2477 Trails & 1917 Territorial ROW Act

- Allotment Use & Occupancy precedes PLO 601



1900 Map of  
Cape Nome  
and Golovin  
Bay

# RS-2477 Trails & 1917 Territorial ROW Act

- Allotment Use & Occupancy precedes PLO 601
- “Aguilar” does not apply
- Allottee’s interest subject to valid existing rights
- Allotments are subject to valid RS-2477 ROW
- Including the 3 allotments on the old loop road
- But, what is the width of the RS-2477 ROW?
  - “ditch to ditch”...public user footprint?
  - 66’ based on 1923 territorial acceptance?
  - 100’ based on A.S. 19.10.015 declaration?
  - 60’ based on Territorial Act of 1917?

# RS-2477 Trails & 1917 Territorial ROW Act

- 60' based on Territorial Act of 1917
  - *"The lawful width of right-of-way of all roads or trails shall be sixty feet (60)."*
- Territorial funds had been used on old loop
- 1917 Act did not serve to create rights-of-way
- Acts as a an acceptance of the RS-2477 Grant
- Reflected local law or custom with regard to standard width of a highway.
- 60' accepted for RS-2477 ROW across allotment

## Summary

- ROW mapping of the Nome-Council road presented a variety of issues, some we have seen before and a few that were new.
- The state's assertion of the highway ROW is now fixed in the ROS and will be reproducible after future storms.
- ROS will serve to protect the rights of adjoining owners.

The image features the word "ROW" written in a hand-drawn, sketchy style. The letters 'R' and 'W' are outlined in black with a bright cyan glow. The letter 'O' is replaced by a pink heart with a black outline and a textured, scribbled interior. The background is a light beige gradient with some faint, thin lines on the left side.

ROW

The End