

MAT-SU BOROUGH PARCEL MODERNIZATION

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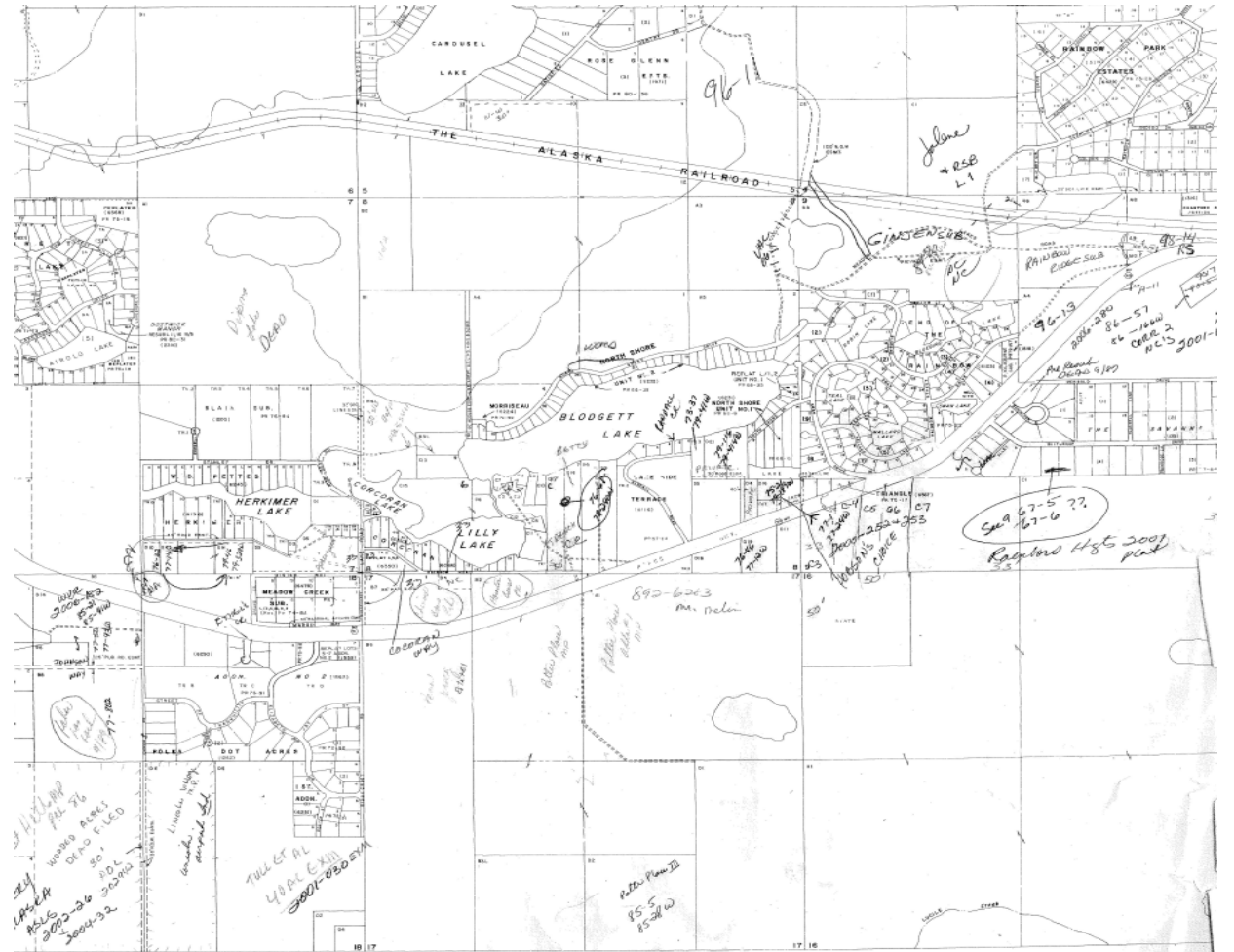
IMPORTANCE OF PARCEL DATA

- Accurate Parcel Data is important for EMS, local 911 services for accurate dispatching and lowered response times
- Accurate and precise parcel data helps the local surveying community and title companies do efficient and effective title research
- Parcel data is one of the most critical and most heavily datasets used by local, state, and Federal government as well the public.



ORIGINAL MAT-SU BOROUGH TAX MAPS

- Original Mat-Su Borough Tax maps were based off USGS Protracted grid maps
- The Parcel Data for these maps consisted of pre-drafted subdivision drawings, tax parcels, and US government lots that were inserted into the USGS grid drawings and transformed into the section grid through a process called rubber-sheeting.
- This created a parcel dataset that did not match real world coordinates and could not be transformed into a GIS polygons due to lack of line work closures



PARCEL SHIFT PROJECT

IMPROVING THE MAT-SU BOROUGH PARCEL DATASET

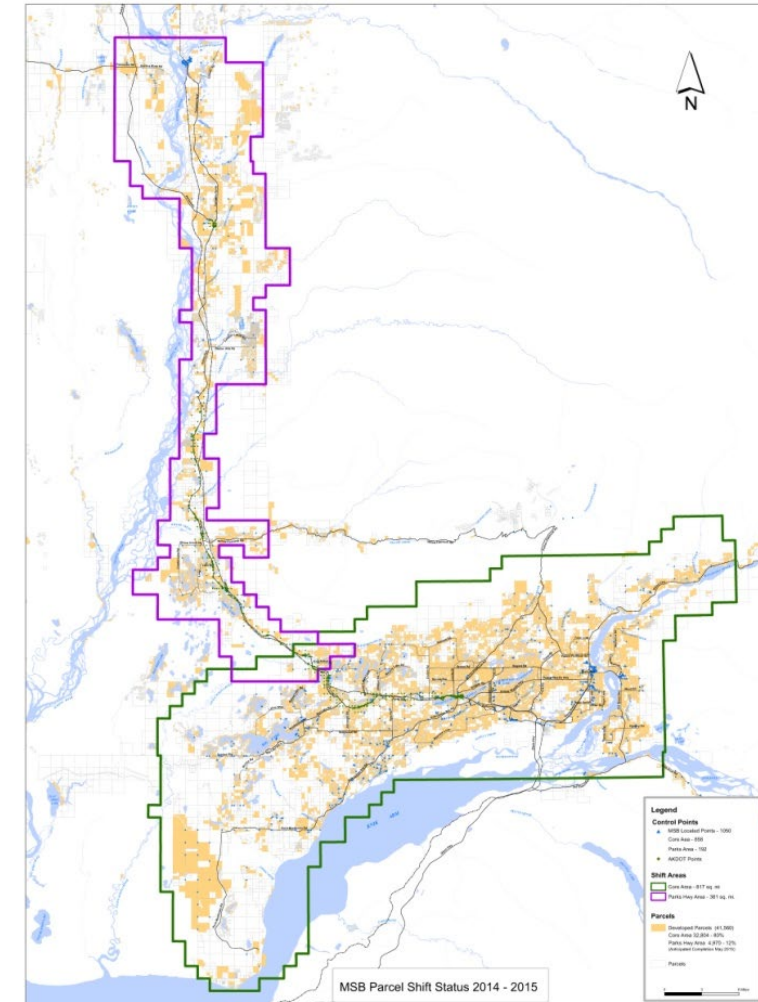
- During the first Mat-Su Borough imagery acquisition in spring 2011 a problem was discovered.
- Because the original Tax maps were based on USGS protracted grid sections once the 2011 aerial imagery was geo-referenced in Alaska State Plane Zone 4 parcel lines from the GIS dataset began overlapping with houses on the imagery data set.
- With the advent of technologies such as wireless E911, automated dispatch systems, vehicle based GPS, digital aerial imagery, LIDAR, upgraded flood plain mapping and applications such as Google Earth and online parcel viewing, having spatially correct, real world locations for the property lines and other GIS data is increasing in importance to a wide array of users.



PARCELS PRE-PARCEL SHIFT NEAR MAT-SU COLLEGE

PARCEL SHIFT

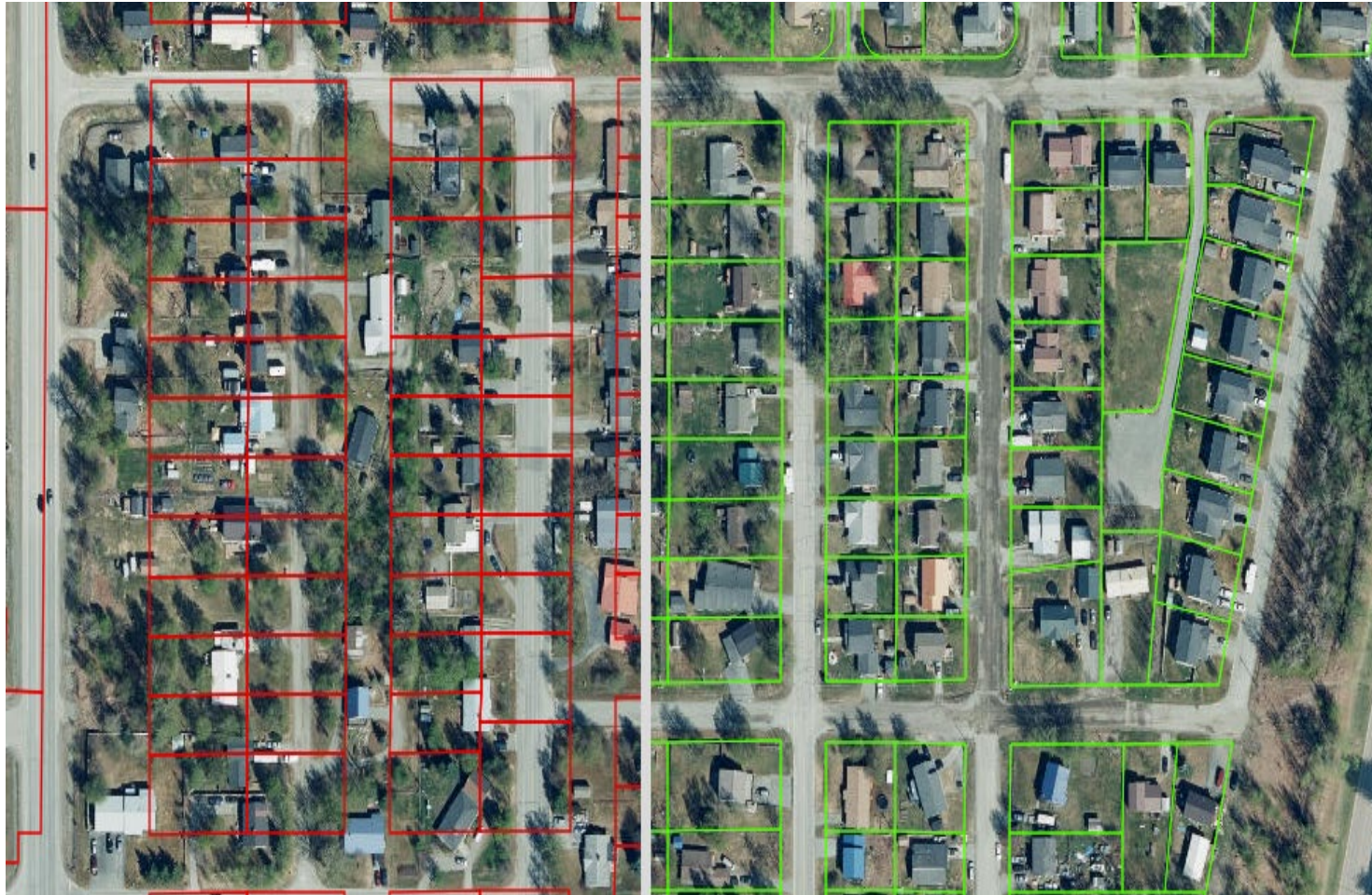
- Initially a \$500,000.00 project with funds from the E911 board and consisted of 3 phases
- Phase I focused on gathering GPS control in the most populated areas of the Mat-Su borough including the communities of Palmer, Wasilla, and Houston, otherwise known as “The Core Area”
- Phase 2 focused on the Parks highway from Houston to Trapper Creek and on the Glenn Highway from Sutton to Glacier View
- Phase 3 focused on taking the spatial accuracy of Phases 1 & 2 from 20’ off down to within 2 feet in populated areas.



PARCEL SHIFT IMPACT

Pre-2011 Parcel Shift

- Address points do not match parcel and building
- Parcel lines off as much as 300' from true ground location
- Emergency Services is not able to locate houses based on parcel data

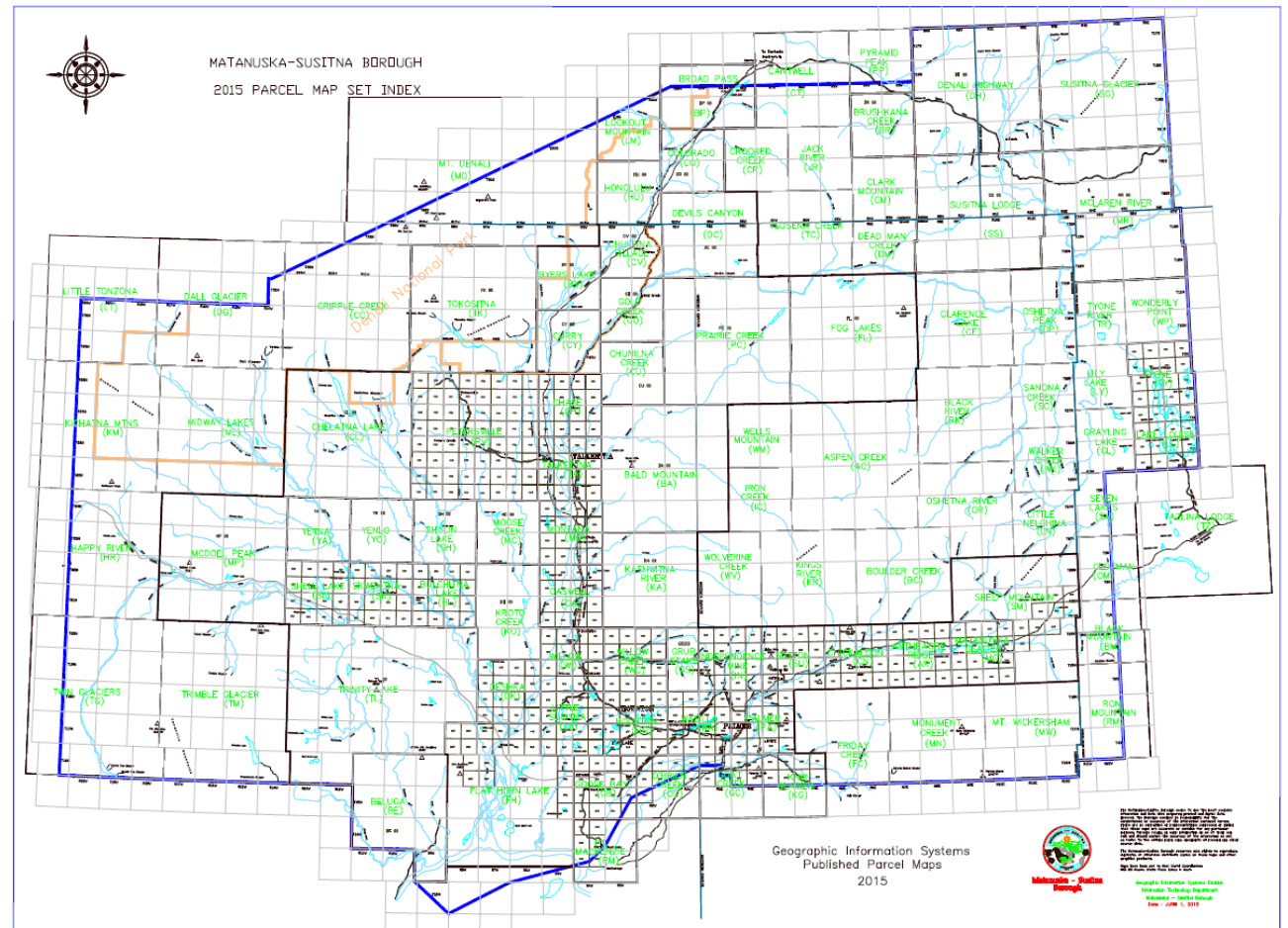


Post-2015 Parcel Shift

- Address points match parcels and building data
- Parcel lines within 10' of true ground location
- Parcel data is used by emergency services to locate homes in efficient manner

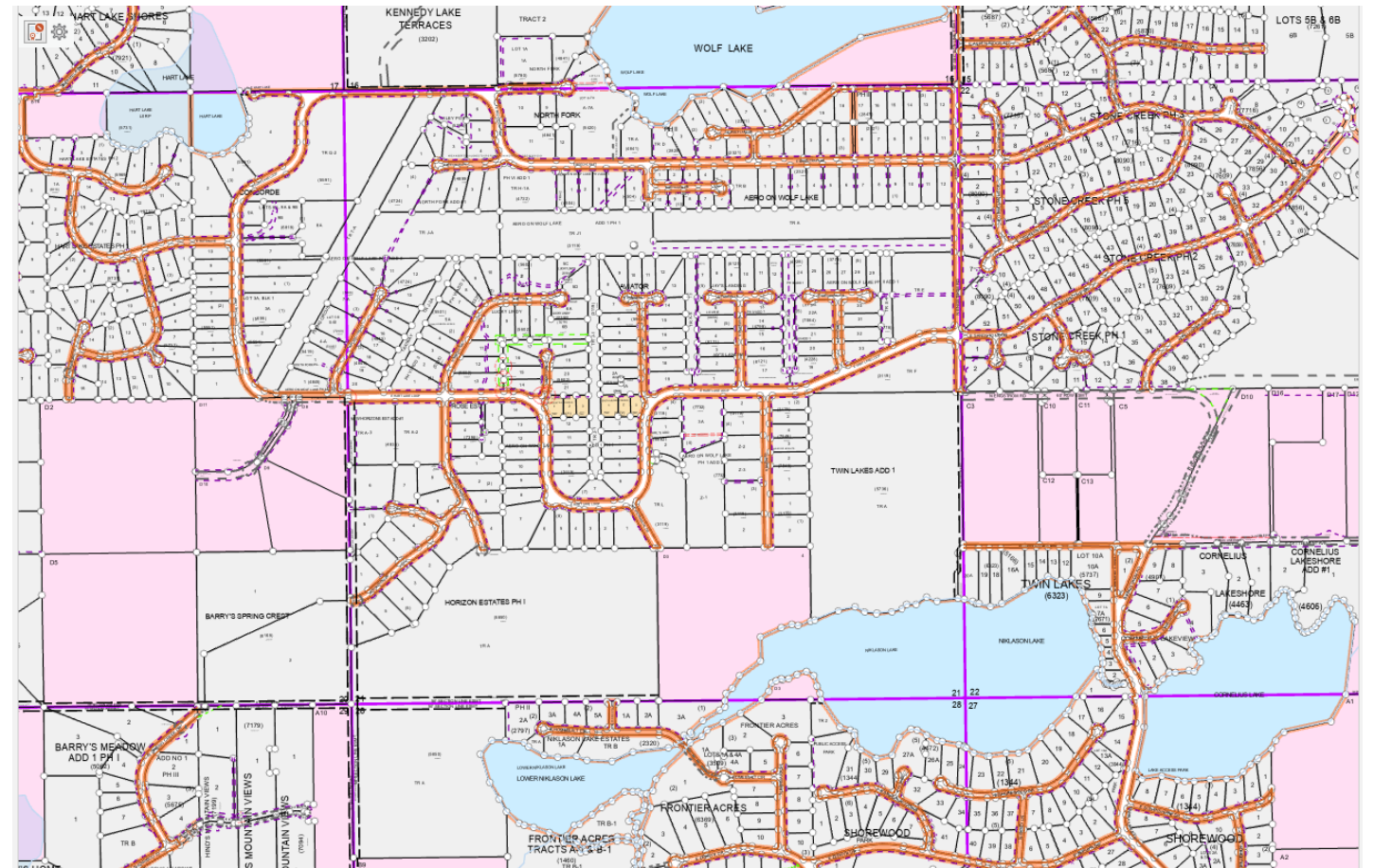
MOVING FROM AUTOCAD TO ARCGIS PRO

- One of the issues with utilizing AutoCAD as a parcel management solution was that in order to create an updated GIS parcel dataset an AutoCAD topology build workflow was needed.
- The Topology build consisted of combining all 577 individual AutoCAD tax maps into 4 large combo drawings where a Map Cleanup script was run to check line closure in the parcels and to ensure that each closed polygon contained an account point.
- The AutoCAD topology build took on average 12 days to complete, and then another 10 days of parcel creation and data joins with the Borough CAMA system



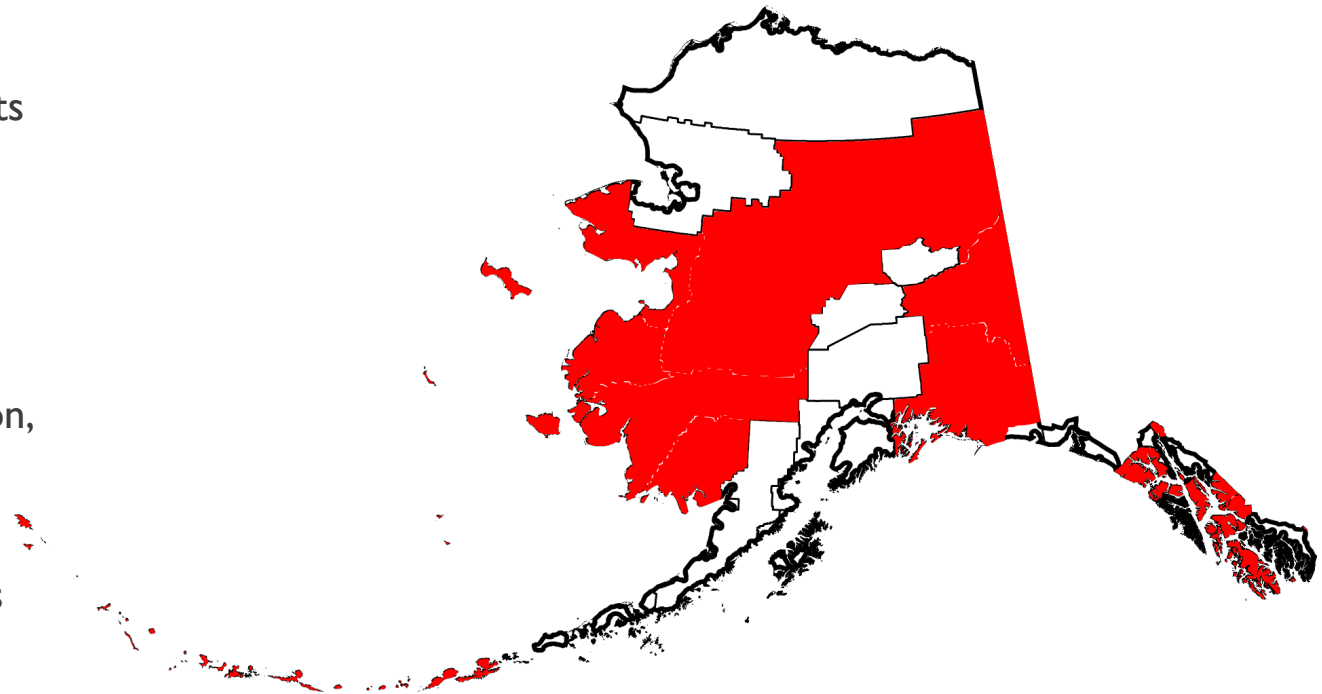
MOVING INTO AN ARCGIS PRO PARCEL FABRIC

- The Mat-Su Borough officially moved into an ArcGIS Pro Fabric in August 2021
- All platting actions, subdivisions, tax parcels, and easements are now updated on a nightly basis
- Public can now view parcel changes as they happen in real time as opposed to a quarterly update cycle
- Creates a more efficient workflow that allows Borough staff to focus on Parcel editing and summer field work instead of dedicated topology builds and script running



STATEWIDE OUTLOOK ON PARCEL DATA

- Incorporated municipalities and boroughs have a vested interest in maintain accurate and complete parcel datasets for property taxation, emergency services and land management
- Currently there is no maintained Parcel data for areas of the State of Alaska that fall outside of local jurisdiction.
- This includes the population centers of Tok, Delta Junction, Glennallen and many other populated communities
- DNR serves as the platting authority for these areas, however, due to staffing and alternative priorities there is not a comprehensive Parcel Dataset for these areas.



■ Unincorporated Areas of Alaska

Cadastral Technical Working Group

Mapping the property of Alaska



CADASTRAL WORKING GROUP BACKGROUND

- The Cadastral TWG is transferring important knowledge, efficient workflows, and new technology for parcel mapping and data management.
- The Cadastral Technical Working Group is identifying areas of the state that do not have updated parcel datasets or do not currently maintain parcel data as part of their current workflows parcel data is used primarily by local taxing authorities
- Detailed and spatially accurate parcel data is vital for emergency services, the surveying and real estate community, and local/state governments.
- Accurate parcel data can help reduce ambulance route times, improve property tax revenue, and provide a spatially accurate parcel data-set that can be viewed by Alaskans in real time.



<https://agc-cadastre-soa-dnr.hub.arcgis.com>



Alaska
Geospatial
Council

CADASTRAL TECHNICAL WORKING GROUP

PURPOSE AND MISSION

PURPOSE

- The cadastral working group provides a framework for the BLM, State of Alaska, local governments, and the private surveying community to share parcel datasets and discuss complex issues regarding parcel management and public sharing of parcel information.
- The cadastral working group will provide work sessions to enhance technical skills regarding parcel management, land records research, and ground control collection/implementation.

IMPORTANCE TO ALASKA

- A real-time active parcel dataset that is spatially accurate and based on legally recorded documents from the State of Alaska, BLM/GLO, and the local platting authority, is a valuable resource to Alaska.
- An accurate parcel dataset helps ensure that first responders arrive at the correct call location, that physical addresses match site location, and that the public is taxed fairly and transparently.
- A comprehensive parcel dataset provides the public with a detailed understanding of land conveyances in their jurisdiction allowing for informed land use decision making.

CADASTRAL TECHNICAL WORKING GROUP GOALS

SHORTTERM GOALS

- Provide a collaboration effort between local governments, State of Alaska, Federal Government, the Alaskan Surveying Community, and the Public
- Provide technical knowledge sharing in parcel management workflows, editing enhancements, and land records research
- Improve data sharing between agencies and the public

LONGTERM GOALS

- Assist in gathering parcel data in local jurisdictions that do not have parcel data in GIS
- Provide technical assistance in developing a parcel dataset for un-incorporated portions of the state of Alaska
- Eventually assist in developing a statewide parcel dataset for Alaska



QUESTIONS?