



USA North 811 Updates

November 2025

Presented by:

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Technology Update: GIS Basemap Data

✓ Ticket details ?

Information about the work site, and the type of work involved

✓ Dig site location ?

Find and draw your dig site on the map

✓ Confirm dig site ?

Based on the dig site drawn on the map

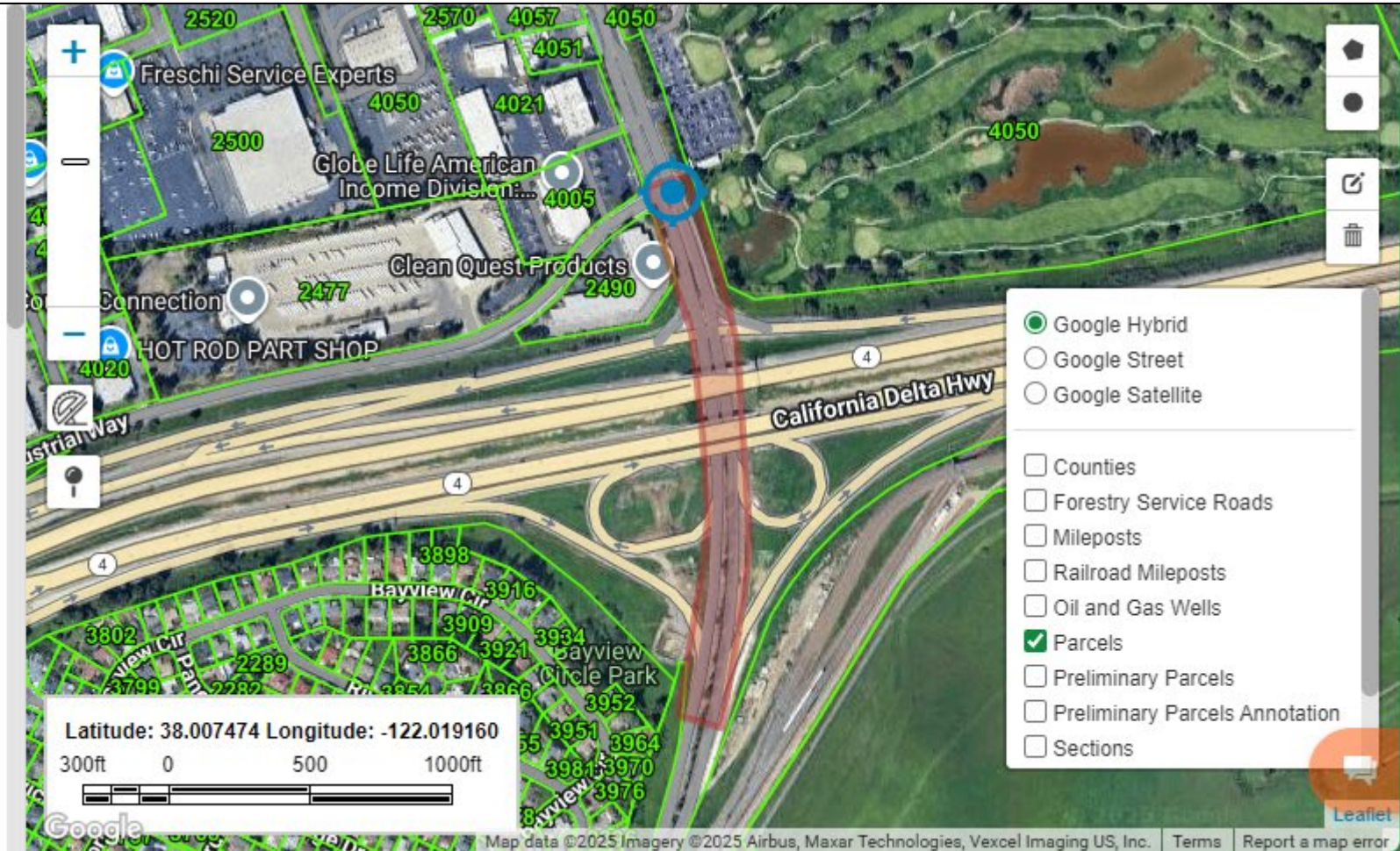
4 Dig site location details * ?

Information not previously included

Dig site location details*

Road widening & reconstruction along Port Chicago Hwy from the north edge of Arnold Industrial Way going south for approximately 1,900 ft to the south edge of the on-ramp from northbound Port Chicago Hwy to eastbound CA Hwy 4. For that entire stretch, please mark curb-to-curb across Port Chicago Hwy and for 15 ft behind curb on both sides of Port Chicago Hwy.

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Automation of GIS data updates in 2025: some layers are now updated daily (if the source data has been updated), other layers monthly, quarterly, or yearly, depending upon the importance of the data.



Core Technology: Geographic Information System (GIS)

How does USAN know which utility operators need to receive a ticket? “Overlapping Polygons.”

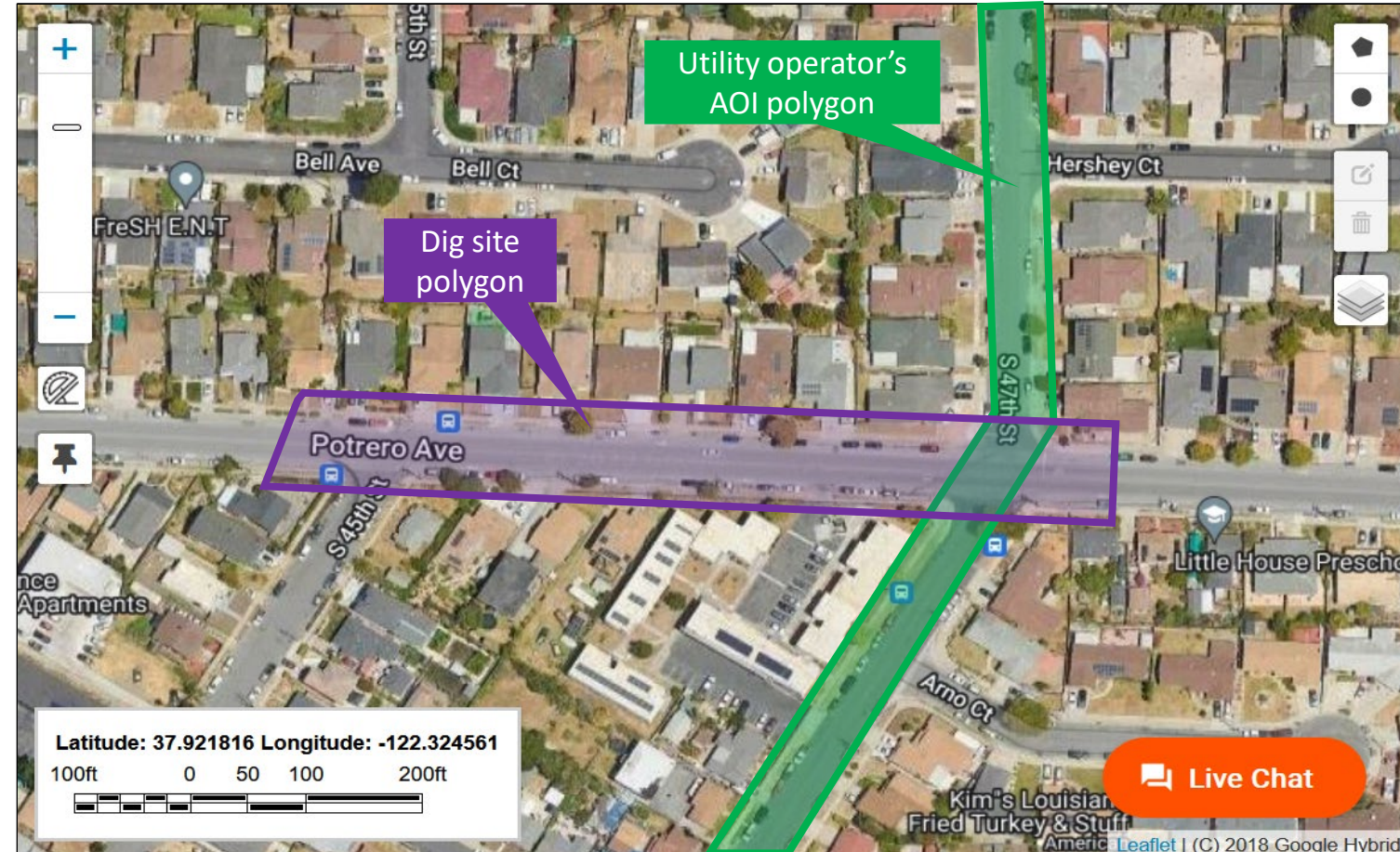
If the dig site polygon overlaps a member utility operator’s area-of-interest (AOI) polygon, USAN will send the ticket to that member operator.



It is critically important that the dig site polygon be drawn accurately and precisely to ensure the proper utility operators receive the ticket.



- There is no master spatial dataset containing every underground pipe and cable. No such GIS database exists.
- Each utility operator keeps its own records. Quality varies significantly.
- Utility data has not been aggregated at the state or national level, except for a few pilot projects.
- Official reasons for not aggregating actual utility data from all operators: homeland security and competition among telecoms.

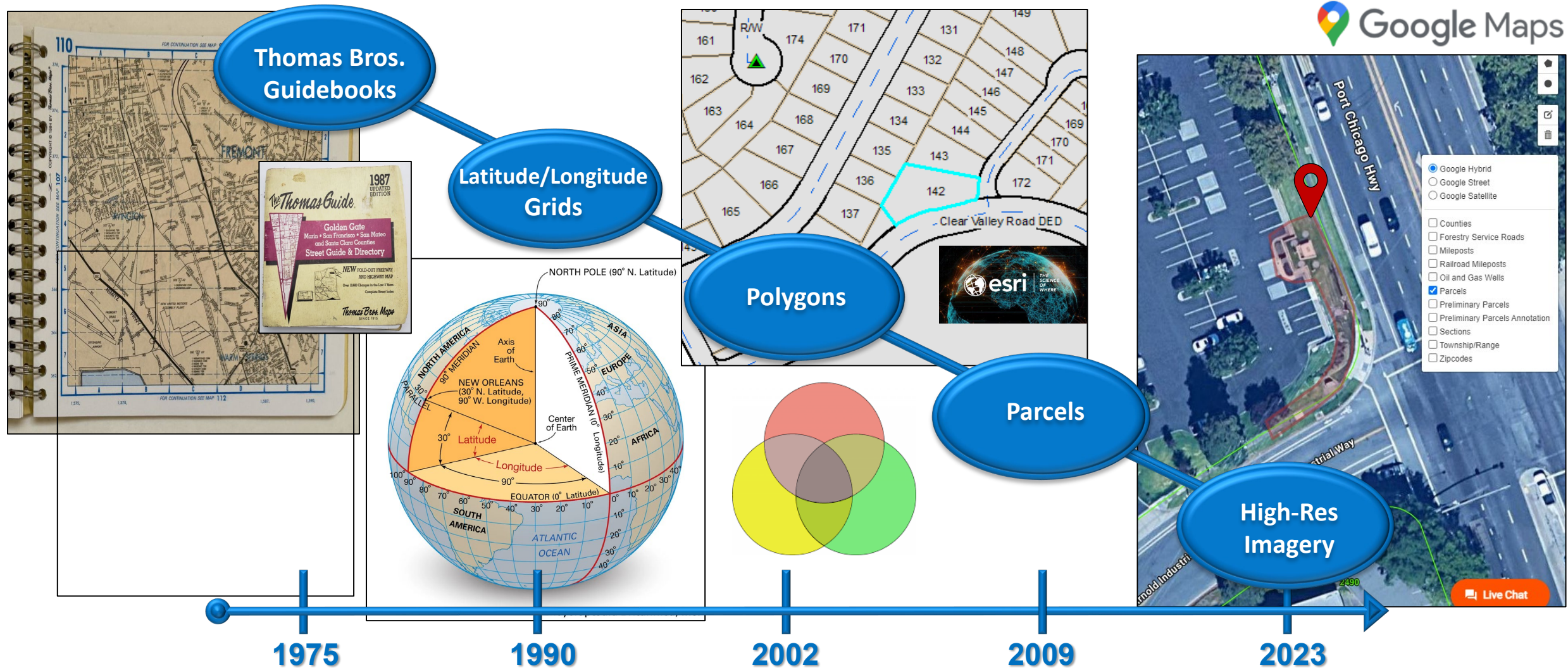


*Actual reason why GIS data is not aggregated:
(James’ opinion only) Utility Operators do not trust their own records

Evolution of Notification to Utility Operators

Advancement of GIS technology

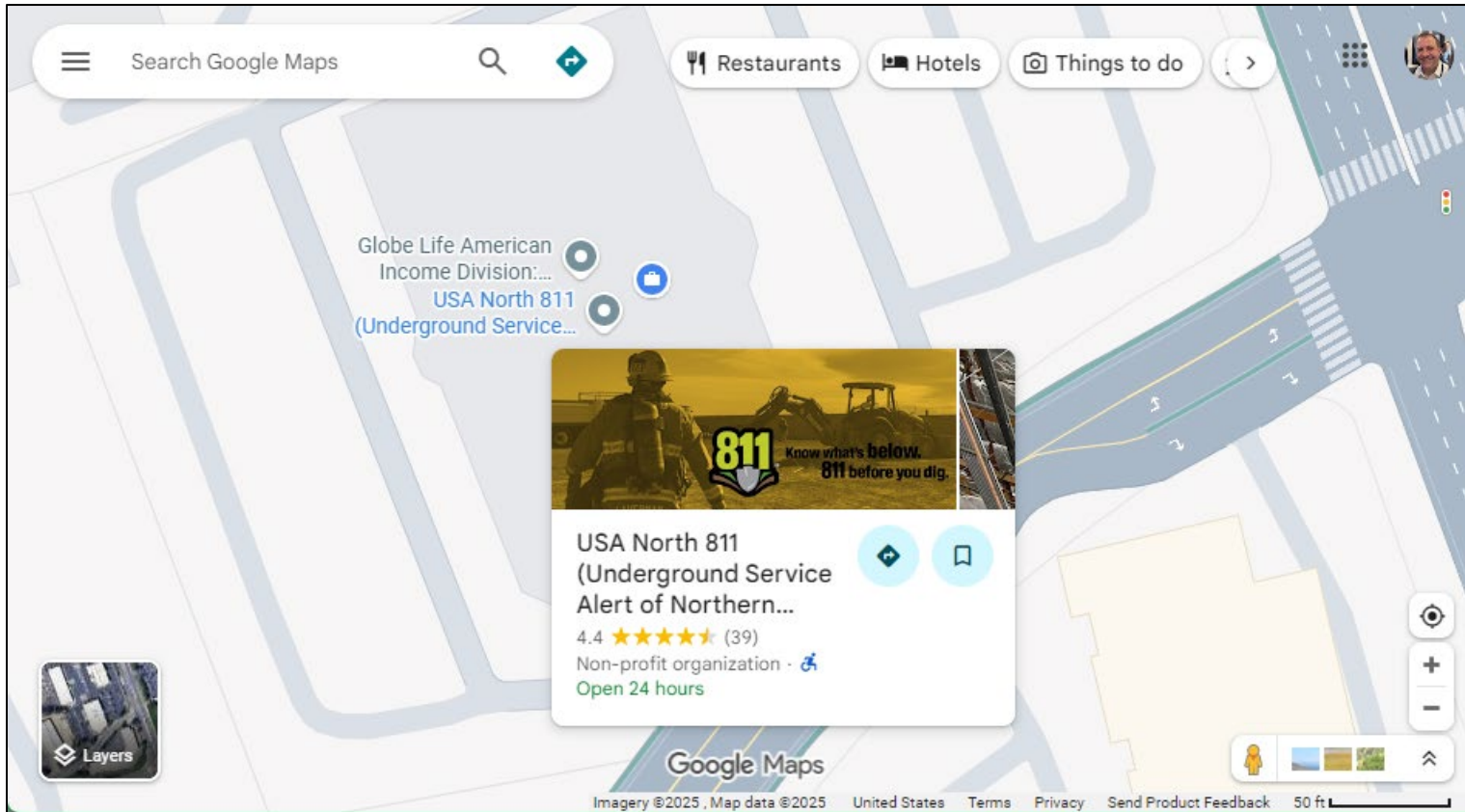
Dig site location and dimensions are identified more accurately and precisely today than ever before



Digital Basemap Data Must Be Current and Correct

Dig site polygon drawn on every ticket must be accurate and precise

It's all about "Where." Where will the digging occur? Where are the nearby utilities?



GIS data layers used to supplement Google Maps

- Parcel boundaries
- Address points – to help in areas where one large parcel contains multiple addresses (e.g., mobile home park, apartment complex, college campus, shopping center, etc.)
- Highway milepost markers and Railroad milepost markers
- Other: Oil & gas wells, PLSS Townships & Sections, etc.

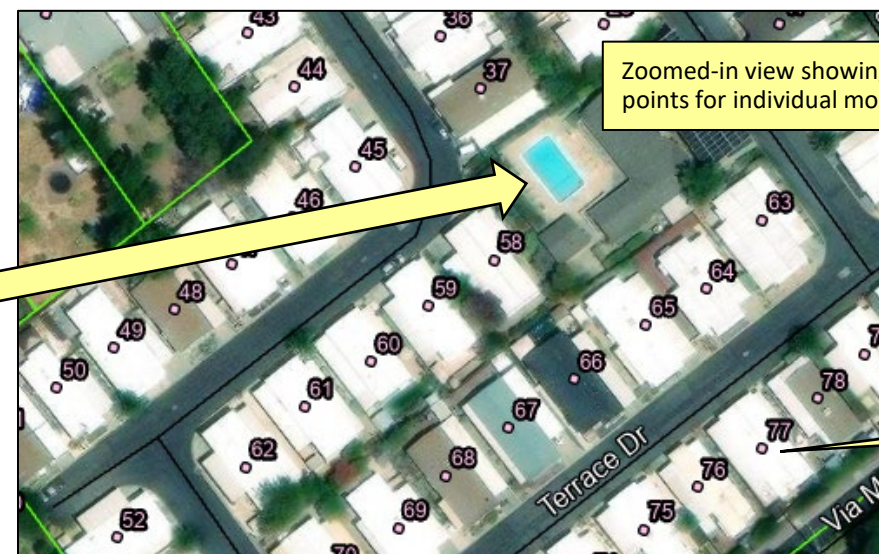
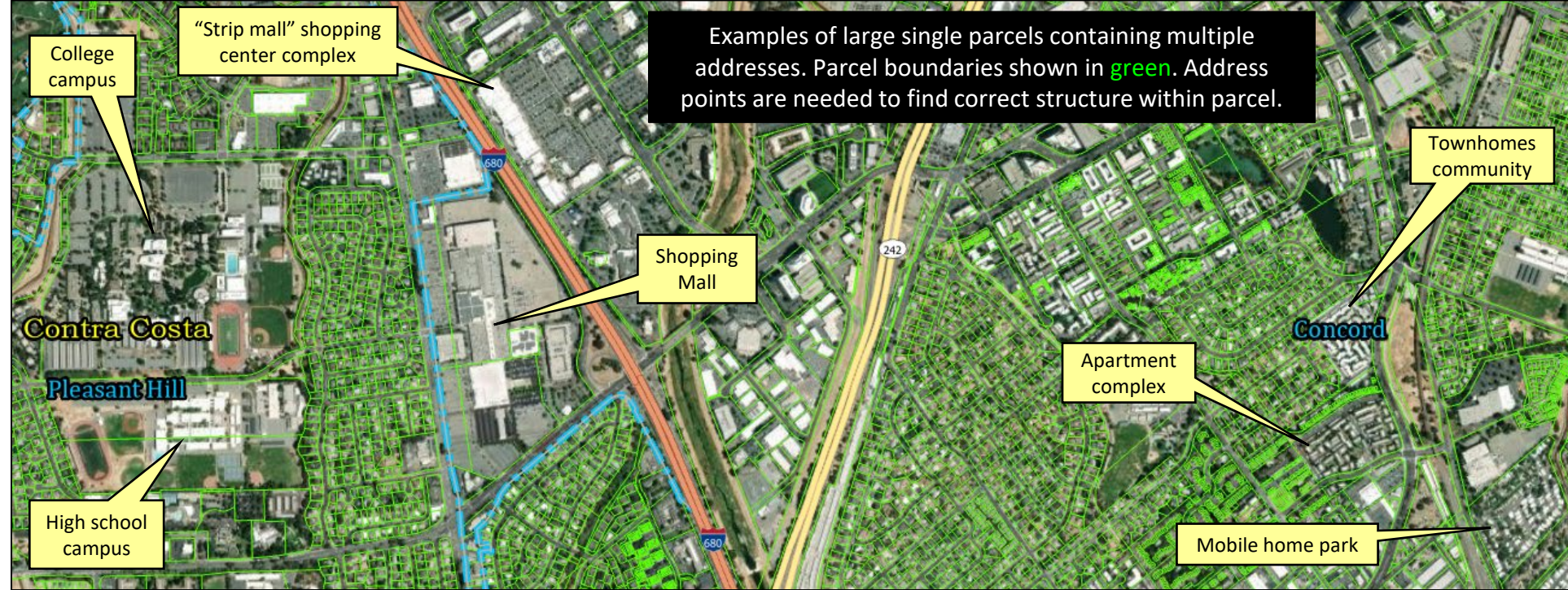
Parcels & Address Points

From commercial vendor and county GIS departments

Town & Country Mobile Home Park
Concord
Contra Costa County

Common address:
1060 San Miguel Rd

3 large parcels (arrow points to 1 of the 3 parcels), each containing dozens of individual mobile home units, each with a unique address



Zoomed-in view showing address points for individual mobile homes

77 Terrace Dr

Highway Tenth Milepost Markers

From Caltrans

CA Hwy 4 milepost 7.3
San Joaquin County

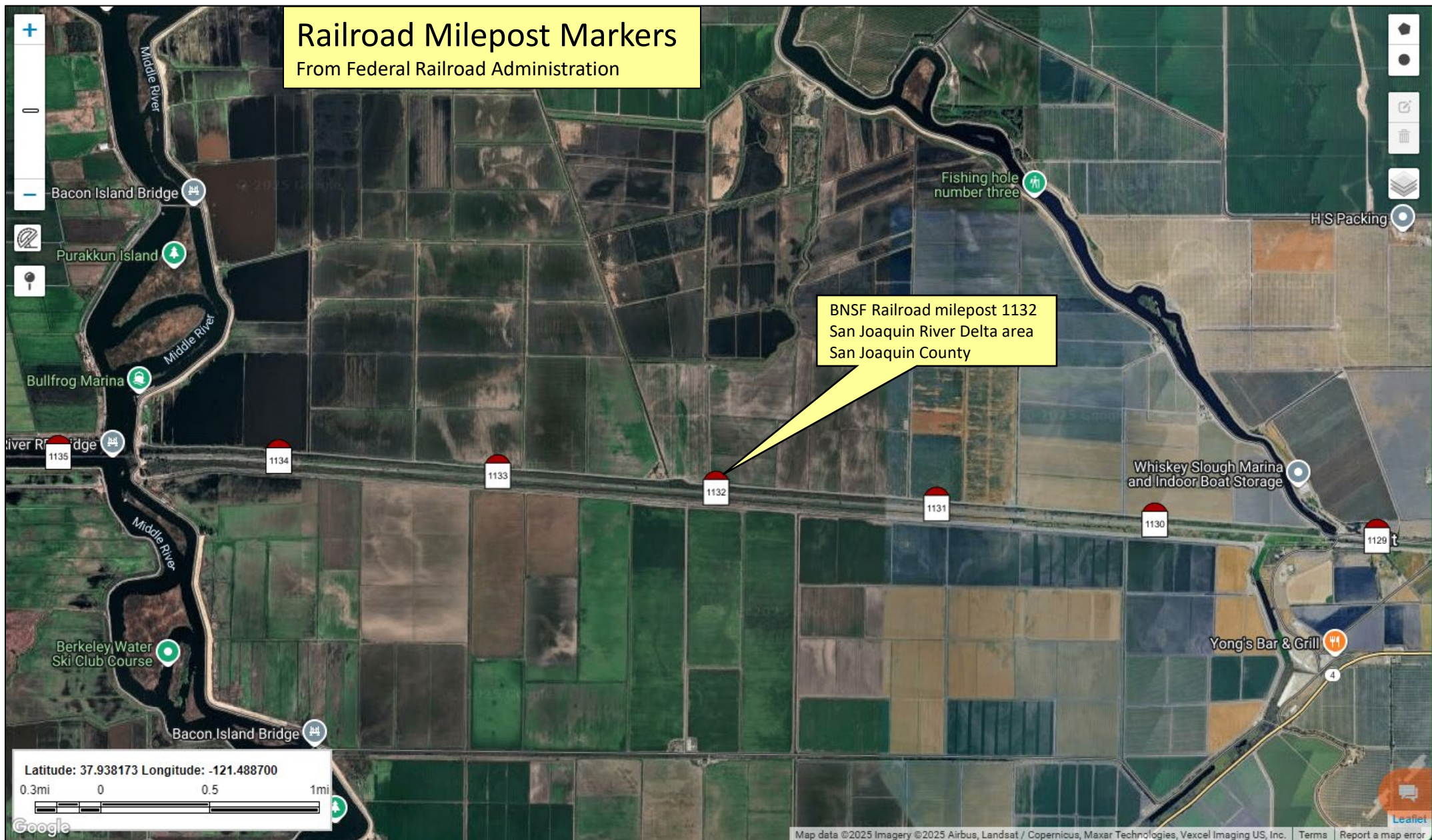
Public Land Survey System (PLSS)
“Township & Range”
Townships and Sections;
Oil & Gas Wells

Latitude: 37.913978 Longitude: -121.447827

250ft 0 200 400 600ft

Google

UNDERGROUND SAFETY BOARD



Preliminary Parcels

From Southwest Gas (in Nevada only)

When a new residential subdivision is being developed, the large vacant parcel may not be legally subdivided into smaller lots until much construction has already occurred on the property, including building new roads, installing utilities, and even fully completing model homes. Addresses may be assigned and building permits granted before the large parcel has been subdivided and the new plat recorded with the county recorder & assessor. The County will typically not create the smaller parcels in their GIS until the new plat has been recorded.

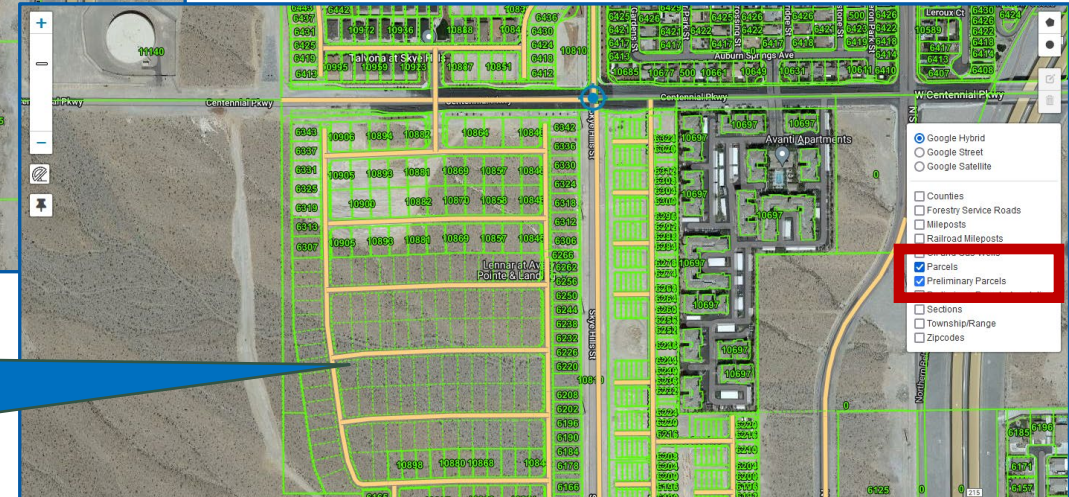
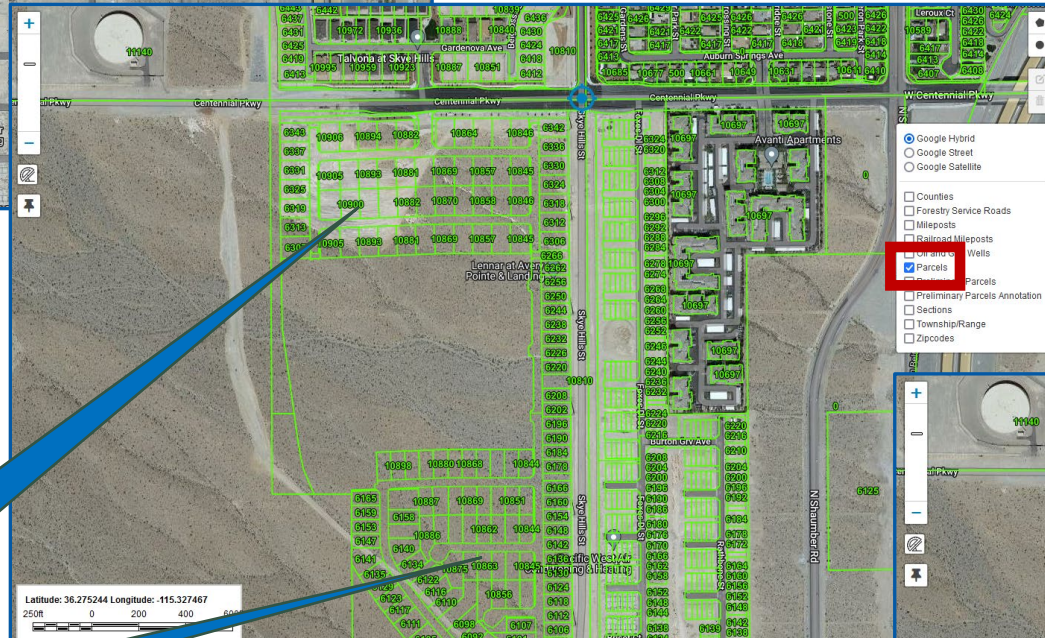
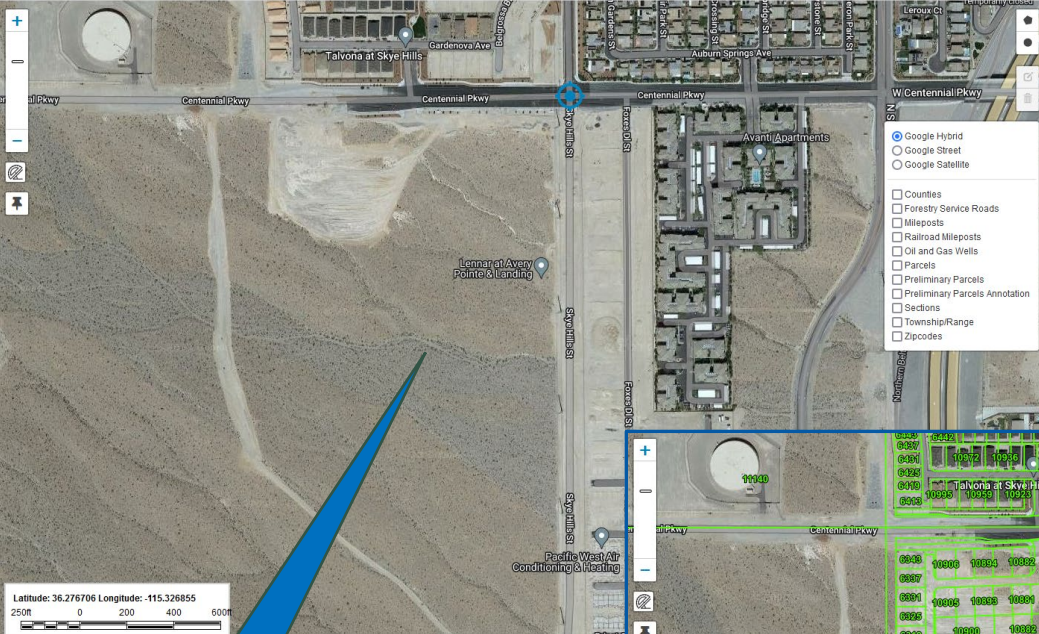
Southwest Gas has been sharing preliminary parcels in Nevada with USAN since 2019.

Excavators and USAN staff often comment that preliminary parcels are very helpful when creating tickets in new subdivisions.

1 Las Vegas example view in Google Maps

2 Same view in Google Maps + parcels from Clark County GIS dept.

3 Same view in Google Maps + parcels from Clark County GIS dept. + preliminary parcels and



GIS Data Layers Update Schedule



California

UPDATES	LAYER	DATA SOURCE	COUNTIES	NOTES
DAILY	Parcels	ParcelQuest	41	
	Parcels	County GIS Departments	8	additional 8 counties to be added in 2026
	Preliminary Parcels	Southwest Gas	3	Lake Tahoe & Truckee areas only
	Address Points	County GIS Departments	8	additional 8 counties to be added in 2026
	Oil & Gas Wells	CA Dept. of Conservation	49	(applicable counties)
MONTHLY	Highway mileposts	Caltrans	49	
QUARTERLY	Forest Service Roads	US Forest Service	49	(applicable counties)
	Water Courses	CA Dept. of Water Resources	49	Aqueducts/canals & mileposts (applicable counties)
YEARLY	Railroad Mileposts	Federal Railroad Administration	49	(applicable counties)
	County Boundaries	CA Dept. of Technology	49	
	PLSS Townships	CA Dept. of Conservation	49	
	PLSS Sections	CA Dept. of Conservation	49	
	Zip Codes	US Census Bureau	49	



Nevada

UPDATES	LAYER	DATA SOURCE	COUNTIES	NOTES
DAILY	Parcels	NV State Demographer	13	
	Parcels	County GIS Departments	4	
	Preliminary Parcels	Southwest Gas	17	
	Address Points	County GIS Departments	4	
MONTHLY	Highway mileposts	NDOT	17	
QUARTERLY	Forest Service Roads	US Forest Service	17	(applicable counties)
YEARLY	Railroad Mileposts	Federal Railroad Administration	17	(applicable counties)
	County Boundaries	NV Division of Minerals	17	
	PLSS Townships	US Bureau of Land Management	17	
	PLSS Sections	US Bureau of Land Management	17	
	Zip Codes	US Census Bureau	17	

GIS Data Goal:

Maximize ticket quality

- Ticket Creator can find the dig site location correctly and draw its location and dimensions accurately and precisely
 - Correct utility operators receive the ticket
- Utility Operator can clearly understand the location and dimensions of the dig site
 - Utility operator can efficiently find the dig site location in the field and/or screen the ticket
 - Questions to the excavator are reduced because the location and dimensions are clearly defined