

Assembling best available contextual layers

Geo-Enabling Elections

May 27, 2021



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Housekeeping

- **Slides** are available on the registration page
- Use the **chat panel** to say hello, chat with other attendees, and ask questions

What we'll cover today

- Identify the contextual data needs in your office
- Use complementary spatial data like aerial imagery to improve election data accuracy
- Utilize GIS data to support resource allocation decisions

Today's agenda

- Introduction (5 minutes)
- The basics of contextual layers (10 minutes)
- Breakout (10 minutes)
- Contextual layers in your office (10 minutes)
- Resource allocation (10 minutes)
- Q&A (10 minutes)
- Wrapping up and course survey (5 minutes)

Hello, there!



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NSGIC

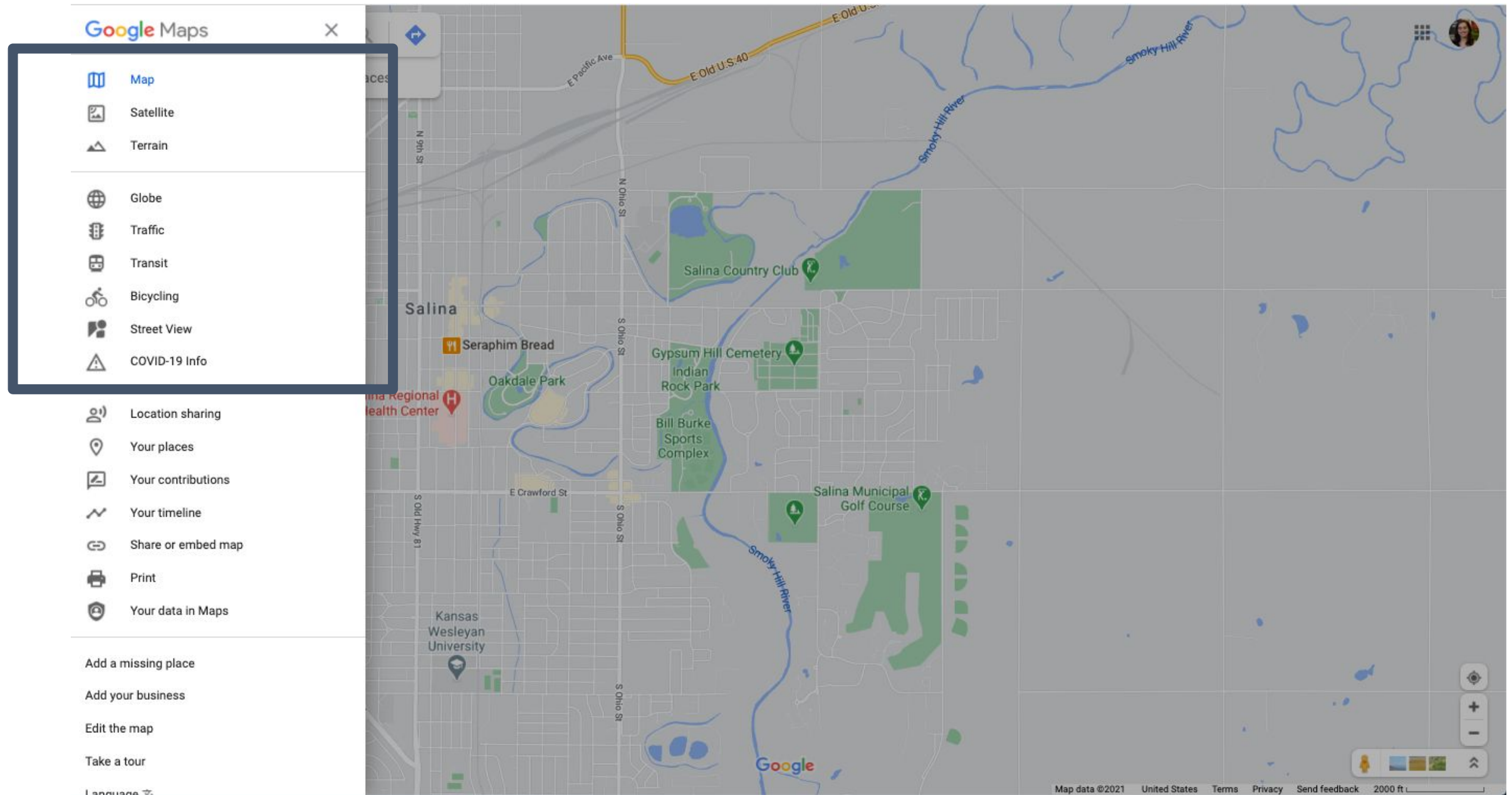
National States Geographic Information Council

Best Practices for Geo-Enabling Elections



What are contextual layers and who manages them?

The basics of contextual layers

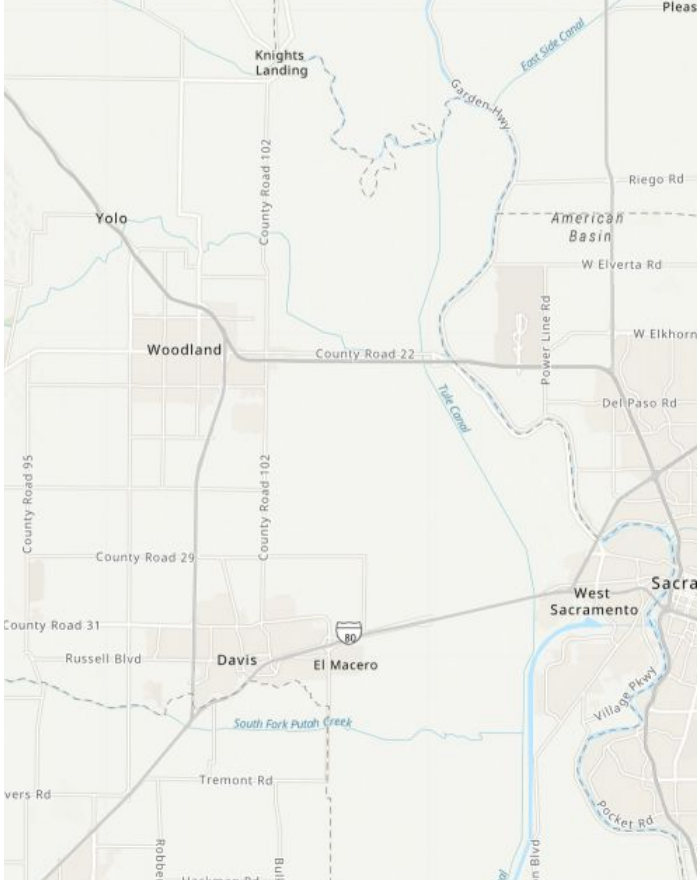


Source: Google Maps 2021

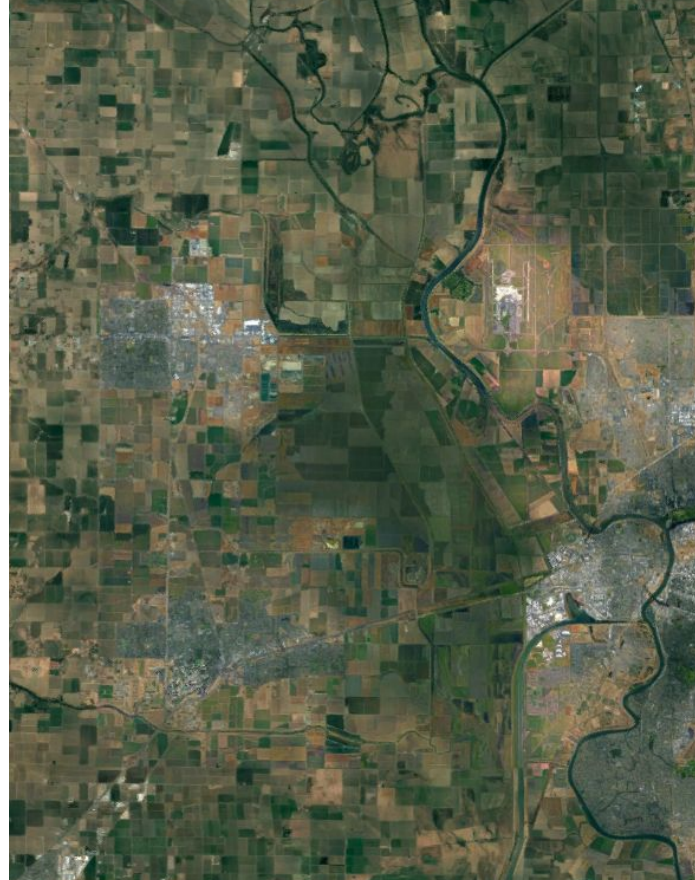
Contextual layers

Relevant, accurate, verified, and accessible supporting GIS layers that contribute to complete spatial data

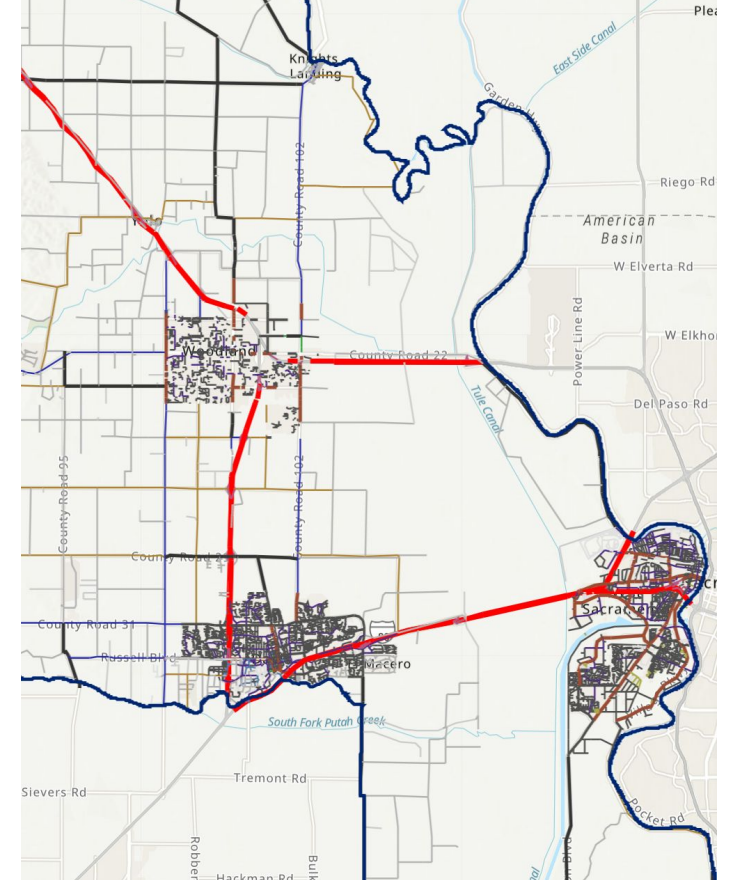
General layers



Base maps

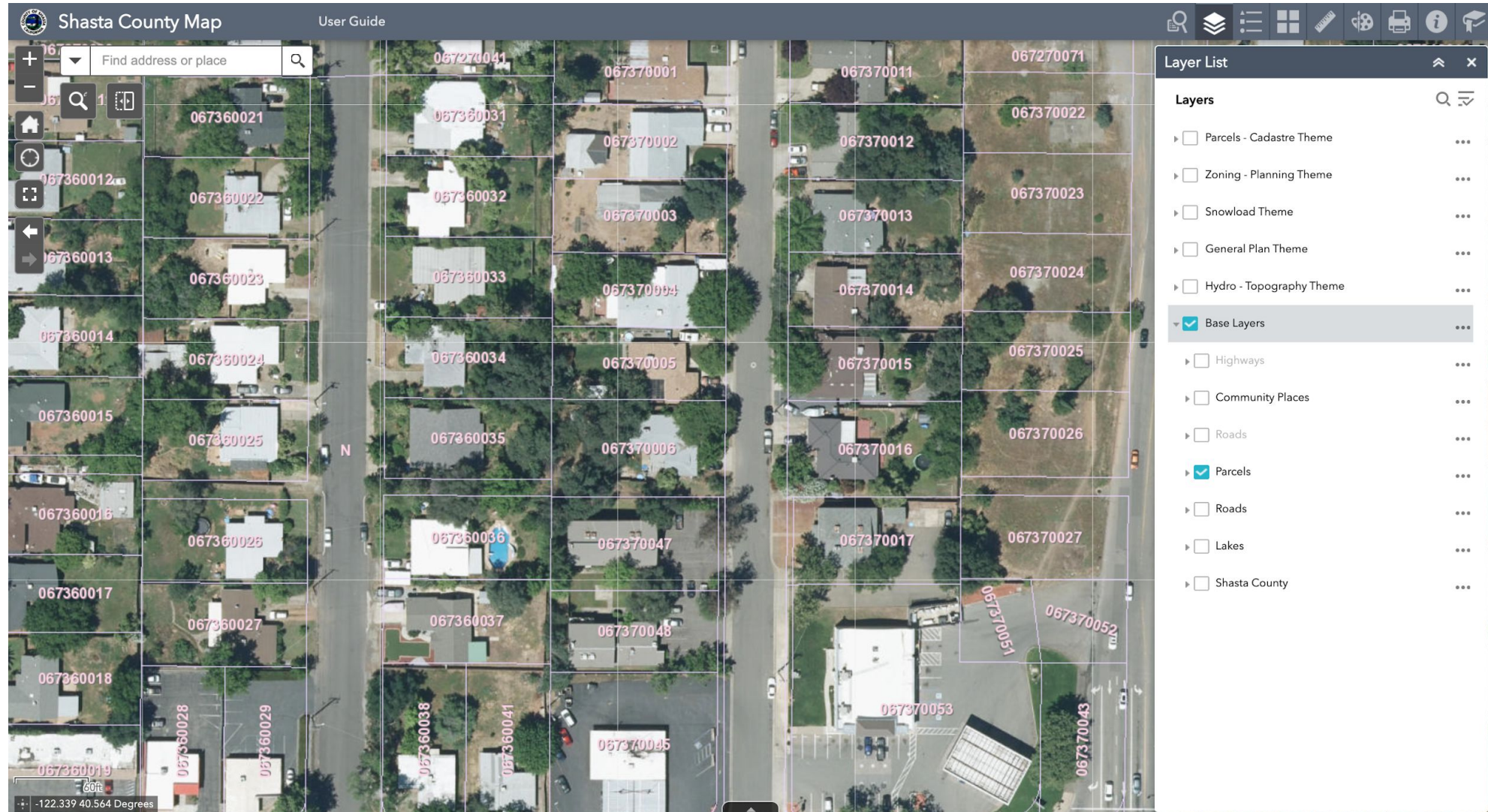


Aerial imagery



Street centerlines

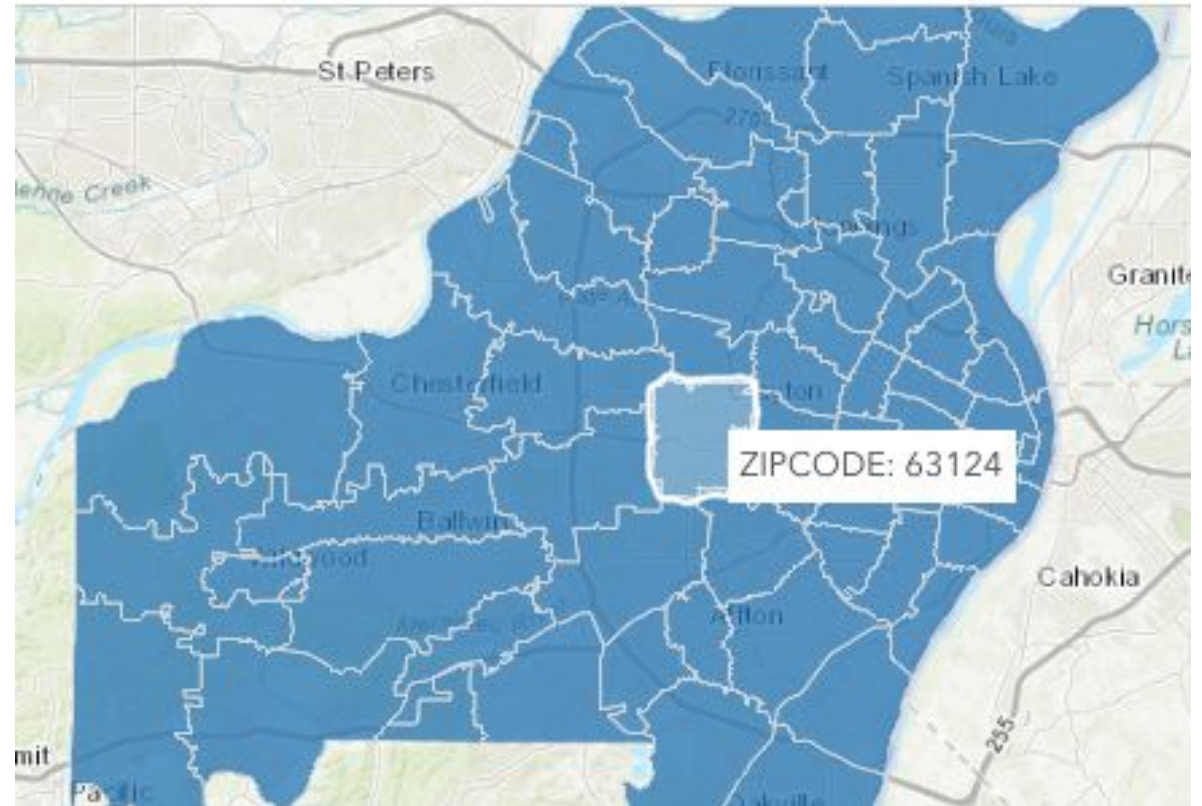
Layers from state/local agencies



Source: Shasta County, CA Map 2021

Layers from federal agencies

- Zip codes
- Census blocks
- Other census data



Source: St. Louis, MO Open Government 2021

Why do they matter?

Contextual layers:

- Improve data accuracy
- Help make better decisions
- Increase voter confidence



Source: Lake County, IL GIS 2021

How can contextual layers improve address data accuracy?

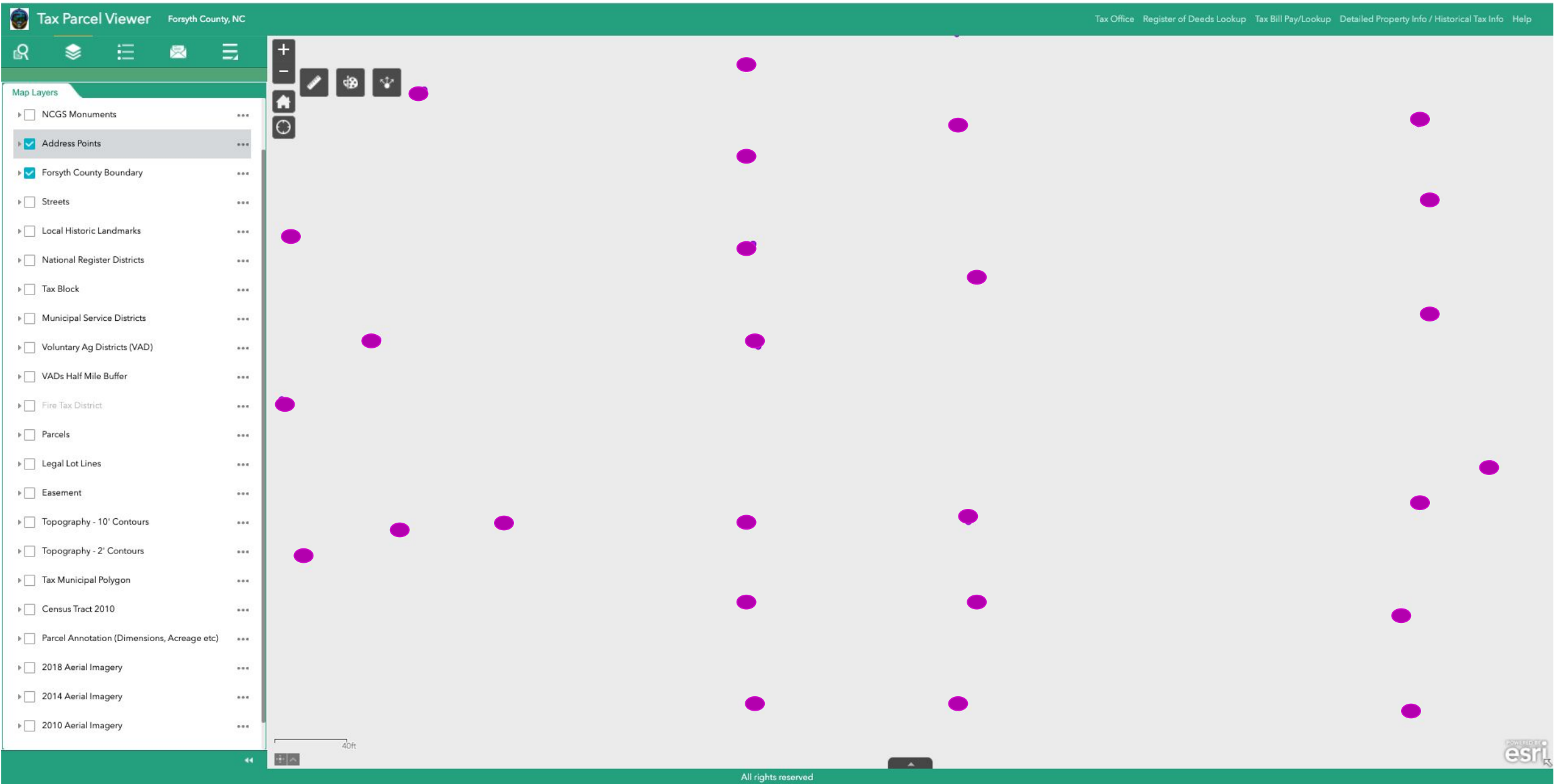
Breakout



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021



Source: Forsyth County, NC 2021

How did it go?

- How did the contextual information help you place the address point?
- Is there any other contextual information you would like in your office?

How do I know which contextual layers my office needs?

Contextual layers in your office

Prioritize contextual layers

- Which layers are required by law?
- Is the layer highly desirable to improve data quality?
- Does the layer provide nice-to-have, but not essential context?

Key steps to take



Identify



Locate



Plan

Identify contextual layers

- Which contextual layers are required in my state?
- What layers will help improve the accuracy of my voting unit layer and address points?



Locate authoritative sources

- Are there existing sources for those contextual layers?
- Who is the contact person managing the data?



Develop a plan

- Who will be the main point person?
- How often is the data updated?



How can spatial data improve decisions for distributing resources?

Resource allocation decisions

Team of specialists

1



Voting unit layer

2



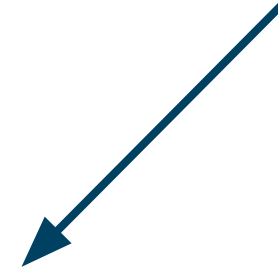
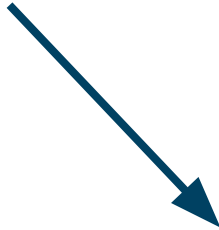
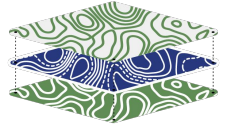
Address points

3



Contextual layers

4



**Accurate and reliable
elections**

Today's topics

- 2020 Election and Maricopa County specific challenges
- Process used prior to 2006
- Geo-Enabled Elections – GIS tools
 - Assisted with increasing voting options
 - Point density - heat maps
 - Voting operations
 - Informing voters
 - Safe and secure return of ballots/results



Maricopa County challenges

- Larger than 7 States
- Over 2.6 million voters
 - 2nd largest in nation
- Rural and urban areas
- Over 5,000 ballot styles in general election
 - 15,000 ballot styles in a primary
- Eyes of the nation
- Over 60% of AZ voters
- Competitive / swing state status



Overcoming hurdles: COVID-19

Existing polling locations

- Not available
- Too small for physical distancing

Personal safety and cleaning supplies

- We need masks, gloves, disinfecting wipes, hand sanitizer
- Products are in short supply

Poll workers

- Health and safety concerns
- Traditional model: 3,600 vs. Revised model: 1,800
- Physical distancing training considerations
- Poll worker correspondence: "Will only work if voting locations are safe"

Why geo-enable elections?



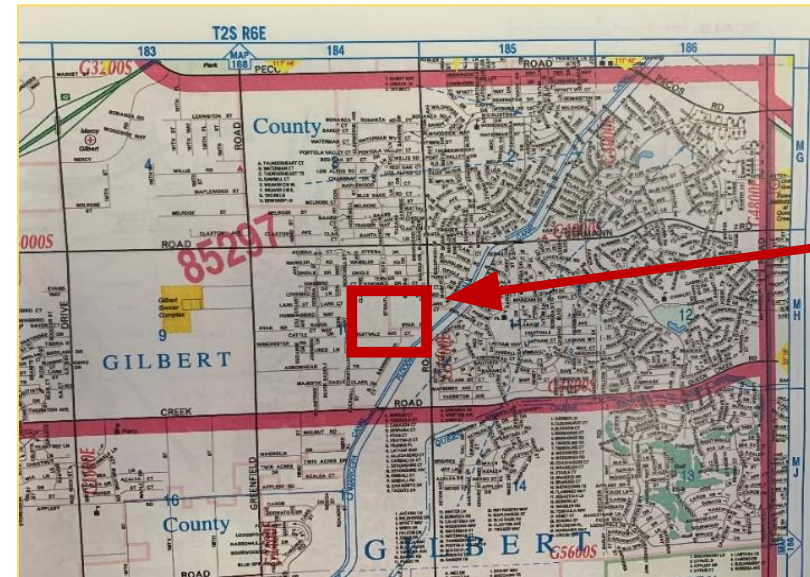
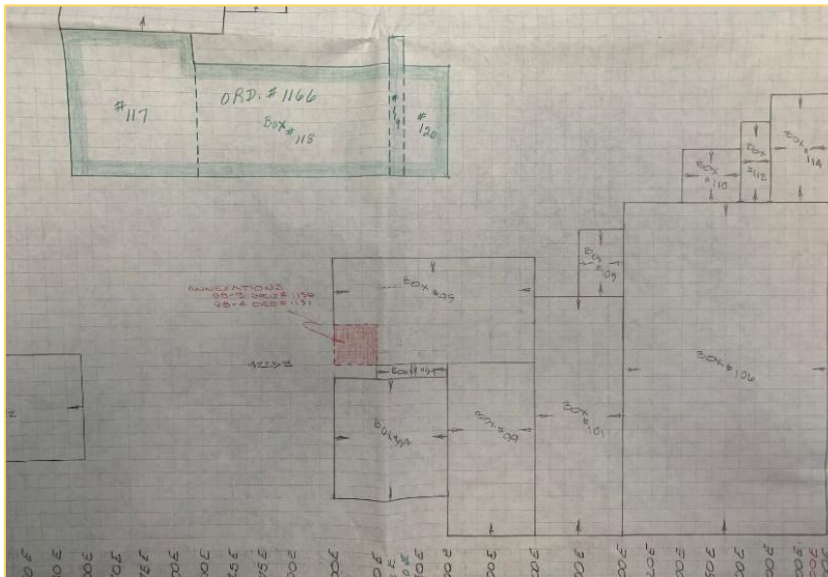
Street Records

STDIR	STNAME	STSFX	STTYPE	ALIGN	FMDLMT	TODLMT	ALIGNAX	SIALIGN	SIFMDLMT	SITODLMT	CTYCD
E	SUPERSTITION		DR	4205	2835	2965	S	-4205	2835	2965	GI
E	RYAN		RD	4410	2830	3020	S	-4410	2830	3020	GI
S	164TH		ST	2800	4287	4227	E	2800	-4287	-4227	GI
S	165TH		WAY	2855	4373	4223	E	2855	-4373	-4223	GI

Boundary Records – city, precinct, school, tech, fire, etc...

BDVAL	BDTYPE	BOXNO	NALIGN	EALIGN	SALIGN	WALIGN	HALIGNAX	VALIGNAX	NSIALIGN	ESIALIGN	SSIALIGN	WSIALIGN	NSTSIDE	ESTSIDE	SSTSIDE	WSTSIDE	CTYCD
GI	C	347	4150	2960	4750	2875	S	E	-4150	2960	-4750	2875	S	W	N	E	GI
1053	P	1	4000	3200	4800	2400	S	E	-4000	3200	-4800	2400	S	W	N	E	GI
60	S	1	800	5600	5600	2400	S	E	-800	5600	-5600	2400	S	W	N	E	GI

Sample of
graph
paper used
in 2006



Area described
by index
records above

Increased voting options

Voting options

- Vote anywhere – Vote Centers
- Early voting - phased opening
- Weekends and evenings
- Drop boxes / drive-thru

GIS considerations

- Public transportation
- Freeways
- Topographic considerations (mountains, canals, rivers)
- High population density, In-person patterns, Native American / rural communities

Mapping tools: Point - Density heat maps

Providing voters with location information

FACILITY NAME *(1.5 miles away)*
555 Election Drive, Phoenix AZ 55555 [Map It](#) [Print It](#)

WAIT TIME ESTIMATES

 5 minutes

 20 people in line

 Last Updated
8/04/2020 7:45 p.m.

OPEN Closes at 8PM ▶ [See more hours](#)



Less than
3 min
average
wait time

Locations.Maricopa.Vote

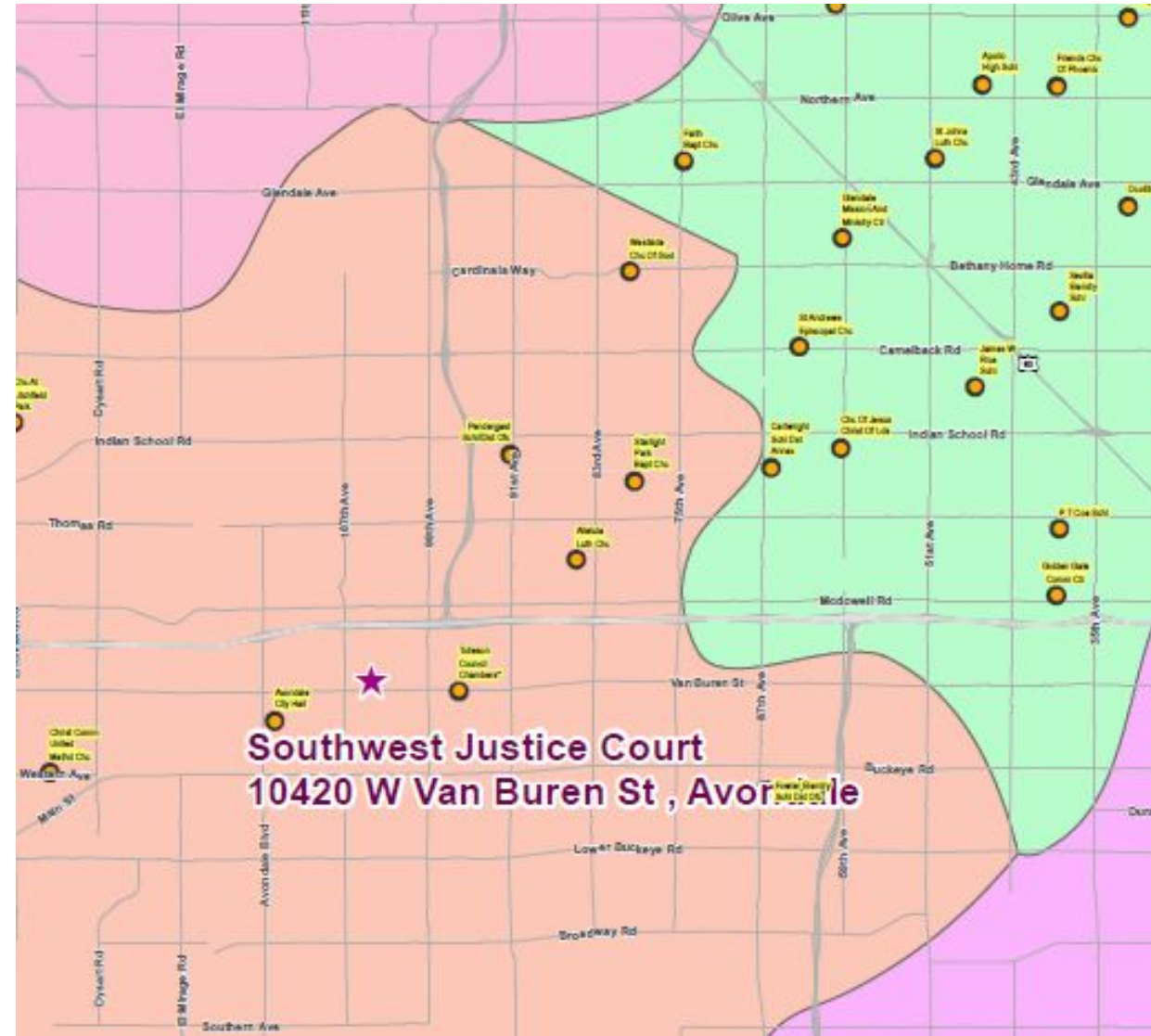
Supply depots & receiving sites

Supply depots

- Replenish Vote Centers
- Extra voting equipment
- PPE & cleaning supplies
- Extra toner & printer paper
- Geographically dispersed / quick response times

Receiving sites

- Easy access for poll workers
- Safe and secure
- Major transportation corridors
- Alternative routes



Let's talk

Discussion



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Next steps

- Have a conversation with NSGIC about assembling contextual layers
- Identify the contextual layers my office needs for our work
- Contact my state GIS office to learn which GIS layers they collect and maintain
- Develop a list of contextual layers to help my office prioritize
- Build relationships with key contacts for local districts like school districts
- Develop a plan for coordinated outreach and layer maintenance
- Identify new opportunities to use geospatial data for resource allocation
- Ask an expert questions to learn more about contextual layers
- I'm not sure

Share your thoughts

- What resonated with you from today's webinar? (Any "ah-ha" moments?)
- What questions do you have about what we covered today?
- What questions do you have about what we didn't cover today?

We've covered a lot of ground

Wrapping up



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What was your experience with today's webinar?

- Quick poll
- Please complete now to provide feedback and improve the webinar for future participants

Geo-Enabling Election Series: Up next

- Convening a team of specialists
- Collecting & sustaining a voting unit GIS layer
- Implementing a geocoding strategy
- Assembling best available contextual layers
- Defining & implementing data validation processes

techandcivicliflife.org/course/geo-enabled-elections/

Thanks!

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