

# Fresno COG Extreme Heat Analysis

*Working Meeting 2*

**PRESENTATION BY ROSE NEWBERRY**

**OCTOBER 2025**





# EXTREME HEAT AND SHADE PLAN

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# Project Team

**FCOG**

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**Project  
Managers**

**CONSULTING  
TEAM**

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**Dudek  
and VRPA**

**WORKING  
GROUP  
MEMBERS**

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## To refresh:

- The Fresno Council of Governments will develop an **Extreme Heat Analysis and Shade Adaptation Plan** for Fresno County. The plan will include an **extreme heat vulnerability analysis**, which will provide valuable data for future adaptation and mitigation responses to extreme heat induced by climate change. The plan will also **identify native and drought tolerant tree canopy and vegetative cover improvement projects** in communities most vulnerable to extreme heat based on the extreme heat vulnerability analysis and bike and pedestrian traffic analysis.
- This plan will inform general plans, other long-range plans, and the design and retrofit of future and present infrastructure.



# Logistics

- Please put questions in the chat, they will be answered by the presenters at the end of each technical overview, with FCOG staff follow ups as needed.
- We will use Menti for the interactive portions of todays meeting. You may use your smartphone or a web browser.



# Progress Report

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## **Completed**

- Plan Review
- Heat Vulnerability
- Active Transportation Analysis

## **In Progress**

- Community Engagement
- Template Selection

## **Next Steps**

- Template Design and Implementation
- Final Plan



# Plan Review

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# Plan Review

**MITIGATION** - Reducing heat buildup:

Planting trees and creating shade  
Cool roofs and pavements  
Preserving green spaces  
Reducing vehicle emissions

**MANAGEMENT** - Helping people cope:

Cooling centers during heat emergencies  
Worker safety protections  
Public education and early warnings  
Ensuring reliable electricity



# Plan Review

## Heat Planning Locally:

**City of Fresno:** Goal to plant 4,600 trees annually; expanding tree canopy to 20% (Mitigation)

**Measure P:** \$38 million annually for parks and green spaces (Mitigation)

**Bus Stop Improvements:** Identifying bus stops needing shade (Management)

**Cooling Centers:** 4 locations in Fresno, activated at 105°F (Management)

**State Support:** New CalHeatScore tool forecasts heat risk daily (Management)

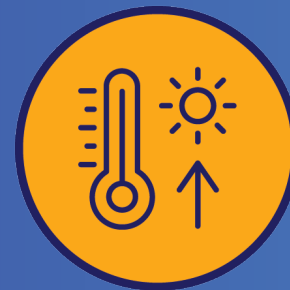
## Challenges we heard from local planners and implementers:

**Funding:** Even Fresno struggles to meet tree planting goals (only 1,000/year vs. 4,600 needed)

**Geographic Inequity:** Rural areas lack infrastructure

**Transportation Barriers + Stress:** Transportation to cooling centers, exposure is higher among those using the system

**Renters Left Behind:** Can't make cooling decisions; ineligible for many weatherization programs



# Questions from Chat

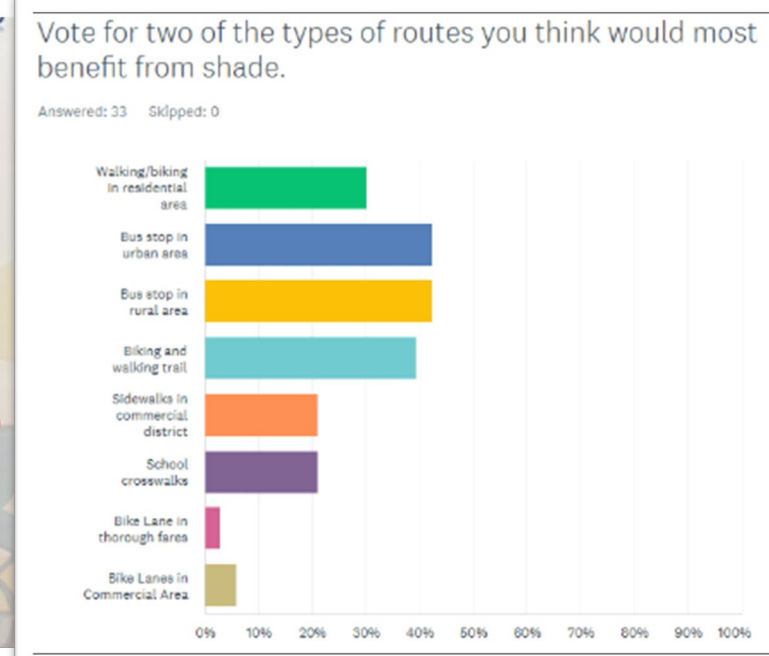


# Community Engagement

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# Community Engagement Summary



**Fresno County Heat Vulnerability Analysis and Shade Adaptation Plan**

**FRESNO**  
Council of Governments

We want to hear your thoughts about heat and shade.

1) What is your experience with extreme heat in Fresno County?  
Hot!

2) What are some specific locations you would like to have more shade?  
PUBLIC AREAS IE. SIDEWALKS

3) What walking and biking routes need more trees?  
ALL

4) What types of shade solutions would you prefer (e.g., trees, shade structures, bus shelters)?  
TREES ARE GOOD! AND BEAUTIFUL





# Key Findings



## Mobility Priorities

- Sidewalks, bike routes, and walking/bike trails
- Bus stops in rural and urban areas
- School crosswalks
- Sidewalks in commercial areas
- Green belts and canal banks



## Shade Infrastructure

Preference for trees

Shade structures also valued

Collaboration for funding, planting, and upkeep; partnerships with irrigation districts, non-profits, and businesses

Health risks and emotional toll of extreme heat frequently mentioned



## Priority Locations

- Bus stop and transit corridors, especially Shaw Avenue and West-Central Fresno
- High-traffic streets (Clinton, Shields, McKinley, Ashlan, Olive, Church, Peach, Dakota)
- Neighborhoods (Reedley, Orange Cove, Southeast and Southwest Fresno, Eastside communities)

# Questions from Chat





# Heat Vulnerability Assessment

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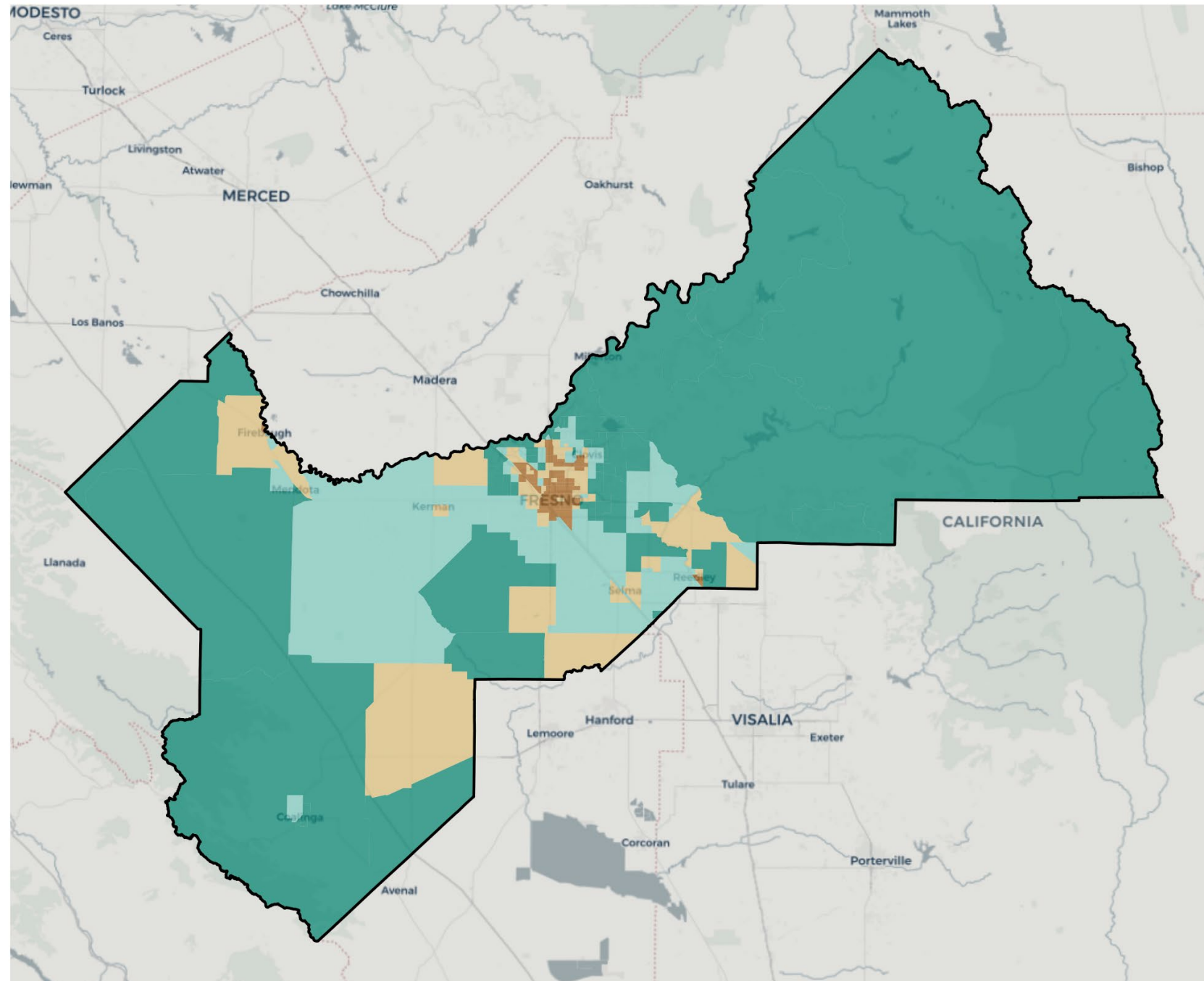


# Vulnerability Assessment

- Hazard → Exposure → Sensitivity → Adaptive Capacity → **Vulnerability**

Component	Indicators
Hazard	Urban heat severity, extreme heat days
Exposure	Population density, impervious surfaces
Sensitivity	Older adults, young children, disability, asthma, obesity, coronary heart disease, outdoor workers, low-income households
Adaptive Capacity	Tree canopy, transportation, income, park and cooling centers proximity


# HVI Map





# Questions from Chat



A city street at dusk with modern buildings, streetlights, and a tall skyscraper in the background. The scene is illuminated by warm streetlights and the cool blue of the twilight sky. The skyscraper in the center has a distinctive spire and is brightly lit. The foreground shows a wide street with a crosswalk and a stop sign. The overall atmosphere is urban and modern.

# Active Transportation Analysis

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# Goals of Transportation Analysis

## **Screening Process**

- Fresno COG Active Transportation Plan Projects
- Transit Stops

## **Priority Analysis**

- Heat Vulnerability
- Transit Connectivity
- Activity Center
- Existing Deficiency

## **Prioritized Geographies**

- West of 99  
(Incorporated/Unincorporated)
- East of 99  
(Incorporated/Unincorporated)
- Fresno/Clovis Metro



# Evaluation Spreadsheet (Active Transportation Projects)

## Fresno COG Extreme Heat Project Location Analysis - East of SR 99 Incorporated

10/16/25

Active Transportation Projects	Location	Heat Vulnerability			Transit Connectivity			Activity Center			Existing Deficiency			Total Score	Public Comments
		H	M	L	H	M	L	H	M	L	H	M	L		
<b>FOWLER</b>															
Ped Crossing - Golden State Blvd/8th St at Vine St	East of SR 99 - Incorporated		2				1		2			2		7	Public support expressed for locations in Eastside cities
Bike Facility - Golden State between Adams Ave and Merced St	East of SR 99 - Incorporated/Unincorporated		2				1		2				1	6	Public support expressed for locations in Eastside cities
<b>KINGSBURG</b>															
Sidewalk - South side of Sierra St (SR 201) west of Simpson St and north side of Sierra east of Simpson St	East of SR 99 - Incorporated		2				1		2			2		7	Public support expressed for locations in Eastside cities
Bike Facility - Draper St from 10th Ave to Sierra St	East of SR 99 - Incorporated		2				1		2			2		7	Public support expressed for locations in Eastside cities
Bike Facility - West side of Golden State from Mountain View to 1040 ft south of Bethel	East of SR 99 - Incorporated		2				1			1		2		6	Public support expressed for locations in Eastside cities
<b>ORANGE COVE</b>															
Sidewalk - Gap between 10th St and Center St	East of SR 99 - Incorporated		2				1			1		2		6	Public support expressed for locations in Orange Cove
Bike Facility - Behind Citrus MS and Orange Cove HS from South Ave to Parlier Ave	East of SR 99 - Incorporated		2				1		2				1	6	Public support expressed for locations in Orange Cove
<b>PARLIER</b>			2				1								
Sidewalk - South side of Manning Ave from Academy Ave to Madsen Ave	East of SR 99 - Incorporated/Unincorporated		2				1			1		2		6	
Bike Facility - Eastern trail from Whitner Ave to North of Madsen Ave	East of SR 99 - Incorporated		2				1			1			1	5	
Bike Facility - Trail between Tuolumne St and E Manning Ave	East of SR 99 - Incorporated			1			1			1			1	4	
<b>SANGER</b>			2												
Ped Crossing - Railroad crossing at 7th St	East of SR 99 - Incorporated			1			1		2		3			7	Public support expressed for locations in Eastside cities
Bike Facility - K St between 5th St and Annadale St	East of SR 99 - Incorporated			1			1		2				1	5	Public support expressed for locations in Eastside cities
<b>FRESNO COUNTY</b>															
Bike Facility - Palm Ave from Shaw Ave to Dakota Ave	East of SR 99 - Incorporated		2			2			2		3			9	
Bike Facility - Path along Jensen Bypass from Cedar Ave to Orange Ave	East of SR 99 - Incorporated	3				2			2			2		9	
Sidewalk - Both sides of Church Ave east of East Ave and East Ave north of Church Ave	East of SR 99 - Incorporated	3					1			1			1	6	Public support expressed for locations in Eastside cities
Sidewalk - Belmont Ave from Winery Ave to east of Bush Ave	East of SR 99 - Incorporated		2				1			1		2		6	
Sidewalk - Clovis Ave from Park Circle Dr to railroad tracks to south	East of SR 99 - Incorporated			1			1			1	3			6	Public support expressed for locations in Eastside cities
Bike Facility - Behind Del Rey Elementary School from Melrona Ave to Jefferson Ave	East of SR 99 - Incorporated			1			1		2				1	5	
Sidewalk - Bullard Ave from Briarwood Ave to Sequoia Ave, from Channing Way to Fruit Ave, and from west of Harrison Ave to Harrison Ave	East of SR 99 - Incorporated			1			1			1			1	4	

# Evaluation Spreadsheet (Transit Stops)

Transit Stops	Location	Transit Connectivity			Existing Deficiency			Total Score	Public Comments
		H	M	L	H	M	L		
Manning Ave and Buttonwillow Ave	East of SR 99 - Incorporated			1		2		6	Public support expressed for locations in Eastside cities
Davita Sanger Dialysis Center	East of SR 99 - Incorporated			1			1	5	Public support expressed for locations in Eastside cities
Auto Dealership	East of SR 99 - Incorporated			1			1	4	Public support expressed for locations in Eastside cities
Me N Ed's	East of SR 99 - Incorporated			1			1	5	Public support expressed for locations in Eastside cities
Round Table Pizza	East of SR 99 - Incorporated			1			1	4	Public support expressed for locations in Eastside cities
Sanger Hospital	East of SR 99 - Incorporated			1		2		7	Public support expressed for locations in Eastside cities
Sanger City Hall	East of SR 99 - Incorporated			1		2		7	Public support expressed for locations in Eastside cities
Sanger City Hall	East of SR 99 - Incorporated			1		2		7	Public support expressed for locations in Eastside cities
McDonald's	East of SR 99 - Incorporated			1			1	5	Public support expressed for locations in Eastside cities
Reedley College	East of SR 99 - Incorporated			1		2		7	Public support expressed for locations in Reedley
Beauty Supply	East of SR 99 - Incorporated			1			1	5	Public support expressed for locations in Eastside cities
Dr. Verma's	East of SR 99 - Incorporated			1			1	5	Public support expressed for locations in Eastside cities
Selma Plaza shopping center/Papa Murphy's Pizza	East of SR 99 - Incorporated			1			1	6	Public support expressed for locations in Eastside cities
Selma Plaza shopping center/WIC Bench	East of SR 99 - Incorporated			1			1	6	Public support expressed for locations in Eastside cities
Brooks Ranch	East of SR 99 - Incorporated			1		2		6	Public support expressed for locations in Eastside cities
BRAWLEY - SHIELDS	Fresno/Clovis Urban Area		2			2		8	Public support expressed for major corridors, including Shields
SHAW - WEST	Fresno/Clovis Urban Area		2		3			8	Public support for shade at bus stops along Shaw Avenue
SE SHAW - BLACKSTONE	Fresno/Clovis Urban Area		2		3			9	Public support for shade at bus stops along Shaw Avenue
SHAW - FIRST	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue
SHAW - CEDAR	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue
WILLOW - SHAW	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue
SHAW - CEDAR	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue
FRESNOYOSEMITE INTL - EB	Fresno/Clovis Urban Area		2			2		8	
FIRST/SHAW S/B	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue
FIRST - SHIELDS	Fresno/Clovis Urban Area		2			2		9	Public support expressed for major corridors, including Shields
FIRST - SHIELDS	Fresno/Clovis Urban Area		2			2		9	Public support expressed for major corridors, including Shields
CEDAR - VENTURA	Fresno/Clovis Urban Area		2			2		9	
CEDAR - VENTURA	Fresno/Clovis Urban Area		2			2		9	
MARKS - SHAW	Fresno/Clovis Urban Area		2			2		7	Public support for shade at bus stops along Shaw Avenue
SW SHAW - HUGHES	Fresno/Clovis Urban Area		2			2		8	Public support for shade at bus stops along Shaw Avenue
SE SHAW - PALM	Fresno/Clovis Urban Area		2			2		7	Public support for shade at bus stops along Shaw Avenue
SE SHAW - GLENN	Fresno/Clovis Urban Area		2			2		8	Public support for shade at bus stops along Shaw Avenue
SE SHAW - FRESNO	Fresno/Clovis Urban Area		2		3			10	Public support for shade at bus stops along Shaw Avenue
NW SHAW - FRESNO	Fresno/Clovis Urban Area		2			2		9	Public support for shade at bus stops along Shaw Avenue



# Evaluation Spreadsheet (Individual Geography)

## Fresno COG Extreme Heat Project Location Analysis - West of SR 99 Incorporated

10/16/25

Active Transportation Projects	Location		Heat Vulnerability			Transit Connectivity			Activity Center			Existing Deficiency			Total Score	Public Comments
			H	M	L	H	M	L	H	M	L	H	M	L		
COALINGA																
Ped Crossing - Cambridge Ave @ Coalinga Middle School	West of SR 99 - Incorporated			2				1		2		3			8	
Bike Facility - Cambridge Ave btwn N Monterey Ave and Sunset Ave Trail Segment 13	West of SR 99 - Incorporated			2				1			1		2		6	
Bike Facility - Elm Ave	West of SR 99 - Incorporated				1			1			1			1	4	
FIREBAUGH																
Bike Facility - Canal Crossing East of T St	West of SR 99 - Incorporated		3					1			1			1	6	
Bike Fac. - Behmer Ave to Clyde Fannon Rd, west side of Clyde Fannon Rd to Borboa Ln	West of SR 99 - Incorporated				1			1			1		2		5	
HURON																
Bike Facility - Huron Middle School to Porvenir Estates	West of SR 99 - Incorporated				1			1			1	3			6	
Ped Crossing - Across Lassen Ave (SR 269) at 11th St	West of SR 99 - Incorporated				1			1			1		2		5	
KERMAN																
Ped Crossing - Across Madera Ave (SR 145) at A St (California Ave)	West of SR 99 - Incorporated				1			1		2			2		6	
Bike Facility - California Ave from Madera Ave (SR 145) to east of Goldenrod Ave	West of SR 99 - Incorporated			2				1		2				1	6	
MENDOTA																
Ped Crossing - Across Derrick Ave (SR 33) at 4th St	West of SR 99 - Incorporated				1			1		2			2		6	
Ped Crossing - Across Derrick Ave (SR 33) at 9th St	West of SR 99 - Incorporated				1			1		2			2		6	
Ped Crossing - Across Derrick Ave (SR 33) at Lozano St	West of SR 99 - Incorporated				1			1		2			2		6	
Bike Facility - West side of Derrick Ave between Bass Ave and Naples St	West of SR 99 - Incorporated				1			1			1			1	4	
SAN JOAQUIN																
Ped Crossing - Across railroad tracks at 9th St	West of SR 99 - Incorporated			2				1			1	3			7	
Ped Crossing - Across railroad tracks at Main St	West of SR 99 - Incorporated			2				1			1	3			7	
Bike Facility - 9th St from Pine St to Nevada Ave	West of SR 99 - Incorporated			2				1			1		2		6	



# Questions from Chat



# Template Selection

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# Why Templates

- **Purpose** – Identify common vulnerable routes that need shade across the County and provide general recommendations and implementation notes all local governments can use.
- **Templates** –
  - Urban Commercial Corridors
  - Suburban Neighborhood Connectors
  - Transit Stop / Mobility Hub Corridors
  - Rural Town Main Streets
  - Community Trail / Pathway Corridors

# We want to hear from you

## Three Questions –

- What problems do you notice on these streets during hot weather?
- What limitations make it hard to add shade or trees here?
- Whose needs should be prioritized on these routes?

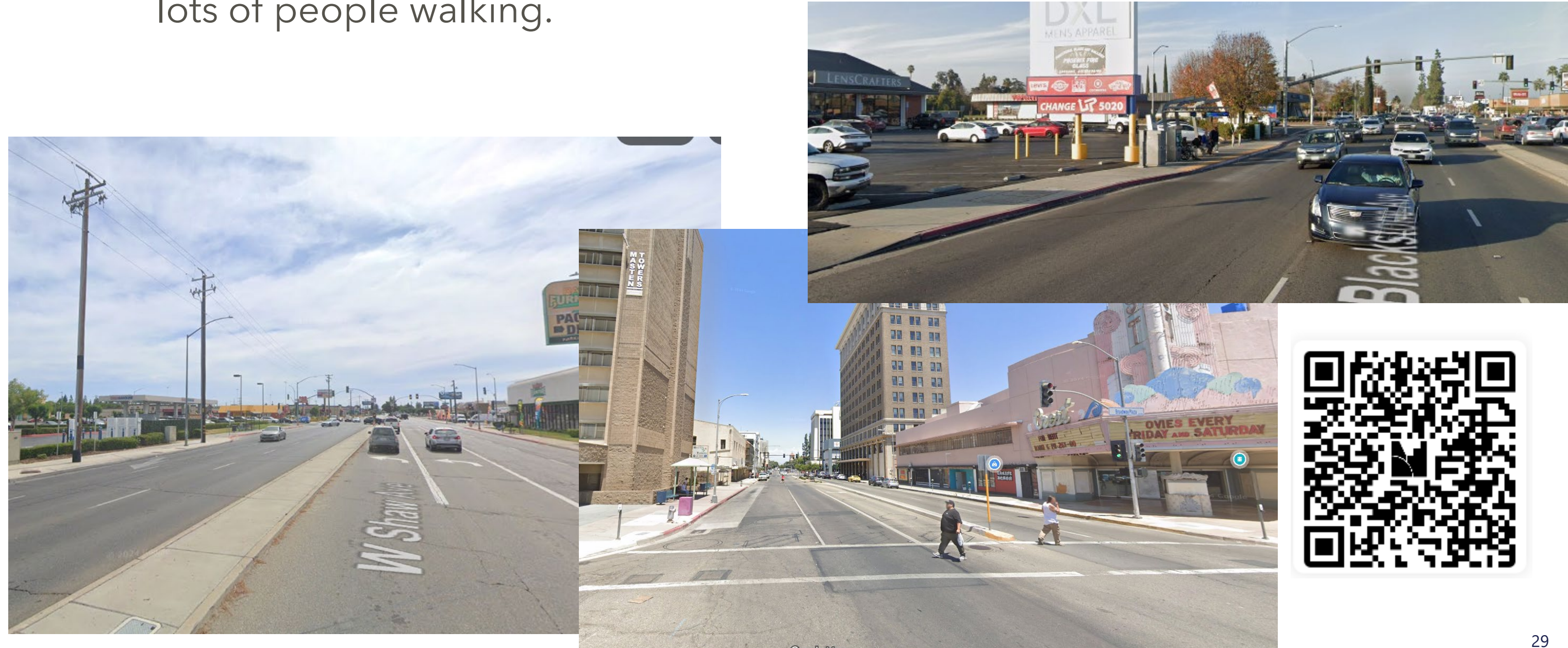
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# Urban Commercial Corridor

- **What it is:** Main streets or business corridors with shops, bus stops, and lots of people walking.





# Suburban Neighborhood Connector

- **What it is:** Residential streets that connect homes, schools, and parks.





# Transit Stop / Mobility Hub Corridor

- **What it is:** Routes people walk or bike to take the bus.



# Rural Town Main Street

- **What it is:** Smaller downtown streets or highways running through town centers that mix vehicles, people, and storefronts.





# Community Trail / Pathway Corridors

- **What it is:** Off-street paths and routes



# Questions from Chat



An orchard of orange trees with a dirt path leading into the distance. The trees are lush green and heavily laden with ripe, orange-colored fruit. The path is a light brown color and leads from the foreground into the distance, flanked by rows of trees. The sky is a clear, pale blue.

# Next Steps

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# Next Steps

- Project Selection
  - Represent all five geographies
  - Represent all five templates
- Project Design
  - Public workshop
  - Plant pallet (canopy, planting recommendations)
  - Site improvements
- Final Plan



# Questions from Chat



DUDEK

Thank you!





XX

