



Public Works Subcommittee Project Discussion #1

Resident Bond Exploratory Committee | October 15, 2024



Public Works Project Meeting #1

Agenda:

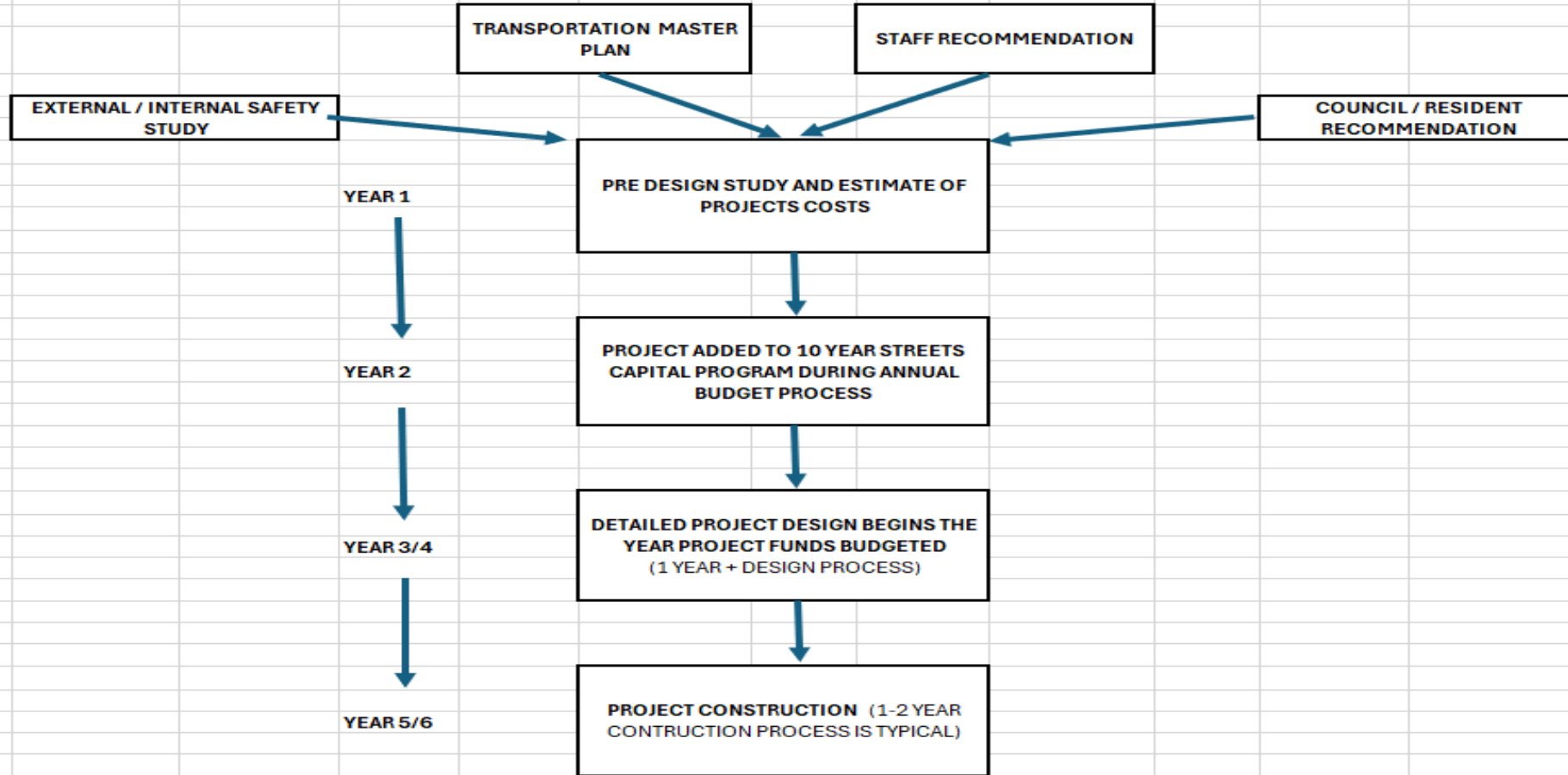
- Large Project Evolution
- Intersection / Roadway Projects
- Miscellaneous Programs
- Next Meeting Preview
- Questions and Discussion



Large Project Evolution



STREETS PROJECT PROCESS / TIMELINE



What Triggers The Need For An Intersection Or Roadway Project?

<u>Reason for Improvement</u>	<u>How We Identify It</u>
Safety Concerns	Crash History and Severity and Road Safety Audits (RSA)
Capacity & Congestion	Traffic Counts, Traffic Flow Quality, Geometric Layout Reviews, Field Observations, Simulation
Operational Efficiency	Signal Timing Analysis, Speed, Traffic Volumes, Turning Movement Counts, Intersection Performance, Arrival and Departure Counts
Pedestrian & Bicycle Needs	Pedestrian/Bicycle Counts, ADA Compliance Survey/Evaluation, User Feedback
<u>Land Use Changes</u>	<u>Trip Generation Analysis and Traffic Impact Study</u>

Key Message: Improvements are based on data-driven assessments to enhance safety, efficiency, and functionality.

What Solutions Can We Build To Fix The Problems?

- **Dual Left-Turn Lanes/Right Turn Lanes:** Typically requires road widening, relocation of curbs, sidewalks, and utilities to accommodate additional lanes, often necessitating relocation of signal poles, mast arms, and equipment.
- **Bicycle Lanes:** Expanding the roadway to add bike lanes often involves widening the street, adjusting lane markings, and potentially realigning signals and poles.
- **Road Widening for Through Lanes:** Adding through lanes increases capacity but necessitates widening the entire intersection, which impacts not just the roadway, curbs, sidewalks, and utilities but also the signals, requiring longer mast arms and new poles.
- **Signal Upgrades to Meet MUTCD Standards:** Ensuring proper signal indication alignment and visibility, especially when adding new lanes, often requires longer mast arms, new signal poles/foundations for all directions.
- **Flashing Yellow Arrows (FYA):** Improves safety but often necessitates longer mast arms and new signal poles to ensure proper coverage for the new lanes.
- **ADA Compliance:** Installing or relocating audible push buttons and curb ramp upgrades.
- **Improved Crosswalk Visibility:** High-visibility markings and enhanced signage improve safety but may also involve signal pole realignment and upgraded signage infrastructure.
- **Enhanced Lighting:** Improving visibility at night or during poor weather conditions involves adding new lighting poles or upgrading existing ones to illuminate the expanded roadway.

Intersection/Roadway Projects



Arizona Ave/Warner Rd Intersection

Page	Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
	6ST786	Arizona Ave/Warner Rd Intersection	\$1,257,300	15,466,700	Streets General Obligation Bonds

The Arizona Avenue and Warner Road intersection was identified by the Maricopa Association of Governments (MAG) as a top 50 intersection for crash incidences in the MAG region. A Road Safety Assessment, RSA recommended signal phasing changes to better accommodate traffic flows, installation of dual left turn lanes northbound and southbound Arizona Ave to reduce the severity and number crashes. Arizona Avenue is classified as a high-capacity corridor with multiple road users.



Ray Road / Kyrene Road Intersection

	Program #	Program Name	Current 10 Year CIP	Bond Auth. Needed	Funding Source
	6ST781	Ray Road / Kyrene Road Intersection	\$5,553,000	\$5,533,000	Streets General Obligation Bonds, Capital Grants

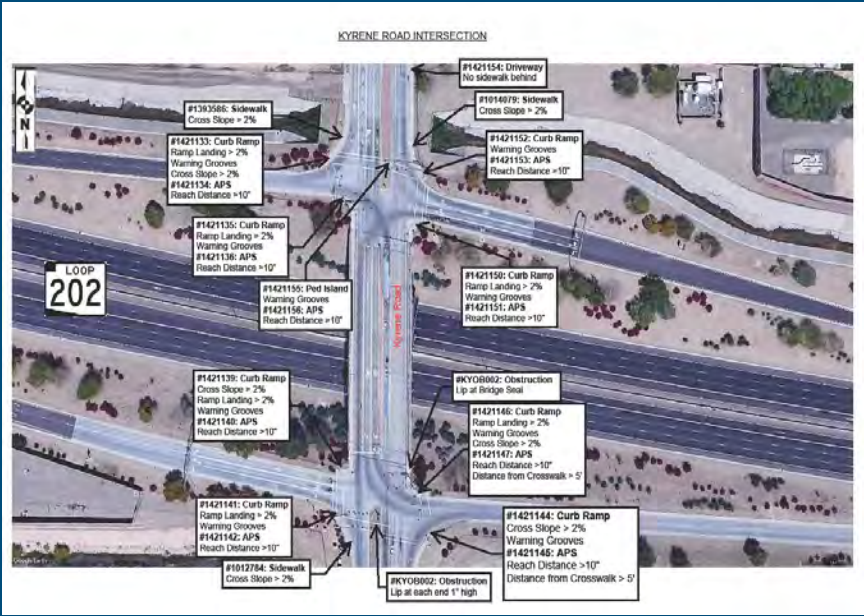
The Ray Road/Kyrene Road program includes reconstruction of the intersection to three thru lanes, dual left turn lanes, right turn lanes, and bike lanes in each direction as well as sidewalks, curb and gutter, street lighting, traffic signals, storm drainage, landscaping, right-of-way acquisition, and utility relocations. Construction funding for this project is beyond this 10-year CIP window.



Kyrene Road (Chandler Boulevard to Santan 202)

Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
6ST737	Kyrene Road (Chandler Boulevard to Santan 202)	\$45,403,100	\$11,906,000	Streets General Obligation Bonds, Capital Grants

This program includes widening Kyrene Road from Chandler Boulevard to the Santan (Loop 202) Freeway from four to six thru lanes (widening to outside), traffic signal modifications, street lighting, storm drainage, landscaping, ROW acquisition and utility relocations. This program also includes intersection improvements at Kyrene Rd and Chandler Blvd consisting of dual left turn lanes and single right in all directions per study that was completed in 2021.



Warner Rd. (Price to Arizona Ave)

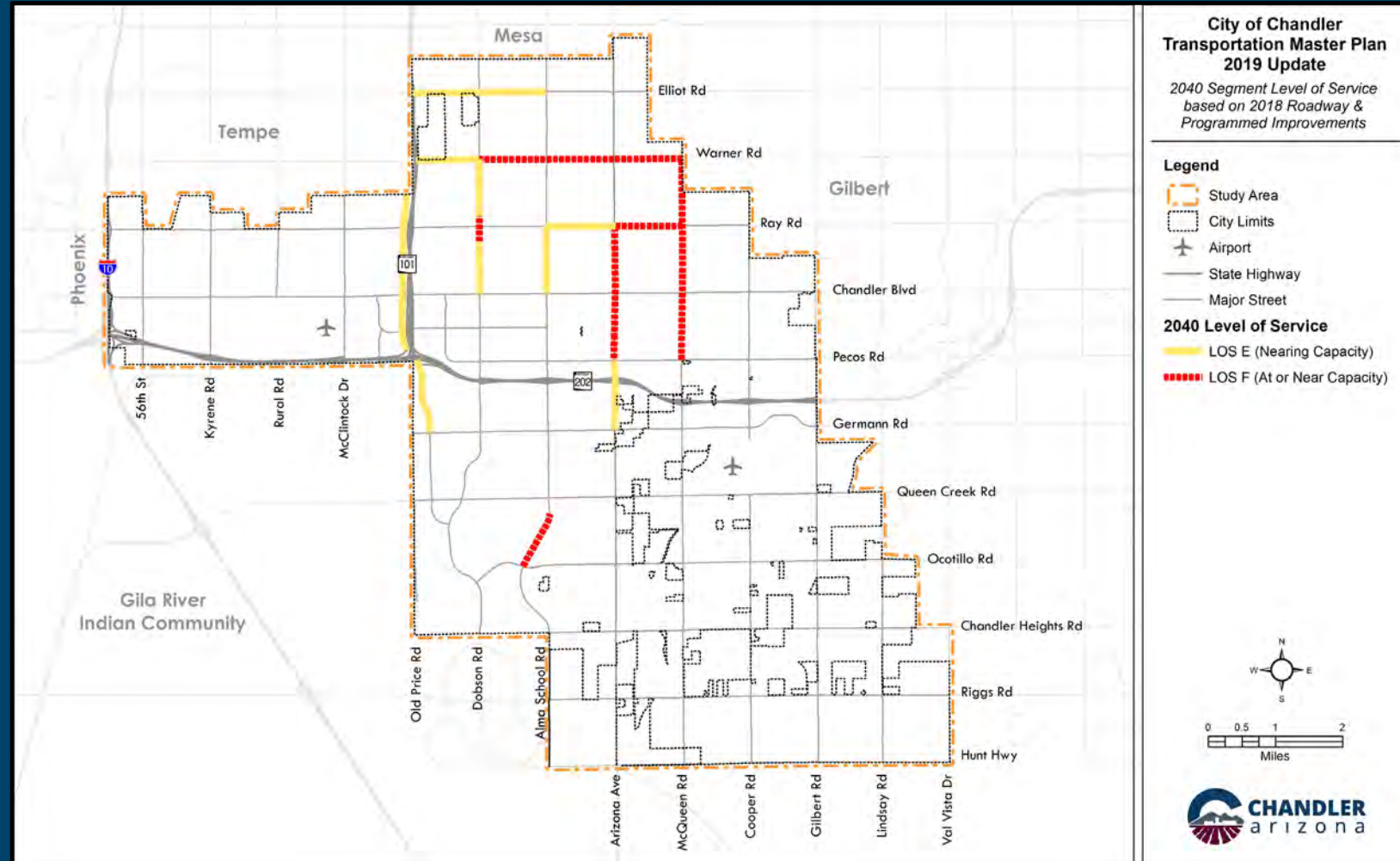
	Program #	Program Name	Current 10 Year CIP	Bond Auth. Needed	Funding Source
	6ST774	Warner Rd. (Price to Arizona Ave)	\$13,911,000	\$13,911,000	Streets General Obligation Bonds, Capital Grants

Warner Road will be widened from 4 to 6 lanes between Price Rd and Arizona Ave, including intersection improvements at Dobson Rd, Alma School Rd, and Arizona Ave. Improvements will consist of thru lanes, turn lanes, bike lanes, sidewalks, curbs and gutters, street lighting, Intelligent Transportation System (ITS), traffic signals as warranted, storm drainage, landscaping, right-of-way acquisition, and utility relocation. Construction funding for this project is beyond this 10-year CIP window.



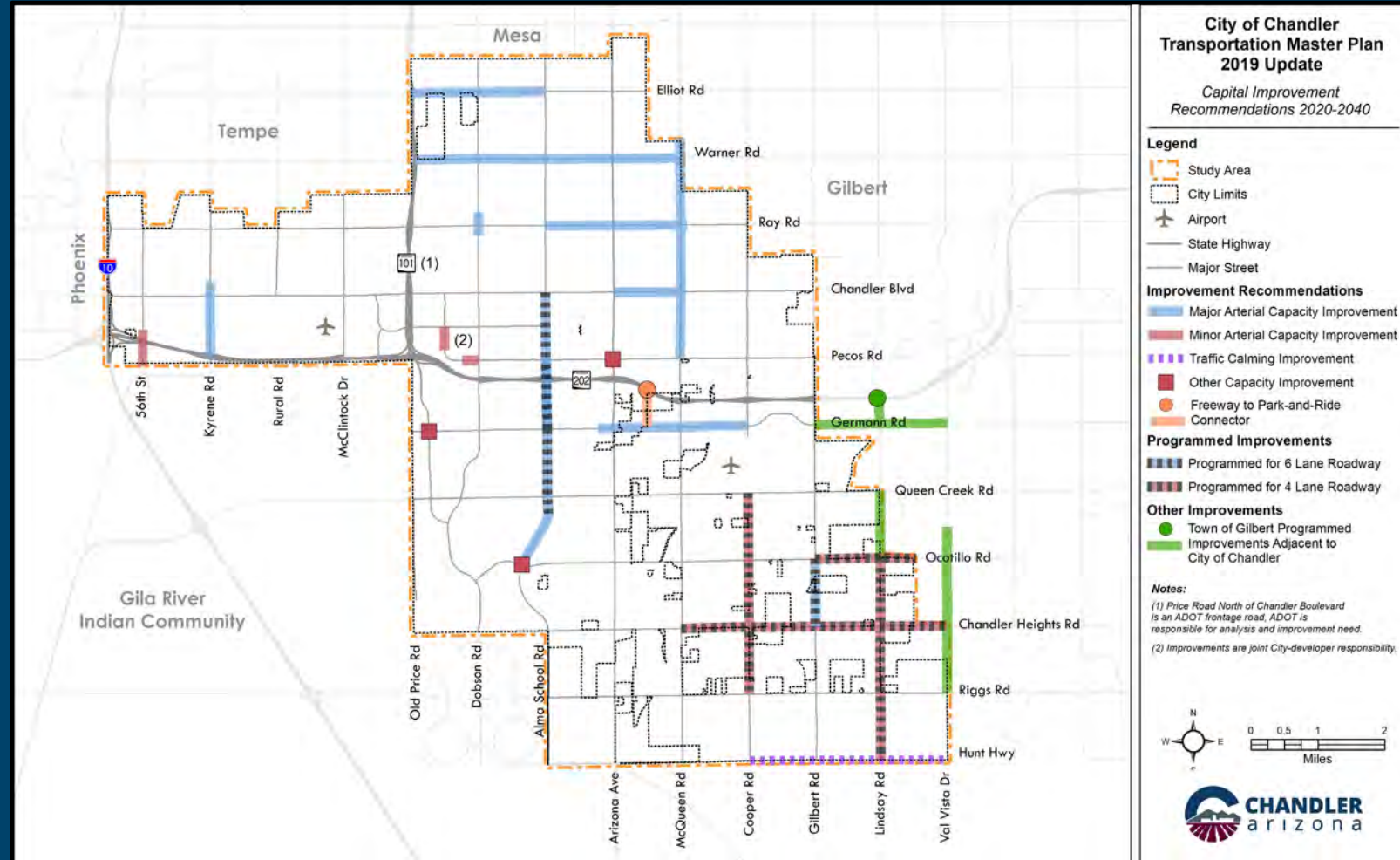
2040 Level of Service Without Improvements

- Capacity constraints primarily north of Loop 202
- Programmed projects accounted for in analysis



Roadway Recommendations (2020-2040)

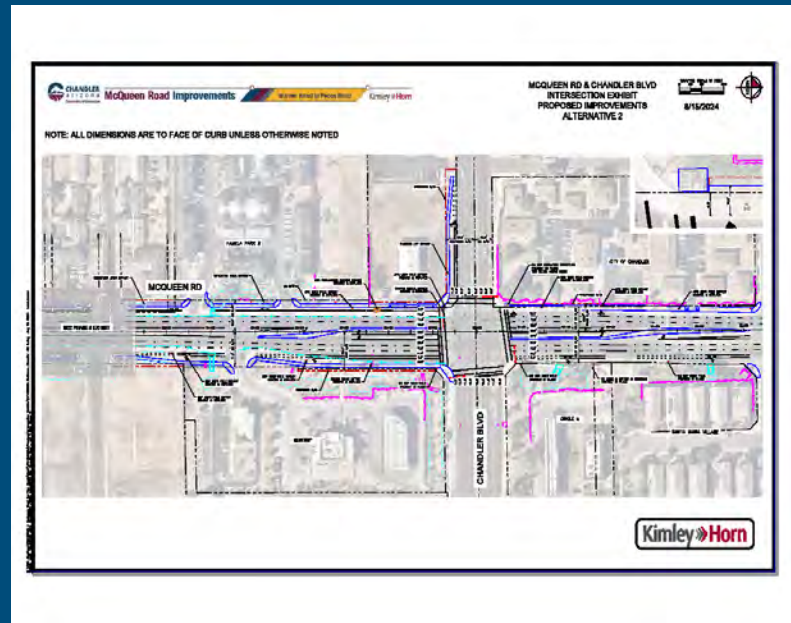
- Network of primarily 4-lane and 6-lane roads
- Several 4-lane roads with 6-lanes at intersections north of Loop 202 and east of Loop 101



McQueen Road Improvements (Warner to Pecos)

Program #	Program Name	Current 10 Year CIP	Bond Auth. Needed	Funding Source
6ST793	McQueen Road Improvements (Warner to Pecos)	\$84,885,000	\$26,631,000	Streets General Obligation Bonds, Capital Grants

McQueen Road improvements will consist of thru lanes, turn lanes, bike lanes, sidewalks, curbs and gutters, street lighting, ITS, traffic signals, storm drainage, landscaping, right-of-way acquisition, and utility relocation. A study began in FY 2023-24 to provide recommended intersection improvements, roadway alignment modifications, and inner/outer widening requirements.



Miscellaneous Programs



Street Construction - Various Improvements

Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
6ST303	Street Construction - Various Improvements	\$12,000,000	\$4,800,000	Streets General Obligation Bonds, Capital Grants

This program provides funding for small safety related projects and developer agreements that arise outside of the normal budget cycle. The program also provides budget appropriation for “year-end closeout” federal grants for various projects and for other federal, state, or county grants. The notification of these grants is often received after the budget has been finalized. The program includes \$4 million in grant appropriation for these unforeseen grant awards.



Traffic Signals Improvements and Repairs

	Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
	6ST322	Traffic Signals Improvements and Repairs	\$16,019,500	\$10,038,500	Streets General Obligation Bonds

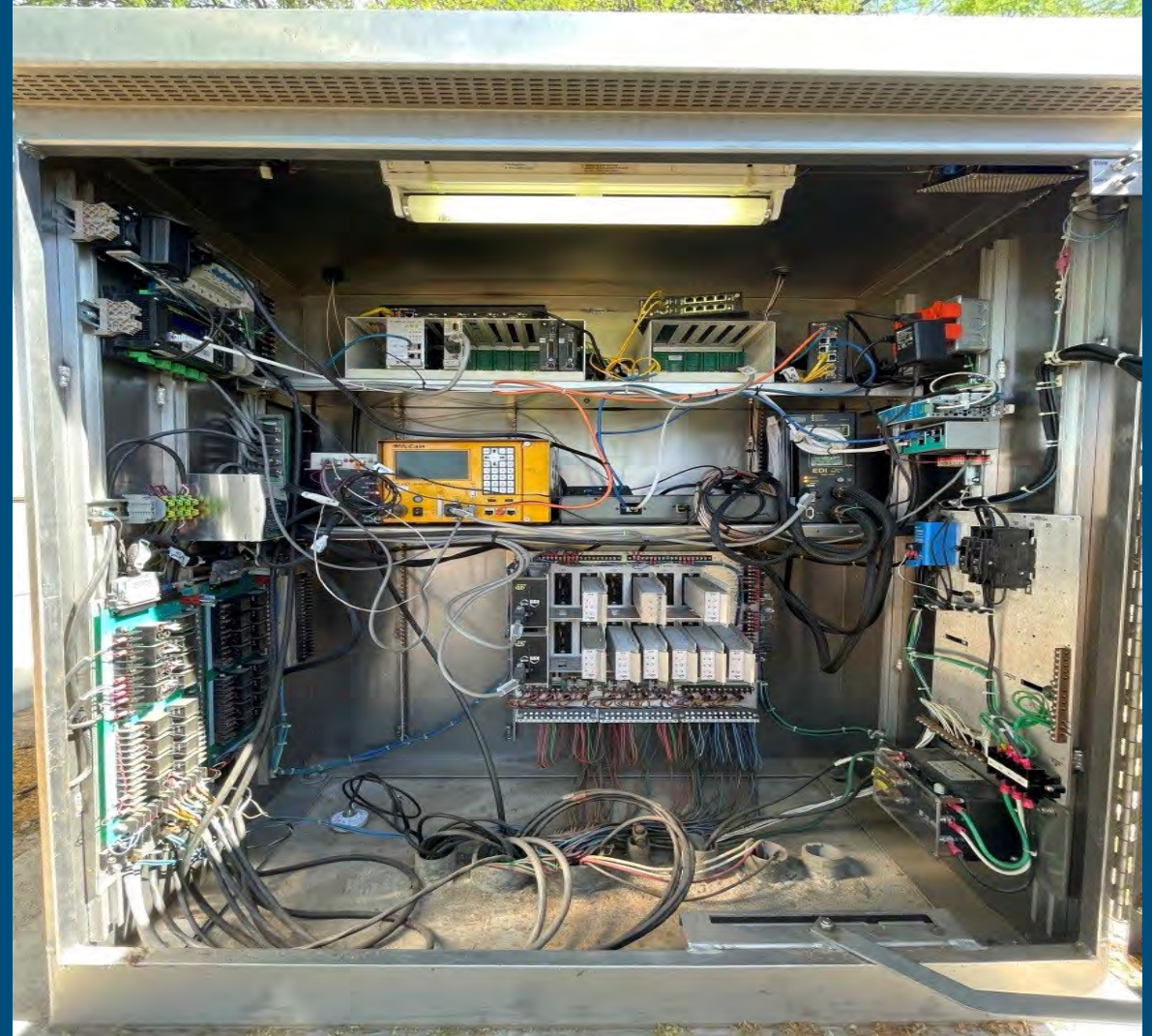
This program will provide traffic signal equipment for ongoing operations, maintenance, and rehabilitation of existing traffic signals, rewiring of intersections, replacement of illuminated street name sign faces, and pole painting. Equipment ranges from signal poles and heads, cameras, controllers, pedestrian signal audibles, speed reader boards, timers, and cabinets. Funding includes upgraded cabinets with the capacity to fit all required equipment necessary including cameras and allows for access to parts of the cabinet making it easier and more efficient for staff.



Traffic Signal and Street Light Maintenance



Managing the Wiring and Electronic Systems



Repair of Damaged Poles and Wiring



Sharing the Beauty of Chandler From a Streets Guy!!



Armstrong Way and Hamilton Street



Willis Road (Vine Street to 1,700 feet east)



El Monte Place (from Cheri Lynn Drive to 1,000 feet east)



Preview of Project Meeting #2 October 29, 2024



2025-2034 CIP - Streets

	Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
	6ST248	Street Repaving	\$185,940,000	\$88,008,000	HURF, General Government Capital Projects, Streets General Obligation Bonds

Chandler maintains about 2,090 lane miles of streets. The Streets Division inventories all streets on a four-year cycle to evaluate pavement condition. Pavement Quality Index (PQI) is tracked to determine maintenance priority. Streets with a PQI of 40 or less (scale of 1 to 100) are scheduled for repaving. Asphalt seals and ADA related concrete sidewalk replacement are also part of this program.



2025-2034 CIP - Streets

Page	Program #	Program Name	Current 10 Year CIP	Bond Auth Needed	Funding Source
	6ST702	Washington Street Improvements	\$12,841,000	\$9,833,000	Streets General Obligation Bonds

Waiting On Kim



2025-2034 CIP - Streets

Program #	Program Name	Current 10 Year CIP	Bond Auth. Needed	Funding Source
6ST753	Ocotillo Rd. Shared Use Path	\$21,911,000	\$21,911,000	Streets General Obligation Bonds, Capital Grants

This program will add a ten to twelve-foot-wide shared use path on one side of Ocotillo Road between Dobson Road and 148th Street. (6.7 miles)

