

03

IDENTIFYING REGIONAL NEEDS



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To identify priority corridors for active transportation, several network alternatives were developed to explore how different regional priorities shape key routes. While the preferred high-priority network is primarily based on the arterial roadway system, active transportation demand does not always follow these major corridors. Nearby local streets, collector roads, or off-street trails often offer safer, more comfortable, or more direct connections for people walking, biking, or using other forms of active transportation. These adjacent routes help fill gaps in the existing network and better reflect local travel patterns. To support a more localized and context-sensitive approach, the region was divided into nine geographic areas that are shown in **Figure 21**. This allows for detailed corridor analysis and recommendations tailored to each area's unique characteristics and needs.

CORRIDOR IDENTIFICATION PROCESS

1

IDENTIFY PRIORITY NETWORK ALTERNATIVES

Three priority network alternatives were created based on the existing conditions analysis and input from the first round of public engagement. Each alternative emphasizes different regional priorities and helps identify key active transportation corridors across the region.

2

DEVELOP EVALUATION CRITERIA AND WEIGHTING

To assess the network alternatives, regional priorities were translated into evaluation criteria. Each alternative was evaluated using a tailored weighting system that emphasizes the priorities most relevant to that scenario, ensuring a fair and meaningful comparison.

3

IDENTIFY HIGH-PRIORITY NETWORK FOR EACH ALTERNATIVE

Weighted criteria were applied to arterial roadway segments across the region. This process highlighted top-performing segments within each geographic area, which were then connected to form a high-priority network for each alternative.

4

SELECT PREFERRED HIGH-PRIORITY NETWORK

A formula was applied to compare the high-priority networks from each alternative and identify the region's preferred high-priority network.

5

DEVELOP PROJECTS FOR THE PREFERRED NETWORK

Using the preferred high-priority network, active transportation projects were developed to address current gaps on the preferred high-priority network and meet demand.

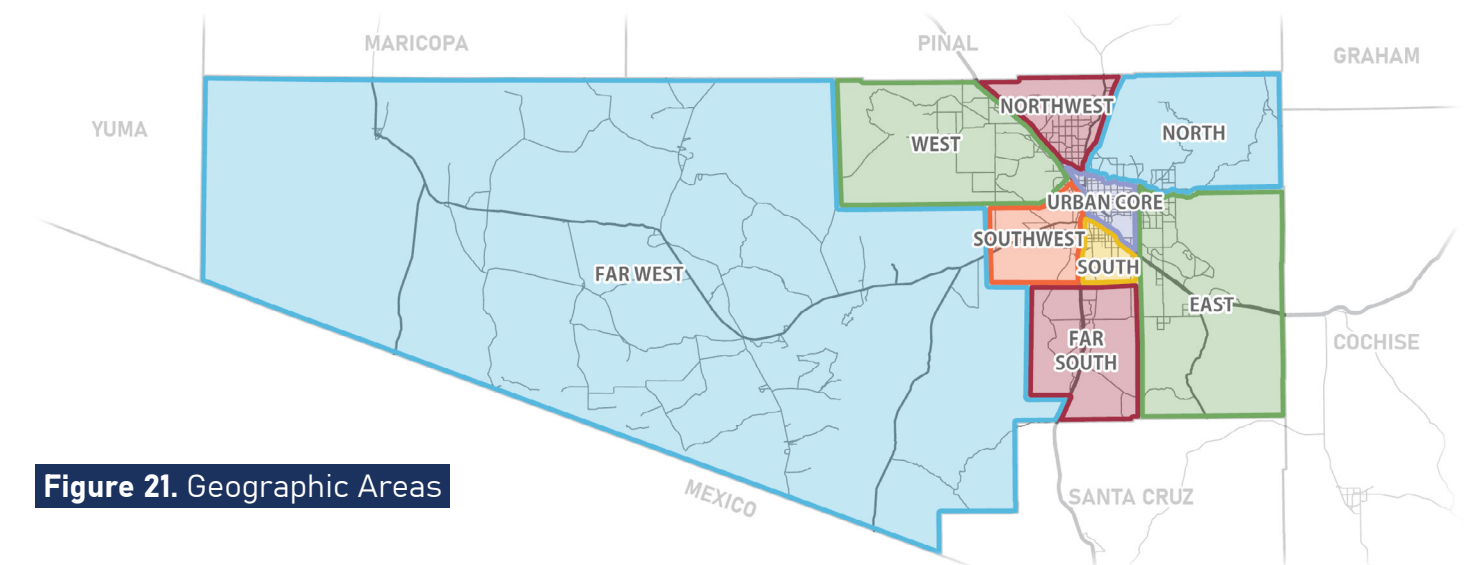


Figure 21. Geographic Areas

1 PRIORITY NETWORK ALTERNATIVES

Each priority network alternative aims to prioritize a different key element to a successful active transportation system.

MAXIMIZING NEED-BASED CONNECTIVITY

Focuses on areas where people are most likely to walk or bike and have fewer transportation options. This helps connect communities that rely more on active transportation.

MAXIMIZING ACCESSIBILITY

Aims to reach as many people as possible by improving connections in places with lots of residents, jobs, and destinations across the region.

MAXIMIZING SAFETY

Targets locations with safety concerns for people walking and biking, using data and public input to guide improvements where they are most needed.

2 CORRIDOR PRIORITIES AND EVALUATION CRITERIA

Eight corridor priorities, shown in Figure 22, were defined to guide the evaluation of arterial segments, each with its own set of technical criteria that helped shape the network alternatives. The priority weighting for each network alternative is shown in Figure 23. The resulting high-priority network for the Maximizing Need-Based Connectivity, Accessibility, and Safety alternatives are shown in Figure 24, Figure 25, and Figure 26, respectively.

Figure 22. Corridor Priorities



Figure 23. Network Alternative Weighting

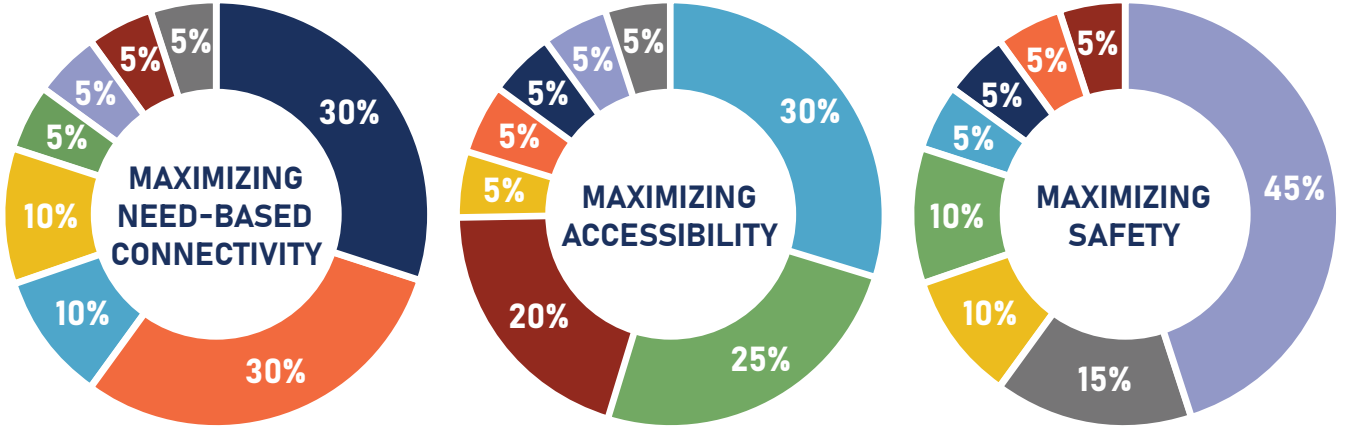


Figure 24. Maximizing Need-Based Connectivity Alternative

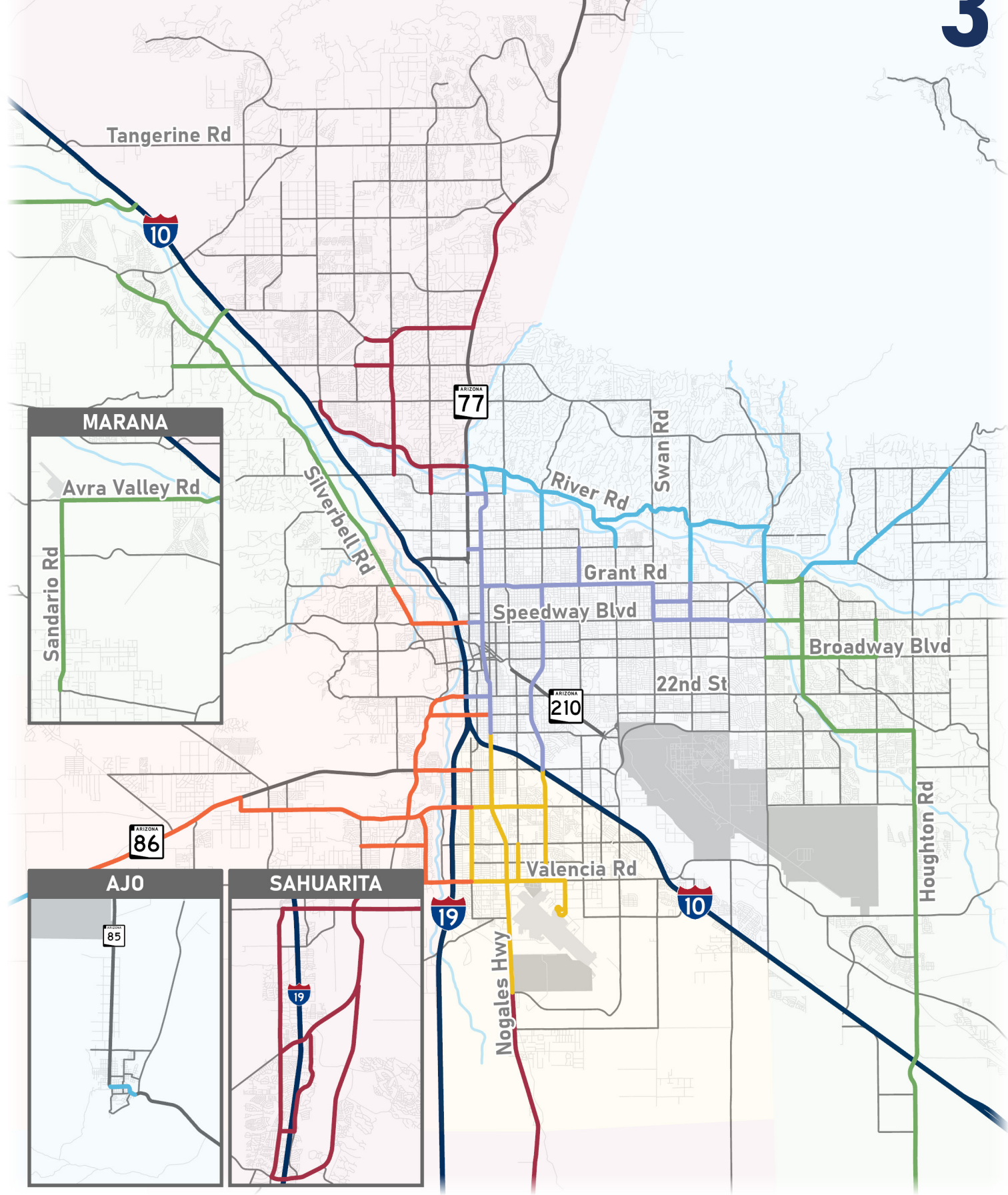




Figure 25. Maximizing Accessibility Alternative

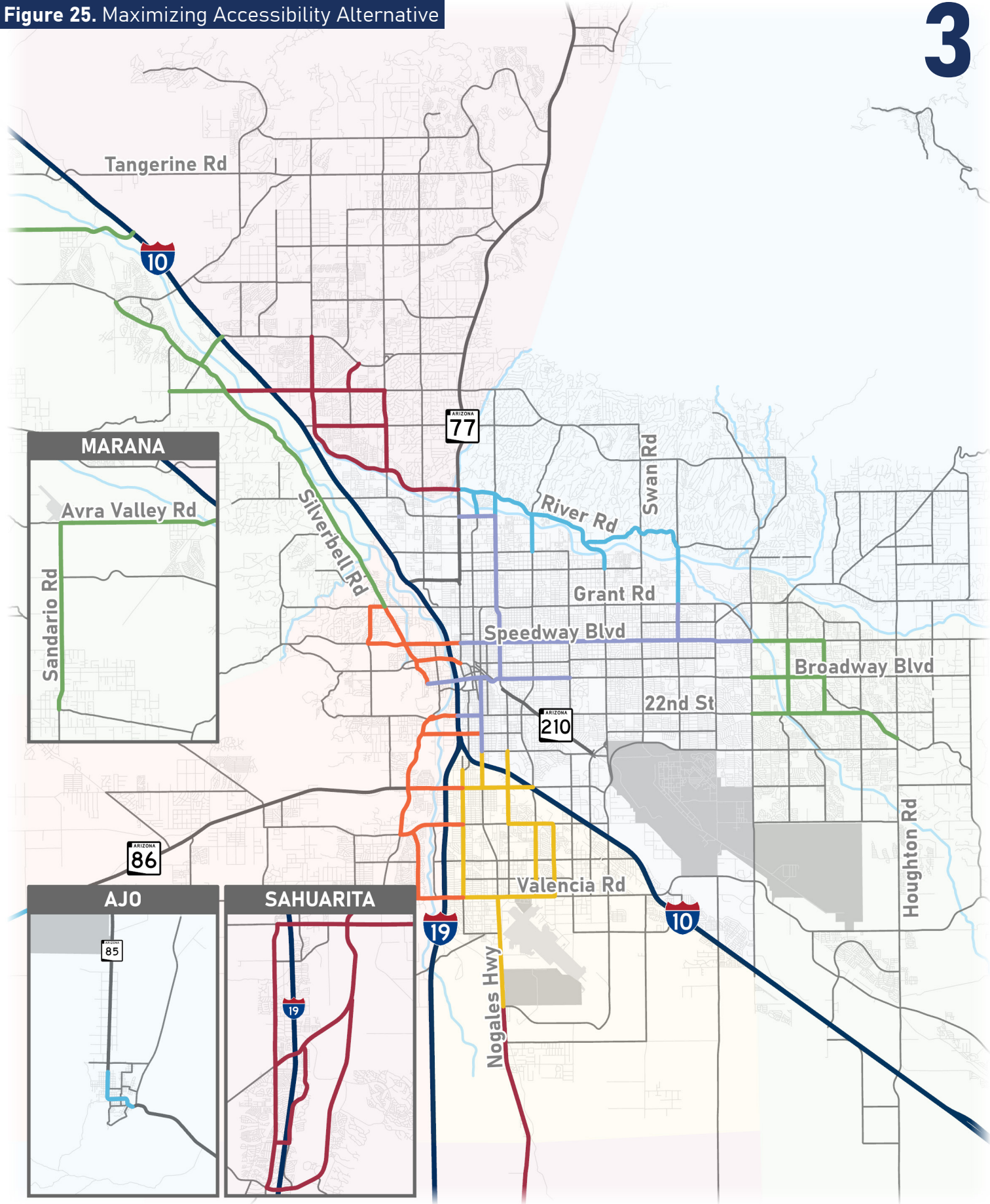
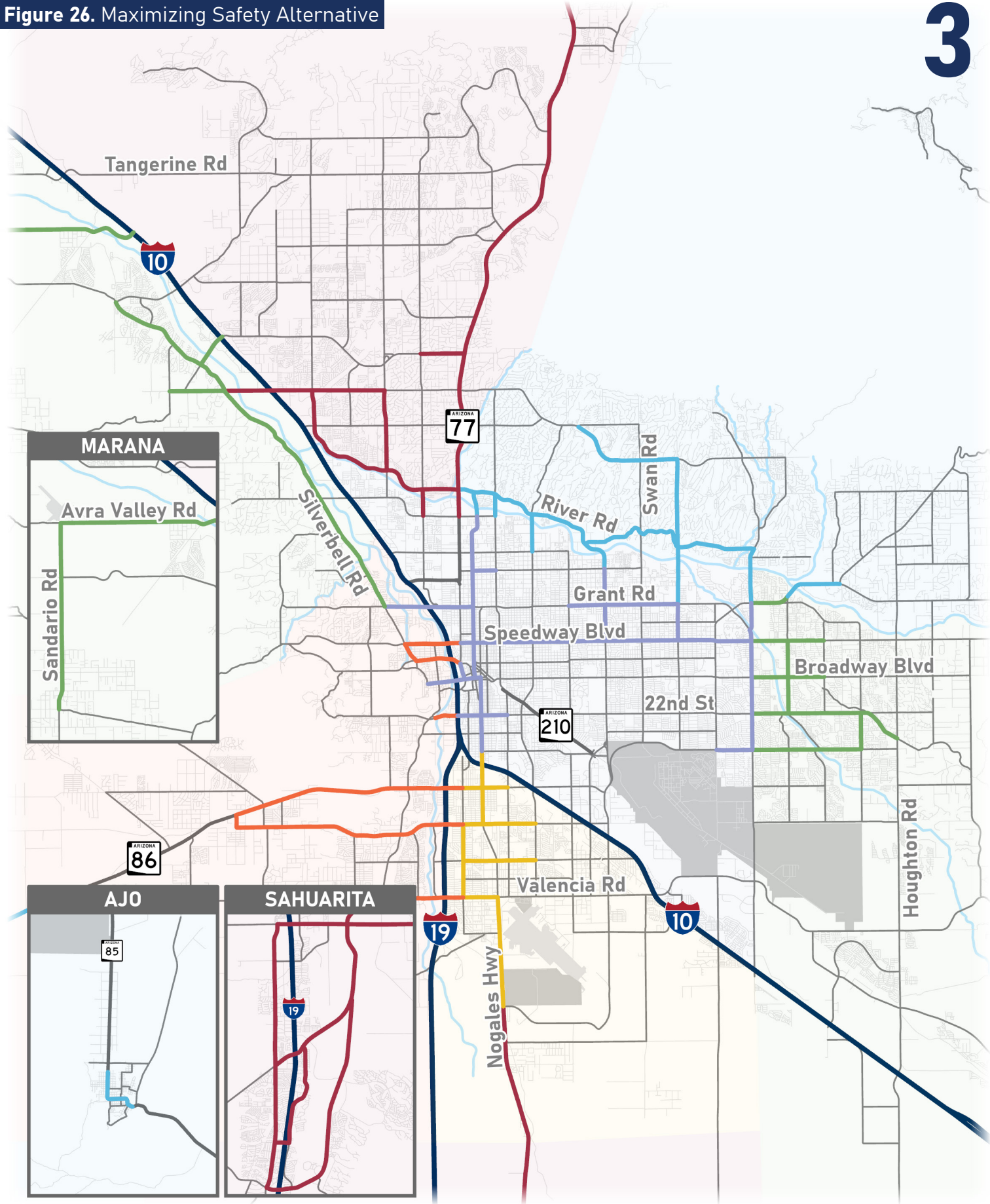


Figure 26. Maximizing Safety Alternative



4 SELECT PREFERRED HIGH-PRIORITY NETWORK

After developing the regional priority network alternatives, a methodology that leverages segments appearing in the majority of the priority network alternatives, shown in **Figure 27**, was applied. This approach ensures that the preferred network reflects broad regional consensus and captures the most critical active transportation corridors.

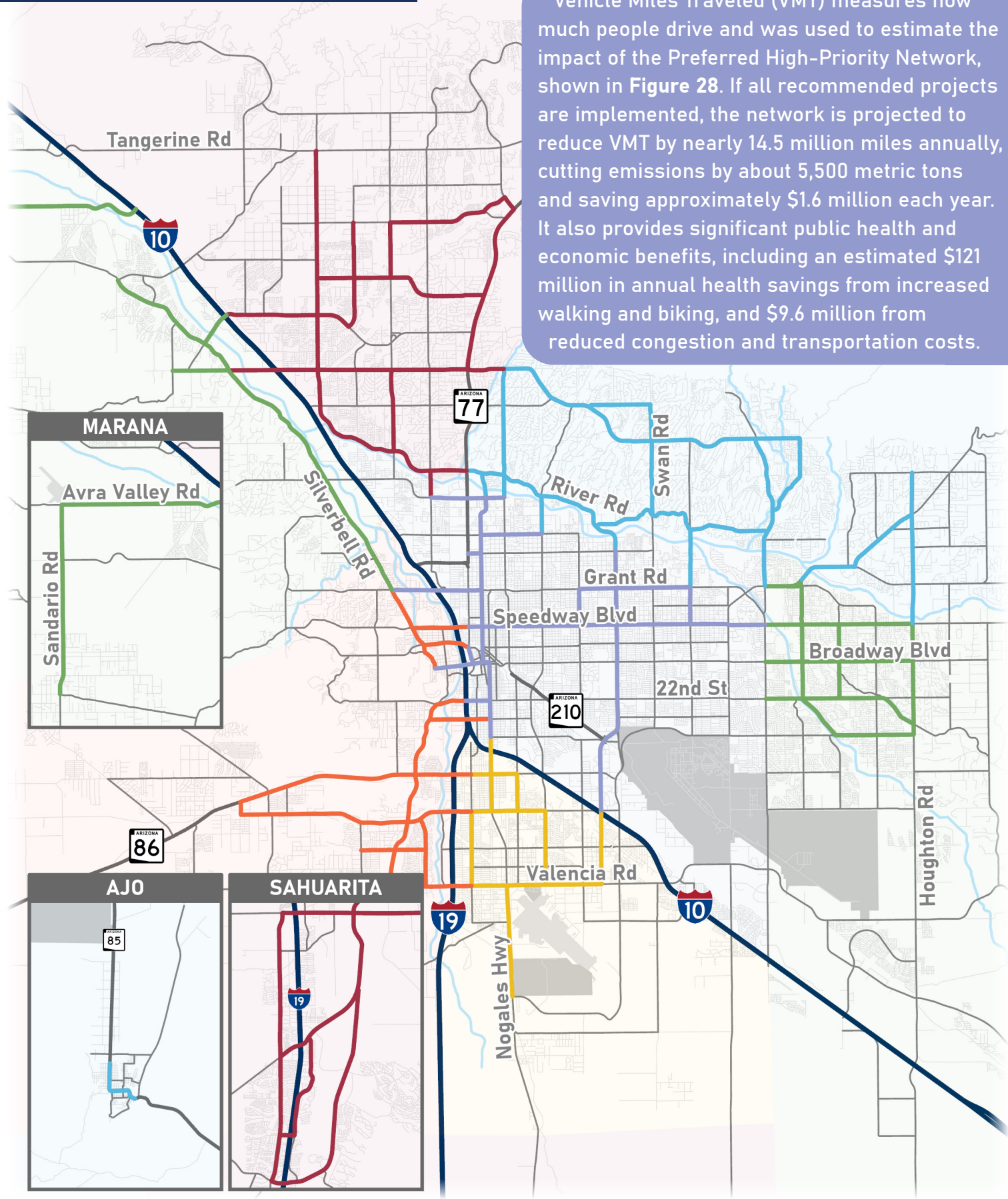
Figure 27. Preferred High-Priority Network Selection Process



The preferred network is shown in **Figure 28** and consists of 202 segments, offering comprehensive coverage across the region. It provides strong connectivity in both east-west and north-south directions, supporting active transportation links between key communities. Notably, the network includes corridors that connect central Tucson with the City of South Tucson, as well as routes linking Tucson to Marana, Oro Valley, and Sahuarita. These connections enhance regional mobility and promote accessible, community-oriented transportation options.



Figure 28. Preferred High-Priority Network



Vehicle Miles Traveled (VMT) measures how much people drive and was used to estimate the impact of the Preferred High-Priority Network, shown in **Figure 28**. If all recommended projects are implemented, the network is projected to reduce VMT by nearly 14.5 million miles annually, cutting emissions by about 5,500 metric tons and saving approximately \$1.6 million each year. It also provides significant public health and economic benefits, including an estimated \$121 million in annual health savings from increased walking and biking, and \$9.6 million from reduced congestion and transportation costs.