

EXECUTIVE SUMMARY

The principal purpose of the PAG Loop Road Study is to evaluate the need for, and feasibility of, developing a system of high capacity, limited, controlled, and reduced access roadways in the PAG Region to meet travel demand beyond the current 2030 Regional Transportation Plan. The study recommendations will be used by PAG to meet the following regional transportation goals.

- Identification of transportation corridors beyond the 2030 horizon to meet future mobility and regional bypass needs in advance of land use development;
- Preservation of corridors and establishment of land use controls in the emerging and fringe areas of the region;
- Extension of the functional and operational life-cycle of existing arterials, collectors, and local streets in developed areas by diverting regional traffic to regional routes; and
- Identifying corridors in the 2030 Regional Transportation Plan that can be transitioned to higher capacity facilities in the future.

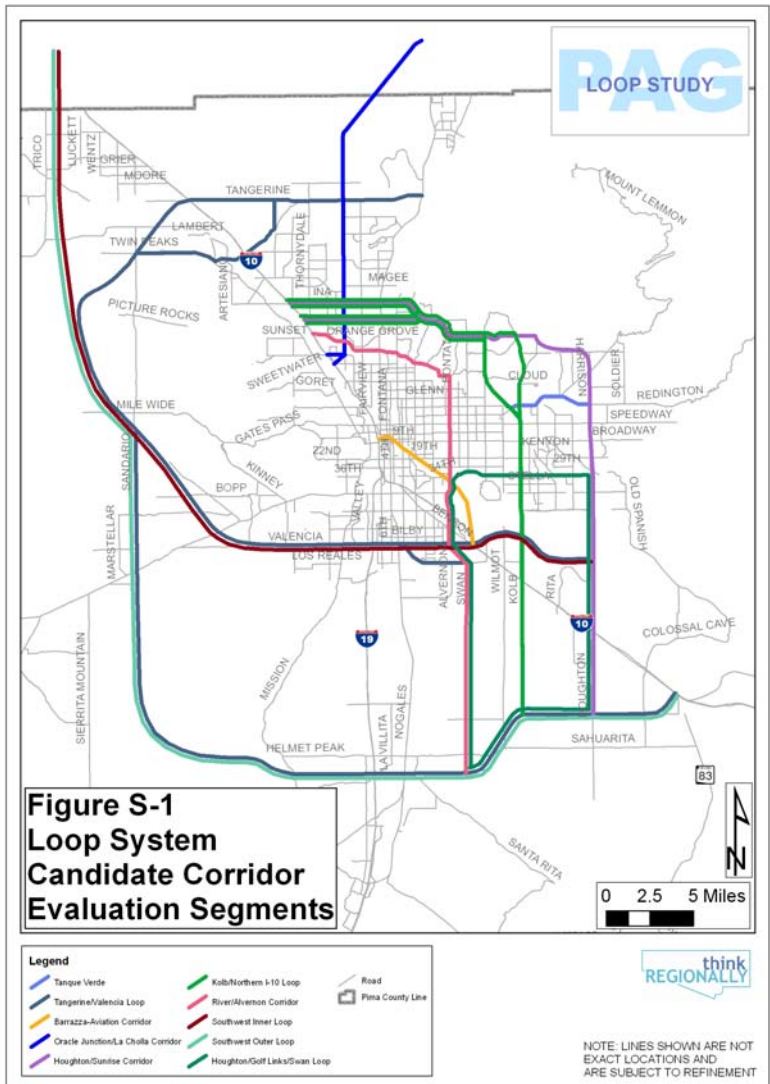
This study acknowledges the current long-range plans in the region, including the 2030 Regional Transportation Plan (RTP) and the Regional Transportation Authority projects that were approved by voters in 2006. Unlike the 2030 RTP and the RTA's voter approved projects, both of which have **specific time horizons**; this study identifies corridors that will meet regional travel needs when the regional **population** is approximately 2.1 million persons.

These study results are to be used to provide general identification of future needs for right-of-way to preserve future transportation corridors.

Initially, a network of high capacity corridors (referred to as the Loop Road System) were identified and were refined based on input from PAG staff and a Technical Advisory Committee consisting of representatives from each of the PAG member-jurisdictions and other stakeholders. The loop routes were stratified into corridors, as shown in Figure S-1. Needs, performance, and feasibility of the general corridor alignments were addressed. As a result of the needs assessment, the following corridors demonstrated a need for a freeway facility:

- Western Freeway Loop
- Southern Freeway Loop

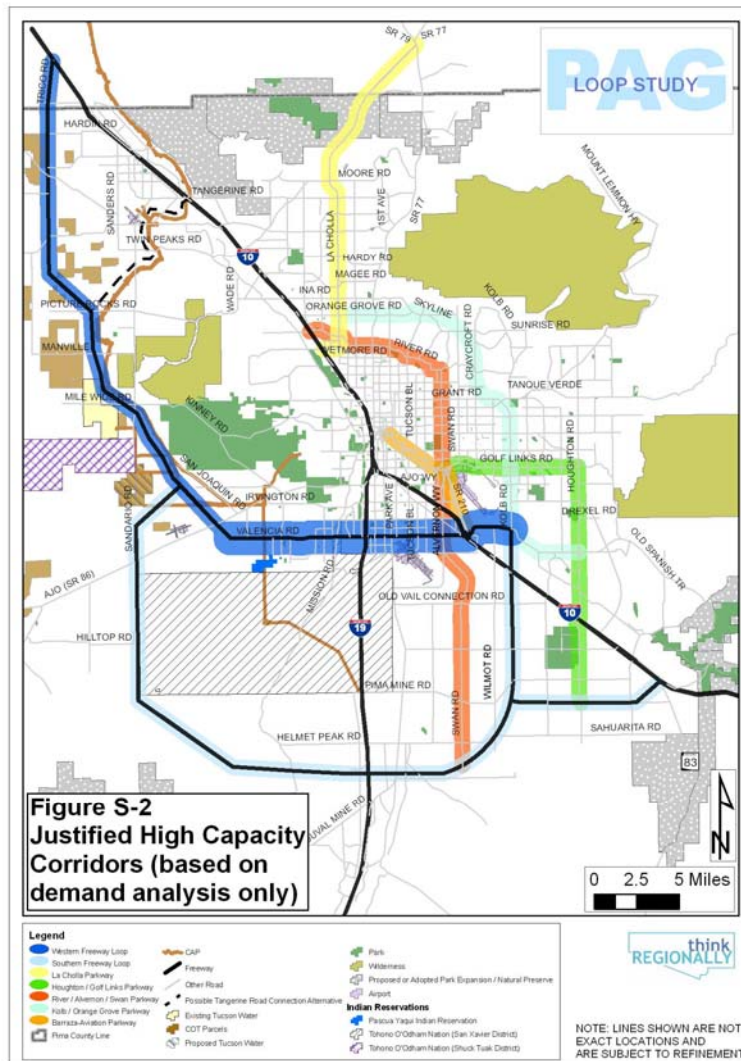
The following facilities demonstrated needs for parkway facilities:



- Houghton/Golf Links Parkway
- Kolb/Orange Grove Parkway
- River/Alverton/Swan Parkway
- La Cholla Parkway
- Barraza- Aviation Parkway

These corridors, which were advanced to the feasibility analysis, are shown in Figure S-2. Needs were not demonstrated for either freeway or parkway facilities on the following loop system elements.

- Tangerine Road
- Houghton Road, north of Golf Links Road
- Ina Road
- Orange Grove Road, west of La Cholla Boulevard
- Snyder Road connection to Houghton Road.



These facilities could, however, be developed as restricted access arterials, although the traffic volume ranges do not justify higher facility classifications. It should be noted that Houghton Road, from I-10 to Tanque Verde, is planned to be widened to a 4 or 6-lane desert parkway, with bike lanes and sidewalks. This project was approved by voters in 2006 as part of the RTA Plan. This recommendation does not preclude the need for Houghton Road improvements because the Beyond 2030 analysis assumes other loop corridor facilities will be built, which may or may not occur. Similarly Tangerine Road, which is planned to be widened as a 4-lane desert parkway from I-10 to La Canada Drive in the RTA Plan, is needed but is not showing heavy future traffic volumes because of other assumed roadway facilities.

Corridor Feasibility Analysis

Three feasibility screens were performed for the freeway and parkway corridors: a physical

constructability screen, an environmental screen, and a land use / area plan compatibility screen.

All of the corridors will have impacts that need to be investigated in greater detail in subsequent phases of project planning and preliminary design. On the corridors that traverse undeveloped areas, environmental impacts relating to wildlife, ranch lands, and critical habitats are key concerns. The western area in the Avra Valley has extensive Tucson Water recharge facilities and vacant parcels that are planned for future water resource development.

The location of the Central Arizona Project presents both a constraint and an opportunity to develop the Western Freeway Loop. A location near the CAP presents opportunities to locate the roadway near an area that has been cleared environmentally. However there are a number of major water lines that divert the CAP water to recharge areas and to the Tohono O'odham Nation for irrigation purposes that must be bridged or otherwise avoided.

In general, elements of area plans are consistent with the loop corridor system. Primary exceptions are that with respect to the Southern Freeway Loop, the Town of Sahuarita objected to the east-west roadway connection to I-19, using the El Toro Road location. The Town formally

asked that PAG evaluate the feasibility of using a location near Pima Mine Road as an alternative to the El Toro location for the east-west connection to I-19. Three I-19 interchange alternatives were developed on or near the Pima Mine Road. While all of the alternatives were found to be possible from a design and construction perspective, no single alternative was endorsed by representatives of both the Town of Sahuarita and the San Xavier District. As a result, additional studies will be required to resolve issues associated with the recommendation for a 300-foot (right-of-way) corridor connecting I-10 to I-19 in the Southeast Area. Further, if it is decided by the State Transportation Board that a corridor connecting I-19 to I-10 in the Southeast Area should be developed as a state highway, additional studies will be required to evaluate alternative corridor alignments, and to identify and develop mitigation strategies for environmental impacts. If such a study is conducted, corridors along the El Toro and Pima Mine Road

alignments should be considered and evaluated along with other corridor alternatives.

The proposed La Cholla Parkway corridor is not supported by Pima County Administration. The proposed alignment would impact the planned expansion of the Tortolita Mountain Park, as well as impact important cultural and biological resources. Pima County has made expansion of this park a priority through the 2004 General Obligation Bond Program, which allocates approximately \$29 million of \$174 million toward open space acquisition and/or conservation easements in the Tortolita Mountains area.

Concerns have been expressed by the Tohono O’odham Nation and the Pascua Yaqui Tribe regarding the proximity of the loop corridors to the Nation’s borders. Specifically, it was expressed that any future Los Reales alignment heading west through the San Xavier district would be seriously opposed by the District and the Tohono O’odham Nation, since it would split the San Xavier cooperative farms in half, and impact housing as well. In addition, the Pasqua Yaqui Nation should be consulted for input.

The Arizona State Land Department in general agrees with the loop concept but remains concerned about roadway impacts. They stated that conceptual plans adopted by the committee should be considered before future alignment recommendations are made, and that consideration should be given to multimodal corridors.

Project Cost Projections

The estimated implementation costs include \$1.1 billion for right-of-way and \$6.6 billion for construction.

Recommendations

The recommended Loop Study Corridors are conceptual in nature and will remain conceptual without implementation and involvement from PAG member jurisdictions, PAG, and the Regional Transportation Authority. This means that only a general alignment, capacity, and facility type have been considered so far. Some of the higher capacity, limited access roadways shown on the network may be candidates for state route or federal interstate highways and necessitate the involvement of the Arizona Department of Transportation and the Federal Highway Administration. A decision by the Arizona State Transportation Board as to the status of certain loop corridors as a state route or highway may affect the development and funding of the facilities. Key recommendations are:

1. Integration of Loop Corridors into the Regional Transportation Plan.

The Loop Study Corridors are candidate regionally significant routes and should be considered for inclusion in upcoming Regional Transportation Plans. The results of this study indicate the corridors are needed and are feasible, based on preliminary assessment. Initial planning of new facilities should involve location studies to define specifically the right-of-way width and location, legal description, impacts, and design for the routes. Other aspects of project development include planning to transition existing roadway facilities from facilities that have unconstrained access to adjacent property to facilities with a high level of access control that accommodate a higher number of through trips.

2. Once Loop Study Corridors are included in the Regional Transportation Plan, incorporate Corridors into a Major Streets and Routes Plan.

A primary tool for corridor preservation is a Major Streets and Routes Plan (MSR). Pima County and the City of Tucson have already adopted MSR which are updated periodically. The City of Tucson routinely follows the intent of the Pima County MSR as they annex unincorporated areas. The Town of Marana has a Major Route Right of Way Plan. Corridors that follow a section line can be added into existing transportation plans of the local jurisdictions or adopted formally, and placed on an existing MSR plan.

3. As the MSR Plan is Prepared, Integrate with Adopted Land Use Plans

It is recommended that the corridor recommendations of this study be further integrated into the local jurisdiction’s overriding plans and programs. This will require the jurisdictions to formally amend their land use and circulation elements; to update any affected area and neighborhood plans; to potentially modify their zoning codes and development procedures; and to incorporate the corridors into their capital improvement programs.

4. Consider Development of a Dedicated Funding Source for Future Funding of Loop Study Corridors

Future roadway improvements for the “beyond 2030” scenario will require new revenue sources dedicated to their implementation. None of the corridor costs are included in currently-adopted plans, and therefore no money is earmarked for these new corridors. Potential funding options fall into three general categories, public, private, and public/private partnerships. In Arizona, federal and state funds

have been the primary revenue source for most major roadway projects. Some local revenues have also been used.

5. Funding Strategies

Funding sources with the highest potential are likely to be toll roads; regional impact fees; state or federal funding via route transfer; and commitment of a second 20-year RTA ½ cent sales tax towards these corridors. This short list is not mutually exclusive, meaning that one or all of the sources could be used strategically.

6. Implementation Strategies

Implementing any or all of the these corridors requires an extremely long lead time, perhaps as long as 30 - 50 years to plan, fund, design and build. However, that does not mean work on the projects can wait. Instead, if the corridors are approved for implementation, work will need to begin immediately on the initial project phases.

An initial step includes identifying an appropriate steward for implementing this interconnected Loop system. There are three obvious choices to consider: PAG, the RTA, and ADOT (for Loop System corridors designated as future state highways). A fourth choice would be a new entity, perhaps a separate district created by state statute.

The second strategy is instituting a **project programming continuum** that links all of the phases of corridor development from concept to construction. This project programming continuum should include development of design standards for each corridor, to assist in obtaining concurrence and public review.

7. Prioritize the Acquisition of Right-of-Way for the Recommended Improvements

Prioritizing the acquisition of right-of-way for the recommended improvements would help preserve the routes, minimize the cost of developing the roadways, and help control access to the roadways.

8. Develop Regional and Jurisdictional Development Policies for Limiting Access from Developments that are Built before the Limited Access Roadway can be Completed

It is recommended that regional and jurisdictional development policies be implemented in order to limit access to future planned limited access facilities. The City of Tucson has developed some policies for roadways such as Houghton Road, where development is currently taking place before a planned limited access roadway can be constructed.

These policies allow the developments to access the roadway during the interim period, but require the future access to the development to conform to the access restrictions required for a limited access roadway in the future. These types of development policies will be essential to successful implementation of these limited access roadways.