



TRANSPORTATION

This portion of the Rio Verde Foothills Area Plan analyzes existing transportation plans, studies, programs, public transit service issues, and provides an inventory of the area's roadway system.

Maricopa County Transportation System Plan

The mission of the Maricopa County Department of Transportation (MCDOT) is to provide a quality transportation system for the citizens of Maricopa County. MCDOT coordinates new construction with surrounding jurisdictions when appropriate. The Transportation System Plan (TSP) was adopted in December 1997 as the transportation element of Maricopa County's Comprehensive Plan. The TSP states that the transportation network should support the safe and efficient movement of goods and people, be environmentally compatible with surrounding conditions, and be supportive of economic development. The TSP helps evaluate regional transportation system impacts; helps identify funding and maintenance priorities; and organizes roadways under MCDOT's jurisdiction into primary, secondary, and local roads.

MAG Roads of Regional Significance

MAG developed the Roads of Regional Significance (RRS) concept and has assigned this designation to a limited number of key arterials whose primary function is to provide mobility within the urbanized area by supplementing and interchanging with the freeway system. Roads of regional significance are expected to receive priority for improvement to a regional standard where feasible. A six-lane divided roadway with 140 feet of right-of-way is the ultimate design standard for urban RRS. In the planning area, Rio Verde Drive is a Primary Roadway in the MCDOT Transportation System Plan, and a RRS according to MAG. This route serves as one of the main access points from the planning area to Scottsdale and Rio Verde.

Maricopa County Major Streets and Routes Plan

The TSP includes a Planning and Management chapter that calls for the preparation of a Maricopa County Major Streets and Routes Plan (MSRP). This plan was completed and adopted April 18, 2001, and was revised September 2004. The MSRP designates and maps future street widths and route overlays for all primary and secondary roads in the Maricopa County roadway system. These future classifications project the ultimate (20 year) functional status of roads. The plan includes two components: a street classification atlas and a policy document to support the atlas.



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The functional classification system used by Maricopa County to classify county streets includes: expressway/freeway, principal arterial, minor arterial, major collector, minor collector, and local street. Typical design standards are illustrated in cross-section in the MSRP. Current classifications for streets in the Rio Verde Foothills area are provided in the *Inventory* section of this chapter.

The MSRP defines the components of the functional classification system as follows:

Expressway/Freeway

An expressway/freeway provides for the swift movement of large volumes of through traffic; is a divided roadway and is not intended to provide access to abutting land; will have complete separation of opposing traffic flows; and will have grade separated intersections or at-grade, signalized intersections at a minimum of one-mile spacing.

There are no expressways/freeways in the planning area. The closest, Loop 101, is located approximately 13 miles from the southwest corner of the planning area.

Principal Arterial Street

A principal arterial street provides for long distance traffic movement within Maricopa County or between Maricopa County and urban areas. Service to abutting land is limited. Access is controlled through frontage roads and raised medians, as well as the spacing and location of driveways and intersections. Opposing traffic flows are separated often by a raised median. The ultimate cross section is four to six lanes in width and includes bike lanes. None of the roads in the planning area has a **current** functional classification of principal arterial.

Rio Verde Drive does have a **future** functional classification of principal arterial in the planning area and could be widened from its existing two lanes when circumstances warrant expansion. This principal arterial classification is designed to handle ultimate future traffic demand. Existing long-term regional transportation plans do not include the possible extension of Rio Verde Drive to SR 87 (Beeline Highway).

Minor Arterial Street

A minor arterial street provides for moderately long distance traffic movement within Maricopa County or between Maricopa County and urban areas. Moderate access is provided to abutting land. Access is controlled through frontage roads, raised medians, and the spacing and location of driveways and intersections. A raised median or a continuous left-turn lane separates opposing traffic flows. The ultimate cross section is four lanes in width and includes bike lanes. There are no minor arterial streets in the planning area.



Major Collector Street

A major collector street provides for short distance (less than three miles) traffic movement; primarily functions to collect and distribute traffic between local streets or high volume traffic generators and arterial streets; and provides direct access to abutting land. Raised medians and the spacing and location of intersections and driveways may control some access. A major collector is two to three lanes in width and includes bike lanes. Rio Verde Drive is the only street in the planning area that has a current functional classification of major collector.

Minor Collector Street

A minor collector street provides for short distance (less than three miles) traffic movement; primarily functions to collect and distribute traffic between local streets and arterial streets; and provides direct access to abutting land. The spacing and location of intersections and driveways may control some access. A minor collector is two lanes in width. There are currently three minor collector segments in the planning area: Dixileta Drive (140th-144th St.), Lone Mountain Road (140th-144th St.), and 144th Street (Rio Verde Dr. to Lone Mountain Rd.). The City of Scottsdale identifies 136th Street, north of Rio Verde Drive, as a future minor collector street in its network.

Local Street

A local street provides for direct access to residential, commercial, or other abutting land, and for local traffic movements. Local streets connect to collector or arterial streets. A local street is a two-lane roadway. Examples would include 144th, 152nd, 160th, 168th Streets, portions of Dixileta Drive, and Lone Mountain Road.

Transportation Overlays

The TSP introduces the concept of overlays by stating that “overlays acknowledge the special importance of roads for purposes other than mobility.” There are seven overlays established in the Transportation System Plan.

1. Scenic/Recreational Overlay

The scenic/recreational overlay acknowledges the need to minimize impacts to or preserve characteristics of a road’s environment, or it recognizes a road’s importance as access to recreational facilities. Characteristics such as design speeds, right-of-way, cuts and fills, existing vegetation and viewsheds will be carefully analyzed.

The entire length of Rio Verde Drive is included in a scenic overlay. Dynamite Boulevard/Rio Verde Drive has been designated as a scenic corridor by the City of Scottsdale from 56th Street to 144th Street.



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2. Public Transportation Overlay

The public transportation overlay identifies potential regional rail or bus rapid transit corridors. There are no roads in the planning area with a public transportation overlay.

3. AZTech Overlay

The AZTech overlay recognizes the special importance of roadways and corridors to implement transportation-related technology. The AZTech overlay identifies corridors where technology will be incorporated to improve transportation service. No roadways in the planning area are designated with the AZTech overlay by the TSP.

4. Oversize Load Overlay

The oversize load overlay identifies routes designed for usage by oversize vehicles and restricted routes where oversize vehicle use is discouraged. An oversize load is defined as a vehicle having a gross weight of over 160,000 pounds or having dimensions larger than one of the following:

- ◆ 120 feet in length
- ◆ 14 feet in width
- ◆ 16 feet in height

There are no roadways in the planning area identified as being restricted.

5. School Safety Overlay

The school safety overlay identifies sites where special design or operational criteria will be implemented to provide for safety. There are no roads in the planning area with a school safety overlay.

6. Roads of Regional Significance (RRS) Overlay

The Roads of Regional Significance (RRS) concept and design guidelines were adopted by the MAG Regional Council in the spring of 1991, and by the Maricopa County Board of Supervisors in October 1992. Further analysis of this concept was completed in January 1996. The concept is a system of upgraded streets and roads to improve mobility in the urban areas, as well as into and out of the region. The adopted RRS concept includes Urban and Gateway routes. Urban routes are designed to complement the freeway system and are three to six miles apart. The concept facilitates the development of a system of routes with higher design standards and higher speeds that will help ensure regional mobility. Gateway routes provide access to the region and need protection to maintain free flow access in and out of the region. Rio Verde Drive is the only road in the planning area with an RRS overlay.



7. Emergency Management Overlay

The emergency management overlay identifies roadways that are of special importance in case of emergencies or catastrophes at the Palo Verde Nuclear Generation Station. The planning area lies well outside the ten-mile radius surrounding the Palo Verde Nuclear Generation Station. No roads in the planning area are identified by the TSP as being emergency evacuation routes.

Rural Maricopa Transit Development Program

In 1997, Maricopa County completed the *Rural Maricopa County Transit Development Program*. The purpose of this study is to identify transit needs and ways to provide additional transit options in rural Maricopa County. The study also identifies several important recommendations, including:

- ◆ Having Maricopa County serve as the lead agency in establishing public transit service from rural to urban areas.
- ◆ Implementing a pilot transit program between Gila Bend, Buckeye, and Phoenix. Once operations prove successful; establish a similar program along the Wickenburg Highway.
- ◆ Continuing support for a regional transportation system through service coordination.

At this time there are no existing or proposed transit routes in the planning area.

MCDOT Bicycle Transportation System Plan

The MCDOT Bicycle Transportation System Plan recognizes bicycling as a viable transportation mode and encourages improving the transportation network to increase access and safety for bicyclists. The standard cross section for all County arterial and collector streets includes bike lanes.

The Bicycle Transportation System Plan identifies 473 miles of Maricopa County roads for the addition of on-road bicycle facilities. This network reflects a network for bicycle facilities to prioritize investment and guide project development. Rio Verde Drive is identified as a future component of MCDOT's Bicycle plan.

Maricopa Association of Governments Transportation Plans

The Regional Transportation Plan (RTP) was adopted on November 25, 2003 and represents the first comprehensive review of transportation investment needs for the region since the early 1960s. This plan is a comprehensive, performance based, multi-modal and coordinated regional plan, covering the period through Fiscal Year 2026. The RTP was developed under the direction of the Transportation Policy Committee, a public/private partnership charged with finding solutions to the Region's transportation challenges.



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The Long Range Transportation Plan (LRTP) identifies specific transportation facilities and services to be constructed or provided in the next twenty years. The LRTP is updated annually and is fiscally constrained, so only includes projects for which funding is currently available or reasonably expected.

MAG's Transportation Improvement Program (TIP) is a five-year schedule of specific projects to be constructed across the Maricopa County region. In the current TIP (2005-2009) there are no proposed road improvements in the planning area. MCDOT submitted a project for the MAG TIP in 2009 to pave the shoulders along Rio Verde Drive from the Scottsdale boundary to Forest Road for bicycle riders.

MCDOT Transportation Improvement Program

Roadway investment decisions by MCDOT are based on a fundamental principle: to provide the right transportation system, at the right time, and for the right cost. To achieve this vision, Maricopa County develops an annual Transportation Improvement Program (TIP) to identify project funding priorities for the next five years. Each year new projects are added to the fifth year, while previously programmed projects move up a year in the schedule. As a structured finance plan, the TIP determines future road expansions and improvements. There are no projects in the Rio Verde Foothills planning area identified in the 2005-2009 Transportation Improvement Plan.

Existing Conditions

Average Daily Traffic Counts

MCDOT provides average daily traffic count data for many major streets. **Table 12** summarizes traffic count information for the Rio Verde Foothills study area. Due to the low population in the planning area, there are only traffic counts for Rio Verde Drive.

Table 12: Peak Traffic Counts

Count date	Street	Direction	Ref. street	Peak AM hour	Peak AM volume	Peak PM hour	Peak PM volume
9/3/02	Rio Verde Dr.	West	144 th St	6:00	377	1:00	371
9/3/02	Rio Verde Dr.	West	Forest Rd	8:00	138	2:00	155
7/5/04	Rio Verde Dr.	West	144 th St.	7:00	412	1:00	423
7/5/04	Rio Verde Dr.	West	Forest Rd.	7:00	144	1:00	175



Dust Abatement

MCDOT paves many county maintained roads to help reduce dust. The Environmental Protection Agency (EPA) imposed the 1998 Federal Implementation Plan for PM-10 nonattainment in Maricopa County, requiring dust control measures for publicly maintained roads with more than 250 vehicles per day. EPA indicated in the fall of 1999 that the measures submitted with the Serious Area Plan for PM-10 were inadequate and needed additional measures. Maricopa County proceeded to obtain MAG approval for CMAQ (Congestion Management and Air Quality) funding to assist with paving dirt roads, and has included this as a committed measure in the revised serious area plan submitted February 2000. Maricopa County's PM-10 traffic volume standard was changed June 10, 2004, to require County-maintained dirt roads to be evaluated for paving if 150 vehicles or more per day use the road. Rio Verde Drive (east of the Scottsdale border), 144th Street (from Rio Verde Dr. to Lone Mountain Rd.), Dixileta Drive (140th St. to 144th St.), and Lone Mountain Road (140th St. to 144th St.) are currently the only County-maintained roads in the planning area.

As of July 2004, MCDOT maintains approximately 500 miles of unpaved roads in Maricopa County. There are many more unpaved private roads that are the responsibility of the property owners to maintain. MCDOT helps property owners establish improvement districts to manage and finance paving and maintenance projects.

Inventory of the Existing Transportation System

In general, the existing roadway system is based on a grid pattern with arterials spaced at one-mile intervals. Most of the roads in the planning area are private or unclassified, and are maintained by the residents. Unclassified roads are those not listed in any jurisdictions' inventory.

The Rio Verde Foothills planning area roadway network consists of one major collector, one minor collector, and a number of unclassified streets. Using national classification terminology, these functional classifications are based on the trips served and the operational characteristics of roads.



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Existing roadways in the planning area and their **current** functional classification are listed below:

Jomax Road	Unclassified
Rio Verde Drive	Major Collector (in the unincorporated county)
Dixileta Drive	Unclassified; Minor Collector (140 th to 144 th St.)
Lone Mountain Road	Unclassified; Minor Collector (140 th to 144 th St.)
136 th Street	Minor Collector (from Rio Verde Dr. to Lone Mountain Rd.)
144 th Street	Unclassified; Minor Collector (Rio Verde Dr. to Lone Mountain Rd.)
152 nd Street	Unclassified
160 th Street	Unclassified
168 th Street	Unclassified

Bicycle and Pedestrian Facilities

Bicyclists and pedestrians have access to all public road rights-of-way in the planning area. In most cases, bike lanes or shoulders will be added during construction, reconstruction, or widening of existing roadways. However, there is currently no continuous or integrated bikeway or pedestrian system serving the entire study area. Within the Rio Verde Foothills planning area, the MCDOT Bicycle Transportation System Plan identifies Rio Verde Drive as a component of the regional bicycle network. As mentioned above, MCDOT has submitted a bike lane paving project to MAG for 2009 for Rio Verde Drive, east of Scottsdale. In addition, Scottsdale's minor collector classification includes bike lanes on minor collectors. 136th Street, a minor collector, is within the City's jurisdiction. Bike lanes will be part of the cross section of 136th Street when and if the roadway is built to its full capacity.

Existing Transit and Rail Services

There are currently no local bus routes serving the Rio Verde Foothills area. The closest facility, a shared-use park-and-ride lot, is located in Fountain Hills at the corner of Palisades Boulevard and La Montana Drive. This facility serves the Express Route, Scottsdale 512, to downtown Phoenix during certain times on weekdays.