

City of Prescott Willow Creek Road Realignment Study

Final Report and Executive Summary

February 2013



AECOM

Task Assignment: T-08-49-K0001

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Appendix A	Public Involvement Summary
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List of Abbreviations

ADA	Americans with Disabilities Act
ADOT	Arizona Department of Transportation
ADT	Average Daily Traffic
ALRIS	Arizona Land Resource Information System
AMA	Active Management Area
APS	Arizona Public Service
ASLD	Arizona State Land Department
BLM	Bureau of Land Management
CYMPO	Central Yavapai Metropolitan Planning Organization
EB	Eastbound
FHWA	Federal Highway Administration
GER	General Engineering Requirements
GPA	General Plan Amendment
HCM	Highway Capacity Manual
LOS	Level of Service
MPD	Multimodal Planning Division
mph	miles per hour
MTIP	Metropolitan Transportation Improvement Program
NB	Northbound
NEPA	National Environmental Policy Act
PARA	Planning Assistance for Rural Area
PEL	Planning and Environmental Linkages
RTP	Regional Transportation Plan
R/W	right-of-way
SB	Southbound
sec	seconds
SR	State Route
TAC	Technical Advisory Committee
TAZ	Traffic Analysis Zone
US	United States
vpd	vehicles per day
WB	Westbound
WOUS	Waters of the United States

EXECUTIVE SUMMARY

ES1. Introduction

The Arizona Department of Transportation (ADOT) awarded funding for the City of Prescott Willow Creek Road Realignment Study through the Planning Assistance for Rural Area (PARA) program. The purpose of the PARA program is to assist counties, cities, towns, and tribal communities in addressing a broad range of multimodal transportation planning issues. This study identified the existing and future needs and deficiencies along Willow Creek Road north of Pioneer Parkway, and recommended a preferred alignment for a realigned corridor with revised connections to State Route (SR) 89 and Pioneer Parkway.

The study area is generally bounded by SR 89 to the east, Outer Loop Road to the north, and Pioneer Parkway to the south (Pioneer Parkway transitions to SR 89A east of SR 89). The study area is located in Yavapai County and included in the planning areas of the City of Prescott and Town of Chino Valley. The Willow Creek Road Realignment will include several existing and future major intersections, including Pioneer Parkway, Perkins Drive, MacCurdy Drive, and Ruger Road. **Figure ES1** displays the study area.

For purposes of this study, needs are defined as unmet demand for transportation facilities, specifically parallel capacity to SR 89 to alleviate traffic, as SR 89 in the vicinity of the study area cannot be widened to the recommended six lanes due to 4(f) properties; and corridor improvements to reduce congestion at major study area intersections (Willow Creek Road/SR 89 and Pioneer Parkway/Willow Creek Road).

This study conforms to the Planning and Environmental Linkages (PEL) process.

This executive summary of the study provides a brief summary of current and future conditions, transportation needs and issues, recommended improvements, and the implementation plan. More detailed information can be found in the final report.

ES2. Current Conditions

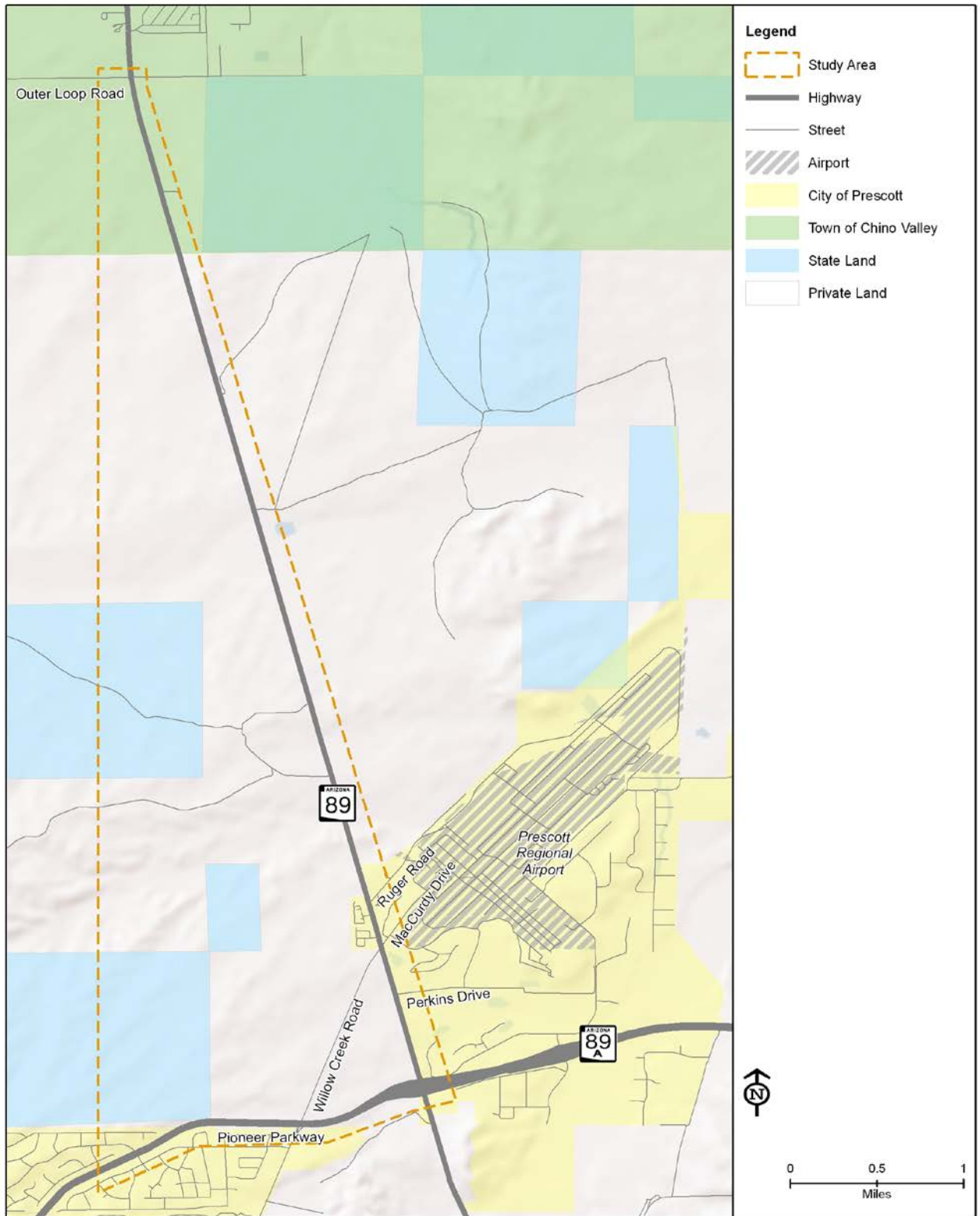
Various plans, studies, and data were reviewed and analyzed to gain an understanding of current conditions within the study area and identify any known fatal flaws.

ES2.1 Existing Corridor Conditions

Overall, the study area is primarily undeveloped with a very low number of residents and employees; therefore minimal infrastructure exists to serve the limited existing development. However, the Prescott Regional Airport is located directly to the east and the spillover effects of this major employment center adjacent to the study area could cause increased related industrial and service center development surrounding the airport, as well as increased traffic traveling to and from the airport area – with some of this traffic likely travelling through the study area.

An environmental review was conducted to inventory the existing physical, natural, and cultural conditions of the study area, including detailed analysis of study area vegetation, special status species, Title VI/environmental justice, potential section 4(f)/6(f) properties, prime or unique farmlands, water resources, cultural resources, and hazardous materials. Through this inventory, no major environmental constraints were identified.

Figure ES -1. Study Area



Sources: Yavapai County, CYMPO, City of Prescott, Arizona Land Resource Information System (ALRIS), Bureau of Land Management (BLM)

ES2.2 Existing Transportation

The existing roadway network in the study area is comprised mostly of state highways and local streets. SR 89 and SR 89A/Pioneer Parkway are higher capacity roadways that serve the function of regional connectivity and form the southern and eastern boundaries of the study area. Ruger Road, MacCurdy Drive, Willow Creek Road, and Perkins Drive connect to these roadways and provide access to the study area and/or Prescott Regional Airport area. With the exception of sidewalks in residential neighborhoods, few alternate transportation modes exist within the study area.

ES2.3 Existing Traffic

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. Available traffic data was reviewed to ascertain the volume of traffic on study area roadways.

Within the study area and during the morning peak hour, it has been observed that roughly two-thirds of the total southbound traffic from the Town of Chino Valley utilize SR 89 and approximately one-third utilize Willow Creek Road. Of the traffic using SR 89, roughly two-thirds travel on SR 89A eastbound and the remaining one-third continue on SR 89 southbound. During the evening peak hour, the majority of the northbound traffic (approximately two-thirds) destined to the Town of Chino Valley use SR 89 and the remaining one-third use Willow Creek Road.

Roadway traffic operations are defined and categorized by the amount of delay experienced by drivers (level of service [LOS]). The concept of LOS uses qualitative measures that characterize operational conditions within a stream of traffic, assigning a grade ranging from A (no delay) to F (severe congestion). LOS D and worse generally imply the need for increased capacity. Currently, the signalized intersection of Pioneer Parkway and Willow Creek Road operates at LOS C and LOS B during the morning and evening peak hours, respectively. The signalized intersection of SR 89 and MacCurdy Drive/Willow Creek Road operates at LOS C and LOS D, respectively, during the morning and evening peak hours. However, during the AM peak hour, the southbound movement experiences significant delays with excessive queue lengths that require several cycles to clear. During the PM peak hour, the left turn movement from Willow Creek Road to SR 89 northbound experiences excessive delays; the left turn phase experiences a LOS F during this peak time period. The unsignalized intersection of SR 89 and Ruger Road operates at LOS D and LOS E, respectively, during the morning and evening peak hours. The unsignalized intersection of SR 89/Perkins Drive operates at an acceptable LOS during both peak hours. However, similar to Ruger Road, a delay is experienced at this intersection due to insufficient gaps on SR 89 for vehicles to enter the traffic stream.

ES3. Future Conditions

ES3.1 Existing Corridor Conditions

Generally speaking, the West Airport General Plan Amendment serves as the foundation for future land uses in the study area, including a mix of low-medium density residential, medium-high density residential, mixed use, commercial, and employment – with primarily non-residential land uses located within the noise contours of the Prescott Regional Airport. North of the wash to the Chino Valley town limits are expected to remain agricultural/ranching. Within Chino Valley, a commercial corridor is planned along SR 89.

Future growth was projected in the *CYMPO 2030 RTP Update* (2012), using the 2010 Census data and population estimates from the Arizona Department of Administration. The population forecast translates to an average annual growth rate between two and three percent over the next 20 years. Based on the traffic analysis zone (TAZ) allocations of population in the *2030 RTP Update*, population and employment densities within the study area are expected to increase, especially between Pioneer Parkway and Bottleneck Wash – where most of the growth is expected – consistent with future land use planning efforts. North of Bottleneck Wash, little growth is expected.

ES3.2 Future Transportation

Planning and preliminary design activities have been conducted for several proposed roadways in the study area, including the Great Western Corridor – a new high speed, limited access facility near the Great Western section line on SR 89A and intersecting SR 89 approximately one mile south of Outer Loop Road (long-range implementation timeframe); and SR 89 – studies are determining the ultimate corridor footprint, with final design underway for the segment between Chino Valley and Deep Well Ranch Road. While Great Western is not a “committed” project because funding has not been secured, both of these planned roadways should be considered when developing future potential improvement concepts.

Limited options for alternate modes of transportation are planned within the study area. Sidewalks are planned along city roadway facilities; bicycle lanes are optional and not always recommended, depending on the speed and access management techniques intended.

ES3.3 Projected Traffic

The three percent growth rate determined as a part of the *CYMPO 2030 RTP Update* (2012) was applied to existing traffic volume data to project 2037 traffic volumes for use in the traffic analyses for this study. However, the area east of SR 89 at Perkins Drive, MacCurdy Drive, and Ruger Road were not anticipated to experience much growth and were slightly increased from existing counts. The 2037 projections were redistributed within the roadway network to reflect improvements currently under consideration by ADOT, Yavapai County, and the City of Prescott, including the construction of Deep Well Ranch Road, a new roadway with a four-legged roundabout located approximately one-quarter mile north of Ruger Road, constructed east of SR 89 to connect to the airport, and extended west for local traffic only.

With little improvements, study area corridors and intersections do not operate acceptably, as described in the following points:

- The Deep Well Ranch Road roundabout with SR 89 is anticipated to operate at a LOS D in 2037 in both the AM and PM peak hours, with the potential of failing on separate approaches. The through traffic demand on SR 89 is too high for this two lane roundabout without any of the traffic being diverted to the fourth leg of the roundabout (the west leg).
- The unsignalized intersections at Ruger Road and Perkins Drive are anticipated to fail in both peak hours.
- The existing intersection at Willow Creek Road/MacCurdy Drive and SR 89 is anticipated to operate at a LOS E and LOS F in 2037 in the AM and PM peak hours, respectively. The through traffic demand on SR 89 in combination with the high left turns from Willow Creek Road creates too much congestion.
- The signalized intersection of Pioneer Parkway and Willow Creek Road is anticipated to operate at a LOS F during the PM peak hour.

ES4. Needs and Deficiencies

To summarize the analysis of existing and future conditions, outstanding roadway network needs and deficiencies are identified as:

- Willow Creek Road/SR 89: Corridor improvements required to reduce congestion at intersection
- Pioneer Pkwy/Willow Creek Rd: Intersection improvements required to reduce congestion
- SR 89, Ruger Rd to SR 89A: Cannot widen SR 89 to recommended 6 lanes due to 4(f) properties; additional parallel capacity required to alleviate directional traffic
- SR 89, Willow Creek Rd to SR 89A: Additional parallel capacity required to alleviate directional traffic

ES5. Recommended Improvements

ES5.1 Alternatives Development and Evaluation

A thorough alternatives development and evaluation process was conducted to determine the preferred study area improvements. Evaluation criteria were identified prior to the development of alternatives to facilitate a fair and comprehensive evaluation. The criteria give focus to the alternative alignment that will best address capacity needs and provide relief from congestion forecast by the model runs of future traffic conditions. Criteria considered included:

- Right-of-way considerations
- Multimodal considerations
- Compatibility with existing and future development
- Compatibility with existing roadways and future improvements
- Public/local agency acceptability
- Drainage/flood control considerations
- Environmental justice and Title VI
- Other environmental considerations
- Traffic considerations
- Utility considerations
- Prescott Airport considerations
- Cost
- Implementation

Two alternative alignments were considered for the realignment of Willow Creek Road between Pioneer Parkway and Deep Well Ranch Road. Using the City of Prescott urban arterial typical section with an ultimate build out of four lanes, the two alternatives include:

- Alternative 1 (green alignment) maintains the existing Willow Creek Road/Pioneer Parkway intersection point, veering to the west and meeting Deep Well Ranch Road at the one-eighth section point. This alignment closely matches previously recommended realignment options for Willow Creek Road, as documented in the *Airport Area Transportation Plan*, *Triangle Area Study*, and *Prescott West Airport General Plan Amendment*.
- Alternative 2 (aqua) follows the existing Willow Creek Road further north, curving back west to meet Deep Well Ranch Road at the same one-eighth midpoint.

The opportunity exists for either alignment to be extended north, based on future development and traffic needs.

The evaluation showed that Alternative 1 is the preferred alignment. This alternative is anticipated to:

- Most strongly support existing, expanding, or new development
- Provide opportunities for multimodal transportation facilities (e.g., pedestrians)
- Minimize environmental and drainage impacts
- Not adversely impact any minority or low-income populations
- Allow a future extension to the north
- Provide reasonable access to the Prescott Airport
- Accommodate a phased construction schedule
- Maximize the likelihood of acceptance by local elected officials, outside agencies, stakeholders, and the community
- Has the lower planning-level cost estimate

ES5.2 Preferred Alignment

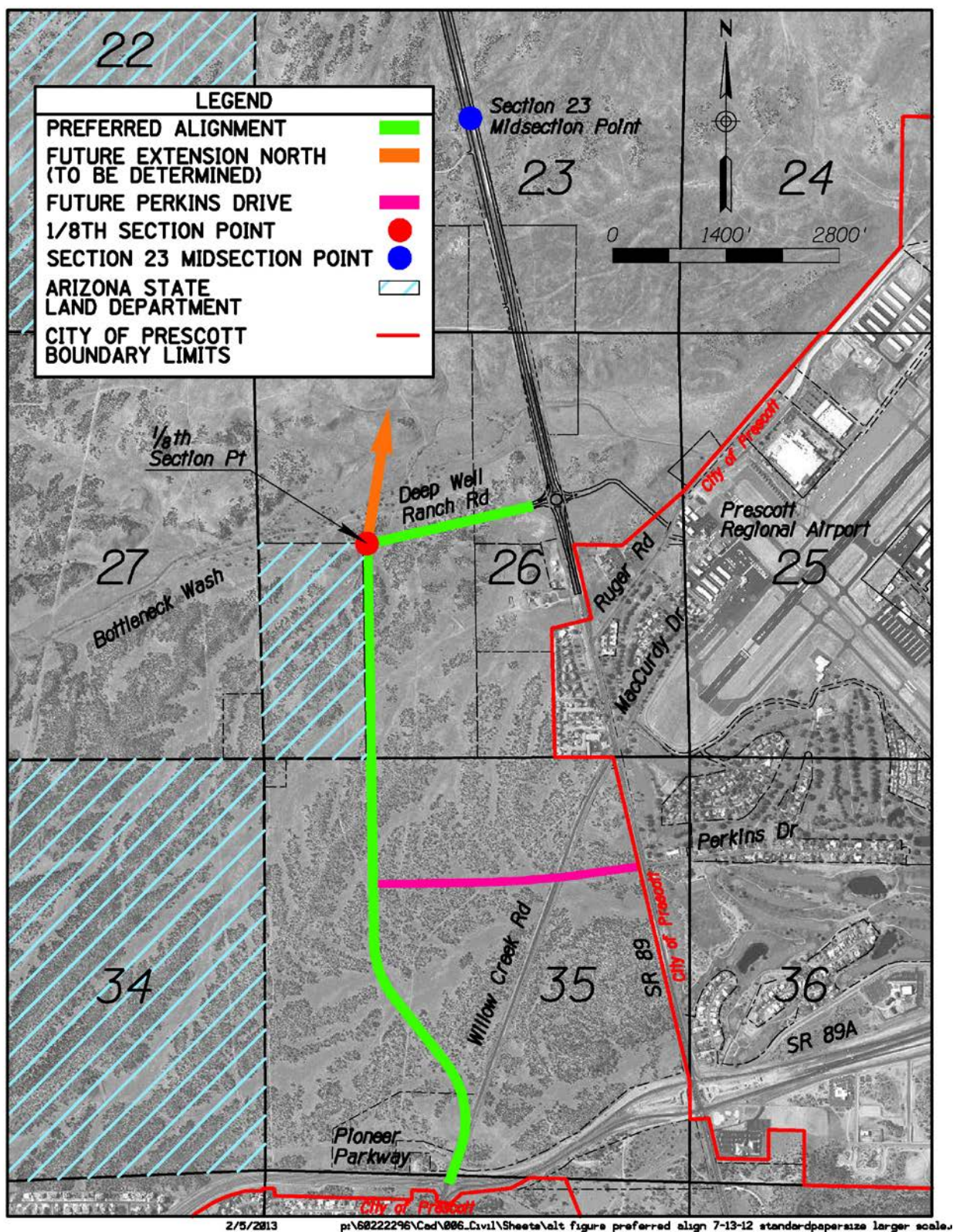
The preferred alignment was refined to be made compatible with the regional roadway network. **Figure ES2** displays the Willow Creek Road preferred alignment. This alignment mirrors Alternative 1, which maintains the current connection with Pioneer Parkway, allows for a potential future intersection at Perkins Road (if the corridor is extended west), and meets Deep Well Ranch Road at the defined one-eighth section point. The preferred alignment allows for a future extension of Willow Creek Road north.

The ultimate section for the Willow Creek Road corridor uses the City of Prescott's five-lane major arterial section which includes two travel lanes in each direction, a shared center turn lane (which alternately, could be constructed as a raised median), landscape buffers, and sidewalks. In total, this section includes 100 feet of right-of-way. At intersection locations, wider right-of-way may be required. No bicycle lanes or regional trails are proposed along this corridor. Should bicycle lanes be required in the future, a reconfiguration of lanes and median widths is allowable in the given 100 feet of right-of-way.

Dependent upon funding levels, the opportunity exists to construct an interim roadway corridor first, using a modified version of the City of Prescott's two lane rural section, which includes 36 feet of pavement for two adjacent travel lanes (one lane in each direction) and paved shoulders. The interim condition would also construct the ultimate infrastructure required for grading and drainage. Regardless of actual roadway construction phasing and implementation, the full 100-foot right-of-way width should be preserved from project initiation.

At initial project construction, the realigned Willow Creek Road is anticipated to have two connection points – the existing connection with Pioneer Parkway on the south, and the northern connection with Deep Well Ranch Road. The existing intersection with Pioneer Parkway will remain a signalized intersection. With an interim section, the intersection will maintain the same lane configurations as today, however when Willow Creek Road is widened to four lanes, this intersection will need to be reconfigured.

Figure ES-2. Preferred Alignment



The initial connection between Willow Creek Road and Deep Well Ranch Road will be a free-flow movement, as neither roadway is expected to extend north or west, respectively. This alignment will require more right-of-way than a traditional four-legged intersection. When either Willow Creek Road is extended north or Deep Well Ranch Road is extended west due to future development or travel demands, this interim connection will need to be reconfigured to a controlled intersection.

In the interim condition, no roadways are anticipated to intersect with Willow Creek Road. A future extension of Perkins Road is likely and will be planned for accordingly. The City of Prescott access management criteria recommends additional intersections be spaced a minimum of one-half mile apart. The City of Prescott and Yavapai County will ultimately be responsible for determining the recommended intersection controls on Willow Creek Road.

Based on the ultimate typical section, the minimum right-of-way width for the corridor is 100 feet. Additional right-of-way may be needed for drainage facilities, side slopes, intersections, bicycle lanes/multi-use pathways, and/or public utility easements. New right-of-way required to construct the corridor alignment is approximately 27 acres, exclusive of the additional right-of-way required at the intersections. The future Willow Creek Road/Deep Well Ranch Road intersection is estimated to require an additional 5 acres of right-of-way – bringing total new right-of-way needed to roughly 32 acres. This acreage will need to be reevaluated and updated once an intersection configuration and type is determined at the future Willow Creek Road/Deep Well Ranch Road junction.

The planning-level cost estimate for implementation of a realigned Willow Creek Road is \$11,800,000. This estimate is for the preferred alignment from Pioneer Parkway/Willow Creek Road to the intersection of Deep Well Ranch Road and SR 89. For the potential interim facility, the planning-level cost estimate is approximately \$7,100,000, which includes construction of the ultimate infrastructure for grading and drainage, but development of a two-lane roadway facility only. The total estimated project costs include both construction and engineering/design. The cost estimate does not include the roundabout at Deep Well Ranch Road/SR 89 that will be constructed with the SR 89 widening project. Additionally, this estimate does not include costs for the full Willow Creek Road/Deep Well Ranch Road intersection, or any new right-of-way costs.

ES5.3 Implementation Plan

The realigned Willow Creek Road is proposed to be implemented in phases, addressing deficiencies and special needs to respond to population and future travel demand warrants. The first phase includes the realignment of Willow Creek Road south of Deep Well Ranch Road, and the second, the extension of Willow Creek Road north of Deep Well Ranch Road. Because of funding constraints, the realignment south of Deep Well Ranch Road could occur in two sub-phases. The roadway could first be built in accordance with the interim typical section (two-lane roadway) and later widened to a four-lane facility.

With the reconstruction of Willow Creek Road, the study team recommends that the existing Willow Creek Road corridor be eliminated. The City of Prescott may need to coordinate with commercial property owners who currently have access to Willow Creek Road at the junction of Willow Creek Road/SR 89 to discuss this transition. This junction is also included in the SR 89 design project (TRACS #89 YV 319 H8039 OID) and may be addressed as that project progresses.

With the reconstruction and realignment of Willow Creek Road, traffic is anticipated to operate acceptably in the design year. Interim construction of the corridor is anticipated to

have minimal impact on surrounding development, as the new roadway corridor alignment traverses no existing development. The existing intersection configuration at Willow Creek Road/Pioneer Parkway meets the future lane demands and recommended build-out configuration, but will require restriping and potential signal timing modifications.

FINAL REPORT

1.0 Introduction

The Arizona Department of Transportation (ADOT) awarded funding for the City of Prescott Willow Creek Road Realignment Study through the Planning Assistance for Rural Area (PARA) program. The purpose of the PARA program is to assist counties, cities, towns, and tribal communities in addressing a broad range of multimodal transportation planning issues. This study identified the existing and future needs and deficiencies along Willow Creek Road north of Pioneer Parkway, and recommended a preferred alignment for a realigned corridor with revised connections to State Route (SR) 89 and Pioneer Parkway.

1.1 Study Area

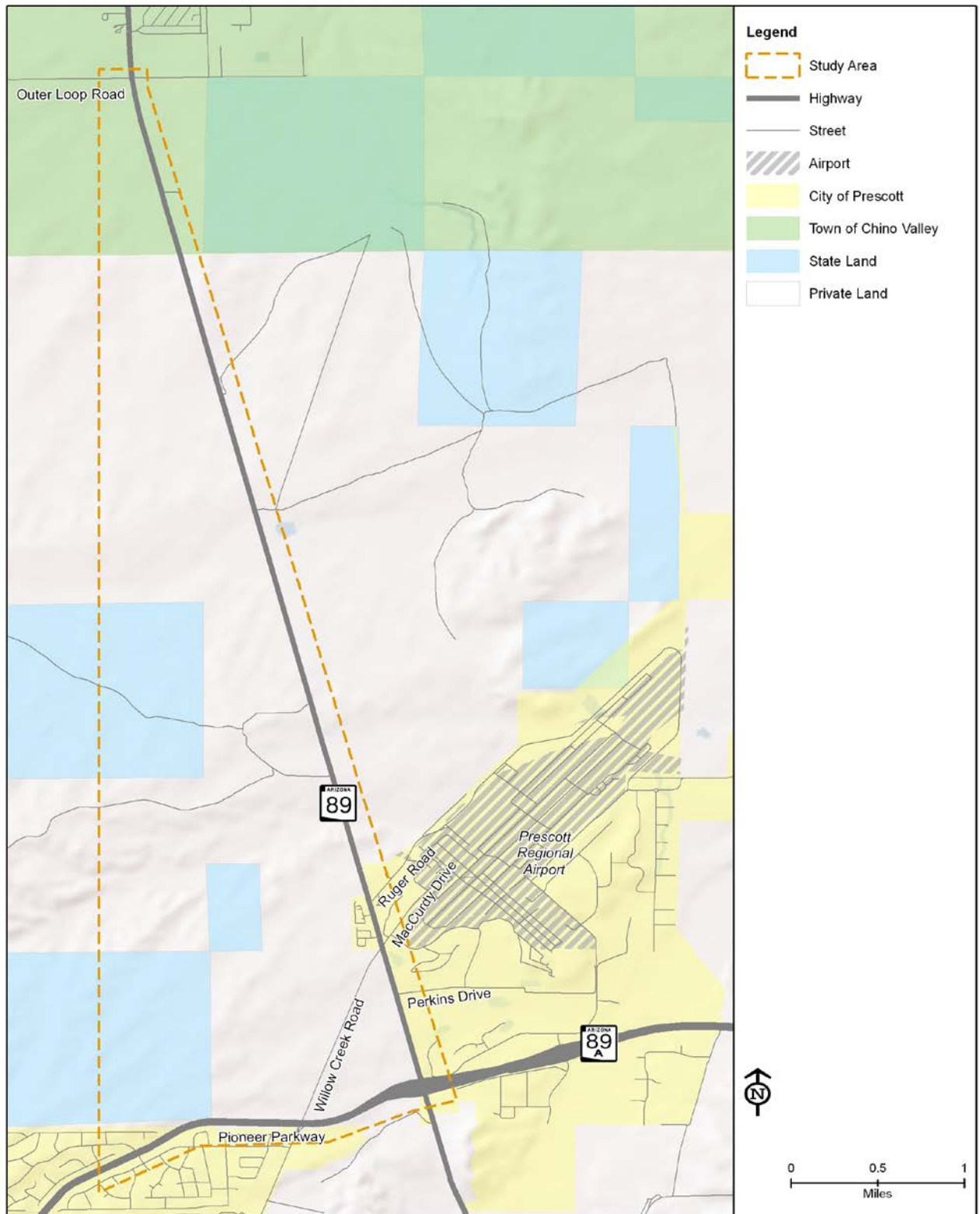
The study area is generally bounded by SR 89 to the east, Outer Loop Road to the north, and Pioneer Parkway to the south (**Figure 1**) (Pioneer Parkway transitions to SR 89A east of SR 89). The study area is located in Yavapai County and included in the planning areas of the City of Prescott and Town of Chino Valley. The Willow Creek Road Realignment will include several existing and future major intersections, including Pioneer Parkway, Perkins Drive, MacCurdy Drive, and Ruger Road.

1.2 Purpose and Need

Future population and employment growth are expected to increase traffic volumes and pressures on the existing and programmed roadway system in the study area. The *Central Yavapai Metropolitan Planning Organization (CYMPO) Regional Transportation Plan (RTP) Update* (2030 RTP Update), July 2012, projected that the population of the CYMPO influence area, comprised of Chino Valley, Prescott, Prescott Valley, Dewey-Humboldt, and other county areas, will increase from roughly 131,000 in 2010 to nearly 221,000 in 2030, an increase of about 68 percent. Employment within the region is anticipated to grow from approximately 45,000 employees in 2010 to 74,000 by the year 2030 – a change of nearly 66 percent. These projections are significantly less than previous estimates conducted prior to the economic recession (where population and employment were expected to more than double), however they still validate that growth is expected within the area and should be planned for accordingly.

The area surrounding the Prescott Regional Airport (Ernest A. Love Field) and within the study area is a focus-area for future development, with a mix of planned commercial, employment, residential, and mixed-use development. The segment of SR 89 within the study area is surrounded by existing development, including a golf course and the regional airport. Previous studies, including the CYMPO 2030 RTP (previous comprehensive RTP that was completed in 2006), have established the need to widen SR 89 to as much as six lanes. However, current design efforts are underway for a narrower four-lane section for SR 89 between the new Deep Well Ranch Road intersection (proposed north of Ruger Road) and SR 89A due to the constraints presented by the surrounding development, which make it difficult to obtain new right-of-way for roadway widening. As a result, the planned improvements to SR 89 will not provide sufficient capacity to accommodate future travel demands.

Figure 1. Study Area



Sources: Yavapai County, CYMPO, City of Prescott, Arizona Land Resource Information System (ALRIS), Bureau of Land Management (BLM)

Traffic analyses completed for the *SR 89A/SR 89/Willow Creek Road Triangle Area Study*, dated August 2008, found that the intersections along Pioneer Parkway/SR 89A and SR 89 in the vicinity of Willow Creek Road currently operate at a poor level of service (LOS) during peak hours (both Pioneer Parkway/Willow Creek Road and SR 89/Willow Creek Road/MacCurdy Drive have a LOS of F in the AM and PM peak hours). This trend is expected to continue and worsen in the future, as seen in recent traffic projections for 2030.

As a result, motorists at these intersections experience significant delays with long wait times that require several signal cycles to get through the intersection. High directional volumes on SR 89 leave few gaps in the traffic stream for vehicles to enter the roadway at the unsignalized intersections along the route, resulting in long wait times and vehicle queues.

In an evaluation of future conditions that considered the planned widening and several minor intersection improvements, the *Triangle Area Study* determined the intersections will continue to operate at LOS F in 2030. This study, along with subsequent area studies, including the *Airport Area Transportation Plan* (2009) and *Prescott West Airport General Plan Amendment* (2008), recommended the need for an alternative routing/extension of Willow Creek Road to connect with SR 89 north of Ruger Road, feeding into the future six-lane section of the highway. The intent of this corridor is to provide a more efficient bypass route for through traffic, diffusing congestion at the failing intersections. Approximately one-third of traffic on SR 89 is through traffic, one-third is westbound, and one-third is eastbound. A realigned Willow Creek Road would serve the traffic to/from the west. The Great Western Corridor, a planned high-capacity transportation corridor forming a new connection between SR 89A and SR 89 to the east, could serve a similar purpose for traffic to/from the east, albeit in a more long-range timeframe, as funding is not currently available for corridor implementation. All of the previous studies stated the need for widening and realigning Willow Creek Road to meet 2030 travel demands, but none identified a definitive alignment or connection point at SR 89.

Therefore, the purpose of the proposed improvements to Willow Creek Road is to accommodate future projected travel demands within the study area, improving the LOS of the corridor and the intersections within the study limits on Willow Creek Road, SR 89, and Pioneer Parkway.

1.3 Study Objectives

The goal of this PARA study is to provide the City of Prescott and the other jurisdictions with a future “footprint” of the Willow Creek Road Realignment and a timeframe for the implementation of the recommended future roadway improvements.

This study will establish the facility type, number of lanes, right-of-way needs, and general alignment for the realigned Willow Creek Road that will be required to accommodate projected traffic growth and enhance safety. Additionally, intersection and/or interchange configurations will be identified for both connection points at SR 89 and at Pioneer Parkway, and all planned or stakeholder identified intersecting roadways along the corridor within the boundaries of the study area.

The study objectives are as follows:

- Clearly define and assess the project study area for roadway needs and deficiencies.
- Develop the purpose and need for the project.
- Develop and evaluate conceptual alternative alignments in the corridor study area.
- Define the characteristics of the preferred alignment, including typical cross-sections, right-of-way, and general drainage.
- Conduct an environmental scan of the area to identify potential fatal flaws.
- Define the configuration of the intersections at the Willow Creek Road connections to SR 89 and Pioneer Parkway.
- Define intersection spacing and configurations at major cross streets.
- Develop an implementation plan.
- Develop consensus for the preferred alignment.

1.4 Planning and Environmental Linkages

The Federal Highway Administration (FHWA) has recently issued new guidance to assist transportation planners and environmental practitioners in the use of corridor and subarea planning to inform the National Environmental Policy Act (NEPA) review process. While this corridor study will not result in detailed environmental documentation such as an Environmental Assessment or Categorical Exclusion, the results of this “pre-NEPA” effort will follow the Planning and Environmental Linkages (PEL) process, which includes a description of the environmental setting and an understanding of the existing infrastructure to make corridor use as efficient as possible through innovative solutions. The use of PEL will help streamline the entire environmental review process, allowing this corridor study to provide the foundation and minimize the need for re-evaluation as the project progresses into the environmental phase in a seamless and cost-effective manner.

Arizona has worked with FHWA to adapt the federal guidance into a state-led process, which includes a series of checklists to be completed throughout the study’s process. The PEL procedures will be carried forth throughout this study to identify important issues early, so that agencies, stakeholders, and the public can make informed and timely decisions.

2.0 Current Conditions

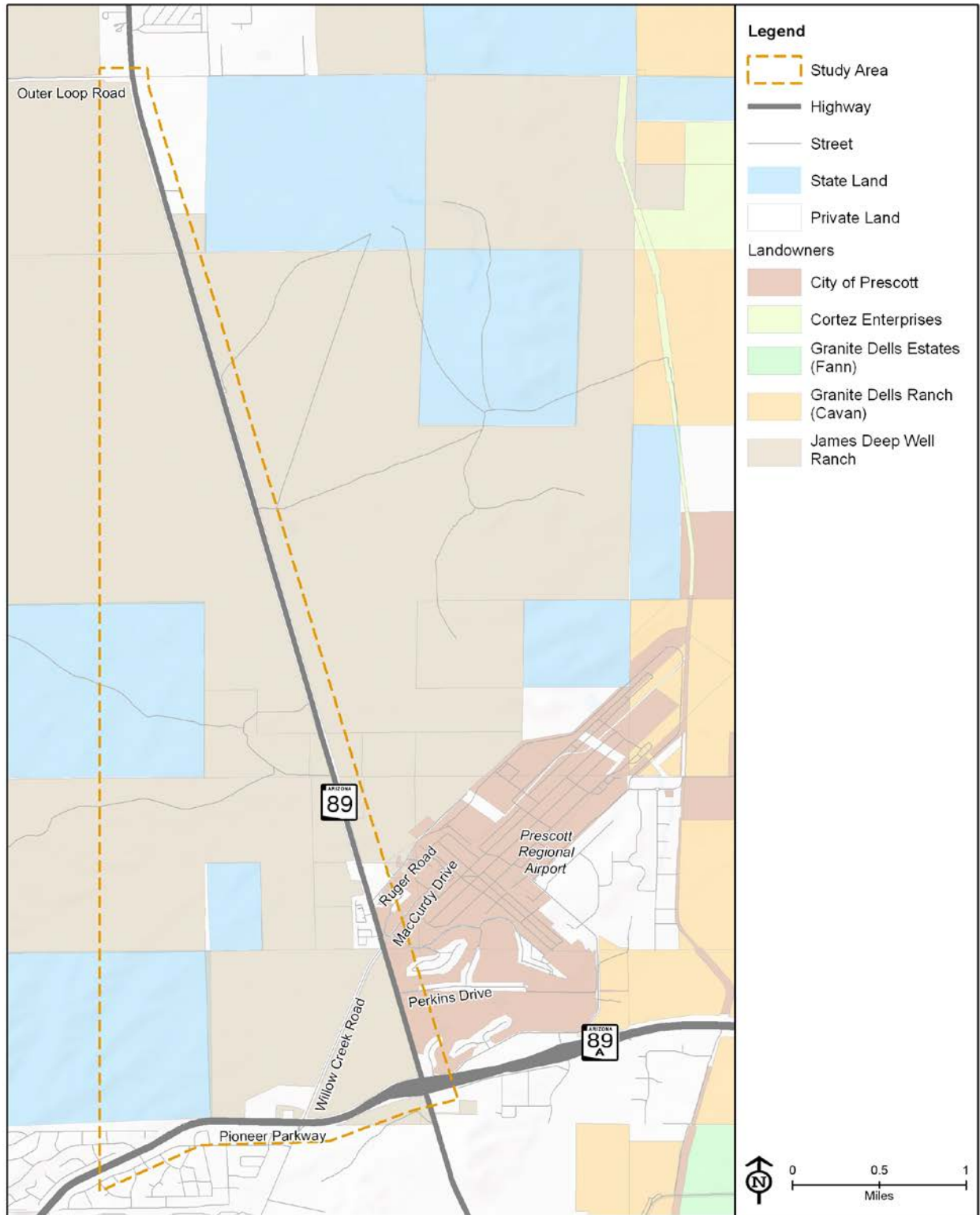
A series of plans, studies, and data were reviewed to gain an understanding of current conditions within the study area and identify any known fatal flaws. This assessment included a review of 15 studies that established the foundation for planning efforts in the vicinity, laying the groundwork for the need for a realigned Willow Creek Road.

2.1 Land Use, Socioeconomic, and Environmental Corridor Features

Land Use

The majority of the land in the study area is privately owned, with three areas in the western portion of the study area publicly owned by the Arizona State Land Department (ASLD) (**Figure 2**). While there are a few areas parceled out and owned by individual property owners, the majority of the study area is under one private land holding – James Deep Well Ranch. The land to the south of the study area is privately-owned, with the Prescott Regional Airport to the east owned by the City of Prescott. The land adjacent to the east and west includes property ownership by ASLD and James Deep Well Ranch.

Figure 2. Land Ownership



Sources: Yavapai County, CYMPO, City of Prescott, ALRIS, BLM

Overall, the study area is primarily undeveloped. There are a few clusters of low-density residential and commercial development scattered at intersections (e.g., SR 89 and Willow Creek Road/MacCurdy Drive; Pioneer Parkway/Willow Creek Road). Otherwise, the study area consists generally of vacant land and some agricultural/ranching land.

Water and sewer lines serve existing development and an Arizona Public Service (APS) substation is located just north and west of the Willow Creek Road/Pioneer Parkway intersection. Three washes traverse the study area, with Bottleneck Wash (east-west wash north of Ruger Road) the only drainageway affected with a 100-year flood zone.

Socioeconomic

The CYMPO 2030 RTP Update includes existing socioeconomic information from 2010. Population and employment density for the study area in the 2030 RTP Update were both very low, between 0 and 150 people and jobs per square mile. However, to the east, the Prescott Regional Airport is a moderate-sized employer; its traffic analysis zone (TAZ) having between 401 and 800 jobs in 2010. The spillover effects of this major employment center adjacent to the study area include increased related industrial and service center development surrounding the airport, as well as increased traffic traveling to and from the airport area – with some of this traffic likely traveling through the study area.

Environmental Corridor Conditions

An environmental review was conducted to inventory the existing physical, natural, and cultural conditions of the study area, including detailed analysis of study area vegetation, special status species, Title VI/environmental justice, potential section 4(f)/6(f) properties, prime or unique farmlands, water resources, cultural resources, and hazardous materials. Through this inventory, no major environmental constraints were identified. Summary findings include:

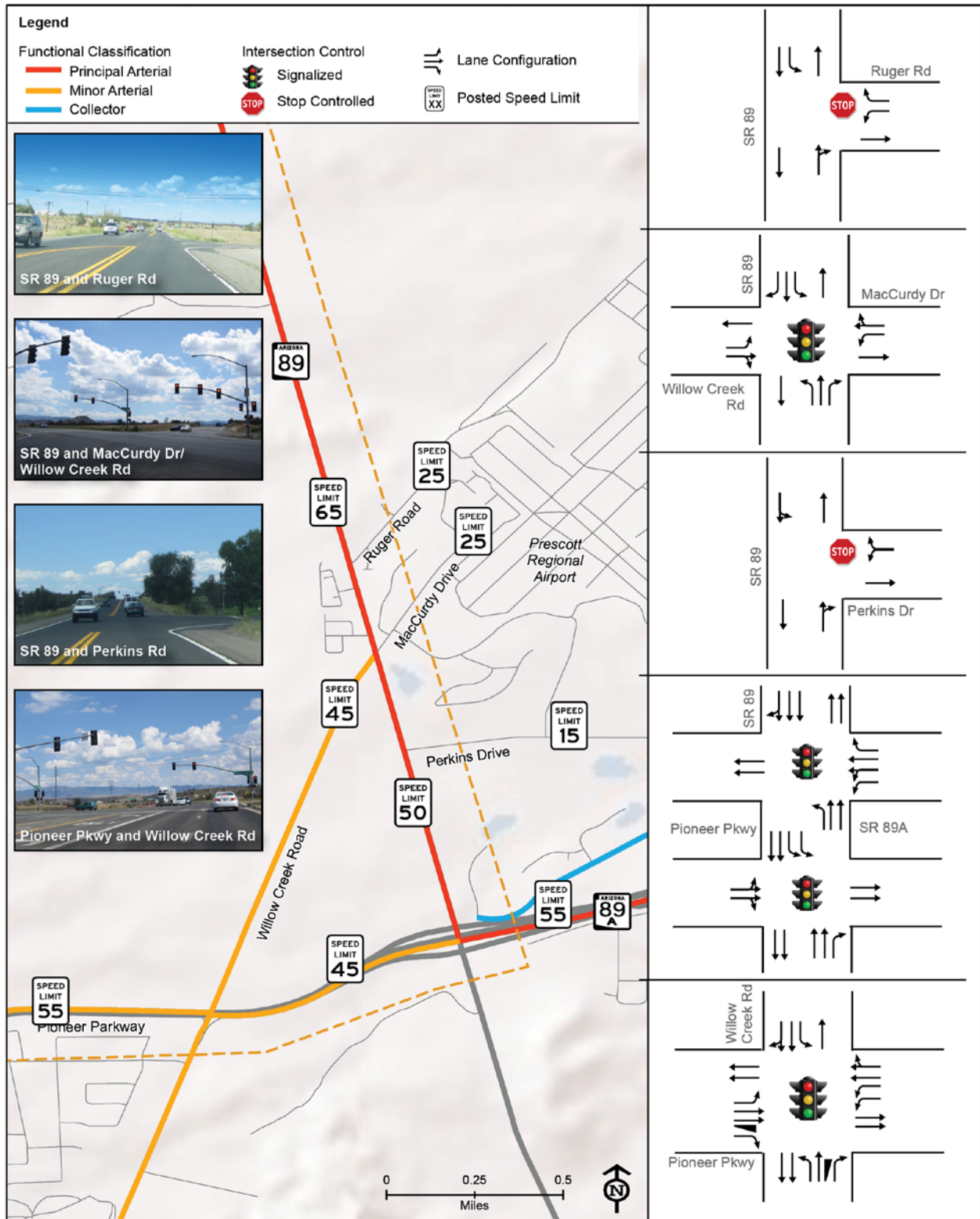
- It is unlikely that threatened, endangered, and candidate species with conservation agreements for Yavapai County would occur in the study area. Major wildlife linkage corridors traverse the region east to west both north and south of the study area.
- Bottleneck Wash is large enough that it may be considered a Waters of the United States (WOUS) and fall under the jurisdiction of the Army Corps of Engineers. Construction within the channel may require a permit under Section 404 of the Clean Water Act.
- Cultural resources may exist within the study area and should be investigated further as planning and design progresses.

2.2 Transportation Conditions

The existing roadway network in the study area is comprised mostly of state highways and local streets. SR 89 and SR 89A/Pioneer Parkway are higher capacity roadways that serve the function of regional connectivity and form the southern and eastern boundaries of the study area. Ruger Road, MacCurdy Drive, Willow Creek Road, and Perkins Drive connect to these roadways and provide access to the study area and/or Prescott Regional Airport area. Existing transportation conditions are illustrated on **Figure 3**.

With the exception of sidewalks in residential neighborhoods, few alternate transportation modes exist within the study area. Bicycle lanes are currently located on Willow Creek Road south of Pioneer Parkway.

Figure 3. Existing Roadway Conditions



The Peavine multi-use trail runs east of the study area, south of SR 89A. A regional public transit route offered by Chino Valley Transit connects the Town of Chino Valley to the City of Prescott (Yavapai Regional Medical Center) using SR 89 and Willow Creek Road. This route runs twice a week (Tuesdays and Thursdays), twice a day.

Existing Traffic Data

Figure 4 displays the existing traffic conditions within the study area. Existing traffic count data (as available) was gathered from Yavapai County, the *SR 89, SR 89A to South Chino Limits: Working Paper One*, draft completed August 2011, the *Airport Area Transportation Plan*, completed June 2009, and the *SR 89/SR 89A/Willow Creek Road Triangle Study*, completed August 2008. The traffic volumes displayed in **Figure 4** are balanced volumes which take into account the year of data collection, and reduce the amount of traffic dissipated from the network between intersections. Average daily traffic (ADT) on SR 89 ranges from above 21,000 vehicles per day (vpd) north of Willow Creek Road/MacCurdy Drive to approximately 15,000 vpd on SR 89 between Willow Creek Road/MacCurdy Drive and Perkins Drive. Willow Creek Road between Pioneer Parkway and SR 89 experience approximately 8,500 vpd. Pioneer Parkway varies from almost 30,000 vpd east of SR 89, around 15,000 vpd between Willow Creek Road and SR 89, and less than 6,500 west of Willow Creek Road.

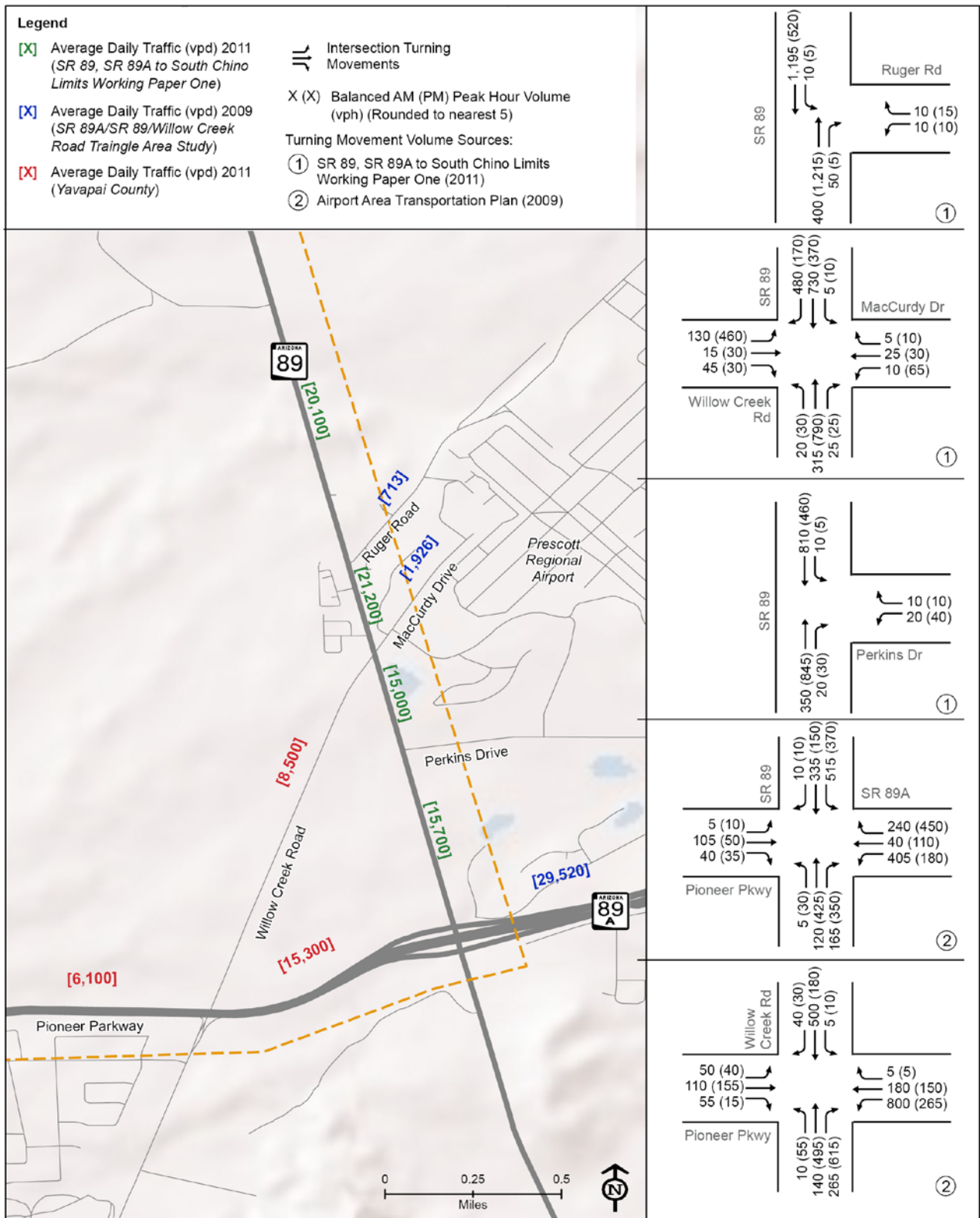
Within the study area and during the AM peak hour, it has been observed that roughly two-thirds of the total southbound traffic from the Town of Chino Valley utilizes SR 89 and approximately one-third utilize Willow Creek Road. Of the traffic using SR 89, roughly two-thirds travel on SR 89A eastbound and the remaining one-third continue on SR 89 southbound. During the PM peak hour, the majority of the northbound traffic (approximately two-thirds) destined to the Town of Chino Valley use SR 89 and the remaining one-third use Willow Creek Road.

Level of Service

According to the 2010 Highway Capacity Manual (HCM), the concept of LOS uses qualitative measures that characterize operational conditions within a stream of traffic. The descriptions of individual LOS characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience. Six levels of service are defined for each type of facility for which the analytical procedures are available. They are given letter designations from 'A' to 'F', with LOS 'A' representing the best operational conditions and LOS 'F' representing an over-capacity condition (congestion).

Synchro/Simtraffic software (Version 8) was utilized for analyzing existing conditions of the study area. Synchro follows the methodologies set forth by the HCM to analyze intersection operations. Synchro is a macroscopic model that is an excellent tool to use for optimizing traffic signal timings and splits and reporting LOS analysis results. Synchro provides control delay at an intersection as a measure of effectiveness. Simtraffic in contrast is a microscopic simulation add-on tool to Synchro. In Simtraffic, individual vehicles that are entering/exiting the network are modeled and displayed as a 3D simulation. Simtraffic yields average delay at an intersection as a measure of effectiveness. The program provides the flexibility to modify the default parameters (e.g., peak hour factor, truck percentages, etc.) in order to accurately reflect the real time traffic conditions.

Figure 4. Existing Traffic Volumes (Years 2009 – 2011)



The existing conditions analysis was based on the existing intersection configurations, peak hour turning movement volumes presented in **Figure 4**, and existing signal timings. Simtraffic models were run to evaluate the intersection operations as part of the entire roadway network. The simulation results in Simtraffic and the resultant system delays take into account impacts of one intersection on another, such as uncoordinated signals or excessive queuing.

Multiple one-hour simulation runs (three total) were performed to yield a reasonable mean value for average intersection delays. The average delay results (seconds/vehicle) from the Simtraffic simulation were compared to the HCM LOS for signalized and unsignalized intersections (**Table 1**). The results for the existing conditions analyses are shown in **Figure 5** and **Figure 6** for AM and PM peak hours, respectively.

Table 1. Peak Hour Intersection Levels of Service

Study Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/Ruger Rd	Unsignalized	31.3	D	37.9	E
SR 89/Willow Creek/MacCurdy Dr	Signalized	29.5	D	48.6	D
SR 89/Perkins Dr	Unsignalized	12.3	B	17.4	C
Pioneer Pkwy/Willow Creek Rd	Signalized	25.6	C	18.8	B
SR 89/SR 89A TI (north intersection)	Signalized	16.3	B	11.4	B
SR 89/SR 89A TI (south intersection)	Signalized	10.8	B	12.8	B

Notes: (1) Uses 2009-2011 balanced volumes

Due to the heavy directional traffic and a 2-phase signal with permissive left turns, the signalized intersection of SR 89 and Willow Creek Road currently operates at LOS D during both the AM and PM peak hours. However, during the AM peak hour, the southbound movement experiences significant delays with excessive queue lengths that require several cycles to clear. During the PM peak hour, the left turn movement from Willow Creek Road to SR 89 northbound experiences excessive delays; the left turn phase experiences a LOS F during this peak time period. This is primarily due to the permissive left turn phase that must yield to westbound through traffic.

During the AM and PM peak hour, the SR 89A/SR 89 TI ramp intersections operate at an acceptable LOS, with both the westbound and eastbound ramp intersections operating at LOS B.

The signalized intersection of Pioneer Parkway and Willow Creek Road operates at LOS C during the AM peak hour due to the heavy left turn movement from westbound Pioneer Pkwy to southbound Willow Creek Road. In the PM peak hour, the reciprocal northbound to eastbound movement is accommodated by a free-flow right turn lane, and the intersection operates at an overall LOS B.

The unsignalized intersection of SR 89 and Ruger Road operates at LOS D and LOS E during the AM and PM peak hours, respectively. Due to the heavy directional traffic on SR 89, the traffic from Ruger Road has very few gaps available to enter onto the highway.

Figure 5. Existing AM Peak Hour LOS

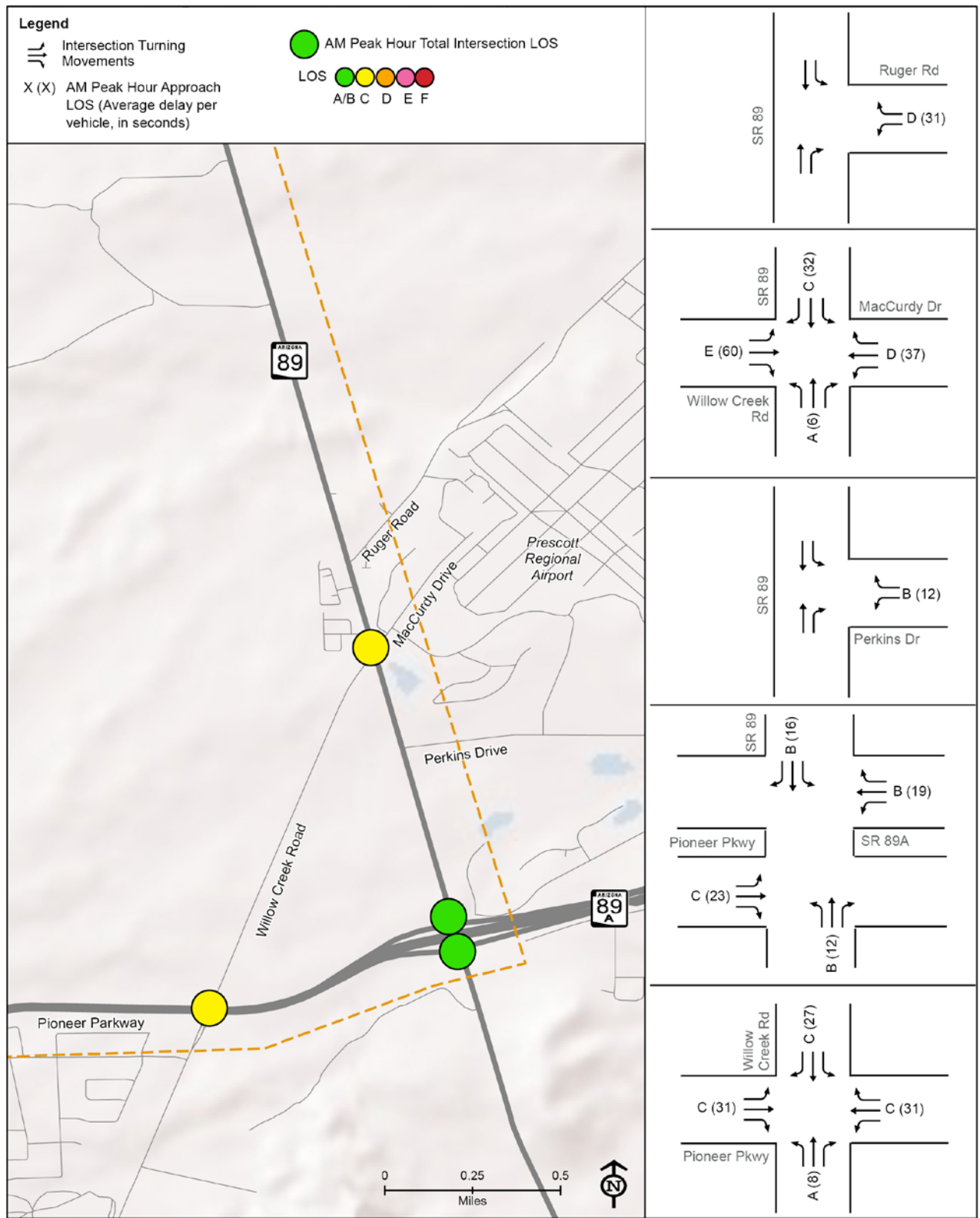
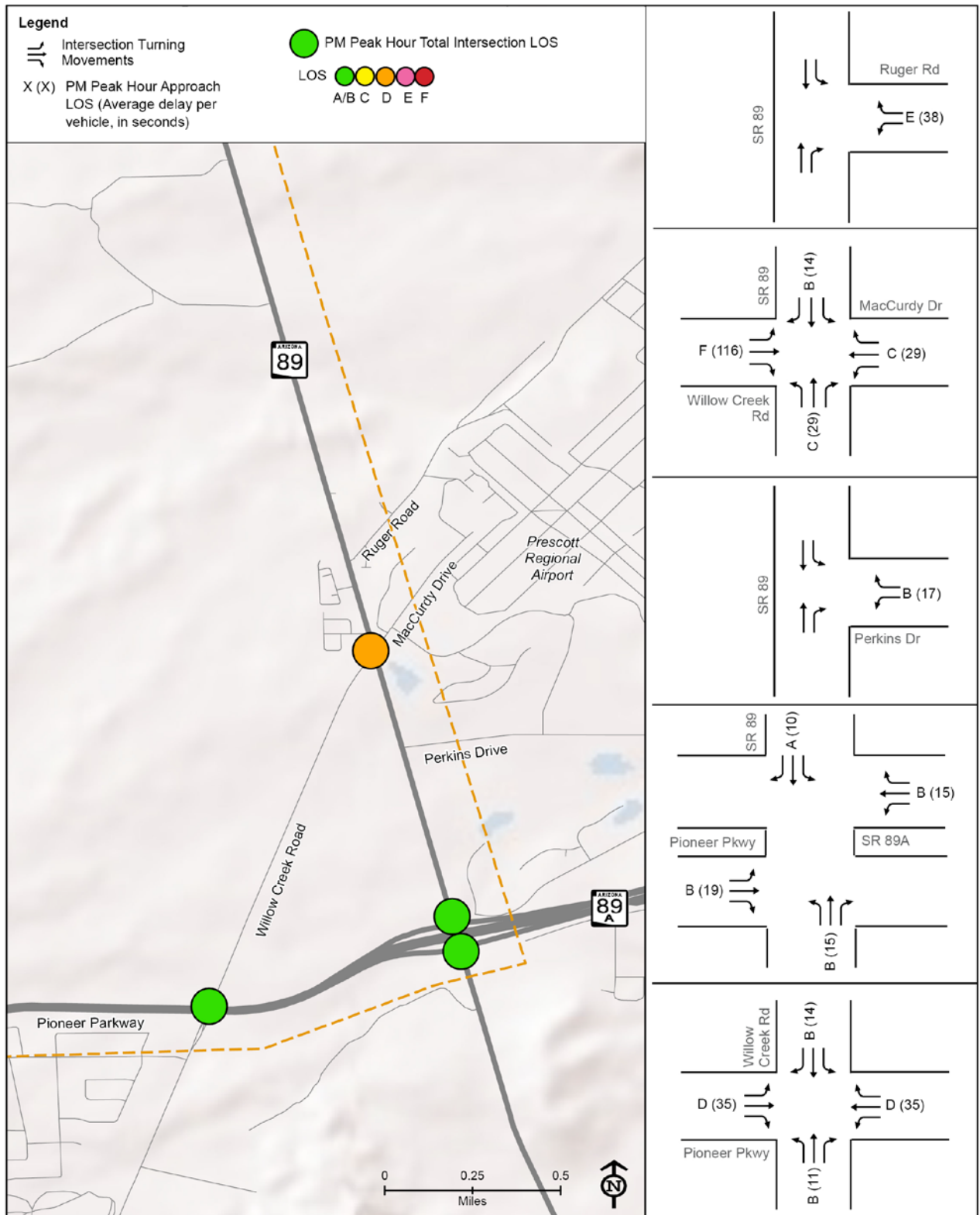


Figure 6. Existing PM Peak Hour LOS



The unsignalized intersection of SR 89 and Perkins Drive operates at an acceptable LOS during both peak hours. However similar to Ruger Road, the delay experienced at this intersection is a result of insufficient gaps on SR 89 for vehicles to enter the traffic stream.

Crash Data

The ADOT-Multimodal Planning Division (ADOT-MPD) and Yavapai County provided crash data for the project area along SR 89, Willow Creek Road, and Pioneer Parkway. From 2006 to 2011, a total of 180 crashes were reported within the study area. The following is a summary of some key characteristics of the crash data:

- Of the 180 crashes reported, 118 (65 percent) were reported to occur at the signalized controlled intersections, while 62 (35 percent) were reported to occur mid-block (between intersections).
- 106 crashes resulted in property damage (59 percent), 70 resulted in injuries (39 percent), and 4 resulted in a fatality (2 percent).
- 156 crashes (87 percent) involved a collision with another motor vehicle while 7 (4 percent) involved a collision with a fixed object, and 6 (3 percent) involved an overturn/rollover vehicle. These three types of crashes accounted for 94 percent of the crashes.
- Of the 156 crashes with another motor vehicle, 60 percent (93 crashes) were rear-end crashes, and 16 percent (25 crashes) were angle (other than left-turn) crashes.

Access Management

Access management is the regulation of vehicular access to public roadways from adjoining property. Access is provided through legal, administrative, and technical strategies available to a jurisdiction. For example, the prime function of the arterial system is to move traffic safely and efficiently. However, access to abutting land also needs to be provided. To maintain the integrity of the arterial system, land access needs to be controlled and managed. Access management guidelines provide a reference for carrying out the planning, design, and approval of access to roadways and assist local officials and developers in understanding how access can be provided while still maintaining mobility.

Transportation access is directly related to nearby land development. Construction of a transportation corridor stimulates land development which in turn, results in additional congestion. This congestion, then, results in improvements to the roadway system, providing more accessibility and stimulating more land development. This cycle continues until the land is built out, or travel demand cannot be met through transportation facility improvements. Access management can, in conjunction with a region's land development plans, help ensure a functional transportation facility, while still providing the necessary infrastructure to support economic development of private land within the region.



James Deep Well Ranch driveway access on to SR 89

The City of Prescott's *2012 Draft revisions to Article 6 of the General Engineering Requirements* (GER) outlines access management standards and techniques required for different roadway classes and development types. Yavapai County's *Subdivision Regulations* and *Zoning Code* require any new developments to submit circulation plans prior to site plan evaluations, outlining access opportunities and traffic flow. Specific access management standards are not included in either code.

Access to the state highway system is managed through ADOT. Permits for driveways on SR 89 are granted by ADOT's Prescott Engineering District, when requests meet all engineering and safety standards.

Although there is little existing development in the study area, access to major developments is generally through an intersecting street or shared driveway. However, there are uncontrolled access points on to SR 89, such as the driveway to the James Well Ranch property located north of Ruger Road on the west side of SR 89.

3.0 Future Conditions

3.1 Land Use, Socioeconomic, and Other Corridor Features

Planned Land Use

Approved land use plans, as documented in the current City of Prescott, Town of Chino Valley, and Yavapai County general/comprehensive plans, were reviewed to understand anticipated land uses in the study area. (This also includes land uses adopted as part of the West Airport General Plan Amendment [GPA].) Land uses between Pioneer Parkway and Bottleneck Wash are expected to be a mix of low-medium density residential, medium-high density residential, mixed use, commercial, and employment – with primarily non-residential land uses located within the airport noise contours. North of the wash to the Chino Valley town limits are expected to remain agricultural/ ranching. Within Chino Valley, a commercial corridor is planned along SR 89.

The ASLD has not completed any recent planning activities for their parcels within the study area; their parcels are anticipated to be developed as low density residential with one dwelling unit per acre.

Socioeconomic

Future growth was projected in the *CYMPO 2030 RTP Update* (2012), using the 2010 Census data and population estimates from the Arizona Department of Administration. The population forecast translates to an average annual growth rate between two and three percent over the next 20 years. When comparing the 2030 estimates developed during the 2006 RTP with the new 2030 projections based on the 2010 Census data, a decrease of projected population of almost 50 percent occurred. This decrease is attributed to the vastly different economic conditions present when the 2030 projections were developed in 2006. Based on current trends, Prescott and Chino Valley are expected to see between 55 and 60 percent growth between 2010 and 2030. Based on the TAZ allocations of population in the *2030 RTP Update*, population and employment densities within the study area are expected to increase, especially between Pioneer Parkway and Bottleneck Wash – where most of the growth is expected – consistent with future land use planning efforts. North of Bottleneck Wash, little growth is expected.

Table 2 presents regional population information and projections, based on the 2012 *RTP Update* population projections. It includes updated existing population information, using data from the 2010 census.

Table 2. Study Area Population Change

Geography	2010	2030	Increase	Percent Growth Estimated
City of Prescott	39,843	62,245	22,402	56%
Town of Chino Valley	10,817	17,322	6,505	60%

Sources: CYMPO 2030 RTP Update, 2012

Planned Corridor Features

A future water utility corridor is planned parallel to the Great Western Corridor, running eastward from SR 89, approximately one-mile south of Outer Loop Road. Adjacent to the existing APS substation, located at the northwest corner of Willow Creek Road and Pioneer Parkway, there is a plan for an intermediate pump station for the Big Chino Water Ranch Water Delivery Pipeline Project. This project includes transporting water from the Big Chino area into the Prescott Active Management Area (AMA) to supplement regional water resources. Land for the Big Chino Water Ranch has already been acquired, along with engineering and design of the pipeline and easement acquisition. Construction of the pipeline and associated facilities has not commenced, pending approval from the Arizona Department of Water Resources.

3.2 Transportation Conditions

Planning and preliminary design activities have been conducted for several proposed roadways in the study area. While not all of these roadways are “committed” projects because funding has not been secured, these planned roadways should be considered when developing future potential improvement concepts:

- The *Great Western Corridor Feasibility Study* recommended a new high speed, limited access facility near the Great Western section line on SR 89A and intersecting SR 89 approximately one mile south of Outer Loop Road (long-range implementation timeframe).
- The *SR 89, SR 89A to South Chino Limits* project is establishing the future ultimate footprint for SR 89. Final design is underway for the segment between Chino Valley and Deep Well Ranch Road, with construction of SR 89 programmed in the CYMPO *Metropolitan Transportation Improvement Program* (MTIP).

Limited options for alternate modes of transportation are planned within the study area. Sidewalks are planned along city roadway facilities; bicycle lanes are optional and not always recommended, depending on the speed and access management techniques intended.

The CYMPO *Transit Implementation Plan* (2009) outlines initial and expanded transit service options for the region, however limited services are anticipated to extend into this study area. The Prescott flex route is envisioned to extend north to Willow Creek Road, connecting to Embry Riddle Aeronautical University. With this route change, Americans with Disabilities Act (ADA) paratransit services would also be extended. The CYMPO *RTP* (2006) shows a

potential broad commuter bus corridor connecting Prescott and Chino Valley through the study area, but with no defined routes or implementation timeframes.

To accommodate anticipated growth in aviation operations, the Prescott Regional Airport recently updated their *Airport Master Plan*, directing capital improvement project implementation from the short-term (5 year) through long-term (20 year) planning period. The sole roadway improvement is a new airport perimeter road, programmed in Phase 2 (2016 to 2020). The *Airport Layout Plan* notes several areas of “future airport development”, designating adjacent parcels the airport plans to acquire and develop. Combined with the phased infrastructure improvements to the airport, new development projects will likely spur additional ancillary airport-related industrial business development surrounding the facility.

Projected Traffic Conditions

The CYMPO 2030 RTP Update, June 2012, projected that population and employment will increase in the CYMPO influence area by approximately 68 and 66 percent, respectively. These projections are significantly less than previous estimates conducted prior to the economic recession (where population and employment were expected to more than double), however they still validate that growth is expected within the area and should be planned for accordingly.

From this study, a future annual growth rate projection of approximately three percent was established using 2010 Census data and population estimates from the Arizona Department of Administration.

Existing turning movement percentages, peak hour to ADT ratios (k-values) and directional distributions (D-values) were calculated from the existing traffic counts. The average existing k-values for the AM and PM peak hours were calculated to be approximately eight percent for both the peak hours. The D-value for the AM peak hour was found to be 70 (SB/WB)/30 (NB/EB) for SR 89, Willow Creek Road, and Pioneer Parkway east of Willow Creek Road. The PM peak hour D-values are roughly equal, but opposite, to the AM values.

The three percent growth rate was applied to existing traffic volume data to project 2037 traffic volumes for use in the traffic analyses for this study. However, the area east of SR 89 at Perkins Drive, MacCurdy Drive, and Ruger Road were not anticipated to experience much growth and were slightly increased from existing counts.

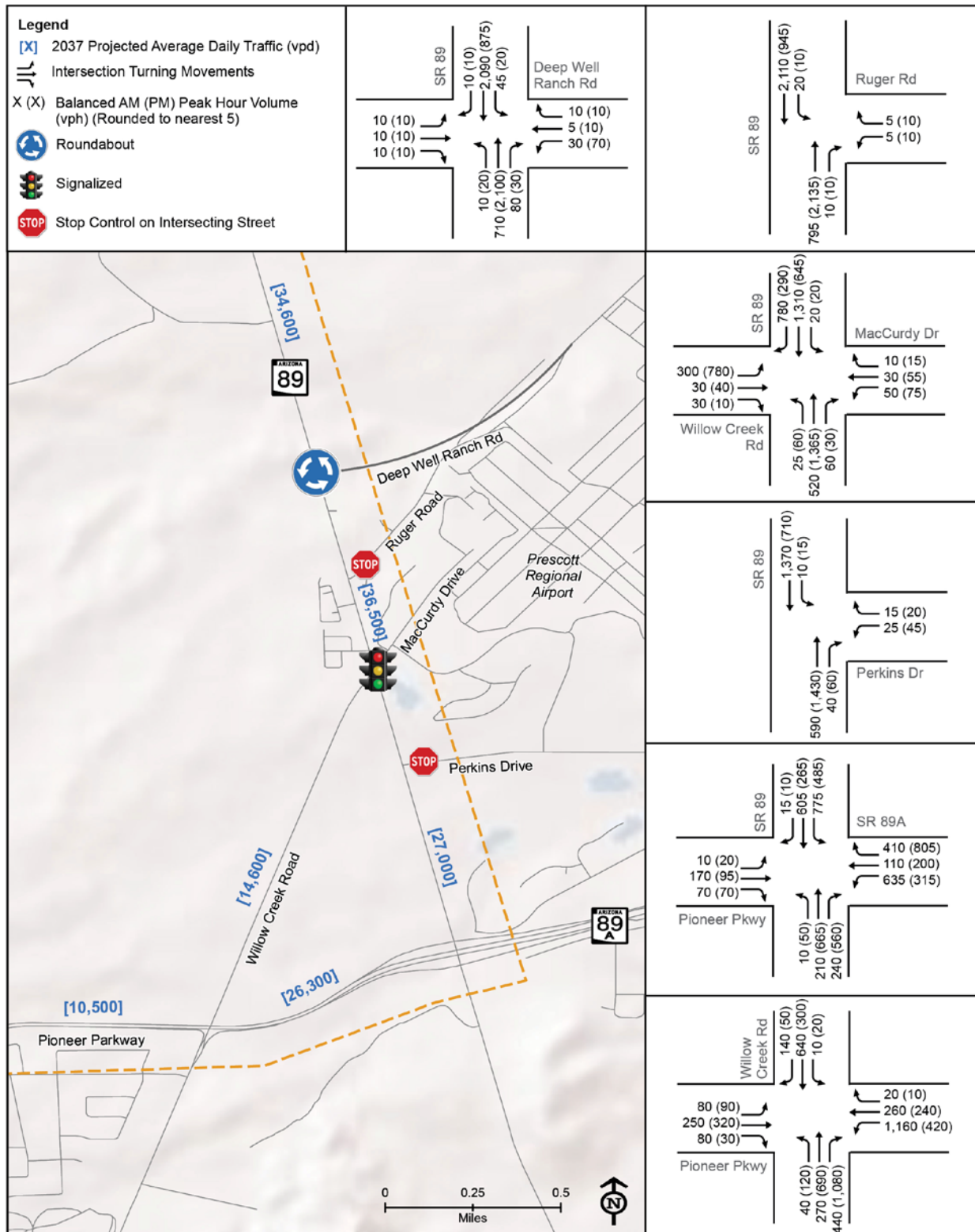
- The 2037 projections were then redistributed within the roadway network to reflect improvements currently under consideration by ADOT, Yavapai County, and the City of Prescott, including the construction of Deep Well Ranch Road, a new roadway with a four-legged roundabout located approximately one-quarter mile north of Ruger Road, to be constructed east of SR 89 to connect to the airport, and constructed west for local traffic only.

Figure 7 displays the redistributed, projected, and balanced peak hour year 2037 turning movement volumes.

Level of Service

The 2037 ‘No Build’ conditions analysis was based on the intersection configurations and peak hour turning movement volumes presented in **Figure 7** and optimized signal timings. Simtraffic models were run to evaluate the intersection operations as part of the entire roadway network. The simulation results in Simtraffic and the resultant system delays take into account impacts of one intersection on another, such as uncoordinated signals or excessive queuing.

Figure 7. Projected 2037 Future Traffic Conditions



Multiple one-hour simulation runs (three total) were performed in Simtraffic to yield a reasonable mean value for average intersection delays. The intersections along SR 89 experience LOS F in both peak hours due to heavy through movements on SR 89. However, as a result, the queues impact the traffic operations at the downstream intersections and restrict the anticipated traffic volumes from entering the roadway network, thereby misrepresenting the LOS at most of the intersections. Therefore, Synchro analysis results were preferred to Simtraffic since they more accurately reflect the total traffic volumes anticipated to enter at each of the intersections.

A unified formula for roundabout capacity prediction was developed from an extensive U.K. study and incorporated into the software program RODEL. The program utilizes geometric data to predict roundabout capacity. Current practice in roundabout evaluation uses default values within RODEL for initial capacity analysis.

The average delay results (sec/veh) from Synchro and RODEL are included in **Table 3**. The results for the future 'No Build' conditions analyses are shown in **Figure 8** and **Figure 9** for AM and PM peak hours, respectively.

Table 3. 2037 Peak Hour Intersection Levels of Service*

Study Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/Deep Well Ranch Rd*	Roundabout	37.7	D	49.6	D
SR 89/Ruger Rd (westbound)	Unsignalized	296.1	F	646.8	F
SR 89/Willow Creek/MacCurdy Dr	Signalized	72.3	E	284.3	F
SR 89/Perkins Dr	Unsignalized	117.7	F	516.2	F
Pioneer Pkwy/Willow Creek Rd	Signalized	77.0	E	50.5	D
SR 89/SR 89A TI (north intersection)	Signalized	19.4	B	12.4	B
SR 89/SR 89A TI (south intersection)	Signalized	19.0	B	31.6	C

*Uses SR 89, Deep Well Ranch to South Chino Limits, 60% Design Lane Configuration

In addition to the 2037 analyses presented in **Table 3**, an analysis of the Willow Creek Road/MacCurdy Drive and SR 89 intersection in its present location as a signalized intersection with two lanes in each direction on SR 89 was conducted. The analysis included an additional through lane on SR 89 in the northbound and southbound directions to account for a four-lane cross-section on SR 89. The analysis results in an anticipated LOS C (24.4 sec delay) and LOS F (89.7 sec delay) in the AM and PM peak hours, respectively.

The Deep Well Ranch Road roundabout with SR 89 is anticipated to operate at a LOS D in 2037 in both the AM and PM peak hours. However, in the AM peak hour, the southbound approach is on the verge of failing, and in the PM peak hour, the westbound approach is failing. The through traffic demand on SR 89 is too high for this two lane roundabout without any of the traffic being diverted to the fourth leg of the roundabout (the west leg).

The unsignalized intersections at Ruger Road and Perkins Drive are anticipated to fail in both peak hours.

Figure 8. Projected 2037 AM Peak Hour LOS

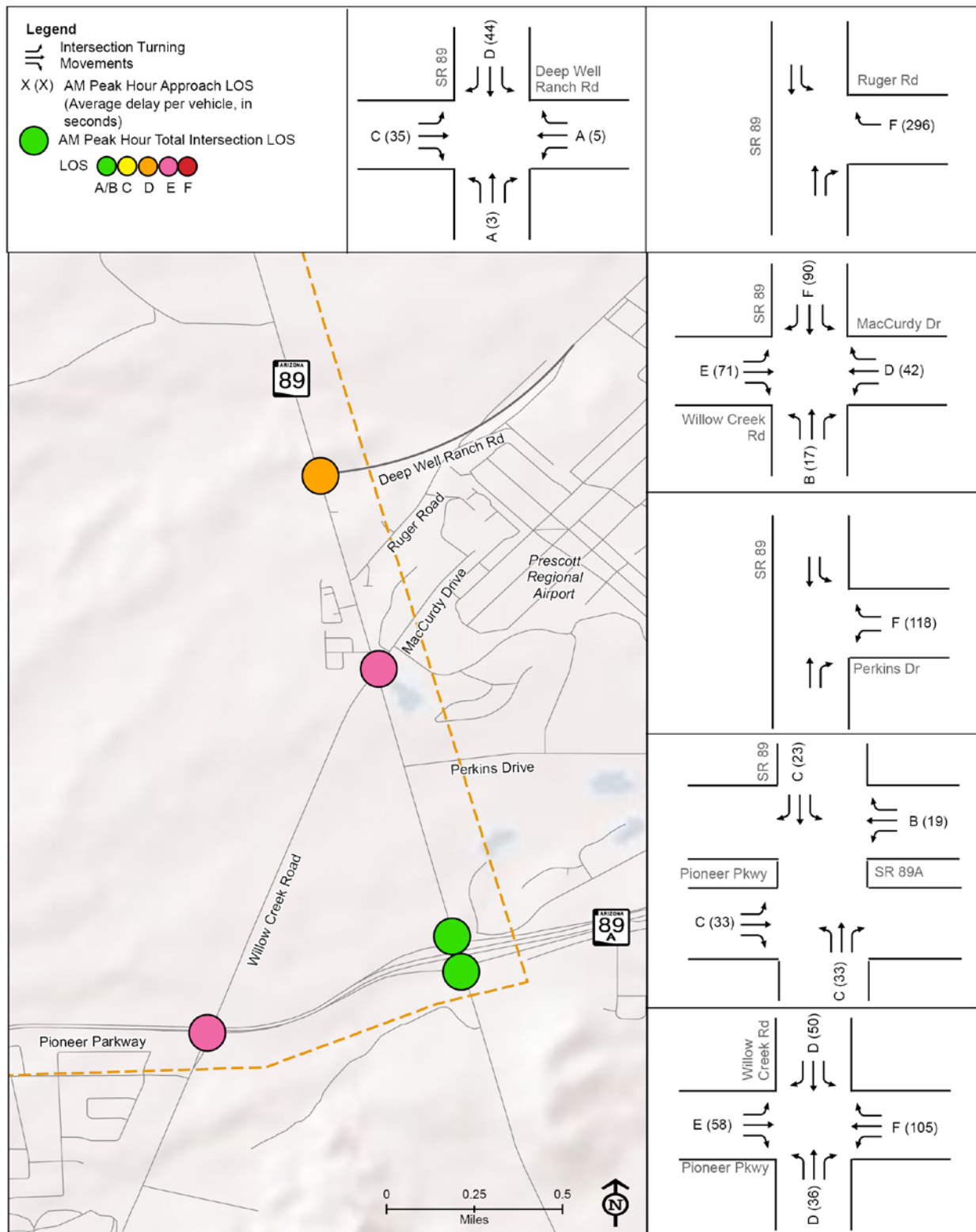
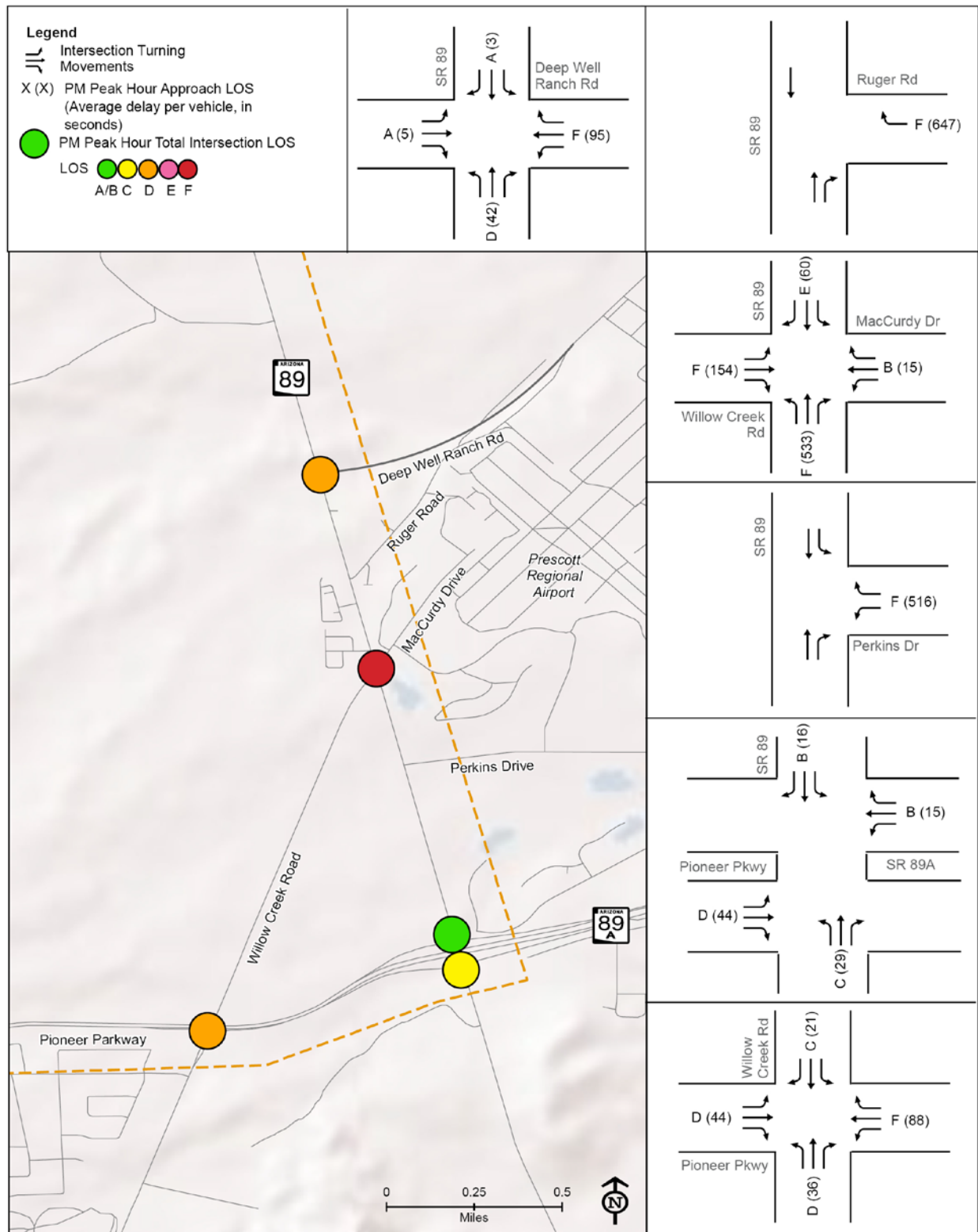


Figure 9. Projected 2037 PM Peak Hour LOS



The existing intersection at Willow Creek Road/MacCurdy Drive and SR 89 is also anticipated to operate at a LOS E and LOS F in 2037 in the AM and PM peak hours, respectively. The through traffic demand on SR 89 in combination with the high left turns from Willow Creek Road creates too much congestion.

As an optimized intersection during the AM and PM peak hour, the SR 89A/SR 89 TI ramp intersections are anticipated to continue to operate at acceptable levels of service, with both the westbound and eastbound ramp intersections operating at LOS D or better.

The signalized intersection of Pioneer Parkway and Willow Creek Road is anticipated to operate at a LOS F during the PM peak hour.

3.3 Needs and Deficiencies

To summarize the analysis of existing and future conditions, outstanding roadway network needs and deficiencies are identified as:

- Willow Creek Road/SR 89: Corridor improvements required to reduce congestion at intersection
- Pioneer Pkwy/Willow Creek Rd: Intersection improvements required to reduce congestion
- SR 89, Ruger Rd to SR 89A: Cannot widen SR 89 to recommended 6 lanes due to 4(f) properties; additional parallel capacity required to alleviate directional traffic
- SR 89, Willow Creek Rd to SR 89A: Additional parallel capacity required to alleviate directional traffic

4.0 Evaluation Framework

Establishing an evaluation framework provides a rational basis for evaluating the advantages and disadvantages of project alternatives. Evaluation criteria were identified prior to the development of alternatives to facilitate a fair and comprehensive evaluation. The criteria give focus to the alternative alignment that will best address capacity needs and provide relief from congestion forecast by the model runs of future traffic conditions.

Table 4 lists the evaluation criteria and performance measures associated with each. The number of performance measures varies for each criterion, reflecting the inherent complexity and amount of data available for each element. The performance measures are intended to minimize or maximize an outcome that reflects fulfillment of the criterion. Some of the measures are evaluated numerically; others are based on a qualitative assessment.

Table 4. Evaluation Framework

Criteria	Performance Measures
Right-of-way (R/W) considerations	Total R/W needed (acres)
	No. of existing residences to be acquired (partial, full)
	No. of other developed properties to be acquired (partial, full)
	No. of required access changes to existing properties
Multimodal considerations	Ability to accommodate bicycles and pedestrians near future residential/commercial areas

Table 4. Evaluation Framework (cont.)

Criteria	Performance Measures
Compatibility with existing and future development	Consistency with adopted land use, economic and transportation plans (General Plan)
	Degree of encroachment on existing or future development
Compatibility with existing roadways and future improvements	Ability to function as part of a regional network capable of accommodating future growth (traffic)
	Consistency with SR 89 widening, Great Western and other planned and approved projects
	Ability for a future extension north
Public/local agency acceptability	Support for and acceptance of the corridor alternative, based on input from major landowners
	Anticipated local municipal support for and acceptance of the corridor alternative, based on input from municipal staff and the Technical Advisory Committee (TAC)
Drainage/flood control considerations	Number of bridges and large box culverts
	No. of linear feet within 100-year flood plain
Environmental justice and Title VI	Potential for impacts on minority, low-income, and other disadvantaged populations (e.g., persons with disabilities)
Other environmental considerations	Number of Section 4(f) and 6(f) properties impacted
	Impacts on sensitive species
	Impact on wildlife habitat and ability to accommodate trail and wildlife linkages
	Visibility to sensitive viewers
	Potential for noise impacts on existing or platted receptors (within 1,500 feet)
	Impacts on Waters of the U.S.
Traffic considerations	Ability to accommodate year 2035 traffic volumes with an acceptable level of service (C or better)
Utility considerations	Number of utilities affected during construction
Prescott Airport considerations	Impacts to Part 77 surface
	Provides reasonable access to future airport terminal
Cost	Planning level cost estimate
Implementation	Ability to phase implementation
	Potential impacts to traffic during construction

Source: Study Team (2011)

NOTE: TAC approval received in June 2012.

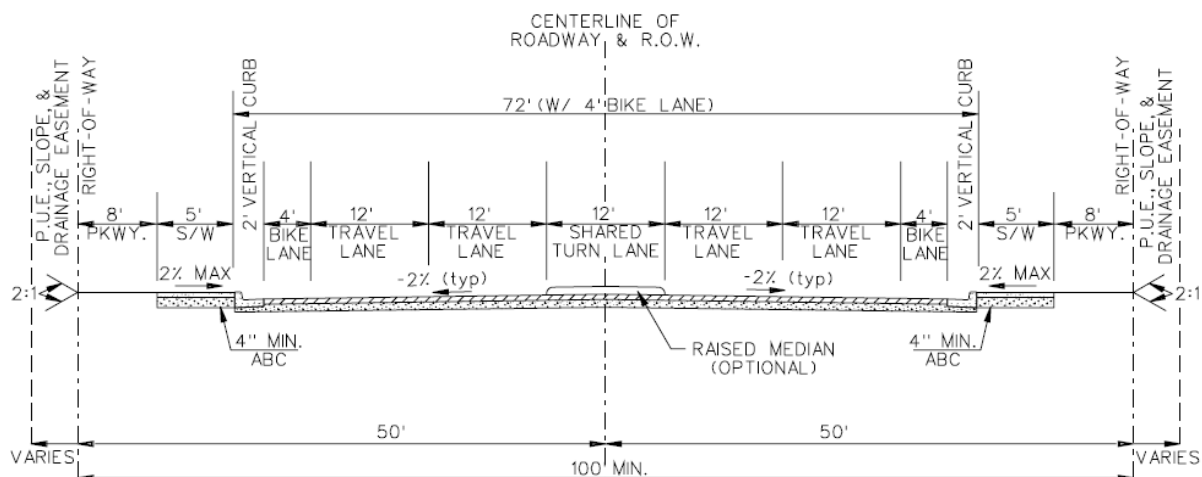
5.0 Development of Alignment Alternatives

Two alternative alignments were considered for the realignment of Willow Creek Road between Pioneer Parkway and Deep Well Ranch Road. These alignments are based on several guiding points:

- Deep Well Ranch Road will be developed as a new full-access intersection (roundabout), located approximately one-quarter mile north of Ruger Road, as part of the ongoing improvements by ADOT to SR 89.
- Between Deep Well Ranch Road and the planned Great Western route, no new intersections are currently planned along SR 89 as part of ADOT's planning and design work, although the potential exists for a future roadway connection to SR 89 at the Section 23 midpoint.
- Based on existing and future traffic conditions and landowner constraints, it was decided that the realignment of Willow Creek Road would extend only as far north as Deep Well Ranch Road, with the potential to extend the corridor north, as demand and development warrants.
- The one-eighth section point is a defined intersection point between Deep Well Ranch and the realigned Willow Creek Road, as officially agreed upon by the involved parties (City of Prescott, Arizona State Land Department [ASLD], and Ron James [property owner of Deep Well Ranch]) through formal adoption of the West Airport GPA map and accompanying Master Plan. This point is fixed unless changed with the concurrence of all parties.

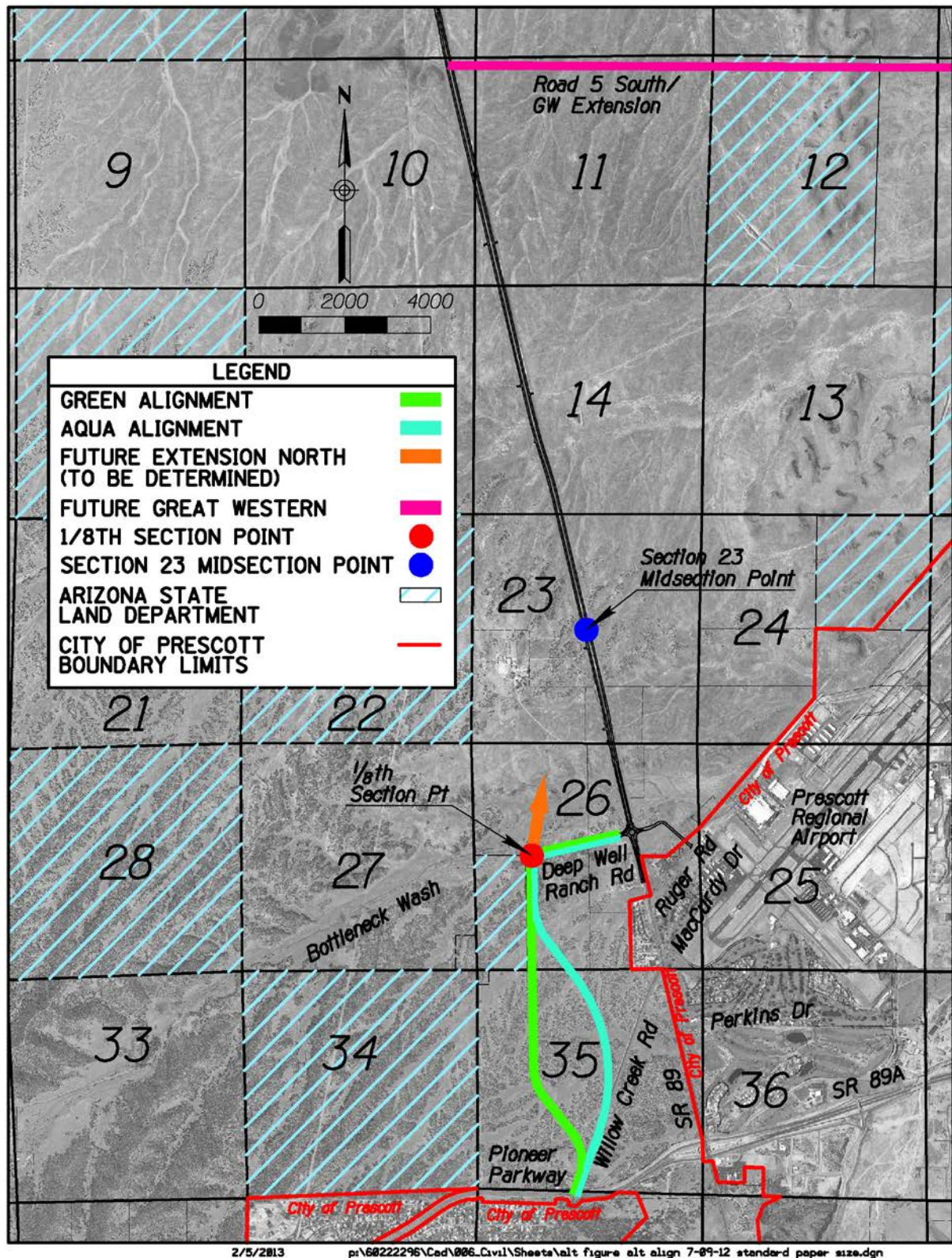
Traffic analyses for this study, as well as those completed for the *CYMPO 2030 RTP* show the need for eight lanes of north-south capacity in this vicinity. That demand is expected to be handled with four lanes on Willow Creek Road, and four lanes on SR 89. Therefore, for planning purposes, a four-lane corridor was used for each alternative. The City of Prescott urban cross section (**Figure 10**) was utilized, as the realigned Willow Creek Road is part of the City of Prescott's planning area. Both alternative alignments are illustrated in **Figure 11**.

Figure 10. City of Prescott Typical Section: 4-Lane Major Arterial



*Note: Inclusion of bike lanes as shown in typical section is optional.

Figure 11. Willow Creek Road Alternative Alignments



Alternative 1 (green alignment) maintains the existing Willow Creek Road/Pioneer Parkway intersection point, veering to the west and meeting Deep Well Ranch Road at the one-eighth section point. This alignment closely matches previously recommended realignment options for Willow Creek Road, as documented in the *Airport Area Transportation Plan*, *Triangle Area Study*, and *Prescott West Airport General Plan Amendment*. Alternative 2 (aqua) follows the existing Willow Creek Road further north, curving back west to meet Deep Well Ranch Road at the same one-eighth midpoint. The opportunity exists for either alignment to be extended north, based on future development and traffic needs.

Both alternatives have the same north and south intersection connection points. On the south end, the existing signal-controlled intersection will remain at Pioneer Parkway. At the north end, the realigned Willow Creek Road will intersect/transition into Deep Well Ranch Road at the one-eighth section point.

No roadways are planned to intersect Willow Creek Road at this time, however the potential exists for an extension of Perkins Drive west. Accommodations will be made during the refinements of the preferred alternative to allow for this future access point.

North of Deep Well Ranch Road, the majority of land is privately-held with no current plans for development. Should development occur, however, an arterial street network will be required to form basic transportation connections between Deep Well Ranch Road and Outer Loop Road to maintain regional connectivity.

6.0 Evaluation of Alternatives

The study team conducted a single-tiered process of evaluating the alternatives. **Table 5** shows the results of the evaluation. The left column of each table lists the evaluation criteria, subdivided into more specific measures where appropriate. For example, “environmental considerations” is a very comprehensive criterion, so it was evaluated against several different performance measures.

Each alternative was rated with respect to each of the evaluation criteria. The rating system consisted of a simple three-point scale, with ○ representing the best possible rating (3 points), ◐ an intermediate rating (2 points), and ● the poorest rating (1 point).

The rating scale is strictly relative – alternatives were considered in relationship to each other. Just because an alternative receives the highest rating does not mean that it faces no issues or obstacles with respect to that criterion.

The evaluation was conducted by a multidisciplinary consultant team, with input from various sources, including the TAC during July 2012, as well as project stakeholders through individual meetings.

6.1 Evaluation Results

The evaluation matrix shows that Alternative 1 is the preferred alignment with a total of 78 points. This alternative is anticipated to:

Table 5. Evaluation Results

Criteria	Performance Measures	Alternative 1 (Green)	Alternative 2 (Aqua)
Right-of-way considerations	Total R/W needed (acres)	● 29 acres	● 25 acres
	No. of existing residences to be acquired (partial, full)	○ None to be acquired	○ None to be acquired
	No. of other developed properties to be acquired (partial, full)	○ None to be acquired	○ None to be acquired
	No. of required access changes to existing properties	○ None	○ None
Multimodal considerations	Ability to accommodate bicycles and pedestrians near future residential/commercial areas	○ Alignment through future residential/ commercial area; ability to accommodate bicycles/pedestrians	○ Alignment through future residential/ commercial area; ability to accommodate bicycles/pedestrians
Compatibility with existing and future development	Consistency with adopted land use, economic and transportation plans (General Plan)	○ Consistent with West Airport GPA/General Plan	● Inconsistent with West Airport GPA/General Plan
	Degree of encroachment on existing or future development	○ Supports plans for future development	● Inconsistent with plans for future development
Compatibility with existing roadways and future improvements	Ability to function as part of a regional network capable of accommodating future growth (traffic)	● Serves regional network connectivity; potential constraints to accommodate future traffic growth due to controlled intersection at SR 89/Deep Well Ranch	● Serves regional network connectivity; potential constraints to accommodate future traffic growth due to controlled intersection at SR 89/Deep Well Ranch
	Consistency with SR 89 widening, Great Western and other planned and approved projects	○ Consistent with planned roadway improvements; matches West Airport GPA	● Inconsistent with planned roadway improvements per West Airport GPA
	Ability for a future extension north	○ Northern terminus allows for future extension	○ Northern terminus allows for future extension

○ Least impact/high compatibility (3 pts) ● Moderate impact/moderate compatibility (2 pts) ● Most impact/low compatibility (1 pt)

Table 5. Evaluation Results (cont.)

Criteria	Performance Measures	Alternative 1 (Green)	Alternative 2 (Aqua)
Public/local agency acceptability	Support for and acceptance of the corridor alternative, based on input from major landowners	○ Most direct route; landowners supportive of alignment	● Does not serve landowners as well as other alternative
	Anticipated local municipal support for and acceptance of the corridor alternative, based on input from municipal staff and TAC	○ Most closely aligns with current plans	● Does not conform to current plans
Drainage/flood control considerations	Number of bridges and large box culverts	○ No bridges/box culverts	○ No bridges/box culverts
	No. of linear feet within 100-year floodplain	○ No floodplain crossings	○ No floodplain crossings
Environmental justice and Title VI	Potential for impacts on minority, low-income, and other disadvantaged populations (e.g., persons with disabilities)	○ Alignment not in proximity to disadvantaged populations	○ Alignment not in proximity to disadvantaged populations
Other environmental considerations	Number of Section 4(f) and 6(f) properties impacted	○ No Section 4(f) or 6(f) properties impacted	○ No Section 4(f) or 6(f) properties impacted
	Impacts on sensitive species	● Potential habitat impact; mitigation potential	● Potential habitat impact; mitigation potential
	Impact on wildlife habitat and ability to accommodate trail and wildlife linkages	● Some ability for trail accommodation and wildlife linkages	● Some ability for trail accommodation and wildlife linkages
	Visibility to sensitive viewers	● Some visual/scenic impacts expected due to new corridor development	● Some visual/scenic impacts expected due to new corridor development

○ Least impact/high compatibility (3 pts) ● Moderate impact/moderate compatibility (2 pts) ● Most impact/low compatibility (1 pt)

Table 5. Evaluation Results (cont.)

Criteria	Performance Measures	Alternative 1 (Green)	Alternative 2 (Aqua)
Other environmental considerations (continued)	Potential for noise impacts on existing or platted receptors (within 1,500 feet)	● Deep Well Ranch Road alignment within 1,500 feet of existing properties	● Deep Well Ranch Road alignment within 1,500 feet of existing properties
	Impacts on Waters of the U.S.	○ No impact to Waters of the U.S.; no permitting required	○ No impact to Waters of the U.S.; no permitting required
Traffic considerations	Ability to accommodate year 2035 traffic volumes with an acceptable level of service	● Connection to SR 89 at Deep Well Ranch operates at an acceptable level	● Connection to SR 89 at Deep Well Ranch operates at an acceptable level
Utility considerations	Number of utilities affected during construction	● Potential impact to water line along Deep Well Ranch Road	● Potential impact to water line along Deep Well Ranch Road
Prescott Airport considerations	Impacts to Part 77 surface	○ No Impacts to Part 77 surface	○ No Impacts to Part 77 surface
	Provides reasonable access to future airport terminal	○ Direct access via connection to Deep Well Ranch Road	○ Direct access via connection to Deep Well Ranch Road
Cost	Planning level cost estimate	○ \$11.8 million	● \$12.2 million
Implementation	Ability to phase implementation	○ Can be constructed when funding is available	○ Can be constructed when funding is available
	Potential impacts to traffic during construction	● Moderate construction impacts anticipated at intersection of Willow Creek Road/Pioneer Parkway, as well as along Willow Creek Road	● Moderate construction impacts anticipated at intersection of Willow Creek Road/Pioneer Parkway, as well as along Willow Creek Road
TOTAL POINTS		78 points	67 points

○ Least impact/high compatibility (3 pts) ● Moderate impact/moderate compatibility (2 pts) ● Most impact/low compatibility (1 pt)

- Most strongly support existing, expanding, or new development
- Provide opportunities for multimodal transportation facilities (e.g., pedestrians)
- Minimize environmental and drainage impacts
- Not adversely impact any minority or low-income populations
- Allow a future extension to the north
- Provide reasonable access to the Prescott Airport
- Accommodate a phased construction schedule
- Maximize the likelihood of acceptance by local elected officials, outside agencies, stakeholders, and the community
- Has the lower planning-level cost estimate

Alternative 1 is very or moderately compatible with all other criteria.

Because this alternative will tie into Pioneer Parkway at the existing intersection, moderate construction impacts are intrinsic to either alternative and will have to be managed appropriately at the time of design and construction.

7.0 Preferred Alignment and Characteristics

The preferred alignment (Alternative 1) has been refined to be made compatible with the regional roadway network. The following sections will present relevant characteristics of the preferred alignment, including the typical section, roadway intersection locations and characteristics, right-of-way requirements, accommodation for non-motorized transportation, and criteria for access management¹.

7.1 Roadway Characteristics

The preferred alignment is illustrated in **Figure 12**. This alignment mirrors Alternative 1, which maintains the current connection with Pioneer Parkway, allows for a potential future intersection at Perkins Road (if the corridor is extended west), and meets Deep Well Ranch Road at the one-eighth section point. The preferred alignment allows for a future extension of Willow Creek Road north – the specific alignment is yet to be determined, although a potential intersection point with SR 89 is identified at the Section 23 midsection point (shown in Figure 3).

The ultimate section for the Willow Creek Road corridor is presented in **Figure 13**, using the City of Prescott's five-lane major arterial section which includes two travel lanes in each direction, a shared center turn lane (which alternately, could be constructed as a raised median), landscape buffers, and sidewalks. In total, this section includes 100 feet of right-of-way. At intersection locations, wider right-of-way may be required.

Dependent upon funding levels, the opportunity exists to construct an interim roadway corridor first, using a modified version of the City of Prescott's two lane rural section, which includes 36 feet of pavement for two adjacent travel lanes (one lane in each direction) and paved shoulders (**Figure 14**). The interim condition would also construct the ultimate infrastructure required for grading and drainage. Regardless of actual roadway construction phasing and implementation, the full 100-foot right-of-way width should be preserved from project initiation.

¹ While this study has resulted in the selection of a preferred alignment, it should be noted that if federal funds are anticipated to contribute to project costs, both alternatives may need to be analyzed during the Project Development process to comply with NEPA regulations.

Figure 12. Preferred Willow Creek Road Alignment

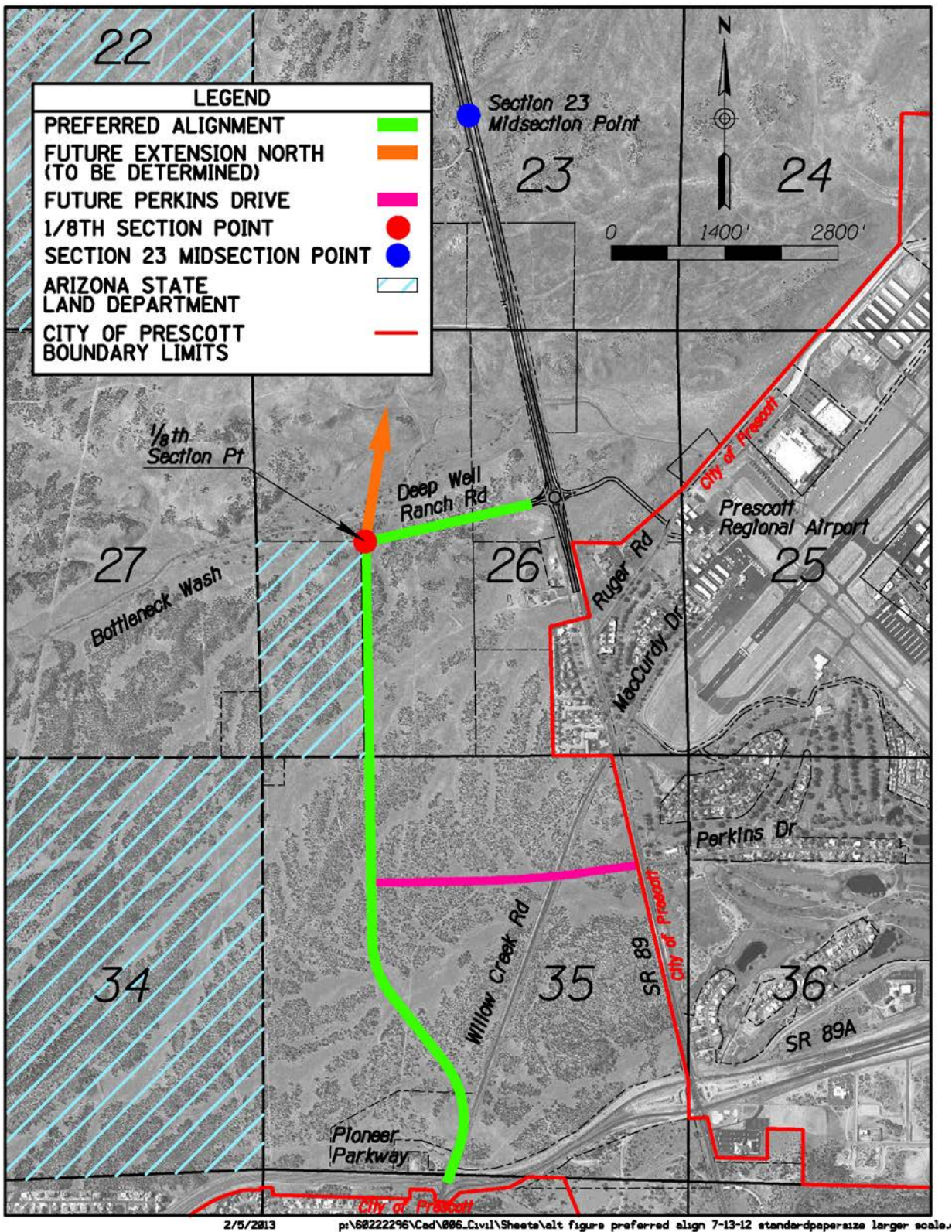


Figure 13. Willow Creek Road Typical Section: Ultimate Section

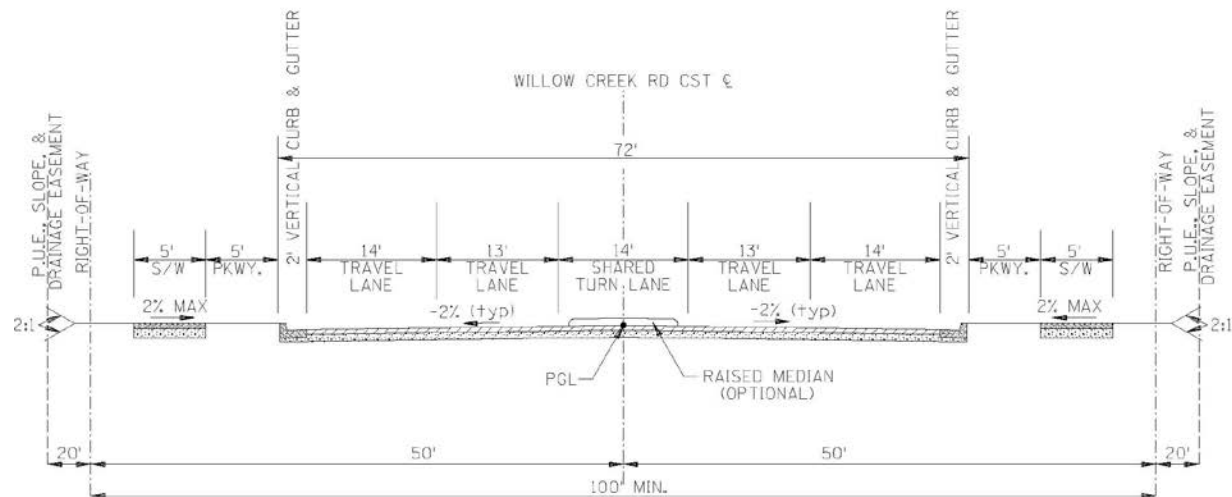
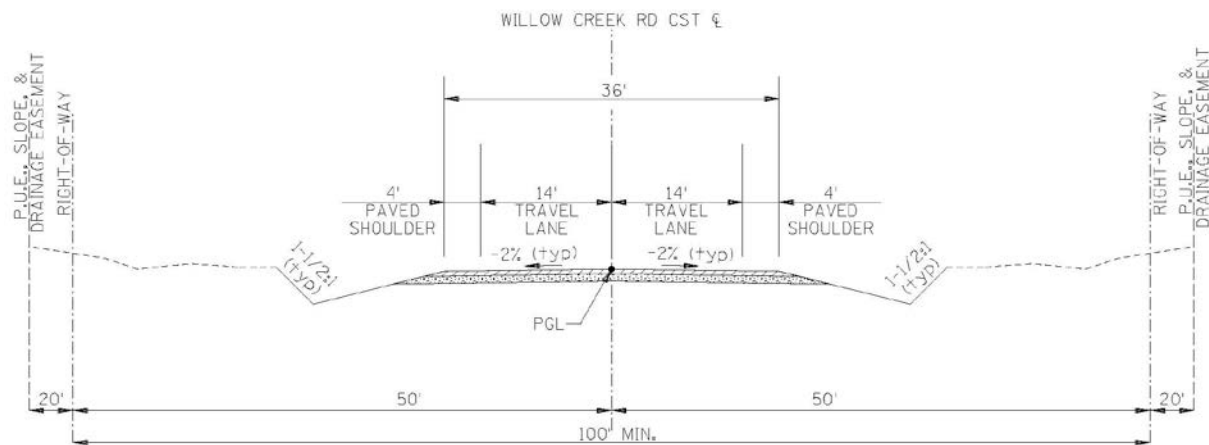


Figure 14. Willow Creek Road Typical Section: Interim Section



7.2 Intersection Characteristics

At initial project construction, the realigned Willow Creek Road is anticipated to have two connection points – the existing connection with Pioneer Parkway on the south, and the northern connection with Deep Well Ranch Road.

The existing intersection with Pioneer Parkway will remain a signalized intersection. With an interim section, the intersection will maintain the same lane configurations as today, however when Willow Creek Road is widened to four lanes, this intersection will need to be reconfigured. **Figure 15** illustrates the anticipated intersection reconfiguration required to accommodate the widened Willow Creek Road and future traffic demands.

Based on current growth projections (CYMPO 2030 RTP Update notes an estimated three percent growth per year), the interim two-lane roadway section is projected to last until within approximately five years of the 2037 projections, when roadway and intersection widening will be required.

The initial connection between Willow Creek Road and Deep Well Ranch Road will be a free-flow movement, as neither roadway is expected to extend north or west, respectively. This alignment will require more right-of-way than a traditional four-legged intersection. Two curve options were developed for the interim free-flow movement: a low-speed/local transition (**Figure 16**) and a high-speed/regional transition (**Figure 17**). For the intersection curve to accommodate a higher speed and meet ADOT design preferences, a larger radius curve is required, resulting in more right-of-way. The right-of-way estimates include the area anticipated to be required for the ultimate build-out of a future controlled intersection, as well as the additional land needed to construct the curved free-flow roadway connection.

The low-speed/local roadway transition includes a 40 mph design speed and a 4 percent superelevation – placing the roadway at a distance of 161 feet from the one-eighth section point. The high-speed/regional roadway transition includes a 45 mph design speed and a 4 percent superelevation – placing the roadway at a distance of 202 feet from the one-eighth section point. Both roadway transition configurations are potential options for the interim condition, and variations on these configurations are possible to accommodate other needs.

When either Willow Creek Road is extended north or Deep Well Ranch Road is extended west due to future development or travel demands, this interim connection will need to be reconfigured to a controlled intersection. The specific intersection configuration (signalized or roundabout) will need to be evaluated based on traffic demands and anticipated turning movement volumes. At that point in time, the potential exists to incorporate the existing curved roadway transition as a northbound to eastbound bypass lane.

The intersection of Deep Well Ranch Road with SR 89 is currently under design by ADOT (SR 89 – SR 89A to South Chino Valley Limits, TRACS #89 YV 319 H8039 OID) as a two-lane roundabout. With the construction of the realigned Willow Creek Road, the Deep Well Ranch/Willow Creek Road corridor is expected to capture a high percentage of southbound SR 89 traffic. Therefore, a bypass lane (from southbound SR 89 to westbound Deep Well Ranch Road) is planned to allow a more continuous travel movement. An illustration of this ultimate configuration is presented in **Figure 18**. Furthermore, construction of a realigned Willow Creek Road will provide the added opportunity to ease construction impacts.

In the interim condition, no roadways are anticipated to intersect with Willow Creek Road. A future extension of Perkins Road is likely and will be planned for accordingly. The City of Prescott access management criteria (expounded upon in Section 5.5) recommends additional intersections be spaced a minimum of one-half mile apart.

Figure 15. Willow Creek Road/Pioneer Parkway Ultimate Signalized Intersection Configuration

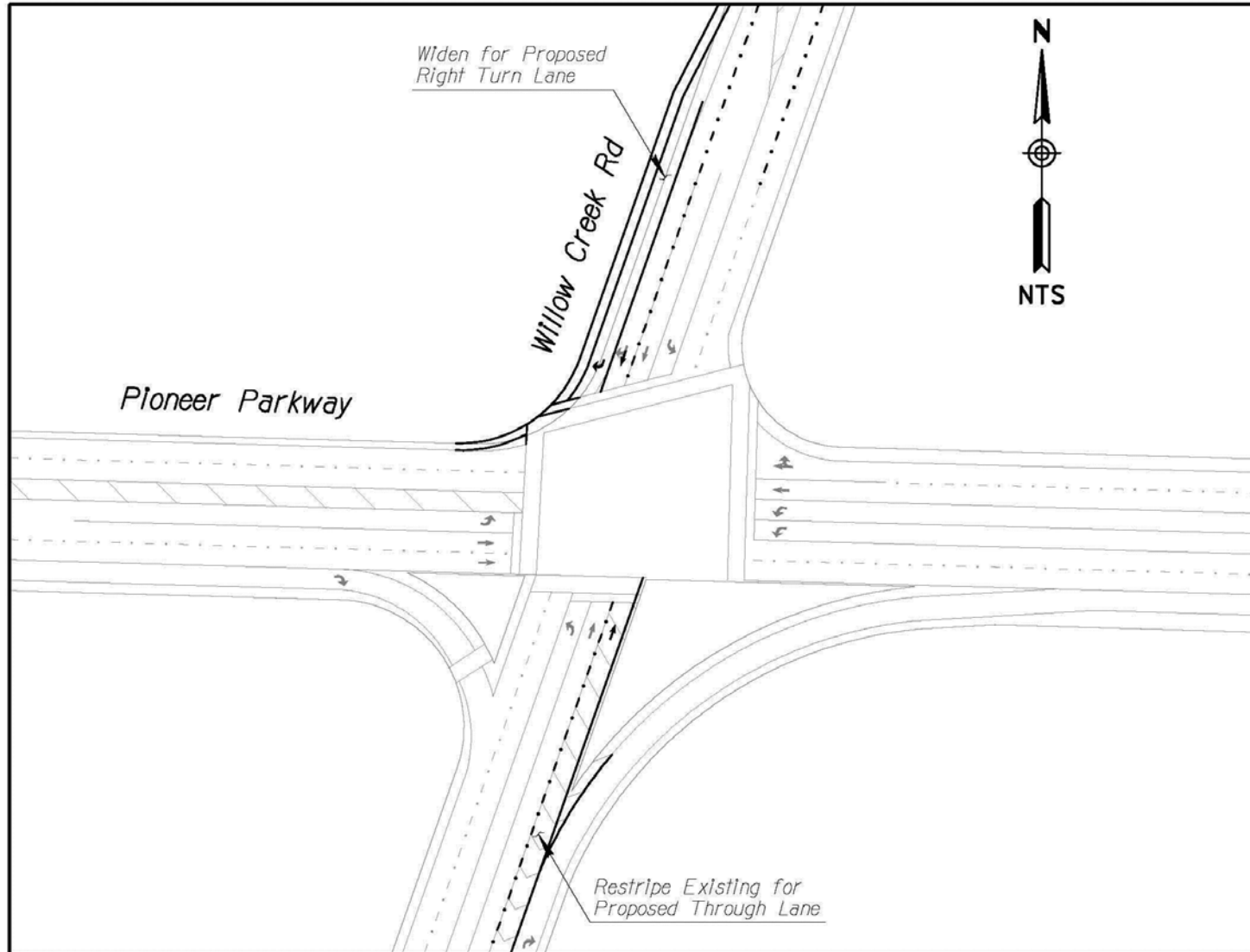


Figure 16. Low-Speed/Local Roadway Transition (40 mph design speed)

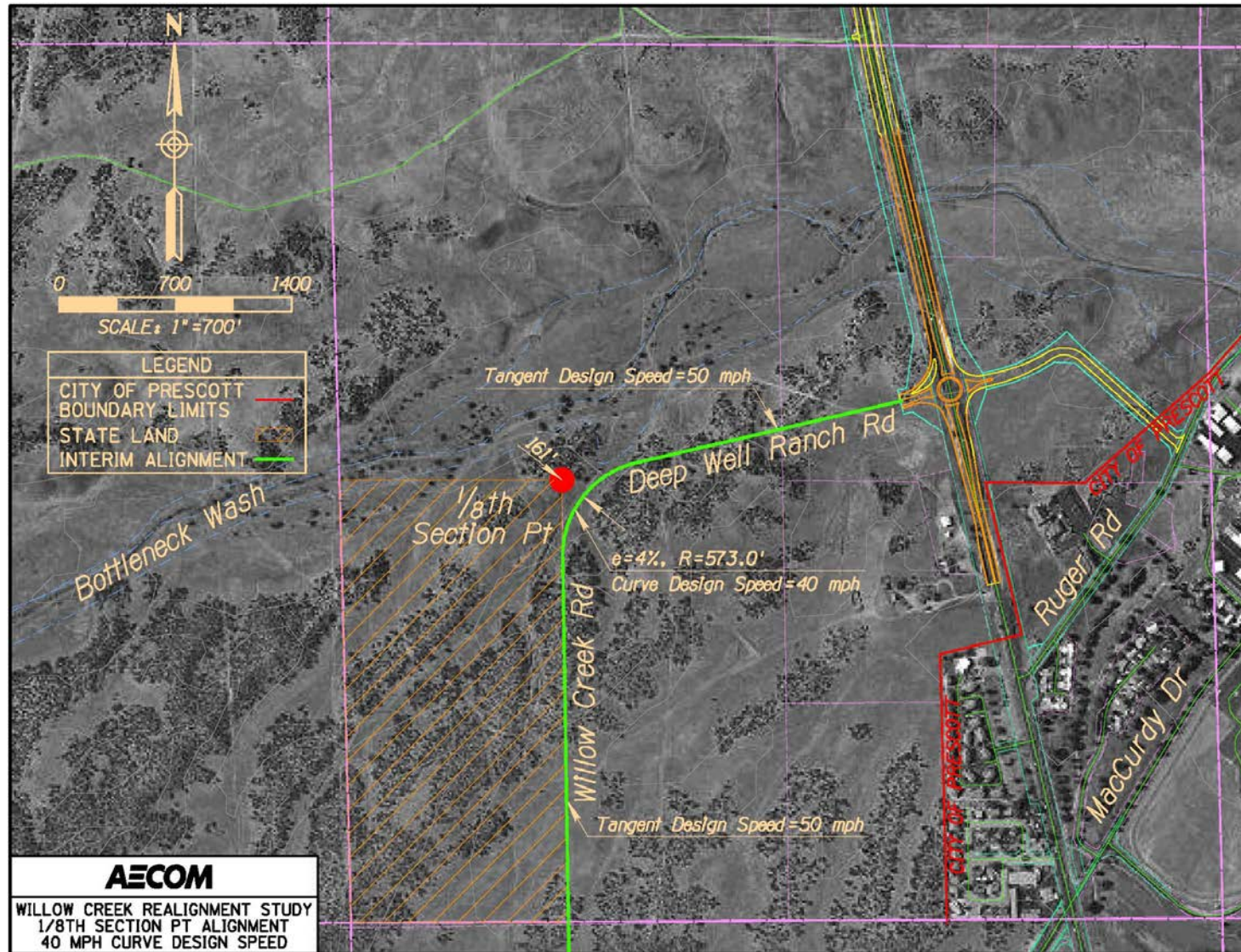


Figure 17. High-Speed/Regional Roadway Transition (45 mph design speed)

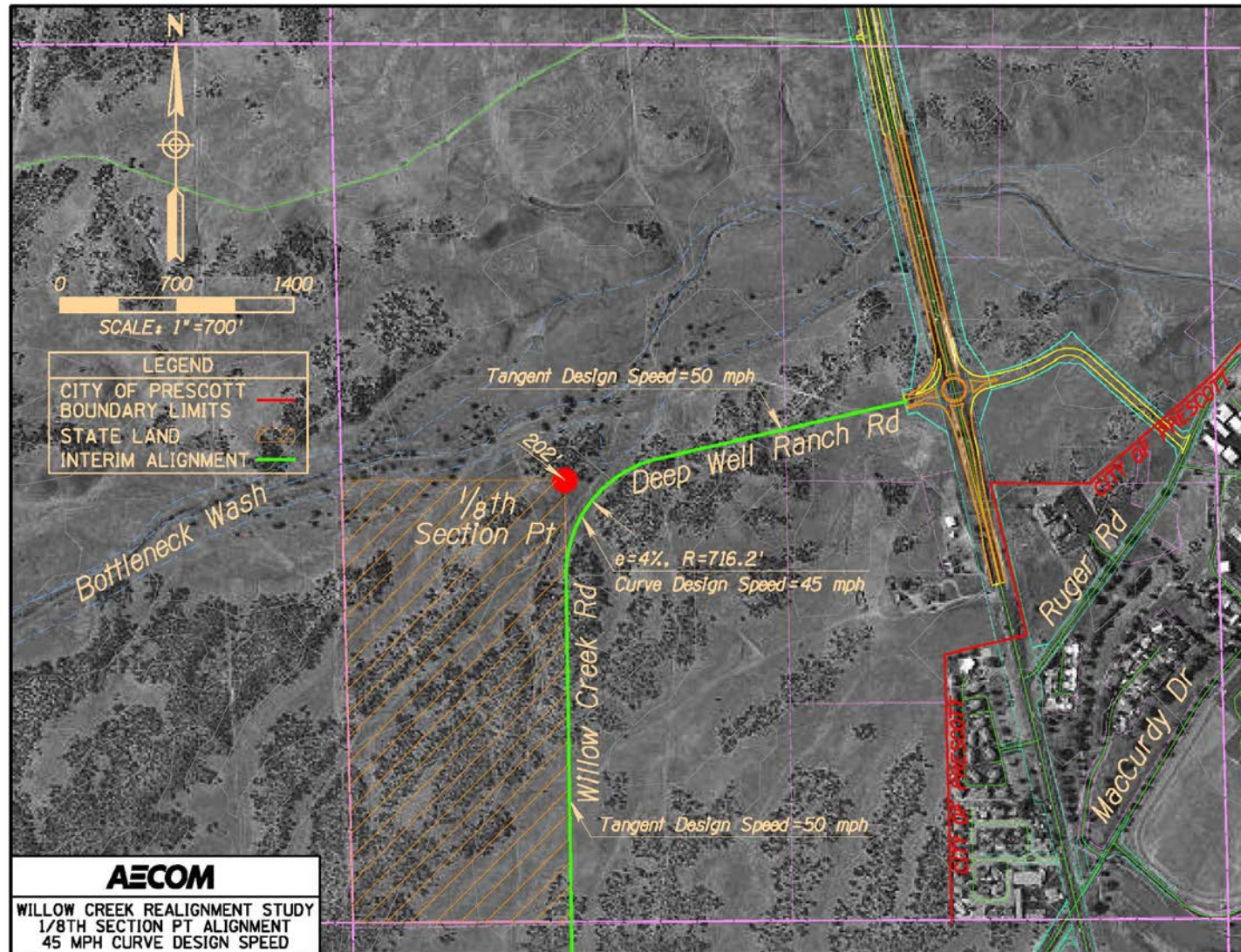
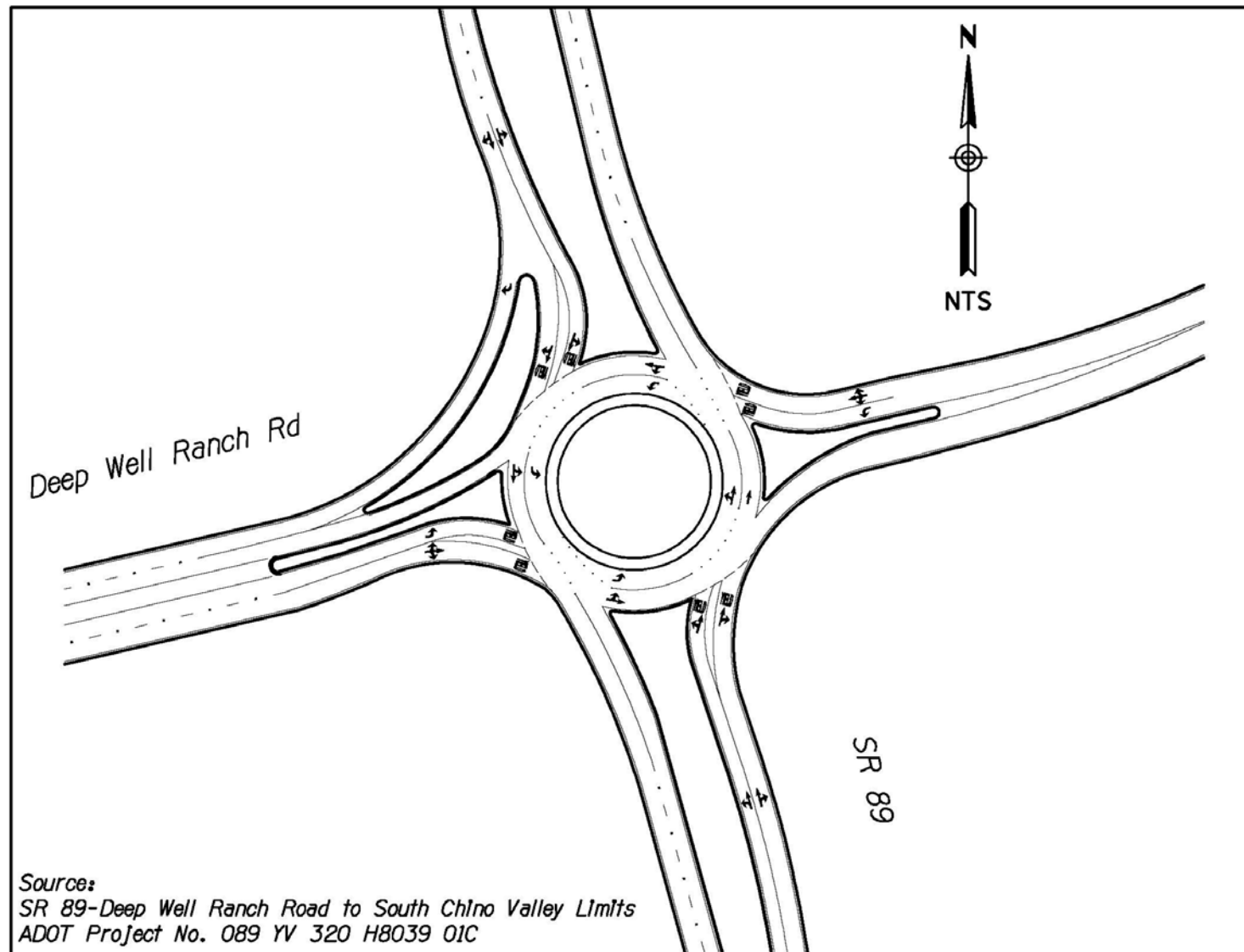


Figure 18. Deep Well Ranch/SR 89 Ultimate Intersection Configuration



The City of Prescott and Yavapai County will ultimately be responsible for determining the recommended intersection controls on Willow Creek Road.

7.3 Right-of-Way Requirements

Based on the ultimate typical section previously presented in **Figure 13**, the minimum right-of-way width for the corridor is 100 feet. Additional right-of-way may be needed for drainage facilities, side slopes, intersections, bicycle lanes/multi-use pathways, and/or public utility easements.

New right-of-way required to construct the corridor alignment is approximately 27 acres, exclusive of the additional right-of-way required at the intersections. The future Willow Creek Road/Deep Well Ranch Road intersection is estimated to require an additional 5 acres of right-of-way – bringing total new right-of-way needed to roughly 32 acres. This acreage will need to be reevaluated and updated once an intersection configuration and type is determined at the future Willow Creek Road/Deep Well Ranch Road junction. No new right-of-way is estimated for the Deep Well Ranch Road/SR 89 intersection, as the future bypass lane is included in the ADOT SR 89 widening project.

7.4 Planning-Level Cost Estimate

The planning-level cost estimate for implementation of a realigned Willow Creek Road is \$11,800,000. This estimate is for the preferred alignment from Pioneer Parkway/Willow Creek Road to the intersection of Deep Well Ranch Road and SR 89. The cost estimate includes the ultimate roadway section with the interim curve transition (utilizing the ultimate four-lane typical section) between Willow Creek Road and Deep Well Ranch Road, using the 40 mph design curve (yields a slightly longer alignment length than the 45 mph option) at the one-eighth section corner. For the potential interim facility, the planning-level cost estimate is approximately \$7,100,000, which includes construction of the ultimate infrastructure for grading and drainage, but development of a two-lane roadway facility only (as illustrated previously in Figure 14).

The total estimated project costs include both construction and engineering/design. The cost estimate does not include the roundabout at Deep Well Ranch Road/SR 89 that will be constructed with the SR 89 widening project. Additionally, this estimate does not include costs for the full Willow Creek Road/Deep Well Ranch Road intersection, or any new right-of-way costs.

7.5 Accommodation of Non-Motorized Transportation

Pedestrian facilities (e.g., sidewalks) are included as part of the typical section proposed for Willow Creek Road, as previously presented in **Figure 13**. No bicycle lanes or regional trails are proposed along this corridor. Should bicycle lanes be required in the future, a reconfiguration of lanes and median widths is allowable in the given 100 feet of right-of-way.

7.6 Access Management

Access management consists of the planning, design and implementation of land use and transportation strategies that maintain a safe flow of traffic while accommodating the access needs of adjacent properties. The purpose of access management is to preserve the capacity and maintain safety of public roadways, while retaining access to private land. Access management is intended to balance a roadway's two main functions: mobility and access. Access is managed through the regulation of vehicular access to public roadways from adjoining properties, and vice versa.

It is desirable for major transportation corridors to facilitate the safe and efficient movement of people and goods with minimal delay or interference from conflicting vehicle movements. However, over time, the addition of more traffic signals and/or curb cuts with resulting turning movements degrades the intended function of the transportation corridor. As traffic congestion increases, the level of service provided by the transportation corridor erodes.

The realigned Willow Creek Road will be mostly constructed as a new roadway, which provides a strong opportunity to manage access immediately.

The City of Prescott has a series of access management guidelines applicable to this corridor, as documented in the 2012 Draft revisions to Article 6 of the GERs. As a major arterial, the following guidelines apply to Willow Creek Road north of Pioneer Parkway:

- 6.4.6.1: A minimum one-half mile spacing shall be required for all full access, signalized or roundabout controlled street intersections in all cases, except where subject to a highway access management plan or as otherwise approved by ADOT. Consideration for intersection spacing as close as one-quarter mile may be considered through the GER variance process. Recorded easements for shared access, provision of acceleration/deceleration lanes, traffic signals and other right-of-way improvements, for these cuts may be required prior to approval.
- 6.4.8.1: Minimum spacing for driveways is 300 feet for major arterial roadways/state highways, and “to be determined by a traffic impact analysis” for a limited access facility. To provide safe turning movements from driveways, on streets without raised medians, new driveways shall align with existing driveways on the opposite side street. Corner parcels may be required to have all access from a side street as determined by the City Traffic Engineer.

Commercial driveways shall not be allowed within 75 feet of the right-of-way line of an intersecting minor collector street, 200 feet of an intersecting minor arterial or major collector, and three-hundred 300 feet of an intersecting major arterial.

- 6.4.9.1: Raised medians on arterial streets are provided to reduce conflicts, channelize movements for safety, and improve traffic flow. It is not possible to provide an opening in the median for every street intersection or driveway. Careful consideration shall be given to each request for a median opening to ensure that the safety and the intent of the median is not compromised by a proliferation of median cuts. The preference for access along arterial streets is to have full access median openings that align at not less than one-quarter mile intervals. Full access openings shall generally occur at the mile, one-half mile, and one-quarter mile interval. All median openings shall be prohibited within 660 feet of an arterial to arterial intersection. Full access median openings at less than one-quarter mile intervals or within 660 feet of an arterial to arterial intersection must go through the GER variance process as outlined in Article 9.

The City of Prescott Draft GERs have been combined with a series of additional access management criteria to ensure safe and efficient movement along Willow Creek Road. Recommended access management techniques include:

- An ultimate four-lane cross-section with a raised median
- Full-access median breaks with half-mile spacing desirable, one-quarter mile spacing minimum
- Left turn lanes at all locations where left turns are permitted
- No direct driveway access to Willow Creek Road
- No on-street parking

Development policies intended to help achieve access management that can be implemented through future development and redevelopment include:

- Encourage alternative access ways that connect to Willow Creek Road at identified major access points
- Encourage the use of direct driveway access to minor roadways connecting to Willow Creek Road

8.0 Implementation Plan

The realigned Willow Creek Road is proposed to be implemented in phases, addressing deficiencies and special needs to respond to population and future travel demand warrants. The following sections will present specific implementation information, such as implementation phasing details, management of the existing Willow Creek Road, and anticipated traffic impacts.

8.1 Implementation Phasing

The realignment of Willow Creek Road includes two major phases – first, the realignment of Willow Creek Road south of Deep Well Ranch Road, and second, the extension of Willow Creek Road north of Deep Well Ranch Road.

Because of funding constraints, the realignment south of Deep Well Ranch Road could occur in two sub-phases. The roadway could first be built in accordance with the interim typical section (two-lane roadway) and later widened to a four-lane facility. As part of construction of this southern segment where neither Willow Creek Road extends north, nor Deep Well Ranch Road extends west, an interim intersection configuration is proposed to be constructed as a continuous curved roadway, as presented earlier in Figures 16 and 17.

The proposed interim implementation of Willow Creek Road allows for a second phase of corridor development, where the roadway can be extended farther to the north. In addition to the Willow Creek Road extension, in the future, Deep Well Ranch Road may extend further west to respond to future development on ASLD-owned or privately-owned lands. With the extension of either of these roads, the interim curved roadway connection of Willow Creek Road/Deep Well Ranch Road will need to be reconstructed to allow for an ultimate four-legged controlled intersection configuration.

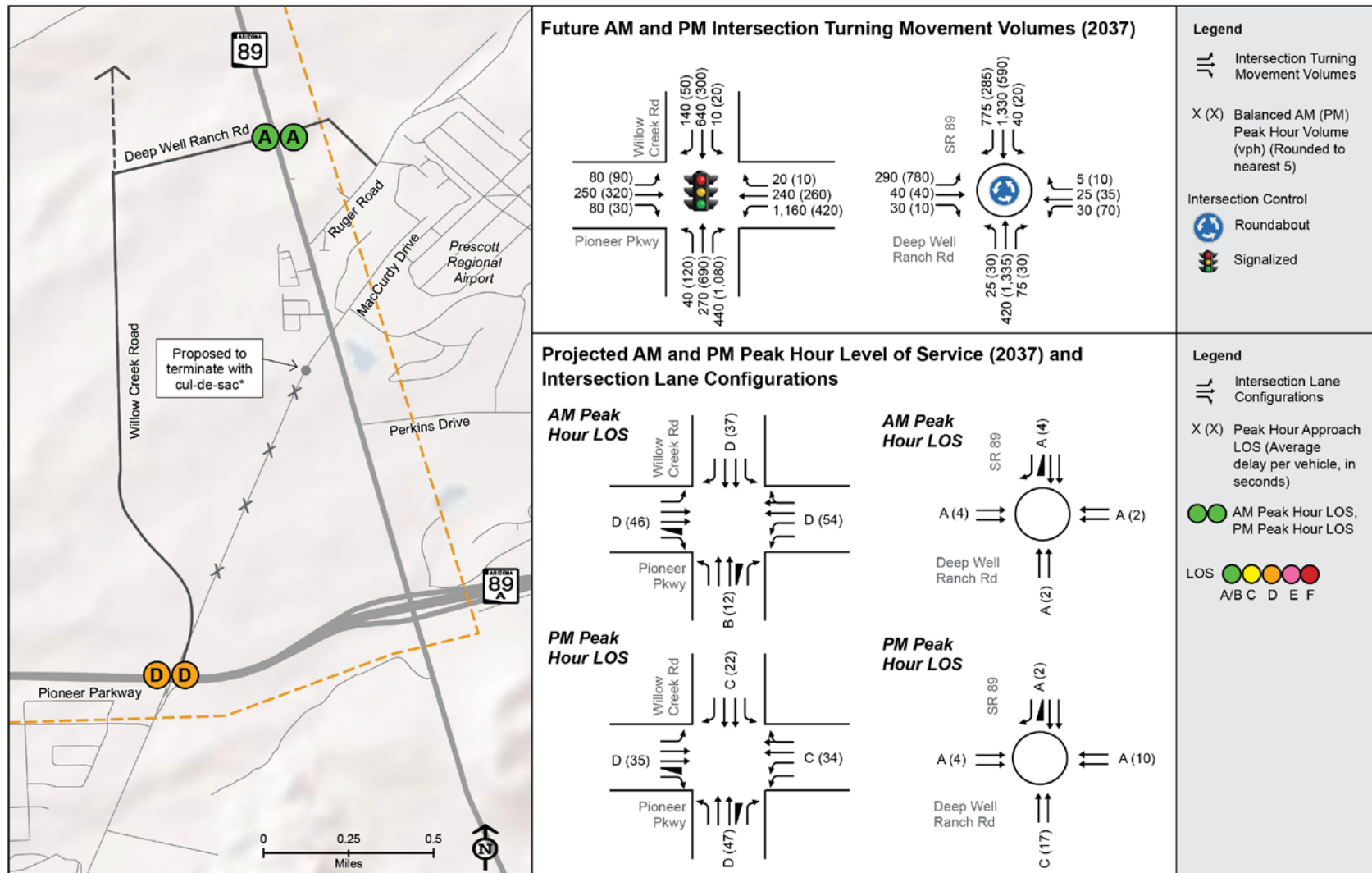
8.2 Management of Existing Willow Creek Road

With the reconstruction of Willow Creek Road, the study team recommends that the existing Willow Creek Road corridor be eliminated. The City of Prescott may need to coordinate with commercial property owners who currently have access to Willow Creek Road at the junction of Willow Creek Road/SR 89 to discuss this transition. This junction is also included in the SR 89 design project (TRACS #89 YV 319 H8039 OID) and may be addressed as that project progresses.

8.3 Traffic Impacts

With the reconstruction and realignment of Willow Creek Road, traffic is anticipated to operate acceptably in the design year. Intersection level of service, including lane configurations and projected turning movement volumes, and level of service for the Willow Creek Road/Pioneer Parkway and Deep Well Ranch Road/SR 89 intersections are presented in Figure 19.

Figure 19. Intersection Traffic Characteristics of Ultimate Corridor Construction



*Per current recommendations of SR 89 - SR 89A to South Chino Valley Limits, TRACS #89 YV 319 H8039 OID

Table 6 presents 2037 peak hour intersection levels of service for the ultimate corridor.

Table 6. 2037 Peak Hour Intersection Levels of Service

Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/Deep Well Ranch Rd	Roundabout	3.7	A	9.9	A
Pioneer Pkwy/Willow Creek Rd	Signal	38.0	D	40.0	D

Interim construction of the corridor is anticipated to have minimal impact on surrounding development, as the new roadway corridor alignment traverses no existing development. The existing intersection configuration at Willow Creek Road/Pioneer Parkway meets the future lane demands and recommended build-out configuration, but will require restriping and potential signal timing modifications.

When the interim corridor is widened, construction impacts will have to be reevaluated based on development that may exist in the future. Should new development exceed CYMPO's projections of an average three percent growth rate per year, buildout conditions of Willow Creek Road and its intersections should be reevaluated.

Spot Intersection Traffic Impact Analysis: SR 89 and MacCurdy Drive/Willow Creek Road

Additional analysis to build traffic conditions on SR 89 was evaluated at the recommendation of the TAC to evaluate alternate traffic scenarios for SR 89 in the build condition. The build condition includes the following assumptions:

- Willow Creek Road is realigned to form a connection with Deep Well Ranch Road.
- SR 89 is converted to a four-lane facility with a raised median from Deep Well Ranch Road to SR 89A.
- Deep Well Ranch Road is constructed and includes a 4-legged roundabout intersection at SR 89.
- Because of the raised median on SR 89, the existing Ruger Road intersection has been converted to allow only right-in/right-out turning movements.
- The former Willow Creek Road corridor is eliminated, with the exception of a cul-de-sac or "stub" just west of SR 89 to allow access to the commercial properties located at the northwest corner of existing Willow Creek Road and SR 89. Although this remains a four-legged intersection with SR 89 and MacCurdy Drive, because of this cul-de-sac, traffic volumes on this segment of roadway are expected to be minimal. *Please note that this analysis relies upon the elimination of the existing Willow Creek Road. Should the existing roadway not be cul-de-saced west of SR 89, this results in an entirely new traffic scenario that was not considered as part of this evaluation.*
- MacCurdy Drive east of SR 89 has minimal development or traffic growth from existing land uses.
- Perkins Drive has a three-legged roundabout intersection control with SR 89, and minimal traffic growth from existing land uses.

The variable assumption for this traffic analyses is that MacCurdy Drive is analyzed with and without a signalized intersection at SR 89. Although one scenario includes a signal at MacCurdy Drive, a signal warrant analysis was not conducted as a part of the traffic

evaluation. Additionally, the results of this analysis do not ensure that the intersection will meet signal warrants in 2037 with the proposed configuration.

The following sections present the build traffic analysis findings for the study area, organized by the two MacCurdy Drive/SR 89 intersection scenarios. Please take note again that this analysis relies upon the existing Willow Creek Road remaining only in the form of a cul-de-sac west of SR 89.

Signalized Intersection at MacCurdy Drive/SR 89

Using the base assumptions and assuming a signalized intersection at MacCurdy Drive and SR 89, **Figure 20** displays the redistributed, projected, and balanced peak hour year 2037 turning movement volumes. A level of service analysis was conducted for this scenario using Synchro 8.0 (signals/stop control) and RODEL (roundabouts) for intersection analyses. All signalized intersections were optimized within the Synchro software. The average delay results (sec/veh) from Synchro and RODEL are included in **Table 7**.

Table 7. SR 89 Scenario 1: 2037 Peak Hour Intersection Levels of Service

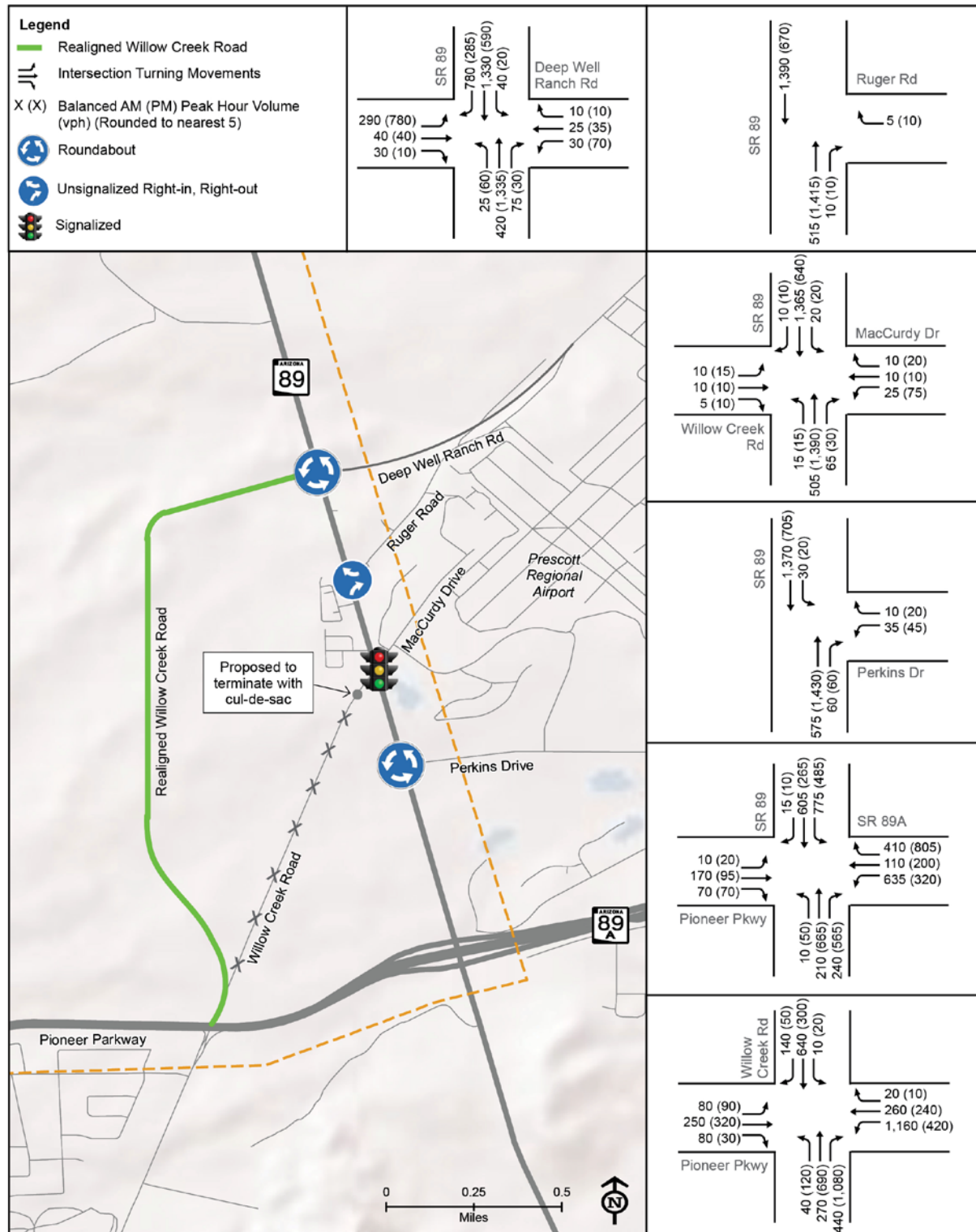
Study Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/Ruger Rd (westbound)	Unsignalized	10.2	B	16.4	C
SR 89/MacCurdy Dr	Signalized	4.8	A	6.9	A
SR 89/Perkins Dr	Roundabout	3.4	A	3.8	A
SR 89/SR 89A TI (north intersection)	Signalized	19.6	B	12.4	B
SR 89/SR 89A TI (south intersection)	Signalized	19.1	B	31.7	C

During the AM and PM peak hours, the SR 89A/SR 89 TI ramp intersections are anticipated to operate at acceptable levels of service, with both the westbound and eastbound ramp intersections operating at LOS C or better.

The unsignalized intersection of SR 89/Ruger Road is anticipated to operate at LOS B during the AM peak hour and LOS C during the PM peak hour.

The MacCurdy Drive/SR 89 intersection with a signalized control is anticipated to operate at a LOS A in both the AM and PM peak hours. Although this analysis shows that this intersection is anticipated to operate acceptably with a signal, there are additional operational aspects to consider in the traffic evaluation of a signalized intersection between two roundabouts, such as queue lengths. The queue lengths included in Synchro indicate that the 95th percentile southbound queue will be approximately 250 feet in the AM peak hour and the 95th percentile northbound queue will be 300 feet in the PM peak hour. Utilizing the ADOT preliminary proposed roundabout configurations at Deep Well Ranch Road and Perkins Drive, the spacing between intersections is approximately 3,000 feet between Deep Well Ranch Road and MacCurdy Drive, and 1,300 feet between MacCurdy Drive and Perkins Drive. Therefore, the operational analysis indicates that there will not be a queuing issue from the signalized intersection into the roundabouts.

Figure 20. Projected 2037 Future Traffic Conditions



Unsignalized Intersection at MacCurdy Drive/SR 89

Using the base assumptions and assuming an unsignalized intersection at MacCurdy Drive and SR 89, the LOS analysis was re-evaluated at the MacCurdy Drive intersection assuming a full access intersection with stop control on MacCurdy Drive/Willow Creek Road cul-de-sac from the east and west. The revised average delay results (sec/veh) from Synchro at this intersection are included in **Table 8**.

Table 8. SR 89 Scenario 2: 2037 Peak Hour Intersection Levels of Service

Study Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/MacCurdy Dr (eastbound)	Unsignalized	124.1	F	110.4	F
SR 89/MacCurdy Dr (westbound)	Unsignalized	84.0	F	>1000	F
SR 89/MacCurdy Dr (northbound left)	Unsignalized	14.0	B	9.3	A
SR 89/MacCurdy Dr (southbound left)	Unsignalized	9.0	A	14.6	B

The unsignalized full access intersection at SR 89/MacCurdy Drive is anticipated to operate at LOS F in both the eastbound and westbound directions during the AM and PM peak hours. The heavy delay on the crossroad is due to left-turning vehicles with insufficient gaps to enter SR 89. Therefore, a third scenario was conducted that modeled this intersection with limited access right-in/right-out turning movements from/to the east and west of SR 89. In order to complete this scenario, the volumes to and from the SR 89/MacCurdy Drive intersection were redistributed and rebalanced. The average delay results (sec/veh) from Synchro and RODEL are included in **Table 9**.

Table 9. SR 89 Scenario 3: 2037 Peak Hour Intersection Levels of Service

Study Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
SR 89/MacCurdy Dr (eastbound)	Unsignalized	15.7	C	10.9	B
SR 89/MacCurdy Dr (westbound)	Unsignalized	10.5	B	16.9	C
SR 89/Perkins Dr	Roundabout	3.4	A	4.2	A

As an unsignalized limited access intersection, SR 89/MacCurdy Drive is anticipated to operate at acceptable LOS C or better in the westbound and eastbound directions during the AM and PM peak hours. With the redistribution of traffic, the roundabout at Perkins Drive is anticipated to continue to operate at LOS A in both peak hours.

Summary

The intersections of SR 89 with Deep Well Ranch Road, Ruger Road, Perkins Drive and SR 89A are all anticipated to operate with acceptable levels of service C or better in both the AM and PM peak hours with the Willow Creek Road realignment improvements. The intersection of MacCurdy Drive and SR 89 will operate acceptably with signal control or as an unsignalized intersection with limited right-in/right-out access from the east and west, assuming existing Willow creek is a cul-de-sac to the west. However, the signalized intersection will introduce approximately 4 seconds of delay per average southbound vehicle on SR 89 in the AM peak hour and approximately 6 seconds of delay per average northbound vehicle on SR 89 in the

PM peak hour. The following assumptions are critical to this analysis, and any changes in the corridor that are different from the below assumptions cancels the validity of this traffic analysis – requiring new data analysis.

- Willow Creek Road has been realigned to Deep Well Ranch Road.
- The stub to the west of SR 89 at MacCurdy has minimal volumes to existing commercial properties.
- MacCurdy Drive to the east of SR 89 has minimal growth.
- The existing traffic volumes on the SR 89 corridor increase at a maximum rate of 3% per year over the next 20 years.

Therefore, the construction of the realigned Willow Creek Road will benefit SR 89 by reducing the level of service to SR 89 south of Deep Well Ranch Road.

9.0 Public Involvement Overview

This section summarizes the public and stakeholder involvement process for this study. Gaining consensus among stakeholder agencies and the public is critical to the success of this transportation study, as well as the future implementation of its recommendations to provide a long-term functional and efficient transportation corridor.

9.1 Technical Advisory Committee

A TAC was established to solicit feedback from partnering agencies and key stakeholders at multiple stages of the study. Members of the TAC include:

- ADOT Multimodal Planning Division
- City of Prescott
- Yavapai County
- CYMPO
- FHWA
- ASLD
- ADOT Prescott Engineering District
- ADOT Communications and Community Partnerships
- ADOT Environmental Planning Group

The role and responsibility of the TAC was to meet at key decision points during the study to receive an update on project progress, and offer advice and guidance on study issues. The TAC was asked to review and comment on all draft working papers and the draft final report.

Four separate TAC meetings were planned over the course of the study:

- The first TAC meeting was held on August 2, 2011. The purpose of this meeting was to initiate the Willow Creek Road Realignment Study, define the role of the TAC, gather information relative to the study needs, and share next steps with the committee.
- The second TAC meeting was held on December 6, 2011. The meeting presented study area issues, constraints, and opportunities learned through the development of Working Paper #1, discussed potential alternatives and evaluation criteria, gathered

additional information from TAC members to consider as the next phase of the project progressed, and shared next steps.

- The third TAC meeting was held on for June 28, 2012. The meeting presented the evaluated alternative roadway alignments for Willow Creek and sought to gain consensus on a selection of a preferred Willow Creek Road alignment to carry on for further refinement.
- The fourth TAC meeting was held on November 7, 2012. The meeting presented the refined preferred alternative, discussed design features of this alignment and the preliminary implementation plan, and addressed TAC comments to Working Paper #2.

9.2 Public Outreach

During the course of this study effort, one public meeting was held in February of 2012 at the Antelope Hills Centennial Event Center. The meeting was conducted in an open house format with a short presentation which provided a free and open exchange of information between area residents with specific issues or questions and the project team. Study fact sheets and comment cards were distributed to all those in attendance. The meeting was held for scoping purposes to provide area residents, business owners, and other impacted stakeholders an opportunity to inform project team members about study area issues and local transportation needs. This meeting also provided project team members an opportunity to present and elicit feedback on the study purpose, process, and goals and objectives.

The second round of outreach occurred in the form of a newsletter, which presented the two alternative roadway alignments that were evaluated as part of this study. The public was encouraged to provide their feedback on the alternatives by responding on a self-addressed comment card, or providing input via email or telephone.

Throughout the whole study, the following outreach methods were used to inform and notify the general public and impacted residents and businesses about meeting dates and locations, as well as information updates:

- Media releases
- Newspaper articles
- Display advertisements in local and regional publications
- Partner agency mediums
- Direct mail flyers to adjacent property owners and previous meeting attendees

Public Meeting Summaries, materials and comments are located in **Appendix A**.

Appendix A

Public Involvement Summary



Public Meeting 1 – Summary

February 22, 2012

Project Background

The Arizona Department of Transportation (ADOT) awarded funding for the City of Prescott Willow Creek Road Realignment Study through the Planning Assistance for Rural Area (PARA) program. The purpose of the PARA program is to assist counties, cities, towns, and tribal communities in addressing a broad range of multimodal transportation planning issues.

This study will identify the existing and future needs and deficiencies along Willow Creek Road north of Pioneer Parkway, and recommend a preferred alignment for a realigned corridor with revised connections to State Route 89 (SR 89) and Pioneer Parkway.

The goal of this PARA study is to provide the City of Prescott and other jurisdictions with a future “footprint” of the Willow Creek Road Realignment and a timeframe for the implementation of the recommended future roadway improvements.

This study will establish the facility type, number of lanes, right-of-way needs, and general alignment for the realigned Willow Creek Road that will be required to accommodate projected traffic growth and enhance safety. Additionally, intersection and/or interchange configurations will be identified for both connection points and all planned or stakeholder identified intersecting roadways along the corridor within the boundaries of the study area.

The City of Prescott Willow Creek Road Realignment Study will be conducted according to a cooperative planning process involving stakeholders that include public agency staff, elected officials, and the public. Throughout the study, information will be presented to and solicited from stakeholders through individual interviews, focus group meetings, public meetings, and other means of communication.

Public Outreach Efforts

The surrounding community is encouraged to participate by attending the public meetings and providing input. A brief presentation was made to the City of Prescott Council on Tuesday, February 7, 2012 regarding the study's purpose and need, existing and future conditions, and an anticipated schedule for the study's activities. ADOT has several ongoing studies in the Prescott area, and the study team emphasized the difference between this study and the concurrent widening design project on SR 89.

The first of two public meetings was held on Wednesday, February 8, 2012 at the Centennial Event Center at Antelope Hills Golf Course between 5:00 p.m. and 6:30 p.m. Eighty-one community members attended the public meeting.

ADOT's attempts to notify the community included the:

- Mailing of approximately 400 fliers to residents adjacent to the Prescott Airport and Antelope Hills Golf Course.
- Display of approximately 25 notification posters throughout the area in highly visible locations.
- Distribution of approximately 1,400 emails to an established database including media contacts.

All notification material can be found in *Appendix A: Notification Material*.

Public Meeting Summary

Tricia Lewis, ADOT Senior Community Relations Officer, started the meeting at 5:15 p.m. by welcoming and thanking participants for their attendance. She explained that this study was part of ADOT's PARA program and that it is not the same study as the concurrent SR 89 widening design study. She then turned the presentation to Kate Bondy, AECOM Project Manager, to review the purpose and need of the study, future and existing conditions, and the overall study schedule. A copy of the meeting presentation and handouts can be found in *Appendix B: Meeting Materials*. Once complete she opened the presentation to a brief question and answer session. A summary of the questions asked and the responses provided can be found below. All question cards can be found in *Appendix C: Question Cards*.

Question and Answers

- Q: Do you believe there will still be congestion on the SR 89 and Willow Creek Road intersection if SR 89 is widened all the way to Chino Valley?
- A: Yes, in 2035 there will be congestion if nothing is done to prepare for the additional anticipated traffic.
- Q: Do you believe we will have a 280 percent population increase if we do not get the water?
- A: This study is not incorporating water into the growth projections. The Central Yavapai Metropolitan Planning Organization (CYMPO) has provided the growth projection numbers that were used to develop the future projected traffic counts. A new CYMPO study is currently being conducted to analyze growth using the newly available census data. It is likely that the 280 percent population growth number will be adjusted based on the new data.
- Q: Who came up with the 280 percent increase in population?
- A: The percentage is based on previous studies conducted in the area, mainly the CYMPO 2030 Regional Transportation Plan from 2006.
- Q: How will MacCurdy Drive connect with Willow Creek Road? There should be direct access to the airport from Willow Creek Road as well as from SR 89.
- A: The MacCurdy Drive and Willow Creek Road connection is unknown at this stage in the study. Alternatives have not been developed.
- Q: What is going to happen to the west entry to Perkins Drive?
- A: Alternatives have not been developed at this time. There are currently two studies being conducted at this time. The SR 89 Widening Project will look at the Perkins Drive intersection and the Willow Creek Road Alignment Study will give a recommendation for the realignment of Willow Creek Road intersection with SR 89 north of Ruger Road.
- Q: If no alternatives are being presented, then why are we here tonight?
- A: It is very important to involve the public and get input on alternative characteristics within the project study area before anything is developed. The input received from the public tonight will help the study team develop the alternatives, which will be presented at a later date.
- Q: What was the intersection north of Ruger Road on the Future Traffic Projection Map?
- A: Deep Well Ranch Road. A proposed road alignment developed in the design of SR 89 Widening Project. Deep Well Ranch is still under review.

- Q: Is there any plan to widen SR 89A
A: SR 89A is not included in the limits of this study.
- Q: Are your population projections for 2035 considerably high? Population has decreased since 2010.
A: As stated previously, the projections used were based on a study completed by CYMPO in 2006. A new study is being conducted with the new census data from 2010 and will update the projections as necessary.
- Q: Will Willow Creek Road and MacCurdy Drive stay the same for the airport and the golf course residents? If so, will the existing road stay?
A: Alternatives have not been developed at this time. The SR 89 Widening Project shows a proposed improvement at this intersection. The Willow Creek Road Realignment Study will take into consideration the proposed improvement.
- Q: Do the 2035 projected traffic volumes assume that Williamson Valley Road has already been widened and that a new north/south corridor between Chino Valley and SR 89A exists east of the airport?
A: No; however the new CYMPO model will include recently completed studies such as the Great Western Corridor which would provide new north/south access from SR 89A to Chino Valley.
- Q: With a population increase of 280 percent, don't you believe we will need more than just an intersection change? Possibly six-eight lane freeways?
A: There can be several solutions to traffic issues, and widening the existing roadways is not always the best one. Part of ADOT's goal is to maintain an efficient and safe transportation system. This means eliminating bottleneck areas, keep traffic moving, and ensure emergency vehicles can access the roadways as needed. Sometimes building alternative roadway corridors can help ensure this goal is attained.
- Q: Has any study been done to determine if traffic coming from Chino Valley to Prescott is going east or west of SR 89 and/or Willow Creek Road?
A: Yes, the traffic distribution patterns are often observed. At this point, traffic heading south on SR 89 can either continue to go south on SR 89 at SR 89A, west at Willow Creek Road, or east on SR 89A. The distribution is evenly split into thirds.
- Q: If most of the traffic is going east, shouldn't we be more concerned with the east side of SR 89 than Willow Creek Road which is west of SR 89?
A: The goal is to evenly distribute traffic to help reduce future congestion on any given roadway.
- Q: Will there be a roundabout at Perkins Drive?
A: The current plans for the SR 89 Widening Project show a roundabout at Perkins Drive.
- Q: Will there be another public meeting to address concerns regarding the widening of SR 89?
A: Yes, ADOT will schedule a public meeting. At this time a date has not been set. Please be sure to leave your contact information to ensure that you are informed of that meeting.

Comments Received via Email

To: Charla Glendenning
From: George Green
Sent: Thursday, February 2, 2012 at 7:07 a.m.

I live on Perkins Drive, and have not seen anything yet on the realignment plan, but with to express my strong dislike for any more roundabouts.

Comments Received on Comment Forms

1. How often do you travel on the SR 89 corridor between Chino Valley and Prescott? (Please choose one)

	Responses	Percentage
More than 2 times per day	5	15.2
1 to 2 times per day	8	24.2
1 to 2 times per week	11	33.3
1 to 2 times per month	9	27.3
Total:	33	100

2. Do you experience delays on SR 89? (Please choose one)

	Responses	Percentage
Yes	16	48.5
No	17	51.5
Total:	33	100

If yes, what time of day are delays most common?

- 7-10 a.m. and 2:30-6 p.m.
- Between 3 p.m. and 7 p.m.
- 4:30 – 5:30 p.m.
- Early morning commute
- 8–10 a.m. and 4-6 p.m.
- 6:30-9 a.m. and 4-6:30 p.m.
- Early morning and late afternoon
- 8 a.m. and 5 p.m.
- 8-9 a.m. and 4-6 p.m.
- 3-6:30 p.m.
- 7-8:30 a.m. and 4-5:30 p.m.
- 7-7:30 a.m. and 5:15-6 p.m.
- Only if there is an accident
- 3 p.m.
- Most of the time when exiting Perkins Drive onto SR 89.
- Morning and evening but always busy.
- After work traffic

- Southbound a.m. 6:45 to 8:30 between SR 89A and two miles north of Willow Creek Road.
Northbound p.m. 4-6 on SR 89 south of Willow Creek Road, and big backup and delay on Willow Creek Road eastbound to northbound.

At what location or intersection are delays most common?

Locations

- Between Ruger Road and Willow Creek, mainly a problem because SR 89 is two lanes between Chino Valley and SR 89A.
- Between the Lakes Highway intersection and Willow Creek Road
- Varies depending on accidents

Intersections

- Ruger Road (2 responses)
- Willow Creek/MacCurdy Drive (12 responses)
- Perkins (4 responses)

What direction were you traveling?

	Responses	Percentage
Northbound	20	51.3
Southbound	19	48.7
Total:	39	100

3. South of the SR 89/MacCurdy Drive intersection, which corridor do you typically use? (Please choose one)

	Responses	Percentage
SR 89	16	43.2
Willow Creek	21	56.8
Total:	37	100

Why? (Those who responded SR 89)

	Responses	Percentage
More direct route to destination	12	63.2
Less traffic and/or congestion	2	10.5
Quicker travel time	3	15.8
Fewer Intersections	2	10.5
Other	0	0
Total:	19	100

Why? (Those who responded Willow Creek)

	Responses	Percentage
More direct route to destination	15	71.4
Less traffic and/or congestion	0	0
Quicker travel time	1	4.8
Fewer Intersections	1	4.8
Other	4	19.0
Total:	21	100

Responses to Other category:

- When traveling to SR 69 to go to the mall, Costco, etc I use SR 89
- Slower traffic
- Depends on what part of Prescott I am going to
- Light controlled intersections

4. Do you use an alternate route to SR 89, such as Outer Loop Road and/or Williamson Valley Road?

	Responses	Percentage
Yes	8	24.2
No	25	75.8
Total:	33	100

If yes, what is the typical reason for using another route? (Please check all that apply)

	Responses	Percentage
General preference	2	13.3
More direct route to destination	5	33.3
Less traffic and/or congestion	3	20.0
Quicker travel time	2	13.3
Other	3	20.0
Total:	15	99.9

Responses to Other category:

- Safety
- Slower traffic
- When SR 89 is closed (it takes longer, so I really do not like to take Outer Loop Road to Williamson Valley to go to Prescott)

5. What are your highest priorities for a realigned Willow Creek Road? (Please check all that apply)

	Responses	Percentage
Travel time improvements	7	13.7
Reduced intersection delay	21	41.2
Access to adjacent land use	1	2.0
Other	22	43.1
Total:	51	100

Responses to Other category:

- Access to Willow Creek Road
- Safety
- I don't know why a realignment is necessary
- I like it just the way it is
- Increase vehicle safety at SR 89 and Willow Creek Road
- Safety improvement
- Safety and access to Ruger Road and St. Luke's Church
- Increase safety is #1 priority
- Stop light violators
- Better intersection safety
- Safety and reduced delays
- Reduced traffic and speed on SR 89
- None of the above – trying to save tax payer dollars
- Make it safer
- Better access for St. Luke's Church
- I have no priorities
- Reduce traffic on SR 89 between SR 89A and MacCurdy Drive
- Reduce traffic (high speed) from SR 89A on SR 89 to MacCurdy Drive

6. What are your biggest concerns with a realigned Willow Creek Road? (Please check all that apply)

	Responses	Percentage
Right-of-way impacts	10	27.0
Environmental impacts	2	5.5
Impacts to existing property	15	40.5
Other	10	27.0
Total:	37	100

Responses to Other category:

- Restricted traffic flow
- Safety
- Convenience and congestion
- Making access to the airport difficult
- None
- Access to the neighborhoods and homes
- Cost

- Waste of tax payer money
- It needs to be safer driving in that area
- Inconvenience from our location

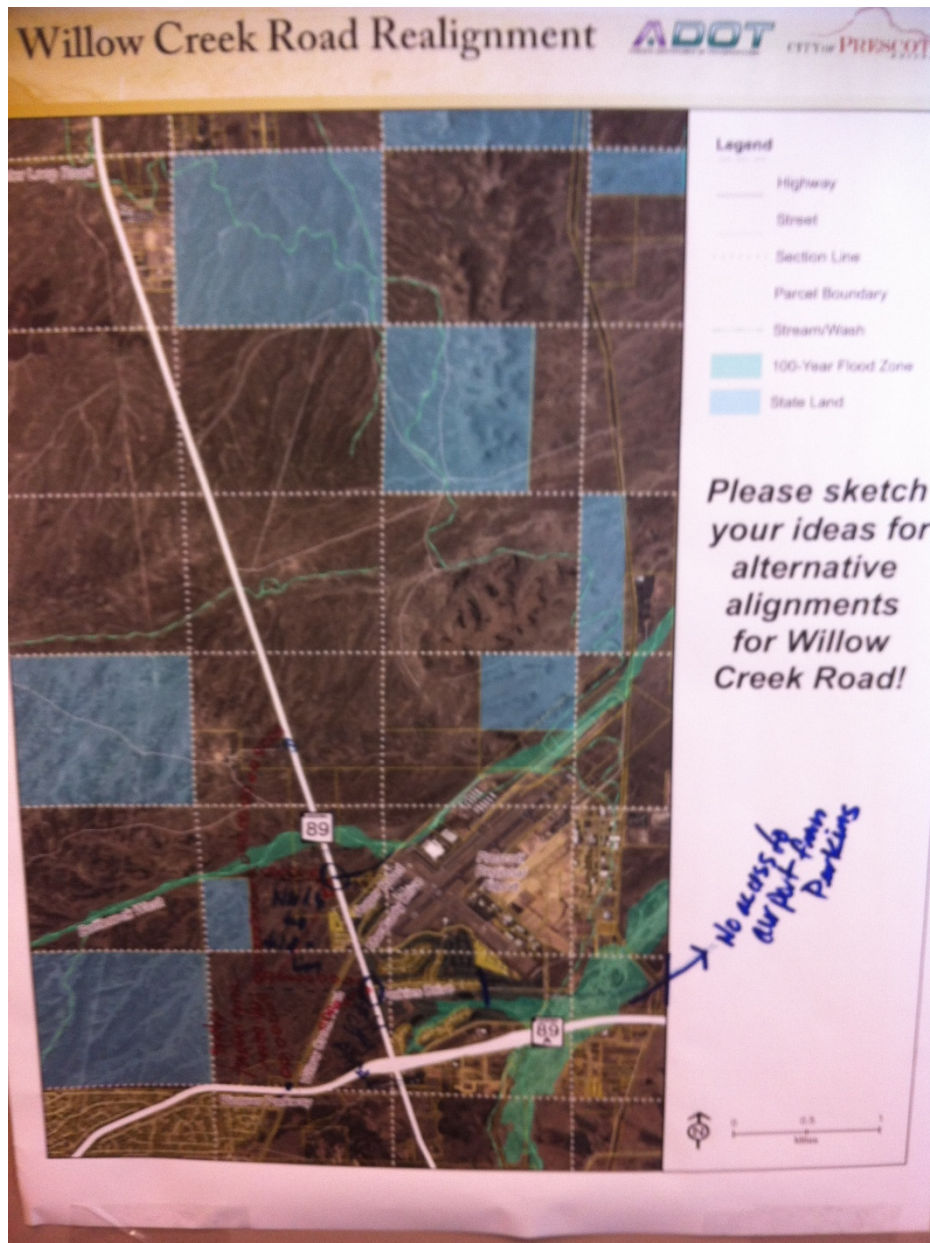
7. Do you have any additional comments you would like to share with the study team?

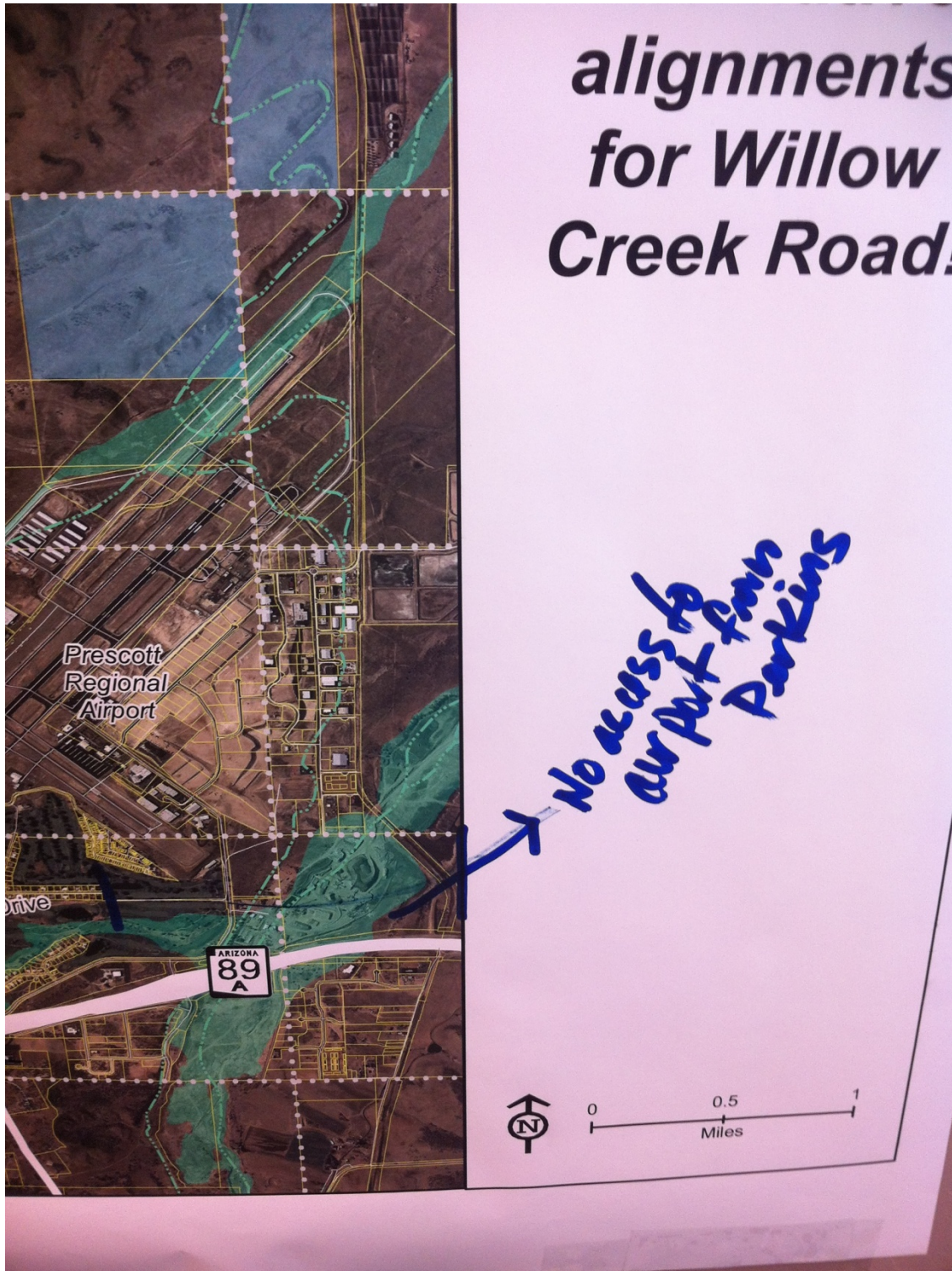
- I have commuted on this route for 29 years. These improvements should have been made years ago. The vision for improvements should include a network that would serve all the Deep Well properties as well. Failing intersections should not be retained.
- Lower the speed limit in this area and police it. People run the stop lights because they are going too fast and the intersection.
- Go for it. It is a needed road improvement.
- Widen SR 89 from SR 89A to Chino Valley.
- Going north on SR 89 from Willow Creek from 4:15 p.m. to 5:45 p.m. takes forever. Usually sit through 4 or 5 light changes. I no longer go this route at those times. Unsafe drivers leave the Circle K going north on SR 89 or left out of Circle K onto Willow Creek Road and this is a hazard for all.
- What are plans for more lanes from the intersection of SR 89/SR 89A north to Chino?
- I own property at Antelope Village. If you plan to reroute Willow Creek Road please lay it out far enough west that highway noise and pollution will not adversely affect our quality of living outside.
- Population prediction is overinflated. There are no jobs and no water.
- Impact on congregation of St. Luke's Church and ingress and egress for the same.
- Because we live on Perkins Drive we are concerned that at some future time Perkins Drive may be used to access the airport.
- Please keep Willow Creek coming to SR 89 and MacCurdy Drive for golf course residents. Thank you. I'm sure the Chino people would like a different route, but we are satisfied with what we have.
- Installation of sound wall and "silent road surface" on SR 89, from SR 89A to MacCurdy Drive.
- Access to St. Luke's Church at 2000 Shepherds Lane may be difficult from SR 89 or Willow Creek Road.
- Enforce speed limits on Willow Creek Road. Provide safe entrance/exit to Perkins Drive. Leave the golf course alone.
- The biggest problem I see is the major congestion both on SR 89A and Willow Creek Road every morning and every evening. Leads to accidents.
- There needs to be direct, convenient, and safe access to both the airport and to our neighborhood, which adjoins the airport and is accessed via MacCurdy Drive. There are already too many stop lights on Willow Creek Road, but that probably won't change. It's slow going taking Willow Creek Road to the four corners or to the town center.
- I can't see where the realignment of Willow Creek Road would benefit those of us coming from MacCurdy when we use Willow Creek Road.
- If ADOT is involved, will the time of any change be another three to five years? Why has ADOT not completed the widening in all this time?
- If a roundabout is in the mix, they need to be larger diameter than the one at Willow Lake Road and SR 89. See the Boston area.
- The modification impacts many. Golf course, airport, businesses, St. Luke's Church, and surrounding homeowners. It's a major problem for St. Luke's Church.

Requests

Following the February 8, 2012 public meeting, a few community members requested copies of the presentation which ADOT provided electronically.

Comments Received on Maps



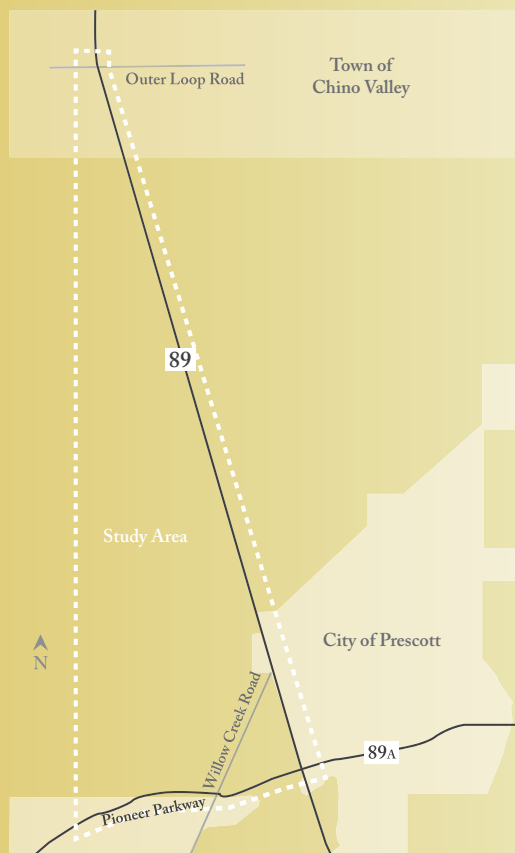




Appendix A: Notification Material

Public Meeting

Willow Creek Road Realignment



Wednesday, February 8

5 p.m. to 6:30 p.m.

Centennial Event Center

at Antelope Hills Golf Course

1989 Clubhouse Drive, Prescott, AZ 86301

The Arizona Department of Transportation and the City of Prescott are conducting a study for the Willow Creek Road Realignment. The study will identify future needs of the roadway and will recommend a preferred roadway realignment connecting to State Route 89 and Pioneer Parkway.

A public meeting has been scheduled to introduce the study to the community and to identify possible issues, concerns, and opportunities.

Contact

For more information regarding the study please contact:

Tricia Lewis, ADOT

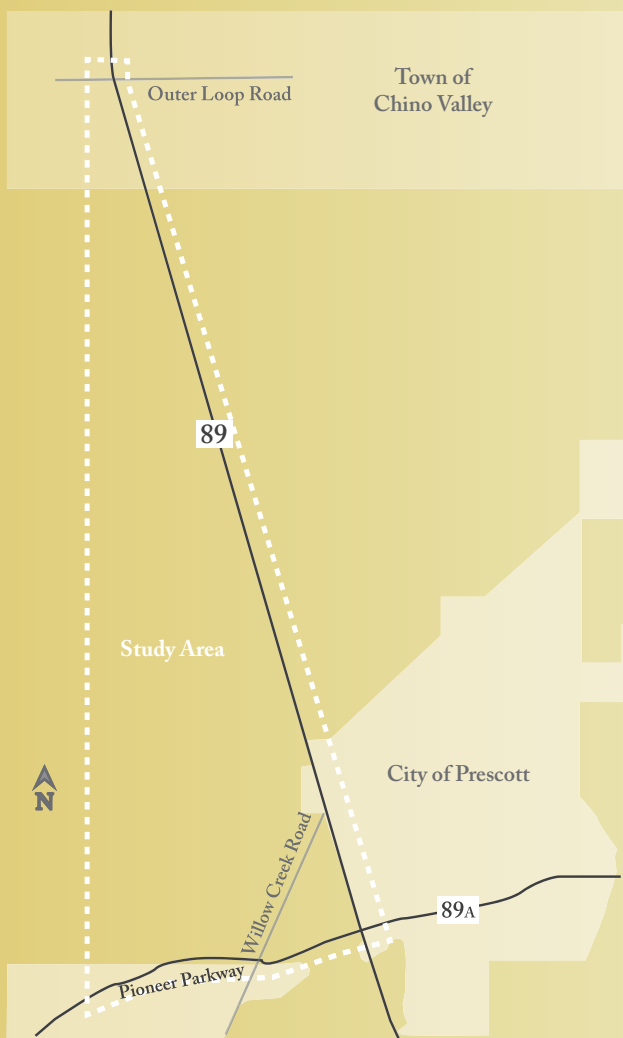
Senior Community Relations Officer

tlewis@azdot.gov or 928.606.2420

<http://azdot.gov/WillowCreek>

Public Meeting

Willow Creek Road Realignment



Wednesday, February 8

5 p.m. to 6:30 p.m.

Centennial Event Center

at Antelope Hills Golf Course

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Public Meeting

Willow Creek Road Realignment

Wednesday, February 8

5 p.m. to 6:30 p.m.

**Centennial Event Center
at Antelope Hills Golf Course
1989 Clubhouse Drive, Prescott, AZ 86301**

<http://azdot.gov/WillowCreek>



◀ Please take a meeting reminder.

Contact

For more information regarding the study please contact:
Tricia Lewis, ADOT
Senior Community Relations Officer
tlewis@azdot.gov or 928.606.2420

<http://azdot.gov/WillowCreek>

Amy Rosar

From: Arizona Department of Transportation [adot@service.govdelivery.com]
Sent: Wednesday, February 01, 2012 9:35 AM
To: Amy Rosar
Subject: Public Meeting Scheduled for the Willow Creek Road Realignment Study
Attachments: mapGraphic.jpg



**Arizona Department of Transportation and the City of Prescott
Willow Creek Road Realignment**

Public Meeting Scheduled

Wednesday, February 8, 2012

5 p.m. to 6:30 p.m.

Centennial Event Center

at Antelope Hills Golf Course

1989 Clubhouse Drive

Prescott, AZ 86301

(Brief presentation to begin at 5:15 p.m.)

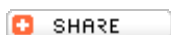
The Arizona Department of Transportation (ADOT) and the City of Prescott are conducting a study for the Willow Creek Road Realignment. The study will identify future needs of the roadway and will recommend a preferred roadway alignment connecting to State Route 89 and Pioneer Parkway.

A public meeting is scheduled to introduce the study to the community and to identify possible issues, concerns, and opportunities.

The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas program.

For more information regarding the study contact Tricia Lewis, ADOT Prescott District Senior Community Relations Officer, at tlewis@azdot.gov, 928.606.2420, or visit the study website at www.azdot.gov/WillowCreek.

- [mapGraphic.jpg](#)



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Appendix B: Meeting Materials

Willow Creek Road Realignment



Public Meeting #1

Wednesday, February 8, 2012

Name: _____

Address: _____

Email: _____

1. How often do you travel on the SR 89 corridor between Chino Valley and Prescott? (Please choose one)

- ☐ More than 2 times per day
- ☐ 1 to 2 times per day
- ☐ 1 to 2 times per week
- ☐ 1 to 2 times per month

2. Do you experience delays on SR 89? (Please choose one)

- ☐ Yes
- ☐ No

If yes:

What time of day are delays most common? _____

At what location or intersection are delays most common? _____

What direction were you traveling?

- ☐ Northbound
- ☐ Southbound

3. South of the SR 89/MacCurdy Drive intersection, which corridor do you typically use? (Please choose one)

- ☐ SR 89
- ☐ Willow Creek Road

Why?

- ☐ More direct route to destination
- ☐ Less traffic and/or congestion
- ☐ Quicker travel time
- ☐ Fewer intersections
- ☐ Other: _____

OVER

Thank you for coming this evening. Completion of this comment form is completely voluntary and helps the project team keep an accurate record of the comments received. Under state law, any identifying information provided will become part of the public record, and as such, must be released to any individual upon request.

Willow Creek Road Realignment



4. Do you use an alternate route to SR 89, such as Outer Loop Road and/or Williamson Valley Road?

- ☐ Yes
- ☐ No

If yes, what is the typical reason for using another route? (Please check all that apply)

- ☐ General preference
- ☐ More direct route to destination
- ☐ Less traffic and/or congestion
- ☐ Quicker travel time
- ☐ Other: _____

5. What are your highest priorities for a realigned Willow Creek Road? (Please check all that apply)

- ☐ Travel time improvements
- ☐ Reduced intersection delay
- ☐ Access to adjacent land use
- ☐ Other: _____

6. What are your biggest concerns with a realigned Willow Creek Road? (Please check all that apply)

- ☐ Right-of-way impacts
- ☐ Environmental impacts
- ☐ Impacts to existing property
- ☐ Other: _____

7. Do you have any additional comments you would like to share with the study team?

Please leave your comment form with us this evening or send us your comments by **Wednesday, February 22.**

Mail: Willow Creek Road Realignment Study
4545 E. Shea Blvd., Ste 210
Phoenix, AZ 85028

Email: cglendening@azdot.gov
Fax: 602.368.9645

Information presented this evening will be available on the study website: <http://www.azdot.gov/WillowCreek>.



Willow Creek Road Realignment Study

Public Open House

February 8, 2012
Antelope Hills Golf Course





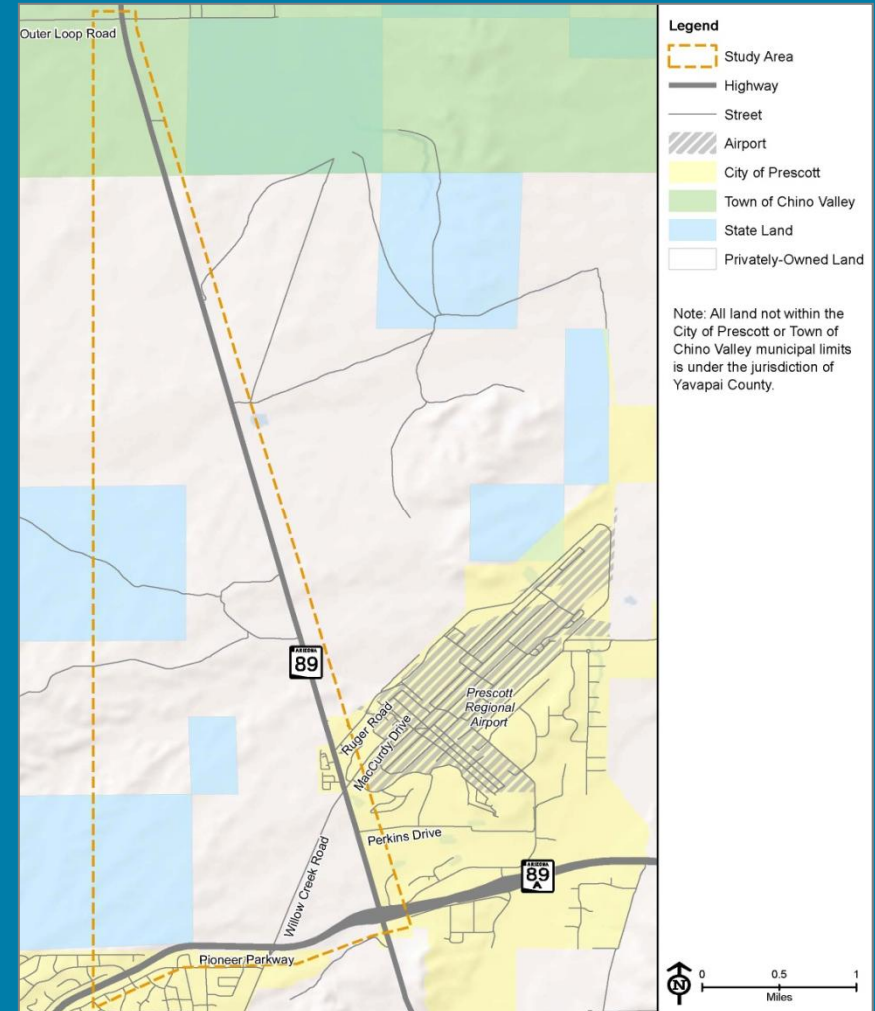
Meeting Purpose

- Provide overview of project process and progress of the Willow Creek Road Realignment Study
- Present study schedule
- Gather input on study area issues and opportunities:
 - Congestion/delay
 - Access
 - Property owner concerns



Study Area

- Bounded by SR 89 (east), Outer Loop Road (north), Pioneer Parkway/SR 89A (south)
- Located in Yavapai County, within planning areas of Prescott and Chino Valley
- Includes several major existing/future intersections:
 - Pioneer Parkway
 - Perkins Drive
 - MacCurdy Drive
 - Ruger Road





Project Need

- Future population and employment growth expected to increase traffic volumes on existing and planned roadway network
 - In the tri-city area between 2006 and 2030, CYMPO 2030 Regional Transportation Plan (RTP) forecasted a 280% population increase; a 150% employment increase
 - Update of RTP is underway to validate socioeconomic inputs, with an emphasis focused on the Willow Creek study area
 - Area surrounding the Prescott Regional Airport is a focus-area for future commercial, employment, residential, and mixed-use development



Project Need

- Previous studies established need to widen SR 89 to six lanes between Chino Valley and Prescott
 - Cannot widen SR 89 to six lanes south of Ruger Road due to existing constraints (e.g., Golf Course, Prescott Regional Airport)
 - Planned improvements to SR 89 do not provide sufficient capacity to accommodate future travel needs; need additional north-south capacity





Project Need

- Traffic analyses shows failing intersection levels of service for future year 2035 traffic volumes within the study area
 - Realignment of Willow Creek Road recommended to provide a more efficient bypass for travelers to/from the west, diffusing congestion at failing intersections
 - Planned Great Western Corridor serves same purpose for travelers to/from the east



Project Purpose

- Accommodate future projected travel demand within the study area
- Improve level of service of the Willow Creek Road/SR 89 corridor
- Improve level of service of intersections within the study area on Willow Creek Road, SR 89, and Pioneer Parkway





Study Objectives

- Define and assess the study area for strategic issues
- Conduct environmental scan to identify potential fatal flaws
- Develop and evaluate conceptual alternative alignments
- Define the characteristics of the preferred alignment:
 - Typical cross-section (number of lanes)
 - Right-of-way
 - Intersection spacing and configuration at major cross streets
 - Willow Creek Road's intersection configuration at SR 89, and at Pioneer Parkway
- Develop an implementation plan for recommended improvements



Project Schedule & Study Milestones

Work Effort	Schedule
Project Kick-off and Initiation	Aug 2011
Data Collection and Analysis	Aug 2011 – Feb 2012
Public Meeting #1 (Scoping)	Feb 2012
Alternatives Development and Evaluation	Dec 2011 – May 2012
Public Meeting #2 (Alternatives Acceptance)	May 2012
Preferred Alternative Refinement/ Implementation Plan	May 2012 – Jun 2012
Final Report Submission/Study Complete	July 2012

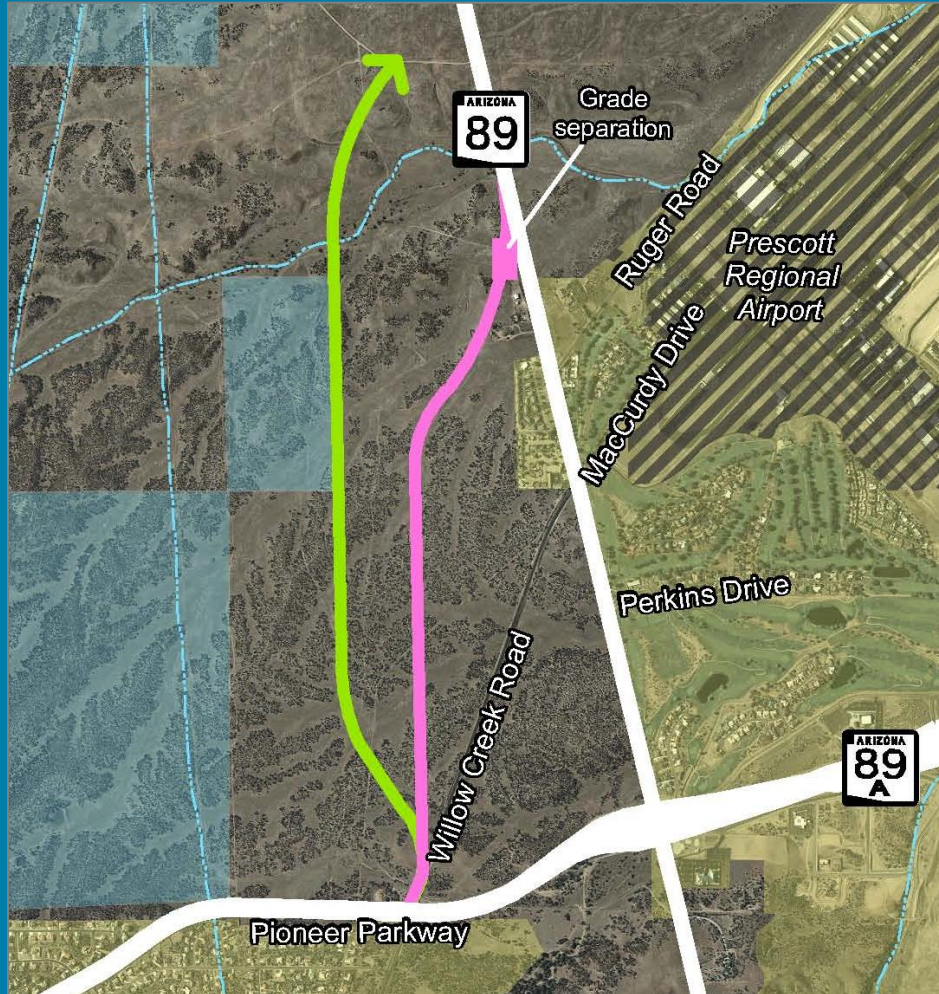


Project History

- Recommendation for the realignment of Willow Creek Road, intersecting SR 89 north of Ruger Road, to accommodate 2030 traffic volumes:
 - Yavapai County SR 89A/SR 89/Willow Creek Road “Triangle Area” Study (2008)
 - City of Prescott West Airport General Plan Amendment and Conceptual Master Plan (2008)
 - City of Prescott Willow Creek Road and Pioneer Parkway Traffic Interchange Feasibility Analysis (2008)
 - City of Prescott Airport Area Transportation Plan (2009)
 - ADOT SR 89, SR 89A to South Chino Limits (current design project)



Previously Suggested Alignments

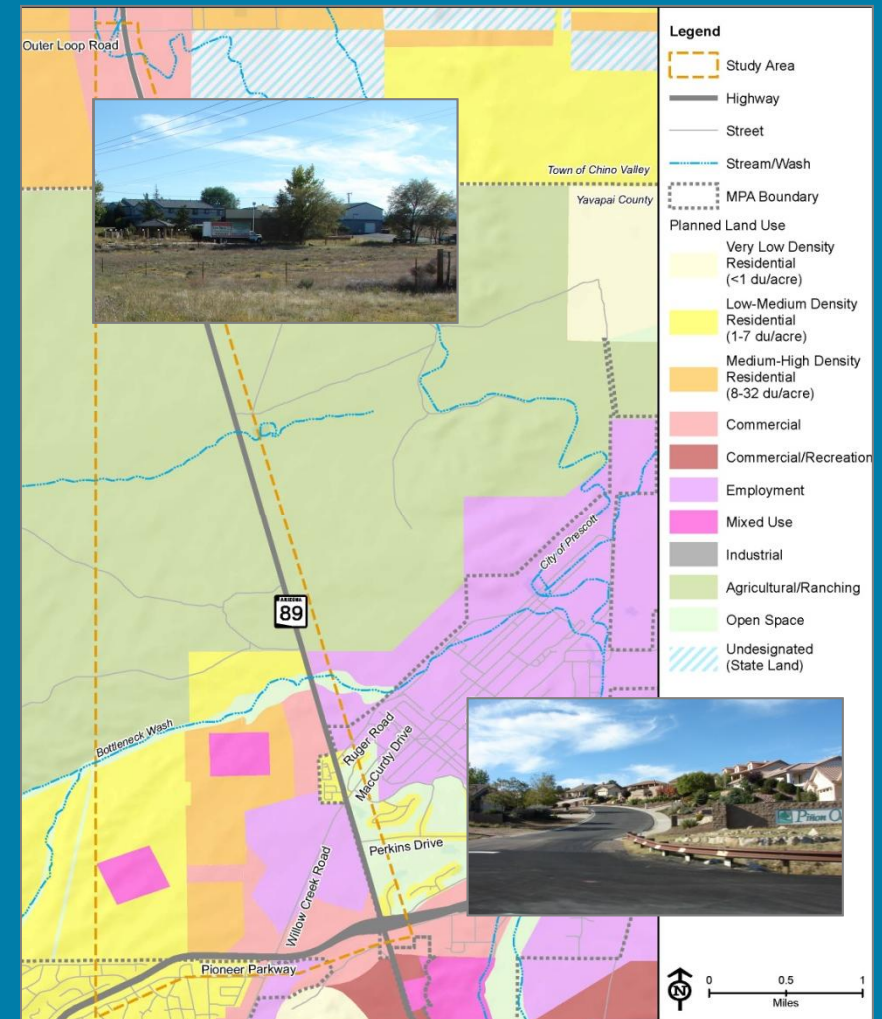


- Yavapai County Triangle Area Study (2008)
- City of Prescott West Airport GPA and Conceptual Master Plan (2008)



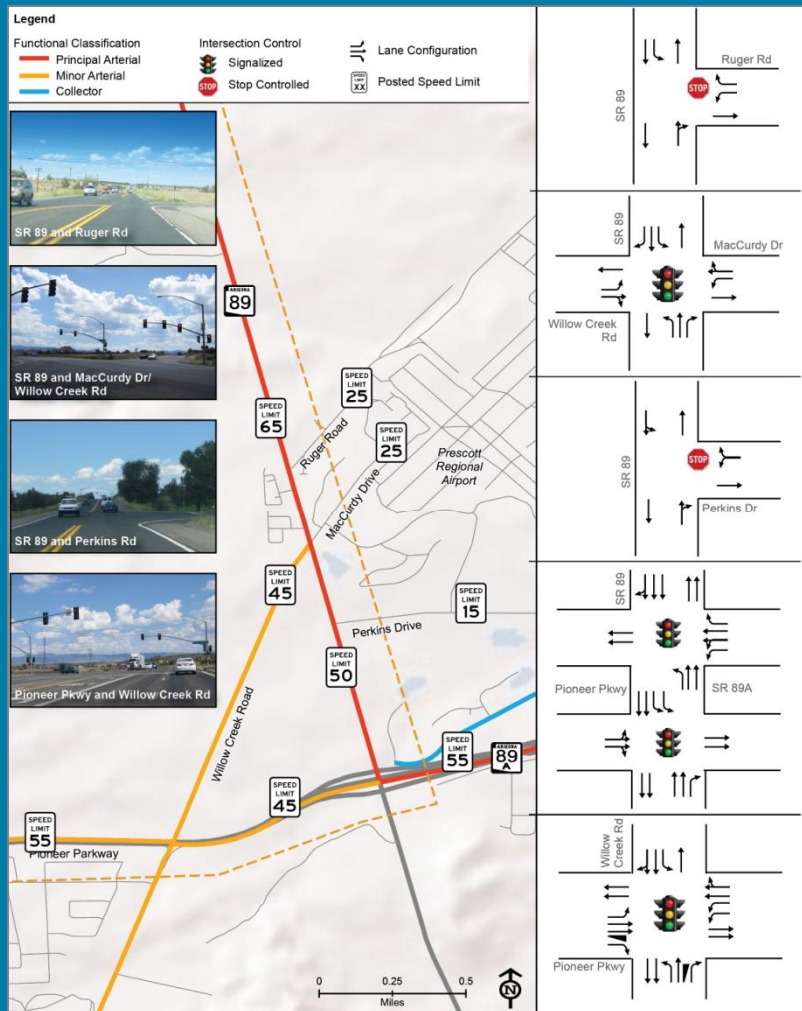
Land Use Conditions

- Existing Land Use and Ownership:
 - Primarily undeveloped; clusters of commercial and low-density residential
 - Mostly privately-owned (James Deep Well Ranch) and Arizona State Land Department
- Future Land Use: —————>
 - Combination of agriculture, residential, commercial, and airport-related employment





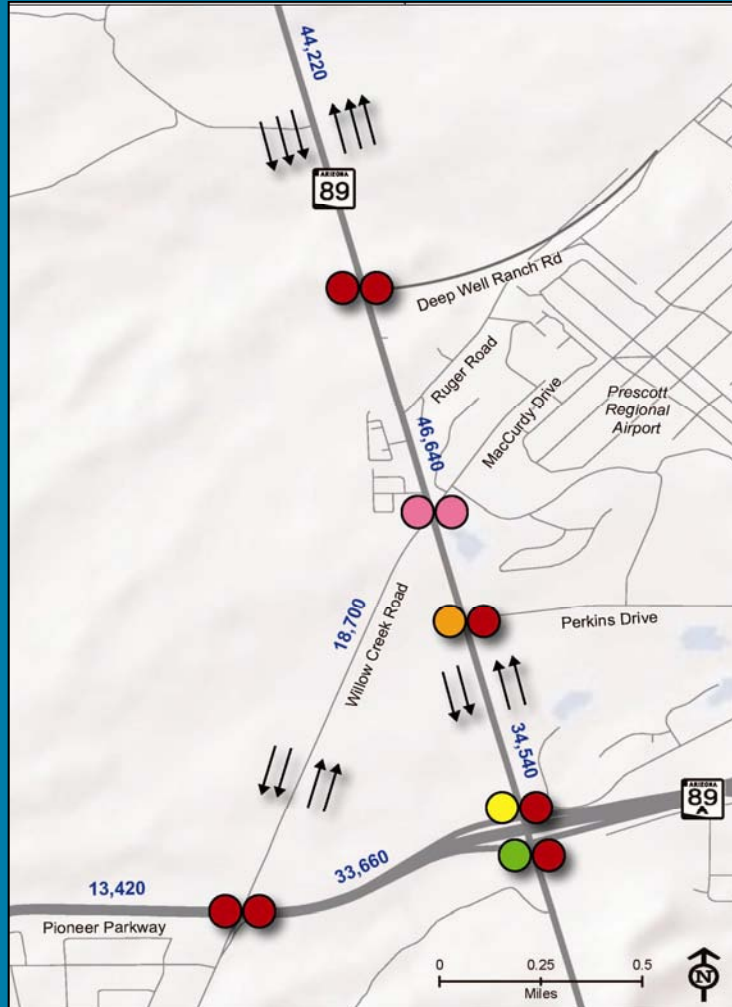
Roadway/Traffic Conditions



- Currently, all intersections operate at level of service (LOS) D or better
- In the future, all intersections anticipated to operate at LOS F during at least one peak hour
- 180 crashes reported between 2006 and 2011
 - 2% fatal (4 crashes)
 - 60% of vehicle-to-vehicle crashes were rear end crashes



Projected 2035 Traffic Conditions



2035 Peak Hour Intersection LOS

Intersection	AM LOS	PM LOS
SR 89/Deep Well Ranch Rd	F	F
SR 89/Ruger Rd (westbound)	B	E
SR 89/MacCurdy Dr (eastbound)	E	B
SR 89/MacCurdy Dr (westbound)	B	E
SR 89/Perkins Dr	A	F
Pioneer Pkwy/Willow Creek Rd	F	F
SR 89/SR 89A TI (north intersection)	C	F
SR 89/SR 89A TI (south intersection)	B	F



Next Steps

- Obtain input regarding issues, needs, and priorities
- Finalize evaluation criteria
- Develop alternatives
- Evaluate alternatives to select preferred corridor (alignment, cross-section, roadway character)
- Develop Implementation Plan



Thank you for coming!

Please return completed comment forms at the door

For more information:

<http://azdot.gov/WillowCreek>

Appendix C: Question Cards

Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

Do you believe there will still be congestion
on 89 at Willow Creek intersection if 89 is
widened all the way to Chow Valley?

Do you believe we will have a 230% population
increase if we do not get the water?

Who came up with the 230% increase in population?

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

How will MacCurdy Drive connect to Willow Creek Road?
(There should be direct access to the airport from Willow Creek
Road, as well as from SR 89.)

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

*What is going to happen to the West
entry to Perkins Dr.?*

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

What was the Northern intersection of Regal

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

IN your projection of 89 being 6 Lanes

Is there any plan to widen 89A?

Are your population projections for 2035 considerably high - Population has decreased since 2010

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

Will

Willow Creek Rd & MacCurdy Drive stay the same for Airport & Golf Course residents. If so,

will the existing road stay?

How long do you plan on study - Please do not use all the money on studies.

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

Do the 2035 ~~ADOT~~ projected traffic volumes assume that Williamson Valley Rd. has already been widened and that a new North/South Corridor between Chino Valley and 89A exists east of the airport?

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

With A Population Increase of 280% (Avg 800-90,000) do you believe we will need more than just an intersection change - possibly 6-8 lane freeways

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

Has any study been done to determine if the traffic coming from China to Prescott ~~is~~ going east or west of 89 and/or Willow Creek Road?

If most of it is going east shouldn't we be more concerned with the east side of 89 than Willow Creek which is west of 89?

Name: _____



Willow Creek Road Realignment Study

Public Meeting #1 - Wednesday, February 8, 2012

Please provide us your written questions regarding this project. A project team member will read them aloud and answers will be provided by the team during the question and answer session following the presentation. Thank you for your input!

Questions to be addressed
Comments for tonight

Name: _____



Willow Creek Road Realignment



Public Outreach Phase 2 – Summary

December 20, 2012

Project Background

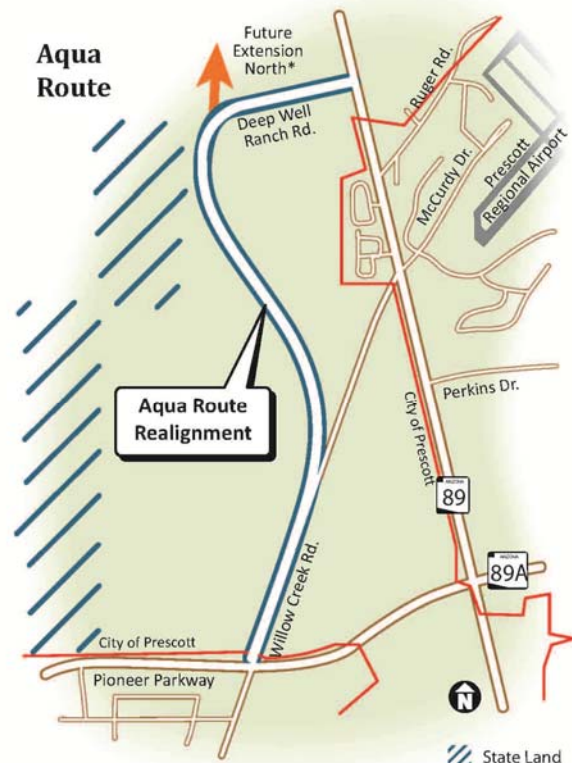
The Arizona Department of Transportation (ADOT) awarded funding for the City of Prescott Willow Creek Road Realignment Study through the Planning Assistance for Rural Area (PARA) program. The purpose of the PARA program is to assist counties, cities, towns, and tribal communities in addressing a broad range of multimodal transportation planning issues.

The goal of the Willow Creek Road Realignment Study is to provide the City of Prescott and other jurisdictions with a future “footprint” of the Willow Creek Road and a timeframe for the implementation of the recommended future roadway improvements. This study will identify the existing and future needs and deficiencies along Willow Creek Road north of Pioneer Parkway, and recommend a preferred alignment with revised connections to State Route 89 (SR 89) and Pioneer Parkway.

A cooperative planning process has been conducted throughout the study involving local agency staff, elected officials, and the public. Information was presented to and solicited from stakeholders through individual interviews, a public meeting, and a newsletter. Based on the input received, two alignments were developed and presented allowing the public to provide feedback.



*The opportunity exists for either alignment to be extended north based on future development and traffic needs.



*The opportunity exists for either alignment to be extended north based on future development and traffic needs.

Public Outreach Efforts

The first phase of public outreach occurred in February 2012 when 81 community members attended a public meeting at the Antelope Hills Centennial Event Center on Wednesday, February 8. The purpose of the meeting was to introduce the study to the community, present existing and future traffic conditions, and to solicit input regarding concerns, issues, and opportunities.

The second round of outreach occurred in the form of a newsletter presenting two new roadway alignments. Community members were asked to provide their feedback on each alternative presented. A self-addressed comment card was included in each newsletter to encourage responses. In total 31 comment cards and two emails were received by the study team and those comments can be found on the following pages. The newsletter was mailed on Monday, November 19, 2012 to approximately 460 individuals.

The newsletter and comment card can be found in the *Appendix: Outreach Material*.

Common Themes from Comments Received

Of the 37 community members who responded to the newsletter, 15 were in favor of the green route, three in favor of the aqua route, and eight in favor of no improvements or changes to Willow Creek Road. A majority of the comments fell under one of the following categories:

- Roadway curvature
- Type of intersection with SR 89 (either a traffic signal or roundabout)
- Potential noise issues

Main concerns identified were:

- Retaining the traffic signal at McCurdy Drive once Willow Creek Road is realigned.
- New development along the new alignment.
- Distance between McCurdy Drive and the future Deep Wells Ranch Road is too close and will create bottleneck issues.
- Location(s) of roundabouts and traffic signals.

Comment Responses Submitted

Comments on Alternative 1 Green Alignment	Comments on Alternative 2 Aqua Alignment	Other Comments
Do not like at all. Why not leave as is?	Do not like at all. Why not leave as is?	
Do not care for it. Why can't it be left alone?	Do not care for it. Why can't it be left alone?	
Do none of the proposed. Reroute Willow Creek Road to connect with Perkins Drive and add a roundabout there. Save a lot of money.	Same.	
Map should show distance between the McCurdy and SR 89 intersection and the proposed intersection of Deep Well Ranch Road and SR 89. Too short of a distance between will cause a traffic bottleneck.	Comments are the same as Alternative 1.	
<ul style="list-style-type: none"> • Please put a roundabout at all intersections. • Improve entrance at SR 89 and Perkins Drive. • I prefer the "Green route". 	<ul style="list-style-type: none"> • Please put a roundabout at all intersections. • Provide turn lanes at SR 89 and entrance to Perkins Drive. • "Aqua route" is least preferred. 	
I think that there would be a bottleneck at the tight curve. Smooth, gentle curves will keep traffic from stacking up.	Prefer this one because of smoother traffic flow.	
This alternative would help decrease the traffic noise currently found on SR 89. What happens to SR 89 with this alternative and our access from Antelope Hills subdivision?	Not my preferred alternative as presently described.	

Arizona Department of Transportation and City of Prescott
Willow Creek Road Realignment Study
Public Outreach Phase 2 Summary
December 20, 2012

Comments on Alternative 1 Green Alignment	Comments on Alternative 2 Aqua Alignment	Other Comments
I think the Green Alignment would be more efficient.		
Extend Glassford Hills Road north to Chino Valley. That would make this bad idea unnecessary.	Both options are really bad.	
The only concern I see is that a lot more homes could be built which means many more left turns onto Willow Creek for people going to Prescott. Willow Creek, McCurdy Drive and SR 89 needs to be closed. Angled intersections don't work.	Close current intersection at McCurdy, Willow Creek and SR 89.	
Reduced radii combined with long straight road not preferred due to travel speed differentials (heavy braking).	Better for control of traveler's speed consistency. More reflects a collector rather than arterial. Good sight distance.	
A much preferred route to us as it provides all the more buffer between our backyard and a busy road.	Seems circulations (needlessly curved) and brings the road (and its noise, dangers, etc.) all the closer to existing neighborhoods.	
Straighter route.		
		Both alternatives must have a wide shoulder or a normal size bicycle lane for safety of bicyclists and motorists.
Less curves		

Arizona Department of Transportation and City of Prescott
Willow Creek Road Realignment Study
Public Outreach Phase 2 Summary
December 20, 2012

Comments on Alternative 1 Green Alignment	Comments on Alternative 2 Aqua Alignment	Other Comments
Light at Pioneer Parkway, help cars get off on Willow Creek.	To sharp a curve too close to developed area of houses and businesses.	
		I've lived in Antelope Hills for 18 years. Willow Creek Road is most important for me as the primary road. I use several times a day. Please don't shut it down.
Looks like it would cost more than the Aqua Alignment.	<ul style="list-style-type: none"> Looks to be the easiest and less cost. Easiest to stay on Willow Creek to SR 89 for us going across SR 89 onto McCurdy Drive. Can use most of existing Willow Creek Road thus less cost. 	Either way, I would like you to keep Willow Creek Road all the way to SR 89 connecting with McCurdy Drive on the other side of SR 89.
Is Alternative 1 on State Land and Alternative 2 on current private land? If so, Alternative 1 would be preferable. Otherwise either looks okay.		For safety's sake, SR 89 needs to be widened to two-lanes each way from Willow Lake Road to Chino Valley. The proposed extension of Glassford Hill Road (in Prescott Valley) to Road #? In Chino Valley will divert much traffic from that part of SR 89.
		You need to put a left turn lane at SR 89 and Perkins Drive. What happened to the traffic circle at SR 89 and Willow Creek Road?
		Neither route appears to be a reasonable route. Shortest distance between the two points is a straight line. Why not move the roundabout further north on SR 89, then go south (west) in a straight line to intersect with Pioneer Parkway at Willow Creek?
		It appears to me that SR 89 should just be widened and leave the alignment of Willow Creek where it is with a traffic light.

Arizona Department of Transportation and City of Prescott
Willow Creek Road Realignment Study
Public Outreach Phase 2 Summary
December 20, 2012

Comments on Alternative 1 Green Alignment	Comments on Alternative 2 Aqua Alignment	Other Comments
		Don't like either route. Why don't you just make Willow Creek Road four lanes with a better traffic light with a left turn arrow at the junction of Willow Creek Road and SR 89?
Either alternative seems to serve traffic needs. Green route appears to provide best commercial development between green alignment and SR 89.		
Green route would be my first choice, but either would work for relief of the traffic we have.		
Great!	Great!	
This route is preferable because it provides a greater offset from the airport and provides a larger area for commercial development.	Will be noisier for Antelope Hills residents.	
	Place a traffic circle at SR 89 and Deep Well Ranch Road and another circle at Aqua route and Willow Creek Road junction.	
		On either alignments, we would like to know where stop lights (now at Willow Creek and McCurdy) will be placed. Also, this may be the wrong time to ask, but we should also like to know if there are any plans to bury the utilities on Perkins Drive?
Prefer green route because it eliminates weeping curve, shortens straight away adjacent to Willow Creek Road.		

Comments on Alternative 1 Green Alignment	Comments on Alternative 2 Aqua Alignment	Other Comments
What concerns me is I already have a hard time turning out of my street onto SR 89. Is the light going to stay at Willow Creek and SR 89? I like the green, it takes it a bit further from my house. My concern is Willow Creek Road and SR 89. Please tell me a light stays!!!		
I prefer the green route.		
Both look acceptable. I prefer the green alignment.		
Prefer the green route.	Do not care for alternative 2.	

Emailed Comments:

Comment 1 – Saturday, November 24, 2012:

I just received the mailing regarding the Willow Creek Road project. I am still just about as confused as I was after the meeting at the Old Clubhouse (AKA Centennial Hall).

So far as the preferred alignment, if you live in Prescott you probably don't care. This is an issue for Chino Valley and Paulden. That's where the current traffic problems come from. Left-turn traffic backs up every afternoon at the intersection of Willow Creek and 89.

I don't see any plan for airport access or access to the homes on Clubhouse Drive and the other residential areas on the Antelope Hills North Golf Course. Using Perkins as a heavy traffic route would cause safety issues due to heavy golf cart traffic to and from the Clubhouse, the 1st tee and the cart barn. I know you could move the cart barn but you can't move the golf course.

I'm sure the folks in this area would like to know if these issues are being addressed.

Response 1 – Monday, November 26, 2012 from Tricia Lewis, ADOT Senior Community Relations Officer:

Thank you for your feedback, I will pass along to the study team to include in study elements.

Comment 2 – Friday, November 30, 2012:

I don't see anything worth commenting on in your recent mailings regarding subject study. Your green and aqua routes are about the same in the silly sketches and provide about the same lack of information that was characteristic of last summer's meeting at Antelope Hills. I find your website equally uninformative. Looks like you are attempting to comply with some reporting requirement without having any information worth spending the postage on, much less the hours of labor already expended.

Let us just hope that you can do something simple and cost effective to help the traffic jam at the junction of Willow Creek and SR 89. This should not include more dinky and dangerous "roundabouts" that go nowhere. These seem to be in fashion at ADOT and should be causing a revolution among knowledgeable highway engineers.

Of course taking the traffic jam away from junction Willow Creek - 89 is badly needed and 4 lanes of 89 to Chino Valley are needed as well. Just get on with it, whatever the color, and remember extra lanes and carefully planned traffic lights, not circles to nowhere!

Response 2 – Monday, December 3, 2012 from Tricia Lewis, ADOT Senior Community Relations Officer:

Thank you for your feedback. I have passed along your comments to the project study team.

Comments received via mail (not on comment cards):

Letter 1 – Monday, December 10, 2012

I live on Perkins Drive in Prescott.

I am not in favor of either of the alignments.

Making the major portion of Willow Creek to four lanes was started over sixteen years ago and at the time we understood our taxes were raised to cover this process. We also understood that the widening of Willow Creek would extend to the intersection of Willow Creek and Highway 89 and also that the entire project would be completed in approximately five years. The last section, of course, was never completed. Even at this late date, I believe, it would be more cost effective (and more convenient) to widen the last segment of Willow Creek to Highway 89 and then widen to four lanes the short distance from this intersection to where Highway 89 is already four lanes. With fore sight by ADOT (or ?) at the time the Willow Creek project was started the cost would have been much less at that time than it would be today.

Appendix: Outreach Material

Willow Creek Road

Realignment Study

The Arizona Department of Transportation and the City of Prescott are conducting a study to identify a new alignment for Willow Creek Road between Pioneer Parkway and State Route 89. The study will identify the future needs of the roadway based on projected growth in the area and will recommend a preferred roadway realignment.

The study was introduced to the community at a public meeting in February 2012. Based on the input received, two alternatives have been developed (see the inside of the newsletter). The community is encouraged to provide input on the alternatives by December 14, 2012. The study team will consider comments received from the community in addition to engineering and environmental criteria to recommend a preferred alternative.

At this time there is no funding programmed for construction.



CITY OF
PRESCOTT



Provide input
on Alternative
Alignments.
Comments due
December 14, 2012.

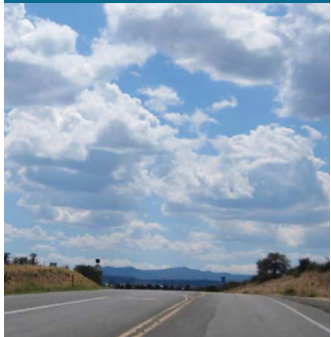
ADOT Willow Creek Study
3217 E. Shea Blvd., Ste 620
Phoenix, AZ 85028

Provide input
on Alternative
Alignments.
Comments due
December 14, 2012.

Thank you for
participating in
the study.

For more information
regarding this study, please
contact Tricia Lewis,
ADOT Senior Community
Relations Officer at
928.606.2420 or
tlewis@azdot.gov
or visit the study website at
www.azdot.gov/WillowCreek.

Willow Creek Road Realignment Study



What we heard from the community:

- Top priorities were identified as travel time improvements, reduced intersection delays and safety.
- The biggest concerns regarding the realignment included potential impacts to existing properties.
- Because growth has slowed in the Prescott region, the growth rate used to determine future traffic is too high.

How the study team addressed the community comments:

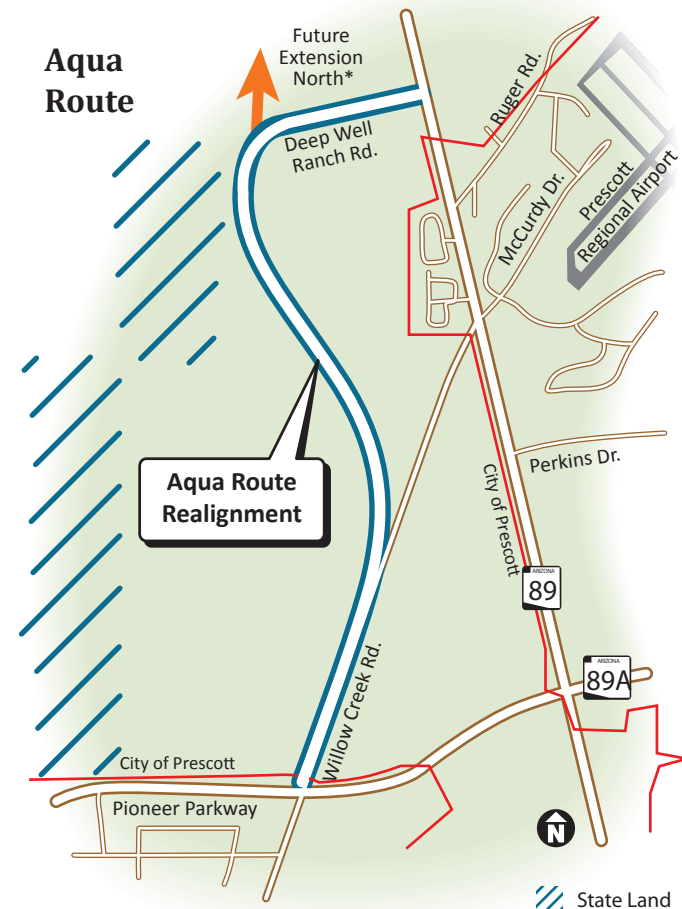
- Alternatives were designed to compliment improvements on SR 89 to reduce travel times and delays. Alternative intersection types and access management techniques will improve safety along the corridor.
- The Study Team coordinated with area property owners to develop alternative alignments that minimized impacts to properties and resulted in mutually acceptable solutions.
- In coordination with the Central Yavapai Metropolitan Planning Organization, development trends for the region were reevaluated to better understand anticipated growth. This resulted in a reduced growth rate to forecast future travel demand and identify implementation timeframes.

Green Route



*The opportunity exists for either alignment to be extended north based on future development and traffic needs.

Aqua Route



*The opportunity exists for either alignment to be extended north based on future development and traffic needs.



Provide input
on Alternative
Alignments.
Comments due
December 14, 2012.

Provide input
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Comments due
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For more information
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please contact Tricia Lewis,
ADOT Senior Community
Relations Officer at
928.606.2420 or
tlewis@azdot.gov
or visit the study website at
www.azdot.gov/WillowCreek.

Name: _____

E-mail: _____

Would you like to receive updates on this project? ☐ Yes ☐ No

Please provide your comments on Alternative 1 (Green Alignment)

Please provide your comments on Alternative 2 (Aqua Alignment)

PLACE
STAMP
HERE

ADOT Willow Creek Road Realignment Study
3217 E. Shea Blvd., Ste 620
Phoenix, AZ 85028