ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
ENVIRONMENTAL & ENHANCEMENT GROUP

DRAFT ENVIRONMENTAL ASSESSMENT

for

US 93, WICKENBURG TO THE SANTA MARIA RIVER

Interim Project No. STP-093-B(872)
TRACS No. 093 YV 161 H4871 01L
Prescott and Kingman Districts - Yavapai County

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Approved by: _____ Date: 9-28-04
Richard M. Duarte, Manager
Environmental & Enhancement Group
Arizona Department of Transportation

Approved by: _____ Date: Oct 26, 2004
Robert E. Hollis, Division Administrator
Federal Highway Administration

This Draft Environmental Assessment has been prepared in accordance with the provisions and requirements of Title 23, Code of Federal Regulations, Part 771, relating to the implementation of the National Environmental Policy Act of 1969 (42 US Code 4332(2)(c)).

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LIST OF ACRONYMS AND ABBREVIATIONS

acc/MVM	Accidents per million vehicle miles
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADT	Average daily traffic
AGFD	Arizona Game and Fish Department
amsl	Above mean sea level
APE	Area of potential effect
ASLD	Arizona State Land Department
ASM	Arizona State Museum
AZPDES	Arizona Pollutant Discharge Elimination System
BLM	Bureau of Land Management
CBC	Concrete box culvert
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CMP	Corrugated metal pipe
CMPA	Corrugated metal pipe arch
CO	Carbon monoxide
COE	US Army Corps of Engineers
dBA	Decibels (A-weighted)
DEA	Draft Environmental Assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
ft	Foot/feet
FY	Fiscal year
ICO	Issues, Concerns, and Opportunities
ISA	Initial Site Assessment
L/DCR	Location/Design Concept Report
L_{max}	Maximum noise level
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MP	Milepost
mph	Miles per hour
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NACOG	Northern Arizona Council of Governments
NAFTA	North American Free Trade Agreement
NB	Northbound
NRHP	National Register of Historic Places
NWP	Nationwide Permit
PA	Programmatic Agreement

PISA	Preliminary Initial Site Assessment
ppm	Parts per million
RCP	Reinforced concrete pipe
R/W	Right-of-way
SB	Southbound
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SR	State Route
Uniform Act	Uniform Relocation Assistance and Real Properties Acquisition Act of 1970
USFWS	US Fish and Wildlife Service
UST	Underground storage tank
vpd	Vehicles per day
WIFL	Southwestern willow flycatcher
WSC	Wildlife of Special Concern
YCFCD	Yavapai County Flood Control District

MITIGATION MEASURES

Mitigation measures have been defined to avoid or minimize the environmental impacts of the preferred alternative. The following mitigation measures and commitments are not subject to change without the prior written approval of the Federal Highway Administration.

Design Responsibilities

- To minimize impacts on adjacent land use, existing cattle crossings under US 93 would be maintained or relocated. To maintain existing cattle crossings, existing box culverts that are 6 feet in height or greater would not be downsized and would be designed to function as cattle passes where feasible. If during design it was determined that the existing cattle passes could not be retained, the Arizona Department of Transportation would contact the affected land managing agency for information on cattle crossing needs and arrange for the development of improved crossing locations or the provision of new livestock water sources (page 28).
- During final design, the Arizona Department of Transportation would review the project plans to verify the extent of encroachment within the 100-year floodplain and would obtain the required floodplain construction permits from the Yavapai County Flood Control District (page 30).
- During final design, the project plans would be reviewed to verify the extent of encroachment into waters of the US. As appropriate, certifications and permits required under Sections 401 and 404 of the Clean Water Act would be obtained by the Arizona Department of Transportation prior to construction (page 30).
- The Arizona Department of Transportation Roadside Development Section would determine who would prepare the Storm Water Pollution Prevention Plan (page 30).
- A survey for loggerhead shrike nests would be performed by a qualified biologist during final design. The survey would be conducted in areas that would be disturbed by construction activities and are located on or within one mile of Bureau of Land Management lands. If loggerhead shrike nests were found, the Arizona Department of Transportation would coordinate with the Bureau of Land Management regarding potential impacts to the species (page 34).
- A survey for western burrowing owls would be performed by a qualified biologist during final design. The survey would be conducted in areas that would be disturbed by construction activities and are located on or within one mile of Bureau of Land Management lands. If western burrowing owls were found, the Arizona Department of Transportation would coordinate with the Bureau of Land Management regarding potential impacts to the species (page 34).
- Game fence consistent with the Arizona Department of Transportation Game Fence Specification included in Appendix E would be installed along the right-of-way line in all portions of the project that are not immediately adjacent to developed areas (page 35).
- The Arizona Department of Transportation Roadside Development Section would notify the Arizona Department of Agriculture at least 60 days prior to the start of construction to afford

commercial salvagers the opportunity to remove and salvage any plants that were not included in the plant salvage plan (page 37).

- A plan for the inventory, salvage, storage, and transplantation of native plants, including saguaro, agave, and Joshua trees, would be developed by the Arizona Department of Transportation Roadside Development Section during final design. Healthy, salvageable native plants within the area of disturbance would be salvaged and transplanted to the extent practicable to replicate the surrounding vegetative density (page 37).
- Disturbed areas would be seeded with a seed mix consisting of native species selected for the site and would be revegetated with salvaged plants. During final design, the Arizona Department of Transportation would develop the seed mix. Revegetation plans would identify, where applicable, the need for mulching, salvaging, topsoiling, and other necessary treatments to promote successful plant establishment (page 37).
- During final design, the Arizona Department of Transportation Natural Resources Section would survey the project area for invasive species. If invasive species were found, the Arizona Department of Transportation Natural Resources Section would treat these species according to an invasive species management plan and any necessary treatments would continue following completion of construction (page 38).
- During final design, the variable-width median and roadway centerline would be located to minimize visual impacts and maximize travelers' experience within the Joshua Forest Scenic Road (page 40).
- Vegetation within the median area would be protected in-place to the extent possible in areas where the median width would be greater than 84 feet (page 40).
- The cottonwood trees located in the vicinity of milepost 166.8 would be protected in-place (page 40).
- Seeding of disturbed areas would occur in a progressive manner as the slopes were completed (page 40).
- Newly exposed rock faces would be shaped to blend with natural rock features by incorporating characteristics of the adjacent natural rock to include color, scale, shape, slope, and fracturing to the extent that is practical and feasible as identified through geotechnical testing and constructability reviews (page 40).
- Rock outcrops would be left in place after construction if they were determined to be stable; would blend into the surrounding terrain; and would not create a hazard to the traveling public, interfere with construction, or look out of place in the natural landscape (page 40).
- At the intersections of cuts and natural grades, slopes would be adjusted and warped to flow into each other or transition into the natural ground surfaces without noticeable breaks (page 40).
- Cut and fill slopes would be designed with varied slope ratios to leave an irregular, undulating, or roughened appearance rather than a uniform grade to simulate the terrain of the surrounding area. The slope ratios would vary from the top to the bottom of the slope face and from station to station (page 41).

- To avoid retaining uncharacteristic and unnatural landforms resulting from construction, the project plans would indicate remnants of landforms to be removed completely (page 41).
- Any riprap material would blend with the surrounding rock and exposed soil color (page 41).
- Erosion control matting would be composed of a natural, earth-tone material (page 41).
- During final design, the Arizona Department of Transportation would evaluate the use of staining exposed rock to reduce the color contrast with the existing landscape (page 41).
- Bridges, concrete barriers, retaining walls, and highly visible culvert headwalls and endwalls would be constructed with color and/or texture qualities that blend with the existing landscape (page 41).
- Where guardrail is required, natural-appearing metal guardrail material, such as naturally weathered steel, would be installed to blend with the landscape (page 41).
- During final design, copies of the construction documents would be provided to the Parkway, Historic, and Scenic Roads Advisory Committee for review and comment (page 41).
- During final design, the Federal Highway Administration's Visual Prioritization Process (1994) or its equivalent would be used to identify site-specific measures to reduce impacts to visual resources (page 41).
- All asphalt not reused as part of the project would be removed from the site or incorporated into roadway embankments under a minimum of 3-foot cover, and the roadbed would be reshaped, scarified, and revegetated. All abandoned sections of old roadway would be obliterated and made to blend with the existing landscape (page 41).
- Within the designated limits of the Joshua Forest Scenic Road, signing and other roadside elements, such as reflectors, delineators, and object markers, would be limited to those essential to ensure efficient traffic operations (page 41).
- If possible, any new roadway signs would be placed to avoid obstructing northbound motorists' views of the Shiprock formation between mileposts 166.0 and 164.0. The Arizona Department of Transportation would field-verify the placement of roadway signs before installation (page 41).
- An Initial Site Assessment would be conducted during final design to assess hazardous materials concerns associated with right-of-way acquisition at the US 93/State Route 71 junction. If necessary, remedial measures would be implemented based on the results of the assessment (page 47).
- During final design, the Arizona Department of Transportation would conduct assessments to determine the presence of asbestos within any bridge structure that would be altered or modified as a result of construction. The Arizona Department of Transportation would also conduct assessments to determine the presence of Resource Conservation and Recovery Act metals (e.g., lead-based paint) on these structures (page 47).
- A Programmatic Agreement to determine the appropriate treatment for sites that could not be avoided but are eligible for the National Register of Historic Places would be executed among the Arizona Department of Transportation, Federal Highway Administration, Bureau

of Land Management, and State Historic Preservation Office prior to construction. The stipulations contained in the Programmatic Agreement would be fully satisfied prior to the beginning of construction (page 49).

Prescott and Kingman District Responsibilities

- The District would submit the Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality (page 30).
- A construction notice would be provided to adjacent residents and businesses at least two weeks prior to construction (page 54).

Contractor Responsibilities

- Permanent cross-drainage structures would be installed at the earliest possible phase of construction to minimize potential erosion throughout the duration of construction (page 30).
- The contractor would submit the Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality (page 30).
- The contractor would employ a qualified biologist to provide instructional materials regarding the protection of chuckwalla and desert rosy boa to all supervisory construction personnel prior to performing any ground-disturbing activities related to construction of the project (page 33).
- A desert tortoise survey would be conducted by a qualified biologist 15 days prior to the beginning of construction in areas of suitable tortoise habitat that would be disturbed (page 34).
- Because Sonoran desert tortoises occur within the project area, the contractor would comply with the Arizona Game and Fish Department's Tortoise Handling Guidelines included in Appendix D if specimens were encountered during construction (page 34).
- The contractor would salvage and replant native plants within the area of disturbance in accordance with the plant salvage and revegetation plans (page 37).
- Disturbed areas would be seeded with a seed mix consisting of native species selected for the site and would be revegetated with salvaged native plants (page 37).
- All earth-moving and hauling equipment would be washed at the contractor's storage facility prior to entering the construction site to prevent the introduction of invasive species (page 38).
- If invasive species were found within the project area, the contractor would be required to wash all earth-moving and hauling equipment prior to leaving the construction site in order to prevent the spread of invasive species to uncontaminated areas (page 38).
- The contractor would stake the clearing limits for Arizona Department of Transportation Engineer's approval prior to the start of clearing. These limits would be irregular where possible, and straight clearing lines would be avoided by varying the width of the area to be

cleared or by leaving selected clusters of vegetation near the edge of the clearing limits (page 40).

- The contractor would remove trees only when specifically authorized to do so by the Arizona Department of Transportation Engineer and would protect in-place the vegetation outside the specified clearing limits (page 40).
- Vegetation within the median area would be protected in-place to the extent possible in areas where the median width would be greater than 84 feet (page 40).
- The contractor would protect in-place the cottonwood trees located in the vicinity of milepost 166.8 (page 40).
- Seeding of disturbed areas would occur in a progressive manner as the slopes were completed (page 40).
- Any riprap material would blend with the surrounding rock and exposed soil color (page 41).
- Erosion control matting would be composed of a natural, earth-tone material (page 41).
- The contractor would protect in-place existing rock and landforms outside the clear zone during construction (page 41).
- All asphalt not reused as part of the project would be removed from the site or incorporated into roadway embankments under a minimum of 3-foot cover, and the roadbed would be reshaped, scarified, and revegetated. All abandoned sections of old roadway would be obliterated and made to blend with the existing landscape (page 41).
- If asbestos and/or heavy-metal materials were found as a result of the assessments of bridge structures conducted by the Arizona Department of Transportation, the contractor would be required to prepare a plan detailing the proper procedures for the demolition or modification of the structures and the disposal or abatement of the asbestos and/or heavy-metal materials. In addition, the contractor would obtain any permits required for demolition of the structures or disposal of the asbestos or heavy-metal materials (page 47).

INTRODUCTION

In 1992, the Arizona Department of Transportation (ADOT) completed a corridor study for US 93 from Wickenburg to Kingman and recommended capacity and design improvements along the length of the corridor to accommodate projected future traffic volumes (ADOT 1992). The purpose of the study was to develop a long-range plan to improve US 93 to meet the capacity, operational, and safety needs of the traveling public.

In 1999, ADOT initiated a study of improvements to US 93 from the US 60/State Route (SR) 74 intersection to the Santa Maria River. This study was subsequently divided into three interrelated US 93 improvement projects: improvements from the SR 89 junction to the Santa Maria River, a bypass around Wickenburg, and an Interim Improvement Project in downtown Wickenburg. The proposed improvements to US 93 from the US 93/SR 89 junction to the Santa Maria River are the subject of this Draft Environmental Assessment (DEA). The Federal Highway Administration (FHWA) issued a Finding of No Significant Impact for the Interim Improvement Project in downtown Wickenburg on October 3, 2003. The bypass around Wickenburg would be addressed in a future environmental document.

This document has been prepared, concurrent with a location/design concept study, to document the development of feasible alternatives for the proposed project. This DEA assesses the potential social, economic, and environmental impacts associated with the preferred alternative and the No Action Alternative. In addition, this document summarizes the alternatives development process, explains the rationale for eliminating or recommending specific alternatives, and summarizes the public participation process.

PROJECT PURPOSE AND NEED

Location

The proposed project area begins at the US 93/SR 89 junction and extends 32 miles northwest on US 93 to the Santa Maria River within Yavapai County, Arizona (Figures 1 and 2). The southern terminus is located approximately four miles northwest of Wickenburg at milepost (MP) 193.5, and the northern terminus is located just south of the Santa Maria River at MP 161.5.

Background and Overview

US 93 is the primary highway route linking the metropolitan Phoenix area to northwest Arizona and beyond. The highway provides regional service to residents and commercial traffic between Wickenburg and Kingman, supports recreational traffic associated with the Colorado River, and provides access to the gaming industries of Laughlin and Las Vegas, Nevada. The highway also serves as a commercial route between metropolitan Phoenix and I-40. US 93 is part of the National Highway System and has been designated as a North American Free Trade Agreement (NAFTA) highway corridor. Traffic volumes along the route have continually increased over the years due to growth in the region. Due to its designation as a NAFTA route, traffic volumes can be expected to increase rapidly in the near future, particularly for long-haul truck traffic.

Within the project area, US 93 is generally a two-lane rural highway with one 12-foot (ft) travel lane in each direction. However, the existing roadway includes a four-lane divided section from the southern project limit to just north of the US 93/SR 89 junction, and a four-lane undivided roadway section from MP 169.2 to MP 167.7. In addition, passing lanes are found in the following locations:

- MP 181.8 to MP 180.8, northbound (NB)
- MP 180.0 to MP 178.9, southbound (SB)
- MP 175.6 to MP 174.3, SB
- MP 173.5 to MP 172.7, NB

Paved shoulder widths vary from 0.5 to 8 ft. The posted speed limit is 65 miles per hour (mph) throughout the project area, except in the vicinity of the US 93/SR 89 junction, where the posted speed limit is 55 mph.

The terrain within the project area varies from level (MP 193.5 to MP 177.0) to gently rolling (MP 177.0 to MP 161.5). The property adjacent to the highway is undeveloped except for an area of residential development north of SR 89, commercial development at the US 93/SR 71 junction, isolated ranch turnouts, and a few public roads. Most of the property in the project vicinity is owned by the Arizona State Land Department (ASLD), although there are lands managed by the Bureau of Land Management (BLM) in the northern portion of the project area, and several small parcels along the roadway are privately owned.

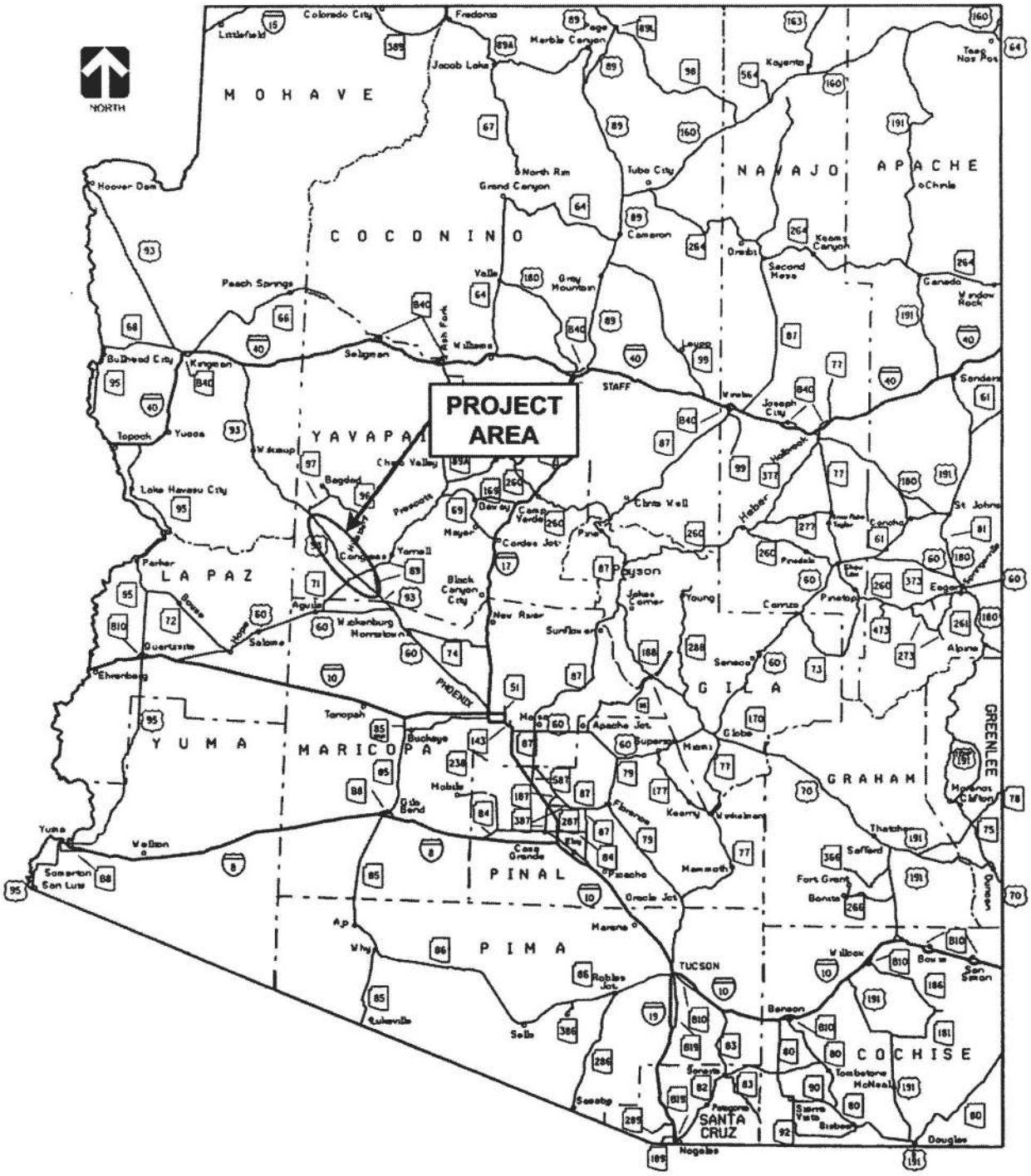


Figure 1 – State Map

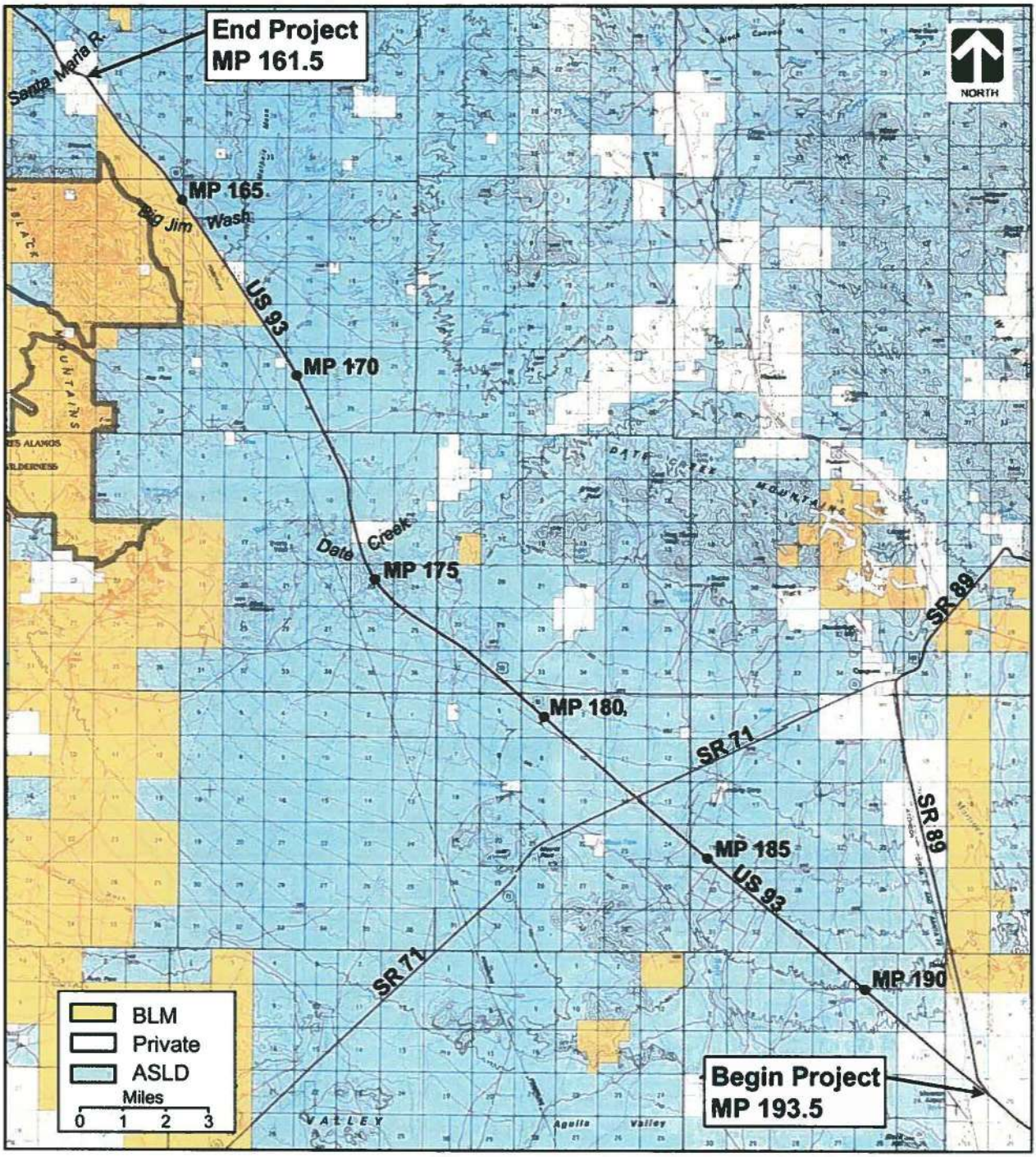


Figure 2 – Project Vicinity Map

The northern portion of the project area is designated as the Joshua Forest Scenic Road. The scenic highway designation begins at MP 180.0 and extends north beyond the project limits to MP 126.5.

Purpose and Need

The project's purpose is to improve traffic operations on US 93 by providing adequate capacity for current and projected traffic volumes, improving passing opportunities, and reducing the frequency and severity of accidents, including the potential for head-on collisions. Traffic studies were conducted to predict future traffic volumes, analyze traffic operations, determine accident frequencies, and recommend the requirements needed to increase the capacity and achieve improved traffic operations in the project area. These studies support the need to construct a four-lane divided facility within the project area.

Traffic Data

Traffic data from 2000 is used as the baseline to reflect existing conditions. For planning purposes, the project would be designed to have a useful life extending through at least 2025, defined as the design year. ADOT measured the 2000 average daily traffic (ADT) based on traffic loop counters located at MP 194.1, MP 188.3, and MP 169.0. Existing and projected traffic volumes within the project area are summarized in Table 1. The 2000 ADT ranged from 6,000 to 6,600 vehicles per day (vpd), and the 2025 ADT is projected to range from 8,900 to 9,400 vpd.

Table 1 – Traffic Volumes

Location	*MP Limits*	*2000 ADT*	*2025 ADT*	*Annual Growth Rate*
Southern project limit to US 93/SR 71 junction	MP 193.5 - MP 182.9	6,600 vpd	9,400	1.42%
US 93/SR 71 junction to northern project limit	MP 182.9 - MP 161.5	6,000 vpd	8,900	1.60%

Level of Service

Level of service (LOS) is a qualitative measure that describes traffic operational conditions in terms of speed, travel time, freedom to maneuver, comfort, convenience, traffic interruptions, and safety. Six classifications are used to define LOS, designated by the letters A through F (Figure 3). LOS A represents the best operating conditions, while LOS F represents heavily congested flow with traffic demand exceeding highway capacity. The goal for this analysis is to determine what improvements would need to be made in order to achieve LOS B or better throughout the project area in the design year.

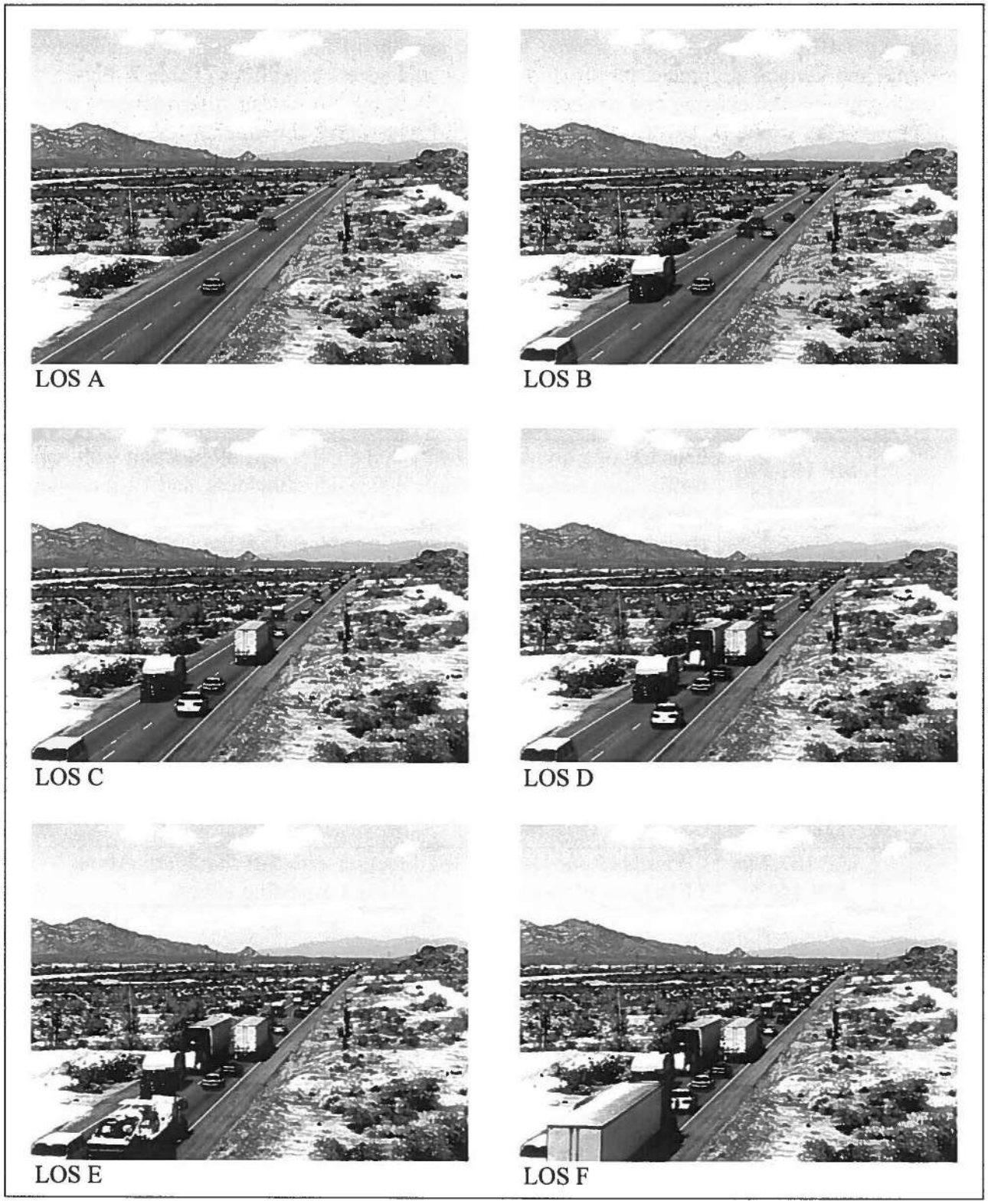


Figure 3 – Level of Service Illustration

To analyze traffic operations, the corridor was separated into six traffic analysis segments based on existing traffic characteristics, roadway widths, number of lanes, functional classification, horizontal and vertical alignment, terrain, topography, and access conditions (Table 2, Figure 4). For each segment, the existing and projected LOS for both the No Action Alternative (in which no improvements would be constructed) and the Build Alternative (in which a four-lane facility would be constructed) were compared (Table 3). The analysis showed that Segments 2, 3, 4, and 6 experienced LOS D or E in 2000, and LOS E or F is projected for these segments in 2025 if no improvements were constructed. The existing factors that reduce LOS for the study area include a high proportion of trucks and recreational vehicles (28 and 1.5 percent, respectively) as well as limited passing opportunities. The analysis showed that all segments of the project area would operate at LOS A in 2025 if a four-lane divided roadway were constructed.

Table 2 – Traffic Analysis Segments

Segment	*MP Limits*	*Description*
1	MP 193.5 to MP 193.2	Consists of a divided highway at the US 93/SR 89 junction with two traffic lanes in each direction, 4-ft inside shoulders, and 10-ft outside shoulders.
2	MP 193.2 to MP 182.9	Begins at the US 93/SR 89 junction and ends at the US 93/SR 71 junction. Includes one lane in each direction and 8-ft shoulders. Approximately 15 percent of this segment is within no-passing zones.
3	MP 182.9 to MP 177.0	Begins at the US 93/SR 71 junction and consists of one lane in each direction with 8-ft shoulders. Includes two passing lane sections. About 19 percent of this segment is within no-passing zones.
4	MP 177.0 to MP 169.2	Consists of one lane in each direction with 5-ft shoulders. Includes two passing lane sections. About 18 percent of this segment is within no-passing zones.
5	MP 169.2 to MP 167.7	Consists of a four-lane undivided roadway with 5-ft shoulders.
6	MP 167.7 to MP 161.5	Consists of one lane in each direction with 5-ft shoulders. About 11 percent of this segment is within no-passing zones.

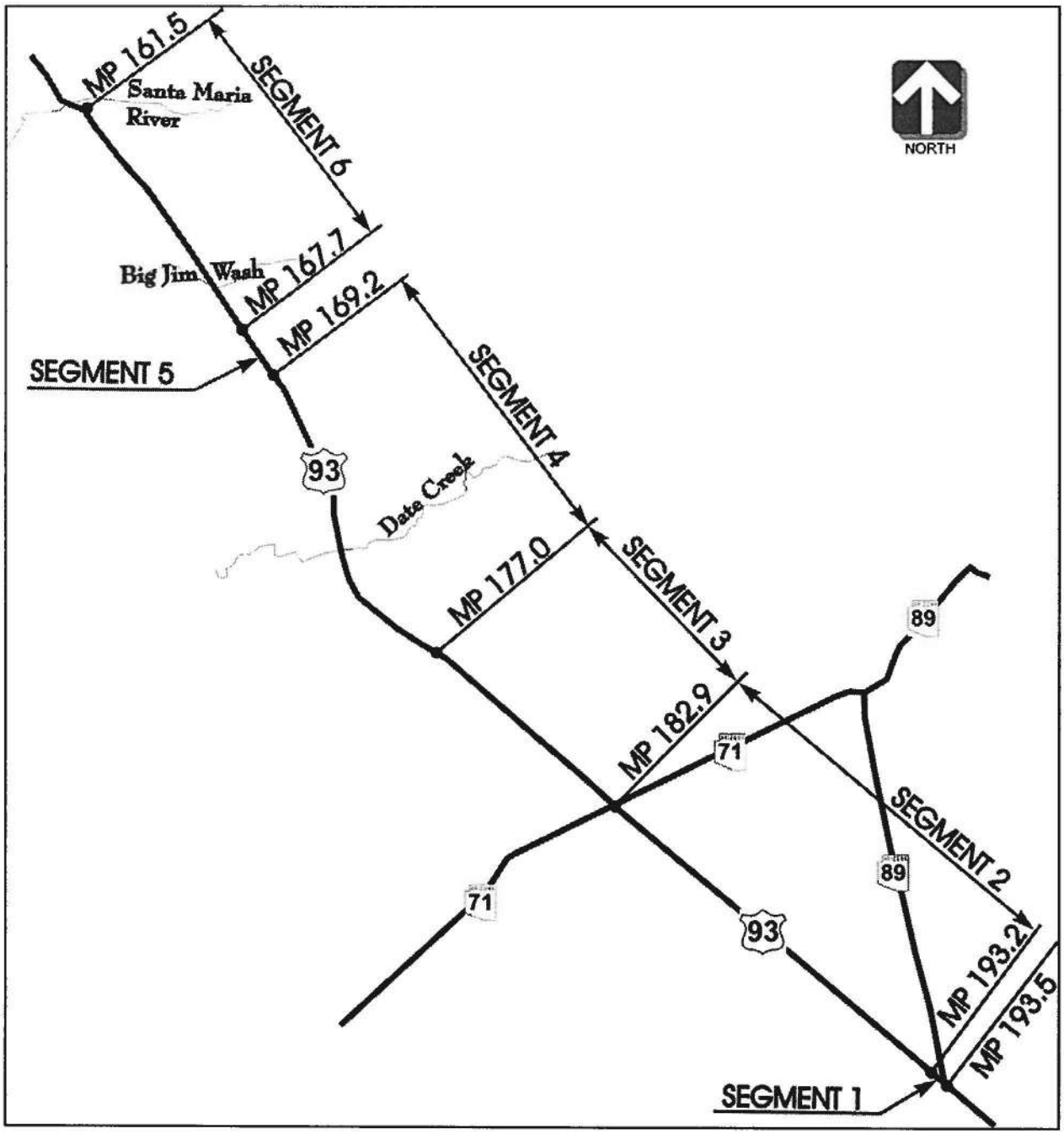


Figure 4 – Traffic Analysis Segments

Table 3 – Levels of Service

Segment	*Existing LOS (2000)*	*Existing Number of Lanes*	*LOS - No Action (2025)*	*LOS - Build Alternative (2025)*
1	A	4	A	A
2	D	2	E	A
3	D (D/A*)	2 (3)	E (E/A*)	A
4	E (E/A*)	2 (3)	F (F/A*)	A
5	A	4	A	A
6	E	2	F	A

* LOS in passing lane sections for each direction (one lane/passing lane)

Accident Analysis

Accident data from May 1997 to April 2002 were provided by the ADOT Traffic Engineering Group. The average accident rate for the study area ranged from 0.42 to 0.95 accidents per million vehicle miles (acc/MVM) (Table 4). For comparison, the statewide average accident rate for two-lane rural highways is 1.02 acc/MVM.

Table 4 – Accident History by Segment, 1997 to 2002

Segment	*Length (miles)*	*Total No. of Accidents*	*Accident Rate (acc/MVM)*
1	0.68	6	0.73
2	10.34	52	0.42
3	5.84	42	0.66
4	7.86	63	0.73
5	1.44	15	0.95
6	6.04	40	0.60

Accident rates were calculated by MP location based on the number of reported accidents within each one-mile section and the historical traffic volumes at that location. As shown in Figure 5, two locations within the project area, MP 172 and MP 166, have an accident rate above the state average. At MP 172, the accident rate was 1.46 acc/MVM. This area includes a rest stop on the inside of a horizontal curve. At MP 166, the accident rate was 1.73 acc/MVM. This area has a long, continuous 3- to 5-percent grade.

Table 5 summarizes selected types of accidents that occurred in each segment of US 93 from May 1997 to April 2002. The most common type of accident within the study limits was the single-vehicle accident, which accounts for approximately 60 percent of the total number of accidents. Approximately 17 percent of the single-vehicle accidents involved wild game or livestock.

Figure 5 – Accident Rate by Milepost, 1997 to 2000

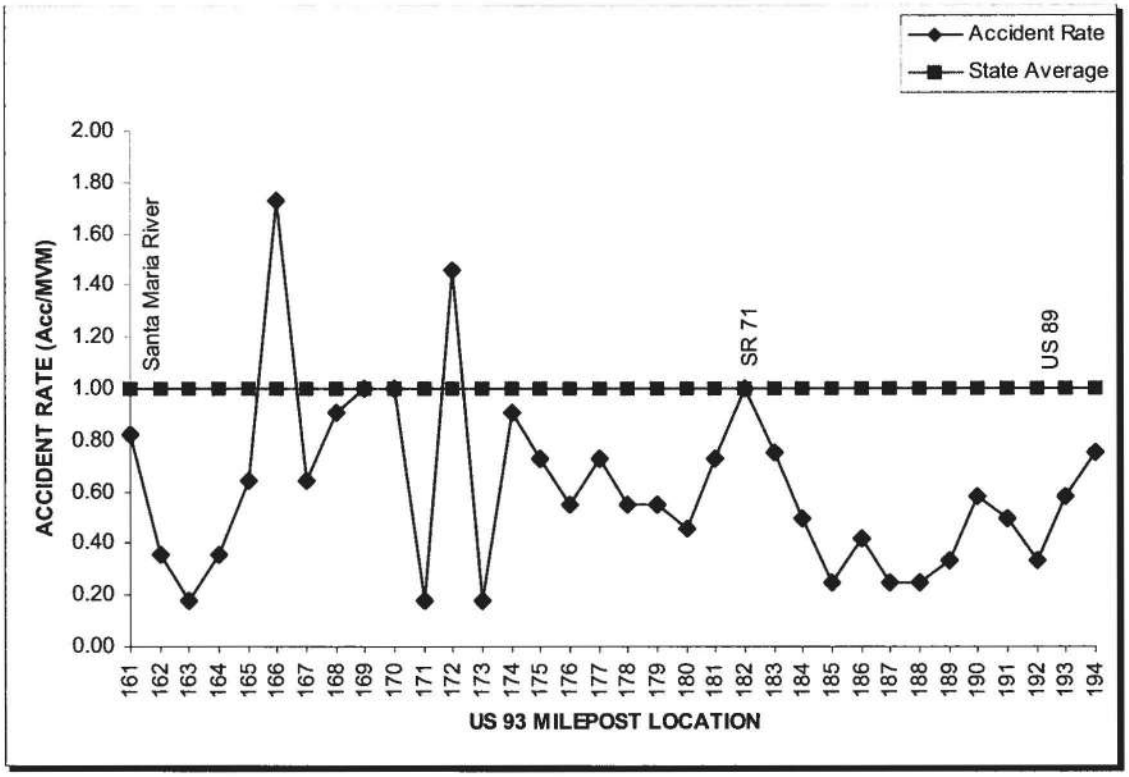


Table 5 – Accident Type by Segment, 1997 to 2002

Accident Type	*Segment*						*Total*
	1	*2*	*3*	*4*	*5*	*6*	
Single-vehicle	1	31	27	40	7	25	131
Sideswipe	1	6	2	8	0	6	23
Collision	0	5	2	3	0	3	13
Rear End	0	8	9	8	7	6	38
Head On	0	1	2	4	1	0	8
Left Turn	1	0	0	0	0	0	1
Angle	3	1	0	0	0	0	4
Total Accidents	6	52	42	63	15	40	218
Total Injuries	4	21	44	47	3	28	147
Total Fatalities	0	2	3	4	3	0	12

Traffic Study Recommendations

The traffic analysis showed that construction of the Build Alternatives analyzed would improve the roadway's capacity and traffic operations. Based on the LOS and accident analyses, the traffic analysis report prepared for this study recommended reconstruction of US 93 to a four-lane divided roadway for the entire length of the project area because a four-lane divided facility

would provide increased passing opportunities, separate opposing traffic, control turning traffic through the use of median crossovers, accommodate access control, and improve operational efficiency (ADOT 2002e).

Conformance with Regulations, Land Use Plans, and Other Plans

The project would conform with regulations stipulated in Title 23 of the Code of Federal Regulations (CFR) Part 771, Endangered Species Act, Clean Water Act, Clean Air Act, and associated amendments to these acts. Yavapai County and Northern Arizona Council of Governments (NACOG) planning documents were reviewed to determine the conformance of the proposed US 93 improvements with adopted plans pertaining to the project area. It was determined that the proposed improvements would be consistent with the Yavapai County General Plan, the Regional Transportation Policy Plan, and the Water Quality Management Plan. In addition, construction of the proposed project would comply with federal, state, and local regulations and the terms and conditions of several permits, as shown in Table 6.

Table 6 – Required Permits

Permit Type	*Jurisdiction*
Section 404 Nationwide Permit (NWP) No. 14	US Army Corps of Engineers (COE)
Section 401 Water Quality Certification	Arizona Department of Environmental Quality (ADEQ)
Arizona Pollutant Discharge Elimination System (AZPDES)	ADEQ
Floodplain Construction Permit	Yavapai County Flood Control District (YCFCD)

General Project Schedule

The ADOT construction program for fiscal years (FY) 2004 to 2008 includes funding for design of one project within the study area in FY 2005. The design segment has not yet been determined. Construction has not yet been programmed.

Issues Eliminated from Detailed Study

Based on early coordination and a review of the project area, the proposed project would have no impact on wild and scenic rivers, prime and unique farm land, sole source aquifers, or wetlands because these features do not occur within the project area.

ALTERNATIVES

Evaluation Criteria and Development of Alternatives

Criteria for Evaluating Alternatives

The development of improvement alternatives for the project area incorporated input from agency representatives, ADOT technical staff, and the public. The evaluation criteria include design, environmental, and socioeconomic considerations that were developed during the agency and public involvement process. The following factors were identified for comparative evaluation of the improvement alternatives:

- Roadway geometrics
- Use of existing roadway
- Right-of-way (R/W) requirements
- Traffic capacity
- Access control
- Drainage
- Cost
- Constructability and traffic control
- Impacts on improved properties
- Wildlife habitat
- Cultural resources
- Visual impacts

Development of Alternatives

All build alternatives under consideration consist of a four-lane divided roadway, with two lanes in each direction. This configuration is desirable because it would:

- Provide the capacity needed to accommodate projected traffic volumes and improve traffic operations
- Separate opposing directions of traffic
- Provide opportunities to retain native vegetation in the median area, which would be visually consistent with the character of the rural area
- Minimize impacts to the landscape by incorporating independent roadway alignments that would minimize cuts and fills in areas with rolling terrain
- Use the existing roadway to carry traffic during construction
- Allow the re-use of the existing roadway alignment for one direction of travel

During the project scoping phase, the possibility of developing alternatives outside of the existing highway corridor was considered. However, it was determined that constructing improvements within the existing US 93 corridor would accomplish most of the goals established by the project stakeholders, such as maximizing the use of the existing roadway, minimizing encroachment into adjacent properties, and avoiding impacts to cultural and natural resources. These findings were similar to those previously documented in the US 93, Wickenburg to Kingman corridor study report (ADOT 1992).

No alternatives were developed outside of the existing corridor since there were no compelling reasons to relocate the highway in a new corridor and the alternatives identified within the existing corridor would meet the project's purpose and need. Other factors that influenced this decision include:

- A new corridor would not make use of the existing roadway and would require substantially more new R/W.
- The existing roadway's vertical and horizontal alignments largely meet current standards and can be retained for use without the need for major upgrades or modification.
- Maintaining the existing roadway for one direction of travel would reduce impacts on adjacent properties and retain access to existing driveways and local roads.
- Utilizing the existing corridor would require less disturbance of wildlife habitat and native vegetation, washes and floodplains, and cultural resources than constructing a new, four-lane divided facility within a new corridor.
- Constructing one new, two-lane roadway for one direction of travel would incur substantially lower costs than constructing two new roadway sections on an independent alignment.

All build alternatives under consideration consist of using the existing US 93 roadway for one direction of travel and constructing a new roadway to accommodate the opposite direction of travel. The determination of whether the new lanes would be constructed on the east or west side of the existing roadway was made based on an analysis of conditions throughout the length of the project. Factors considered in the analysis include the following:

- Maximize the use of the existing R/W
- Minimize impacts to improved properties adjacent to the highway
- Minimize environmental impacts
- Minimize impacts on existing drainage facilities and natural drainage features
- Enhance aesthetic values and preserve natural features

Additional information on the cross sections considered and the design concept alternatives evaluated in the Location/Design Concept Report (ADOT 2004d) for this project is provided in Appendix A.

Study Segments

In order to systematically describe and analyze roadway improvement alternatives, the corridor was subdivided into three study segments according to the defining characteristics of the roadway setting (Figure 6). Segment A (MP 193.5 to MP 190.5) consists of a low-density, rural residential area with level terrain, Segment B (MP 190.5 to MP 180.0) consists of undeveloped rural areas with level terrain, and Segment C (MP 180.0 to MP 161.5) encompasses the Joshua Forest Scenic Road south of the Santa Maria River with rolling terrain.

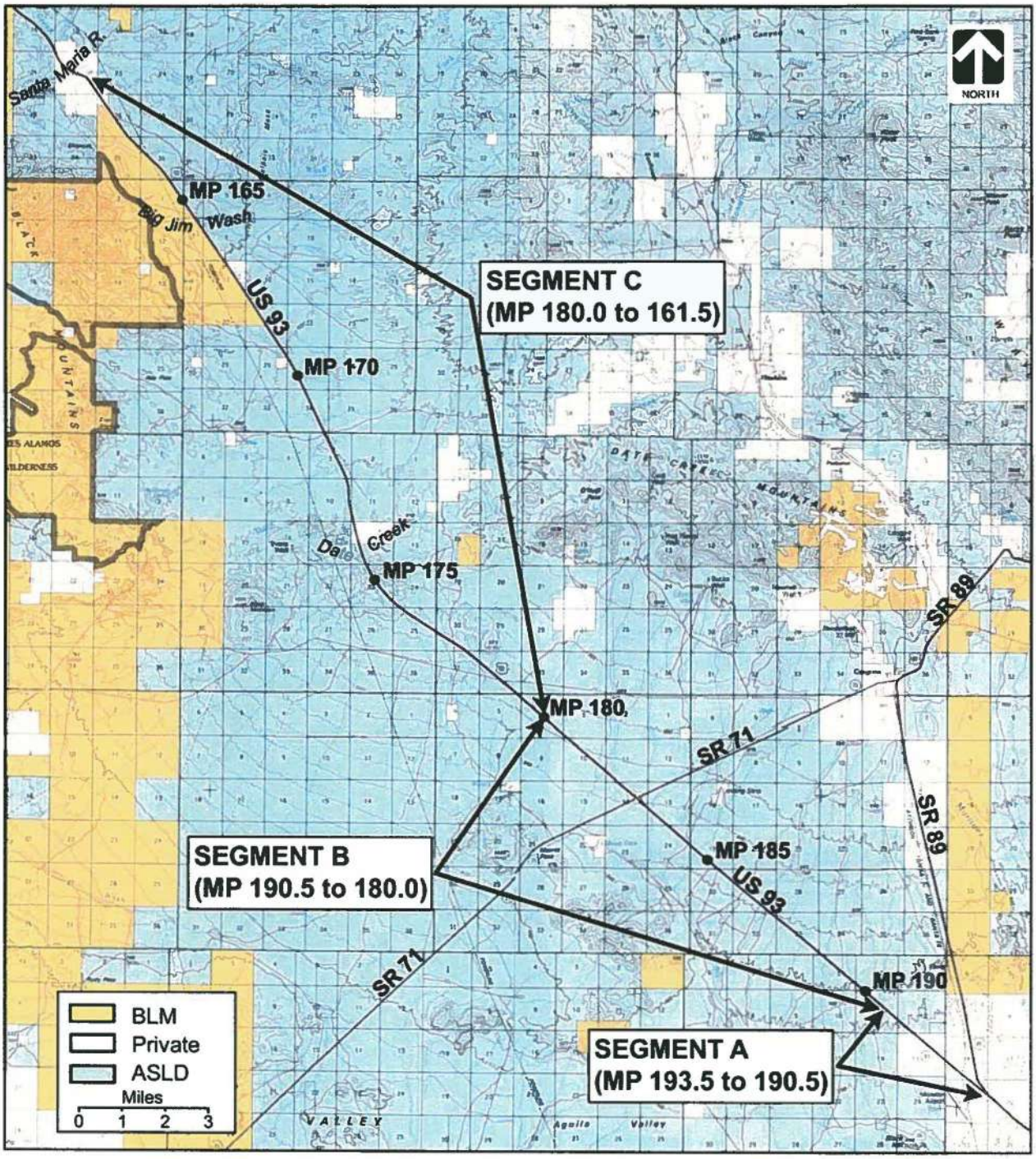


Figure 6 – Study Segments

No Action Alternative

The No Action Alternative assumes that no major improvements would be made to US 93 within the project area. This alternative would result in no apparent change to the environment along the project corridor. Under this alternative, traffic flow within the study area would continue to deteriorate due to increasing congestion. This congestion would be worsened in the future with the increasing traffic volumes generated by ongoing development, regional growth, and commercial trucking. As a result, the No Action Alternative would not:

- Increase the capacity of the existing roadway
- Separate opposing directions of traffic
- Enhance passing opportunities
- Reduce the potential for head-on collisions
- Improve traffic operations

Alternatives Considered but Eliminated from Further Consideration

The alternative development and evaluation process identified disadvantages for some alternatives when compared to others. The alternatives with comparative disadvantages were eliminated from consideration and detailed analysis. The alternatives considered but eliminated from further consideration for each study segment are described below.

Segment A (MP 193.5 to MP 190.5)

Alternative A-2 (Figure 7) would consist of using the existing roadway for SB traffic and constructing a new, parallel two-lane roadway for NB traffic to the east of existing US 93. This alternative was eliminated from further consideration because:

- The Vista Royale residential development is located adjacent to US 93 between MP 192.3 and MP 191.4. Several residences are located approximately 100 ft to the east of the existing roadway, while residences on the west side of US 93 are located over 150 ft from the existing roadway. Construction of a new, two-lane roadway to the east side of existing US 93 would result in greater impacts on the residences east of the roadway than would result from constructing the new lanes to the west.
- The existing R/W is substantially wider on the west side of US 93 than on the east side. Constructing the new lanes to the west would maximize the use of the existing ADOT R/W and reduce the need for acquisition of new R/W. The larger amount of new R/W required would result in higher costs for Alternative A-2 compared to widening to the west.
- From MP 192.0 to MP 191.2, several existing turnouts serving individual residences on the east side of US 93 create conflicts between turning traffic and through-traffic. A frontage road on the east side of US 93 would be needed to consolidate traffic in this area. If the new lanes were constructed to the east of the existing US 93 roadway, construction of a frontage road would likely require the displacement of several residents in this area. These displacements would be largely avoided by widening US 93 to the west.

Compared to widening to the west of the existing roadway (Alternative A-1, page 21), Alternative A-2 would be disadvantageous in terms of R/W acquisition, impacts on improved properties, and cost. This alternative would be similar to widening to the west in terms of roadway geometrics, use of the existing roadway, traffic capacity, access control, drainage, constructability/traffic control, and impacts on wildlife habitat, cultural resources, and visual setting.

Segment B (MP 190.5 to MP 180.0)

Alternative B-2 (Figure 7) would consist of using the existing roadway for SB traffic and constructing a new, parallel two-lane roadway for NB traffic to the east of existing US 93. This alternative was eliminated from further consideration because the existing R/W is substantially wider on the west side of US 93 than on the east side, and there would be no advantage to constructing the new lanes to the east of US 93. The existing R/W to the west of the existing roadway would accommodate most of the space required for the new roadway; therefore, constructing the new lanes to the west of the existing roadway would require substantially less new R/W than constructing the lanes to the east, thereby minimizing

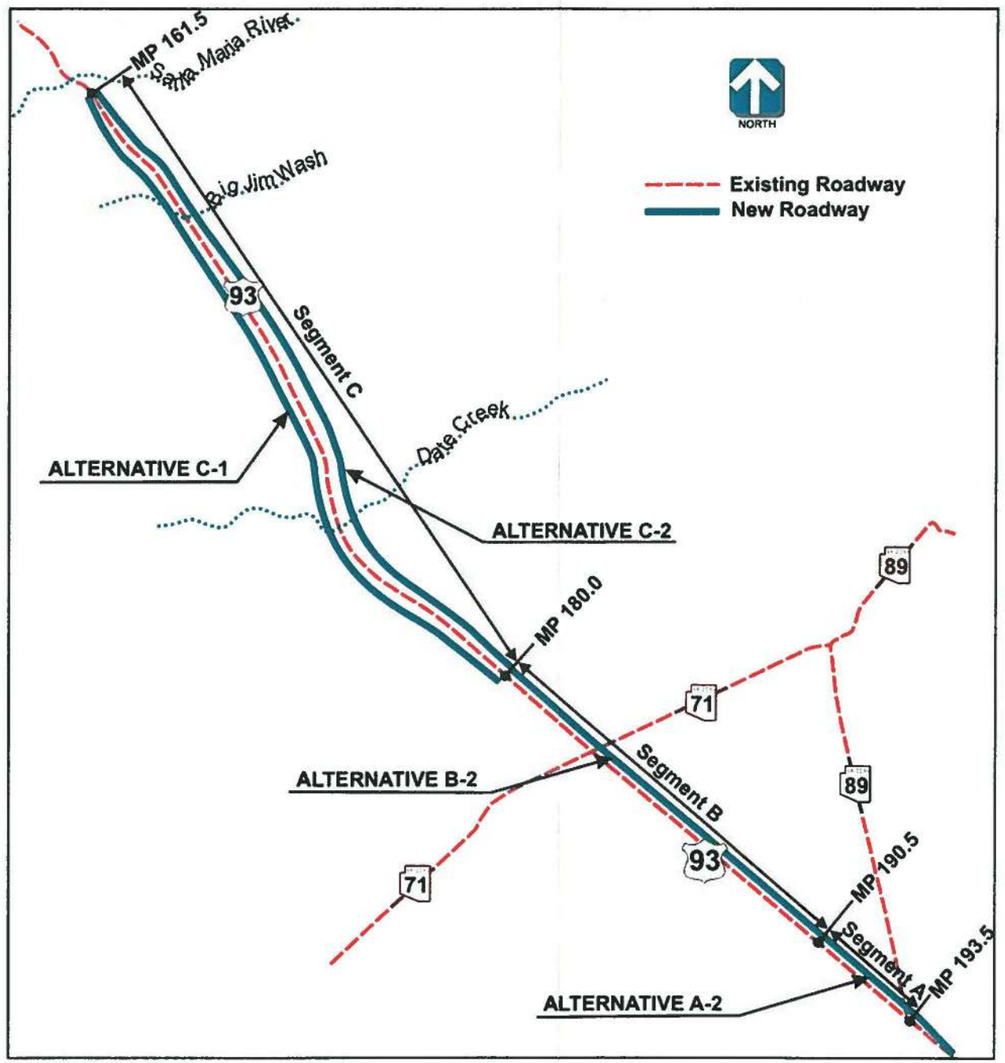


Figure 7 – Alternatives Considered but Eliminated from Further Consideration

impacts on adjacent properties. In addition, the larger amount of new R/W required would result in higher costs for Alternative B-2 compared to widening to the west.

Compared to widening to the west of the existing roadway (Alternative B-1, page 21), Alternative B-2 would be disadvantageous in terms of R/W requirements and cost. This alternative would be similar to widening to the west in terms of roadway geometrics, use of the existing roadway, traffic capacity, access control, drainage, constructability/traffic control, impacts to improved properties, and impacts on wildlife habitat, cultural resources, and visual setting.

Segment C (MP 180.0 to MP 161.5)

Alternative C-1 (Figure 7) would consist of using the existing roadway for NB traffic and constructing a new, two-lane roadway for SB traffic to the west of existing US 93. Alternative C-2 (Figure 7) would consist of using the existing roadway for SB traffic and constructing a new, two-lane roadway for NB traffic to the east of existing US 93. Alternatives C-1 and C-2 were eliminated from further consideration because:

- Restricting the location of the new lanes to the east or west side of the existing roadway for the full length of Segment C would limit the ability to fit the new roadway to the rolling terrain and existing drainage features.
- Restricting the location of the new lanes to the east or west side of the existing roadway for the full length of Segment C would reduce opportunities to avoid visual features and retain natural vegetation.
- Alternatives C-1 and C-2 would have higher costs than constructing the new lanes on alternating sides of the existing roadway because constructing the new alignment to best fit the terrain would be more efficient than restricting construction to one side of the existing roadway.

Compared to constructing the new lanes on alternating sides of the existing roadway to best fit the terrain and enhance scenic values (as described on page 23 for Alternative C-3), Alternatives C-1 and C-2 would be disadvantageous in terms of drainage, cost, and impacts to wildlife habitat, cultural resources, and visual setting. These alternatives would be similar to constructing the new lanes on alternating sides of the existing roadway in terms of roadway geometrics, use of the existing roadway, R/W requirements, traffic capacity, access control, constructability/traffic control, and impacts on improved properties.

Preferred Alternative

The preferred alternative would consist of constructing Alternatives A-1, B-1, and C-3 (Figure 8), which are described in detail below.

Segment A (MP 193.5 to MP 190.5)

Alternative A-1 (Figure 8) would consist of using the existing roadway for NB traffic and constructing a new, parallel two-lane roadway for SB traffic to the west of existing US 93. This alternative is preferred for Segment A because it would minimize impacts to improved properties, reduce project costs, and maximize the use of the existing ADOT R/W compared to Alternative A-2 (page 17). This alternative is similar to Alternative A-2 in terms of roadway geometrics, use of the existing roadway, traffic capacity, access control, drainage, constructability/traffic control, and impacts on wildlife habitat, cultural resources, and visual setting.

Alternative A-1 would include the following features (illustrated in Appendix B):

- A new railroad overpass would be constructed for the SB lanes west of the existing overpass at MP 192.9. The existing overpass would remain in place for the NB roadway.
- A new, two-way frontage road would be constructed along the east side of US 93 from Quail Run Road (MP 192.6) to MP 191.5 to consolidate several individual residential turnouts and reduce conflicts with turning vehicles.
- Intersections with median crossovers would be provided to connect the frontage road to US 93 at Quail Run Road (MP 192.6), Caballero Drive (MP 192.1), and opposite the emergency access road to the Vista Royale residential development (MP 191.5).
- A portion of Moreton Road (MP 192.4) would be realigned to provide a perpendicular, right-in/right-out intersection with the new SB lanes.
- The intersection with Nine Iron Ranch Road (MP 192.2) would be retained as a right-in/right-out intersection with the NB lanes.
- A portion of the emergency access road to the Vista Royale residential development (MP 191.5) would be realigned to provide a perpendicular intersection with US 93.

Segment B (MP 190.5 to MP 180.0)

Alternative B-1 (Figure 8) would consist of using the existing roadway for NB traffic and constructing a new, parallel two-lane roadway for SB traffic to the west of existing US 93. This alternative is preferred for Segment B because it would maximize the use of the existing ADOT R/W and minimize project costs. Alternative B-1 would be similar to Alternative B-2 (page 17) in terms of roadway geometrics, use of the existing roadway, traffic capacity, access control, drainage, constructability/traffic control, and impacts on wildlife habitat, cultural resources, and visual setting.

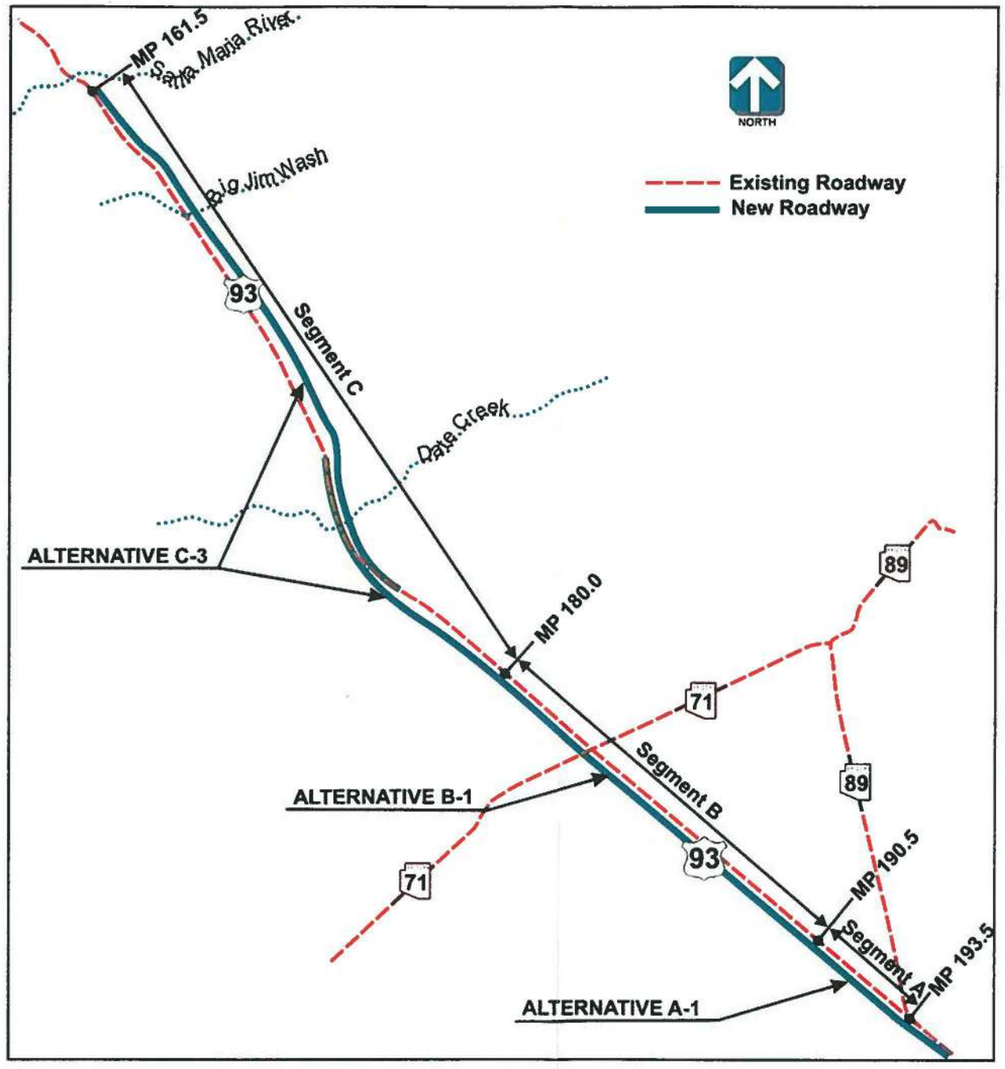


Figure 8 – Preferred Alternative

This alternative would include the following features:

- The US 93/SR 71 junction would be reconstructed to accommodate a four-lane roadway on US 93 and to provide ramps that meet current roadway design guidelines. The reconstruction would reverse the existing grade separation, resulting in the SR 71 roadway going over US 93 on an overpass structure. The infield areas between the ramps and mainline would consist of small retention basins within which salvaged vegetation would be planted.
- Several shallow basins would be excavated on the west side of the new SB roadway to provide material for the roadway embankment. The appearance of these basins would be mitigated by seeding and transplanting salvaged plants and constructing slopes with varied slope ratios, warping, or other measures to maintain a natural look.
- Minor access points would be accommodated with right-in/right-out access or median crossovers.

Segment C (MP 180.0 to MP 161.5)

Alternative C-3 (Figure 8) would consist of using the existing roadway for one direction of travel and constructing a new, two-lane roadway for the opposite direction of travel, alternating the location of the new lanes as appropriate to best fit the topography and maximize retention of the scenic features of the Joshua Forest Scenic Road. The new, two-lane roadway would be constructed on the west side of the existing roadway in the southern portion of Segment C to match the roadway in Segment B. It would continue on the west side of the existing highway to approximately MP 173.0, where the new roadway would shift to the east side of the existing roadway to better fit the terrain and minimize new R/W requirements, construction costs, and impacts on private property. In this area, a portion of the existing roadway would need to be realigned and reconstructed to accommodate the transition to the new lanes. The alignment of the new lanes would continue on the east side of the existing roadway to approximately MP 162.0, where the roadway would transition to match the existing four-lane roadway at MP 161.5.

Compared to the other alternatives considered for Segment C (page 19), Alternative C-3 would be similar in terms of roadway geometrics, use of the existing roadway, R/W requirements, traffic capacity, access control, constructability/traffic control, and impacts on improved properties and wildlife habitat. This alternative is preferred for Segment C because it maximizes opportunities to enhance the visual setting of the roadway, minimizes project costs, and minimizes impacts on cultural resources.

With this alternative, the roadway would have a variable-width median as follows:

- At the southern terminus of Segment C (MP 180.0), the median would match the roadway in Segment B. The median width would increase to 176 ft at MP 178.0 to maximize the retention of Joshua trees.
- From MP 176.0 to MP 168.0, the median would vary in width from 176 to 576 ft. The variable-width median through this area would allow the preservation of natural vegetation and landforms in the median, avoid clusters of Joshua trees, best fit the rough topography, minimize impacts to waters of the US, retain the natural channel for Date Creek (MP 174.2) in the median, and avoid impacts to private property on the east side of US 93 at MP 173.3.

- From MP 168.0 to MP 165.0, the median width would be reduced to 176 ft in order to minimize impacts to Big Jim Wash (MP 165.5) and a private ranch.
- From MP 165.0 to MP 164.0, the median width would increase to 406 ft to avoid displacing a Western Area Power Administration transmission tower.
- From MP 164.0 to MP 161.5, the median width would decrease to match the existing roadway north of the project area.

Alternative C-3 would include the following features:

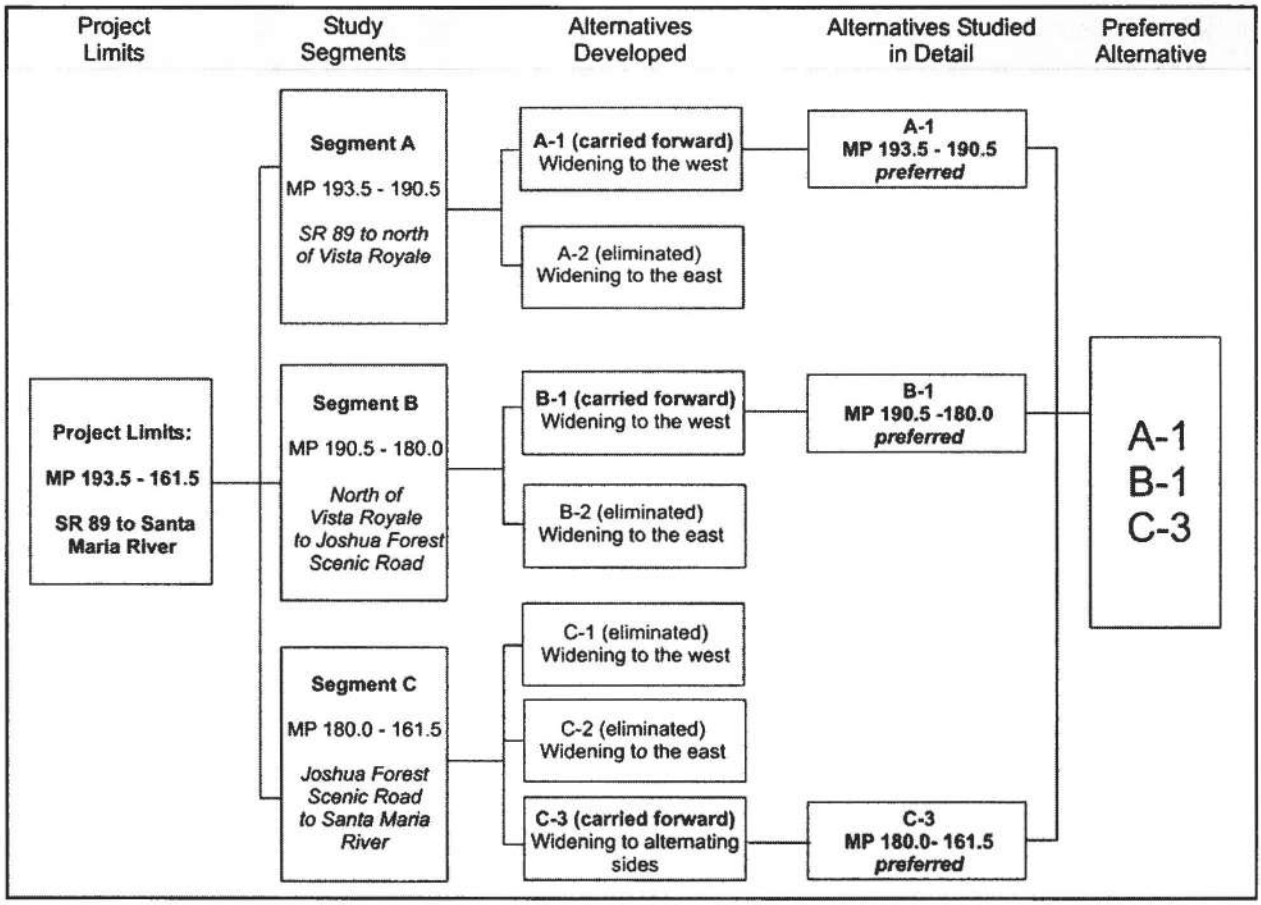
- A portion of Alamo Road (MP 178.6) would be realigned to provide a perpendicular intersection with US 93.
- A bridge would be constructed for the new SB roadway at MP 178.3. On the NB roadway, an existing 5-barrel, 10- by 4-ft concrete box culvert (CBC) would be replaced with a bridge crossing.
- A portion of a primitive road that intersects US 93 across from Date Creek Ranch Road (MP 177.4) would be realigned to provide a perpendicular intersection with US 93.
- The existing roadside table facility on the west side of US 93 at MP 172.6 would be replaced. ADOT is currently investigating alternatives to provide new parking areas and emergency phone call boxes within the project area.
- Access to ranch properties along US 93 and the network of primitive roads serving public and private land away from the highway would be maintained with right-in/right-out access or median crossovers.

Conclusion

Figure 9 summarizes the alternative development process and identifies the preferred alternative for each study segment. The preferred alternative would provide a four-lane divided facility to accommodate future traffic volumes and, compared to the alternatives that were eliminated from further consideration, would have the following benefits:

- Minimizes impacts on adjacent residential areas
- Minimizes new R/W requirements
- Maximizes opportunities to retain natural vegetation and enhance scenic elements along the Joshua Forest Scenic Road

Figure 9 – Alternatives Development Summary



AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

Terminology for Describing Impacts

In this assessment, potential impacts on each resource or environmental consideration are described in terms of intensity (negligible, minor, moderate, or major), duration (short-term or long-term), type (beneficial or adverse), and context (site-specific, local, or regional).

For the purposes of this assessment, the following definitions apply:

Negligible – the impact to the resource is barely perceptible or not measurable, and is confined to a small area
Minor – the impact to the resource is perceptible or measurable and is localized
Moderate – the impact is clearly detectable or measurable and could have appreciable effects on the resource
Major – the impact would have a substantial, highly noticeable influence on the resource
Short-term – the impact would be less than five years in duration
Long-term – the impact would be five or more years in duration

Land Ownership, Jurisdiction, and Land Use

Lands within the project area are both publicly and privately owned, as shown in Figure 2. The majority of the US 93 R/W in the project area is located on an ASLD easement with ASLD lands on both sides of the roadway. However, in the northern project area between MP 167.8 and 162.0, the US 93 R/W is located on both ASLD and BLM easements, divided at the existing roadway centerline. In this area, BLM lands are located west of the roadway centerline and ASLD lands are located to the east. Private lands are located adjacent to the project area primarily at the US 93/SR 89 and US 93/SR 71 junctions, near Date Creek, south of Big Jim Wash, and south of the Santa Maria River.

Lands under the jurisdiction of ASLD and BLM in the project vicinity are managed for cattle grazing, mining, recreation, wildlife habitat, utility corridors, and transportation. Within the private property, the existing land uses include residential, commercial, livestock grazing, and undeveloped land. The residential areas are located near the US 93/SR 89 junction in Segment A, while commercial uses are located adjacent to the US 93/SR 71 junction in Segment B. Several unoccupied mobile homes are also located at the US 93/SR 71 junction. Private lands within the project area are currently zoned for rural residential use.

Due to the new R/W required for construction of the preferred alternative, a total of 588.2 acres of land on 51 parcels would be permanently incorporated into ADOT R/W (Table 7). The preferred alternative would generally minimize impacts on adjacent land uses by following the existing roadway corridor and avoiding developed properties to the extent possible. In addition, the preferred alternative would maintain access to adjacent properties and accommodate future traffic volumes associated with continued development in the project area.

Table 7 – Acres of New Right-of-Way

Study Segment	*Private*	*BLM*	*ASLD*	*Total*
A	37.7	0.0	0.0	37.7
B	2.9	0.0	0.0	2.9
C	52.2	0.0	495.4	547.6
Total	92.8	0.0	495.4	588.2

Grazing

Much of the ASLD and BLM land within the project area is divided into grazing allotments. Seven ASLD and two BLM grazing allotments were identified in the project area adjacent to US 93. Of these, four grazing allotments, all on ASLD land located within Study Segment C, would be directly affected by construction of the preferred alternative due to R/W acquisition within the allotments (Table 8). A total of 456.8 acres, representing less than 0.4 percent of the total acreage currently included in these grazing allotments, would be incorporated into the new R/W for the preferred alternative.

To minimize impacts on adjacent land use, existing cattle crossings under US 93 would be maintained or relocated. To maintain existing cattle crossings, existing CBCs that are 6 ft in height or greater would not be downsized and would be designed to function as cattle passes where feasible. If during final design it was determined that the existing cattle passes could not be retained, ADOT would contact the affected land managing agency for information on cattle crossing needs and arrange for the development of improved crossing locations or the provision of new livestock water sources as appropriate.

Table 8 – Impacts to Grazing Allotments

Lease/Permit Holder	*Land owner*	*Location*			*Acres in allotment*	*Acres impacted*
		Township	*Range*	*Section(s)*		
Barnes	ASLD	12N	9W	36	17,707	52.0
Pingitore et al.	ASLD	11N 11N	9W 8W	1 6, 7, 8, 16, 17, and 21	40,095	125.4
Blair	ASLD	11N 10N	8W 8W	27, 28, and 34 3, 10, and 11	22,703	166.2
Knight	ASLD	10N 10N	8W 7W	14, 23, 24, and 25 30, 31, and 32	37,089	113.2
				Total	117,594	456.8

Conclusion

The preferred alternative would minimize impacts to adjacent land use by following the existing US 93 alignment, minimizing R/W take from adjacent developed properties, maintaining access to adjacent properties, maintaining or improving livestock crossings, coordinating with affected land managing agencies, and accommodating future traffic volumes associated with regional

development. Therefore, the preferred alternative would have minor, adverse, long-term, and site-specific impacts on land use.

The No Action Alternative would not require the acquisition of new R/W or construction on adjacent properties. Therefore, the No Action Alternative would have no impact on adjacent land uses or grazing allotments.

Water Quality

Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map panels for the project area were reviewed. US 93 intersects or is adjacent to the 100-year floodplain in 11 locations within the project limits (Table 9). The preferred alternative would require the extension of existing culverts, construction of new culverts, construction of new bridges, and construction of roadway embankment within the 100-year floodplain. The preferred alternative would be designed to minimize floodplain encroachments to the extent possible and ensure that the flood-carrying capacity of the drainages crossing the project area would not be impaired, as described in the project drainage report (ADOT 2003h).

Table 9 – Impacts to the 100-Year Floodplain

Location	*Wash Name*	*Impact (acres)*
MP 193.3	Unnamed tributary of Sols Wash	0.7
MP 192.6	Unnamed tributary of Sols Wash	2.1
MP 190.1	Unnamed tributary of Sols Wash	1.3
MP 184.2	Unnamed tributary of Sols Wash	1.7
MP 183.4	Unnamed tributary of Sols Wash	0.0
MP 182.2	Unnamed tributary of Sols Wash	0.6
MP 182.0	Unnamed tributary of Sols Wash	0.4
MP 181.7	Unnamed tributary of Sols Wash	0.6
MP 174.2	Date Creek	2.4
MP 166.6	Unnamed tributary of Big Jim Wash	0.9
MP 165.5	Big Jim Wash	2.1

The project was evaluated for potential impacts to the floodplain upstream and downstream of US 93, in accordance with 23 CFR 650, Subpart A, which prescribes FHWA policies and procedures for the location and hydraulic design of highway encroachments on floodplains. This regulation calls for the assessment of federally funded highway projects in terms of impacts on flood risk. Under this code, federal highway projects must avoid hazardous or incompatible use and development of floodplains; avoid longitudinal or substantial floodplain encroachment; minimize negative impacts on base flood elevations; restore and preserve natural and beneficial floodplain values; and be consistent with FEMA, state, and local government standards for administration of the National Flood Insurance program.

It was determined that construction of the preferred alternative would not constitute a hazardous or incompatible use of floodplains; would avoid longitudinal or substantial floodplain encroachment by constructing perpendicular crossings to the maximum extent possible; would not result in greater than a 1-ft rise in base flood elevations; would have no impact on natural and beneficial floodplain values; and would be consistent with FEMA, ADOT, and YCFCD standards regarding highway construction in floodplains. During final design, ADOT would review the project plans to verify the extent of encroachment into floodplains and obtain the required floodplain construction permits from YCFCD.

Waters of the US

US 93 intersects numerous small, unnamed, intermittent washes within the project area, as well as Date Creek and Big Jim Wash. Existing drainage structures along the corridor consist of two bridges, 78 CBCs, and 125 pipe culverts.

A jurisdictional delineation determined that 90 washes within the project area constitute waters of the US and are, therefore, subject to the provisions of Section 404 of the Clean Water Act. The locations of these wash crossings are listed in Appendix C. The delineation was approved by the COE on August 26, 2004.

The preferred alternative would require the placement of fill within jurisdictional waters of the US due to the extension of existing culverts, construction of new culverts, construction of new bridges, and construction of the roadway embankment. During final design, the project plans would be reviewed to verify the extent of encroachment into waters of the US, and certifications and permits required under Sections 401 and 404 of the Clean Water Act would be acquired by ADOT prior to construction. Based on a review of the conceptual design plans and current COE permitting requirements, it is anticipated that the work for this project would be covered under the provisions of the COE's NWP No. 14 and the ADEQ's Section 401 Conditional Water Quality Certification.

In order to reduce erosion, minimize sedimentation, and eliminate the discharge of non-storm water pollutants into waters of the US, the project would incorporate best management practices and comply with ADOT's standard specifications regarding erosion control and protection of water bodies. The preferred alternative would be designed to avoid the placement of fill within jurisdictional waters of the US to the extent possible, and construction would proceed in accordance within the terms and conditions of the required water quality permits. Permanent cross-drainage structures would be installed at the earliest possible phase of construction to minimize potential erosion throughout the duration of construction.

AZPDES/Storm Water Pollution Prevention Plan

Because one or more acres of land would be disturbed during construction, an AZPDES general permit would be required. The ADOT Roadside Development Section would determine who would prepare the Storm Water Pollution Prevention Plan during final design. The ADOT Prescott and Kingman Districts (consistent with which district a project is located on) and the contractor would submit the Notice of Intent and the Notice of Termination to the ADEQ.

Conclusion

The preferred alternative would be designed to minimize impacts to the 100-year floodplain and jurisdictional waters of the US to the maximum extent possible. Construction of the proposed improvements would incorporate best management practices, include erosion control measures, and comply with all COE, ADEQ, YCFCD, and AZPDES permit terms and conditions to protect water quality in the project area. Therefore, the preferred alternative would have minor, adverse, long-term, and site-specific impacts on water quality.

The No Action Alternative would not require the extension of existing culverts, the construction of new culverts, or ground disturbance. Therefore, the No Action Alternative would have no impact on the 100-year floodplain, waters of the US, storm water runoff, or water quality.

Biological Resources

Description of Ecosystem or Biological Community

The project area is located within the Arizona Upland subdivision of the Sonoran desertscrub biotic community. Acacia, palo verde, buckthorn, mesquite, saguaro, cholla, ocotillo, and bursage are common throughout the project area. From MP 180.0 to MP 161.5, there is a high concentration of Joshua trees, which are the dominant characteristic feature of this portion of the road. Annual rainfall averages approximately 11 inches in Wickenburg and approximately 10 inches at the northern project limit. The elevation in the project area ranges from 1,880 to 2,960 ft above mean sea level (amsl).

Wildlife

Threatened/Endangered Species

The US Fish and Wildlife Service's (USFWS) list of endangered, threatened, candidate, and proposed species for Yavapai County (Table 10) was reviewed in a biological evaluation (ADOT 2004b). It was determined that construction of the preferred alternative would have no impact on the California brown pelican, Chiricahua leopard frog, Colorado white salmon, desert pupfish, Gila chub, Gila topminnow, loach minnow, Page springsnail, razorback sucker, spikedace, or yellow-billed cuckoo because these species require permanent water sources, mature riparian habitat, or aquatic habitat, which are not present in the project area.

Construction of the preferred alternative would have no impact on the Mexican spotted owl because this species requires mature riparian trees, deciduous or evergreen forest, or deep canyons for nesting, and such habitat is absent from the project area. Additionally, the project area is not located within the known elevation range (4,000 to 10,000 ft amsl) for the Mexican spotted owl.

Construction of the preferred alternative would have no impact on the lesser long-nosed bat because no roosting habitat, such as caves, mine shafts, or tunnels, is located in the project area. Furthermore, bridges and CBCs within the project area were examined for evidence of use by bats. No bat droppings (guano) or pollen stains, indicators of use of an area by bats for roosting,

were found. The nearest known roosting site for this species is approximately 150 miles southeast of the project area.

Table 10 – Special Status Wildlife Species

Common Name	*Scientific Name*	*Status*
Bald eagle	*Haliaeetus leucocephalus*	Threatened
California brown pelican	*Pelecanus occidentalis californicus*	Endangered
California leaf-nosed bat	*Macrotus californicus*	BLM Sensitive, WSC
Chiricahua leopard frog	*Rana chiricahuensis*	Threatened
Chuckwalla	*Sauromalus ater*	BLM Sensitive
Colorado white salmon (pikeminnow)	*Ptychocheilus lucius*	Endangered
Desert pupfish	*Cyprinodon macularius*	Endangered
Desert rosy boa	*Charina trivirgata*	BLM Sensitive
Gila chub	*Gila intermedia*	Proposed Endangered
Gila topminnow	*Poeciliopsis occidentalis occidentalis*	Endangered
Lesser long-nosed bat	*Leptonycteris curasoae yerbabuenae*	Endangered
Loach minnow	*Tiaroga cobitis*	Threatened
Loggerhead shrike	*Lanius ludovicianus*	BLM Sensitive
Longfin dace	*Agosia chrysogaster*	BLM Sensitive
Lowland leopard frog	*Rana yavapaiensis*	WSC
Maricopa tiger beetle	*Cicindela oregona maricopa*	BLM Sensitive
Mexican spotted owl	*Strix occidentalis lucida*	Threatened
Page springsnail	*Pyrgulopsis morrisoni*	Candidate
Razorback sucker	*Xyrauchen texanus*	Endangered
Roundtail chub	*Gila robusta*	WSC
Sonoran desert tortoise	*Gopherus agassizii*	BLM Sensitive, WSC
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered
Spikedace	*Meda fulgida*	Threatened
Western burrowing owl	*Speotyto cunicularia hypugaea*	BLM Sensitive
Yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Candidate

Important habitat components for wintering bald eagles consist of perch and roost sites and adequate food supplies, including fish, waterfowl, carrion, and terrestrial vertebrates. While the Santa Maria River is located at MP 160.7, 0.8 mile north of the project limit, this stream does not sustain adequate flows to support a source of fish or waterfowl for prey. The lack of large trees, cliffs, and a substantive perennial water source within the project limits precludes the project area from containing bald eagle roosting or nesting sites. The nearest suitable habitat is located 19 miles from the project area, and no bald eagles are known to occur within 25 miles of the project area. Therefore, construction of the preferred alternative would not affect the bald eagle.

The primary constituent elements of habitat necessary for the southwestern willow flycatcher (WIFL) are dense, closed canopy stands of riparian vegetation with a large volume of cover. The

project area contains Sonoran desertscrub and small areas of xeroriparian habitat, as described on page 37. The xeroriparian areas lack the dense canopy and multilayered characteristics necessary to provide suitable WIFL habitat. The closest suitable WIFL habitat to the project area is along the Santa Maria River, located approximately 0.8 mile north of the northern project limit, and the nearest known WIFL occurrence is located 15 miles southeast of the project area. Therefore, construction of the preferred alternative would not affect the WIFL .

Sensitive Species

Because BLM lands are located west of the existing US 93 centerline from MP 167.8 to 162.0, potential impacts to wildlife species that are classified as "sensitive" when occurring on BLM lands were assessed in the biological evaluation (ADOT 2004b). This document was approved by BLM on August 20, 2004. Table 10 includes BLM sensitive wildlife species that have been documented in the project vicinity or were identified by a BLM biologist as a potential species of concern for the project area.

Construction of the preferred alternative would have no impact on the Maricopa tiger beetle because this species occurs in riparian and wetland habitats, which are not present in the project area. The preferred alternative would have no impact on the longfin dace because this species requires aquatic habitat, which is not present in the project area.

Construction of the preferred alternative would have no impact on the California leaf-nosed bat because no suitable roosting habitat, consisting of caves, mines, or rock shelters, occurs within the project area. Furthermore, bridges and CBCs within the project area were examined for evidence of use by bats. No bat droppings (guano) or pollen stains, indicators of use of an area by bats for roosting, were found.

Suitable habitat for chuckwalla and desert rosy boa occurs within the project area north of MP 177.0, where hills and boulder outcroppings are present with fissures that provide the characteristic habitat for these species. Chuckwallas are predominantly found near cliffs, boulders, or rocky slopes, where they use rocks as basking sites and rock crevices for shelter. They are found in open areas and around large boulders and are known to hide in rock crevices when frightened, turning sideways and wedging themselves in tightly by inflating the body. The desert rosy boa is a nocturnal, non-venomous rock dweller that spends most of its time deep in rock crevices or underground. The desert rosy boa is often found near streams and small springs in canyons, rocky foothills, and gorges. Approximately 150 acres of suitable chuckwalla and desert rosy boa habitat would be disturbed due to construction of the preferred alternative. Any chuckwallas or desert rosy boas present in the project area could be harmed by ground-disturbing activities during construction. Therefore, the contractor would employ a qualified biologist to provide instructional materials regarding the protection of chuckwalla and desert rosy boa to all supervisory construction personnel prior to performing any ground-disturbing activities related to construction of the project. Construction of the preferred alternative might impact individual chuckwallas and desert rosy boas, but would not be likely to result in a trend toward federal listing or loss of viability.

Habitat for the loggerhead shrike consists of open country with scattered trees and shrubs, savanna, desertscrub, and occasionally open woodland. The habitat is typically interspersed with

improved pastures, grasslands, and hayfields throughout its range, and the bird often perches on poles, wires, and fenceposts. Suitable habitat for loggerhead shrike consisting of open scrublands with available perches occurs throughout the project area. Approximately 182 acres of suitable loggerhead shrike habitat would be disturbed due to construction of the preferred alternative. Temporary impacts to individuals in the project vicinity could occur during construction activities. Therefore, a survey for loggerhead shrike nests would be performed by a qualified biologist during final design. The survey would be conducted in areas that would be disturbed by construction activities and are located on or within one mile of Bureau of Land Management lands. If loggerhead shrike nests were found, ADOT would coordinate with BLM regarding potential impacts to the species. Construction of the preferred alternative might impact individual loggerhead shrikes, but would not be likely to result in a trend toward federal listing or loss of viability.

The western burrowing owl is a small, ground-dwelling owl found in open, well-drained grasslands, steppes, deserts, prairies, and agricultural lands, often associated with burrowing mammals, and occasionally found in open areas such as vacant lots near human habitations, golf courses, and airports. It requires an abandoned small mammal burrow or natural cavity surrounded by sparse vegetation in which to nest. This species uses a wide variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground. The project area contains suitable habitat for western burrowing owl south of MP 177.0, where well-drained, level to gently sloping topography with by sparse vegetation, bare ground, and abundant small mammal burrows is present. Approximately 157 acres of suitable western burrowing owl habitat would be disturbed due to construction of the preferred alternative. Temporary impacts to individuals in the project vicinity could occur during construction activities. Therefore, a survey for western burrowing owls would be performed by a qualified biologist during final design. The survey would be conducted in areas that would be disturbed by construction activities and are located on or within one mile of Bureau of Land Management lands. If western burrowing owls were found, ADOT would coordinate with BLM regarding potential impacts to the species. Construction of the preferred alternative might impact individual western burrowing owls, but would not be likely to result in a trend toward federal listing or loss of viability.

The Sonoran desert tortoise uses naturally occurring shelter sites such as caliche bank holes along arroyos, rock crevices, spaces within boulder piles, debris piles created by woodrats, or thick vegetation. It is also known to dig burrows in soft earth in which it hibernates during the winter and uses as shelter in the summer. The Sonoran population of the desert tortoise is associated with rolling, often rocky, terrain, in mountain foothills and desert mountain ranges where naturally occurring shelter sites are available. The project area contains suitable habitat for Sonoran desert tortoise, with rocky, rolling terrain north of MP 177.0 that could provide natural shelter sites for this species. Construction of the new roadway would disturb approximately 182 acres of suitable Sonoran desert tortoise habitat. The BLM land in the northern project area (MP 167.8 to MP 162.0) is not classified desert tortoise habitat. To avoid injuring Sonoran desert tortoises that may be in the project area during construction, a desert tortoise survey would be conducted by a qualified biologist 15 days prior to the beginning of construction in areas of suitable tortoise habitat that would be disturbed. The Arizona Game and Fish Department (AGFD)'s Tortoise Handling Guidelines (Appendix D) would be followed if

specimens were encountered during construction. Construction of the preferred alternative might impact individual Sonoran desert tortoises, but would not be likely to result in a trend toward federal listing or loss of viability.

Arizona Species of Concern

AGFD provided a list of Wildlife of Special Concern (WSC) that have been documented as occurring in the project vicinity. These species are included in Table 10. Lowland leopard frog and roundtail chub would not be affected by construction of the preferred alternative because these species require permanent water sources or aquatic habitat, which are not present in the project area. California leaf-nosed bat and Sonoran desert tortoise are addressed in the Sensitive Species discussion (page 33).

Migratory Birds

The Migratory Bird Treaty Act (MBTA), as described in 16 US Code 703-712, prohibits taking (i.e., harming, harassing or pursuing), killing, possessing, transporting or importing migratory birds, their eggs, parts, and nests, except when specifically authorized by the US Department of the Interior. The MBTA is designed to protect individual birds, but not specifically their habitats. During construction, numerous MBTA-protected birds occurring within the project area would experience increased noise associated with construction activities and would be disturbed by construction noise and earthmoving activities. It was determined that due to the minor, temporary nature of the potential impacts, no mitigation would be warranted for these species.

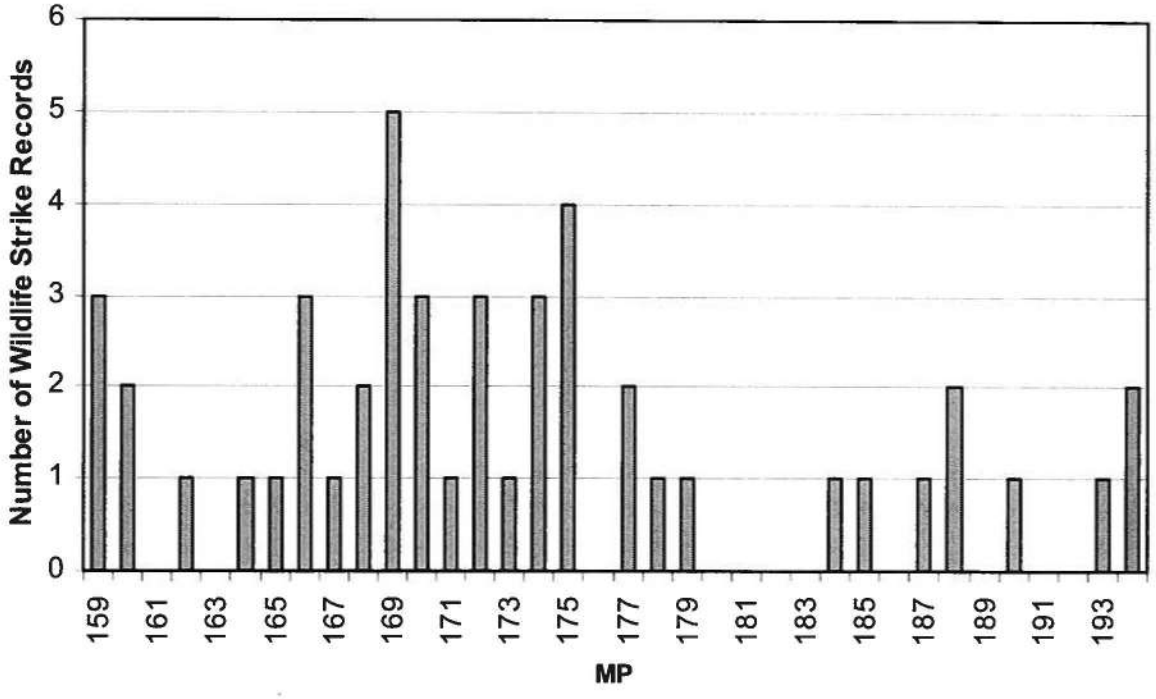
Wildlife Strikes

Typical wildlife occurring in the project area includes mule deer, coyote, javelina, desert cottontail, western diamondback rattlesnake, and roadrunner, as well as various rodents, reptiles, and birds. AGFD and ADOT provided information on the locations of reported wildlife strikes within the project area. Figure 10 shows the total number wildlife strikes reported within the project area from 1991 through 2002. The incidence of animal strikes in this corridor is relatively low, with a maximum value of five strikes near MP 169 over the 11-year reference period. During the study scoping phase and subsequent correspondence, AGFD did not identify any locations within the project area warranting special treatment for wildlife movement, nor request crossings designed exclusively for wildlife.

Wildlife, such as coyote, javelina, mountain lion, Sonoran desert tortoise, and rodents, are known to use drainage structures to cross under highways. Deer may use CBC crossings, although the extent to which this occurs is unknown. It is assumed that prey species are less likely to use culvert crossings if there is not a clear view of the terrain on the other side. Major washes in the project area may currently provide crossing opportunities for wildlife. Due to the drainage requirements associated with the project, new culverts and bridges would be constructed for the new roadway. It is anticipated that these structures would be used to some extent by wildlife; however, no crossings designed specifically for wildlife would be included in the preferred alternative. To facilitate wildlife movement, the preferred alternative would include the installation of game fence along the R/W line within all portions of the project that are not

immediately adjacent to developed areas, consistent with AGFD recommendations (Appendix E).

Figure 10 – Wildlife Strikes by Milepost, 1991 to 2002



Plants

Threatened/Endangered Species

The USFWS list of threatened and endangered plant species for Yavapai County is included in Table 11. The Arizona agave occurs at elevations of 3,000 to 6,000 ft amsl and is associated with oak-juniper and mountain mahogany-oak scrub vegetation. The range of the Arizona cliffrose is limited to areas of limestone deposits.

Table 11 – Special Status Plant Species

Common Name	*Scientific Name*	*Status*
Arizona agave	*Agave arizonica*	Endangered
Arizona cliffrose	*Purshia subintegra*	Endangered

Construction of the preferred alternative would not affect the Arizona agave because the project area is located at elevations ranging from 1,880 to 2,960 ft amsl and does not contain oak-juniper or mountain mahogany-oak scrub vegetation. Construction of the preferred alternative would not affect the Arizona cliffrose because the project area is not characterized by limestone deposits.

Sensitive Species

No BLM sensitive plant species are documented as occurring in the project vicinity, and the BLM biologist did not include any plants in the list of sensitive species to be evaluated for the project area. Therefore, the project was not evaluated for impacts on BLM sensitive plant species.

Arizona Native Plant Law Species

The project area includes numerous species afforded protection under the Arizona Native Plant Law, including saguaro, barrel cactus, Joshua tree, mesquite, ironwood, ocotillo, palo verde, cholla, and prickly pear. Protected native plants within the construction limits would be impacted by the project; therefore, the ADOT Roadside Development Section would notify the Arizona Department of Agriculture at least 60 days prior to the start of construction to afford commercial salvagers the opportunity to remove and salvage any plants that were not included in the plant salvage plan.

Critical Habitat

The project area is not located within designated critical habitat for any listed species.

Riparian Habitat

Areas of xeroriparian (mesquite/salt cedar) vegetation are found along the drainages of Date Creek (MP 174.2) and Big Jim Wash (MP 165.5). Construction of the preferred alternative would result in impacts to less than 1 acre of this vegetation type. Most of the trees in these locations are less than 5 ft in height, and the vegetation lacks the dense canopy and multilayered characteristics of riparian zones.

Vegetation

From MP 193.5 to approximately MP 180.0, the vegetation in the project area consists of Sonoran upland desertscrub with high density vegetation cover and rich species diversity. Saguaros, small palo verdes, and mesquites are common with larger mesquites occurring within drainages. From MP 180.0 to the northern project limit, the vegetation consists of Joshua tree forest at the edge of the Sonoran upland desertscrub transition zone. This area shows increasing dominance of grasses and herbaceous species, and saguaros and mesquites are less prominent. In addition, a small group of isolated cottonwood trees is present immediately adjacent to both sides of US 93 at MP 166.8. The preferred alternative would have no impact on these trees.

A plan for the inventory, salvage, storage, and transplantation of native plants, including saguaro, agave, and Joshua trees, would be developed by the ADOT Roadside Development Section during final design. Healthy, salvageable native plants within the project area would be salvaged and transplanted to the extent practicable to replicate the surrounding vegetative density. Disturbed areas would be seeded with a seed mix consisting of native species selected for the site and would be revegetated with salvaged plants. During final design, ADOT would develop the seed mix. Revegetation plans would identify, where applicable, the need for

mulching, salvaging, topsoiling, and other necessary treatments to promote successful plant establishment.

Invasive Species

Under Executive Order 13112 on invasive species, dated February 3, 1999, projects that occur on federal lands or are federally funded must, "... subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: i) prevent the introduction of invasive species; ii) detect and respond rapidly to, and control, populations of such species in a cost-effective and environmentally sound manner; iii) monitor invasive species populations accurately and reliably; ... [and] iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded."

During final design, the ADOT Natural Resources Section would survey the project area for invasive species. If invasive species were found, the ADOT Natural Resources Section would treat these species according to an invasive species management plan and any necessary treatments would continue following completion of construction.

All earth-moving and hauling equipment would be washed at the contractor's storage facility prior to entering the construction site to prevent the introduction of invasive species. If invasive species were found in the project area, the contractor would also be required to wash all earth-moving and hauling equipment prior to leaving the construction site in order to prevent the spread of invasive species to uncontaminated areas. In addition, disturbed areas would be seeded using native species and revegetated with salvaged plants.

Conclusion

In conclusion, impacts to wildlife habitat and vegetation would occur as a result of the incorporation of existing habitat into ADOT R/W and the disturbance of natural areas due to construction. These impacts would be mitigated by salvaging and transplanting native plants, providing instructional materials regarding protection of desert rosy boa and chuckwalla to supervisory construction personnel, conducting a survey for loggerhead shrike nests and western burrowing owl during final design, conducting pre-construction surveys for Sonoran desert tortoise, complying with AGFD guidelines to protect Sonoran desert tortoise during construction, revegetating disturbed areas with salvaged plants and native species seed, providing game fence to accommodate wildlife movement, and preventing the spread of invasive species. Therefore, the preferred alternative would have minor, adverse, long-term, and local impacts on biological resources.

The No Action Alternative would not require the incorporation of existing habitat into new R/W or the disturbance of natural areas. Therefore, the No Action Alternative would have no impact on biological resources.

Visual Resources

As discussed in the project visual impact assessment report, the characteristics of the project area create a unique landscape in Arizona (ADOT 2003f). ADOT has designated the US 93 corridor

as the Joshua Forest Scenic Road from MP 180.0 to MP 126.5, north of the project limits. This designation indicates that the road has a notably scenic character and qualifies the road for certain federal and state funds earmarked for enhancement.

Existing Conditions

Near the US 93/SR 89 junction, the visual environment is dominated by the presence of low-density residential units in the foreground. Moving north, the development gives way to expanses of sparse vegetation on flat terrain, allowing unobstructed views of distant landforms. At the US 93/SR 71 junction (MP 182.9), the overpass structure, ramps, and adjacent developed areas dominate the foreground.

At MP 180.0, the Joshua Forest Scenic Road designation begins. A dense forest of Joshua trees is present from MP 179.0 to the northern project limit. Joshua trees, which belong to the yucca family, grow most thickly on the high terraces to the northeast and a small range of sloping volcanic rocks to the southwest. The density of the coarse-textured, irregular forms of the Joshua trees creates a distinctive, unique landscape. In addition, views from the roadway in this area include striking landforms, such as Tres Alamos, the Black Mountains, Malpais Mesa, and the Shiprock formation. Changes in the views from the roadway occur at MP 166.8, where cottonwoods on both sides of the roadway provide a focal point for travelers, and at MP 163.5, where overhead transmission lines cross US 93 and detract from the natural setting.

Visual Impacts

To assess the impacts of construction of the proposed improvements, the project area was divided into several visual assessment units, and each unit was assigned a visual quality rating for the existing condition and for the preferred alternative. Near the southern project limit, the change from a two-lane to a four-lane roadway would create a notable change in the visual character in the rural residential area near the US 93/SR 89 junction. The new roadway would create a larger footprint and would be a more visible built feature of the landscape. The spatial dominance of the roadway would increase, but this change would be minor considering the already disturbed setting; therefore, construction of the preferred alternative would not change the overall moderate level of visual quality.

North of the residential area at the US 93/SR 89 junction to the beginning of the Joshua Forest Scenic Road, construction of the preferred alternative would reduce the area's visual quality rating from high to moderately high. The new roadway's larger footprint would increase the dominance of the roadway and increase the contrast between the natural and built environments. The level terrain and straight roadway alignment would provide long views of the wider roadway prism, detracting from the natural setting.

At the US 93/SR 71 junction, reconstruction of the interchange and ramps would increase the dominance of the roadway in the landscape. However, the existing overpass structure and commercial development already detract from the natural surroundings. Therefore, the visual character of this area would not change substantially from existing conditions, and would retain the existing visual quality rating of moderately low.

Within the Joshua Forest Scenic Road, construction of the preferred alternative would increase the visual dominance of the roadway and detract from the natural setting to varying degrees. The variable-width median and undulating horizontal alignment would reduce the magnitude of change in the visual character and quality of the landscape. However, in areas where the road alignment is level and straight or where the vegetation is too sparse to reduce the visibility of the opposite travel lanes, the long, unobstructed views of the four-lane roadway would detract from the natural setting. In areas with rolling terrain, cut slopes would create notable landscape modifications, increasing the contrast between the natural and built environments. In addition, the Shiprock formation, which is currently only visible to NB traffic, would be less visible for travelers due to the wider separation of the travel lanes. The existing visual quality ratings within this area vary from very high to moderate; after construction of the proposed improvements, the visual quality ratings would range from high to moderate.

Mitigation

In order to meet ADOT's visual quality requirements for the Joshua Forest Scenic Road, changes to the landscape resulting from construction of the preferred alternative should not be evident, and any alterations in the environment should repeat the form, line, color, and texture of the surrounding setting. The following measures would be implemented to minimize impacts to the visual character of the project area:

- During final design, the variable-width median and roadway centerline would be located to minimize visual impacts and maximize travelers' experience within the Joshua Forest Scenic Road.
- The contractor would stake the clearing limits for ADOT approval prior to the start of clearing. These limits would be irregular where possible, and straight clearing lines would be avoided by varying the width of the area to be cleared or by leaving selected clusters of vegetation near the edge of the clearing limit.
- Vegetation outside of the specified clearing limits would be preserved and protected. The contractor would remove trees only when specifically authorized to do so by ADOT and would protect in-place vegetation outside of the specified clearing limits.
- Vegetation within the median area would be protected in-place to the extent possible in areas where the median width would be greater than 84 ft.
- The contractor would protect in-place the cottonwood trees located in the vicinity of MP 166.8.
- Seeding of disturbed areas would occur in a progressive manner as the slopes were completed.
- Newly exposed rock faces would be shaped to blend with natural rock features by incorporating characteristics of the adjacent natural rock to include color, scale, shape, slope, and fracturing to the extent that is practical and feasible as identified through geotechnical testing and constructability reviews.
- Rock outcrops would be left in place if they were determined to be stable; would blend into the surrounding terrain; and would not create a hazard to the traveling public, interfere with construction, or look out of place in the natural landscape.
- At the intersections of cuts and natural grades, slopes would be adjusted and warped to flow into each other or transition into the natural ground surfaces without noticeable breaks.

- Cut and fill slopes would simulate the terrain of the surrounding area. Cut and fill slopes would be designed with varied slope ratios to leave an irregular, undulating, or roughened appearance rather than a uniform grade. The slope ratios would vary from the top to the bottom of the slope face and from station to station.
- To avoid retaining uncharacteristic and unnatural landforms resulting from construction, the project plans would indicate remnants of landforms to be removed completely.
- Any riprap material used in the project would blend with the surrounding rock and exposed soil color.
- Erosion control matting would be composed of a natural, earth-tone material.
- During final design, ADOT would evaluate the use of staining exposed rock to reduce the color contrast with the existing landscape.
- Bridges, concrete barriers, retaining walls, and highly visible culvert headwalls and endwalls would be constructed with color and/or texture qualities that blend with the existing landscape.
- Where guardrail is required, natural-appearing metal guardrail material, such as naturally weathered steel, would be installed to blend with the landscape.
- The contractor would protect in-place existing rock and landforms outside the clear zone during construction.
- During final design, copies of the construction documents would be provided to the Parkway, Historic, and Scenic Roads Advisory Committee for review and comment.
- During final design, FHWA's Visual Prioritization Process (FHWA 1994) or its equivalent would be used to identify site-specific measures to reduce impacts to visual resources.
- All asphalt not reused as part of the project would be removed from the site or incorporated into roadway embankments under a minimum of 3-ft cover, and the roadbed would be reshaped, scarified, and revegetated. All abandoned sections of old roadway would be obliterated and made to blend with the existing landscape.
- Within the designated limits of the Joshua Forest Scenic Road, signing and other roadside elements, such as reflectors, delineators, and object markers, would be limited to those essential to ensure efficient traffic operations.
- If possible, any new roadway signs would be placed to avoid obstructing NB motorists' views of the Shiprock formation between MP 166.0 and MP 164.0. ADOT would field-verify the placement of roadway signs before installation.

Conclusion

Construction of the preferred alternative would affect the visual character of the project area because it would increase the visual dominance of the roadway and detract from the natural setting. However, the extensive mitigation measures outlined above for the proposed improvements would substantially reduce the effect of construction on the visual environment. These measures would provide the level of visual quality required to retain the scenic road designation. Therefore, the preferred alternative would have moderate, adverse, long-term, and localized impacts on visual resources.

The No Action Alternative would not require constructing a new roadway or modifying motorists' views. Therefore, the No Action Alternative would have no impact on the existing visual setting.

Air Quality

Air Quality Standards and Conformity

The Clean Air Act of 1970 and associated amendments established National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. The Clean Air Act Amendments of 1990 authorized the Environmental Protection Agency (EPA) to designate those areas that do not meet the NAAQS as nonattainment areas and to classify them according to their degree of severity.

For areas that have been designated as nonattainment areas, the State Implementation Plan (SIP) must outline the actions required to achieve compliance with the NAAQS. Projects in designated nonattainment areas must demonstrate conformance with the SIP and the local Transportation Improvement Program. The project area is located in an area that meets NAAQS. Therefore, federal conformity procedures would not apply to this project.

Existing Conditions

No air quality monitoring sites are located in the project vicinity; therefore, existing conditions were modeled based upon existing traffic operations and climatological data, as described in the following section. The values for the existing CO concentrations in the project area obtained as a result of the air quality modeling were well below NAAQS limits.

Air Quality Modeling

An air quality assessment was performed to predict the impact of vehicle emissions from the proposed roadway on future CO levels in the project vicinity (ADOT 2003b). The air quality analysis, which is presented in detail in a separate air quality assessment report, focused on the local impact of CO emissions estimated for the existing roadway configurations in 2001 and 2025 (No Action Alternative) and for the preferred alternative in 2025. The analysis was performed using the CAL3QHC line source dispersion model, which was developed for the EPA in order to calculate the total emissions from moving and idling vehicles as well as to predict the dispersion and estimated concentrations of inert pollutants, primarily CO, near highways and arterial street intersections. The CO emission factors were generated using the MOBILE5a model.

Seventy-eight air quality receptor locations were used to characterize the predicted maximum concentrations for CO throughout the project area. These receptors were placed at roughly 5000-ft intervals on both sides of the roadway. The individual air quality receptor locations and results of the CO analysis for each receptor location for the existing condition, the No Action Alternative, and the preferred alternative are included in Appendix F. All predicted CO concentrations resulting from the analysis were well below NAAQS limits.

The maximum predicted 1-hour concentrations of CO at the receptors for the existing condition, the No Action Alternative, and the preferred alternative ranged from 2.2 to 2.7 parts per million (ppm), well below the NAAQS limit of 35 ppm. In general, the predicted 1-hour CO concentrations for the preferred alternative were slightly lower than for the existing condition

and the No Action Alternative. Also, the maximum predicted 8-hour CO concentrations for the existing condition, the No Action Alternative, and the preferred alternative ranged from 1.5 to 1.9 ppm, well below the NAAQS limit of 9 ppm. In general, the predicted 8-hour CO concentrations for the preferred alternative were slightly lower than for the existing condition and the No Action Alternative.

Temporary Impacts

Some temporary deterioration of air quality would be expected due to the operation of construction equipment and the slower traffic speeds associated with a construction zone. However, this localized condition would be discontinued when the project was completed. Short-term impacts due to particulate matter or dust emissions may also occur during the construction phase, but these would be reduced through the use of watering or other dust control measures. In addition, temporary air quality impacts may occur during construction due to the burning of waste vegetation. Fugitive dust generated from construction activities would be controlled in accordance with ADOT's standard specifications, special provisions, and local rules or ordinances.

Conclusion

The air quality analysis demonstrated that CO concentrations after construction of the preferred alternative would remain well below NAAQS limits throughout the project area, and temporary impacts would be minimized by the use of dust abatement measures. The predicted CO concentrations for the preferred alternative were generally slightly lower than for the existing condition and the No Action Alternative. The air quality within the project limits would improve slightly due to improved traffic operations associated with the increased roadway capacity. Therefore, the preferred alternative would have minor beneficial, long-term, and localized impacts on air quality.

With the No Action Alternative, traffic operations would not be improved and CO concentrations would rise as congestion continued to increase. Therefore, the impact of the No Action Alternative on air quality would be minor, long-term, adverse, and local.

Noise Analysis

Noise Policy

Under federal noise abatement regulations (23 CFR 772), noise impacts are analyzed based upon the land use activity and a noise threshold for the corresponding land use category (Table 12). The only sensitive land use category that is present within the project area is Category B, which includes residences, motels, and parks. Under the ADOT *Noise Abatement Policy*, adopted in March 2000, mitigation is considered for Category B properties when noise levels exceed 64 decibels (dBA). Additionally, mitigation would be considered for Category B properties if the predicted noise levels exceed the existing noise level by 15 dBA or greater.

Table 12 – Noise Abatement Criteria

Activity Category	*Description*	*Threshold*
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities are essential if the area is to continue to serve its intended purpose.	57 dBA (Exterior)
B	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.	67 dBA (Exterior)
C	Developed lands, properties, or activities not included in Categories A or B.	72 dBA (Exterior)
D	Undeveloped lands.	72 dBA (Exterior)
E	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.	52 dBA (Interior)

Existing Conditions

To determine existing conditions, ambient noise measurements were taken at two locations in the vicinity of the Vista Royale residential development. Measured noise levels at these sites, located approximately 230 ft east and 200 ft west of the R/W line, consisted of 57 and 58 dBA, respectively. The noise monitoring sites are shown in Appendix G.

Noise Assessment

As described in the project's noise study technical report (ADOT 2003d), noise impacts adjacent to the project area were evaluated by comparing predicted traffic noise levels in the existing condition (2002) to noise levels for the design year (2025) for both the No Action and preferred alternatives. Noise levels were assessed for 13 representative residential receivers that were identified in proximity to the proposed highway alignment. Predicted traffic noise levels were developed using the noise prediction model STAMINA/Optima 2.0. The locations of the receiver sites and results of this analysis are shown in Table 13. The noise receiver sites are shown in Appendix G.

Existing (2002) traffic noise levels ranged from 51 to 63 dBA. Under existing conditions, none of the receivers meet or exceed ADOT's Noise Abatement Criteria (NAC) threshold of 64 dBA. For the No Action Alternative, predicted noise levels in 2025 would range from 53 to 65 dBA. The noise level increase from existing conditions would range from 1 to 2 dBA at all receivers. Under the No Action Alternative, Receiver 1-4 would exceed ADOT's NAC threshold of 64 dBA. For the preferred alternative, predicted unmitigated noise levels in 2025 would range from 54 to 63 dBA. The noise level increase from existing conditions would range from 0 to 3 dBA at all receivers. With the preferred alternative, none of the receiver sites would experience noise levels that would meet or exceed ADOT's NAC threshold of 64 dBA. Therefore, noise abatement would not be warranted for the proposed project.

Table 13 – Noise Impact Summary

Receiver	*Description*	*No. of Units*	*MP*	*Distance from existing US 93 centerline*	*Noise Level (dBA)*		
					Existing (2002)	*No Action (2025)*	*Preferred Alt. (2025)*
1-1	Residences	2	192.3	800 ft west	51	53	54
1-2	Residence	1	192.2	500 ft west	55	57	57
1-3	Residences	2	192.2	405 ft east	56	58	57
1-4	Residence	1	192.2	140 ft east	63	65	63
1-5	Residences	4	192.1	285 ft west	59	60	62
1-6	Residences	3	191.9	225 ft east	60	62	61
1-7	Residences	3	191.7	190 ft east	61	63	62
1-8	Residences	3	191.6	290 ft east	58	60	59
2-1	Residence (unoccupied)	1	183.0	450 ft east	56	58	57
2-2	Residence (unoccupied)	1	182.9	650 ft east	53	55	54
2-3	Residence (unoccupied)	1	182.8	480 ft west	55	57	58
2-4	Residence (unoccupied)	1	182.8	300 ft west	58	60	-*
2-5	Residence (unoccupied)	1	182.7	220 ft west	60	62	-*

*Within new R/W; no noise level calculated. These mobile homes at the US 93/SR 71 junction would be relocated, as described on pg. 53.

Construction Noise

Temporary noise impacts would be experienced during construction of the proposed improvements. An analysis was conducted to assess the collective impact of construction noise. The maximum noise levels (L_{max}) of various types of construction equipment were measured at the R/W line during a previous highway construction project (Table 14). The results of the preliminary estimates indicate that sensitive receivers could be substantially affected by construction noise if the receivers are immediately adjacent to the R/W. The highest noise levels would occur during the grading/earthwork phase. Typically, construction noise levels continually change as the construction phases are completed. Since these noise levels are temporary and not continuous, mitigation measures are not specifically warranted for construction-related noise.

Table 14 – Temporary Noise Impacts

Construction Phase	*Equipment*	*Equipment L_{max}*[1]	*Distance to R/W*	*L_{max} at R/W*[2]
Site Clearing	Dozer	84 dBA	50 ft	----
	Backhoe	85 dBA	50 ft	88 dBA
Grading/Earthwork	Scraper	92 dBA	75 ft	----
	Grader	91 dBA	75 ft	93 dBA
Foundation	Backhoe	85 dBA	100 ft	----
	Loader	84 dBA	100 ft	85 dBA
Base Preparation	Compressor	85 dBA	100 ft	----
	Dozer	84 dBA	100 ft	85 dBA

[1] Noise levels provided by equipment manufacturer
[2] Measured noise levels during use of equipment in highway construction

Conclusion

As demonstrated by the noise impact analysis, construction of the preferred alternative would temporarily increase noise levels due to construction, but would not result in noise levels that meet or exceed the NAC threshold of 64 dBA at any of the sensitive receivers in the project area after construction. Therefore, the preferred alternative would have minor, adverse, long-term, and site-specific impacts on noise levels.

With the No Action Alternative, predicted noise levels in 2025 would be higher than existing conditions due to increasing traffic volumes and congestion, and the predicted noise levels would meet or exceed the NAC threshold of 64 dBA at one location. Therefore, the impact of the No Action Alternative on noise levels would be moderate, long-term, adverse, and site-specific.

Hazardous Materials

Preliminary Initial Site Assessment

A Preliminary Initial Site Assessment (PISA) for hazardous materials was conducted for the project area in order to determine the potential for encountering environmental contamination from hazardous materials due to previous and/or existing activities in the proposed R/W for the preferred alternative. The PISA was initiated with a search of available ADEQ and EPA records to identify known sources of contaminants in the project vicinity. Aerial photographs of the study area were also examined as part of the literature research effort to further identify possible sources of contamination. Field reconnaissance was conducted in order to identify potential contamination based on observations of existing and former land uses, soil conditions, construction materials, chemicals, and on-site equipment. Field reconnaissance was conducted on February 6, 2003, and consisted of a windshield survey of the project area and on-ground visual surveys of any sites with suspected hazardous waste concerns.

The records search disclosed one permitted hazardous waste handler in the project vicinity, a closed solid waste facility located 0.1 mile north of MP 171 on the west side of US 93, and a diesel fuel spill that occurred in the general vicinity of Congress in March 2000. Because these

potential hazardous materials concerns are not located within the proposed R/W for the preferred alternative, they were determined to be low risk and would not warrant further investigation.

During the field investigations, former gas stations were observed on the northwest and southeast quadrants of the US 93/SR 71 junction. Neither of these sites was listed in ADEQ or EPA records; therefore, it could not be ascertained if the underground storage tanks (UST) associated with these sites have been removed or if subsurface contamination of soils or groundwater is present. In addition, construction debris, removed USTs, derelict vehicle storage, aboveground fuel tanks, and 55-gallon drums were observed on the northeast and southwest corners of the US 93/SR 71 junction. These areas are located within the new R/W associated with reconstruction of the interchange and ramps. Due to the high likelihood of hazardous waste concerns at these locations, further investigation of these sites would be warranted during final design.

Mitigation

An Initial Site Assessment (ISA) would be conducted during final design to assess hazardous materials concerns associated with R/W acquisition at the US 93/SR 71 junction. If necessary, remedial measures would be implemented based upon the ISA results. If suspected hazardous materials were encountered during construction, work would cease at that location and the ADOT Resident Engineer would be notified immediately to arrange for proper assessment, treatment, or disposal of those materials.

In accordance with the asbestos consent decree issued by EPA in May 2003, an asbestos assessment would be required for any bridge structure that would be modified or altered as a result of this project. One bridge, the existing US 93/SR 71 overpass, would need to be removed for construction of the preferred alternative. An assessment would also be required to establish the presence of heavy metals (e.g., lead-based paint) on the structure.

During final design, ADOT would conduct assessments to determine the presence of asbestos within any bridge structure that would be altered or modified as a result of construction. ADOT would also conduct assessments to determine the presence of Resource Conservation and Recovery Act metals on these structures. If these hazardous materials were found, the contractor would be required to prepare a plan detailing the proper procedures for the demolition or modification of the structures and the disposal or abatement of the asbestos and/or heavy-metal materials. In addition, the contractor would obtain any permits required for demolition of the structures or disposal of the asbestos or heavy-metal materials.

Conclusion

During final design, ADOT would investigate the potential hazardous materials concerns listed above and determine the need for remediation in order to prevent conflicts with hazardous materials during construction. Therefore, the impact of the preferred alternative on hazardous materials would be minor, short-term, adverse, and site-specific.

The No Action Alternative would not require acquisition of land at the US 93/SR 71 junction or modification or removal of any bridge structures. Therefore, the No Action Alternative would have no impact on hazardous materials.

Cultural Resources

A literature review for the project identified cultural resources located within the study area from information on file at the State Historic Preservation Office (SHPO), Arizona State Museum (ASM), BLM Arizona Office, and ASLD. Additional information was obtained from historic General Land Office maps. The cultural resources inventory identified prior surveys, previously recorded archaeological sites, prior data recovery projects, and area-specific literature reviews within the project area.

A detailed reconnaissance survey for cultural resources was conducted within the proposed R/W for the preferred alternative between July 23 and November 9, 2001, and between May 14 and May 17, 2002 (ADOT 2003a). The surveys resulted in the identification of a total of 47 sites in the project vicinity. Of these, 15 sites are both eligible for the National Register of Historic Places (NRHP) and located within the R/W for the preferred alternative (Table 15).

To be eligible for inclusion in the NRHP, historic properties must be at least 50 years old and meet one or more of the criteria set forth in 36 CFR 60.4:

- Criterion A applies to properties that are associated with events that have made a significant contribution to the broad patterns of history.
- Criterion B applies to properties that are associated with the lives of persons significant in the past.
- Criterion C applies to properties that embody the distinctive characteristics of a type, period, or method of construction, that represent the work of a master, that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- Criterion D applies to properties that have yielded, or may be likely to yield, information important in prehistory or history.

Thirteen of the NRHP-eligible sites within the R/W are eligible only under criterion D. One prehistoric site (AZ M:16:34 [ASM]), an artifact scatter with grinding slicks and petroglyphs, is eligible under criteria C and D. The Santa Fe, Prescott & Phoenix Railroad, built circa 1894, is eligible for the NRHP under criterion A. Based on the results of the cultural resource survey and a review of the conceptual engineering drawings, the preferred alternative would impact a total of 10 sites that are NRHP-eligible.

The preferred alternative would intersect the Santa Fe, Prescott & Phoenix Railroad immediately adjacent to the existing crossing at MP 192.9. This railroad alignment is still in use. The portion of this historic site within the area of potential effect (APE) is noncontributing to the site's overall eligibility. This determination was made because the alignment's original feeling, design, materials, and workmanship have been modified to the extent that it no longer conveys its historic character. Construction of a new crossing immediately adjacent to the existing crossing would have no impact on the historic property because this railroad has undergone and continues

to undergo periodic modification and regular maintenance. Furthermore, the roadway crossing would not affect the railroad alignment, nor would it substantially alter any characteristic features of the site or its setting.

Table 15 – Cultural Resources Sites

Site Number	*Description*	*NRHP Eligibility*	*Impact?*
AZ M:12:29 (ASM)	Artifact scatter with rock features	D	No
AZ M:12:31 (ASM)	Artifact scatter with features	D	Yes
AZ M:12:32 (ASM)	Artifact scatter with features	D	Yes
AZ M:12:33 (ASM)	Artifact scatter with features	D	No
AZ M:12:34 (ASM)	Artifact scatter with features	D	Yes
AZ M:12:36 (ASM)	Artifact scatter	D	Yes
AZ M:12:37 (ASM)	Chipped lithic scatter with possible roasting areas	D	Yes
AZ M:12:38 (ASM)	Artifact scatter with features	D	Yes
AZ M:16:21 (ASM)	Artifact scatter with features	D	Yes
AZ M:16:23 (ASM)	Artifact scatter with features	D	No
AZ M:16:26 (ASM)	Artifact scatter with features	D	No
AZ M:16:27 (ASM)	Artifact scatter with features	D	Yes
AZ M:16:34 (ASM)	Grinding slicks, petroglyphs, and artifact scatter	C and D	Yes
AZ N:3:32 (ASM)	Santa Fe, Prescott & Phoenix Railroad	A	Yes
AZ N:13:21 (ASM)	Artifact scatter with rock features	D	No

Construction of the preferred alternative would encroach on a portion of site AZ M:16:34 (ASM) that is located just outside the existing US 93 R/W; however, the preferred alternative would have no impact on the petroglyphs that contribute to the site's eligibility under criterion C. The preferred alternative would also affect eight prehistoric artifact/lithic scatter sites that are NRHP-eligible under criterion D. Every effort to minimize impacts to these sites would be made during final design. Should any of these sites be impacted, mitigation may include flagging, avoidance, and data recovery. An effect determination has not yet been made for this project; however, a recommendation of "no adverse effect to historic properties" is anticipated from the cultural resources coordination currently underway.

If previously unidentified cultural resources were encountered during activities related to the construction of the project, the contractor would stop work immediately at that location and take all reasonable steps to secure the preservation of those resources. The ADOT Resident Engineer would contact the ADOT Historic Preservation Team immediately and make arrangements for the proper treatment of those resources.

Because the preferred alternative would result in impacts to cultural resources sites, a Programmatic Agreement (PA) would be executed among FHWA, ADOT, BLM, and SHPO in

order to identify specific measures to mitigate impacts to cultural resources resulting from construction. (Appendix H). The stipulations contained in the PA would be fully satisfied prior to the beginning of construction.

The No Action Alternative would not require the disturbance of any cultural resources sites. Therefore, the No Action Alternative would have no impact on cultural resources.

Socioeconomic Impacts

Demographic Characteristics

Demographic data obtained from the US Bureau of the Census were used to compare the demographic profile of the project area with those of Yavapai County and Arizona. The population of the project area is represented by the total population of the two census block groups corresponding to the inhabited areas adjacent to US 93 within the project area (Table 16). Census tracts are small statistical subdivisions of a county, block groups are smaller statistical subunits of census tracts, and census blocks are the smallest subunit of census data available. Detailed data for each block group and maps of their locations are included in Appendix I.

As shown in Table 16, the population of the project vicinity is comprised of a lower percentage of racial minorities and Hispanic/Latino persons than the populations of Yavapai County and Arizona. In addition, the percentages of male and female residents, persons living below the poverty level, and disabled persons within the project vicinity are similar to the percentage of these groups within Yavapai County and Arizona.

However, the population within the project area is comprised of a substantially greater percentage of individuals 65 years in age or older than in Yavapai County and in the state as a whole. No other concentrations of protected population groups were identified in the project vicinity.

Table 16 – Demographic Characteristics

Demographic	*Arizona*	*Yavapai County*	*Project Vicinity*
Total population	5,130,632	167,517	2,379
Gender:			
Male	49.9 %	49.0 %	50.4%
Female	50.1 %	51.0 %	49.6%
Race:			
White	75.5 %	91.9 %	95.8%
Black/African-American	3.1 %	0.4 %	0.2%
American Indian/Alaska Native	5.0 %	1.6 %	0.6%
Asian	1.8 %	0.5 %	0.1%
Native Hawaiian/Pacific Islander	0.1 %	0.1 %	0.0%
Some other race	11.6 %	3.6 %	1.9%
Two or more races	2.9 %	1.9 %	1.4%
Hispanic/Latino	25.3 %	9.8 %	7.5%
Age 65 years and over	13.0 %	22.0 %	33.7%
Disabled	14.9 %	15.6 %	16.4%
Below poverty level	13.9 %	11.9 %	11.3%

Title VI/Environmental Justice

Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on environmental justice, dated February 11, 1994, directs that programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations.

To assess potential impacts to protected populations, including the elderly population identified in the project vicinity, a Title VI/Environmental Justice evaluation was conducted. The potentially affected residents in the project area live in the vicinity of the Vista Royale development north of the US 93/SR 89 junction. The closest necessary services, such as medical assistance, social services, and shopping, are located along US 93 approximately four miles south of the project area in Wickenburg, and, therefore, the primary route used to access services for these residents is US 93. All persons living in the project area would experience temporary delays when traveling on US 93 due to lane closures. However, because US 93 would remain open to traffic throughout construction, existing access to necessary services for these residents would be maintained and no notable impact would occur.

The impacts expected to result from construction of the preferred alternative were evaluated to identify any potential disproportionately high and adverse effects. Impacts to the residents in the project area would consist of R/W acquisition, one residential displacement, and the temporary construction impacts described above. The R/W acquisition and residential displacement would occur due to frontage road construction. The R/W acquisition on the residential parcels would

consist of a 35- to 50-ft swath of land adjacent to the existing US 93 R/W, as illustrated in Appendix B. Seventeen occupied residential parcels would be affected by R/W acquisition, resulting in R/W takes ranging from 0.2 to 1.7 acres from each parcel. The preferred alternative has been developed to avoid the residences built upon the affected parcels to the maximum extent possible within design constraints. One residential displacement is unavoidable due to the proximity of the building to the existing US 93 R/W. The traffic delays during construction would be borne equally by all residents and the motoring public in the project area. Due to the minor nature of these impacts, no potentially disproportionately high and adverse effects were identified resulting from construction of the preferred alternative.

Construction of the preferred alternative would result in improved operational efficiency and reduced congestion for all persons in the project area using the improved roadway. Residents of the project area would have improved access to US 93 and reduced vehicle conflicts due to the construction of the frontage road. Therefore, upon completion, the preferred alternative would have a beneficial permanent impact on all residents and motorists.

Although an elderly population is present within the project area, the preferred alternative would not have a disproportionately high and adverse human health and environmental impact on that or any protected population. The temporary impacts of construction would be minor and would be borne equally by all residents and the motoring public in the project area. The land acquisition and residential displacement required for project construction would be minor and are unavoidable due to the proximity of the residential area to the existing US 93 roadway. All users originating within and outside of the immediate project area would benefit from the improved operational efficiency, improved capacity, and reduced congestion on US 93. Therefore, the project would not have a disproportionately high and adverse human health and environmental impact on any protected population.

Neighborhood Continuity

Construction of the preferred alternative would require widening US 93 and R/W acquisition in a residential area in the vicinity of the US 93/SR 89 junction. However, because the R/W acquisition required for the proposed frontage road would occur immediately adjacent to the existing R/W, it would not result in the isolation of residences, nor eliminate access from the residences to shopping, schools, or other community services.

The existing US 93 roadway is already established as a major highway that bisects this residential area. Widening within this area would maintain the highway corridor in its current location. Current local traffic patterns already incorporate US 93 as the only thoroughfare through this development, and the preferred alternative would not substantially alter the status quo. The increased roadway width would have the effect of creating a greater perception of the division between the portions of the community on either side of US 93. However, because construction of the preferred alternative would not result in the isolation of residential areas or impede access to commercial areas, the impact on neighborhood continuity would be minimal.

Emergency Services - Police, Fire, Ambulance, Hospital

The proposed road widening would have a positive impact on emergency services in the project area because the project would decrease traffic congestion on US 93, thereby improving response times for emergency vehicles. The project would have no effect on existing access to police stations, fire stations, or hospitals.

In order to ensure access to emergency services including police, fire, ambulance, and hospitals, traffic through the area would be maintained during construction in accordance with current ADOT traffic control management procedures for highway construction and maintenance. Traffic control plans would be prepared to ensure that emergency vehicles could efficiently traverse the project area.

Social Services, Schools, Recreation

Access to social services, schools, and recreation would be maintained throughout construction. In communities with elderly populations and residents in outlying rural areas, public notification of construction projects is important to ensure that construction activities would not hinder access to community and social services such as senior day-care and medical assistance. Prior to construction, public notices would be distributed to area residents. Temporary message boards would be used to inform the motoring public and area residents of potential construction-related delays.

Recreational opportunities within nearby ASLD and BLM lands include hiking, hunting, off-highway vehicle use, and camping. Due to the previously disturbed nature of the highway corridor, relatively little recreational activity occurs in immediate proximity to US 93. However, recreational users regularly use local roads that intersect US 93 to access ASLD and BLM lands in the project vicinity available for dispersed recreation and hunting. Two BLM public wilderness areas, the Arrastra Mountain Wilderness and Tres Alamos Wilderness, are located west of US 93 near the northern project limit. The preferred alternative would avoid impacts to recreation by maintaining access to the existing roads to recreational lands.

Relocations/Displacements

Construction of the preferred alternative would require one residential displacement near the US 93/SR 89 junction and the relocation of two unoccupied mobile homes in the vicinity of the US 93/SR 71 junction. The preferred alternative would also require the acquisition of 2.9 acres of land for new R/W on two commercial properties at the US 93/SR 71 junction, but would not result in the displacement of the businesses at those locations.

Acquisition of new R/W from private parties would require fair compensation, in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). ADOT would implement a R/W relocation program in accordance with the Uniform Act and FHWA's regulations concerning R/W acquisition (49 CFR 24). The Uniform Act provides minimum real property acquisition policies and requires uniform and equitable treatment of persons displaced as a result of a federally assisted program or project. The stated purpose of the Uniform Act is to ensure that affected persons would not suffer

disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement on such persons. The Uniform Act requires that displaced persons receive uniform and consistent services and payments regardless of race, color, sex, or national origin. Any replacement units would meet federal and state standards for "Decent, Safe, and Sanitary" housing.

Temporary Impacts

During construction, traffic through the project area and access to adjacent properties would be maintained in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highways* and/or associated provisions in the project plans, as determined by the ADOT Traffic Design Section. Temporary impacts would also occur due to the modification of residential driveways along the new frontage road. Business disruption during construction would be minor, since access to the commercial establishments at the US 93/SR 71 junction would be maintained throughout construction.

Lane closures along the existing roadway would be required during construction of the preferred alternative, resulting in temporary traffic delays. US 93 would remain open to traffic throughout construction. The ADOT Kingman and Prescott Districts would provide a construction notice to adjacent residents and businesses at least two weeks prior to construction.

Permanent Impacts

Access to properties adjacent to US 93 in the project area would be maintained, improved, or modified as a result of the proposed widening. In particular, the construction of a frontage road from MP 192.6 to MP 191.5 would modify the access to US 93 from several residences. The frontage road would consolidate the individual access points for each residence into four designated access points, thereby decreasing conflicts between turning vehicles and traffic on US 93.

Construction of a divided roadway would result in right-in/right-out access at several turnouts within the project area. Affected roadway users would need to travel out-of-direction in order to use median crossovers to gain access to the opposite direction of travel.

A beneficial permanent change to traffic patterns and service would occur due to provision of a four-lane divided roadway that would improve traffic operations and remove the need and opportunity for vehicles to pass in opposing traffic lanes. Traffic operations along the project corridor would be improved and congestion would be decreased.

Conclusion

Socioeconomic impacts would result from construction of the preferred alternative due to the acquisition of new R/W from private landowners and residential displacements. These landowners and residents would be compensated in accordance with the Uniform Act. The project would have a minor impact on access to adjacent properties, recreation, or services. The project would have a negligible impact on neighborhood continuity, would not require commercial displacements, and would not result in a high and adverse impact on any minority

group. Therefore, the preferred alternative would have minor, adverse, long-term, and site-specific impacts on socioeconomic considerations.

The No Action Alternative would not require the acquisition of new R/W from private landowners, residential displacements, or temporary or permanent impacts. Therefore, the No Action Alternative would have no socioeconomic impacts.

Section 4(f) Properties

Section 4(f) of the US Department of Transportation Act of 1966 states that FHWA "... may approve a transportation program or project ... requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if ... there is no prudent and feasible alternative to using that land and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use" (49 US Code 303[c]).

A "use" of a Section 4(f) resource, as defined in 23 CFR 771.135(p), occurs: 1) when land is permanently incorporated into a transportation facility; 2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes; or 3) when there is a constructive use of land. A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from a Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a constructive use can occur when:

a) the projected noise level increase, attributable to the project, substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f);
b) the proximity of the proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. An example of such an effect would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building or substantially detracts from the setting of a park or historic site that derives its value in substantial part due to its setting; and/or
c) the project results in a restriction of access that substantially diminishes the utility of a significant publicly owned park, recreation area, or historic site.

Two Section 4(f) properties, the Santa Fe, Prescott & Phoenix Railroad and a prehistoric site consisting of grinding slicks, petroglyphs, and an artifact scatter (AZ M:16:34 [ASM]), are located in the project vicinity.

Santa Fe, Prescott & Phoenix Railroad

The Santa Fe, Prescott & Phoenix Railroad, built circa 1894, is eligible for inclusion on the NRHP under criterion A (properties associated with events that have made a significant

contribution to the broad patterns of history). This railroad alignment is currently in use by the Burlington Northern and Santa Fe Railroad. The preferred alternative would intersect the railroad alignment immediately adjacent to the existing grade-separated crossing at MP 192.9. A new structure to carry SB US 93 traffic over the railroad would be constructed just west of the existing US 93 railroad overpass, which would be used to carry NB traffic.

The portion of this site within the APE is noncontributing to the site's overall NRHP eligibility and is therefore not considered to be a Section 4(f) resource. This determination was made because the alignment's original feeling, design, materials, and workmanship have been modified by regular maintenance activities to the extent that it no longer conveys its historic character. The new roadway crossing would not affect the railroad alignment, nor would it substantially alter any characteristic features of the site or its setting. Therefore, no contributing elements of the site would be affected by construction of the preferred alternative. No direct effect on the Section 4(f) property would occur as a result of construction of the preferred alternative. Furthermore, no constructive use of the Section 4(f) property would occur as a result of construction of the preferred alternative because the site is not a noise-sensitive facility, the preferred alternative would not interfere with the aesthetic characteristics of the railroad, and the preferred alternative would not restrict access to the railroad.

Site AZ M:16:34 (ASM)

Based on a review of the conceptual engineering drawings, the preferred alternative would encroach into a portion of site AZ M:16:34 (ASM) that is located just outside and west of the existing US 93 R/W. This prehistoric site consists of grinding slicks, petroglyphs, and an artifact scatter. The eastern boundary of this site is located approximately 75 ft west of the existing western R/W line. The petroglyphs contribute to the site's NRHP eligibility under criterion C (properties that embody the distinctive characteristics of a type, period, or method of construction, that represent the work of a master, that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction) and are located over 300 ft west of the existing R/W line. In the vicinity of this site, the new lanes would be constructed approximately 150 ft (centerline to centerline) to the west of the existing US 93 roadway.

The portion of this site within the APE is noncontributing to the site's overall NRHP eligibility and is therefore not considered to be a Section 4(f) resource. Although a portion of the roadway would be constructed within the designated boundary of the site, the preferred alternative would have no impact on the petroglyphs that contribute to the site's NRHP eligibility. The portion of the site into which the new roadway would encroach is eligible for the NRHP only under criterion D (properties that have yielded, or may be likely to yield, information important in prehistory or history). Therefore, no contributing elements of the site would be affected by construction of the preferred alternative. No direct effect on the Section 4(f) property would occur as a result of construction of the preferred alternative. Furthermore, no constructive use of the Section 4(f) property would occur because the site is not a noise-sensitive facility, the preferred alternative would not interfere with the site's aesthetic characteristics, and the preferred alternative would maintain the existing access to the site.

Conclusion

Construction of the preferred alternative would not cause a direct impact on or constructive use of the Section 4(f) resources in the project area. Therefore, the preferred alternative would have no adverse effect on Section 4(f) properties.

The No Action Alternative would not require disturbance of any Section 4(f) resources. Therefore, the No Action Alternative would have no impact on Section 4(f) properties.

Utilities

Utility relocations and adjustments would be necessary for construction of the preferred alternative. Existing utilities in the project area include:

- Overhead power and telephone lines are located within ADOT R/W on the east side of US 93 from MP 193.9 to MP 192.1.
- A buried power line crosses Quail Run Road parallel to US 93 at MP 192.6.
- A buried power line crosses US 93 at MP 192.4.
- A buried telephone cable is located within ADOT R/W on the east side of US 93 from MP 192.1 to MP 191.5.
- A buried telephone cable crosses US 93 at MP 192.0 and continues northerly on the west side of US 93 to MP 191.5.
- Two power transmission lines cross US 93 at MP 163.3. One tower for each of the two lines would be located in the median. Access to the transmission lines from US 93 would be maintained.

ADOT's Utility and Railroad Engineering Section would investigate utility involvement during the project design phase. Potential utility conflicts would be resolved during final design of the preferred alternative, when each utility company would receive and review the preliminary design plans for any relocations and/or adjustments. Typically, interruptions in service are minimal because the utility companies would construct any new facilities before disconnecting the existing facilities. The utility companies would be responsible for notifying their customers of any anticipated interruptions in service. Therefore, the preferred alternative would have minor, adverse, short-term, and localized impacts on utilities.

The No Action Alternative would not require the relocation or adjustment of any utilities. Therefore, the No Action Alternative would have no impact on utilities.

Material Sources and Waste Materials

The preferred alternative would be designed to balance borrow and waste material requirements within construction segments to the maximum extent possible. It would be the responsibility of the contractor to identify any needed material sources or waste disposal sites and to provide the environmental documentation regarding the potential use of these sites, as specified in ADOT's standard specifications. Therefore, the preferred alternative would have minor, adverse, long-term, and site-specific impacts on materials sources or waste sites.

The No Action Alternative would not require the use of borrow material or waste sites. Therefore, the No Action Alternative would have no impact on materials sources or waste sites.

Secondary Impacts

Secondary impacts are defined in Council on Environmental Quality (CEQ) Guidelines as "those impacts that are caused by an action and occur later in time, or are farther removed in distance but are still reasonably foreseeable after the action has been completed" (40 CFR 1508.8). Secondary impacts comprise a wide variety of effects such as changes in land use, economic vitality, and population density.

The new facility would improve the LOS and operational efficiency of US 93 throughout the project area due to the increased capacity provided by the widened roadway and reduced congestion. Such improvements would accommodate growth in the project vicinity. Secondary impacts of the project would consist of increased traffic volumes on US 93 and continued development in the area.

These secondary impacts would be further intensified due to the construction of additional highway projects in the vicinity, such as the Interim Improvement Project in downtown Wickenburg, which is programmed for construction in FY 2005. Secondary impacts would also be influenced by the eventual construction of the US 93 Wickenburg bypass, which would likely intersect the project area near MP 191. No final decision has been made regarding the route or US 93 intersection location for the Wickenburg bypass project. ADOT has completed a feasibility study to evaluate route corridors for the bypass, and anticipates constructing a bypass roadway in 15 to 20 years. The secondary impacts of the preferred alternative would be minor, long-term, adverse, and regional.

With the No Action Alternative, increasing traffic volumes due to regional growth would not be accommodated. The secondary impacts from the other highway projects identified in the vicinity would still be expected to occur and would affect the project area. The secondary impacts of the No Action Alternative would be moderate, long-term, adverse, and regional.

Cumulative Impacts

Cumulative impacts are defined in 40 CFR 1508.7 as "the incremental impact(s) of the action when added to other past, present, and reasonably foreseeable future actions." The following analysis was prepared in accordance with the 1992 US Department of Transportation's *Secondary and Cumulative Impact Assessment in the Highway Project Development Process* and the 1997 CEQ publication *Considering Cumulative Impacts Under the National Environmental Policy Act.*

For this analysis, the scope of the proposed action, physical extent of direct impacts, and natural and man-made development boundaries were also considered in defining the geographic limits. The geographic limits of the cumulative impact analysis extend approximately 0.3 mile north of the project limits to the Santa Maria River, one mile to the east and west of the existing US 93 roadway, and approximately 3.5 miles south of the project limits to the Yavapai/Maricopa County border.

Actions Included in the Cumulative Impact Analysis

Past Actions

The past actions and completed projects that directly and indirectly resulted in the current conditions of the area under analysis are listed below.

- Prehistoric use of the project area by native American peoples
- Mining exploration (1860s)
- Ranching (dating back to 1870s)
- Construction of the Santa Fe, Prescott & Phoenix Railroad (1894)
- Construction of the local road network serving ranches and mining claims (dating back to approximately 1875)
- Establishment of the SR 71 alignment (1927) and subsequent improvements (1940 – 1964)
- Establishment of the SR 89 alignment (1932) and subsequent improvements (1940 – 1964)
- Establishment of the US 93 alignment (1946)
- Designation of the Joshua Forest Scenic Road scenic setback (1963)
- Construction of existing US 93 (1964 – 1965)
- Construction of utility lines (1970 – 1980s)
- Private development in the vicinity of the US 93/SR 89 junction (dating back to approximately 1986)
- Enactment of NAFTA (1993)
- Designation of CANAMEX corridor (2001)

Present Actions

- Ranching
- Maintenance of US 93, SR 71, SR 89, Santa Fe, Prescott & Phoenix Railroad, local road network, and utility lines
- Private development/residential construction at the Vista Royale subdivision (approximately MP 192.3 to MP 191.4)

Future Actions

- Continued ranching
- Continued private development/residential construction at the Vista Royale subdivision (approximately MP 192.3 to MP 191.4)
- Continued maintenance of US 93, SR 71, SR 89, Santa Fe, Prescott & Phoenix Railroad, local road network, and utility lines
- Construction of the US 93 Interim Improvement Project in Wickenburg (programmed for FY 2005)
- Improvements to US 93 between the northern terminus of the Wickenburg Interim Improvement Project (MP 197.0) and SR 89 (not currently programmed, but reasonably foreseeable within 10 years)
- Construction of the US 93 Wickenburg bypass, which would likely intersect the study area near MP 191 (not currently programmed, but reasonably foreseeable in 15 to 20 years)

Contributions to Cumulative Impacts

Land Ownership, Jurisdiction, and Land Use

The existing land uses in the project area have been shaped by the acquisition of R/W corridors for US 93, SR 71, SR 89, utilities, and the Santa Fe, Prescott & Phoenix railroad. Undeveloped land near the US 93/SR 89 junction has been subdivided for private residential development. The use of BLM and ASLD lands in the project vicinity has been affected by the designation of grazing allotments and recreation areas.

The preferred alternative would require 588.2 acres of new R/W and would therefore contribute to the conversion of lands in the project area to transportation uses. The foreseeable construction of the US 93 Interim Improvement Project and Wickenburg bypass would further add to the acquisition of new R/W.

The proposed US 93 improvements would accommodate future development in the project vicinity resulting from regional growth demands. Subdivision of private lands in the project area would be anticipated to continue, though to a limited extent, as the project area lies within rural residential zoning and most of the land is not privately held. The ASLD lands in the project area could also potentially be developed within zoning constraints. The BLM lands in the project vicinity are designated for retention; thus, no land use change would be anticipated in those areas. The cumulative impact would consist of potentially shifting from undeveloped and grazing to more intensive land uses.

Water Quality

The existing water resources in the project area have been shaped by construction of US 93, SR 71, SR 89, local roads, the Santa Fe, Prescott & Phoenix railroad, utility lines, and private development. The installation of drainage structures and embankment associated with roadway, railroad, housing, and commercial construction to date has resulted in the placement of fill within waters of the US, impacts to the 100-year floodplain, and increased runoff from impervious surfaces.

Construction of the preferred alternative would result in the placement of fill within 83 washes, impacts to the 100-year floodplain in 11 locations, and increased runoff due to the wider pavement surface. The foreseeable construction of the US 93 Wickenburg bypass and continuing development in the project area would further add to the impact on water quality. The cumulative impact would be a potential decrease in water quality due to sedimentation and increased turbidity.

Biological Resources

The existing biological resources in the project area have been affected by construction of US 93, SR 71, SR 89, local roads, the Santa Fe, Prescott & Phoenix railroad, utility lines, ranching, and private development. Construction, development, and ranching have resulted in the loss and degradation of wildlife habitat and removal of protected native plants from the project vicinity. The highway corridors have intersected wildlife habitat, affecting wildlife movement.

Construction of the preferred alternative would require salvaging and transplanting protected native plants, reduce the amount of available wildlife habitat by 495.4 acres, and create a wider expanse of roadway for wildlife to cross. The foreseeable construction of the US 93 Wickenburg bypass and continuing development and ranching in the project area would further add to the impact on biological resources. The cumulative impact would be a potential reduction in biological diversity in the project vicinity due to the reduction or degradation of available wildlife habitat.

Visual Resources

The existing visual setting in the project area has been affected by construction of US 93, SR 71, SR 89, local roads, the Santa Fe, Prescott & Phoenix Railroad, utility lines, ranching, and private development. Construction, development, and ranching have detracted from the natural setting of the project area.

Construction of the preferred alternative would further affect the visual quality of the project area due to the construction of a new roadway. In order to comply with the requirements of the scenic designation, the project would be designed to complement the natural landscape and to avoid impacts to aesthetic features to the maximum extent possible within design constraints. The foreseeable construction of the US 93 Wickenburg bypass and continuing development and ranching in the project area would further add to the impact on visual resources. The cumulative impact would be a potential minor reduction in the visual quality of the project vicinity.

Air Quality

The existing air quality in the project area has been affected by the construction of US 93, SR 71, SR 89, and local roads, and increasing traffic volumes associated with regional growth and the designation of US 93 as a NAFTA route. The project area is in an area that meets NAAQS.

Construction of the preferred alternative would result in slightly better air quality in the project area due to the improvement in traffic operations. The foreseeable construction of the US 93 Wickenburg bypass and Interim Improvement Project would also be beneficial to regional air quality due to improved traffic operations. The cumulative impact would be a reduction in CO concentrations and improvement in air quality in the project vicinity.

Cultural Resources

There is evidence that the original construction of existing US 93 and roadway maintenance activities have disturbed some of the cultural resource sites in the project area. It is likely that construction and maintenance activities on SR 71, SR 89, local roads, the Santa Fe, Prescott & Phoenix Railroad, and utility corridors have also contributed to disturbance of cultural resources sites in the project vicinity.

Construction of the preferred alternative would result in impacts to one historic and nine prehistoric cultural resources sites. The foreseeable construction of the US 93 Wickenburg bypass and continuing development in the project area would likely result in impacts to

additional cultural resources sites. The cumulative impact would be a potential reduction in the number and variety of cultural resource sites in the project vicinity.

Conclusion

As presented in the preceding analysis, construction of the preferred alternative would contribute to the cumulative adverse impacts of past, present, and reasonably foreseeable future actions on land use, biological resources, water quality, visual resources, and cultural resources. The cumulative impact would generally be minor, long-term, adverse, and local.

The No Action Alternative would not contribute to the cumulative impacts of past, present, and reasonably foreseeable future actions on land use, biological resources, water quality, visual resources, or cultural resources, but would contribute to cumulative adverse impacts on air quality in the project area. The cumulative impact would generally be minor, long-term, adverse, and local.

Conclusion

The preferred alternative would accommodate economic development in the US 93 corridor by providing a more efficient roadway for ever-increasing regional traffic volumes and increasing the potential for new development. A matrix summarizing impacts is presented in Table 17. Mitigation for project-related impacts on these resources is discussed under the respective resource analyses and would include compensation for R/W acquisition, compliance with terms and conditions of various water quality permits, development of wildlife crossings, compliance with AGFD Sonoran desert tortoise guidelines, avoidance and data recovery for cultural resources, revegetation of disturbed areas, and design measures to minimize visual impacts.

Table 17 – Impacts Summary

Resource/Environmental Consideration	*Impact of No Action Alternative*				*Impact of Preferred Alternative*			
	Intensity	*Duration*	*Type*	*Context*	*Intensity*	*Duration*	*Type*	*Context*
Land Ownership, Jurisdiction, and Land Use	None				Minor	Long-term	Adverse	Site-specific
Water Quality	None				Minor	Long-term	Adverse	Site-specific
Biological Resources	None				Minor	Long-term	Adverse	Local
Threatened/Endangered Species	None				No effect			
Visual Resources	None				Moderate	Long-term	Adverse	Local
Air Quality	Minor	Long-term	Adverse	Local	Minor	Long-term	Beneficial	Local
Noise	Moderate	Long-term	Adverse	Site-specific	Minor	Long-term	Adverse	Site-specific
Hazardous Materials	None				Minor	Short-term	Adverse	Site-specific
Cultural Resources	None				Minor	Long-term	Adverse	Site-specific
Socioeconomic Impacts	None				Minor	Long-term	Adverse	Site-specific
Section 4(f) Properties	None				No adverse effect			
Utilities	None				Minor	Short-term	Adverse	Local
Material Sources and Waste Materials	None				Minor	Long-term	Adverse	Site-specific
Secondary Impacts	Moderate	Long-term	Adverse	Regional	Minor	Long-term	Adverse	Regional
Cumulative Impacts	Minor	Long-term	Adverse	Local	Minor	Long-term	Adverse	Local

PUBLIC INVOLVEMENT/PROJECT COORDINATION

To ensure that the community has had ample opportunity to provide comments and be involved in the development of the preferred alternative, this study has included public involvement consisting of public scoping and information meetings, question and answer sessions, newsletters, newspaper advertisements, and a project web site.

Public involvement for the proposed US 93 improvements was conducted concurrently with the proposed ultimate bypass around Wickenburg and the Wickenburg Interim Improvement Project. For clarity, only the comments germane to the US 93, Wickenburg to the Santa Maria River study are included in this DEA.

Scoping

The purpose of the scoping process is to identify potential issues, concerns, and opportunities (ICOs) that should be considered in the development and evaluation of alternatives for the proposed improvements. ICO information was obtained from area residents, business owners, and government agency representatives through public and agency scoping meetings. ADOT's technical staff also provided ICO input to the study. The scoping process for this project is summarized in the project scoping report.

Agency Scoping

An agency scoping meeting was held on June 3, 1999, from 1:00 to 3:00 pm at the Wickenburg Council Chambers, located at 155 North Tegner Street in Wickenburg. The meeting was attended by representatives of the BLM, ADOT, ASLD, Town of Wickenburg, Yavapai County, FHWA, and the Wickenburg Chamber of Commerce. The meeting was opened with a discussion of the study corridor, the purpose of the study, and the purpose of the agency scoping meeting. After reviewing the meeting handout, the floor was opened to the agency representatives to express their concerns regarding the development and evaluation of alternatives for the proposed highway improvements. The agency representatives voiced the ICOs listed below regarding the roadway's design, social and economic impacts, and environmental impacts. Copies of correspondence submitted to and received from various agencies following the scoping meeting are included in Appendix J.

<u>Design Considerations</u>

- Incorporate design measures to preserve the visual character of the scenic highway.
- Coordinate with Western Area Power Administration regarding potential conflicts with power lines that cross the existing roadway near the Santa Maria River.
- Concern was expressed regarding potential material source sites and staging areas.
- Access to public lands and recreational areas must be maintained.
- Access control should be addressed early in the process.

<u>Social and Economic Impacts</u>

- Disruption of hiking, mountain biking, and equestrian trails should be avoided.

- Consistency with general land use plans should be considered.
- Physical improvements on ASLD lands (e.g. corrals, barns, etc.) would require compensation if they were affected by the highway improvements.
- Minimize impacts on residential areas.
- Two grazing allotments (the Santa Maria and the DG Ranch) are present on BLM lands south of the Santa Maria River. These land parcels are designated for retention.
- Subsurface federal mining rights on ASLD lands need to be considered.
- Assistance for grazing lessees, such as providing fencing during construction, should be considered.
- Concerned about impacts on BLM recreational lands and the potential involvement of Section 4(f) considerations in the study.
- Maintain access to grazing allotments on ASLD lands.
- Keep the cost of the proposed highway in a reasonable range.

Environmental Impacts

- Concerned about visual impacts on designated scenic highway. The roadway should blend into the surrounding areas.
- Wildlife crossing locations need to be identified and accommodated in developing design alternatives.
- Bat surveys at existing structures on BLM land would be required to detect roosting areas and determine the need for mitigation.
- Consider plant salvaging during design.
- Minimize air quality impacts and noise pollution.
- Minimize impacts on wildlife habitat.

Public Scoping

A public scoping meeting was held on June 3, 1999, from 6:00 to 8:00 pm at the Wickenburg Community Center, located at 160 North Valentine Street in Wickenburg. The meeting was advertised in the *Wickenburg Sun* and the *Arizona Republic* two weeks prior to the meeting. The purpose of the meeting was to provide information about the study process to the general public and to provide an opportunity to gather public input on ICOs for the proposed highway improvements. One hundred seventy-two people signed the attendance sheets for the meeting. A summary of comments received following the public scoping meeting regarding improvements to US 93 from Wickenburg to the Santa Maria River is provided below.

Design Considerations

- Use the existing alignment for new four-lane divided roadway north of Wickenburg.
- Maintain access to local roads.
- Improve the roadway's safety and traffic flow.

Social and Economic Impacts

- Minimize impacts on private property.

- Avoid residential areas and neighborhoods.
- Protect existing recreational areas and equestrian trails.
- Minimize the cost of building the new roadway.

Environmental Impacts

- Avoid impacts on air quality.
- Minimize visual impacts.
- Avoid wildlife and habitat impacts.
- Minimize noise impacts in residential areas.
- Preserve local water quality.
- Avoid floodplain encroachment.

Information Meetings

A public information meeting was held at the Wickenburg Community Center from 6:00 to 8:00 pm on August 22, 2000. The meeting was advertised in the *Wickenburg Sun* and the *Arizona Republic* two weeks prior to the meeting. Three hundred forty-three people signed the attendance sheets for the meeting. The meeting began with an explanation of the study process and how it had progressed since the public scoping meeting held on June 3, 1999. The alternatives for widening US 93 from SR 89 to the Santa Maria River were presented along with information about the other portions of the larger US 93 study from SR 74 to the Santa Maria River. It was explained that the existing roadway would be retained for one direction of travel and widening would occur to either side to provide a four-lane divided facility. Forms were made available at the meeting to allow the public to submit written comments.

Comments received regarding the project were generally in support of improving the roadway due to perceived unsafe conditions on the existing roadway. Concerns were expressed about visual impacts, impacts to businesses, avoiding wildlife and vegetation, improving the US 93/SR 89 and US 93/SR 71 junctions, accommodating new development, noise impacts, and maintaining access to adjacent properties. In addition, several people expressed opposition to the widening because they believed that the bypass around Wickenburg should be the first priority for US 93 improvements in the Wickenburg vicinity.

Hearing

A public hearing for the preferred alternative is planned for November 17, 2004, from 6:00 to 8:00 pm in the cafeteria of the Wickenburg High School, located at 1090 South Vulture Mine Road. A transcript of the public hearing would be included in the final environmental document. In addition, a summary of public comments received following distribution of this DEA and during the public hearing comment period, as well as ADOT responses, would be provided in the final environmental document. After review of the final study documents, FHWA would issue a final decision on the proposed project.

Other Ongoing Activities

Public involvement has also been achieved during the course of the study through the use of study updates and a project web site. Study update newsletters were included in the *Wickenburg Sun* in May 1999, February 2000, October 2000, and March 2002. A project web site offering study information has been available during the course of the study for public information and feedback. The web site address is http://www.wickenburg.civilnet.sverdrup.com.

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APPENDICES

Appendix A – Supplemental Design Concept Alternative Information

Design Concept Alternatives

In the project's Location/Design Concept Report (L/DCR), the design concepts for each alternative are identified by alphanumeric designations associated with the three study segments shown in Figure 6. The design concept alternatives include varying cross sections and constructing the improvements on either side of the existing roadway. For these variations, the alternatives were assigned names according to the following method as summarized in Table A:

- The first letter (A, B, or C) identifies the study segment.
- The number corresponds to the type of typical cross section applied ("1" indicates narrow median, "2" indicates standard median, and "3" indicates variable-width median).
- The final letter corresponds to which side of the existing roadway the improvements would be constructed ("a" indicates the west side, "b" indicates the east side, and no final suffix is included if improvements would be constructed on alternating sides).

Table A – Design Concept Alternatives Summary

Segment	*Alternative*	*Location of New Lanes Relative to Existing US 93*	*Cross Section*
A	A-1a	West	Narrow median
	A-1b	East	Narrow median
	A-2a	West	Standard median
	A-2b	East	Standard median
	A-3a	West	Variable-width median
	A-3b	East	Variable-width median
B	B-1a	West	Narrow median
	B-1b	East	Narrow median
	B-2a	West	Standard median
	B-2b	East	Standard median
	B-3a	West	Variable-width median
	B-3b	East	Variable-width median
C	C-1a	West	Standard median
	C-1b	East	Standard median
	C-2a	West	Variable-width median
	C-2b	East	Variable-width median
	C-3	Varies	Variable-width median

Cross Sections Considered

Three typical roadway cross sections that would provide the needed capacity and meet the goals for the project area were identified and considered for each of the study segments, as illustrated in Figure A.

Narrow Median

A 70-ft centerline-to-centerline roadway separation, which provides a 46-ft graded median, is the minimum cross section to be used in rural areas, based on ADOT's *Roadway Design Guidelines*. This cross section, which requires the least amount of R/W of any rural divided highway cross section, would be used in areas where a wider separation would have negative impacts on adjacent properties. In the L/DCR, the narrow median cross section is recommended for Segment A.

The advantages of this cross section would include:

- Requires the least amount of new R/W of any rural divided highway cross section
- Results in the least impact on adjacent property for any rural divided highway cross section

The disadvantages of this cross section would include:

- Reduced opportunities for independent lane elevations for each direction of travel, which would result in increased land disturbance in rolling terrain
- Requires removal of natural drainage features or vegetation in the median because the full width of the median is graded
- Less shielding from the headlight glare of oncoming traffic than would be provided with a wider median
- Less capacity for storing turning vehicles at crossovers than would be provided with a wider median

Standard Median

A 108-ft centerline-to-centerline roadway separation, which provides an 84-ft median, would be the desirable cross section for use in rural areas. In the L/DCR, the standard median cross section is recommended for Segment B.

Advantages of this cross section would include:

- A greater range of independent profile grades for each set of lanes than could be achieved with a narrow median
- Increased opportunities to provide a landscaped area or retain natural vegetation in the median to improve aesthetics
- Greater capacity for storing turning vehicles at crossovers than would be provided by a narrow median
- More room for drainage improvements than would be provided by a narrow median

The disadvantage of this cross section would be that it would require more R/W and have a greater impact on adjacent land parcels than the narrow median.

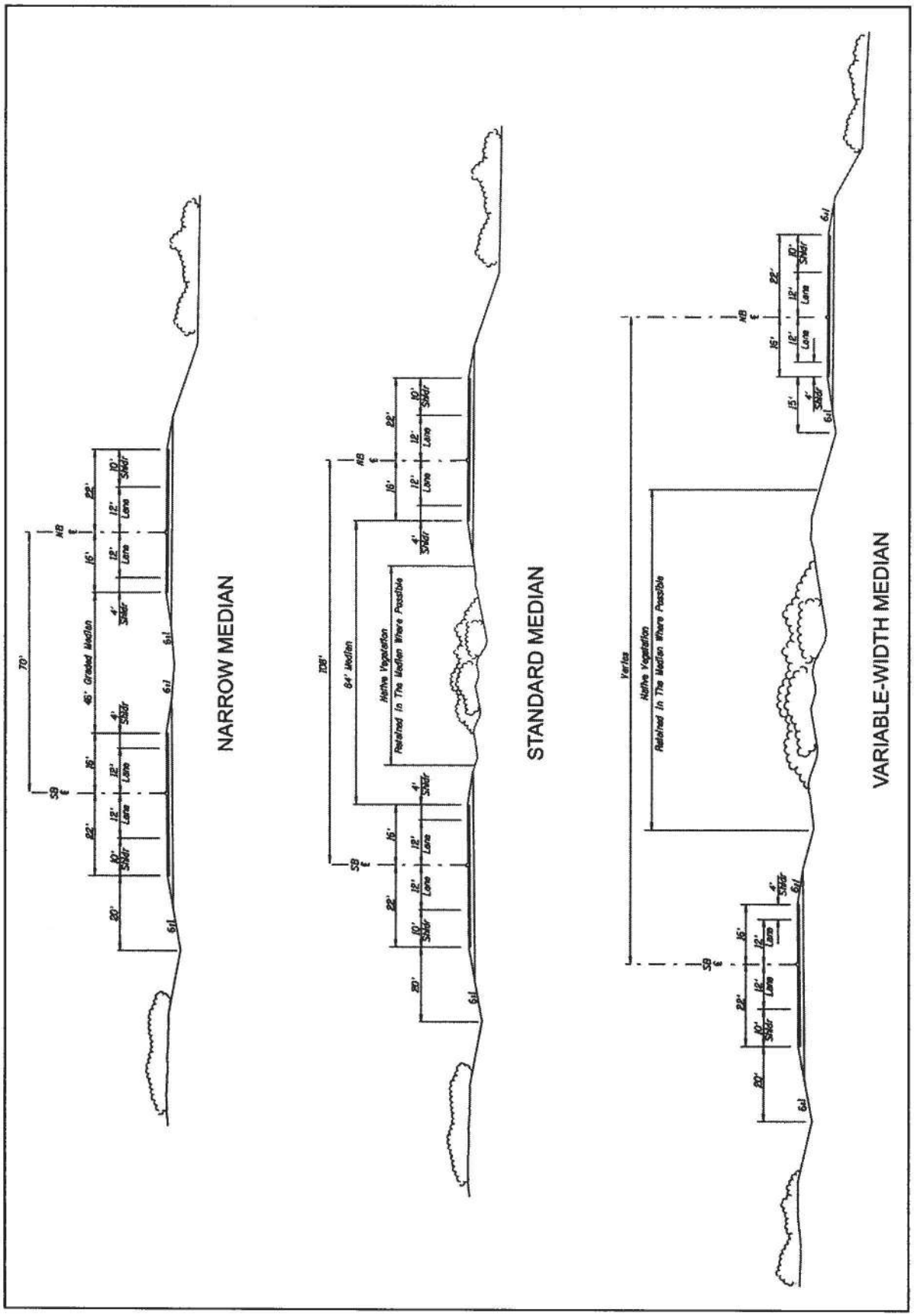


Figure A – Cross Sections

Variable-Width Median

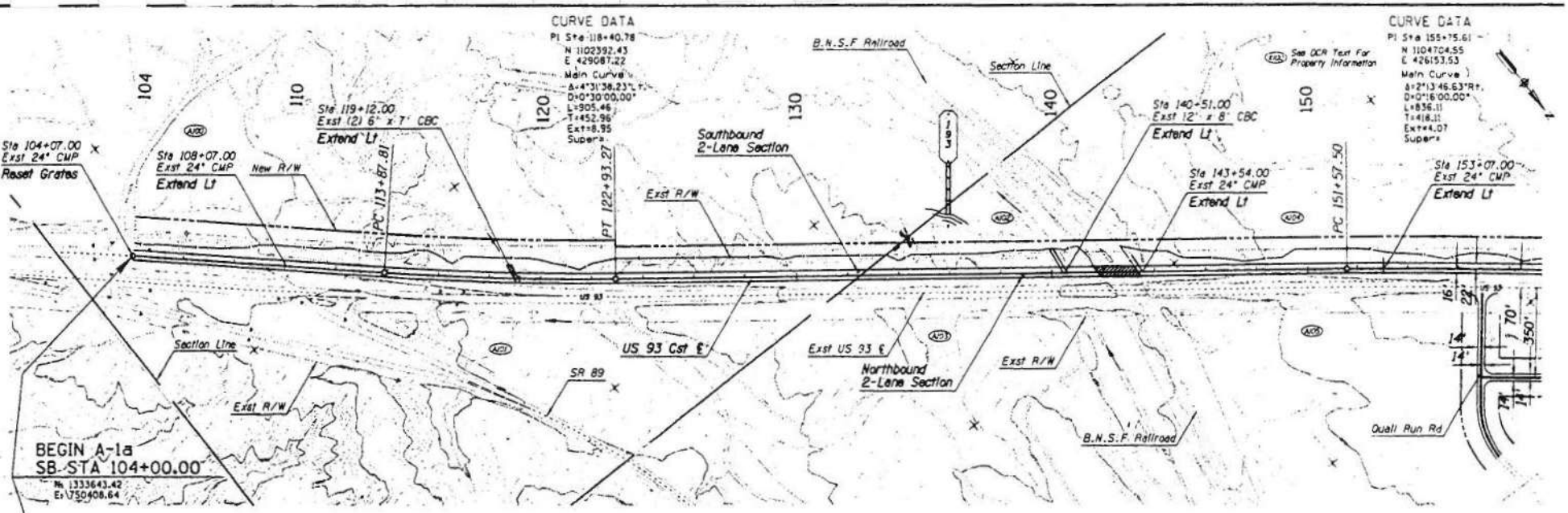
A divided four-lane facility with a variable-width median, which allows development of independent alignments for each direction of travel, would be the desirable cross section in rural areas where the topography is rolling and there are scenic elements that should be avoided. In the L/DCR, the variable-width median cross section is recommended for Segment C.

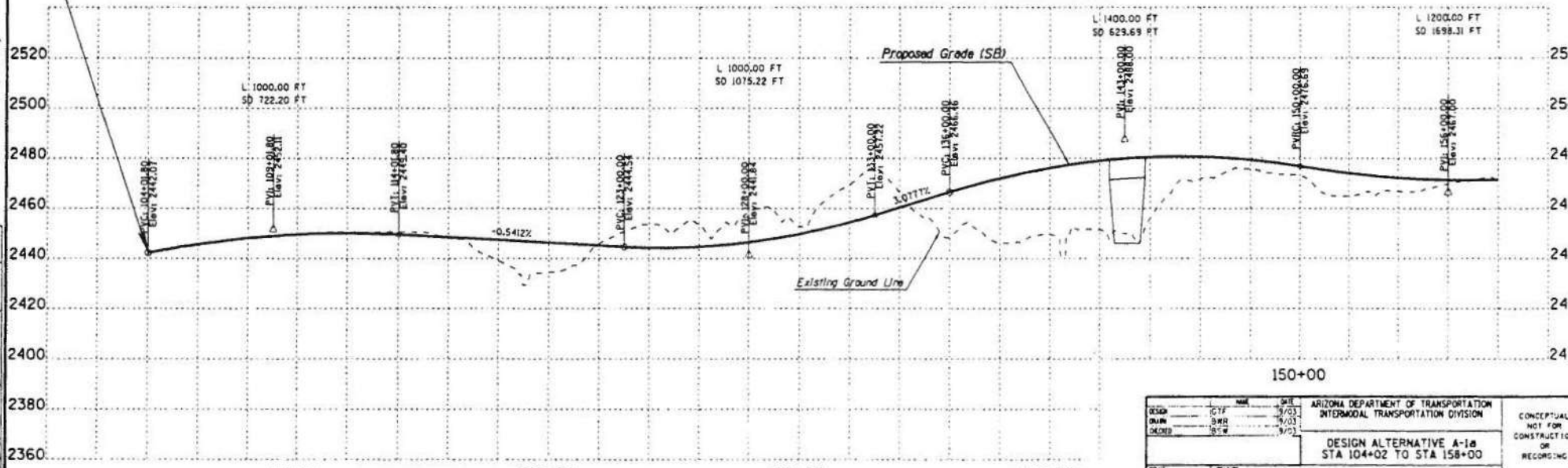
Advantages of this cross section would include:

- Independent vertical and/or horizontal alignments to fit the terrain, minimizing the need for cut and fill, reducing vegetation disturbance, and lowering construction costs
- Use of independent alignments to enhance the aesthetic quality of the roadway by improving views from the roadway and/or allowing natural vegetation to remain in the median
- Use of independent alignments to retain natural drainage channels in the median
- Use of two independent roadways minimizes impacts on the visual setting by reducing the dominance of the opposing lanes in motorists' views from the roadway

The disadvantage of this cross section would be that it would require more R/W than the standard median or narrow median, resulting in higher R/W costs and greater impacts on adjacent properties.

Appendix B – Plan Sheets





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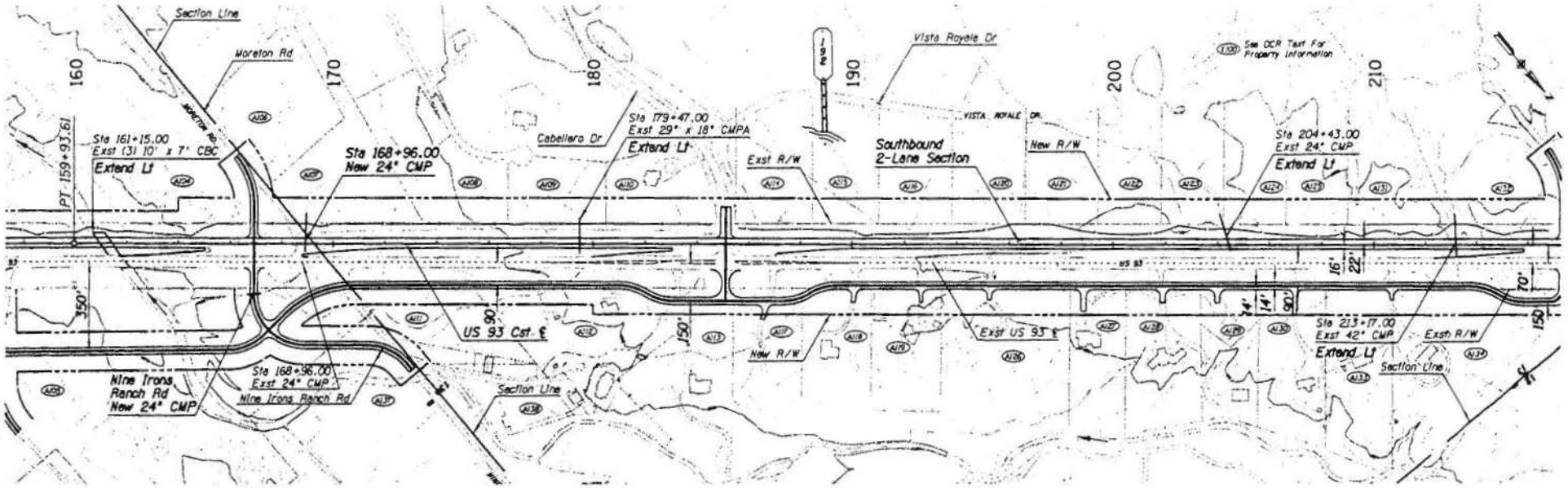
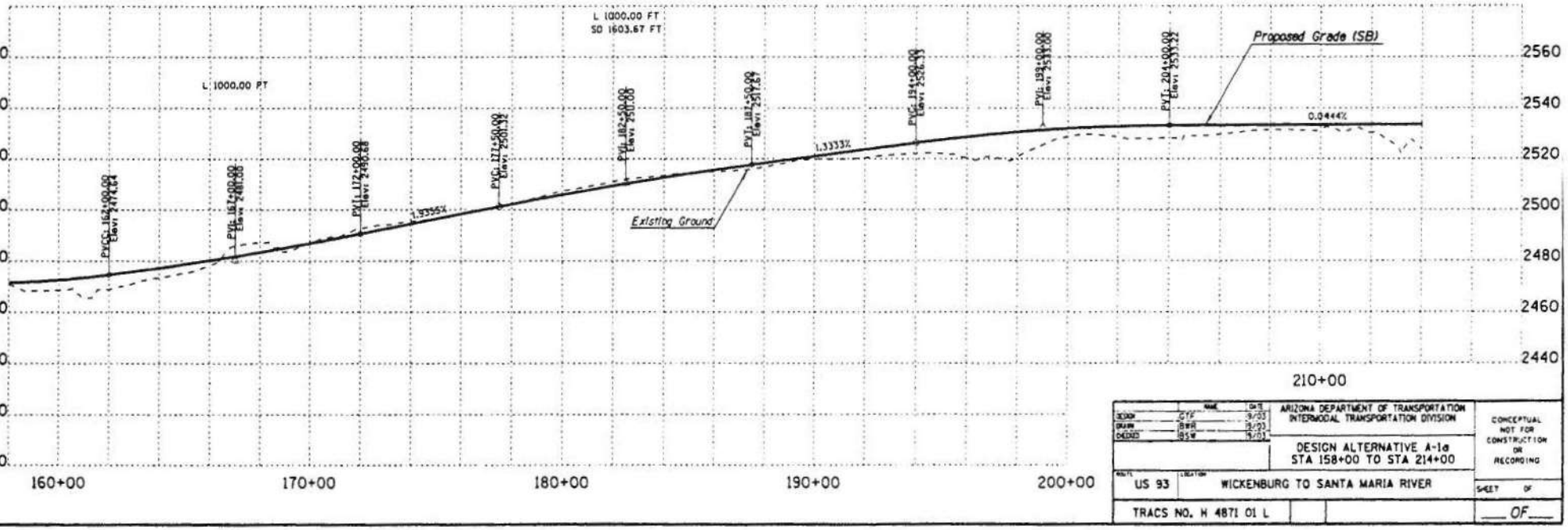
CHECKED	RCW	9/03	DESIGN ALTERNATIVE A-1a STA 104+02 TO STA 158+00
US 93	WICKENBURG TO SANTA MARIA RIVER		
TRACS NO. H 4871 01 L			

CONCEPTUAL NOT FOR CONSTRUCTION OR RECORDING

SHEET OF ___ OF ___





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ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION

DESIGN ALTERNATIVE A-1σ
STA 158+00 TO STA 214+00

CONCEPTUAL
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CONSTRUCTION
OR
RECORDING

ROUTE: US 93
LOCATION: WICKENBURG TO SANTA MARIA RIVER

SHEET OF

TRACS NO. H 4871 01 L

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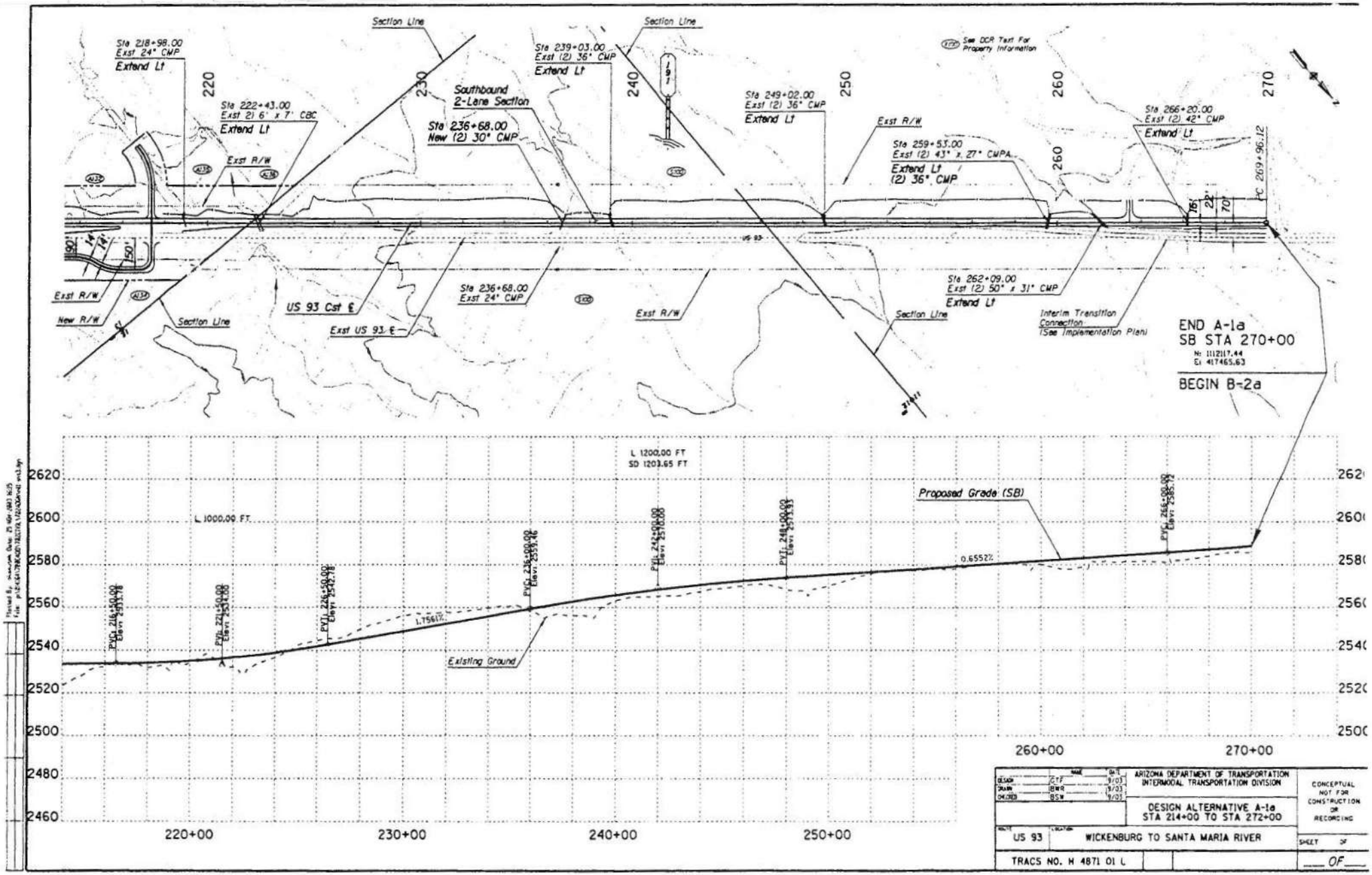

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CHECKED	BSW	9/03

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION

DESIGN ALTERNATIVE A-1a
STA 214+00 TO STA 272+00

CONCEPTUAL NOT FOR CONSTRUCTION OR RECORDING

ROUTE	LOCATION	SHEET
US 93	WICKENBURG TO SANTA MARIA RIVER	OF
TRACS NO. H 4871 01 L		

Appendix C – Water Quality Data

Table C – Jurisdictional Waters of the US

Wash No.	*MP*	*Culvert Type*	*Channel Cross Section Width x Depth (ft)*
1	193.31	CBC	12 x 1
2	192.91	CBC	10 x 1
3	192.52	CBC	20 x 1.5
4	191.36	CBC	6 x 1
5	190.45	CBC	20 x 1.5
6	190.19	CBC	20 x 1
7	189.79	CMP	4 x 2
8	189.40	CBC	12 x 1
9	188.69	CBC	12 x 1
10	188.31	CBC	8 x 1
11	186.85	CBC	10 x 1.5
12	186.56	CBC	6 x 1
13	186.30	CBC	10 x 2
14	186.2	CMPA	2 x 3
15	186.03	CBC	8 x 1
16	185.49	CBC	10 x 1
17	184.93	CBC	20 x 2
18	184.77	CBC	6 x 3
19	184.71	CBC	10 x 3
20	184.17	CBC	15 x 2
21	184.01	CBC	10 x 1
22	183.74	CBC	6 x 2
23	183.41	CBC	20 x 1
24	183.16	CBC	30 x 1
25	182.62	CBC	6 x 1
26	182.20	CBC	7 x 2
27	182.06	CBC	4 x 2
28	181.92	CBC	12 x 1
29	181.70	CBC	12 x 1
30	181.54	CBC	5 x 1.5
31	181.40	CBC	6 x 2
32	181.36	CBC	8 x 1
33	181.13	CBC	3 x 1
34	180.98	CMP	3 x 1
35	180.88	CMP	3 x 1
36	180.81	CMP	4 x 1
37	180.71	CMP	4 x 1
38	180.58	CMP	3 x 1

(continues on next page)

Table C – Jurisdictional Waters of the US
(continued)

Wash No.	*MP*	*Culvert Type*	*Channel Cross Section Width x Depth (ft)*
39	180.45	CBC	6 x 2
40	180.41	CBC	4 x 2
41	180.09	CBC	15 x 2
42	179.86	CBC	6 x 2
43	179.51	CBC	8 x 1
44	179.24	CBC	6 x 1
45	179.02	CBC	8 x 1.5
46	178.85	CBC	6 x 1
47	178.71	CBC	40 x 1
48	178.29	CBC	50 x 1.5
49	178.01	CBC	8 x 1.5
50	177.46	CBC	25 x 1
51	177.24	CMP	8 x 1
52	177.02	CBC	10 x 2
53	176.32	CBC	10 x 1.5
54	175.83	CBC	6 x 1
55	175.12	CBC	8 x 1
Date Creek	174.22	Bridge	110 x 1.5
56	173.97	CMP	2 x 1
57	173.85	CMP	2 x 1
58	173.76	CBC	15 x 2
59	173.65	CBC	10 x 1
60	173.35	CBC	12 x 1.5
61	172.44	CMP	3 x 1
62	172.34	CBC	6 x 1
63	172.10	CMP	4 x 1
64	171.91	CBC	4 x 1.5
65	171.46	CBC	8 x 1
66	171.10	CMP	5 x 1
67	170.94	CBC	20 x 1
68	170.16	CBC	20 x 1
69	169.21	CBC	30 x 1
70	169.03	CBC	8 x 1
71	168.69	RCP	8 x 1.5
72	168.47	RCP	5 x 2
73	168.41	RCP	3 x 1
74	168.35	RCP	4 x 1

(continues on next page)

Table C – Jurisdictional Waters of the US (continued)

Wash No.	*MP*	*Culvert Type*	*Channel Cross Section Width x Depth (ft)*
75	168.13	RCP	4 x 1
76	167.17	RCP	3 x 1
77	167.06	CMP	6 x 1
78	166.61	CBC	25 x 1.5
79	166.45	CMP	3 x 1
80	166.23	RCP	5 x 1
81	166.07	RCP	2 x 1
Big Jim Wash	165.53	Bridge	150 x 1
82	165.05	CMP	6 x 0.5
83	164.75	CBC	6 x 1
84	164.61	CBC	15 x 1
85	164.51	CMP	8 x 1
86	163.37	CBC	6 x 1
87	163.06	CBC	12 x 1
88	161.85	CBC	15 x 1

Appendix D – Arizona Game and Fish Department Tortoise Handling Guidelines

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised January 17, 1997

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

Desert tortoises of the Sonoran population are those occurring south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position at all times and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 105 degrees fahrenheit unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to two miles, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 105 degrees fahrenheit, the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- These guidelines do not apply to the Mohave population of desert tortoises (north and west of the Colorado River). Mohave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.

- These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.

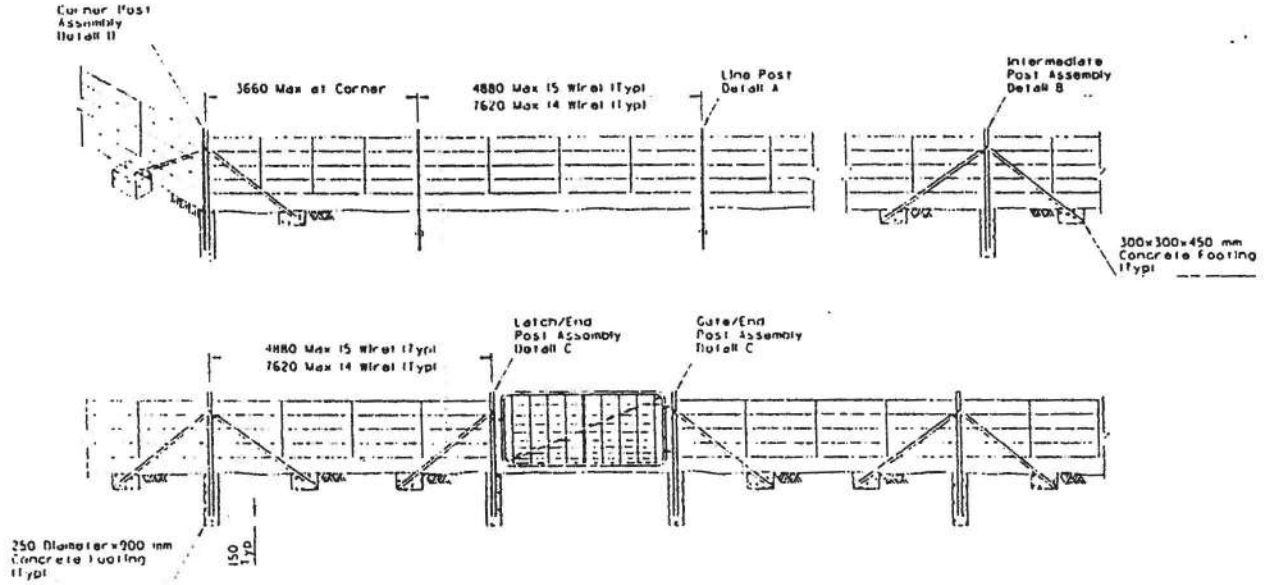
- Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.

RAC:NLO:rc

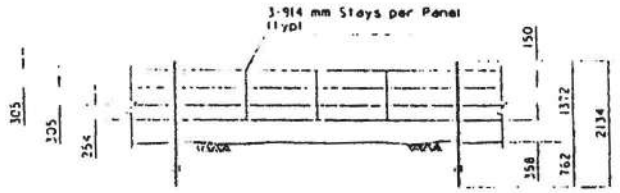
Appendix E – Game Fence Specification

GENERAL NOTES

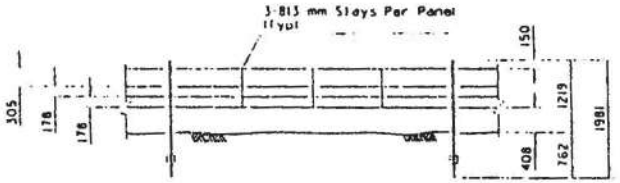
1. Intermediate Post Assemblies shall be located as shown and at intervals not to exceed 200 m or midway between all braced posts.
2. For game fence the bottom wire shall be barbless.
3. The stays on game fence shall have their ends turned up, to prevent injuries to game.



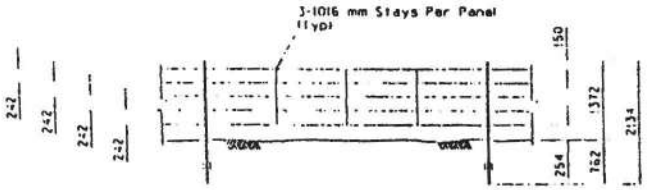
TYPICAL BARBED WIRE FENCE INSTALLATION-TYPE 2 BW SHOWN



TYPE 1 BARBED WIRE (BW) (4 WIRE)



BARBED WIRE GAME FENCE (GF)



TYPE 2 BARBED WIRE (BW) (5 WIRE)

Terry H. Otterness	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS STANDARD DRAWINGS
	FENCE, BARBED WIRE

Appendix F – Air Quality Data

Table F – Air Quality Analysis Results

Receptor	*MP*	*Side of US 93*	*1-Hour CO Concentration (ppm)**			*8-Hour CO Concentration (ppm)***		
			Existing	*No Build*	*Preferred Alt.*	*Existing*	*No Build*	*Preferred Alt.*
Segment 1								
W1	193.6	West	2.5	2.5	2.6	1.8	1.8	1.8
W2	192.8	West	2.4	2.5	2.6	1.7	1.8	1.8
W3	191.9	West	2.4	2.4	2.5	1.7	1.7	1.8
W4	190.9	West	2.3	2.3	2.4	1.6	1.6	1.7
W5	190.0	West	2.2	2.3	2.3	1.5	1.6	1.6
W6	189.4	West	2.3	2.3	2.4	1.6	1.6	1.7
E1	193.6	East	2.4	2.4	2.4	1.7	1.7	1.7
E2	192.8	East	2.6	2.6	2.5	1.8	1.8	1.8
E3	191.9	East	2.6	2.6	2.5	1.8	1.8	1.8
E4	190.9	East	2.4	2.4	2.4	1.7	1.7	1.7
E5	190.0	East	2.4	2.4	2.4	1.7	1.7	1.7
E6	189.4	East	2.4	2.4	2.4	1.7	1.7	1.7
Segment 2								
W1	189.1	West	2.3	2.3	2.4	1.6	1.6	1.7
W2	188.1	West	2.2	2.3	2.3	1.5	1.6	1.6
W3	187.2	West	2.3	2.3	2.4	1.6	1.6	1.7
W4	186.2	West	2.2	2.3	2.3	1.5	1.6	1.6
W5	185.3	West	2.3	2.3	2.4	1.6	1.6	1.7
W6	184.3	West	2.2	2.3	2.3	1.5	1.6	1.6
W7	183.5	West	2.2	2.3	2.3	1.5	1.6	1.6
INT-SW	183.0	West	2.2	2.2	2.2	1.5	1.5	1.5
INT- NW	182.9	West	2.2	2.3	2.3	1.5	1.6	1.6
INT-NE	183.0	East	2.2	2.2	2.2	1.5	1.5	1.5
INT-SE	183.0	East	2.2	2.3	2.2	1.5	1.6	1.5
E1	183.5	East	2.4	2.4	2.4	1.7	1.7	1.7
E2	184.3	East	2.4	2.4	2.4	1.7	1.7	1.7
E3	185.3	East	2.4	2.4	2.4	1.7	1.7	1.7
E4	186.2	East	2.4	2.4	2.4	1.7	1.7	1.7
E5	187.2	East	2.4	2.4	2.4	1.7	1.7	1.7
E6	188.1	East	2.4	2.4	2.4	1.7	1.7	1.7
E7	189.1	East	2.4	2.4	2.4	-	-	-
Segment 3								
W1	182.3	West	2.6	2.7	2.6	1.8	1.9	1.8
W2	181.4	West	2.5	2.5	2.5	1.8	1.8	1.8
W3	180.5	West	2.6	2.7	2.6	1.8	1.9	1.8
W4	179.5	West	2.5	2.5	2.5	1.8	1.8	1.8

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Table F – Air Quality Analysis Results (continued)

Receptor	MP	Side of US 93	1-Hour CO Concentration (ppm)*			8-Hour CO Concentration (ppm)**		
			Existing	No Build	Preferred Alt.	Existing	No Build	Preferred Alt.
W5	178.6	West	2.6	2.7	2.6	1.8	1.9	1.8
W6	177.6	West	2.5	2.5	2.5	1.8	1.8	1.8
E1	177.6	East	2.6	2.6	2.5	1.8	1.8	1.8
E2	178.6	East	2.6	2.6	2.5	1.8	1.8	1.8
E3	179.5	East	2.6	2.6	2.5	1.8	1.8	1.8
E4	180.5	East	2.6	2.6	2.5	1.8	1.8	1.8
E5	181.4	East	2.6	2.6	2.5	1.8	1.8	1.8
E6	182.3	East	2.6	2.6	2.5	1.8	1.8	1.8
Segment 4								
W1	177.2	West	2.5	2.5	2.4	1.8	1.8	1.7
W2	176.7	West	2.6	2.7	2.5	1.8	1.9	1.8
W3	175.7	West	2.5	2.5	2.4	1.8	1.8	1.7
W4	174.8	West	2.6	2.7	2.5	1.8	1.9	1.8
W5	173.9	West	2.5	2.5	2.4	1.8	1.8	1.7
W6	172.9	West	2.6	2.7	2.5	1.8	1.9	1.8
W7	172.0	West	2.5	2.5	2.4	1.8	1.8	1.7
W8	170.9	West	2.6	2.7	2.5	1.8	1.9	1.8
W9	170.0	West	2.5	2.5	2.4	1.8	1.8	1.7
W10	169.2	West	2.7	2.7	2.4	1.9	1.9	1.7
W11	168.2	West	2.5	2.7	2.4	1.8	1.9	1.7
W12	167.3	West	2.6	2.7	2.5	1.8	1.9	1.8
W13	166.3	West	2.5	2.5	2.4	1.8	1.8	1.7
W14	165.4	West	2.6	2.7	2.5	1.8	1.9	1.8
W15	164.4	West	2.5	2.5	2.4	1.8	1.8	1.7
W16	163.5	West	2.6	2.7	2.5	1.8	1.9	1.8
W17	162.6	West	2.5	2.5	2.4	1.8	1.8	1.7
W18	161.8	West	2.5	2.5	2.5	1.8	1.8	1.8
E1	161.8	East	2.4	2.4	2.5	1.7	1.7	1.8
E2	162.6	East	2.6	2.6	2.5	1.8	1.8	1.8
E3	163.5	East	2.6	2.6	2.4	1.8	1.8	1.7
E4	164.4	East	2.6	2.6	2.4	1.8	1.8	1.7
E5	165.4	East	2.6	2.6	2.4	1.8	1.8	1.7
E6	166.3	East	2.6	2.6	2.4	1.8	1.8	1.7
E7	167.3	East	2.6	2.6	2.4	1.8	1.8	1.7
E8	168.2	East	2.6	2.6	2.4	1.8	1.8	1.7
E9	169.2	East	2.6	2.6	2.3	1.8	1.8	1.6
E10	170.0	East	2.5	2.5	2.4	1.8	1.8	1.7

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Table F – Air Quality Analysis Results (continued)

Receptor	*MP*	*Side of US 93*	*1-Hour CO Concentration (ppm)**			*8-Hour CO Concentration (ppm)***		
			Existing	*No Build*	*Preferred Alt.*	*Existing*	*No Build*	*Preferred Alt.*
E11	170.9	East	2.6	2.6	2.4	1.8	1.8	1.7
E12	172.0	East	2.6	2.6	2.4	1.8	1.8	1.7
E13	172.9	East	2.6	2.6	2.4	1.8	1.8	1.7
E14	173.9	East	2.6	2.6	2.5	1.8	1.8	1.8
E15	174.8	East	2.6	2.6	2.4	1.8	1.8	1.7
E16	175.7	East	2.6	2.6	2.5	1.8	1.8	1.8
E17	176.7	East	2.6	2.6	2.4	1.8	1.8	1.7
E18	177.2	East	2.6	2.6	2.4	1.8	1.8	1.7

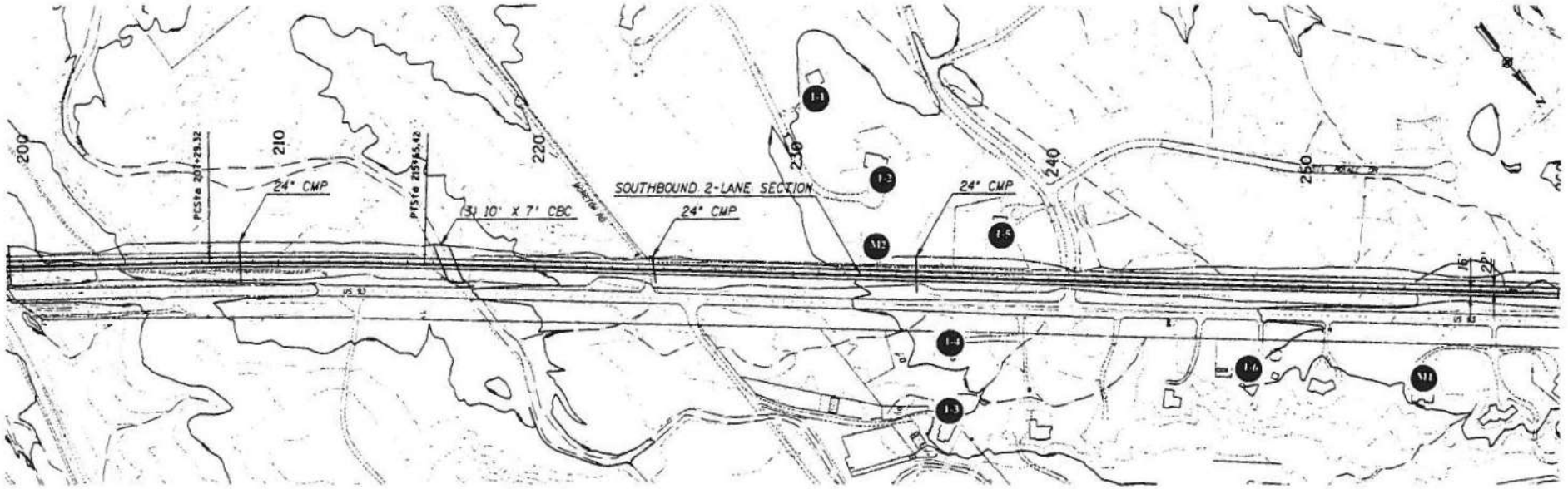
* Includes 2.0 ppm background CO concentration

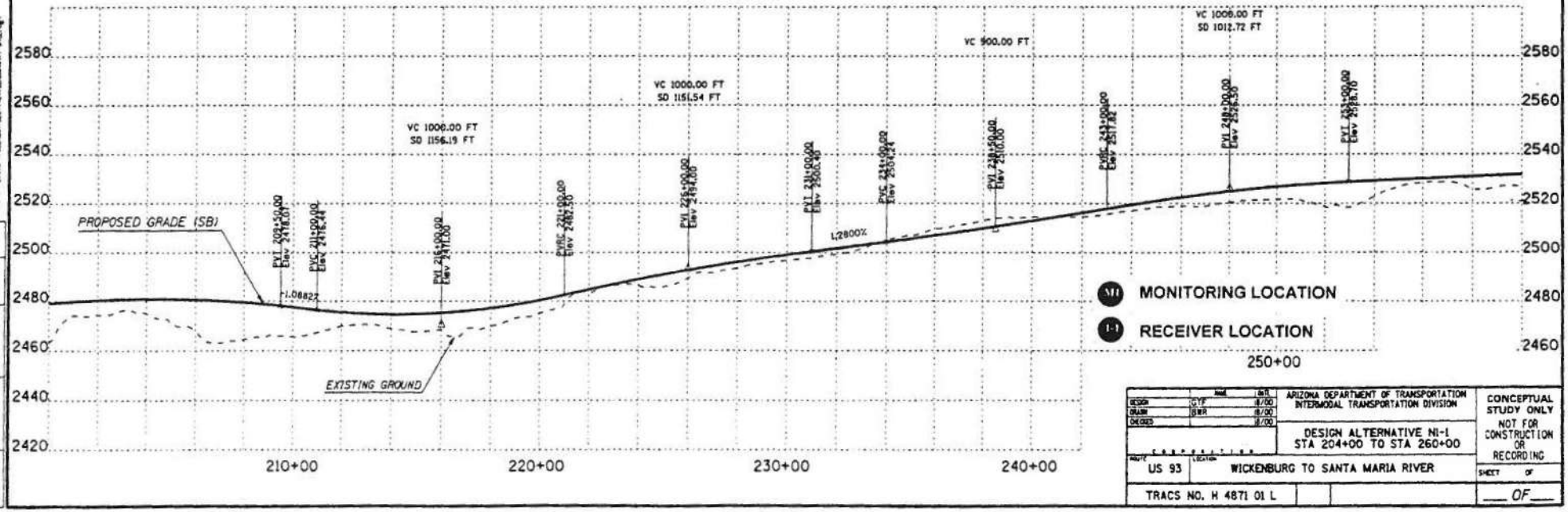
** Based on 0.7 persistence factor

Appendix G – Noise Analysis Information

To determine existing noise conditions, ambient noise level readings were taken at two locations in the project area in January 2002. Noise levels were monitored during mid-day (12:30 to 1:30 pm) traffic conditions using a Larson Davis Model 820 Type I integrating sound level meter placed approximately 5 ft above the ground.

Site M-1, located at MP 191.8 approximately 230 ft east of the R/W line, had a measured noise level of 57 dBA. Site M-2, located at MP 192.2 approximately 200 ft west of the R/W line, had a measured noise level of 58 dBA.





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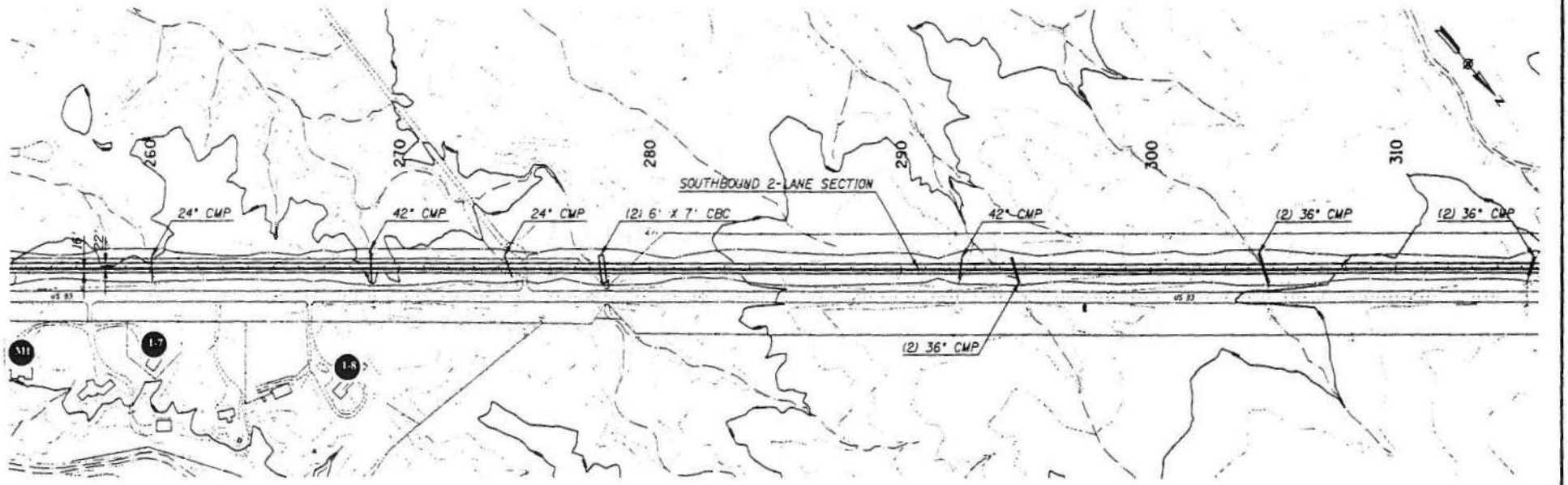
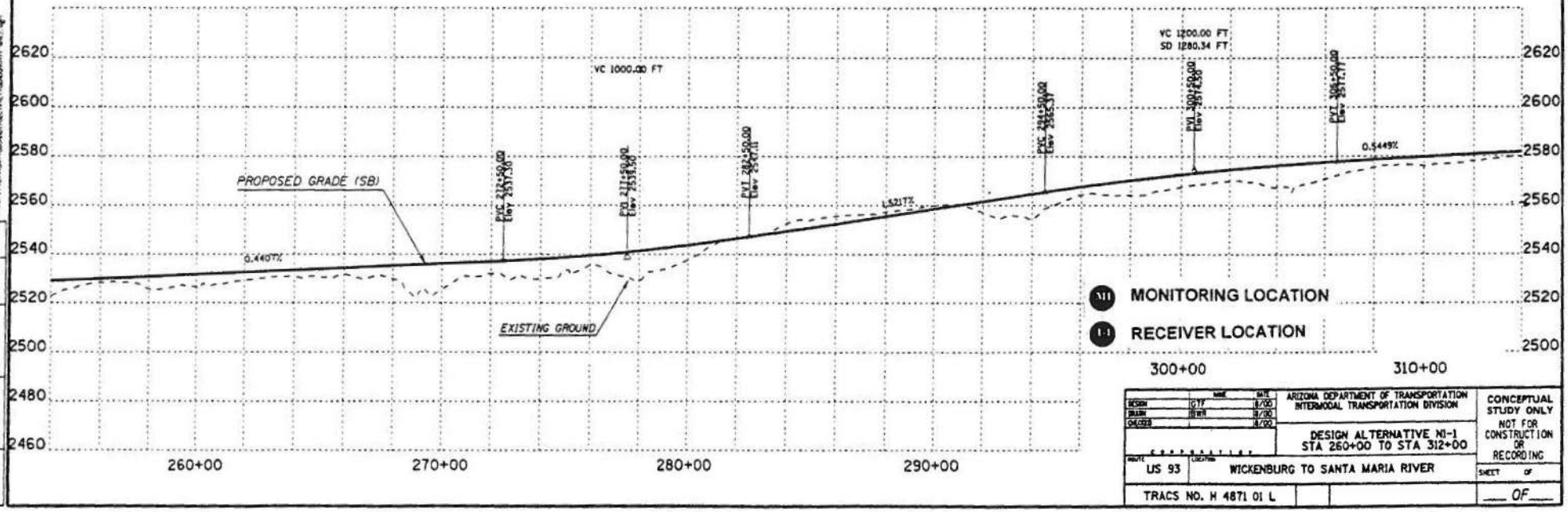
CHECKED		8/00	DESIGN ALTERNATIVE NI-1 STA 204+00 TO STA 260+00
ROUTE US 93	LOCATION WICKENBURG TO SANTA MARIA RIVER		
TRACS NO. H 4871 01 L			

CONCEPTUAL STUDY ONLY
NOT FOR CONSTRUCTION OR RECORDING

SHEET OF ___ OF ___





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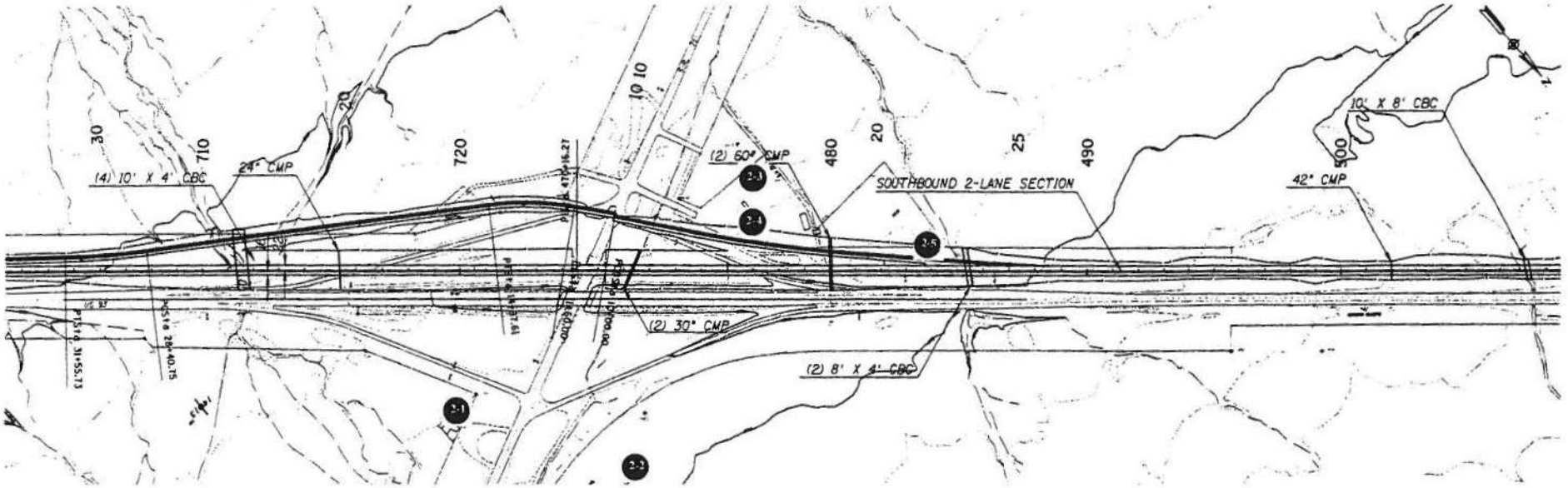
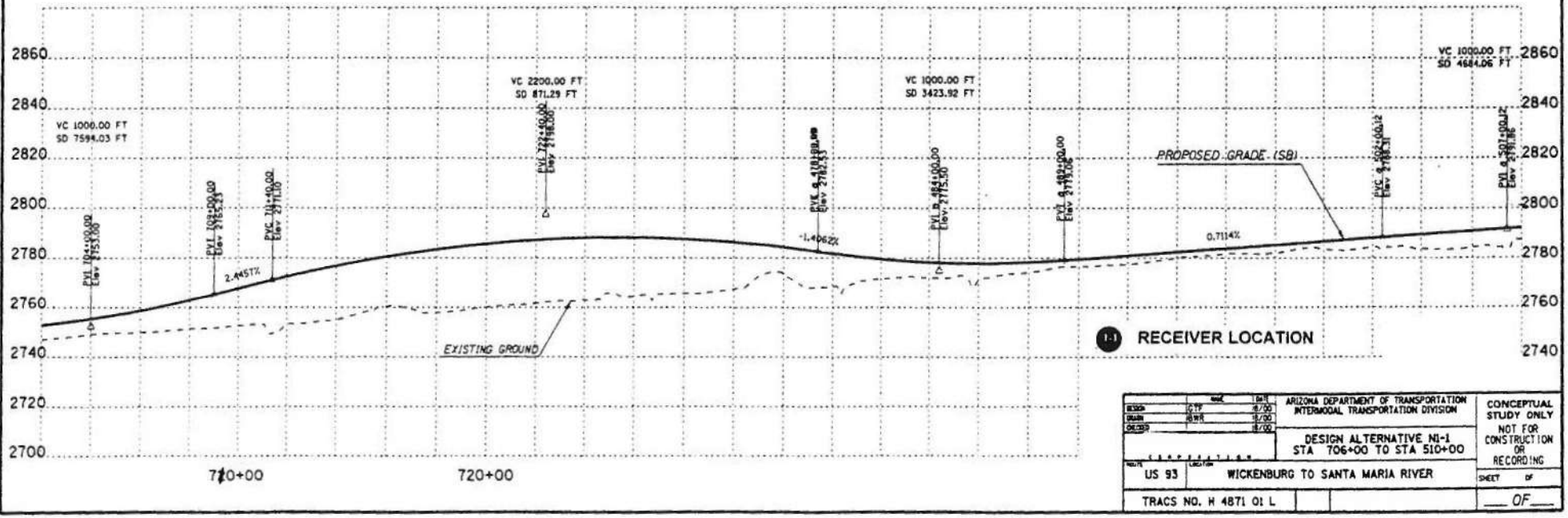
ROUTE: US 93	LOCATION: WICKENBURG TO SANTA MARIA RIVER		SHEET OF ___ OF ___
TRACS NO. H 4871 01 L			

CONCEPTUAL STUDY ONLY NOT FOR CONSTRUCTION OR RECORDING





ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION			CONCEPTUAL STUDY ONLY NOT FOR CONSTRUCTION OR RECORDING
DESIGN ALTERNATIVE N1-1 STA 706+00 TO STA 510+00			
US 93	WICKENBURG TO SANTA MARIA RIVER		SHEET OF
TRACS NO. H 4871 01 L			___ OF ___

Appendix H – Section 106 Draft Programmatic Agreement

PROGRAMMATIC AGREEMENT

AMONG

FEDERAL HIGHWAY ADMINISTRATION
ARIZONA STATE HISTORIC PRESERVATION OFFICE
ARIZONA DEPARTMENT OF TRANSPORTATION
BUREAU OF LAND MANAGEMENT
ARIZONA STATE LAND DEPARTMENT
THE HOPI TRIBE
THE COLORADO RIVER INDIAN TRIBE
THE YAVAPAI PRESCOTT INDIAN TRIBE
THE CHEMEHUEVI TRIBE
THE FORT MOJAVE TRIBE

REGARDING DATA RECOVERY AT ARCHAEOLOGICAL SITES ALONG US 93 BETWEEN MILEPOSTS 161.0 AND 194.0
US 93; WICKENBURG – SANTA MARIA RIVER
PROJECT NO. STP-093-B(AIQ)
TRACS NO. 093 YV 161 H4871 01L
MARICOPA AND YAVAPAI COUNTIES, ARIZONA

WHEREAS, the Federal Highway Administration (FHWA) proposes to widen a portion of US 93, a federally-funded project in Maricopa and Yavapai Counties, Arizona (hereafter referred to as "the project"); and

WHEREAS, the area of potential effect for the project is defined as the existing right-of-way (ROW) of US 93 between mileposts (MP) 161.0 and 194.0, as well as any new ROW required for construction; and

WHEREAS, project construction will occur on land owned by the Arizona Department of Transportation (ADOT) and ADOT easement across public land administered by the Bureau of Land Management (BLM), and the Arizona State Land Department (ASLD), and ADOT, acting as agent for FHWA, has participated in consultation; and

WHEREAS, the proposed project may have an adverse effect upon archaeological sites which may be eligible for listing on the National Register of Historic Places and may possibly have effects to unidentified subsurface archaeological resources; and

WHEREAS, ADOT, acting as agent for FHWA has participated in consultation and has been invited to be a signatory to this Programmatic Agreement (Agreement); and

WHEREAS, SHPO is authorized to enter into this agreement in order to fulfill its role of advising and assisting Federal agencies in carrying out their Section 106 responsibilities under the following federal statutes: Sections 101 and 106 of the National Historic

Preservation Act of 1966, as amended, 16 U.S.C. 470f, and pursuant to 36 CFR Part 800, regulations implementing Section 106, at 800.2(c)(1)(i) and 800.6(b); and

WHEREAS, the FHWA has consulted with the Arizona State Historic Preservation Office (SHPO), the BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, the Fort Mojave Tribe and the Advisory Council on Historic Preservation (the Council) in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR §800.6(b)(2)) to resolve the possible adverse effects of the Project on historic properties; and

WHEREAS, the Indian Tribes that may attach religious or cultural importance to affected properties have been consulted [pursuant to 36 CFR § 800.2 (c)(2)(ii)(A-F)], and the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe have been invited to be a concurring party in the Agreement; and

WHEREAS, in their role as lead federal agency, FHWA has consulted with the Arizona State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) as revised in 2000; and

WHEREAS, by their signature all parties agree that the regulations specified in the ADOT document, "ADOT Standard Specifications for Road and Bridge Construction" (Section 104.12, 2000) will account for the cultural resources in potential material sources used in project construction; and

WHEREAS, any data recovery necessitated by the Project must be permitted by the appropriate federal land managing agency pursuant to the Antiquities Act of 1906 and/or the Archaeological Resources Protection Act of 1979 (ARPA); and

WHEREAS, the data recovery necessitated by the Project must be permitted by the Arizona State Museum pursuant to A.R.S. § 41-842; and

WHEREAS, an agreement regarding the treatment and disposition of Human Remains, Associated Funerary Objects, and Objects of Cultural Patrimony would be developed for the Arizona State Museum (ASM) for state and private land; and

WHEREAS, an agreement regarding the treatment and disposition of Human Remains, Associated Funerary Objects, and Objects of Cultural Patrimony would be developed by the BLM under ARPA guidelines for BLM land; and

WHEREAS, human Remains and Associated Funerary Objects recovered will be treated in accordance with the Native American Graves and Protection Repatriation Act (NAGPRA); and

NOW, THEREFORE, all parties agree that upon FHWA's decision to proceed with the Project, FHWA shall ensure that the following stipulations are implemented in order to take into account the effects of the Project on historic properties, and that these stipulations shall govern the Project and all of its parts until this PA expires or is terminated.

Stipulations

FHWA will ensure that the following measures are carried out.

1. Development of a Data Recovery Work Plan

   The data recovery plan will be submitted by ADOT, on behalf of FHWA, to all parties to this Agreement for 30 calendar days' review. The data recovery plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37). Unless any signatory or concurring party objects to the data recovery plan within 30 calendar days after receipt of the plan, FHWA shall ensure that it is implemented prior to construction.

2. The Data Recovery Work Plan (the Work Plan) will specify:

   a) The properties or portions of properties where data recovery is to be carried out. Also, it will specify any property or portion of property that would be destroyed or altered without treatment;

   b) The results of previous research relevant to the project, the research questions to be addressed through data recovery, with an explanation of their relevance and importance;

   c) The field and laboratory analysis methods to be used, with an explanation of their relevance to the research questions;

   d) The methods to be used in analysis, data management, and dissemination of data to the professional community and the public, including a proposed schedule for project tasks, including a schedule for the submission of draft and final reports to consulting parties;

   e) The proposed disposition and curation of recovered materials and records in accordance with 36 CFR 79;

   f) Procedures for monitoring, evaluating and treating discoveries of unexpected or newly identified properties during construction of the project, including consultation with other parties;

   g) A protocol for the treatment of human remains, in the event that such remains are discovered, describing methods and procedures for the recovery, analysis, treatment, and disposition of Human Remains, Associated Funerary Objects, and Objects of Cultural Patrimony. This protocol will reflect concerns and/or conditions identified as a result of consultations among parties to this Agreement.

3. Review and comment on the Data Recovery Work Plan

a) Upon receipt of a draft of the Work Plans, ADOT, on behalf of FHWA, will review and subsequently submit such documents concurrently to all consulting parties for review. All consulting parties will have 30 calendar days from receipt to review and provide comments to ADOT. All comments shall be in writing with copies provided to the other consulting parties. Lack of response within this review period will be taken as concurrence with the plan.

b) If revisions to the Work Plans are made all consulting parties have 20 calendar days from receipt to review the revisions and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the plan or report.

c) Once the Data Recovery Plan is determined adequate by all parties (with SHPO concurrence), FHWA shall issue authorization to proceed with the implementation of the Plan, subject to obtaining all necessary permits.

d) Final drafts of the Data Recovery Plan will be provided to all consulting parties.

4. Review and Comment on Preliminary Report of Findings

a) Upon completion of fieldwork, the institution, firm, or consultant responsible for the work will prepare and submit a brief Preliminary Report of Findings.

b) Upon receipt of a draft of the Work Plans, ADOT, on behalf of FHWA, will review and subsequently submit such documents concurrently to all consulting parties for review. All consulting parties will have 30 calendar days from receipt to review and provide comments to ADOT. All comments shall be in writing with copies provided to the other consulting parties. Lack of response within this review period will be taken as concurrence with the plan.

c) If revisions to the Preliminary Report of Findings are made, all consulting parties have 20 calendar days from receipt to review the revisions and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the plan or report.

d) Once the Preliminary Report of Findings has been accepted as a final document, ADOT, on behalf of FHWA, will notify appropriate project participants that construction may proceed.

5. Review and Comment on Data Recovery Report

a) Within 180 days of completion of data recovery, a report will be prepared incorporating all appropriate data analyses and interpretations, and the report will be submitted to signatories and concurring parties who will be provided with 30 calendar days to review and comment upon the data report.

b) Upon receipt of the data recovery report, ADOT, on behalf of FHWA, will review and subsequently submit such documents concurrently to all consulting parties for review.

All consulting parties will have 30 calendar days from receipt to review and provide comments to ADOT. All comments shall be in writing with copies provided to the other consulting parties. Lack of response within this review period will be taken as concurrence with the plan.

c) If revisions to the data recovery report are made, all consulting parties have 20 calendar days from receipt to review the revisions and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the plan or report.

d) Once the data recovery report has been accepted as a final document, ADOT, on behalf of FHWA, will notify appropriate project participants that construction may proceed.

6. Standards for Monitoring and Data Recovery

All historic preservation work carried out pursuant to this Agreement shall be carried out by or under the supervision of a person, or persons, meeting at a minimum the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739).

7. Curation

All materials and records resulting from the data recovery program conducted within the Project area shall be curated in accordance with standards 36 CFR 79 and guidelines generated by ASM. The repository for materials either will be ASM or one located in Maricopa or Yavapai Counties that meets those standards and guidelines. Materials subject to repatriation under A.R.S. § 41-844 and A.R.S. § 41-865 shall be maintained in accordance with the burial agreement until any specified analyses, as determined following consultation with the appropriate Indian tribes and individuals, are complete and the materials are returned.

8. Additional Inventory Survey

ADOT, on behalf of FHWA, in consultation with all parties to this agreement shall ensure that new inventory surveys of additional rights-of-way and temporary construction easements will include determinations of eligibility that are made in accordance with 36 CFR § 800.4(c) for all historic properties, including any added staging or use areas. Should any party to this Agreement disagree with FHWA regarding eligibility, the SHPO shall be consulted and resolution sought within 20 calendar days. If the FHWA and SHPO disagree on eligibility, FHWA shall request a formal determination from the Keeper of the National Register.

9. Objection by a Signatory or Concurring Party

Should any signatory or concurring party to this Agreement object within 30 days to any plan or report provided for review or to any aspect of this undertaking related to historic preservation issues, FHWA shall consult with the objecting party to resolve the objection. If the objection cannot be resolved, FHWA shall request further comments of the Council with reference only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

10. Discoveries

If potential historic or prehistoric archaeological materials or properties are discovered after construction begins, the person in charge of the construction shall promptly report the discovery to the ADOT Historic Preservation Specialist, representing FHWA. If human or funerary objects are discovered, ADOT shall require construction to immediately cease within the area of the discovery, take steps to protect the discovery, and notify and consult with appropriate Native American groups to determine treatment and disposition measures in accordance with the previously implemented burial agreement. The Director of the ASM (the Director) shall also be informed. In consultation with the Director and ADOT, on behalf of FHWA, the person in charge of construction shall immediately take steps to secure and maintain preservation of the discovery. If the discovery appears to involve Human Remains as defined in ASM rules implementing A.R.S. § 41-844 and 41-865, ASM and FHWA shall ensure that the discovery is treated according to the burial agreement. If the discovery involves Human Remains discovered on BLM lands, the BLM shall ensure the discovery is treated according to the burial agreement, ARPA and NAGPRA.

If Human Remains are not involved, then the ADOT Historic Preservation Specialist shall evaluate the discovery, and in consultation with FHWA and SHPO, determine if the Plan previously approved by ASM according to Stipulation 2 is appropriate to the nature of the discovery. If appropriate, the Plan shall be implemented by ADOT, on behalf of FHWA. If the Plan is not appropriate to the discovery, FHWA shall ensure that an alternate plan for the resolution of adverse effect is developed pursuant to 36 CFR § 800.6 and circulated to the consulting parties, who will have 48-hours to review and comment upon the alternate plan. FHWA shall consider the resulting comments, and shall implement the alternate plan once a project specific permit has been issued.

11. Amendments

This Agreement may be amended by the signatories pursuant to 36 CFR § 800.6 (c) (7). FHWA shall file any amendments with the Council and provide notice to the concurring parties.

12. Termination

Any signatory may terminate the Agreement by providing 30 day written notification to the other signatories. During this 30 day period, the signatories may consult to seek agreement on amendments or other actions that would avoid termination pursuant to 36 CFR § 800.6 (b). If the parties cannot agree on actions to resolve disagreements, FHWA will comply with 36 CFR § 800.7(a).

13. In the event the FHWA or ADOT cannot carry out the terms of this agreement, the FHWA will comply with 36 CFR § 800.3 through 800.6.

14. There shall be an annual meeting among FHWA, SHPO, and ADOT to review the effectiveness and application of this agreement, to be held on or near the anniversary date of the execution of this agreement.

15. Equal Opportunity/Non-Discrimination: The Parties agree to comply with Chapter 9, Title 41, Arizona Revised Statutes (Civil Rights), Arizona Executive Order 99-4 and any other federal or state laws relating to equal opportunity and non-discrimination, including the Americans with Disabilities Act.

16. Records: Pursuant to A.R.S. et seq. 35-214, 35-215 and 41-2548, all books, accounts, reports, files and other records relating to this Agreement shall be subject, at all reasonable times, to inspection and audit by the State for five years after the termination of this Agreement.

17. Conflict of Interest: This Agreement is subject to cancellation by the State under A.R.S. et seq. 38-511 if a person significantly involved in the Agreement on behalf of the State is an employee or consultant of the contractor at any time while the Agreement or any extension of the Agreement is in effect.

18. Non-Availability of Funds: This Agreement shall be subject to available funding, and nothing in this Agreement shall bind the State to expenditures in excess of funds authorized and appropriated for the purposes outlined in this Agreement.

19. Arbitration: To the extent required by A.R.S. §§ 12-1518(B) and 12-133, the parties agree to resolve any dispute arising out of this Agreement by arbitration.

This agreement shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

Execution of this Agreement by the signatories and its subsequent filing with the Council is evidence that the Federal Highway Administration has afforded the Advisory Council on Historic Preservation an opportunity to comment on US 93; Wickenburg – Santa Maria River project and its effects on historic properties, and that the Federal Highway Administration has taken into account the effects of the undertaking on historic properties.

SIGNATORIES

FEDERAL HIGHWAY ADMINISTRATION

By _____ Date_____

Title _____

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By _____ Date_____

Title _____

INVITED SIGNATORIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By _____ Date_____

Title Environmental & Enhancement Group Manager

CONCURRING PARTIES

BUREAU OF LAND MANAGEMENT

By_____

Title_____ Date_____

ARIZONA STATE LAND DEPARTMENT

By _____ Date_____

Title _____

HOPI TRIBE

By_____ Date_____

Title_____

COLORADO RIVER INDIAN TRIBE

By_____ Date_____

Title_____

PRESCOTT YAVAPAI TRIBE

By_____ Date_____

Title_____

CHEMEHUEVI TRIBE

By_____ Date_____

Title_____

FORT MOJAVE TRIBE

By _____ Date_____

Title _____

Appendix I – Census Block Group Data and Maps

Table I – Census Block Group Demographic Data

Demographic	*Census Tract 14, Block Group 1*	*Census Tract 14, Block Group 5*
Total population	1312	1067
Gender:		
Male	50.8%	50.0%
Female	49.2%	50.0%
Race:		
White	95.1%	96.7%
Black/African-American	0.2%	0.1%
American Indian/Alaska Native	0.6%	0.7%
Asian	0.1%	0.1%
Native Hawaiian/Pacific Islander	0.0%	0.0%
Some other race	2.3%	1.4%
Two or more races	1.7%	1.0%
Hispanic/Latino	10.5%	3.7%
Age 65 years and over	26.1%	42.9%
Disabled	13.1%	20.5%
Below poverty level	15.2%	6.5%

Figure I-1 – Census Tract 14, Block Group 1

Figure I-2 – Census Tract 14, Block Group 5

Appendix J – Agency Correspondence

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012-1939

REPLY TO
Office of the Chief
Regulatory Branch

August 26, 2004

Larry Lindner
Arizona Department of Transportation
Environmental Planning Group
205 S. 17th Avenue Room 213 E
Phoenix, Arizona 85007-3212

File Number: 2004-00781-CJL

Dear Mr. Lindner:

Reference is made to your letter of July 1, 2004 in which you inquired as to the jurisdictional limits of Section 404 of the Clean Water Act for Date Creek, Big Jim Wash and other unnamed ephemeral washes located within the following sections:

- T12N, R9W, Sections 22, 23, 26, 27, 35, and 36
- T11N, R9W, Section 1
- T11N, R8W, Sections 6, 7, 8, 16, 17, 21, 27, 28, and 34
- T10N, R8W, Sections 3, 10, 11, 14, 23, 24, and 25
- T10N, R7W, Sections 30, 31, and 32
- T9N, R6W, Sections 3, 4, 5, 10, 11, 13, 14, and 24
- T9N, R7W, Sections 19, 29, 30, 32, 33, and 34
- T8N, R6W, Sections 2, 3, 11, 12, and 13
- T8N, R5W, Sections 18, 19, and 20

This project is located approximately four miles north of Wickenburg, Maricopa County, Arizona. The request was made as a part of the Arizona Department of Transportation's US 93, Wickenburg to Santa Maria River project that begins at milepost (MP) 193.5 and extends to MP 161.5 (TRACS No. 093 YV 161 H4871 01L).

The enclosed aerial photograph or map and the attached table of jurisdictional widths delineate the waters of the United States, including wetlands, regulated by Section 404 of the Clean Water Act. This approved jurisdictional determination will remain in effect for five years from the date of this letter unless an unusual flood event occurs. After this five-year period or after an unusual flood event alters stream conditions, the Corps of Engineers reserves the authority to retain the original jurisdictional limits or to establish new jurisdictional limits as conditions warrant.

Each water of the United States herein delineated is an interstate water or a water that is tributary to an interstate water. The Section 404 jurisdictional limit for a water of the United States is defined at 33 CFR Part 328. The jurisdictional limit for a non-tidal water of the United States is determined by the jurisdictional wetland boundary and/or the ordinary high water mark. The jurisdictional limit of a wetland is determined in accordance with the Corps of Engineers 1987 Wetlands Delineation Manual. Otherwise, presence of the indicators stated in the definition of ordinary high mark (33CFR 328.3(e)) are used to establish the jurisdictional limit of a water of the United States. The basis of this jurisdictional determination is shown on the enclosed checklist.

Any discharge of dredged or fill material within the designated jurisdictional area requires a Section 404 permit from the Corps of Engineers. The Corps of Engineers emphasizes avoidance of the delineated jurisdictional area. Please review this delineation and evaluate your proposed activity to ensure that avoidance of the jurisdictional area is given full consideration in your design. If all discharges of dredged or fill material occur outside the designated jurisdictional area, no Section 404 permit is required. If avoidance is not practicable, please reference File Number 2004-00781-CJL when submitting your Section 404 permit application to the Corps of Engineers. Please be advised that your application needs to substantiate that avoidance of designated jurisdictional areas is not practicable and substantiate that impacts to waters of the United States have been minimized.

Furthermore, you are hereby advised that the Corps of Engineers has established an Administrative Appeal Process for jurisdictional determinations which is fully described at 33 CFR Part 331. The Administrative Appeal Process for jurisdictional determinations is diagrammed on the enclosed Appendix C. If you decide not to accept this approved jurisdictional determination and wish to provide new information please send the information to this office. If you do not supply additional information you may appeal this approved jurisdictional determination by completing the attached "Notification of Administrative Appeal Options and Process and Request for Appeal" form and submitting it directly to the Appeal Review Officer at the address provided on the form.

The receipt of your letter is appreciated. If you have questions, please contact Dana Owsiany at (602) 640-5385 x 254.

Sincerely,

Cindy Lester, P.E.
Chief, Arizona Section
Regulatory Branch

Enclosure(s)

Copies Furnished:
(Without Enclosures)

Laura N. Gerbis
Jacobs Civil Inc.
875 West Elliot Road, Suite 201
Tempe, Arizona 85284

Arizona Department of Transportation
Intermodal Transportation Division
206 South Seventeenth Avenue Phoenix, Arizona 85007-3713

Janet Napolitano
Governor

Victor M. Mendez
Director

Debra R. Brisk
Deputy Director

July 12, 2004

Mr. John Reid
Bureau of Land Management
2475 Beverly Avenue
Kingman, AZ 86401

RE: Biological Evaluation
US 93, SR 89 to Santa Maria River
Project No. STP-093-B(872)
TRACS No. 093 YV 161 H4871 01L

Dear Mr. Reid:

The Arizona Department of Transportation is planning to construct new lanes to improve traffic operations on US 93 between the US 93/State Route (SR) 89 junction and the Santa Maria River within Yavapai County, Arizona. The project will provide adequate capacity for current and projected traffic volumes and improve passing opportunities by adding lanes and creating a four-lane divided facility. Laura Gerbis (Jacobs Civil) has been in contact with you regarding this project.

Enclosed for your review is a Biological Evaluation completed by Jacobs for the project. The BE concluded that the project would not affect any threatened, endangered, proposed, or candidate species. However, habitat and/or individuals of the Sonoran desert tortoise and several Bureau of Land Management sensitive species (including the chuckwalla, desert rosy boa, loggerhead shrike, and western burrowing owl) could be impacted by the project. If you feel the document is satisfactory, please sign this letter in the space provided below and return for our files. If you have any comments or need any additional information, please feel free to contact me by phone at (928) 779-7528, by e-mail at jwhite@dot.state.az.us, or in writing at the address below. In order for the project to remain on schedule, it would be appreciated if any comments or requests for more information can be made no later than August 11, 2004. Thank you for your time and assistance on this project.

Sincerely,

Justin White
Environmental Planner/Biologist
ADOT Environmental & Enhancement Group
1801 South Milton Road
Flagstaff, AZ 86001

Reviewed By

8/20/2004
Date

Arizona Governor's Award for Quality
2001 Award Recipient

Arizona Department of Transportation

Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janet Napolitano
Governor

Victor M. Mendez
Director

Bill Higgins
Acting State Engineer

April 7, 2004

Dr. David Jacobs, Compliance Specialist
State Historic Preservation Office
Arizona State Parks
1300 West Washington
Phoenix, Arizona 85007

RE: Project No. STP-093-B(AIQ)
TRACS No. 093 YV 161 H4871 01L
US 93; Wickenburg – Santa Maria River
Continuing Section 106 Consultation
Draft Programmatic Agreement

Dear Dr. Jacobs:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to widen US 93 between Wickenburg and the Santa Maria River in Maricopa and Yavapai Counties. As this project would employ federal funds, it is considered an undertaking subject to Section 106 review. This project occurs on land owned by ADOT, public land administered by the Bureau of Land Management (BLM) and Arizona State Trust land administered by the Arizona State Land Department (ASLD). Consulting parties for this project include FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribes, the Yavapai Prescott Indian Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe.

Previous consultation regarding this project noted that it would be unlikely for the project to avoid all cultural resources and recommended that a Programmatic Agreement (PA) be developed to address possible impacts to historic properties. SHPO and the BLM concurred with this recommendation (Jacobs [SHPO] to Hollis [FHWA] February 11, 2004 and Rose [BLM] to Hollis [FHWA] November 14, 2003). At this time, ADOT, on behalf of FHWA, is submitting a draft PA for your review and comment. Once all comments are received, FHWA will submit a final PA for signature.

Please review the enclosed draft PA and the information provided in this letter. If you find the PA adequate, please indicate your concurrence by signing below. If you have any comments

regarding the PA, please submit them in writing. If you have any questions or concerns, please feel free to contact me at 602-712-8148 or e-mail kneustadt@dot.state.az.us.

Sincerely,

Kae Neustadt
Historic Preservation Specialist
Environmental & Enhancement Group
205 S 17th Avenue, Room 213E / MD 619E
Phoenix, Arizona 85007

Signature for SHPO Concurrence

20 MAY 04
Date

Enclosure

cc:
SThomas
ALirange

Arizona Department of Transportation

Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janet Napolitano
Governor

Victor M. Mendez
Director

Bill Higgins
State Engineer

February 27, 2004

Ms. Cindy Lester, Chief,
Arizona Section Regulatory Branch
Los Angeles District, Corps of Engineers
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1936

Attention: Dana Owsiany

Subject: US 93, Wickenburg to Santa Maria River
TRACS No. 093 YV 161 H4871 01L
Jurisdictional Delineation

Dear Ms. Lester:

The Arizona Department of Transportation (ADOT) and the Federal Highway Administration are proposing improvements to US 93 from the junction of State Route (SR) 89 to the Santa Maria River. The project area begins approximately four miles north of the town of Wickenburg at Milepost (MP) 193.5 and ends south of the Santa Maria River at MP 161.5. ADOT is preparing a draft Environmental Assessment and Location / Design Concept Report for this project.

The purpose of the proposed project is to alleviate congestion and improve traffic operations on US 93 by providing adequate capacity for current and projected traffic volumes and improving passing opportunities. The agency preferred alternative identified in the Draft Environmental Assessment is to construct a new, parallel two-lane roadway for southbound traffic to the west of the existing US 93 roadway from MP 193.5 to approximately MP 173.0; and to construct a new, two-lane roadway with a variable-width median for northbound traffic to the east of the existing US 93 roadway from MP 173.0 to MP 161.5.

As required by Section 404 of the Clean Water Act, the attached package contains a proposed jurisdictional delineation of waters of the US within the project area. This package includes the following items for your review:

- A state map indicating the project location.
- A project area map showing the MP limits of the project area and major identifying features within the corridor.

- A summary matrix of the existing water conveyance structures in the project area.
- Site visit photographs showing inlet and outlet views of each conveyance structure in the project area, and upstream and downstream views along each channel.
- One set of 55 sheets including the aerial photographs, proposed improvements, identifying features in the project area, and proposed jurisdictional areas; two additional sets without the proposed jurisdictional areas are also provided. The sheets are at a scale of 1 inch = 100 feet. The aerial photos were taken in December 1999 and field-verified for accuracy in August 2002. The area surveyed includes the existing right-of-way as well as any blue jurisdictional areas shown on the sheets extending outside the existing right-of-way. The aerial photographs show the preferred alternative identified in the draft Environmental Assessment.

The project area is found on the Flores, Congress SW, O'Neill Pass, Date Creek Ranch, Malpais Mesa, and Ives Peak USGS topographic quadrangles, and is located within the following sections:

- T 12N, R 9W, Sections 22, 23, 26, 27, 35, and 36
- T 11N, R 9W, Section 1
- T 11N, R 8W, Sections 6, 7, 8, 16, 17, 21, 27, 28, and 34
- T 10N, R 8W, Sections 3, 10, 11, 14, 23, 24, and 25
- T 10N, R 7W, Sections 30, 31, and 32
- T 9N, R 7W, Sections 3, 4, 5, 10, 11, 13, 14, and 24
- T 9N, R 6W, Sections 19, 29, 30, 32, 33, and 34
- T 8N, R 6W, Sections 2, 3, 11, 12, and 13
- T 8N, R 5W, Sections 18, 19, and 20

If you have any questions or require additional information, please contact either Laura N. Gerbis at Jacobs Civil Inc. (480-763-8715) or me (602-712-6322). Your assistance is appreciated.

Sincerely,

Lawrence R. Lindner
Environmental Planner

Enclosures: State location map
Project area map
Summary matrix
Site photos
Plots (1 set showing proposed jurisdictional areas; 2 sets without)

c: Don Smith, Jacobs Civil Inc. (letter only)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
One Arizona Center, Suite 410
400 E. Van Buren St.
Phoenix, AZ. 85004

November 12, 2003

IN REPLY REFER TO
HA-AZ
STP-093-B(AIQ)
TRACS No. 093 YV 161 H4871 01L
US 93; Wickenburg – Santa Maria River
Early Section 106 Consultation

David Jacobs, Ph.D.
Compliance Specialist
State Historic Preservation Office
Arizona State Parks
1300 W. Washington
Phoenix, Arizona 85007

Dear Dr. Jacobs:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to widen US 93 between Wickenburg and the Santa Maria River, in Maricopa and Yavapai Counties, Arizona. As this project employs federal funds, it is considered an undertaking subject to Section 106 review. This project occurs on land owned by ADOT, the Bureau of Land Management (BLM) and Arizona State Trust land administered by the Arizona State Land Department (ASLD). Consulting parties for this project include FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe.

The scope of this project would involve widening US 93 from two lanes to four lanes. At this point, details of the project scope are not known. Cultural resource consultation is being initiated as part of the preparation of an Environmental Assessment (EA). New right-of-way (ROW) and temporary construction easements (TCEs) would be required. The project area of potential effect (APE) is defined as the 33-mile long corridor along US 93 from mileposts (MP) 161.0 to 194.0, including the entire ROW width of US 93 and up to 500 feet outside of the ROW.

The project APE has recently been surveyed by Archaeological Consulting Services, Ltd. (ACS). The results are reported in *"Cultural Resources Survey of US 93 Between Wickenburg and the Santa Maria River (Mileposts 161.0 – 194.0), Maricopa and Yavapai Counties, Arizona"* (Punzmann and Aguila 2003) and are enclosed for your review and comment. ACS identified 47 cultural resources within the project APE. The results are summarized in the table below.

Site number*	Land Jurisdiction	Site Description	Eligibility Recommendation
M:12:29	ADOT, BLM	prehistoric artifact scatter with features	eligible, criterion 'd'

M:12:30	ADOT, BLM	lithic scatter	not eligible due to lack of features and potential subsurface materials
M:12:31	ADOT, BLM, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
M:12:32	ADOT, BLM	prehistoric artifact scatter with features	eligible, criterion 'd'
M:12:33	ADOT, BLM	prehistoric artifact scatter with features	eligible, criterion 'd'
M:12:34	ADOT, BLM, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
M:12:35	ADOT, ASLD	possible historic road	not eligible due to poor integrity
M:12:36	ADOT, ASLD	prehistoric artifact scatter	eligible, criterion 'd'
M:12:37	ADOT, private	lithic scatter with features	eligible, criterion 'd'
M:12:38	ADOT, BLM, private	prehistoric artifact scatter with features	eligible, criterion 'd'
M:12:39	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:12:40	ADOT, ASLD, BLM	possible historic road	not eligible due to lack of significance
M:12:43	ASLD	possible historic road	not eligible due to lack of significance
M:16:19	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:21	ADOT, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
M:16:22	ADOT, private	prehistoric artifact scatter	not eligible due to scarcity of materials and lack of potential subsurface materials
M:16:23	ADOT, private	prehistoric artifact scatter with features	eligible, criterion 'd'
M:16:24	ADOT, private	lithic scatter with possible features	not eligible due to scarcity of materials and lack of potential subsurface materials
M:16:25	ADOT, ASLD	prehistoric bedrock grinding slicks with artifact scatter	not eligible due to scarcity of materials and lack of potential subsurface materials
M:16:26	ADOT, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
M:16:27	ADOT, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
M:16:28	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:33	ADOT, ASLD	historic artifact scatter	not eligible due to size and lack of significance

M:16:34	ADOT, ASLD	prehistoric grinding slicks, petroglyphs and artifact scatter	eligible, criteria 'd' and 'c' (for petroglyphs)
M:16:35	ADOT, ASLD	historic artifact scatter	not eligible due to lack of significance
M:16:36	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:37	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:38	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:39	ADOT, ASLD	possible historic road	not eligible due to lack of significance
M:16:40	ADOT, ASLD	Historic Alamo Road (c. 1935)	not eligible due to lack of integrity
M:16:41	ADOT, ASLD	Historic Date Creek Ranch Road (c. 1948-1956)	not eligible due to lack of significance and integrity
M:16:42	ADOT, ASLD	Historic Date Creek Ranch Road (c. 1921)	not eligible due to lack of integrity
N:3:32	ADOT, private	Santa Fe, Prescott & Phoenix Railroad (c. 1894)	eligible, criterion 'a', non-contributing in project APE
N:13:19	ADOT, ASLD	prehistoric and historic artifact scatter with possible features	not eligible due to lack of integrity
N:13:20	ADOT, ASLD, private	historic State Route 71 (SR 71)	eligible, criterion 'd,' as part of the Historic State Highway System
N:13:21	ADOT, ASLD	prehistoric artifact scatter with features	eligible, criterion 'd'
N:13:22	ADOT, ASLD	historic artifact scatter	not eligible due to scarcity of materials and lack of potential subsurface materials.
N:13:23	ADOT, ASLD	possible historic road	not eligible due to lack of significance
N:13:24	ADOT, private	historic artifact scatter	not eligible due to lack of significance
N:13:25	ADOT, private	historic artifact scatter	not eligible due to scarcity of materials and lack of potential subsurface materials.
N:13:26	ADOT, private	historic artifact scatter	not eligible due to lack of significance
N:13:27	ADOT, private	historic artifact scatter	not eligible due to lack of significance
N:13:29	ADOT, private	possible historic road	not eligible due to lack of integrity

N:13:30	ADOT, private	possible historic road	not eligible due to lack of significance
N:13:31	ADOT, private	possible historic road	not eligible due to age and lack of integrity
N:13:32	ADOT, private	possible historic road	not eligible due to lack of significance
U:13:248	ADOT, BLM, ASLD, private	Historic US 93 (c. 1952)	eligible, criteria 'd,' as part of the Historic State Highway System

* all site numbers preceded by AZ and followed by (ASM)

Because the project scope has not yet been clearly defined, a recommendation of project effect cannot be made at this time. However, it is likely, given the nature of the project and the number of cultural resources identified within the project APE, that the project would have an impact to multiple historic properties. FHWA recommends that a Programmatic Agreement (PA) be developed to address such impacts.

Please review the enclosed survey report. If you agree with FHWA's recommendations of eligibility and the recommendation that a PA be developed to address the project effects on historic properties, please sign below to indicate your concurrence. If you have any questions or concerns, please contact Kae Neustadt at 602-712-8148 or via email kneustadt@dot.state.az.us.

Sincerely,

Robert E. Hollis
Division Administrator

Signature for SHPO Concurrence

11 FEB 04
Date

Enclosures

cc: Kae Neustadt, ADOT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
One Arizona Center, Suite 410
400 E. Van Buren St.
Phoenix, AZ. 85004

November 12, 2003

IN REPLY REFER TO
HA-AZ
STP-093-B(AIQ)
TRACS No. 093 YV 161 H4871 01L
US 93; Wickenburg – Santa Maria River
Early Section 106 Consultation

Mr. Daniel Eddy, Jr., Chair
Colorado River Indian Tribe
Route 1, Box 23-B
Parker, Arizona 85344

Dear Chairman Eddy:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to widen US 93 between Wickenburg and the Santa Maria River, in Maricopa and Yavapai Counties, Arizona. As this project employs federal funds, it is considered an undertaking subject to Section 106 review. This project occurs on land owned by ADOT, the Bureau of Land Management (BLM) and Arizona State Trust land administered by the Arizona State Land Department (ASLD). Consulting parties for this project include FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe.

The scope of this project would involve widening US 93 from two lanes to four lanes. At this point, details of the project scope are not known. Cultural resource consultation is being initiated as part of the preparation of an Environmental Assessment (EA). New right-of-way (ROW) and temporary construction easements (TCEs) would be required. The project area of potential effect (APE) is defined as the 33-mile long corridor along US 93 from mileposts (MP) 161.0 to 194.0, including the entire ROW width of US 93 and up to 500 feet outside of the ROW.

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			not eligible due to lack of features and potential subsurface

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* all site numbers preceded by AZ and followed by (ASM)

Because the project scope has not yet been clearly defined, a recommendation of project effect cannot be made at this time. However, it is likely, given the nature of the project and the number of cultural resources identified within the project APE, that the project would have an impact to multiple historic properties. FHWA recommends that a Programmatic Agreement (PA) be developed to address such impacts.

Please review the enclosed survey report. If you agree with FHWA's recommendations of eligibility and the recommendation that a PA be developed to address the project effects on historic properties, please sign below to indicate your concurrence. At this time, FHWA is also inquiring whether you have any concerns regarding historic properties of religious or cultural importance to your community within the project area. If you have such concerns, any information you might provide within 30 days of receipt of this letter would be considered in the project planning. If your office opts to participate in cultural resource consultation at a later date, FHWA would make a good faith effort to address any concerns. However, such consultation would not necessitate a reconsideration of this recommendation of project effect. If you have any questions or concerns, please contact Kae Neustadt at 602-712-8148 or via email kneustadt@dot.state.az.us.

Sincerely,

STEPHEN D. THOMAS

Robert E. Hollis
Division Administrator

Signature for CRIT Concurrence

11-20-03
Date

Enclosures
cc:
Betty Cornelius, Colorado River Indian Tribe Museum Director, with enclosure
SThomas
TDeitering
ALirange
KNeustadt (619E)
SDT:cdm

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
One Arizona Center, Suite 410
400 E. Van Buren St.
Phoenix, AZ. 85004

November 12, 2003

IN REPLY REFER TO
HA-AZ
STP-093-B(AIQ)
TRACS No. 093 YV 161 H4871 01L
US 93; Wickenburg – Santa Maria River
Early Section 106 Consultation

Mr. Ernest Jones, Sr., President
Yavapai-Prescott Indian Tribe
530 E. Merritt
Prescott, Arizona 86301-2038

Dear President Jones:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to widen US 93 between Wickenburg and the Santa Maria River, in Maricopa and Yavapai Counties, Arizona. As this project employs federal funds, it is considered an undertaking subject to Section 106 review. This project occurs on land owned by ADOT, the Bureau of Land Management (BLM) and Arizona State Trust land administered by the Arizona State Land Department (ASLD). Consulting parties for this project include FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe.

The scope of this project would involve widening US 93 from two lanes to four lanes. At this point, details of the project scope are not known. Cultural resource consultation is being initiated as part of the preparation of an Environmental Assessment (EA). New right-of-way (ROW) and temporary construction easements (TCEs) would be required. The project area of potential effect (APE) is defined as the 33-mile long corridor along US 93 from mileposts (MP) 161.0 to 194.0, including the entire ROW width of US 93 and up to 500 feet outside of the ROW.

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Sincerely,

Robert E. Hollis
Division Administrator

Signature for Yavapai-Prescott Concurrence

11/14/03
Date

Enclosures
cc:
Nancy Hayden, Cultural Research Program Director, with enclosure

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
One Arizona Center, Suite 410
400 E. Van Buren St.
Phoenix, AZ. 85004

November 12, 2003

IN REPLY REFER TO
HA-AZ
STP-093-B(AIQ)
TRACS No. 093 YV 161 H4871 01L
US 93; Wickenburg – Santa Maria River
Early Section 106 Consultation

Mr. John Rose, Archaeologist
Bureau of Land Management
Kingman Field Office
2475 Beverly Ave
Kingman, Arizona 86401

Dear Mr. Rose:

As you are aware, the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) are planning to widen US 93 between Wickenburg and the Santa Maria River, in Maricopa and Yavapai Counties, Arizona. As this project employs federal funds, it is considered an undertaking subject to Section 106 review. This project occurs on land owned by ADOT, the Bureau of Land Management (BLM) and Arizona State Trust land administered by the Arizona State Land Department (ASLD). Consulting parties for this project include FHWA, ADOT, the Arizona State Historic Preservation Office (SHPO), BLM, ASLD, the Hopi Tribe, the Colorado River Indian Tribe, the Prescott Yavapai Tribe, the Chemehuevi Tribe, and the Fort Mojave Tribe.

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Sincerely,

Robert E. Hollis
Division Administrator

Signature for BLM Concurrence

Nov 14, 2003
Date

Enclosures

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • AZGFD.COM

March 6, 2003

Ms. M. Beth McMichael
Jacobs Civil Inc.
875 W. Elliot Rd.
Suite 201
Tempe, AZ 85284

Re: Special Status Species Information for **US 93, Wickenburg – Santa Maria River (Milepost 161.5 – 193.5), Design Concept Study, ADOT TRACS # 93 YV 161 H4871 01L.**

Dear Ms. McMichael:

The Arizona Game and Fish Department (Department) has reviewed your request, dated February 20, 2003, regarding special status species information associated with the above-referenced project area. The Department's Heritage Data Management System (HDMS) has been accessed and current records show that the special status species listed on the attachment have been documented as occurring in the project area (3-mile buffer). In addition, this project does not occur in the vicinity of any proposed or designated Critical Habitats.

The Department's HDMS data are not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity.

Making available this information does not substitute for the Department's review of project proposals, and should not decrease our opportunities to review and evaluate new project proposals and sites. The Department is also concerned about other resource values, such as other wildlife, including game species, and wildlife-related recreation. The Department would appreciate the opportunity to provide an evaluation of impacts to wildlife or wildlife habitats associated with project activities occurring in the subject area, when specific details become available.

If you have any questions regarding the attached species list, please contact me at (602) 789-3618. General status information, state-wide and county distribution lists, and abstracts for some special status species are also available on our web site at: http://www.azgfd.com/frames/fishwild/hdms_site/Home.htm.

Sincerely,

Sabra S. Schwartz
Heritage Data Management System, Coordinator

SSS:ss

Attachment

cc: Bob Broscheid, Project Evaluation Program Supervisor
Russ Engel, Habitat Program Manager, Region IV

AGFD #02-26-03(13)

Special Status Species within 3 Miles of US 93 Milepost 161.5 to 193.5

Arizona Game and Fish Department, Heritage Data Management System

March 6, 2003

Scientific Name	Common Name	ESA	USFS	BLM	WSCA	NPL
AGOSIA CHRYSOGASTER	LONGFIN DACE	SC		S		
BUFO MICROSCAPHUS MICROSCAPHUS	ARIZONA TOAD	SC	S			
CICINDELA OREGONA MARICOPA	MARICOPA TIGER BEETLE	SC	S	S		
GILA ROBUSTA	ROUNDTAIL CHUB	SC	S		WSC	
GOPHERUS AGASSIZII (SONORAN POPULATION)	SONORAN DESERT TORTOISE	SC			WSC	
HELODERMA SUSPECTUM CINCTUM	BANDED GILA MONSTER	SC		P		
MACROTUS CALIFORNICUS	CALIFORNIA LEAF-NOSED BAT	SC		S	WSC	
RANA YAVAPAIENSIS	LOWLAND LEOPARD FROG	SC	S		WSC	

No Critical Habitats in project area. AGFD #02-26-03(13), Road-widening project: US 93, Wickenburg - Santa Maria River, TRACS No. 93 YV 161 H4871 01L.

STATUS DEFINITIONS

ARIZONA GAME AND FISH DEPARTMENT (AGFD)
HERITAGE DATA MANAGEMENT SYSTEM (HDMS)

FEDERAL US STATUS

ESA **Endangered Species Act** (1973 as amended)
US Department of Interior, Fish and Wildlife Service (http://arizonaes.fws.gov)

Listed

- **LE** Listed Endangered: imminent jeopardy of extinction.
- **LT** Listed Threatened: imminent jeopardy of becoming Endangered.
- **XN** Experimental Nonessential population.

Proposed for Listing

- **PE** Proposed Endangered.
- **PT** Proposed Threatened.

Candidate (Notice of Review: 1999)

- **C** Candidate. Species for which USFWS has sufficient information on biological vulnerability and threats to support proposals to list as Endangered or Threatened under ESA. However, proposed rules have not yet been issued because such actions are precluded at present by other listing activity.
- **SC** Species of Concern. The terms "Species of Concern" or "Species at Risk" should be considered as terms-of-art that describe the entire realm of taxa whose conservation status may be of concern to the US Fish and Wildlife Service, but neither term has official status (currently all former C2 species).

Critical Habitat (check with state or regional USFWS office for location details)

- **Y** Yes: Critical Habitat has been designated.
- **P** Proposed: Critical Habitat has been proposed.

[\N No Status: certain populations of this taxon do not have designated status (check with state or regional USFWS office for details about which populations have designated status)].

USFS **US Forest Service** (1999 Animals, 1999 Plants: corrected 2000)
US Department of Agriculture, Forest Service, Region 3 (http://www.fs.fed.us/r3/)

- **S** Sensitive: those taxa occurring on National Forests in Arizona which are considered sensitive by the Regional Forester.

BLM **US Bureau of Land Management** (2000 Animals, 2000 Plants)
US Department of Interior, Bureau of Land Management, Arizona State Office (http://azwww.az.blm.gov)

- **S** Sensitive: those taxa occurring on BLM Field Office Lands in Arizona which are considered sensitive by the Arizona State Office.
- **P** Population: only those populations of Banded Gila monster (*Heloderma suspectum cinctum*) that occur north and west of the Colorado River, are considered sensitive by the Arizona State Office.

TRIBAL STATUS

NESL **Navajo Endangered Species List** (2000)
Navajo Nation, Navajo Fish and Wildlife Department
(http://www.heritage.tnc.org/nhp/us/navajo/esl.html)

The Navajo Endangered Species List contains taxa with status from the entire Navajo Nation which includes parts of Arizona, Utah, and New Mexico. In this notebook we provide NESL status for only those taxa whose distribution includes part or all of the Arizona portion of the Navajo Nation.

Groups

1 Those species or subspecies that no longer occur on the Navajo Nation.

2 Any species or subspecies which is in danger of being eliminated from all or a significant portion of its range on the Navajo Nation.

3 Any species or subspecies which is likely to become an endangered species, within the foreseeable future, throughout all or a significant portion of its range on the Navajo Nation.

4 Any species or subspecies for which the Navajo Fish and Wildlife Department (NF&WD) does not currently have sufficient information to support their being listed in Group 2 or Group 3 but has reason to consider them. The NF&WD will actively seek information on these species to determine if they warrant inclusion in a different group or removal from the list.

MEXICAN STATUS

MEX **Mexican Federal Endangered Species List** (October 16, 2000)
Proyecto de Norma Oficial Mexicana PROY-NOM-059-ECOL-2000

The Mexican Federal Endangered Species List contains taxa with status from the entire Mexican Republic and waters under its jurisdiction. In this notebook we provide MEX designations for only those taxa occurring in Arizona and also in Mexico.

P En Peligro de Extinción(Determined Endangered in Mexico): in danger of extinction.

A Amenazada (Determined Threatened in Mexico): could become endangered if factors causing habitat deterioration or population decline continue.

Pr Sujeta a ProtecciónEspecial (Determined Subject to Special Protection in Mexico): utilization limited due to reduced populations, restricted distribution, or to favor recovery and conservation of the taxon or associated taxa.

E Probablemente extinta en el medio silvestre (Probably extinct in the wild of Mexico): A native species whose individuals in the wild have disappeared, based on pertinent documentation and studies that prove it. The only existing individuals of the species are in captivity or outside the Mexican territory.

[| = One or more subspecies of this species has status in Mexico, but the HDMS does not track it at the subspecies level (most of these subspecies are endemic to Mexico). Please consult the NORMA Oficial Mexicana PROY-NOM-059-ECOL-2000 for details.]

STATE STATUS

NPL **Arizona Native Plant Law** (1999)
Arizona Department of Agriculture (http://agriculture.state.az.us/PSD/nativeplants.htm)

- **HS** Highly Safeguarded: no collection allowed.
- **SR** Salvage Restricted: collection only with permit.
- **ER** Export Restricted: transport out of State prohibited.
- **SA** Salvage Assessed: permits required to remove live trees.
- **HR** Harvest Restricted: permits required to remove plant by-products.

WSCA **Wildlife of Special Concern in Arizona** (1996 in prep)
Arizona Game and Fish Department (http://www.azgfd.com)

- **WC** Wildlife of Special Concern in Arizona. Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Arizona Game and Fish Department's listing of Wildlife of Special Concern in Arizona (WSCA, in prep). Species indicated on printouts as WC are currently the same as those in **Threatened Native Wildlife in Arizona** (1988).

Revised 10/3/01, AGFD HDMS
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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Ave., Suite 330
Phoenix, Arizona 85004

May 3, 1999

IN REPLY REFER TO
HA-AZ
STP-035-1( )
H4871 01L
US 93, Wickenburg to Santa Maria River
Location/Design Concept Study

Mr. Michael Taylor
Manager, Phoenix Field Office
Bureau of Land Management
2015 West Deer Valley Road
Phoenix, Arizona 85027

Dear Mr. Taylor:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT), as joint lead agencies, are initiating an Environmental Assessment (EA) for proposed improvements to US 93 between State Route (SR) 74 and the Santa Maria River. This study will include a range of alternatives for widening the existing highway to improve the capacity and safety features of this 48-mile corridor. The project will also include a new alignment around the Town of Wickenburg in order to separate regional and local traffic, particularly removing the increasing volume of long-haul trucks from the downtown area in Wickenburg.

The proposed alternatives for the project may cross lands that are managed by your agency, particularly in the area south and west of Wickenburg. Because of the project's involvement with BLM land, we are requesting your participation as a cooperating agency. We have also extended this invitation to the Corps of Engineers because the alternatives under consideration may affect the Hassayampa River and numerous intermittent streams and washes along the corridor that meet the Corps' jurisdiction pursuant to Section 404 of the Clean Water Act.

Your agency's involvement would include participation in regularly scheduled Interdisciplinary Team meetings as the study proceeds through the EA development process. To assist our interagency cooperation, we will consult with you on relevant technical studies, and provide you with project information as it is developed.

Please notify this office, in writing, of your decision to participate as a cooperating agency, we appreciate your consideration of this request. If any questions arise, please contact Steve Thomas (FHWA) at 379-3918, or Karim Dada (ADOT) at 712-8858.

Sincerely,

STEPHEN D. THOMAS

Robert E. Hollis
Division Administrator

cc:
Bert Bertleson, Sverdrup 637 S. 48th St., #101, Tempe, AZ 85281

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ARIZONA DIVISION
234 N. Central Ave., Suite 330
Phoenix, Arizona 85004

May 3, 1999

IN REPLY REFER TO
HA-AZ
STP-035-1( )
H4871 01L
US 93, Wickenburg to Santa Maria River
Location/Design Concept Study

Ms. Cindy Lester
Manager, Arizona Field Office
Los Angeles District, Corps of Engineers
3636 North Central Avenue, Suite 760
Phoenix, Arizona 85012-1936

Dear Ms. Lester:

The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT), as joint lead agencies, are initiating an Environmental Assessment (EA) for proposed improvements to US 93 between State Route (SR) 74 and the Santa Maria River. This study will include a range of alternatives for widening the existing highway to improve the capacity and safety features of this 48-mile corridor. The project will also include a new alignment around the Town of Wickenburg in order to separate regional and local traffic, particularly removing the increasing volume of long-haul trucks from the downtown area in Wickenburg.

The proposed alternatives for the project will cross the Hassayampa River and numerous intermittent streams and washes along the corridor that meet the Corps' jurisdiction pursuant to Section 404 of the Clean Water Act. Due to the project's involvement with waters of the United States, we are requesting your participation as a cooperating agency. We have also extended this invitation to the Bureau of Land Management because several alternatives may affect lands under its jurisdiction.

Your agency's involvement would include the area of water quality under your jurisdiction. No direct writing or analysis by your staff will be necessary during the preparation of the EA. To assist our interagency cooperation, we will (1) invite you to coordination meetings, (2) consult with you on relevant technical studies, and (3) provide you with project information as it is developed.

We expect the EA process will satisfy your NEPA requirements, including those related to alternatives, environmental consequences, and mitigation. In addition, we intend to utilize the EA and subsequent Finding of No Significant Impact as the basis for necessary permit applications.

Please notify this office, in writing, of your decision to participate as a cooperating agency.

We appreciate your consideration of this request. If any questions arise, please contact Steve Thomas (FHWA) at 379-3918, or Karim Dada (ADOT) at 712-8858.

Sincerely,

STEPHEN D. THOMAS

Robert E. Hollis
Division Administrator

cc:
Bert Bertleson, Sverdrup 637 S. 48th St., #101, Tempe, AZ 85281