



**Arizona Department of Transportation**

**Environmental & Enhancement Group**

**An Addendum Cultural Resources Class I  
Overview Report for the 202L, South  
Mountain Freeway EIS & L/DCR Project,  
Maricopa County, Arizona**

**202L, South Mountain Freeway, EIS & L/DCR**

**ADOT Project No. RAM-202-C-200  
ADOT Tracs No. 202L MA 054 H5764 01L**

**June 28, 2005**



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# **An Addendum Cultural Resources Class I Overview Report for the 202L, South Mountain Freeway EIS & L/DCR Project, Maricopa County, Arizona**

**ADOT Project No. RAM-202-C-200  
ADOT Tracs No. 202L MA 054 H5764 01L**

**Route: Interstate 10 (MP 126.7 to MP 143.7)  
Route: SR 101L (MP 1.7 to MP 8.1)**

**Prepared for:  
Arizona Department of Transportation  
Environmental & Enhancement Group  
205 South 17<sup>th</sup> Avenue, Mail Drop 619E  
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**HDR Cultural Resource Report 05-01  
Arizona State Museum Antiquities Permit No. 2005-027bl**

**June 28, 2005**

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# Abstract

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**Report Title:** An Addendum Cultural Resources Class I Overview Report for the 202L, South Mountain Freeway EIS & L/DCR Project, Maricopa County, Arizona

**Report Date:** June 29, 2005

**ADOT Project Name:** 202L, South Mountain Freeway, EIS & L/DCR

**ADOT Project No.:** RAM-202-C-200

**ADOT TRACS No.** 202L MA 054 H5764 01L

**FHWA Federal Aid Project No.:** NH-202-D ( )

**HDR Project No.** 00173-529-044, T015

**Agency:** Arizona Department of Transportation (ADOT), Federal Highway Administration (FHWA)

**Land Jurisdiction:** ADOT and Private

**Project Funding:** Federal

**Project Description:** A addendum Class I overview to cover expanded portions of the State Route Loop 202 (202L), South Mountain Freeway, Environmental Impact Statement (EIS) & Location/Design Concept Report (L/DCR) study area along Interstate I-10 (I-10) and the State Route Loop 101 (101L) freeways that were not included in the initial Class I report (Burden 2002). This overview presents a comprehensive assessment of previous archaeological investigations and recorded archaeological sites and historic building properties within a mile of I-10 from 19<sup>th</sup> Avenue in Phoenix (Milepost [MP] 143.7) to Estrella Parkway west of Tolleson (MP 126.7) and along the 101L from I-10 (MP 1.7) to Northern Avenue (MP 8.1) at the border of Glendale and Peoria.

**Location:** The addendum Class I study includes portions of the I-10 and 101L freeway corridors in the west Phoenix metropolitan area. Along I-10, the addendum Class I study area is generally bounded by 19<sup>th</sup> Avenue on the east, Van Buren on the south, Estrella Parkway on the west, and Thomas Road on the north. Along the 101L, the study area is bounded by Northern Avenue on the north and I-10 on the south, and east-west it is loosely bounded by 83<sup>rd</sup> Avenue and 107<sup>th</sup> Avenue as the freeway meanders.

The Class I study area includes portions of Sections 1 to 12 of Township 1 North, Range 2 East; Sections 31 to 36 of Township 2 North, Range 2 East; Sections 1 to 12 of Township 1 North, Range 1 East; Sections 3 to 5, 8, 9, 16, 17, 20, 21, 28, 29, and 31 to 36 of Township 2 North,

Range 1 East; and Sections 32 to 34 of Township 3 North, Range 1 East (El Mirage, Fowler, Glendale, Perryville, Phoenix, and Tolleson, AZ U.S.G.S. 7.5' Quadrangle Maps; Gila and Salt River Baseline and Meridian).

**Number of Archaeological Sites in the Study Area: 27**

**Number of Historic Linear Sites in the Study Area: 5**

**Number of Historic Building Properties in the Study Area: 129**

**Number of Sites in the Alternative Alignments: 8**

**List of Sites on the W55 and W71 Alignments:**

National Register of Historic Places (NRHP) Eligible: AZ T:12:10 (ASM) (Los Colinas), AZ T:12:38 (ASM), and AZ T:12:178 (ASM) (Los Aumentos).

NRHP Ineligible: AZ T:11:26 (ASM), AZ T:12:4 (MNA), AZ T:12:5 (MNA).

**List of Sites on the W101WPR, W101WFR, W101W99, W101CPR, W101CFR, W101EPR, W101EFR Alignments:**

NRHP Eligible: AZ T:7:167 (ASM) (Grand Canal), AZ T:10:83 (ASM) (Roosevelt Canal), AZ, and AZ T:12:178 (Los Aumentos).

NRHP Ineligible: T:11:26 (ASM) and AZ T:12:4 (MNA).

**Management Recommendations:** On behalf of ADOT and FHWA, HDR Engineering, Inc. (HDR) has prepared an addendum Class I overview for the 202L, South Mountain Freeway, EIS and L/DCR project. In late 2004, the project study area was expanded to include new areas along the I-10 and 101L transportation corridors where additional lanes would be needed to complete the freeway connections. New right-of-way (R/W), less than 100 ft to either side of the existing freeways, would be needed to accommodate the additional lanes. This report covers areas not included in the original Class I overview for the project (Burden 2002).

The study identified 27 previously recorded prehistoric and historic archaeological sites, five historical-period linear sites, and 129 historic building properties. In addition, historical maps indicate that several prehistoric canal alignments pass through the study area. For the archaeological sites, five are considered eligible to the NRHP, five sites are not eligible, nine sites have not been evaluated for eligibility, and the eligibility state of eight sites is unknown due to a lack of available information. Historically-documented prehistoric canals in the area are viewed as potentially eligible resources that should be investigated if encountered.

The Class I study revealed five historical-period linear sites in the study area. The linear sites are considered eligible overall with contributing and non-contributing segments.

Of the 129 historic building properties, 25 have been previously recommended as eligible to the NRHP, 37 have been recommended as not eligible, and 67 have not been evaluated. Seventy-one historic building properties are in the Capital Redevelopment Area in Phoenix, an unnominate residential area with an abundance of historic building properties. Eighteen of the historic

building properties are in the Villa Verde Historic District, which is listed on the Phoenix Register of Historic Places. Although the Villa Verde properties were previously recommended as not eligible to the NRHP, they should be re-evaluated within the context of an early Phoenix suburban neighborhood.

The vast majority of cultural resources identified in the addendum Class I study area will not be affected by any of the proposed alternative alignments. Cultural resources in the W55 and W71 alignments include AZ T:11:26 (ASM), AZ T:12:4 (MNA), AZ T:12:5 (MNA), AZ T:12:10 (ASM) (Los Colinas), AZ T:12:38 (ASM), and AZ T:12:178 (ASM) (Los Aumentos). Cultural resources in the W101 alignments include AZ T:7:167 (ASM) (Grand Canal), AZ T:10:83 (ASM) (Roosevelt Canal), AZ T:11:26 (ASM), AZ T:12:4 (MNA), and AZ T:12:178 (Los Aumentos). HDR recommends that all cultural resources considered eligible to the NRHP should be avoided if possible. If avoidance is not possible then adverse impacts should be mitigated through an appropriate program of archival research, pedestrian surveys, archaeological excavations, ethnographic research, and Historic American Engineering Record (HAER) documentation, etc.

If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources. The Engineer will contact the ADOT Environmental & Enhancement Group, Historic Preservation Team, at 602.712.8636, immediately and make arrangements for the proper treatment of those resources.

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# Chapter 1: Introduction

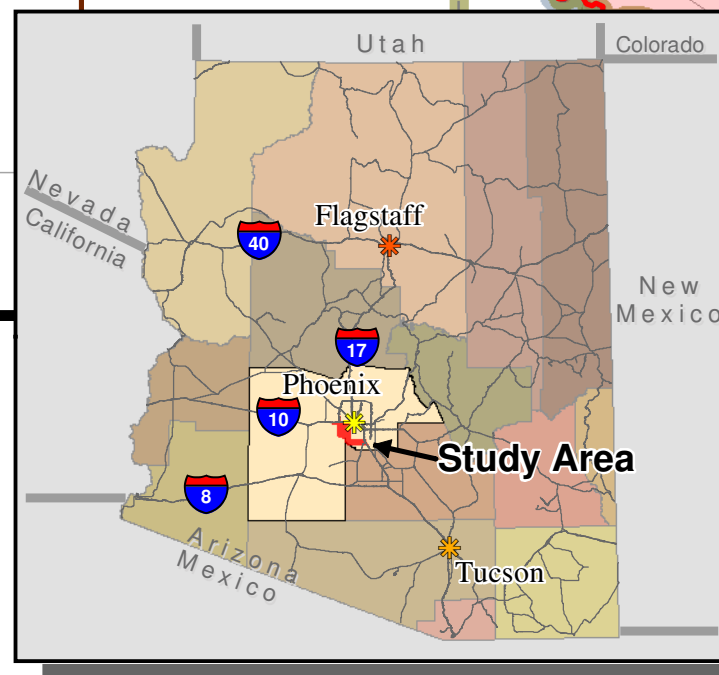
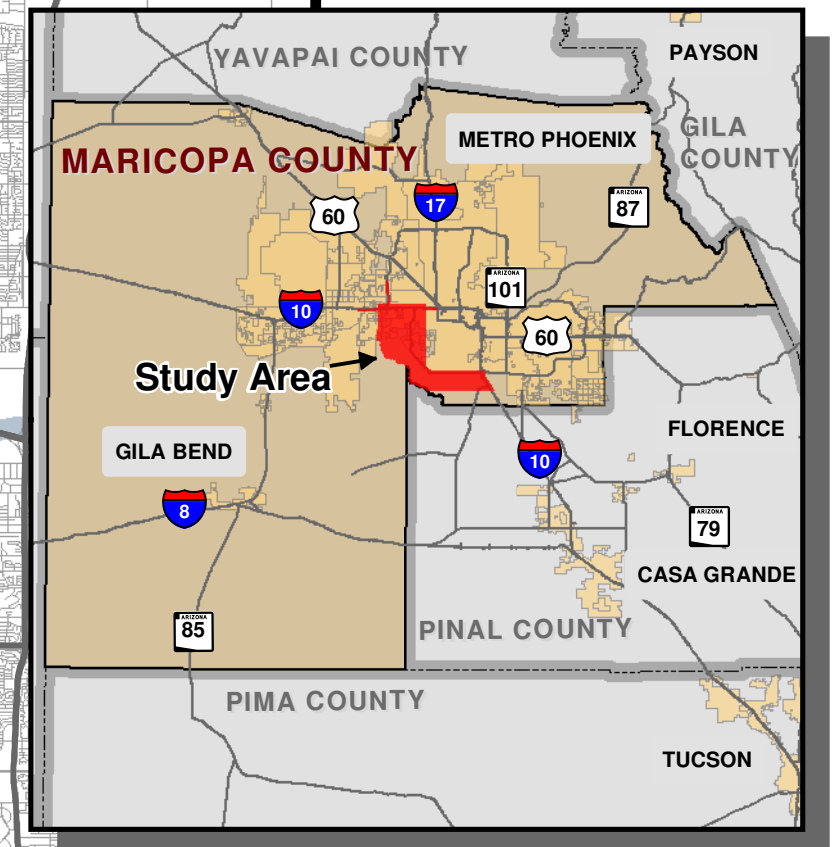
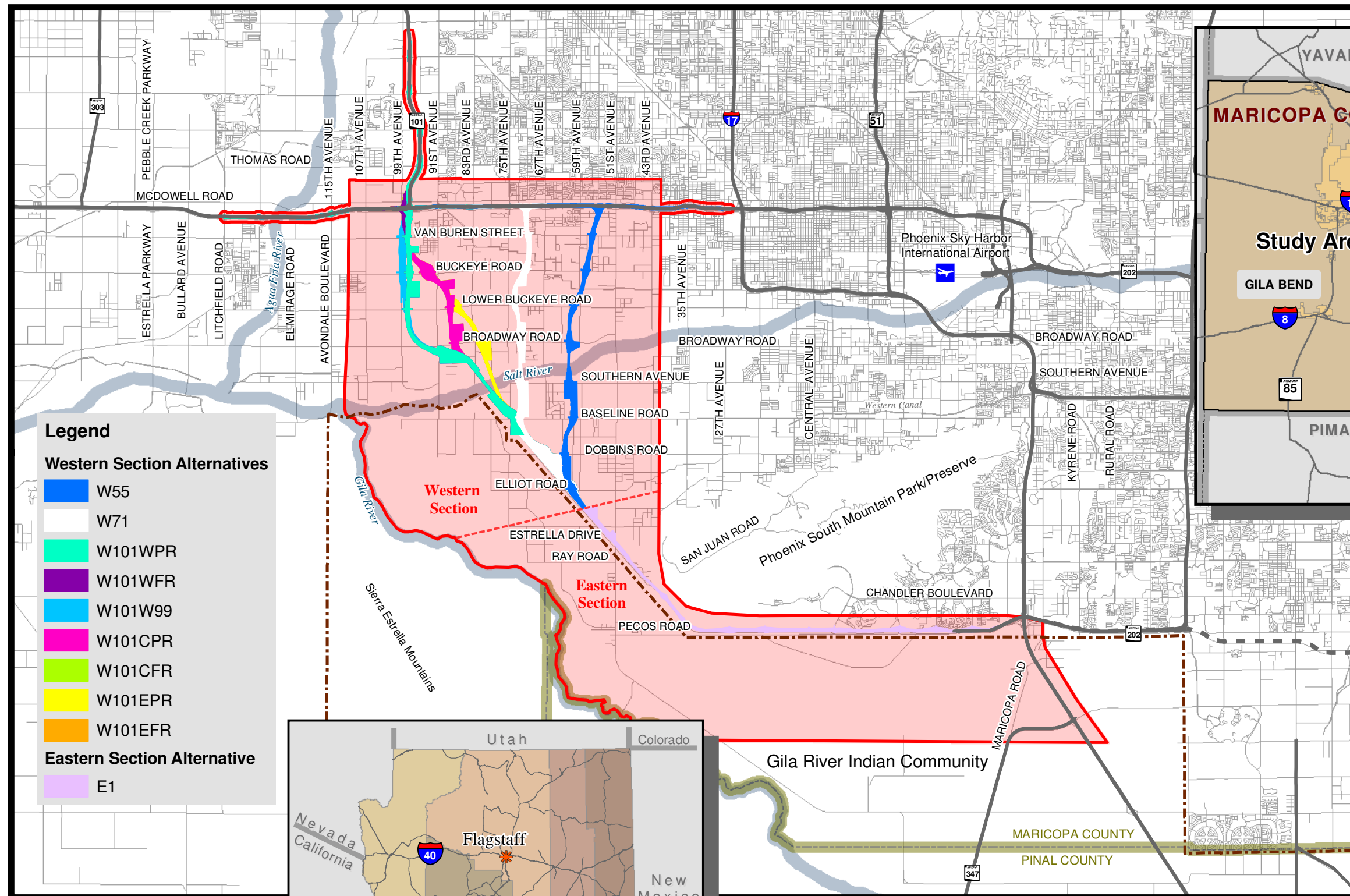
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This report presents the results of an addendum Class I overview for the Loop 202 (202L), South Mountain Freeway, Environmental Impact Statement (EIS) & Location/Design Concept Report (L/DCR) project. This is a federally-funded project is sponsored by the Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA). In late 2004, the original study area was expanded to include more extensive portions of Interstate 10 (I-10) and the State Route (SR) Loop 101 (101L) transportation corridors where additional lanes would be needed to complete the freeway connections. New right-of-way (R/W), less than 100 feet on either side of the freeways, would be needed to accommodate the additional lanes. These areas were not included in the original Class I overview prepared for the project by the Gila River Indian Community's Cultural Resource Management Program (GRIC-CRMP) (Burden 20002). Therefore HDR Engineering, Inc. (HDR) prepared this addendum Class I overview at the request of ADOT and FHWA. The following report provides a summary of past projects, previously recorded archaeological sites and historic building properties, and past eligibility and management recommendations.

The study area for the addendum Class I overview includes one mile to the north and south of I-10 from 19<sup>th</sup> Avenue in Phoenix (Milepost [MP] 143.7) to Estrella Parkway west of Tolleson (MP 126.7) and one mile to the east and west of the Loop 101 from I-10 (MP 1.7) to Northern Avenue (MP 8.1) at the border of Glendale and Peoria (Figure 1). The area includes portions of Sections 1 to 12 of Township 1 North, Range 2 East; Sections 31 to 36 of Township 2 North, Range 2 East; Sections 1 to 12 of Township 1 North, Range 1 East; Sections 3 to 5, 8, 9, 16, 17, 20, 21, 28, 29, and 31 to 36 of Township 2 North, Range 1 East; and Sections 32 to 34 of Township 3 North, Range 1 East (El Mirage, Fowler, Glendale, Perryville, Phoenix, and Tolleson, AZ U.S.G.S. 7.5' Quadrangle Maps; Gila and Salt River Baseline and Meridian).

## Project Background

ADOT is studying the South Mountain Transportation Corridor (SMTTC) in south Phoenix, Maricopa County, Arizona. The South Mountain Freeway corridor was adopted into the Maricopa Association of Governments (MAG) regional freeway system in 1985 as part of the MAG Freeway/Expressway Plan (MAG, 1985), at which time it was included in the state highway system by the State Transportation Board. In 1988, ADOT prepared a state-level Environmental Assessment (EA) and a Design Concept Report (ADOT 1988a, 1988b) for the project, identified at that time as the South Mountain Parkway. As presented then, the project would connect I-10 (Maricopa Freeway) south of Phoenix with I-10 (Papago Freeway) west of the city, following an east-west alignment along Pecos Road, through the western tip of the Phoenix South Mountain Park/Preserve (SMPP), then north to I-10 between 55th and 63rd avenues. Due to the time elapsed since those documents were approved and to secure eligibility for federal funding for a proposed project within this corridor, ADOT and the FHWA are now preparing an EIS in accordance with the National Environmental Policy Act (NEPA) of 1969. In November 2004, the MAG Regional Transportation Plan (RTP) (MAG 2003) was placed before Maricopa County voters who approved the plan and the transportation projects it would fund. The South Mountain Freeway was included in this plan.



**Draft Cultural Resources Report**

**Project Study Area and Alternatives, Vicinity and Location Map**

**South Mountain Freeway Transportation Corridor Study**

Draft: May 2006



**Figure 1**  
Page 2



South Mountain Transportation Corridor  
TRACS No. 202L MA 054 H5764 01L  
FHWA Federal Project No. NH-202-D( )

E:\GISDATA\Projects\AZADOT\SouthMtnTech\_report02\_05\  
culturalProj\_Study\_Area.mxd

The study area for the EIS includes more than 140 square miles and is divided into a western section and an eastern section at a location common to all action alternatives (see Figure 1). The division between sections occurs just east of 59<sup>th</sup> Avenue and south of Elliot Road. Within the western section, three alternatives are being considered for detailed study. These are the W55, W71, and W101 alternatives. The W55 Alternative would connect to I-10 at 55<sup>th</sup> Avenue while the W71 Alternative would connect at 71<sup>st</sup> Avenue. Both the W55 Alternative and W71 Alternative each have one design option associated with them. The W101 Alternative would connect to I-10 at the existing SR 101 or 101L (Agua Fria Freeway)/I-10 system traffic interchange (TI) and has seven design options associated with it. The W101 Alternative design options vary geographically among west (W), central (C), east (E), and along 99<sup>th</sup> Avenue alignments and would vary geometrically based on a partial reconstruction (PR) or a full reconstruction (FR) of the system TI. The seven design options for the W101 alternative are:

- ▶ W101WPR- W101 Alternative, Western alignment, Partial Reconstruction
- ▶ W101WFR- W101 Alternative, Western alignment, Full Reconstruction
- ▶ W101CPR - W101 Alternative, Central alignment, Partial Reconstruction
- ▶ W101CFR - W101 Alternative, Central alignment, Full Reconstruction
- ▶ W101EPR - W101 Alternative, Eastern alignment, Partial Reconstruction
- ▶ W101EFR - W101 Alternative, Eastern alignment, Full Reconstruction
- ▶ W101W99 - W101 Alternative, 99<sup>th</sup> Avenue alignment, Partial Reconstruction

Improvements to I-10 (Papago Freeway) would occur for each western section alternative (W55, W71 and W101). Improvements to 101L would occur for each design option associated with the W101 Alternative.

Within the eastern section of the study area, one action alternative (E1 Alternative) is being considered for detailed study. The E1 Alternative would begin at the section division described above and would connect to I-10 (Maricopa Freeway) at the junction of the Pecos Road/I-10/SR 202 or 202L (Santan Freeway) system TI.

All alternatives would be located outside the Gila River Indian Community (GRIC). Coordination regarding potential eastern section alternatives on GRIC land is ongoing; however, permission to study such alternatives has not yet been granted. The No-Action Alternative is being considered for the entire study area.

## Chapter 2: Environmental Context

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The I-10 and 101L study corridors are located in the lower Salt River Valley, in the western portion of the Phoenix metropolitan area. Land use is a mix of residential, agricultural, industrial, and commercial areas. No natural terrain remains. The Salt River parallels the I-10 corridor five to six miles to the south. The Aqua Fria River, a north-south trending tributary to the Salt River, crosses the I-10 corridor about three and a half miles west of the I-10/101L interchange. The area covered by the addendum Class I study is area is part of the lower Salt River Valley, near the confluence of the Salt and Gila Rivers.

This portion of the lower Salt River Valley consists of a series of paired alluvial terraces flanking the rivers sloping toward the river. Historically, in the vicinity of Phoenix, the Salt River had a broad, shallow, braided streambed with a low to relatively steep gradient, dropping between 6.2 and 15.3 ft/mi (Graybill and Nails 1989). On average, annual stream flow in the Salt (when combined with that of the Verde River) was almost four times greater than that of the Gila and San Pedro rivers combined, making the area more favorable for irrigation agriculture (Masse 1991; Waters and Ravesloot 2001). Salt River stream flow peaks in March and April with snowmelt from higher elevations, and again in August as a result of summertime thunderstorms (Doyel 1995; Henderson and Hackbarth 1995; Masse 1991). Historic stream flow reconstructions, via the analysis of tree-ring data, collected from the upper watershed of the Salt and Verde rivers indicate that yearly flow was quite variable (Graybill 1989). Modern regulatory actions and resource exploitation have narrowed and deepened the original channel (Graybill and Nails 1989).

Climatic data for the lower Salt River Valley shows a mean annual temperature of 72°F, with July maximum temperatures averaging 104.4°F and January minimum temperatures averaging 41°F. Mean annual rainfall is 7.6 inches (Sellars and Hill 1974). Rainfall is bi-seasonal, but typically summer dominant, with high intensity thunderstorms providing the most moisture in July and August. The secondary period of precipitation occurs in the winter when Pacific frontal systems spread gentle rainfall across the region. April, May, and June are the driest months.

The expansion of modern agricultural fields and subsequent encroachment of the Phoenix metropolitan area has greatly affected the extent of the lower Salt River Valley's original vegetative regimes. However, examples of the lower Colorado River Valley and Arizona Upland subdivisions of the Sonoran Desertscrub community can still be found along this portion of the Salt River (Brown 1994; Brown and Lowe 1980). The lower Colorado River Valley subdivision is characterized by the creosote bush-white bur sage and saltbush series along the lower terraces and the palo verde-cacti-mixed scrub along the bajadas (Henderson and Hackbarth 1995). The latter series appears in transitional zones with representatives of the Arizona Upland subdivision—the creosote bush-crucifixion thorn series. Agricultural expansion and urban sprawl have all but eradicated the extensive mesquite bosques, stands of cottonwood and desert willow, and mixtures of reeds, saltbush, and grasses that once dominated riverine and tributary drainage areas along the Salt River. (Abbott 2000; Rea 1983, 1997). Presently, the Sonoran Riparian Woodland and Riparian Scrubland biomes are represented by a handful of relict stands in undeveloped and sufficiently watered areas along the river (Henderson and Hackbarth 1995). No

native vegetation remains in the area surveyed for this study, due to agricultural, residential, and industrial development.

Changes brought upon the various vegetative regimes in the lower Salt River Valley also had a profound affect on faunal species diversity. Construction of water control facilities along the Salt River have resulted in the loss of riverine habitats that once carried the a diversity of faunal species. Animal communities in the lower Salt River Valley were also greatly affected by agricultural intensification and urbanization. Historically, riparian zones included beaver, muskrat, otter, skunk, raccoon, gophers, squirrels, and a number of species of fish. Animals within the larger basin included mule deer, white-tailed deer, bighorn sheep, antelope, badger, gray fox, coyote, rabbits, and gray wolf. The northern and eastern edges of the lower Salt River Valley would occasionally have been within the ranges of black bear and mountain lions. Bird species included red-tailed hawk, American kestrel, turkey vulture, great-horned owl, Gila woodpecker, cactus wren, and Gambel's quail. Reptiles included desert tortoise, Sonoran mud turtle, rattlesnakes, and a number of other snakes, iguanas, and lizards. Many of these and other animal species have been recovered from archaeological sites.

# Chapter 3: Cultural Context

The following summary of the prehistory and history of the area is largely reproduced from the culture history presented in the Class I Overview for the South Mountain EIS provided by the Gila River Indian Community's (GRIC) Cultural Resources Management Program (CRMP) (Burden 2002:2-10 to 2-23).

Human occupation and use of the study area spans from approximately 10,000 B.C. to the present. The cultural development of the region during this time is characterized by five major developmental stages representing distinctly different lifeways: the Paleo-Indian Period (10,000-8500 B.C.), the Archaic period (8500 B.C.-A.D. 100), the Formative Period (A.D.100-1450), the Protohistoric Period (A.D. 1450-1694), and the Historic Period (A.D. 1694-1953). Cultural chronologies proposed for the region have these primary stages subdivided into a sequence of periods and phases that define the major developmental trends (Table 1). Furthermore, the periods and phases are detectable in the archaeological record.

**Table 1. Cultural Chronology.**

Year	Major Developmental Periods	Chronological Periods	Phases
A.D. 1900 A.D. 1800 A.D. 1700 A.D. 1600 A.D. 1500 A.D. 1400 A.D. 1300 A.D. 1200 A.D. 1100 A.D. 1000 A.D. 900 A.D. 800 A.D. 700 A.D. 600 A.D. 500 A.D. 400 A.D. 300 A.D. 200 A.D. 100	HISTORIC	Historic	-----
	PROTOHISTORIC	Protohistoric	-----
	FORMATIVE	Classic	Polvorón
			Civano
			Soho
		Sedentary	Sacaton
		Colonial	Santa Cruz
			Gila Butte
		Pioneer	Snaketown
			Estrella/Sweetwater
		Early Formative	Vahki
	Red Mountain		
-----	undefined		
100 B.C. 500 B.C. 1000 B.C. 2000 B.C. 3000 B.C.	ARCHAIC	Early Agricultural / Late Archaic	-----
		Middle	-----

**Table 1. Cultural Chronology.**

<b>Year</b>	<b>Major Developmental Periods</b>	<b>Chronological Periods</b>	<b>Phases</b>
5000 B.C.	PALEO-INDIAN		
7000 B.C.		Early	-----
9000 B.C. 10,000 B.C.		Paleo-Indian	-----

## **Paleo-Indian Period**

The initial occupation during the Paleo-Indian period (10,000 – 8500 B.C.) appears to have been somewhat intermittent in the middle Gila Valley based on the limited amount of recovered evidence. The period is manifested in southern Arizona and throughout the Southwest by isolated surface finds of Clovis points, as well as buried megafauna kills sites in alluvial contexts with associated lithic assemblages (Haynes 1980; B. Huckell 1982; Mabry 1998a; Mabry 1998b). Based on this scant data, the period seems to be characterized by dispersed mobile groups that primarily hunted now-extinct megafauna and supplemented their diet with collection of wild plant materials (Waters 1986). In the lower Salt River Valley, this period is represented by only a few surface artifact finds in the middle Gila Valley and a single specimen recovered at the northern edge of the basin (Agenbroad 1967; B. Huckell 1982). It is likely, however, that Paleo-Indian period remains are buried beneath Holocene alluvium overlaying older Pleistocene deposits.

## **Archaic Period**

The period following climatic amelioration and the extinction of the previously exploited large mammals saw the emergence and flourishing of the Southwestern Archaic Tradition (8500 B.C.-A.D. 100). This tradition initially is characterized by small, mobile residential groups living in short-term field camps or long-term base camps that hunted small to medium game and foraged for a diversity of floral resources. This subsistence-settlement pattern persists in most of southern Arizona through the Early (8500-5000 B.C.), Middle (5000-1500 B.C.), and Late (1500 B.C.-A.D. 100) periods. Although there was a trend toward increased reliance on gathering within a seasonal round – as evidenced by the increased prevalence of grinding tools in artifact assemblages – and increasing sedentism, most groups did not develop a reliance on agriculture. Beginning about 1500 B.C., however, groups in the Tucson Basin occupying upland and primary or secondary stream courses, adopted maize horticulture, maintained substantial storage facilities, and developed a semi-sedentary subsistence-settlement pattern (B. Huckell 1995; Mabry 1998a; Mabry 1998b). By 800 B.C., some communities had developed into large, seasonally occupied villages exhibiting communal structures (B. Huckell 1995; Mabry 1998a; Mabry 1998b). The latter sites are contemporary with Late Archaic period sites, but they are referred to as Early Agricultural period sites to highlight their divergent subsistence-settlement pattern.

At present, few Archaic period sites have been identified in the Phoenix Basin, and these appear to represent short-term, seasonal field camps that date primarily to the Middle and Late Archaic



periods (Bayham et al. 1986; Bubemyre et al. 1998; Fish 1968; Halbirt and Henderson 1993; Neily 1991, Neily et al. 1999a). Surface finds of temporally diagnostic projectile points attest to the widespread use of the area by Archaic period groups. However, pre-ceramic, horticultural settlements such as those found in and around the Tucson Basin have not been identified in the Phoenix Basin.

## Formative Period

### Early Formative and Pioneer Periods

The succeeding Early Formative period (A.D. 100-650) constitutes a period of transition characterized by an expansion of agricultural efforts, increased sedentism, construction of more substantial pit structures, and the initial production of plain ware ceramics (Doyel 1993a; Neily et al. 1999b; Wallace et al. 1995). Evidence suggests a shared cultural pattern existed across southern Arizona during the initial phase (around A.D. 100-450 / 550) of this period (Cable and Doyel 1987; Ciolek-Torrello 1995; Doyel 1993a; LeBlanc 1982; Whittlesey 1995). This cultural pattern was distinguished by semi-sedentary settlements with circular, oval, and bean-shaped pit houses; large communal houses; plain ware pottery; large projectile points; basin and slab metates; flexed and seated inhumation and primary cremation; and floodwater agriculture. Small canals appear in the Phoenix Basin at this time. The earliest dated canals include one in the lower Salt Valley, which dates between 130 B.C. and A.D. 275 (Henderson 1989:196), and one in the middle Gila Valley, which dates to between A.D. 125 and A.D. 245 (Waters and Ravesloot 2000:53). Early Formative period sites in the Phoenix Basin (Red Mountain phase) include Pueblo Patricio, La Cuenca del Sedimento, La Escuela Cuba, and the Red Mountain site in the Salt River area (Cable and Doyel 1987; Cable et al. 1985; Hackbarth 1992; Henderson 1989, 1995; Morris 1969). At present, Red Mountain phase sites or components have not been documented in the middle Gila Valley, other than a number of possible undated structures at Snaketown.

The placement of the Vahki, Estrella, and Sweetwater phases, along with the Snaketown phase, traditionally comprised the Pioneer period in the Hohokam cultural chronology (Gladwin et al. 1937; Haury 1976). These phases have undergone recent re-evaluation with regard to the origins and development of the Hohokam (Cable and Doyel 1987; Dean 1991; Wallace et al. 1995). Based on available limited excavation and artifact data, these three phases (Vahki, Estrella, and Sweetwater) can best be conceptualized as a continuation of the broad, regional cultural development of the Early Formative period. For this reason, the transition between the Early Formative and Pioneer periods is ambiguous. During the Vahki phase (around A.D. 450/550-650), both micaceous plain ware and red ware ceramics were produced and a figurine complex developed. Other characteristics of this phase include settlements with plaza-oriented layouts, the construction of large square houses, and a mortuary pattern incorporating both cremations in pits or trenches and flexed and semi-flexed inhumations (Doyel 1991). The hallmark of the following Estrella and Sweetwater phases (A.D. 550 / 650-700) is the production of grooved and decorated Red-on-gray ceramics. Although the large square houses continue to be constructed, they are smaller in size than during the Vahki phase and occur with smaller structures. The presence of some intrusive elements, including macaws, parrots, shell, and turquoise suggests the initiation of regional interaction and long distance trade. Along with ceramic incising and the figurine

complex, these intrusive elements suggest that sociopolitical differentiation or ethnic marking of Formative/Pioneer material culture was a salient feature in the Phoenix Basin. Evidence for the Vahki, Estrella, and Sweetwater phases is best represented at Snaketown and the Grewe site in the middle Gila Valley (Craig 1999; Gladwin et al. 1937; Haury 1976) and at Pueblo Patricio (Cable et al. 1985; Henderson 1995) in the lower Salt Valley.

The Hohokam cultural pattern appears, at the earliest, during the Snaketown phase (A.D. 700-750) of the Pioneer period or perhaps the subsequent Gila Butte phase (A.D. 750-850) of the Colonial period (Wallace 1997; Wallace et al. 1995; Wilcox 1979; Wilcox and Sternberg 1983). As an integrated, regional belief and ritual system, the Hohokam cultural pattern initially appeared in the Phoenix Basin and was characterized by the development of large-scale irrigation agriculture, Red-on-buff pottery, a distinctive iconography, exotic ornaments and artifacts, a cremation mortuary complex, trash mounds, the adoption of public architecture such as ballcourts, and larger, more complex settlements.

In addition to pushing forward the emergence of the Hohokam, researchers have developed a consensus favoring an in situ development of the Hohokam from an Archaic cultural base (e.g., Cable and Doyel 1987; Doyel 1991; Wallace 1997; Wallace et al. 1995; Wilcox 1979). This is in contrast to the original concept of the Hohokam as immigrants from Mesoamerica who brought with them an advanced society based on irrigation agriculture, a well-developed ceramic technology, other sophisticated craft industries, and sedentary lifestyle (Gladwin et al. 1937; Haury 1976). Nevertheless, significant elements of the Hohokam cultural pattern are Mesoamerican in origin – ballcourts, figurines, copper bells, macaws, pyrite mirrors – but the mechanisms for how they reached southern Arizona are still debated (e.g., Kelly 1966; Mathien and McGuire 1986; Nelson 1986; Wilcox 1991; Wilcox and Sternberg 1983).

Throughout the Hohokam pre-Classic period (Snaketown through Sacaton phases), extending from A.D. 700 to around A.D. 1150 or 1200, the Phoenix Basin can be considered the primary focus of Hohokam regional development. The Snaketown phase witnessed the first documented construction of canals on a large scale (Wilcox and Shenk 1977), trash mounds, and urn cremation burials (Haury 1976). There is evidence of Hohokam occupation outside the Phoenix Basin during the Snaketown phase in river valleys such as the Tucson Basin and the lower Verde Valley, and this expansion continued in the subsequent Colonial period (A.D. 750-950). By the end of the Sedentary period (A.D. 1150), a multitude of sites were occupied in the Salt and Gila river valleys and canal networks had attained their greatest levels of complexity. Large ballcourt villages included Mesa Grande, Pueblo Grande, La Ciudad de Los Hornos, La Ciudad, and Las Colinas in the lower Salt River Valley and Snaketown, Grewe, Olberg, Chee Nee, Hidden Ruin, and Villa Buena in the middle Gila Valley.

## **Colonial Period**

The Colonial period (A.D. 750-950) – divided into the Gila Butte (A.D. 750-850) and Santa Cruz (A.D. 850-950) phases in the Phoenix Basin – is characterized by the establishment of numerous and widespread settlements throughout the area, the adoption of ballcourts as a public architectural component, the expansion of canal systems, and the spread of new material culture and an elaborate mortuary complex (Ciolek-Torrello and Wilcox 1988; Crown 1991; Czaplicki

1984; Debowski et al. 1976; Doyel 1991; Doyel and Elson 1985; Gasser et al. 1990; Haury 1976; Howard 1993; Marmaduke and Henderson 1995; Neily et al. 1999b; Wilcox and Sternberg 1983). Settlement patterns reveal increasing differentiation in site size and function (Gregory 1991), and settlement hierarchies developed along irrigation systems in river valleys (Doyel 1991). Within sites, spatial patterning in groups of structures becomes apparent. For example, habitation sites comprising courtyard groups focused on a mutual extramural work area become common settlement organizational pattern (Howard 1985; Wilcox et al. 1981). At smaller hamlets and villages, consisting of one or two courtyard groups, trash mounds, cemetery areas, and cooking ovens tended to be arranged around the margins of the courtyard. At larger villages composed of clusters of courtyard groups, central plazas and communal cemetery and work areas were incorporated into the village structural layout (Howard 1985; Wilcox et al. 1981; Wilcox and Sternberg 1983). Ballcourts appeared as integrative structures at some villages by the early Gila Butte phase, then increased in number and spatial extent throughout the remainder of the Colonial period. The number and size of ballcourts varied from village to village, suggesting a hierarchical structure within the regional system (Doyel 1991; Wilcox and Sternberg 1983).

The appearance and subsequent expansion of Hohokam traits in areas peripheral to the Phoenix Basin, including areas where canal irrigation was not possible, initially was viewed as evidence of migration and colonization by Phoenix Basin Hohokam (Gladwin et al. 1937; Haury 1976). In some cases, movement of Hohokam populations into these peripheral areas is evident (Doyel 1978; Elson et al. 1995; Haury 1932; Mitchell 1986). However, these patterns are also interpreted as representing the integration of peripheral areas into a Hohokam regional system (Wilcox 1979; Wilcox and Sternberg 1983) or religious cult (Doyel 1991; Wallace 1997; Wallace et al. 1995) centered in the Phoenix Basin. This regional network or cult potentially was maintained and regulated through the ballcourt system (Doyel 1991), facilitating trade and exchange as well as dissemination of technological (e.g., canal irrigation and Red-on-buff pottery) and socio-religious ideas (e.g., cremation mortuary complex). Although groups in the Hohokam region probably were integrated at these higher levels, recent research has highlighted the diversity throughout the region and questioned the utility of any monothetic explanations of a unified Hohokam culture (McGuire 1991; Wallace 1997; Whittlesey 1998; Wilcox 1991).

## **Sedentary Period**

The Sedentary period (A.D. 950-1150), as represented by the Sacaton phase in the Phoenix Basin, witnessed continued growth of the number, size, and extent of Hohokam settlements, ballcourts, and canal networks in the Phoenix Basin (Crown 1991; Debowski et al. 1976; Doyel 1991; Doyel and Elson 1985; Haury 1976; Howard 1993; Wilcox and Sternberg 1983). Many large sites reached their maximum size and complexity at this time (Crown 1991). In peripheral drainage areas, the number of villages, hamlets, and farmsteads also increased. By the early Sedentary period, ballcourts were represented not only in the Phoenix Basin but in peripheral areas as well. Hohokam influence and the ballcourt system had expanded to its greatest size (Doyel 1980; Wilcox and Sternberg 1983). It is also during this time that Hohokam exchange and interaction networks reached their greatest distribution, and the amount of exotic materials at large sites may indicate that some social differentiation had developed (Doyel 1991; Nelson 1986). The intensive use of agricultural rock piles for cultivation of agave and possibly cholla,

and non-irrigation agricultural intensification appears to stem from the late Sedentary and early Classic periods (Cantley 1991; Doyel 1993b; Fish et al. 1992a, 1992b; Masse 1991).

By the end of the Sedentary period, however, the Hohokam regional system appears to have weakened as ballcourts and many sites in areas outside and on the fringes of the Phoenix Basin were abandoned and Hohokam populations primarily settled along major drainages (Ciolek-Torrello and Wilcox 1988; Craig 1999; Crown 1991; Doyel 1991; Gasser et al. 1990; Haury 1976; Wilcox and Sternberg 1983). Incipient platform mounds were constructed in the Phoenix Basin at this time, signaling the beginning of a change in public architecture (Gregory 1987; Haury 1976). Some ancestral villages such as Snaketown and Grewe were depopulated and the populations shifted to nearby locations (Craig 1999; Crown 1991; Doyel 1980; Wilcox et al. 1981). Other changes include "...an increase in the production of red ware pottery, a decrease in the production of Red-on-buff, an emphasis on urn cremation burial, and a decrease in the frequency of ornate artifacts" (Doyel 1991: 253). These changes are associated with the down cutting and widening of the Gila River between A.D. 1020 and 1160 (Waters and Ravesloot 2000, 2001), which may have been caused by several clusters of major flooding events during this interval (Graybill et al. 1999).

## **Classic Period**

During the Classic period (A.D. 1150-1450), divided into the Soho and Civano phases in the Phoenix Basin, change in the structure of Hohokam communities was indicated by several factors. Changes culminating during the Soho phase included a shift in burial practices from primarily cremations to inhumations and urn cremations; the development of new domestic architectural forms, including post-reinforced and adobe-walled structures and walled compounds; a further reduction in Red-on-buff pottery and an increase in red ware pottery production; and a change in regional networks reflected in a shift in the production and distribution of ceramic types and exotic materials (Crown 1991; Doyel 1980, 1991). The Soho phase also saw the decline and eventual collapse of the ballcourt system in the Phoenix Basin and the florescence of another monumental architectural component, the platform mound (Gregory 1987). With roots in the Sedentary period, the platform mound reflected a change in Hohokam community organization that was manifested in settlement systems not only in the Phoenix Basin, but over a much wider region (Gregory 1991). Although the rapid transformation during the Classic period appears dramatic, many of the developments were initiated in the Sedentary period. Some researchers contend the basic cultural patterns remained Hohokam (e.g., Crown 1991, Sires 1987; Teague and Crown 1984b). Nevertheless, fundamental changes occurred in many aspects of Hohokam society, and this process is representative of cultural changes occurring across the Southwest at this time (Cordell et al. 1994; Doyel 1993a).

A hierarchy of settlement types also emerged during the Classic period, including villages with only one or a few walled residential compounds, such as Pueblo Pasado and Sidewinder Ruin, and settlements with one or more platform mound compounds as well as other compounds, such as Las Acequias, Los Muertos, Adamsville, and Lower Santan (Doyel 1980, 1991). By the Civano phase, specific large settlements, such as Casa Grande, Pueblo Grande, and La Ciudad, contained one or more platform mounds, numerous compounds, a ballcourt, and a tower or Great House (Wilcox 1991). It is believed these various types of Classic period settlements formed

distinct irrigation communities – sociopolitical organizations consisting of a series of integrated villages that included one or more platform mound villages serving as administrative centers distributed along a single canal or canal system (Gregory 1991; Howard 1987). A substantial Classic period occupation with platform mounds is also evident in the non-riverine area around the Picacho Mountains (Czapliki 1984; Ciolek-Torrello and Wilcox 1988). Some platform mounds appear to have evolved in function from a non-residential special purpose facility to a residence used by a specific residential group in the Civano phase (Gregory 1987, 1991). Salado polychrome pottery, most of which was imported from outside the Phoenix Basin, appears in ceramic assemblages at this time (Abbott and Schaller 1992; Crown 1994). Such developments may reflect increasing social differentiation, and possibly the existence of elite groups controlling and coordinating ritual and agricultural knowledge, interregional interaction, and access to resources (e.g., Doyel 1991; Wilcox 1991; Wilcox and Shenk 1977).

The end of the Classic period was marked by the collapse of the system of platform mound communities and the depopulation of the Phoenix Basin. The abandonment of these late Classic period communities has been suggested to coincide with a period of drought and flood conditions that substantially reduced or destroyed the irrigation systems on which these communities relied (Nials et al. 1989). However, recent geoarchaeological testing in the middle Gila River Valley found no indication that the late Classic period collapse was preceded by major changes in the fluvial landscape. Given the close association of the Gila and Salt drainages, a similar conclusion was put forward for the Salt River (Waters and Ravesloot 2001). Regardless, abrupt changes in community organization and integration were marked by the appearance of dispersed rancheria settlements with shallow pit structures, “degenerate” red ware, and indications of a mixed subsistence strategy. However, some Civano phase compounds possibly were reoccupied (E. Sires 1983; Teague and Crown 1984b; Doyel 1991, 1995). This terminal period of prehistoric occupation in the Phoenix Basin has been tentatively defined at several sites and site components as the El Polvorón phase (Chenault 1993; Crown 1991; E. Sires 1983; Teague and Crown 1984b). The precise nature and character of this phase, however, have yet to be clarified (Doyel 1991, 1995), and some researchers dispute whether evidence supports the concept of the Polvorón phase as distinct from the Civano phase (e.g., Henderson and Hackbarth 2000).

## Protohistoric Period

The Protohistoric period (A.D. 1450-1694) represents the time between the end of the Classic period and Spanish contact. The archaeology of the period is poorly understood throughout southern Arizona, largely due to the small sample of excavated material, poor chronometric control, and lack of cohesive interpretive framework (Ravesloot and Whittlesey 1987; Whittlesey et al. 1998a; Wilson 1999). As a result, the principle sources of information are Spanish ethnohistorical accounts which are relevant primarily to the late Protohistoric period. More archaeological data from the early part of this period is needed from across southern Arizona to fully understand the transition from prehistoric to historic times.

In the 1690s, the Spanish identified two main subgroups of Upper Pimans occupying southern Arizona: the Akimel O’odham in the middle Gila Valley (Bolton 1948; Doelle 1981; Ezell 1983; Gasser et al. 1990), and the Sobaipuri in the middle Santa Cruz and San Pedro valleys (Bolton 1948; Doelle 1984; Wallace and Doelle 1997; Masse 1981). These accounts provide an outline

of the Sobaipuri and O'odham settlement-subsistence systems in the 1690s. Most settlements were located in riverine settings and consisted of small, loosely clustered, brush-covered houses. Each village was self-sufficient, politically autonomous, and focused on agriculture (both floodwater and irrigation). While Piman villages were noted as far west as the Gila-Salt confluence in the middle Gila Valley, shared hostilities with Yavapai to the north may have kept the Pima out of the Salt River Valley in the late seventeenth century (Doyel 1989; Henderson and Hackbarth 1995).

At present, few Sobaipuri archaeological sites that might date to the Protohistoric period have been identified in the Tucson Basin and lower San Pedro Valley, and even fewer Protohistoric Akimel O'odham sites have been found in the Gila Valley (Doelle 1981, 1984; Ravesloot and Whittlesey 1987). In addition, the dating of much of the purported Protohistoric period archaeological data is disputable (Doelle 1984; Ravesloot and Whittlesey 1987). Some progress has been made in classifying early Protohistoric period settlements and their associated artifact assemblages for the lower San Pedro Valley and Tucson Basin (e.g., Masse 1981; Ravesloot and Whittlesey 1987). However, such attempts to synthesize data from the middle Gila Valley are still at a rather incipient stage (Cable 1990; Gasser et al. 1990; Masse 1990). These problems inhibit a basic understanding of the majority of the Protohistoric period. More importantly, they prevent a conclusive determination of whether a cultural and/or occupational continuum exists between documented historical-period and prehistoric populations (e.g., Doelle 1981; Doyel 1991; Ezell 1983; Gasser et al. 1990; Haury 1976; Masse 1981; Rea 1997).

Segments of the semi-nomadic Western Apache and Yavapai tribes occupied portions of south-central Arizona at the time of Spanish contact, but little is known of their range during the Protohistoric period. The Western Apache were a Southern Athapaskan-speaking tribe whose origins lie in modern-day Canada. The timing of the Athapaskan entry into the Southwest is debated widely, and dates range from as early as A.D. 1000 through A.D. 1400 (Opler 1983; Perry 1991). With a few notable exceptions, archaeological evidence of the Western Apache occupation prior to the nineteenth century is scant (Gregory 1981; Whittlesey et al. 1998a). The Yavapai were Yuman speakers, and evidence tentatively supports a migration of Yuman peoples from the lower Colorado River region into Arizona between A.D. 1100 and 1300 (Kendall 1983; Rogers 1945; Whittlesey and Benaron 1998). Yavapai archaeology for all periods is poorly known, and the nature and extent of the Protohistoric Yavapai occupation is almost entirely unknown (Whittlesey et al. 1998a). These problems in Western Apache and Yavapai archaeology will be hard to overcome as the material culture of these hunter-gatherer people was not elaborate and is assumed to have consisted of easily transportable items (Basso and Opler 1971; Whittlesey et al. 1998a). Furthermore, "it may be impossible to distinguish between the Yavapai and Western Apache on the basis of archaeological data and material culture alone" (Whittlesey et al. 1998a:214).

## Historic Period

The Historic period (A.D. 1694–present), which began with Spanish contact, comprises the time for which written records of the region exist. The period is divided into the Hispanic era, encompassing the time of Spanish and Mexican occupation of southern Arizona, and the American era, from the Gadsden Purchase to the present.

## **The Hispanic Era (A.D. 1694-1853)**

Father Eusebio Francisco Kino arrived at Dolores in Sonora in 1687 and established Jesuit missions in the Pimería Alta of northeast Sonora between 1691 and 1711. He briefly visited the Sobaipuri along the middle Santa Cruz River in 1692 and the Akimel O'odham along the middle Gila River in 1694 and again in 1697. Although other Spanish missionaries followed Father Kino throughout the 1700s, records of his visits provide the primary source of information about these groups at the beginning of the eighteenth century.

Little written information was obtained on Akimel O'odham settlements or people in the middle Gila Valley during the Hispanic era. Living far beyond the Hispanic frontier, which never extended north of the Tucson Basin, the Akimel O'odham managed to escape involvement in the events and turbulence in the south and only had sporadic contact with Euro-Americans (Ezell 1983; Russell 1908; Wilson 1998). However, Spanish accounts identified at least six self-sufficient, autonomous Akimel O'odham settlements primarily along the Gila River west of the Casa Grande Ruins (Bolton 1948:I:127-129; Doelle 1981; Ezell 1983; Russell 1908; Wilson 1998, 1999). By this time, the Pee Posh had migrated up the Gila River from the lower Colorado River and joined the Akimel O'odham after being displaced by the conflicts with Quechans and Mojaves. The economy of these villages centered on floodwater farming of corn, beans, squash, and cotton, supplemented by gathered and traded foods (Ezell 1983; Hackenberg 1983). The use of irrigation agriculture at the time of contact remains controversial (Doelle 1981; Ezell 1983; Hackenberg 1983; Haury 1976), but this technology certainly was important in the nineteenth century when crops such as wheat were introduced. Although not in direct contact with the Spanish settlements to the south, the Akimel O'odham and Pee Posh were affected significantly by introduced European elements such as new cultigens, such as wheat, livestock, metal, military strategies, and, disease. Like the Sobaipuri villages to the south, Akimel O'odham settlements became a target of frequent raiding by Apache as well as the Yavapai and Quechan. (Dobyns 1974; Ezell 1983; Russell 1908). To defend against these constant threats, the Akimel O'odham adopted a denser settlement pattern, introduced mandatory service for all males, and conducted counter-raiding and punitive campaigns with their Tohono O'odham and Pee-Posh allies. By the end of the Hispanic period, the economic and military prowess of the Akimel O'odham were recognized by both Euro-Americans and native peoples alike (Ezell 1983).

Throughout the Hispanic era, the Western and Yavapai had only marginal contact with the Spaniards, Mexicans, and O'odham groups (Spicer 1962; Whittlesey et al. 1998b). This limited interaction took the form of Apache raiding on Spanish and Mexican settlements (Goodwin 1942), as well as Apache and Yavapai raiding on O'odham villages (Bolton 1948; Dobyns 1974; Russell 1908). The Western Apache and Yavapai came to resemble each other closely, and the considerable degree of cultural similarity between them led to confusion among later Euro-Americans regarding ethnic identity (Khera and Mariella 1983). These two groups also shared an economic system that was "...a fluid and opportunistic blend of gathering, hunting, farming, and raiding; a settlement system focused on small groups of extended families that were seasonally mobile; politically autonomous bands; and technology closely adapted to a mobile lifestyle" (Whittlesey and Benaron 1998:143). The Western Apache tribe occupied a territory bounded roughly by the San Francisco Peaks in the north, the White Mountains in east-central

Arizona, the Santa Catalina Mountains, and the Yavapai territory (Basso 1983; Basso and Opler 1971; Black and Green 1995; Goodwin 1942; Whittlesey and Benaron 1998; Whittlesey et al 1998a). The Yavapai tribe occupied a territory bounded roughly by the lower Colorado River, the Gila River, the San Francisco Peaks, and the Western Apache territory. The southeastern Yavapai, or Kewevkapaya, occupied the area from the confluence of the Gila and San Pedro rivers north toward the confluence of the Salt and Verde rivers (Gifford 1932; Khera and Mariella 1983; Whittlesey et al. 1998a).

Mexico achieved independence from Spain in 1821, whereupon modern-day southern Arizona came under Mexican rule. The Mexican government terminated the Spanish policy of subsidizing and resettling peaceful Apaches on the northern frontier around Tucson, and conditions subsequently deteriorated as Apache raiding resumed (Neily et al. 1999b; Sheridan 1986). Despite the danger of Apache attacks, this time saw some mining exploration and ranching activities in and around the Tucson Basin. Elsewhere in southern Arizona, American trappers, traders, and mountain men entered areas inhabited by the San Carlos Apache that were previously unknown to Euro-Americans (Corle 1951; Whittlesey et al 1998b). The end of the Hispanic era is formally marked by the Gadsden Purchase in 1853, although the Mexican military did not withdraw from Tucson until 1856.

### **The American Era (A.D. 1853 – Present)**

With the Gadsden Purchase of 1853, modern-day southern Arizona became part of the United States. The subsequent arrival of the U.S. military and Euro-American settlers in the Tucson Basin was followed by an economic boom, with ranches, farms, and mercantile shops being established (Neily et al. 1999b). The Civil War temporarily halted economic development in the area, but southern Arizona saw the influx of thousands of Euro-American settlers after the war. A local government was instituted with the organization of the Territory of Arizona in 1863.

In 1865, the U.S. Army established Camp Verde (later known as Fort McDowell) at the confluence of the Salt and Verde rivers. Over the next few decades, the U.S. Army launched campaigns across the Arizona Territory to suppress the Yavapai and Apache and opened the door for non-native settlement. Initially, the subsequent influx of Euro-American settlements focused on mining, but ranching and farming soon followed. By the late 1860s, settlers began developing irrigation agriculture along the Salt River by rehabilitating the remnants of prehistoric Hohokam canals.

The Phoenix townsite was established in 1870. In the late nineteenth century and early twentieth century, Salt River farmers mainly grew alfalfa and grain. With the completion of Roosevelt Dam in 1911 and insurance of a stable and reliable water supply, the Valley's farming community was built out to its maximum extent. Cotton production became more prevalent starting around World War I when an increased demand made it profitable. In addition to farming, feeder and dairy cattle were also important components of the southwest Valley's local economy. Over the following decades, family owned farms and dairies dotted the Valley's rural landscape and were integral components of Arizona's economy. Following the end of World War II, however, family farms and dairies began to be replaced by larger commercial operations through a trend of urban development that continues today.



One profound effect of the post-Civil War influx of Euro-American settlers on indigenous populations was the construction of upstream canals that diverted much water to non-Indian farmers along the Gila River in the 1870s (Dobyns 1981; Ezell 1983). The introduction of animal husbandry, decimation of woodlands for mining operations, destruction of beaver populations, and construction of wagon roads and railroads in the region led to increased erosion and disastrous flooding events (Dobyns 1981). As a result, during subsequent periods of drought, the lack of Gila River water that could be used for irrigation agriculture led to widespread famine and eventual relocation of some O'odham settlements to the Salt River Valley (Ezell 1983; Hackenberg 1983). The Akimel O'odham refer to the period between 1870 and 1910 as the "years of famine," during which they "...were plunged from the status of independent farmers competing successfully with White farmers to that of wage laborers" (Ezell 1983:158-159).

The most ambitious effort to rectify the economic plight of the Akimel O'odham was the San Carlos Project Act of 1924, authorizing the construction of a water storage dam on the Gila River to provide for the irrigation of 50,000 acres of Indian and 50,000 acres of non-Indian land. For a variety of reasons, the San Carlos Project failed to revitalize the O'odham farming economy (Hackenberg 1983). Over the years, the U.S. Government placed severe acculturation pressures on the Akimel O'odham that have affected changes in nearly every aspect of their lives. Since World War II, however, the Akimel O'odham have experienced a resurgence of interest in tribal sovereignty and economic development. As the community became a self-governing entity, it has developed several profitable enterprises in agriculture and telecommunications, built two casinos, and begun the process of revitalizing their farming economy by constructing a water delivery system across the reservation.

# Chapter 4: Regulatory Context

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The 202L, South Mountain Freeway, EIS & L/DCR Project is using federal funds administered through FHWA and therefore is a federal undertaking that requires compliance with several federal preservation laws. The National Environmental Policy Act of 1969 (42 U.C.C. 4321-4347) stipulates that federal agencies work to preserve not only natural resources but also important historical and cultural aspects of our national heritage [Section 101(b)(4)].

The National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470) requires federal agencies to take into account the effects of their undertakings on historic properties, and afford the State Historic Preservation Office (SHPO) and other parties with a demonstrated interest a reasonable opportunity to comment on such undertakings. Regulations for *Protection of Historic Properties* (36 CFR Part 800) implement Section 106 of the NHPA. These regulations define a process for responsible federal agencies to consult with the State or Tribal Historic Preservation Officer (S/THPO), Native American groups, other interested parties, and when necessary, the Advisory Council on Historic Preservation (ACHP) to ensure that historic properties are duly considered as federal projects are planned and implemented.

To be determined eligible for inclusion in the National Register, properties must be important in American history, architecture, archaeology, engineering, or culture. They also must possess integrity of location, design, settings, materials, workmanship, feeling, and association, and meet at least one of four criteria:

- a) Are associated with events that have made a significant contribution to the broad patterns of our history.
- b) Are associated with the lives of persons significant in our past.
- c) Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction.
- d) Have yielded, or may be likely to yield, information important in prehistory or history.

Properties may be of local, state, or national importance. Typically, historic properties are at least 50 years old, but younger properties may be considered for listing if they are of exceptional importance.

State of Arizona preservation laws include the State Historic Preservation of 1982 (A.R.S 41-861 through 41-864) which stipulates that state agencies work to identify and preserve significant historic properties and provides SHPO an opportunity to comment on any agency plans that affect properties listed on or eligible for listing on the Arizona State Register of Historic Places. In addition, the Arizona Antiquities Act (A.R.S. 41-841 through 41-847) prohibits excavation of historic or prehistoric sites on lands owned or controlled by the State of Arizona or local governments without a permit. The Act also directs those in charge of activities on such lands to

notify the director of the Arizona State Museum of the discovery of any archaeological sites, historical resources, or human remains.

A large portion of this addendum Class I overview focuses within Phoenix city limits, and the City of Phoenix has a well developed program for the management and proper treatment of cultural resources. The City of Phoenix General Plan includes a policy that “encourages the protection, preservation, and designation of historic resources,” requires that development is “compatible with architectural, archaeological, and historic resources and their setting,” and also encourages the preservation “of archaeological resources found at development sites of public and private projects.” In support of that policy, the City of Phoenix Zoning Ordinance, Chapter 8, Section 802(A) acknowledges the potential significance of archaeological resources within the city. Therefore, it is the City of Phoenix’s policy (Chapter 8, Section 802[B2]) (Bostwick 2004: 5):

- a) To encourage identification of the location of both prehistoric and historic archaeological resources;
- b) To assist with the preservation of these resources, within developments where appropriate, and with recovery of the resources where applicable;
- c) To encourage recognition of the fact that archaeological resources found on public land are the property of all citizens, and are not private property.

Archaeological resources found on city-owned lands are the property of the City of Phoenix. In addition, the City of Phoenix has been designated by the SHPO as a Certified Local Government (CLG), which requires that the City (Bostwick 2004: 5):

- Maintain a historic preservation commission
- Enforce state and local preservation laws
- Provide for public participation in its activities
- Enact the City’s historic preservation ordinance

As such, all work within Phoenix city limits must adhere to the City’s Historic Preservation Ordinance and the *City of Phoenix Guidelines for Archaeology* (Bostwick 2004).

# Chapter 5: Results

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HDR conducted archival research and checked site records and project files at the Arizona SHPO, the Arizona State Library's Archives and Public Records Office, Pueblo Grande Museum (PGM), the Bureau of Land Management Arizona State Office, and at ADOT. In addition, HDR conducted database searches on AZSITE and the National Register of Historic Places (NRHP). The Class I review incorporated all previously recorded prehistoric and historic cultural resources within one mile of the I-10 and 101L corridors.

HDR identified 119 previous projects in the addendum Class I study area (Tables 2-4; Figures 3-8). Seventy-six projects were Class III archaeological surveys, of which 58 resulted in negative findings. Report information for four of the Class III surveys was unavailable; hence, the results for those are unknown (Lausten 2003a; Rosenberg 1983b; 76-057.ASU; and 84-004.ASU). Thirteen of the previous projects were archaeological testing and excavation projects and 23 were archaeological monitoring projects.

HDR identified seven historic building inventories (Janus Assoc. 1986; Janus Assoc. 1987a-b; Woodward and Osmon 1991a-c; Woodward 1993). Two dealt with the Grand Avenue corridor (Janus Assoc. 1986; Woodward 1993). There were two building inventories for the Capitol Redevelopment Area (Janus Assoc. 1987a-b). The other three building inventories focused on the general Phoenix metropolitan area, historic rural and estate architecture (Woodward and Osmon 1991a), pre-1900 rural and estate architecture (Woodward and Osmon 1991b), and public and institutional architecture (Woodward and Osmon 1991c).

Previously recorded cultural resources include 27 prehistoric and historic archaeological sites, five historical-period linear sites, and 129 historic buildings (Tables 5-7; Figures 9-14). In addition, historical maps indicate that several prehistoric canal alignments pass through the study area (Figures 15-16). For the archaeological sites, five are considered eligible to the NRHP, five sites are not eligible, nine sites have not been evaluated for eligibility, and eligibility state of eight sites is unknown due to a lack of available information. Historically-documented prehistoric canals in the area are viewed as potentially eligible resources that should be investigated if encountered.

The Class I study revealed five historical-period linear sites are in the study area. The linear sites are considered eligible overall with contributing an non-contributing segments.

Of the 129 historic buildings, 25 have been previously recommended as eligible to the NRHP, 37 have been recommended as not eligible, and 67 have not been evaluated (Figures 17-19). Seventy-one historic building properties are in the Capital Redevelopment Area, an unnominated residential area with an abundance of historic buildings. Eighteen of the historic building properties are in the Villa Verde Historic District, which is listed on the Phoenix Register of Historic Places. Although the Villa Verde properties were previously recommended as not eligible to the NRHP, they should be re-evaluated within the context of an early Phoenix suburban neighborhood.

**Table 2. Previous Archaeological and Historic Property Surveys.**

Agency Proj. #	AZSITE Proj. #	Project Name	Sites <sup>1</sup>	Location	Reference
1974-001.ASM	2443	TG&E El Sol-Vail Transmission Line	0	T2N, R1W, S25, 35, and 36; T1N, R1W, S2, and 11	McDonald et al. 1974
I-10-2(104).ADOT	--	Reams Road TI at I-10	0	T1N, R1W, S5-6	Rosenberg 1983a
I-10_2(24).ADOT	--	43 <sup>rd</sup> Avenue and McDowell <sup>2</sup>	--	43 <sup>rd</sup> Avenue and McDowell <sup>2</sup>	Rosenberg 1983b
	--	Survey/Assessment of 9 Parks- Alegre Park	Stone artifacts; no site designated	67 <sup>th</sup> Avenue and Encanto	Doyel 1984
	--	Assessment of 8 Parks- Sueno Park	1	43 <sup>rd</sup> Avenue and Encanto	Cable 1985
	--	Survey of Desert West (formerly Alegre) Park	6 sherds; no site designated	67 <sup>th</sup> Avenue and Encanto	Doyel 1986
	--	Grand Avenue Corridor Survey	--	T2N, R2E, S26 and 36	Janus Assoc. 1986
N-901-278.ARS; 2181-R.SHPO	AZRef 5505	NW Section of Outer Loop Freeway	0	T2N, R1E, S4; T3N, R1E, S33	Stone 1986
1987-002.ASU	9179; AZRef 5394	SW Loop Freeway Project	8 sites discussed; no new sites	T1N, R2E, S5-8	Bostwick and Rice 1987
	--	Government Mall Capitol Longview Redevelopment Area	0	T1N, R2E, S1	Janus Assoc. 1987a
	--	Capitol Redevelopment Area	70 historic structures	T1N, R2E, S1	Janus Assoc. 1987b
1987-222.ASM	5131	US Telecom Buried Fiber Optic Cable	0	T1N, R1W, S1-6; T1N, R1E, S1-6; T1N, R2E, S1-6, and 12	O'Brien et al. 1987
N-901-279.ARS	5461	I-10 Interchange- Outer Loop Freeway	0	T1N, R1E, S4 and 5; T2N, R1E, S33	Bontrager 1988
1988-148.ASM	9919	85 Acre Parcel Adjacent to N. Side of I-10 in Goodyear	0	T1N, R1W, S3 and 4	Curtis 1988
1989-148.ASM; 2925-R.SHPO	5175	Grand Avenue Between Beardsley Canal and Pierce Street	1	T2N, R2E, S35 and 36	Curtis 1989a
H 2162.ADOT; 3098-R.SHPO	AZRef 5725	Bullard Avenue Interchange along I-10	0	T1N, R1W, S4 and 5	Curtis 1989b
N-900-325.ARS	--	Outer Loop Freeway along 99 <sup>th</sup> Avenue	2	T2N, R1E, S16, 21, 28, and 33	Curtis 1989c
1991-07.PGM	--	Desert West Park	0	T2N, R2E, S31	Howard and Bostwick 1991b
1991-025.ASM	--	Waste Water Ditch	0	T2N, R1E, S28	Lincoln 1991
	--	Rural and Estate Architecture <sup>2</sup>	19 historic	City of Phoenix	Woodward and Osmon 1991a

**Table 2. Previous Archaeological and Historic Property Surveys.**

Agency Proj. #	AZSITE Proj. #	Project Name	Sites <sup>1</sup>	Location	Reference
			structures		
	--	Pre-1900 Construction <sup>3</sup>	1 historic structure	City of Phoenix	Woodward and Osmon 1991b
	--	Public and Institutional Architecture <sup>3</sup>	2 historic structures	City of Phoenix	Woodward and Osmon 1991c
4162-R.SHPO; N-900-965.ARS	AZRef 6271	Litchfield Road and Van Buren Street	1	T1N, R1W, S3, 4, 9, and 10	Stone 1992
2003-246.ASM	12915; 3344; 5360	Southwest Fibernet Project Fiber Optic ROW, Electric Lightwave	0	T2N, R2E, S26, 35, and 36	Foster et al. 1993
1993-169.ASM	AZRef 192	Villa de Paz	0	T2N, R1E, S20	Macnider 1993
	--	Grand Avenue Alignment- Historic Building Survey	28 historic structures	T2N, R2E, S26 and 36	Woodward 1993
1994-306.ASM	AZRef 857	91 <sup>st</sup> Avenue between Camelback and Glendale	0	(see original map- proj area does not show up on copy)	Davies and Foster 1994
1994-438.ASM; 3385-I.SHPO	1424; AZRef 5378	91 <sup>st</sup> Avenue Survey	0	T1N, R1E, S3, 4, 9, and 10	Owens 1994
1994-348.ASM	AZRef 993	Northern Avenue and 99 <sup>th</sup> Avenue	0	T2N, R1E, S4 and 5; T3N, R1E, S32 and 33	Wenker 1994
	--	Yanya Park	1	T1N, R2E, S11	Schroeder 1995
1995-307.ASM 3406-I.SHPO	1753; 2241	McDowell Road Survey	0	T2N, R1W, S33; T1N, R1W, S6	Stubbing and Mitchell 1995
1995-037.ASM	1822	Avondale Wetlands	0	T2N, R1E, S31 and 32; T2N, R1W, S36; T1N, R1W, S1	Telles 1995a
1995-110.ASM	1539	Land Sale to ARCO	0	T1N, R2E, S8	Telles 1995b
1996-119.ASM	1961	Suncor	0	T2N, R1W, S34	Hackbarth 1996
1996-012.ASM	1962	Tolleson Post Office Survey	0	T1N, R1E, S10	Slawson 1996
1996-97.ASM; 3405-I.SHPO	2090; 2239	Thomas Road Survey	0	T2N, R1E, S32 to 35	Stubing 1996
1997-247.ASM	--	Northern Avenue: Grand to 101 Freeway	0	T2N, R1E, S2-4; T3N, R1E, S33-35	Adams 1997
1997-175.ASM	AZRef 3382	Stardust Development	0	T2N, R1E, S17	Marshall 1997a
1997-390.ASM	7858	Agua Fria Drainage Basin	0	T1N, R1E, S4	Palus 1997

**Table 2. Previous Archaeological and Historic Property Surveys.**

<b>Agency Proj. #</b>	<b>AZSITE Proj. #</b>	<b>Project Name</b>	<b>Sites<sup>1</sup></b>	<b>Location</b>	<b>Reference</b>
1997-380.ASM	--	Agua Fria Freeway Alignment	0	T2N, R1E, S4, 9, 16, and 28	Stone 1997
1998-408.ASM	8000	Estrella Parkway and MC 85	0	T2N, R1W, S31; T1N, R1W, S5, 6, and 8	Garcia and Lewenstein 1998
1998-463.ASM	7999	Van Buren and Reams Road Survey	0	T1N, R1W, S5	Hutira 1998
1998-247.ASM	9888	ADOT-Phoenix	0	T1N, R2E, S2 and 3	Larkin and Giacobbe 1998
1998-281.ASM	AZRef 9073	1.19 Corridor for a Drainage Channel	2	T2N, R1E, S7 and 8	Stone 1998a
H 4578.ADOT	--	Supplemental Bethany Home Outfall Channel	0	T2N, R1E, S7 and 18	Stone 1998b
1998-361.ASM	7771	99 <sup>th</sup> Ave: Glendale to McDowell	0	T2N, R1E, S32 and 33; T1N, R1E, S4 and 5	Aguila 1999a
1998-368.ASM	8002	115 <sup>th</sup> Ave: MC 85-McDowell Road	1	T1N, R1E, S6 and 7; T2N, R1E, S31; T2N, R1W, S36; T1N, R1W, S1 and 12	Aguila 1999b
1999-336.ASM	9352	Avondale: 2 Pendergast School Sites	0	T2N, R1W, S36; T2N, R1E, S17	DeMaagd 1999
1999-412.ASM	9363	Richmond American- Estrella	0	T1N, R1W, S5	Hart 1999
1999-133.ASM	8001	Disposal Site Survey	2	T1N, R1W, S1 and 2	Montero 1999
1999.270.ASM	--	91 <sup>st</sup> Avenue and Indian School	0	T2N, R1E, S21	Shaw 1999
2001-319.ASM	13256	Dysart Road-19 <sup>th</sup> Avenue	0	T2N, R2E, S31-36; T1N, R2E, S1-6; T2N, R1E, S31-36; T1N, R1E, S1, 3-6	Brodbeck 2001
2003-712.ASM	--	I-10 West and 91 <sup>st</sup> Avenue	0	T1N, R1E, S4	Davis and Hohmann 2001
2001-699.ASM	11353	103 <sup>rd</sup> Ave. & McDowell Survey	0	T2N, R1E, S32	Foster 2001
2001-548.ASM	11237	I10 Avondale and Buckeye	0	T1N, R1W, S4 and 5	Gentilli and Folb 2001
2000-723.ASM	11302	AT&T NexGen/Core Project Link 3	1	T1N, R1E, S3, 4, 10, and 11; T2N, R1E, S32 and 33	Kearns et al. 2001
2001-220.ASM	10961	39 <sup>th</sup> Avenue and McDowell	0	T1N, R2E, S3	Kober 2001a
2001-274.ASM	12613	Litchfield Park Survey	0	T2N, R1W, S33	Knoblock 2001
2001-607.ASM	11189	119th Avenue & McDowell Survey	0	T1N, R1W, S1	Lundin 2001a
2001-698.ASM	11355	75 <sup>th</sup> Avenue & Van Buren Survey	0	T1N, R1E, S12	Lundin 2001b
2001-029.ASM	--	99 <sup>th</sup> Avenue and Campbell	0	T2N, R1E, S20	Marshall 2001b
2001-087.ASM	--	United 6 Towers: ADOT 158A	0	T1N, R1W, S2	Mitchell and Lundin 2001
2000-625.ASM	10846	Buckeye Basin No. 3 Inventory	0	T1N, R1E, S12	Rodgers 2001a

**Table 2. Previous Archaeological and Historic Property Surveys.**

Agency Proj. #	AZSITE Proj. #	Project Name	Sites <sup>1</sup>	Location	Reference
		(Fowler Detention Basin)			
2001-409.ASM	AZRef 9327	Bethany Home Outfall Channel	1	T2N, R1E, S9, 10, 15	Rodgers 2001b
2001-829.ASM	13545	McDowell Road 75 <sup>th</sup> -83 <sup>rd</sup>	0	T2N, R1E, S35; T1N, R1E, S2	Stubing 2001
2003-603.ASM	--	Survey of 75 Acres at 107 <sup>th</sup> Ave. and Thomas Rd.	0	T2N, R1E, S32	Cogswell 2002
2003-814.ASM	--	4280 W. Thomas Rd.	0	T2N, R2E, S34	Davis and Hohmann 2002a
2003-815.ASM	--	5833 W. Thomas Rd.	0	T2N, R2E, S32	Davis and Hohmann 2002b
02-042.USBR	--	Easement Exchange and Facility Relocation	1	T1N, R1E, S2	Fangmeier 2002
2002-071.ASM	--	Paradise Parkway Disposal Parcel	0	T2N, R1E, S10	Touchin 2002
2002-315.ASM	13016	Goodyear Fiber Optic	0	T2N, R1W, S28; T1N, R1W, S3	White 2002a
2003-1130.ASM		26.24 Acres near I-102 <sup>2</sup>	--	Bullard and McDowell Rd.	Lausten 2003a
2003-1325.ASM	AZRef 9263	91 <sup>st</sup> Avenue and Northern Avenue	0	T2N, R1E, S4	Ryden and Foster 2003
2003-1116.ASM	--	SR 101 and I-10 Telecommunications Tower	0	T1N, R1E, S4	Schmidt and Mitchell 2003
2004-424.ASM	AZRef 9762	I-10 Phoenix District Inventory	3	T2N, R1W, S31; T1N, R1W, S5 and 6	Touchin and Brodbeck 2003
02-036.USBR	--	USA Easement Relocation	1	T1N, R1E, S12	Jones and Fangmeier 2004
2004-646.ASM	--	Archaeological Evaluation of 25 Acres	0	T1N, R1E, S2	North 2004
2004-448.ASM	AZRef 10595	Loop 101 Maryland Avenue Overpass	0	T2N, R1E, S9	Strohmayer 2004
00F022.WCRM	--	Survey of 4 AT&T Reroutes	0	T1N, R1E, S11, 2, and 3; T2N, R1E, S34	Wheeler et al. 2004
2004-39.PGM	--	Survey of 40 Acres at 79 <sup>th</sup> Avenue and Van Buren Street	0	T1N, R1E, S2	Kennedy 2005
1980-220.ASM	9961	I-10 91 <sup>st</sup> Avenue- Agua Fria River	0	T1N, R1W, S2	ASM PRF and map / AZSite
76-057.ASU	--	No information available <sup>2</sup>	--	T3N, R1E, S31-32	AZSite map
84-004.ASU	--	No information available <sup>2</sup>	--	T3N, R1E, S32-33; T2N, R1E, S4-5, 8-9, 16-17, and 20-21	AZSite map
<sup>1</sup> Number of sites recorded in Class I Study Area <sup>2</sup> Report is unavailable; results are unknown. <sup>3</sup> Project area is broadly defined.					



**Table 3. Previous Testing and Excavation Projects.**

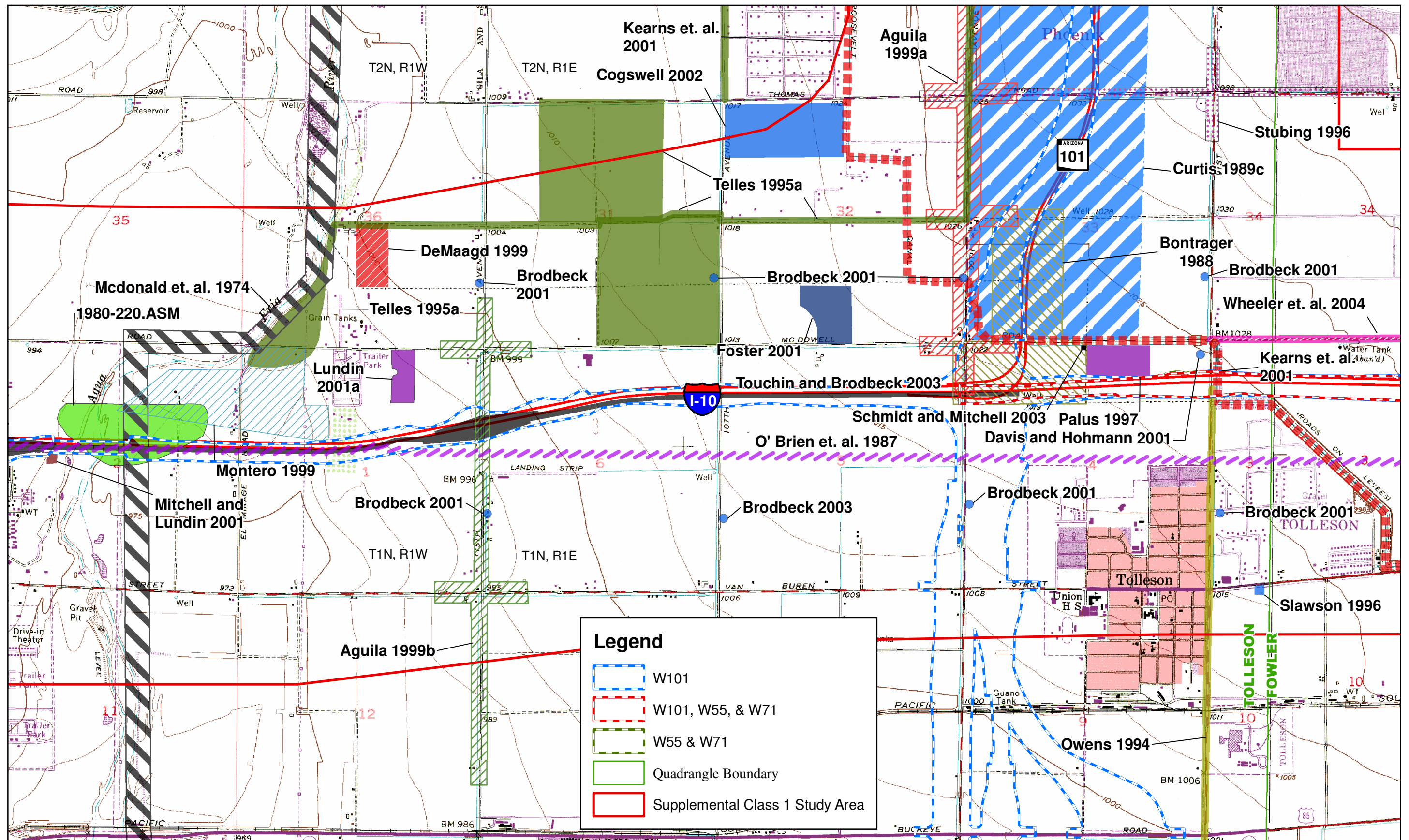
<b>Agency Proj. #</b>	<b>AZSite Proj. #</b>	<b>Project Name</b>	<b>Results</b>	<b>Location</b>	<b>Reference</b>
271.SHPO	--	Test Investigations at Group I, West Papago-Inner Loop of I-10	2 canals; prehistoric & historic artifacts	T1N, R1E, S2	Yablon 1980
--	--	Testing of I-10 Corridor between I-17 and 30 <sup>th</sup> Drive	--	Las Colinas	Schreiber et al. 1981
7.72.SHPO	5394	Excavations at Las Colinas	--	T2N, R2E, S36; T1N, R2E, S1,2, 11, and 12	Abbott et al. 1988; Graybill et al. 1989; Gregory et al. 1988a, 1988b, 1989; Hammack and Sullivan 1981; Heathington, et al. 1985; Teague and Deaver 1989
88-7-13.PMDR	AZRef 5550	Testing of Disposal Parcel	--	T2N, R2E, S36	Weaver 1989
96-90.SWCA	--	Testing for the 35 <sup>th</sup> Avenue Loop Project	--	T1N, R2E, S2	Ryden et al. 1996
98:29.ARS	--	Archaeological Testing for Loop 101	--	McDowell and 99 <sup>th</sup> Avenue	Shepard 1998
41.LBG	--	Archaeological Testing for Chicanos por la Causa	20 sherds; 1 flake	T1N, R2E, S3	Hohmann 2000
2001-10.DA	--	Monitoring and Testing for Grand Avenue Overpass	Few artifacts	T2N, R2E, S36	Clark and Henderson 2001
2002-08.PGM	--	Burial Recovery	--	Las Colinas	Boston and Ryan 2002
--	--	Testing at Site AZ T:12:184 (ASM)	1 roasting pit	T1N, R1E, S2	McDermott 2003
--	--	Testing within Las Colinas	1 sherd	T1N, R2E, S2	Cogswell 2004
--	--	Testing on Parcel 108-16-100	0	T2N, R2E, S35	Czarzasty 2004
04-356.SWCA	--	Testing at Los Aumentos	--	T1N, R1E, S2	Lindly 2004

**Table 4. Previous Monitoring Projects.**

<b>Agency Proj. #</b>	<b>AZSite Proj. #</b>	<b>Project Name</b>	<b>Results</b>	<b>Location</b>	<b>Reference</b>
--	--	Desert Sky Pavilion	--	T2N, R1E, S35	Hutira 1990
1993-28.PGM	--	Long West Property Building	--	T1N, R2E, S2	Bostwick 1993
5550-R.SHPO	AZRef 7200	Neighborhood Services Department 27 <sup>th</sup> Avenue	1 feature; 20 artifacts	T1N, R2E, S2	Marshall 1996; Pueblo Grande
1997-308.ASM	--	Neighborhood Services Department 29 <sup>th</sup> Avenue	3 sherds	T1N, R2E, S2	Marshall 1997b; Pueblo Grande
2000-684.ASM	13088	3436 W. Lynwood	canal	T1N, R2E, S2	Hackbarth 2000
1961-001.ASM; 5825-R.SHPO; 2000-41.PGM	7407	Neighborhood Services Department Polk Street	5 artifacts	T1N, R2E, S2	Marshall 2000
2000-36.PGM		2705 W. Fillmore Street	25 sherds	T1N, R2E, S2	Ryden and Mitchell 2000
2001-383.ASM	AZRef 9847	5620 W. Granada	--	T1N, R2E, S32	Hart 2001a
2001-96.NRI	--	Neighborhood Services Department North 64 <sup>th</sup> Lane	--	T2N, R2E, S31	Hart 2001b
2001-36.PGM	--	Neighborhood Services Department West Polk Street	--	T1N, R2E, S2	Hart 2001c
2001-33.PGM	--	Melvin Street	--	T1N, R2E, S2	Kober 2001b
2001-208.ASM	AZRef 8711	Monitoring- 3632 W. McKinley	--	T1N, R2E, S3	Marshall 2001a
2001-20.PGM	--	Neighborhood Services Department Melvin Street	--	T1N, R2E, S1	Marshall 2001c
2001-25.PGM	--	Neighborhood Services Department 40 <sup>th</sup> Avenue	--	T1N, R2E, S3	Shaw 2001
2002-39.PGM	--	2928 N. 69 <sup>th</sup> Avenue	--	T2N, R1E, S25	Keller 2002
02-376.SWCA	--	2903 W. Portland Street	--	T1N, R2E, S2	Keller and Mitchell 2002
02-409.SWCA	--	Fence at Willow Park	12 artifacts	Las Colinas area	Schmidt and Mitchell 2002
2002-44.PGM	--	Fence on McKinley Street	--	T1N, R2E, S2	Stubing 2002
2002-19(AZ).USBR	--	1910 W. Monte Vista Road	--	T2N, R2E, S36	White 2002b
2002-1(AZ).USBR	--	2922 W. Villa Street	--	T1N, R2E, S2	White 2002c
2003-214.ASM	--	Encanto Sidewalk Monitoring	--	T2N, R2E, S35	Lausten 2003b
2003-003.ASM; 2002-51.PGM	--	Monitoring at Grand Avenue, McDowell Road, and 19 <sup>th</sup> Avenue	--	T1N, R2E, S1	Lausten 2003c
2003-560.ASM; 2001-42.PGM	--	Monitoring	--	T1N, R1E, S11-12	Schmidt et al. 2003







Source: USGS 7.5' Quadrangle: Fowler, AZ, and Tolleson, AZ

0 0.25 0.5 Miles

N

Figure 3. Previous Projects (b)

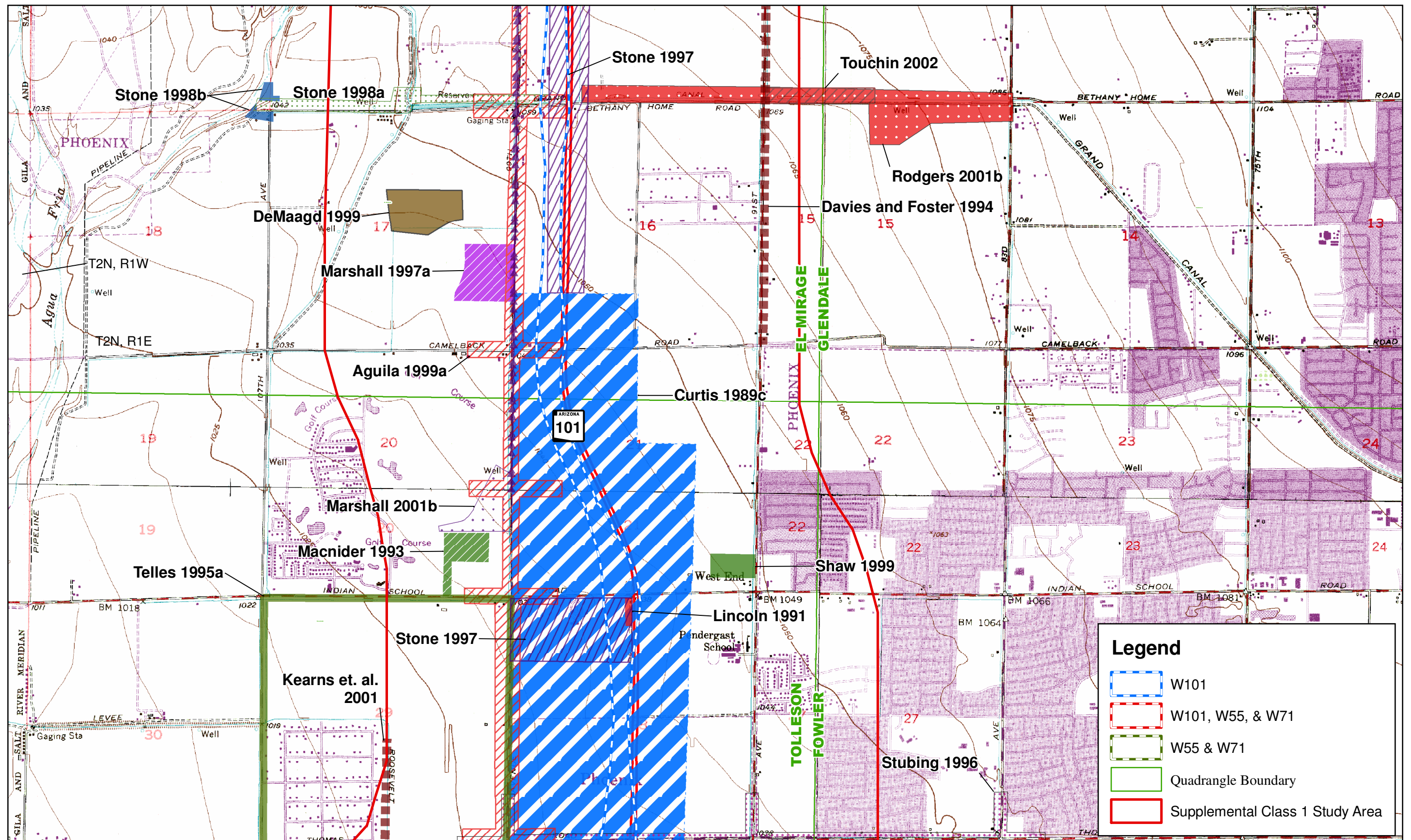








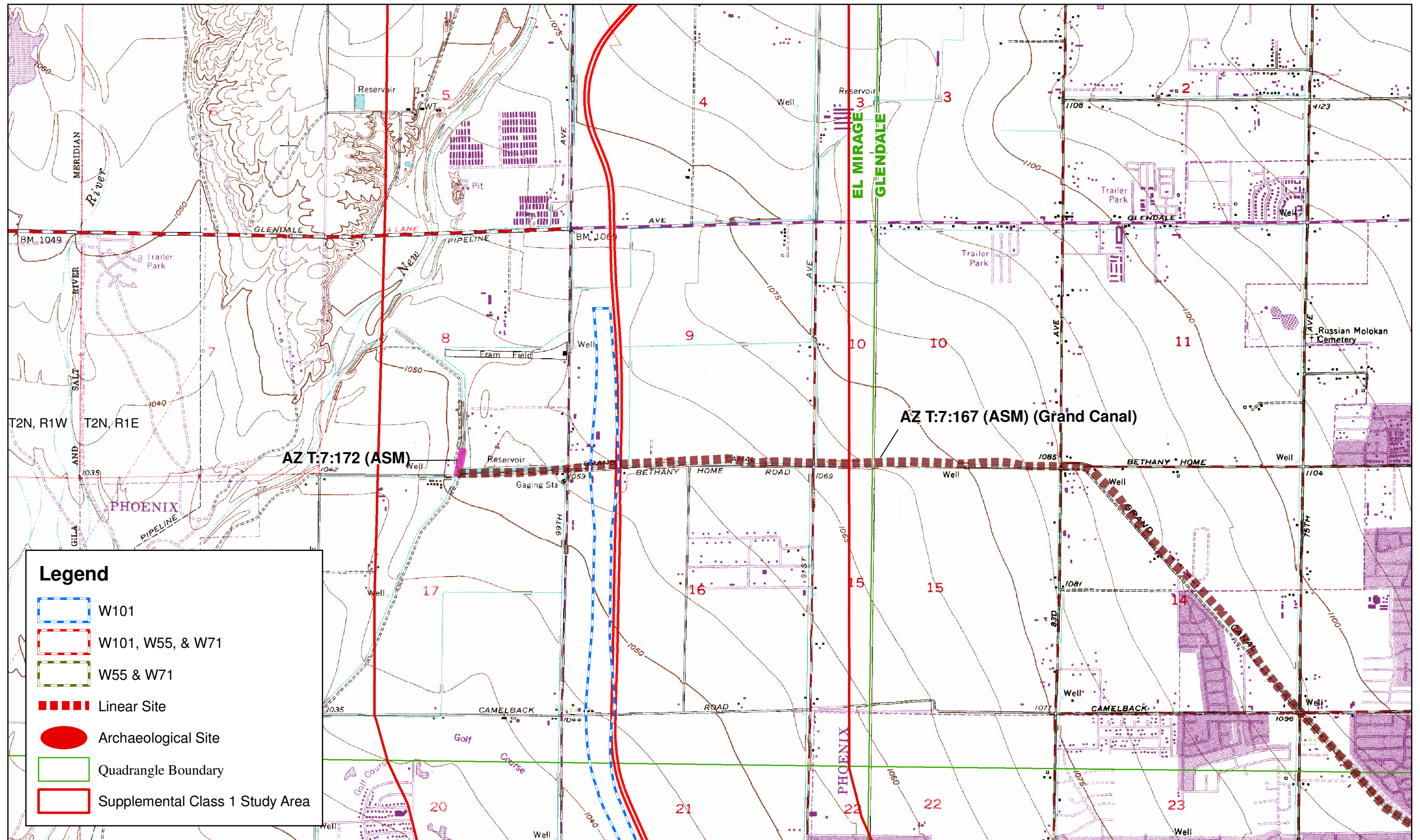




Source: USGS 7.5' Quadrangle: El Mirage, AZ, Fowler, AZ, Glendale, AZ and Tolleson, AZ

Figure 6. Previous Projects (e)







**Table 5. Previous Recorded Archaeological Sites.**

<b>AZ Site Num</b>	<b>Site Number</b>	<b>Site Name</b>	<b>Description</b>	<b>NRHP Recommendation</b>	<b>Reference</b>
--	ASU	--	Area marked "Ruins" on topographic map	Unknown	Pueblo Grande base map
--	Booster T2N, R2E, S35	--	Unknown	Unknown	SHPO base map; Pueblo Grande base map
--	Booster T1N, R2E, S2	--	Unknown	Unknown	Ryden et al. 1996; Hackbarth 2000; SHPO base map; Pueblo Grande base map
--	Midvale-5	El Canal	Prehistoric mound cluster; Hohokam site located near a major canal system and close to other major prehistoric settlement areas	Not Evaluated	Bostwick and Rice 1987; SHPO inventory 1252; SHPO base map; AZSite; Pueblo Grande base map; AZSite Proj. No. 6556
--	Midvale-6; AZ T:12:28b (ASU)	--	Prehistoric mounds and canal; Prehistoric scatter	Not Evaluated	Bostwick and Rice 1987; SHPO inventory 1256; SHPO base map; AZSite Proj No. 6557; Pueblo Grande base map
--	Midvale Mound 12	--	Prehistoric site	Not Evaluated	SHPO base map; Pueblo Grande base map; Czarzasty 2004
--	PHX:1:1 (GP); 1:1 (GP)	--	Prehistoric and Historic artifact scatter; Prehistoric mound(s)	Not Evaluated	Gladwin and Gladwin 1929; Bostwick and Rice 1987; SHPO inventory 1253; SHPO base map; Pueblo Grande base map; AZSite Proj. No. 6562
--	SRP-02-396-1; ACS-1	--	Prehistoric artifact scatter; possibly associated with Los Aumentos	Unknown	Fangmeier 2002
--	Turney-1	--	Prehistoric mounds and canal	Not Evaluated	Bostwick and Rice 1987; SHPO base map; AZSite; Pueblo Grande base map
--	Turney-3	--	Prehistoric mounds and canal	Not Evaluated	Bostwick and Rice 1987; SHPO inventory 1257; SHPO base map; AZSite Proj No. 6581; Pueblo Grande base map
2379	AZ T:7:26 (ASU)	--	1930s farm house; no longer standing	Not Eligible	SHPO inventory 799; Curtis 1989c
64573	AZ T:7:172 (ASM)	--	Privately-owned unlined dirt irrigation canal	Not Eligible	Stone 1998a

**Table 5. Previous Recorded Archaeological Sites.**

<b>AZ Site Num</b>	<b>Site Number</b>	<b>Site Name</b>	<b>Description</b>	<b>NRHP Recommendation</b>	<b>Reference</b>
	AZ T:11:26 (ASM)	--	Hohokam artifact scatter and historic artifact scatter; Recorded by MNA in the mid-1960s; Destroyed by construction of I-10	Unknown	SHPO base map; AZSite; Pueblo Grande base map; ASM site card; Curtis 1989c
15331	AZ T:11:44 (ASM)	--	An irrigation well and complex of connected concrete elements: abandoned well pump motor mount concrete pad and associated concrete basin-like structures; Potentially eligible	Eligible	Stone 1992
65910	AZ T:11:101 (ASM)	--	Late historic concrete cobble house foundation, pump house remains, artifact scatter; Disturbed by plowing / trash disposal	Not Eligible	Aguila 1999b
65908	AZ T:11:109 (ASM)	--	Late historic features including a well with concrete pad, concrete wall sections, canal remnants	Not Eligible	Montero 1999
65909	AZ T:11:110 (ASM)	--	Late historic features including 2 wells and pump bases; Site eroded and disturbed by bulldozing	Not Eligible	Montero 1999
	AZ T:12:1 (REC); ACS-1	Fowler Ruin	Hohokam habitation / mounds with canals; Prehistoric artifact scatter	Not Evaluated	Midvale n.d. and 1968; Bostwick and Rice 1987; Lundin 2001b; Rodgers 2001a; Jones and Fangmeier 2004; SHPO inventory 1192; SHPO base map; Pueblo Grande base map; AZSite Proj. No. 5302
2095; 2114; 71666;	AZ T:12:3 (ASM); AZ T:12:20 (PG); AZ T:12:8 (ASU); AZ T:12:30 (ASU);	Las Moradas	Prehistoric artifact scatter is probably part of Las Colinas; Historic trash	Eligible	Howard and Huckleberry 1991; Bostwick 1993; Schroeder 1995; Marshall 1997c

**Table 5. Previous Recorded Archaeological Sites.**

<b>AZ Site Num</b>	<b>Site Number</b>	<b>Site Name</b>	<b>Description</b>	<b>NRHP Recommendation</b>	<b>Reference</b>
88002	AZ T:12:4 (MNA); NA 15788;	--	Prehistoric artifact scatter located in the I-10 R/W; MNA Excavated / Tested portion within I-10 R/W in 4/1979; 16 trenches excavated; No intact subsurface deposits or features were identified	Unknown	ADOT 1978; Yablon 1980; Pueblo Grande base map
88003	AZ T:12:5 (MNA); NA 15789	--	Prehistoric artifact scatter; Excavated / Tested by MNA in 5/1979; no intact subsurface cultural deposits or features were identified	Unknown	ADOT 1978; Yablon 1980; Pueblo Grande base map
2103; 2104; 71669	AZ T:12:10 (ASM); AZ P:2:4 (GP); AZ P:2:5 (GP); AZ T:12:4 (ASU); AZ T:12:5 (ASU)	Las Colinas; Casas de las Colinas; Spear Site; Kalfus Ruins	Multi-component Hohokam site with multiple platform mounds, adobe surface rooms, pit houses, trash mounds, numerous burials, etc.; Determined eligible on 06/10/77; Impacted by development, looting, and agriculture	Eligible	ADOT 1978; Gregory and McGuire 1980; Hammack 1981; Schreiber et al. 1981; Gregory and Gardiner 1983; Heathington 1985; Gregory 1988a, 1988b, and 1989; Abbott et al. 1988; Weaver 1989; Teague and Deaver 1989; Graybill et al. 1989; Howard and Huckleberry 1991; Bostwick 1993; Marshall 1996, 1997b, 1997c, 2000; Ryden and Mitchell 2000; Clark and Henderson 2001; Hart 2001c; White 2002b and 2002c; Boston and Ryan 2002; Keller and Mitchell 2002; Schmidt and Mitchell 2002; Stubing 2002; Lausten 2003c; Cogswell 2004; AZSite Proj No. 5394
	AZ T:12:13 (PG)	--		Unknown	SHPO inventory 1210
2093	AZ T:12:29 (ASU); AZ T:12:29a (ASU); AZ T:12:29b (ASU)	--	Prehistoric site; destroyed by plowing; Auger pits placed on site—artifacts curated at ASU.	Not Eligible	SHPO inventory 1254; two possible locations plotted in T2N, R1E, S35; AZSite Proj No. 5922
2097	AZ T:12:33(ASU)	--	Prehistoric artifact scatter	Not Eligible	From AZSite- OCRM Project #78-200; SHPO inventory 1258; SHPO base map; Pueblo Grande base map; AZSite Proj No. 5312

**Table 5. Previous Recorded Archaeological Sites.**

<b>AZ Site Num</b>	<b>Site Number</b>	<b>Site Name</b>	<b>Description</b>	<b>NRHP Recommendation</b>	<b>Reference</b>
74526; 90015	AZ T:12:38 (ASM); AZ T:12:6 (MNA); NA 15790	--	Historic canal; Hohokam village/habitation/artifact scatter; Disturbed by housing development; Tested 6/1979; Excavated; Determined Eligible 10/28/81	Eligible	ADOT 1978; Yablon 1980; Cable 1985; Bostwick and Rice 1987; Gregory et al. 1988a; Pueblo Grande base map; SHPO inventory 1204 and 238; SHPO base map
90014	AZ T:12:178 (ASM); AZ T:12:184 (ASM); NA 15787; AZ T:12:3 (MNA)	Los Aumentos	Hohokam village with 2 small canals on the eastern half; Site originally mapped by Midvale and Turney; Much of site disturbed by agriculture; (Partially) Tested/Excavated 3/1979	Eligible	Patrick 1903; Turney 1929; Haury 1945; Midvale 1968 and n.d.; Yablon 1980; Bostwick and Rice 1987; O'Brien et al. 1997; Brodbeck 2001; Kearns et al. 2001; Fangmeier 2002; Stubing 1996 and 2001; McDermott 2003; Lindly 2004; North 2004; SHPO inventory 1189; SHPO base map; AZSite Proj No. 5300

**Table 6. Previously Recorded Historic Linear Sites.**

<b>AZ Site Num</b>	<b>Site Number</b>	<b>Site Name</b>	<b>Description</b>	<b>NRHP Recommendation</b>	<b>Reference</b>
7993; 13829	AZ I:3:10 (ASM); AZ V:2:101 (ASM)	Grand Avenue	US 89 / US 79 / US 60	Eligible with contributing and non-contributing segments	Curtis 1989a
9159	AZ N:3:32 (ASM); AZ N:7:161 (ASM)	AT & SF Railway	Atchison, Topeka & Santa Fe Railway also known as Santa Fe, Prescott & Phoenix Railway Line	Eligible with contributing and non-contributing segments	Fangmeier 2001; AZSite
58336	AZ T:7:167 (ASM)	Grand Canal	Concrete-lined irrigation canal	Eligible with contributing and non-contributing segments	Andersen and Nolan 1990; Stone 1997 and 1998a; Aguila 1999a
15312; 64574	AZ T:10:83 (ASM); AZ T:7:171 (ASM)	Roosevelt Canal; Roosevelt Irrigation District (RID)	In-use segment of historic Roosevelt Canal System; Built in 1928. See RID 5, 6, and 7 in T1N, R1W, S5 (Touchin and Brodbeck 2003)	Eligible overall with contributing and non-contributing segments	Stone 1998a; Touchin and Brodbeck 2003; Strohmayer 2004
	AZ T:11:159 (ASM)	Litchfield Park Spur	1920's American railroad spur	Eligible	Myrick 1975; Touchin and Brodbeck 2003

**Table 7. Previously Recorded Historic Sites.**

<b>Map Ref. Number</b>	<b>Property Reference No.</b>	<b>Site Name</b>	<b>Address</b>	<b>Historic District Neighborhood</b>	<b>Eligibility Recommendation</b>	<b>Reference</b>	<b>Construction Date</b>
1	MPA EXP-9435	Sherid, A.E., Boarding House	2010 West Palm Lane	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 48723	Unknown
2	MPA EXP-10131; Inventory #11	Hawley, J.C., House	1913 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49419; Woodward 1993	1928
3	MPA EXP-10133; Inventory #13	Erickson, W. H., House	1917 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49421; Woodward 1993	1928
4	MPA EXP-10134; Inventory #14	Rental House	1919 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49422; Woodward 1993	1930
5	MPA EXP-10135; Inventory #15	Williams, Hazel G., House	1921 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49423; Woodward 1993	1928
6	MPA EXP-10137; Inventory #17	Hochstetler, William, House	1927 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49425; Woodward 1993	1928
7	MPA EXP-10138; Inventory #18	Van Wey, Mrs. M. A., House	1924 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49426; Woodward 1993	1930
8	MPA EXP-10139; Inventory #19	House	1926 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49427; Woodward 1993	1942-1946
9	MPA EXP-10140; Inventory #20	Dixon, E.E. / Evans, Leslie, House	1954 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49428; Woodward 1993	1928
10	MPA EXP-10141; Inventory #21	Sullivan, H.J., House	1927 W. Palm Lane	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49429; Woodward 1993	1930
11	MPA EXP-10142; Inventory #22	Campbell, B.E., House	1925 W. Palm Lane	Villa Verde	Not Eligible <sup>1</sup>	AZSite No. 49430; Woodward 1993	1931
12	Inventory #06	E. H. Wilson House	1901 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1929

**Table 7. Previously Recorded Historic Sites.**

<b>Map Ref. Number</b>	<b>Property Reference No.</b>	<b>Site Name</b>	<b>Address</b>	<b>Historic District Neighborhood</b>	<b>Eligibility Recommendation</b>	<b>Reference</b>	<b>Construction Date</b>
13	Inventory #07	Mrs. E.E. Coates House	1905 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1928
14	Inventory #08	N. M. Wandell House	1907 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1928
15	Inventory #09	J. A. Park / J. T. Coffman House	1909 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1928
16	Inventory #10	Herbert J. Spurlock House	1911 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1928
17	Inventory #12	Claude C. Hill House	1915 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1928
18	Inventory #16	D. H. Dever House	1923 W. Granada Road	Villa Verde	Not Eligible <sup>1</sup>	Woodward 1993	1929
19	Inventory #23	AZ Fertilizer Company Building	West Monte Vista		Not Eligible	Woodward 1993	1948
20	Inventory #24	General Supply Company Building	2106 W. Monte Vista		Not Eligible	Woodward 1993	1949
21	Inventory #25	Harry L. Beck House	2112 W. Monte Vista		Not Eligible	Woodward 1993	1949
22	Inventory #26	Sullivan Manufacturing Co.	2114 W. Monte Vista		Not Eligible	Woodward 1993	1947
23	Inventory #27	I. E. Stanfield House	2200 Grand Avenue		Not Eligible	Woodward 1993	1950
24	Inventory #28; MPA EXP-10148	Dixie Service Station	2202 Grand Avenue		Not Eligible	AZSite No. 49436; Woodward 1993	1950
25	None	Johnson House	9702 W. Glendale Avenue		Eligible	Stone 1997	1937
26	None	Sutter Farmhouse	9825 W. Glendale Avenue		Not Eligible	Stone 1997	1938
27	None	Farmhouse	4101 N. 99 <sup>th</sup> Avenue		Not Eligible	Stone 1997	1942
28	None	“Historic residence”	South of Glendale and 500 ft east of 99 <sup>th</sup> Avenue		Not Eligible	Stone 1986	unknown
29	MPA EXP-9870	Pendergast School	3802 N. 91 <sup>st</sup> Avenue		Eligible	AZSite No. 49158	1909-1912

**Table 7. Previously Recorded Historic Sites.**

<b>Map Ref. Number</b>	<b>Property Reference No.</b>	<b>Site Name</b>	<b>Address</b>	<b>Historic District Neighborhood</b>	<b>Eligibility Recommendation</b>	<b>Reference</b>	<b>Construction Date</b>
30	MPA EXP-9871	Cartwright School	5833 W. Thomas Road		Eligible	AZSite No. 49159	1924
31	Inventory #303; MPA EXP-9872	Isaac Jr. High Building #1	3402 W. McDowell Road		Not Eligible	AZSite No. 49160; Woodward and Osmon 1991c	1931
32	MPA EXP-9873	Isaac Jr. High Gym	3402 W. McDowell Road		Not Eligible	AZSite No. 49161	1938
33	MPA EXP-9874	Grand Avenue School	2535 N. 24 <sup>th</sup> Avenue		Eligible	AZSite No. 49162	
34	MPA EXP-11249; Inventory #701	Farm House	7910 W. McDowell Road		Not Eligible	AZSite No. 50537; Woodward and Osmon 1991a	1915
35	MPA EXP-11250; Inventory #702	Farm House	6901 W. Thomas Road		Eligible	AZSite No. 50538; Woodward and Osmon 1991a	1915
36	Inventory #703	Farm House	2500 N. 83 <sup>rd</sup> Avenue		Eligible	Woodward and Osmon 1991a	1910
37	MPA EXP-11252; Inventory #704	Farm House	2800 N. 83 <sup>rd</sup> Avenue		Not Eligible	AZSite No. 50540; Woodward and Osmon 1991a	1910-1920
38	MPA EXP-11253; Inventory #705	Farm House	7201 W. McDowell Road		Eligible	AZSite No. 50541; Woodward and Osmon 1991a	1920
39	MPA EXP-11257; Inventory #713	Farm House	3948 W. McDowell Road		Eligible	AZSite No. 50545; Woodward and Osmon 1991a	1890-1900
40	MPA EXP-11258; Inventory #714	Hussey Ranch House	4700 W. Thomas Road		Not Eligible	AZSite No. 50546; Woodward and Osmon 1991a	1935-1940
41	MPA EXP-11259; Inventory #715	Ranch House	5301 W. McDowell Road		Eligible	AZSite No. 50547; Woodward and Osmon 1991a	1930-1940
42	MPA EXP-11260; Inventory #716	Farm House	5501 W. McDowell Road		Eligible	AZSite No. 50548; Woodward and Osmon 1991a	1915



**Table 7. Previously Recorded Historic Sites.**

<b>Map Ref. Number</b>	<b>Property Reference No.</b>	<b>Site Name</b>	<b>Address</b>	<b>Historic District Neighborhood</b>	<b>Eligibility Recommendation</b>	<b>Reference</b>	<b>Construction Date</b>
43	MPA EXP-11261; Inventory #717	Cartwright House	5801 W. McDowell Road		Eligible	AZSite No. 50549; Woodward and Osmon 1991a	1935-1940
44	MPA EXP-11262; Inventory #718	Ranch House	7510 W. McDowell Road		Eligible	AZSite No. 50550; Woodward and Osmon 1991a	1910
45	MPA EXP-11263; Inventory #719	Barn	7915 W. McDowell Road		Eligible	AZSite No. 50551; Woodward and Osmon 1991a	1920
46	MPA EXP-11264; Inventory #720	Farm House	8125 W. Thomas Road		Not Eligible	AZSite No. 50552; Woodward and Osmon 1991a	1920-1930
47	MPA EXP-11265; Inventory #721	Ranch House	334 N. 75 <sup>th</sup> Avenue		Eligible	AZSite No. 50553; Woodward and Osmon 1991a; Fangmeier 2002	1915
48	Inventory #722	Ranch House	335 N. 75 <sup>th</sup> Avenue		Eligible	Woodward and Osmon 1991a	1900-1910
49	MPA EXP-11267; Inventory #723	Farm House	7301 W. Van Buren Street		Eligible	AZSite No. 50555; Woodward and Osmon 501991a; Fangmeier 2002	1925-1935
50	Inventory #724	Farm House	6701 W. Van Buren		Eligible	Woodward and Osmon 1991a	1915-1925
51	MPA EXP-11269; Inventory #725	House	6639 W. Van Buren Street		Eligible	AZSite No. 50557; Woodward and Osmon 1991a	1890-1910
52	MPA EXP-11270; Inventory #726	Farm House	6529 W. Van Buren Street		Eligible	AZSite No. 50558; Woodward and Osmon 1991a	1900-1910
53	MPA EXP-14574; #CAP-120.0	Stillwell, Judge W. H., House	2039 W. Monroe Street		Eligible	AZSite No. 53862; Woodward and Osmon 1991b	1893
54	Inventory #201; MPA EXP-16781	St. Matthew's Catholic Church	2038 W. Van Buren Street		Eligible	AZSite No. 56069; Woodward and Osmon 1991c	1940

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55	CAP-1	Standard Oil Company Warehouse	1901 W. Fillmore	Capital Redevelopment	Eligible	Janus Assoc. 1987b	1917
56	CAP-2	Valley Lumber Company	1924 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
57	CAP-3	McCoy, C. A. Auto Camp	1926-1930 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1923
58	CAP-4	Powell, Mrs. Janet House	346 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1921
59	CAP-5	Young, H.F. House	332 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1921
60	CAP-6	House	328 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1925
61	CAP-7	House	326 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928-1934
62	CAP-8	House	320 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
63	CAP-9	House	310 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1917
64	CAP-10	Lung Tang, Henry Grocery	2002 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
65	CAP-11	Canion Building	2006-2010 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
67	CAP-12	House	311 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
68	CAP-13	House	313 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
69	CAP-14	Ozanne House	317 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1912
70	CAP-15	Theye, John House	323 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1923
71	CAP-16	Ring, Thomas A. House	327 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1920
72	CAP-17	House	339 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1920
73	CAP-18	House	343 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929

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74	CAP-18.1	House	1977 W. Fillmore	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1926-1934
75	CAP-19	Storm, J. C. House	442 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
76	CAP-20	House	438 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
77	CAP-21	House	434-436 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
78	CAP-22	House	430 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
79	CAP-23	Smith, Patrick House	426 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
80	CAP-24	Barnard, F. A. House	418 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
81	CAP-24.1	House	316 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1915-1934
82	CAP-24.2	House	422 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1915-1934
83	CAP-25	Kane, J. J. House	414 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
84	CAP-26	House	410 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
85	CAP-27	Green, Mrs. Bula House	406 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
86	CAP-28	House	409 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
87	CAP-29	House	415 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
88	CAP-30	Taylor, W. K. House	417 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
89	CAP-31	Spitler, Earl House	421 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
90	CAP-32	Douthitt, G. J. House	433 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
91	CAP-33	Wooton, H. M. House	437 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928

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<b>Map Ref. Number</b>	<b>Property Reference No.</b>	<b>Site Name</b>	<b>Address</b>	<b>Historic District Neighborhood</b>	<b>Eligibility Recommendation</b>	<b>Reference</b>	<b>Construction Date</b>
92	CAP-34	Custer, H. L. House	443 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
93	CAP-35	Amos, R. Q. House	445 N. 20 <sup>th</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928
94	CAP-36	Hamblin, Jacob House	389 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Eligible	Janus Assoc. 1987b	1930
95	CAP-37	House	363 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
96	CAP-38	House	359 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
97	CAP-40	St. Mathews Rectory	316-322 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1940
98	CAP-40.1	House	328 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928-1934
99	CAP-41	House	332-334 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
100	CAP-42	House	336 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
101	CAP-43	House	340 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
102	CAP-44	House	344 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
103	CAP-45	House	348 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
104	CAP-46	House	352 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1935
105	CAP-47	House	360 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
106	CAP-48	House	368 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1935
107	CAP-49	Mitchell, J. M. House	393 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
108	CAP-50	Mitchell, W. T. House	391 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Eligible	Janus Assoc. 1987b	1934
109	CAP-51	House	381 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929

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110	CAP-52	Phy, W. W. House	377 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
111	CAP-53	House	373 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
112	CAP-54	Rhodes, Arthur House	369 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
113	CAP-55	Benson, G. W. House	365 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1929
114	CAP-55.1	House	351 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928-1936
115	CAP-55.2	House	347 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1928-1936
116	CAP-57	Rosasco, Luigi House	339-341 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
117	CAP-58	House	337 N. 20 <sup>th</sup> Drive	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
118	CAP-59	Gideon, Pape / Shulenberger House	2202 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1908-1917
119	CAP-60	Zimmer / Kern House	2130 W. Van Buren Street	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1908-1914
120	CAP-61	Anstee, George / Morrison, Bryton	330 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1921
121	CAP-62	House	342-346-348 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
122	CAP-63	Young / Lewis House	368 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1917
123	CAP-64	Young / Nielson House	370 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	Prior to 1917
124	CAP-65	Jones, L. H. House	374-376 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1930
125	CAP-66	Workers' Cabin	378 N. 21 <sup>st</sup> Avenue	Capital Redevelopment	Unevaluated	Janus Assoc. 1987b	1926
126	Inventory #01	Smith-Booth-Usher Co. Building	1750 Grand Avenue		Not Eligible	Woodward 1993	1938
127	Inventory #02	J. T. Jenkins Co. Building	1764 Grand Avenue		Not Eligible	Woodward 1993	1943-1945

consolidated in the California, Arizona & Santa Fe Railway Company in 1911, and the Atchison, Topeka & Santa Fe Company in 1963 (Fangmeier 2001). Passenger service ended in 1969. The line became part of the Burlington Northern Santa Fe Railroad in the mid 1990s and is still in use. The railroad is eligible for the NRHP under Criterion A for its association with the early transportation history and economic development and settlement of central Arizona since the late nineteenth century (Fangmeier 2001). The railroad is more than 0.5 mi from the nearest alternative alignment and therefore will not be affected by the project.

AZ T:11:159 (ASM) is the Litchfield Park Railroad Spur which crosses I-10 just west of Litchfield Road (Figure 9). The spur is an abandoned, 5-mi-long standard gauge line that linked the agricultural and industrial business of Litchfield Park with the Weldon-Phoenix-Eloy mainline. The spur was constructed in 1920 as part of a planned master community under the direction of Paul W. Litchfield, president of the Goodyear Corporation, and Kenneth B. McMicken, a prominent developer (Myrick 1975). The spur played an important role in the development of the Goodyear Tire Company and other industrial developments in the Litchfield Park area, including the Goodyear Aircraft Corporation (now Goodyear Aerospace Corporation) which manufactured airplanes during World War II. The line was also used to support the war effort by providing a supply link to Luke Air Base just north of Litchfield Park. The Litchfield Park Railroad Spur is eligible for the NRHP under A and B for its associations with industrial and economic development of Litchfield Park and for use in the support of the war effort (Touchin and Brodbeck 2003a). The spur is about 0.25 mi from the nearest alternative alignment and therefore should not be affected by the project.

The Grand Canal—AZ T:7:167 (ASM)—is considered eligible to the NRHP under Criteria A and C, both individually and as part of the over all Salt River Project (SRP) system (Anderson and Noland 1990; Curtis 1989c; Stone 1998c; Touchin and Brodbeck 2003b) (Figures 13 and 14). The canal was constructed between 1878 and 1886 by the Grand Canal Company, which was the first such company devoted exclusively to the promotion of irrigation systems. It came under the jurisdiction of the Bureau of Reclamation (Reclamation) in 1907 (Stone 1997). The Grand Canal is one of the primary delivery canals in the SRP system and it has played an important role in the development of Arizona's early agricultural industry. Historically, it initiated at the Salt River just east of Sky Harbor Airport. Today, it extends for 22.43 mi from the Arizona Canal north of Papago Buttes to 83<sup>rd</sup> Avenue near the confluence of Agua Fria and New Rivers.

Recognizing the historical importance of the system, Reclamation, SRP, and the SHPO have entered into a Programmatic Agreement (PA) to ensure proper management of the resource and to outline proper procedures for mitigating any potential future impacts from maintenance activities and upgrades to the system. As part of the PA, SRP has completed an Historic American Engineering Record (HAER) for the Grand Canal which is recognized by the participating parties as adequate mitigation for future modification (Anderson and Noland 1990). The canal crosses the current study area on the 101L at the Bethany Home Road alignment (MP 6.0) and is in the limits of all the W101 alternative alignments.

The Roosevelt Canal—designated AZ T:10:83 (ASM)—is the main delivery canal for the Roosevelt Irrigation District (RID), which was incorporated in 1928 and today supplies

approximately 38,000 acres in the Buckeye area (Stone 1998a) (Figures 9 and 10). The Roosevelt Canal was built in 1928 and has played an important role in the agricultural development of the far west Phoenix metropolitan area. Today, the canal is about 42-mi-long, extending from central Phoenix near the intersection of 27<sup>th</sup> Avenue and Lower Buckeye Road to the Agua Fria River near the intersection of Johnson Road and Broadway Road. The Roosevelt Canal is eligible for the NRHP under Criteria A and C for its associations with the early development of irrigation systems in the Phoenix area (Stone 1998a; Touchin and Brodbeck 2003a). The canal crosses the study area in two places and is within the limits of all the W101 alternative alignments. It crosses I-10 at 91<sup>st</sup> Avenue. The segment of the canal in the I-10 R/W was piped when the interstate was built and has been determined a non-contributing segment (Touchin and Brodbeck 2003a). The canal also crosses the study area on the Loop 101 at McDowell Road.

## **Historic Neighborhoods and Buildings**

A total of 129 historic building properties were identified within the addendum Class I study area (Table 6; Figures 17-19). These include farm, ranch, and suburban houses; industrial and commercial buildings; warehouses; schools; barns; and churches. Eighteen historic building properties are part of the Villa Verde Historic District and 71 historic building properties are in the Capital Redevelopment Area. The other 41 historic building properties are scattered along the I-10 and L101 corridors. It should be noted that the Villa Verde properties were recommended as not eligible by Woodward Architectural Group during their evaluation of the predominately commercial Grand Avenue transportation corridor (Woodward 1993). However, within the context of an historic residential district, many of the properties could be viewed as contributing components. Nevertheless, based on current NRHP eligibility recommendations, 25 properties are considered eligible, 37 are considered not eligible, and 68 have not been evaluated for NRHP eligibility.

The historic building properties along the I-10 corridor are located along McDowell Road 0.25 mi north of I-10, and along Van Buren Street, 0.75 mi to the south of I-10. Other properties, such as those in the Villa Verde Historic District, are farther away from the interstate. Thus, none of historic building properties should be affected by the proposed alternative alignments.

### **Villa Verde Historic Neighborhood**

Villa Verde Historic Neighborhood is a middle-class Phoenix subdivision developed from 1928 to 1940 that is listed on the City of Phoenix Register of Historic Places (Weight 1998; Woodward 1993) (Figure 17). The neighborhood includes 107 houses and one commercial property located between 19<sup>th</sup> Avenue, 20<sup>th</sup> Avenue, Granada Road, and Monte Vista Road. Eighteen of the properties are within the addendum Class I study area. The neighborhood includes a collection of English Cottage, Tudor Revival, Cotswold Revival, Cape Cod Revival, Spanish Colonial, Southwest, International, and Transitional/Early Ranch Style residences. The one commercial structure, located at the southwest corner of 19<sup>th</sup> Avenue and Granada Road, was built shortly after the residential structures were built and initially served as a neighborhood grocery store.

A very unique aspect of Villa Verde is that all of its homes were designed, built, and sold by Frank B. Wallace (Weight 1998). Wallace's determination that no two houses in the neighborhood would look alike adds to the appeal of the area. He enticed potential buyers by emphasizing that the neighborhood had "all city conveniences but no city taxes" (Weight 1998:3). The significance of the neighborhood is best summarized by Weight (1998: 4):

*Villa Verde is significant as a largely intact representation of a middle-class Phoenix subdivision developed from 1928 to 1940. Flourishing at the height of the city's prosperity between World War I and World War II, the neighborhood reflects the demand for residential development and the distinctive architecture of the period. It also represents a successful speculative venture by a single developer, providing a taste of what would follow in later years.*

The Villa Verde Historic Neighborhood has not been evaluated for NRHP eligibility, however the information collected for its listing on the Phoenix Register indicates that it is a strong candidate to qualify under Criteria A, B, and C. The neighborhood is about a half-mile north of I-10 and therefore should not be affected by any of the proposed alternative alignments.

### **Capitol Redevelopment Area**

In 1987, Janus Associates conducted an historic building inventory of the area bounded by 19<sup>th</sup> Avenue, 23<sup>rd</sup> Avenue, Harrison Street, and Fillmore Street as part of a urban redevelopment planning program (Janus 1987a, 1987b) (Figure 17). The area, known as the Capitol Redevelopment Area, is not a designated historic district but it does have an abundance of historic building properties. It is represented by diverse architectural styles which include indigenous frame cottages, brick and wood Queen Anne cottages, large Neo-Colonial Revival houses, Modest Builder's or Western Colonial homes, and many variations of the Bungalow Style. Many of the homes in this area were owned by territorial, state, and county government employees and officials as well as employees of nearby industries and businesses (Janus 1987a). Janus identified 268 historic building properties in the Capitol Redevelopment Area. They recommended 33 properties as eligible to the NRHP under Criteria A, B, and C while the other 235 properties were not evaluated. Of these 71 historic building properties within the current study area, three of which were recommended as eligible. The Capitol Redevelopment Area is 0.5 mi south of I-10 and therefore none of its historic building properties should be affected by the proposed alternatives.



# Chapter 6: Summary and Management Recommendations

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On behalf of ADOT and FHWA, HDR Engineering, Inc. (HDR) has prepared a addendum Class I overview for the Loop 202, South Mountain Freeway, Environmental Impact Statement (EIS) & Location/Design Concept Report project. In late 2004, the project study area was expanded to include new areas along the I-10 and 101L transportation corridors where additional lanes would be needed to complete the freeway connections. New right-of-way (R/W), less than 100 ft to either side of the existing freeways, would be needed to accommodate the additional lanes. This report covers areas not included in the original Class I overview for the project (Burden 2002).

The study identified 27 previously recorded prehistoric and historic archaeological sites, five historical-period linear sites, and 129 historic building properties. In addition, historical maps indicate that several prehistoric canal alignments pass through the study area. For the archaeological sites, five are considered eligible to the NRHP, five sites are not eligible, nine sites have not been evaluated for eligibility, and eligibility state of eight sites is unknown due to a lack of available information. Historically-documented prehistoric canals in the area are viewed as potentially eligible resources that should be investigated if encountered.

The Class I study revealed five historical-period linear sites in the study area. The linear sites are considered eligible overall with contributing an non-contributing segments.

Of the 129 historic building properties, 25 have been previously recommended as eligible to the NRHP, 37 have been recommended as not eligible, and 67 have not been evaluated. Seventy-one properties are in the Capital Redevelopment Area, an unnominated residential area with an abundance of historic building properties. Eighteen of the historic building properties are in the Villa Verde Historic District, which is listed on the Phoenix Register of Historic Places. Although the Villa Verde properties were previously recommended as not eligible to the NRHP, they should be re-evaluated within the context of an early Phoenix suburban neighborhood.

The vast majority of cultural resources identified in the addendum Class I study area will not be affected by any of the proposed alternative alignments. Cultural resources in the W55 and W71 alignments include AZ T:11:26 (ASM), AZ T:12:4 (MNA), AZ T:12:5 (MNA), AZ T:12:10 (ASM) (Los Colinas), AZ T:12:38 (ASM), and AZ T:12:178 (ASM) (Los Aumentos). Cultural resources in the W101 alignments include AZ T:7:167 (ASM) (Grand Canal), AZ T:10:83 (ASM) (Roosevelt Canal), AZ T:11:26 (ASM), AZ T:12:4 (MNA), and AZ T:12:178 (Los Aumentos). HDR recommends that all cultural resources considered eligible to the NRHP should be avoided if possible. If avoidance is not possible then adverse impacts should mitigated through an appropriate program of archival research, pedestrian surveys, archaeological excavations, ethnographic research, and HAER documentation, etc.

If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources. The Engineer will contact

the ADOT Environmental & Enhancement Group, Historic Preservation Team, at 602.712.8636, immediately and make arrangements for the proper treatment of those resources.

**Table 8. Management Summary.**

<b>Alignments</b>	<b>Site</b>	<b>Type</b>	<b>Location</b>	<b>Jurisdiction</b>	<b>NRHP Eligibility (Criterion)</b>	<b>Management Recommendation</b>
W55/W71	AZ T:11:26 (ASM)	Hohokam Artifact Scatter	T1N, R1E, S4	ADOT	Not Eligible	None
	AZ T:12:4 (MNA)	Hohokam Artifact Scatter	T1N, R2E, S6	ADOT, Private	Not Eligible	None
	AZ T:12:5 (MNA)	Hohokam Artifact Scatter	T1N, R2E, S5	ADOT, Private	Not Eligible	None
	AZ T:12:10 (ASM) Las Colinas	Hohokam Village	T2N, R2E, S36; T1N, R2E, S1, 2, 11	ADOT, Private	Eligible (D)	Avoid, or else mitigate adverse effects
	AZ T:12:38 (ASM)	Hohokam Village	T1N, R2E, S3	ADOT, Private	Eligible (D)	Avoid, or else mitigate adverse effects
	AZ T:12:178 (ASM) Los Aumentos	Hohokam Village	T1N, R1E, S2	ADOT, Private	Eligible (D)	Avoid, or else mitigate adverse effects
W101 Alignments <sup>1</sup>	AZ T:7:167 (ASM) Grand Canal	Canal	T2N,R1E, S9, 16	Reclamation	Eligible (A, C)	Avoid, or else mitigate adverse effects
	AZ T:10:83 (ASM) Roosevelt Canal	Canal	T1N, R1E, S3, 4	Private	Eligible (A, C)	Avoid, or else mitigate adverse effects
	AZ T:11:26 (ASM)	Hohokam Artifact Scatter	T1N, R1E, S4	ADOT,	Not Eligible	None
	AZ T:12:4 (MNA)	Hohokam Artifact Scatter	T1N, R2E, S6	ADOT, Private	Not Eligible	None
	AZ T:12:178 (ASM) Los Aumentos	Hohokam Village	T1N, R1E, S2	ADOT, Private	Eligible (D)	Avoid, or else mitigate adverse effects

<sup>1</sup> = Includes alignments W101WPR, W101WFR, W101W99, W101CPR, W101CFR, W101EPR, W101EFR

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