

MEMORANDUM OF AGREEMENT (MOA) BETWEEN THE UNITED STATES OF AMERICA, BUREAU OF RECLAMATION, the ARIZONA STATE HISTORIC PRESERVATION OFFICE (SHPO) AND YUMA COUNTY REGARDING THE COUNTY 8TH STREET REALIGNMENT PROJECT (PROJECT)

WHEREAS, Yuma County plans to realign and improve a 4,000 foot segment of road depicted on an Overall Site Plan prepared by Yuma County (Appendix A). The Project area is a segment of County 8th Street (Project) near Antelope Hill, northeast of Wellton, Arizona between Mohawk Valley Road and Avenue 37E. The Project is being implemented for safety reasons and to accommodate increasing traffic in this fast-growing area of Yuma County; and

WHEREAS, Reclamation must issue a grant of authorization permit to Yuma County before the Project can proceed on Federal land. The Undertaking is subject to review under the National Environmental Policy Act of 1969 (42 United States Code [U.S.C.] § 4321, et seq., and its implementing regulations 40 Code of Federal Regulations [C.F.R.] Parts 1500-1508)) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. § 470f and its implementing regulations, 36 C.F.R. Part 800); and

WHEREAS, Reclamation has determined that the Undertaking will have an adverse effect on two historic properties. The project will have an indirect effect on National Register eligible Antelope Hill (AZ X: 8:6 [ASM]) and an adverse effect on historic site AZ X: 8:74 (ASM), the Severo Mendoza homestead, eligible for the National Register under 36 C.F.R. Part 60.4, Criterion d. Reclamation and the SHPO acknowledge the increased risk of vandalism to Antelope Hill and the need for more protective measures. Reclamation has consulted with SHPO, the Advisory Council on Historic Preservation (“Council”), and respective Indian Tribes pursuant to 36 C.F.R. Part 800, regulations implementing Section 106 and 110 (f) of the NHPA; and

WHEREAS, Reclamation has consulted with 21 Indian tribes regarding the effects of this Undertaking on historic properties. Reclamation has invited the Cocopah Indian Tribe, Fort Yuma Quechan Indian Tribe, and Tohono O’odham Indian Nation to be concurring parties to this agreement; and

WHEREAS, Reclamation has consulted with Yuma County regarding the effects of this Undertaking on historic properties and has invited the County to sign this MOA as an invited signatory as they are responsible for carrying out the terms of this agreement;. The Wellton-Mohawk Irrigation and Drainage District (District) owns the Antelope Hill Wasteway crossed by the road. The District has chosen not to enter in this agreement. Reclamation and the SHPO are signatories to this MOA as per 36 CFR Part 800.6 (c) (1) (i); and

WHEREAS, in accordance with 36 C.F.R. § 800.6 (a) (1), Reclamation has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect finding and providing specified documentation and provided documentation specified in 36 CFR 800.11. The ACHP has chosen not to participate in consultation pursuant to 36 C.F.R. § 800.6 (a) (1) (iii); and

WHEREAS, the public has had an opportunity to comment through the participation requirements of the National Environmental Policy Act (NEPA) under 40 CFR Part 1506.6; and

NOW THEREFORE, Reclamation, the SHPO, and Yuma County agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the adverse effects to historic properties.

STIPULATIONS

Reclamation shall ensure that the following measures are carried out:

I. TREATMENT OF EFFECTS:

A. Reclamation will prepare a Historic Properties Treatment Plan (HPTP) to resolve the adverse effects to historic properties. The HPTP will be submitted to interested tribes and other consulting parties for their review. Reclamation will take into account all comments and will submit the HPTP and responses to the SHPO for review. Reclamation will ensure that treatment measures are implemented prior to construction.

II. OTHER MITIGATIVE MEASURES:

A. Protective Fencing and Barriers: To lessen the impacts to Antelope Hill and an **unmarked**, historic gravesite (site AZ X: 8:77 [ASM]), Yuma County agrees to extend the existing post and cable fence on the north side of the hill by approximately 1,100 feet to the southeast. The fence will terminate at a north-south trending, unimproved road on the east side of Antelope Hill. Yuma County shall also erect a durable and appropriate barrier around site AZ X: 8:77 (ASM) near the north shoulder of the proposed alignment. The design and materials used must be durable and suitable to the purpose and shall be approved by Reclamation prior to installation. Yuma County agrees to construct the post and cable fencing and gravesite barrier before construction is initiated.

B. Archaeological Monitor: Reclamation shall ensure that a professional archaeologist is present during construction of the subgrade preparation and all other ground disturbing activities in the northern two-thirds of the APE.

C. Post-Review Inadvertent Discoveries: In the event that potential historic properties are discovered or if unanticipated effects to historic properties occur, Reclamation shall follow the discovery plan protocol included in the HPTP (Appendix B). In the event that human remains are encountered during treatment or construction, all work in the vicinity will cease and the location shall be secured by Yuma County. Yuma County will immediately notify Reclamation so that SHPO can be notified. Reclamation will consult with tribes to establish affiliation or identify lineal descendants of the deceased individual(s) in accordance with the Native American Graves Protection Act regulations (25 U.S.C. 3002 (a) Section 3) and Reclamation's Directives and Standards. All other discoveries will be dealt with on a case-by-case basis, depending on location, significance, and ability to answer research questions.

III. DURATION

This MOA will be null and void if Stipulations IA and IIA are not carried out within three (3) years and Stipulation IIB is not carried out within five (5) years from the date of its execution. At such time, and prior to work continuing on the Undertaking, Reclamation shall either (a) execute a MOA pursuant to 36 C.F. R. § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 C.F.R. § 800.7. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII below. Reclamation shall notify the signatories and concurring parties of the course of action it will pursue.

IV. MONITORING AND REPORTING

Each year following the execution of this MOA, and until it expires or is terminated Reclamation shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any proposed scheduling changes, any problems encountered, and disputes and objections received in relation to Reclamation's efforts to carry out the terms of this MOA.

V. DISPUTE RESOLUTION

Should any signatory or concurring parties to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, Reclamation shall consult with such party to resolve the objection. If Reclamation determines that such objection cannot be resolved, Reclamation will:

- A. Forward all documentation relevant to the dispute, including Reclamation's proposed resolution, to the ACHP. The ACHP shall provide Reclamation with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, Reclamation shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. Reclamation will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within thirty (30) days, Reclamation may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, Reclamation shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
- C. Reclamation's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute, remain unchanged.

VI. AMENDMENT TO THIS AGREEMENT: This MOA may be amended pursuant to 36 C.F.R. § 800. (c) (7) when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

VII. TERMINATION

Should any signatory to this MOA determine that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VI. If within thirty (30) days (or another time period agreed upon by all parties) an amendment cannot be agreed upon, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and before work is resumed on the Undertaking, Reclamation must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Reclamation shall notify the signatories as to the course of action it will pursue.

VIII. STATE OF ARIZONA CONTRACTING REQUIREMENTS

The State of Arizona requires that the following stipulations be included in all Programmatic Agreements entered into pursuant to the federal regulations under 36 CFR 800.14. These stipulations apply to the whole of the agreement and to all of the signatories to the MOA.

A. Non-discrimination

The parties agree to comply with Chapter 9, Title 41, Arizona Revised Statutes (Civil Rights), Arizona Executive Orders 75-5 and 99-4 and any other Federal or State laws related to equal opportunity and non-discrimination, including the Americans with Disabilities Act.

B. Conflict of Interest

This agreement is subject to cancellation by the State under A.R.S. § 38-511 if any person significantly involved in the agreement on behalf of the State is an employee or consultant of the contractor at any time while the agreement or any extension of the agreement is in effect.

C. Non-availability of Funds

This agreement shall be subject to available funding, and nothing in this agreement shall bind the State to expenditures in excess of funds appropriated and allotted for the purposes outlined in this agreement.

D. Arbitration

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

E. Records

Pursuant to A.R.S. §§ 35-214, 35-215 and 41-2548, all books, accounts, reports, files and other records related to this agreement shall be subject, at all reasonable times, to inspection and audit by the State for five years after the termination of this agreement.

EXECUTION of this MOA by Reclamation, SHPO, and Yuma County, and implementation of its terms evidence that Reclamation has taken into account the effects of this undertaking on historic properties and afforded the ACHP the opportunity to comment.

SIGNATORIES:

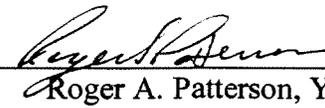
BUREAU OF RECLAMATION

By:  Date: 8/21/09
Jennifer McCloskey, Manager, Yuma Area Office

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By:  DS#PO Date: 9/3/09
James Garrison, Arizona State Historic Preservation Officer

YUMA COUNTY

By  Date July 31, 2009
Roger A. Patterson, Yuma County Engineer

Approved as to form:
By: 
Edward P. Feheley, Deputy County Attorney

CONCUR:

FORT YUMA QUECHAN TRIBE

By _____ Date _____
Michael Jackson Sr., President

COCOPA INDIAN TRIBE

By: _____ Date _____
Sherry Cordova, Chairwoman

TOHONO O'ODHAM NATION

By _____ Date _____
Ned Norris Jr., Chairman

APPENDIX A
Overall Site Plan prepared by Yuma County

APPENDIX B
Historic Properties Treatment Plan

Treatment Plan for the Archaeological Data Recovery of Site AZ X:8:74 (ASM), the Severo Mendoza Homestead, Yuma County 8th Street Realignment Project, Arizona

by Marlesa A. Gray and Robert M. Wegener

Prepared for
Bureau of Reclamation, Lower Colorado Region
500 Fir Street
Boulder City, NV 89005



Technical Report 08-61
Statistical Research, Inc.
Tucson, Arizona

February 2009

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Introduction, Setting, Site Description, and Context

Introduction

As part of its on-call contract for cultural resource services with the Bureau of Reclamation, Lower Colorado Regional Office (Reclamation), Statistical Research, Inc. (SRI), of Tucson, Arizona, carried out a cultural resources assessment of a proposed road improvement project in Yuma County, Arizona. The Yuma County Department of Public Works proposes to improve and realign an existing 4,000-foot segment of County 8th Street near Antelope Hill, about 7 miles east of the community of Wellton (Figures 1 and 2). The segment in question falls entirely on Reclamation-administered land, which prompted Yuma County to apply to Reclamation for a right-of-way (ROW) permit for the project. To determine if the proposed project would impact cultural resources eligible for listing in the National Register of Historic Places (NRHP), Reclamation contracted SRI to carry out a Class I literature review and site files search of the Antelope Hill vicinity, followed by a Class III field survey of the area of potential effects (APE).

The Class I literature review and site files search found that five archaeological sites were previously reported within the 150-foot-wide survey corridor established for the project by Reclamation. The Class III field survey did not identify any new sites within the survey corridor. Of the five previously recorded sites, portions of two (AZ X:8:74 [ASM] and AZ X:8:77 [ASM]) fall within the Class III survey corridor for the project. Both were originally recorded in a survey by SRI for the proposed Wellton-Mohawk Title Transfer project (Vanderpot and Altschul 2004) (Figures 3 and 4). The field survey determined that one of the two sites, AZ X:8:74 (ASM), the remains of an early-twentieth-century homestead, has surface artifact concentrations that will be impacted directly by the currently proposed project. SRI recommended that the site be considered eligible for listing in the NRHP under Criterion d (O'Mack et al. 2004). According to the Scope of Work (SOW) for the current project, the Arizona State Historic Preservation Office (AZSHPO) concurred with this recommendation, and the site was found to be eligible for listing in the NRHP.

Environmental Setting

The project area landscape is dominated by Antelope Hill, an isolated, double-peaked hill protruding from the generally level floodplain of the Gila River, about 30 miles upstream from the confluence of the Gila with the Colorado River near Yuma. The floodplain in the vicinity of Antelope Hill is several miles wide. It rises gradually to the north and south in a series of low alluvial terraces that lead eventually to rugged south-east-northwest-trending mountain ranges: the Muggins Mountains to the north, the Gila Mountains to the west, and the Mohawk Mountains to the east. Antelope Hill is located immediately south of the modern river channel, at the front edge of the lowest alluvial terrace. The top of Antelope Hill has an elevation of about 815 feet above mean sea level (AMSL); the surrounding floodplain is about 240 feet AMSL. The hill is oblong in plan, about 1 mile long and between $\frac{1}{4}$ mile and $\frac{1}{2}$ mile wide, with its long axis oriented roughly north-south. The hill has steep slopes ranging from 55 to 75 percent in grade (Schneider 2000:15).

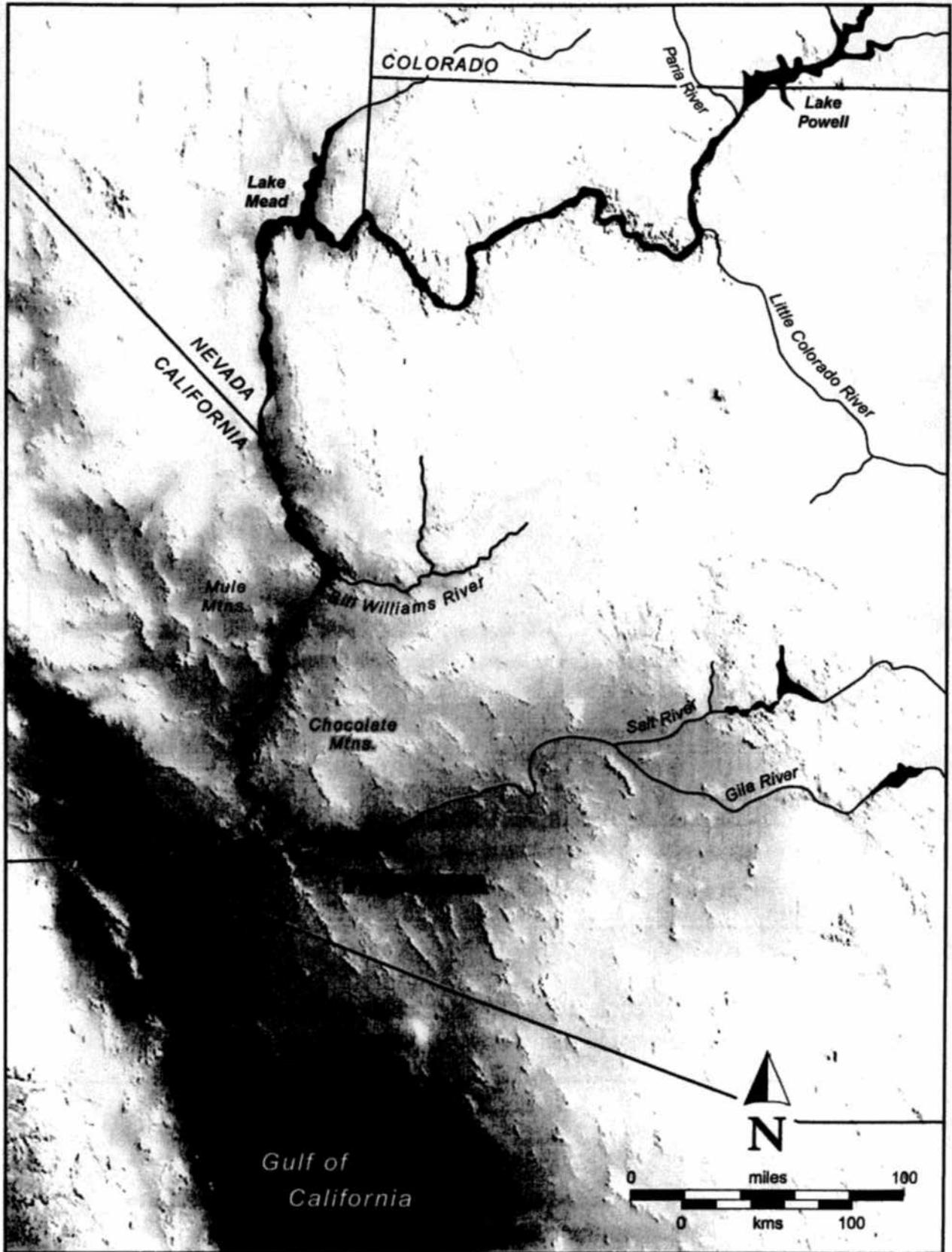
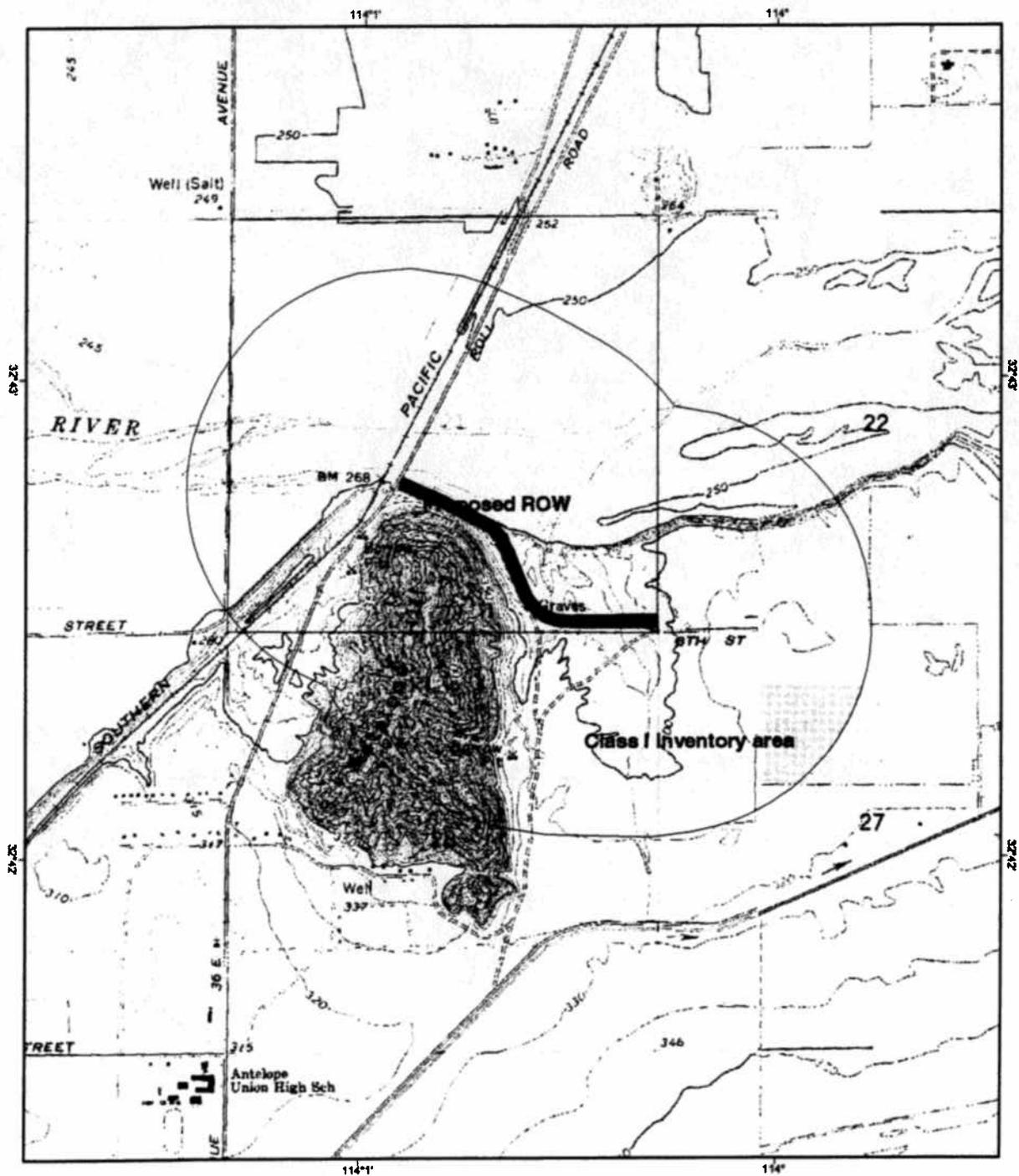


Figure 1. Location of the project area in southwestern Arizona.



Scale 1:24000
 Base Maps: Wellton Mesa (1982) & Tacna (1982) 7.5 minute USGS topographic maps
 Projection: Polyconic
 Datum: 1983 North American Datum
 Ellipsoid: 1980 Global Reference System
 October 2004: Statistical Research, Inc

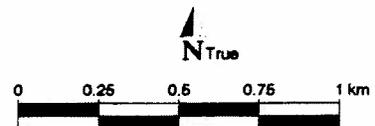
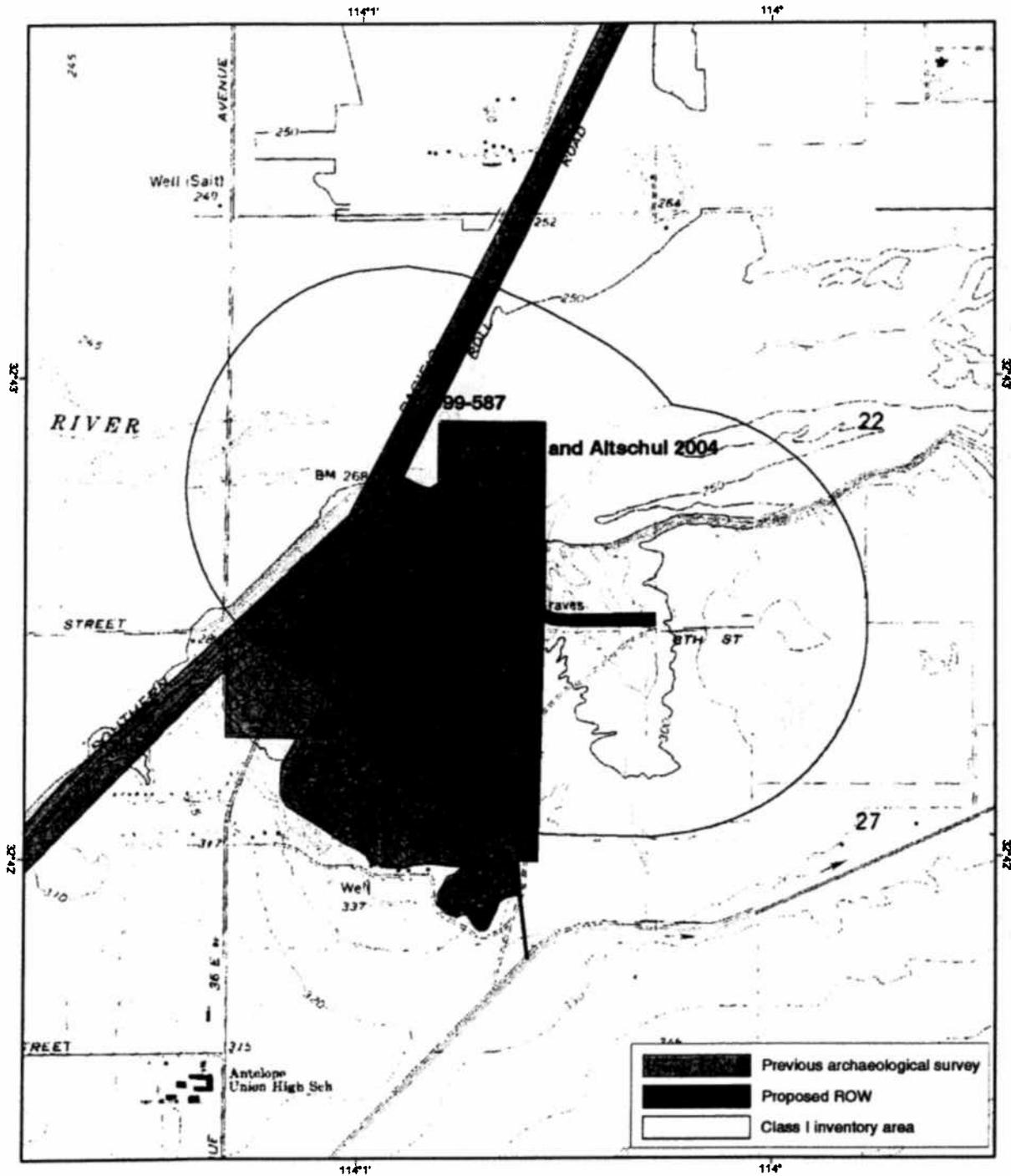


Figure 2. Map of project vicinity showing Class I inventory area and proposed realignment ROW.



Scale 1:24000
 Base Maps: Wetton Mesa (1982) & Tacna (1982) 7.5 minute USGS topographic maps
 Projection: Polyconic
 Datum: 1983 North American Datum
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 October 2004: Statistical Research, Inc
 Archaeological sites from AZSITE October 7, 2004

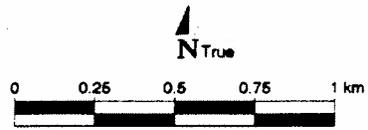
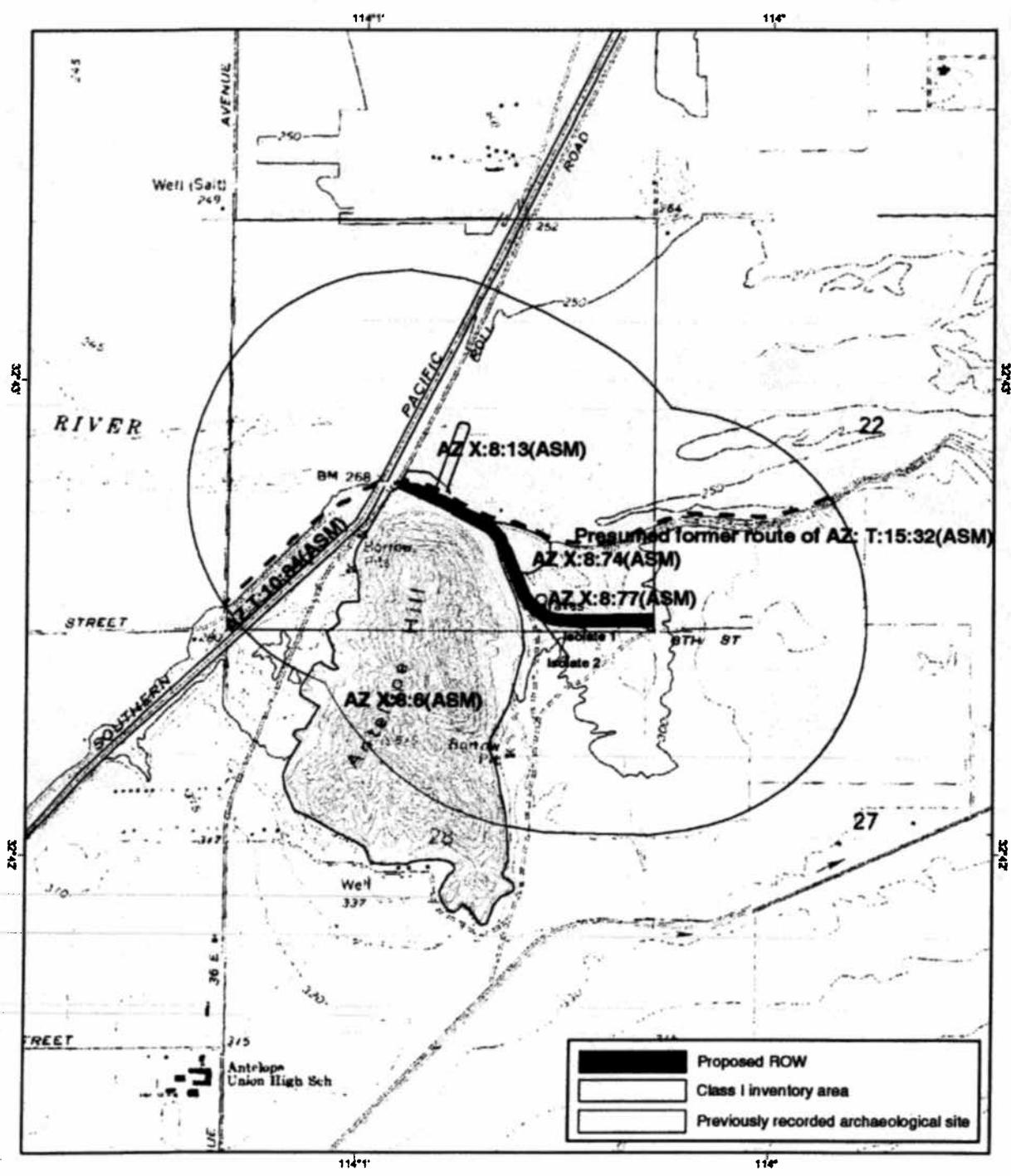


Figure 3. Map of project vicinity showing previous archaeological surveys.



Scale 1:24000
 Base Maps: Wetton Mesa (1982) & Taona (1982) 7.5 minute USGS topographic maps
 Projection: Polyconic
 Datum: 1983 North American Datum
 Ellipsoid: 1980 Global Reference System
 October 2004: Statistical Research, Inc
 Archaeological sites from AZSITE October 7, 2004

Figure 4. Map of project vicinity showing location of site AZ X:8:74 (ASM) and other nearby sites.

Antelope Hill is composed entirely of a clastic, arkosic sandstone—that is, a sandstone consisting of coarse granitic debris of which more than 15 percent is feldspar. The hill comprises two separate, uplifted fault blocks, which give it its double-peaked appearance (Schneider 2000:15). The alluvial soils surrounding Antelope Hill are generally sandy, with some talus from the hill and waterworn pebbles and cobbles deposited by flooding.

Before dams and irrigation works began restricting its flow in the late nineteenth century, the Gila River flowed year-round, fed primarily by the mountains of eastern Arizona and western New Mexico. Low-water flow in the Gila was once confined to a relatively deep, narrow channel, navigable in a flatboat from the Pima Villages to the Colorado River. The lower Gila River valley was densely vegetated with cottonwood, willow, mesquite, and other riparian vegetation and supported a wide variety of fauna. Today, the flow in the river is negligible except in years of unusually heavy rainfall, and the native riparian vegetation is mostly gone, replaced in many places by salt cedar, an invasive nonnative species (Schneider 2000:13). Today, the vegetation on Antelope Hill itself is sparse and limited to globemallow, desert holly, brittlebush, and various cacti. The surrounding terrace is sparsely vegetated with creosotebush, white bursage, several species of saltbush, and a variety of annual grasses (Schneider 2000:14).

The climate of the lower Gila River valley is characterized by long, hot summers and mild winters. From May through September, the temperature routinely exceeds 100°F, and temperatures above 110°F are common. At Wellton, near Antelope Hill, the mean January temperature is 51.3°F; the mean July temperature is 90.8°F (Schneider 2000:14; Sellers and Hill 1974). Rainfall occurs in a biseasonal pattern, with winter storms entering the area from the north and summer storms from the south. The average annual precipitation is 3.5 inches, with most of the rain falling in a few heavy but brief storms (Schneider 2000:14; Wilson 1933:17).

In addition to its place in the greater riverine environment of the lower Colorado River, the lower Gila River is also traditionally taken as the boundary between two environmental and cultural regions: the rugged, arid uplands north of the river, where the Yuman-speaking Yavapai, Hualapai, and other historically documented groups lived as seminomadic farmers and foragers; and the Papaguería to the south, home of the Tohono O’odham, the Piman-speaking people called Papagos by the Spanish. The Papaguería is a vast desert region roughly delimited on the north by the Gila, on the east by the Santa Cruz River, on the west by the Colorado River, and on the south by the Altar River of Sonora, Mexico. Like the area north of the Gila, the Papaguería is generally very arid, but it includes a wide range of environmental conditions, from the relatively abundant rainfall and higher elevations of its eastern fringe to the extreme heat, very low rainfall, and lower elevations of its western fringe. Across the Papaguería, the Tohono O’odham practiced various combinations of agriculture and seasonal gathering. In the far western Papaguería, including the area immediately south of the lower Gila River valley, the Hia C’ed O’odham, near kin of the Tohono O’odham, adapted the same way of life to the most demanding part of the region.

AZ X:8:74 (ASM) Site Description

AZ X:8:74 (ASM) was first recorded by SRI in the Wellton-Mohawk Title Transfer project (Vanderpot and Altschul 2004) and assigned the temporary number SRI-WMHI-4. The site consists of two discrete historical-period artifact concentrations, each representing multiple dumping episodes, plus a general scatter of historical-period trash. It was further investigated as part of SRI’s cultural resources assessment for the proposed Yuma County 8th Street realignment (O’Mack et al. 2004).

SRI’s search of General Land Office (GLO) records for the Wellton-Mohawk Title Transfer project showed that on April 18, 1935, Severo F. Mendoza received a patent for the 80-acre parcel comprising the W ¹/₂ of the SE ¹/₄ of Section 21, Township 8 South, Range 17 West (GLO 1935). This parcel encompasses all of AZ X:8:74 (ASM) as well as the small nearby cemetery designated AZ X:8:77 (ASM), and it is likely that both sites are associated with the Mendoza homestead. In April 1929, Mendoza built a tent house on

his claim and moved his family there. He dug a well and installed a pump, then cleared 10 acres for planting. In the GLO inspector's report of May 1934, the parcel was described as "[r]ough, uneven desert land agricultural in character covered with mesquite and greasewood and, on the north side with some Iron wood. Impossible of successful cultivation without irrigation" (GLO 1934). The 10-acre field cleared by Mendoza was adjacent to the Gila River, but only a small portion of it was under cultivation, irrigated by well water. The exact location of the field is not indicated in the report. Mendoza's living quarters consisted of a three-room tent-and-lumber house. Outbuildings and other features included a corral, chicken house, and two wells, one with a small pump. Mendoza lived on the land with his wife and five children. In the 1930 census, Mendoza gave his occupation as "general farm laborer" (Bureau of the Census 1930), but by May 1934 he was working "in a large dairy where the barns, separators, milk houses, etc. are located but one-quarter mile distant from the house" (GLO 1934). The dairy was part of Antelope Ranch, owned by Wayne Wright, and it supplied dairy products to farming and ranching communities across the Antelope and Mohawk Valleys.

According to Bill Wright, the son of the original owner of Antelope Ranch, Mendoza and his family moved to Yuma around 1938. The Mendoza dwelling and outbuildings were situated in a natural drainage close to the river. Left unattended, they eventually deteriorated and washed away (Wright 2004). There is no visible evidence of buildings or structures in an aerial photograph of the vicinity of the Mendoza homestead taken in 1939 (Fairchild Aerial Surveys 1939). A 1946 map of lands comprising the proposed Wellton-Mohawk Division of the Gila Project indicates that the federal government owned the land formerly occupied by Mendoza (Bureau of Reclamation 1946). When or from whom the parcel was acquired is not known. The other known patented claims near the Mendoza homestead were held by Charles Baker, Edmond M. Goldsmith, Nathan M. Huckaby, and Sadie Simonsen (Altschul et al. 2002:59–66).

The map of AZ X:8:74 (ASM) prepared for the Wellton-Mohawk Title Transfer project was used as a guide for resurvey of the portion of the site falling within the current Class III survey corridor. Artifact Concentration 1 (AC 1), an elongated area extending roughly east-west along the northern portion of the site and adjacent to a shallow natural drainage, falls partly in the realignment ROW. AC 2, a smaller, oval area, falls almost entirely in the ROW (Figure 5). The general artifact scatter that covers most of the site also extends into the ROW. The artifacts in all three contexts include a wide range of fragmentary household and architectural debris. In AC 1, the majority of artifacts date to the 1940s or 1950s; in AC 2, the majority date to the approximate period 1920–1950. No intact architectural features were found in the ROW. Both artifact concentrations are potentially associated with buried artifact deposits or other buried features, although there was no other evidence of buried features. The site has suffered some surface disturbance from vehicles or machinery as well as the redeposition of soil from the adjacent slopes of Antelope Hill, from flooding by the Gila River, or both. The proposed realignment project would directly impact the site by damaging or partly destroying ACs 1 and 2 and any associated buried features.

The Class I overview prepared by SRI for the Wellton-Mohawk Title Transfer project included a review of homestead claims made in the title transfer project area, including in the vicinity of Antelope Hill (Altschul et al. 2002:58–67). The claims span the period 1884–1943, with a peak of activity in the 1920s coinciding with the reconstruction of the irrigation head works at Antelope Hill and the associated canal system. Through the 1930s and into the 1940s, the number of homestead claims steadily declined as the water table (and the feasibility of gravity-fed irrigation) receded, the level of soluble salts in the soil increased, and farmers began to rely on wells for irrigation; a single claim was made in 1943. Thus, Severo Mendoza settled in the area relatively late in the homesteading period, and, not surprisingly, was unable to establish a successful farm, working instead as a laborer and selling or abandoning the homestead by 1939.

Historical Significance

In the Class III inventory of sites for the title transfer project (Vanderpot and Altschul 2004), SRI included a discussion of the features that would be expected at homestead sites from any part of the overall homesteading

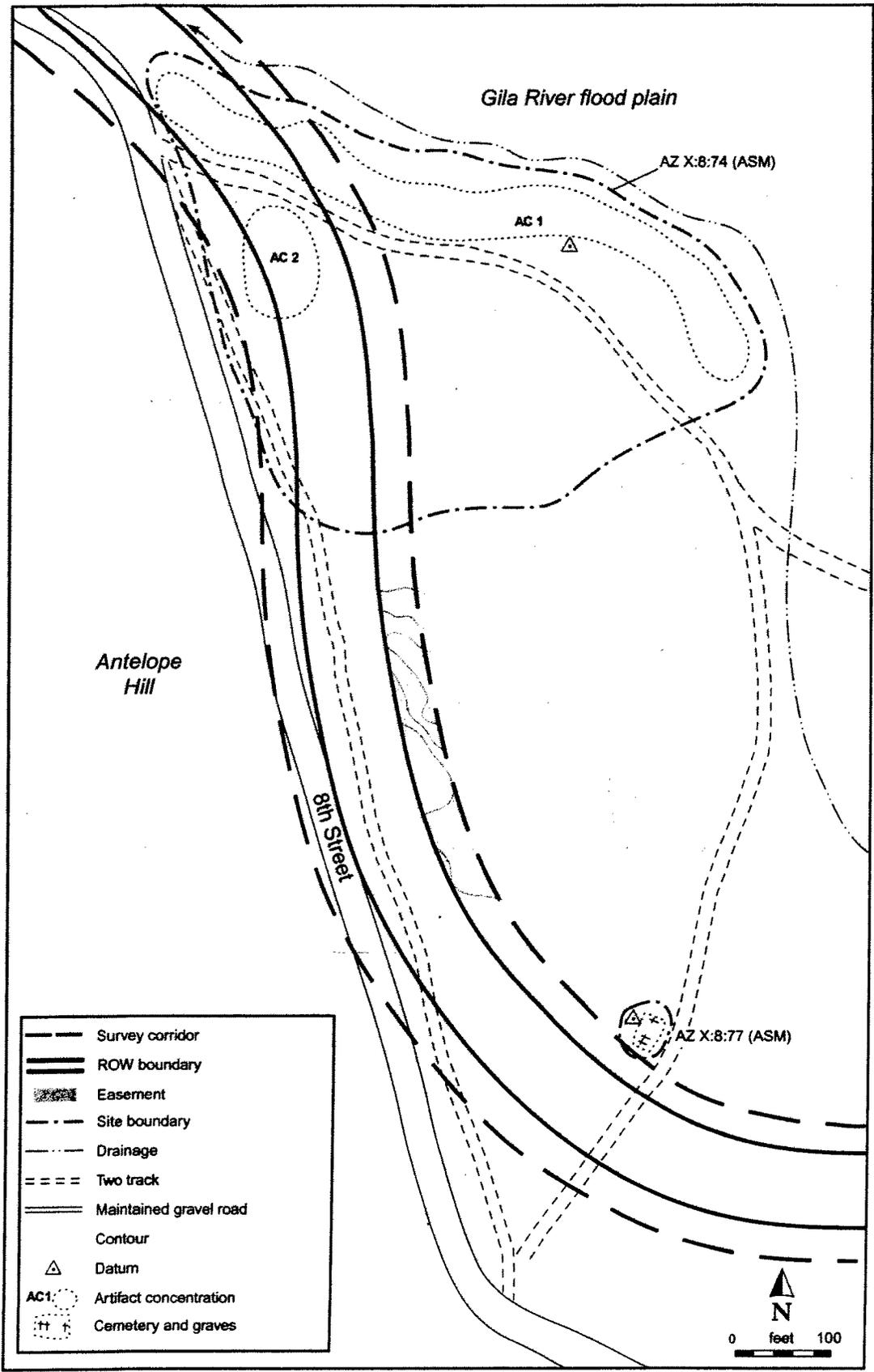


Figure 5. Map of AZ X:8:74 (ASM) and associated AZ X:8:77 (ASM), showing proposed realignment ROW.

period (based largely on Stein 1990), including the remains of houses; water-collecting and water-storage structures (e.g., wells, pumps, windmills, cisterns, bermed catchments); outhouses; remnants of agricultural fields (e.g., cleared areas, irrigation ditches, fences); buildings and structures associated with livestock (e.g., corrals, stock tanks, apiaries, chicken pens and coops, barns, tack rooms); and artifact-containing features (e.g., trash deposits, privy pits). Given the condition of AZ X:8:74 (ASM), as documented both in the title transfer survey and in the cultural resources assessment for the current project, the only features likely to be preserved at the site are buried trash deposits, privy pits, or well shafts.

It is important to emphasize that, although Severo Mendoza's attempt at farming was presumably late and short lived, the homestead represented by AZ X:8:74 (ASM) was nonetheless where he and his family tried for nearly a decade to make a go of homesteading. As Stein (1990:30–31) has discussed, an understanding of homesteading in Arizona (like anywhere) requires an understanding of how and why homesteads failed as well as succeeded, which means AZ X:8:74 (ASM) could not be excluded from consideration for NRHP eligibility based on either its relatively late date or the brief, unsuccessful attempt at homesteading that it represents. Although there is nothing about the site that made it eligible for listing in the NRHP under Criterion a, b, or c, the information potential of buried archaeological features, such as those listed above, at the site was the basis for the recommendation for a determination of eligibility for listing in the NRHP under Criterion d (O'Mack et al. 2004:41).

In the terminology of the statewide context for historical-period refuse deposits (Sullivan and Griffith 2005), the artifact concentrations recorded on the surface of AZ X:8:74 (ASM) are a kind of trash storage feature, either a trash scatter (or midden) representing the incidental accumulation of debris from repeated activities in the same location, a deflated waste pile representing one or more episodes of dumping, or evidence of an otherwise intact but buried trash-storage feature. Whatever the precise origin of a trash storage feature, the draft statewide context specifies that the NRHP eligibility and information potential of such a feature depends on whether it can be associated with a more substantial property having significance in its own right, such as a homestead. In the case of AZ X:8:74 (ASM), the association of the artifact concentrations at the site with the homesteading efforts of the Mendoza family, which were part of a documented regional homesteading phenomenon, gives the artifact concentrations a potential significance as a source of information on that phenomenon. Although the surface artifacts by themselves are probably of limited value for a study of the homestead, any intact buried trash deposit represented by the surface artifacts could be used to study the participation of the Mendoza family in the regional and larger social and economic systems of the period, much as similar features have served elsewhere in southern Arizona (e.g., Sterner and Majewski 1998). The fact that the Mendoza family was Hispanic increases the potential importance of the site: of the 192 homesteads patented in the Wellton-Mohawk Title Transfer project area in the overall period 1884–1943, only 12 others were patented by people with Hispanic surnames (Altschul et al. 2002: Table 2).

Based on the possible presence of buried trash deposits at AZ X:8:74 (ASM) and the potential of such deposits to provide significant information about the history of homesteading in the lower Gila River valley, SRI recommended that the site be considered eligible for listing in the NRHP under Criterion d. Reclamation and AZSHPO concurred with this recommendation. It is worth emphasizing that although the site does not preserve any trace of intact architectural or other features, and although the surface of the site shows evidence of having been disturbed both mechanically and through the redeposition of soil from adjacent areas, it is still possible that the site preserves intact buried trash deposits or other archaeological features containing trash deposits, such as privies.

Historical Integrity

Not only must a historic site possess significance under the NRHP criteria, it must also exhibit integrity, or the ability to display its significance. There are seven elements of integrity to consider when evaluating

significance: location, design, setting, materials, workmanship, feeling, and association. Stein (1990:21) noted that homesteads found only in an archaeological condition might have a different set of integrity qualities than homesteads still architecturally viable. At least some of these elements must be present, or the archaeological homestead site has lost its significance (Stein 1990:20–25).

Considering that the Severo Mendoza homestead was apparently never more than a tent shelter with associated structures and was occupied for only 9 years, the site continues to display some degree of integrity, particularly of location, setting, materials, and association:

- Integrity of Location: AZ X:8:74 (ASM) remains in its original location.
- Integrity of Setting: Despite some incursions from modern development, the setting of the homestead site still survives relatively intact on the northeast flank of Antelope Hill.
- Integrity of Materials: According to Stein (1990:23), integrity of materials is of vital importance for an archaeological site because this forms the basis for the “ability to yield” language of Criterion d. Site AZ X:8:74 has not been picked clean of artifacts; in fact, quite the contrary. Therefore, the site should yield information about the Mendoza family’s occupation of the site and about broader issues of Hispanic homesteading in Yuma County during the second quarter of the twentieth century. The site and its artifacts may also possess the ability to shed light on the nature of Depression-era hard-scrabble farming in southwestern Arizona.
- Integrity of Association: This refers to the direct link between the site and the reason for its significance. The Mendoza homestead site (AZ X:8:74 [ASM]) has been determined eligible for listing in the NRHP on the basis of its ability to provide information about early-twentieth-century Hispanic homesteading in Yuma County.

Threats to the Resource

Before preparing a treatment plan, including a plan for any kind of data recovery, it is necessary to determine the threats to the historic resource. In the case of AZ X:8:74 (ASM) (the Severo Mendoza homestead site), the primary threat is the proposed construction of the Yuma County 8th Street realignment.

Research Design

Pat H. Stein (1990:25) practically revealed in the research opportunities presented by Arizona homestead sites. First, there is the government's perspective on how a homestead should have been developed and used. Secondly, there is the homesteader's sworn testimony of what was claimed to have been done to satisfy legal requirements. Thirdly, there is sometimes an oral history account from the homesteader based on recollections of what occurred at the site. Finally, there is the archaeological or architectural testimony of the physical remains of the site. Sometimes these data sets coincide to produce a clear picture of the past, but more often they provide conflicting views and force the researcher to examine the interrelationships with a skeptical and seasoned eye.

Stein (1990:28–31) listed seven research issues that could be tackled using information gleaned from an analysis of Arizona homesteads. Taking into consideration the historic context of AZ X:8:74 (ASM), its significance to the NRHP, the elements for which it still retains integrity, and those portions of the site that are threatened by the imminent construction of the proposed County 8th Street realignment, SRI can frame research questions that will focus subsequent archaeological data recovery and treatment. This chapter outlines these questions in the framework of several of the research issues suggested by Stein (1990).

Research Issue 1: To what extent were homesteads economically self-sufficient?

Despite their desire for self-sufficiency, Stein (1990:28) noted that many homestead claims were unable to support even the hardest-working claimant. So, how did homesteaders eke out an existence in southwestern Arizona's extreme climate? We know that Severo Mendoza supplemented income from the claim with work as a laborer on the neighboring Antelope Ranch. Anticipating that the Mendoza family probably struggled to make the claim a success, we can look to the archaeologically derived data, and possibly some additional archival sources, to ask the following research questions:

1. To what extent did the Mendoza family tend to "make do"? Is there archaeological evidence of long-term use or adaptive re-use of objects, rather than immediate discard?
2. How dependent was the Mendoza family on manufactured goods?

Research Issue 3: What was the role of women?

Gender studies are an important component of current historical archaeological research. Stein (1990:29) has suggested that an understanding of the role of women may be key to also understanding how Arizona homesteads operated on a daily basis, as well as how homesteads satisfied the residency requirements of the law. From the Mendoza homestead patent case file, we know that he settled on the claim with his wife and five children. Several research questions can be asked of the archaeological data to better understand the role that his wife and family played in the development of the Mendoza claim:

1. How well (or poorly) is the presence of Mrs. Mendoza and the children marked by age- and gender-specific artifacts? How strong is that presence, if there?
2. Are the artifacts from the Mendoza homestead deposits reliable predictors of the composition of the household?

Research Issue 4: What were the patterns of land use?

According to Stein (1990:29), studies of land-use patterns often provide insight into how homesteads were organized and how they functioned economically and socially. Given that the Mendoza plot is known to have been 80 acres, but the archival evidence suggests that only about 10 acres were actually cultivated, several questions can be asked about the actual land use of the homestead:

1. What factors did Mendoza consider in siting various improvements on the homestead? What role did features of the natural and built environments play in these decisions?
2. If the location of the “habitable house” can be determined, was it sited near the center of the claim or along a section road at the edge of the claim? Was the proximity of Antelope Hill a major factor in the siting decision? How far from other nearby houses was the Mendoza house situated?

Research Issue 7: What factors contributed to the “success” of a homestead, as measured by the conveyance of a title patent from the government to the claimant?

That Severo Mendoza received a patent for an 80-acre claim is undisputed (GLO 1935). Therefore, he was “successful” in the government’s view of having established a homestead. However, we know as well that he was working as a farm laborer (Bureau of the Census 1930; GLO 1934), and that he moved his family to Yuma in 1938 (Wright 2004). So, how successful was the homestead? Specific research questions that can be asked of the archaeological data include:

1. Is there archaeological evidence of improvements on the homestead that might be construed as evidence of “success” through the 9-year occupancy of the site?
2. Does the artifact assemblage suggest that the Mendoza family was able to improve its economic position during the period it lived on the homestead?
3. Can the artifact assemblage inform on how the Great Depression impacted the homestead’s viability, and do Depression-era artifacts at the site signal significant economic hardship at the homestead and surrounding area?

Data Recovery Tasks and Methods

SRI's recommendations are made in the context of the history of homesteading in early-twentieth-century Arizona; the significance of a Hispanic homestead in an area where few Hispanic homesteads were patented; the integrity of the archaeological remains still on the property; and the imminent threats to those remains from the proposed road realignment and in view of the archaeological research questions just outlined.

Data Recovery Tasks

Prior to beginning fieldwork, SRI will obtain an Archaeological Resources Protection Act (ARPA) permit from Reclamation. All data recovery operations at AZ X:8:74 (ASM) will be limited to the realignment project's APE and will include the following tasks:

1. Create an instrument map of the site and all features and artifact concentrations using a total station surveying instrument. Map will include all backhoe trenches, stripping units, features, artifact concentrations, and point-located artifacts.
2. Collect (either by grid or point provenience) all diagnostic surface artifacts from ACs 1 and 2; nondiagnostic cans and glass fragments will not be collected.
3. Using the total station, point provenience and collect other diagnostic artifacts within the project APE.
4. That portion of AC 2 (approximately 9,300 square feet or $\frac{1}{5}$ of an acre) within the project APE will be mechanically stripped to determine whether buried cultural deposits and features might be present.
5. Excavate three backhoe trenches within the portion of the site that is within the project APE to locate buried cultural deposits that might be present and to establish the site's stratigraphic and geomorphic setting. Two east-to-west trenches will be placed near or within AC 2. One north-to-south trench will be placed in AC 1 within the APE. Total trench length is estimated at 300 feet or less. All cultural and significant stratigraphic features located in the trenches will be described and fully documented, including digital photographs and profile drawings.
6. SRI will also excavate three or four 1-by-1-m excavation units in features or artifact concentrations as revealed by the mechanical excavations. Provenience control will be maintained by excavating with shovels in arbitrary 3-inch levels. If strata are encountered, the artificial levels will be abandoned, and natural stratigraphy will be followed. This process will be followed until culturally sterile soil is encountered. Profiles of at least two faces of each unit will be drawn if there is relevant stratigraphic information. Photogrammetric techniques, recording forms, and traditional hand-drawn maps and profiles will be used, as appropriate, to thoroughly document each excavation unit.

Provenience Control, Tracking, and Data Checking

Because of the nature of some of the research questions, supreme importance will be placed on provenience control, tracking, and data checking. SRI has developed, tested, modified, and refined a highly efficient proveniencing system with multiple error-checking and correction stages—from the removal of cultural materials from the excavation area, to screening and sorting, and ultimately through the analysis process. We propose to use the same database-driven management system we routinely use on all archaeological data recovery projects, including the U.S. 60 and Joint Courts Complex data recovery projects (for the latter, more than 1,000 burials, along with their burial accompaniments, were recovered and documented). The SRI system follows widely accepted conventions for the location of artifacts, samples, and activity areas. Our system assigns a unique number to every space (point, line, or polygon) that contains features, artifacts, or other archaeological units.

Screening Methods

All sediments from the hand-excavated units will be screened using a 1/4-inch dry-screen process. Screen contents will be placed into bags bearing provenience designation (PD) information. Then, an inventory will be created, and bags will be boxed by provenience unit and tagged for removal to the laboratory. Point-provenienced artifacts not subject to screening will be bagged and handled separately but similarly.

Unanticipated Discoveries

Should significant buried historical-period features (e.g., house foundations, privies, wells, or trails) or artifacts, whether associated with the Severo Mendoza homestead or not, or prehistoric features (e.g., activity surfaces, trash deposits, pit features, or architectural remains) or artifacts not associated with the Severo Mendoza homestead be found, SRI will notify and consult with Reclamation regarding an appropriate strategy prior to proceeding. Reclamation will consult and coordinate with the AZSHPO and Tribes, and Reclamation will ensure that Tribal concerns are addressed as appropriate.

Should human remains be encountered, SRI will immediately provide Reclamation an oral followed by written notification, and the protocols set forth in Reclamation's Directives and Standards (USBR 2000) and the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C 3001 et seq., 43 CFR 10, as updated [NAGPRA]) will be followed, including Reclamation consultation with the AZSHPO and the Tribes. All work at the discovery locale shall cease and every attempt will be made to stabilize and protect the remains in place, and secure the discovery locale. In some cases, fragmented remains may not be readily identified by field personnel. In this case, an SRI physical anthropologist will identify the remains and, if determined to be human, SRI will immediately notify Reclamation, who in turn will consult with the AZSHPO and the Tribes.

Analytical Methods

All recovered historical-period artifacts will be sorted initially by material category: ceramic, glass, metal, wood, shell, and so on. Within each material category, the focus of subsequent analysis will be on characteristics that can help determine artifact function, point of origin, and period of manufacture. For example, ceramic artifacts, which are typically dominated by dishes used to prepare or serve food, will be examined for body (paste), vessel form, surface treatment, technology, and makers' marks. Glass artifacts, which typically consist of bottles and jars but may also include items such as lamp chimneys and window glass, will be examined for color, shape, decoration, closure type, base or neck finish, labeling, technology, makers'

marks, and other diagnostic characteristics. Metal artifacts, which may include a wide variety of household and non-household items such as cans, buckets, utensils, tools, machinery, automotive parts, cartridge cases, barrel hoops, and wire will be examined for any characteristics diagnostic of function, point of origin, and period of manufacture. Artifacts of other materials will be similarly examined for function, point of origin, technology, and period of manufacture. Each artifact will be assigned a unique catalog number, which is used for coding artifact characteristics and provenience information in a Microsoft Access database. The database, which will be linked by PDs to the larger SRI project database, will be used to generate summary tables and for relational analyses.

We also will assign artifacts in all material categories to 1–17 functional categories: communication, construction, coins and tokens, food preparation/consumption, food/beverage container, household furnishings, household maintenance, machinery, medical/health, mining/quarrying, personal items, religious items, tools/hardware, transportation, weaponry, other, and unknown. These categories crosscut the material categories and are useful in the interpretation of individual features or groups of features. We also will use a long list of common names to describe individual artifacts in order to characterize the artifacts from a feature in more tangible terms than purely functional characterizations sometimes allow.

We will consult a wide variety of published and unpublished sources to help identify artifacts and to determine function, point of origin, technology, and date of manufacture. For uncommon or unusual artifacts, the Internet is sometimes a useful source of information, including various museum, collector, and auction Web sites. The information provided by these sources is of widely varying usefulness and reliability—in many cases, only a photograph or illustration of a similar item is provided, with little or no accompanying information. Hence, we rely on Internet sources only when our print and other sources fail us and we are confident that the information provided by a Web site is reliable.

Archaeological Monitoring

SRI will provide an experienced supervisory-level archaeologist to monitor construction activities at the site. Should additional cultural deposits or features be discovered during monitoring, the monitor will, if necessary and appropriate, halt construction and notify the project principal investigator (PI) and Reclamation. The PI will consult with Reclamation, who in turn will consult with the AZSHPO and Tribes, to assess and determine a suitable course of action for the unanticipated discovery.

Consultation

If an unanticipated discovery involving prehistoric or historical-period Native American remains is made, SRI will assist Reclamation in coordinating and conducting one on-site visit with interested Native American groups either during excavation or during monitoring. The project PI will coordinate with Reclamation and attend the in-field meeting with Tribal representatives.

Reports

Upon conclusion of fieldwork, SRI will submit a preliminary letter report of its findings to Reclamation that can be used for consultation with agencies and other interested parties. This report will summarize field methods and will list all features that were identified. For each feature, we will present its dimensions, type, and excavation method (hand, complete, sampled, or not excavated). This report will include a preliminary assessment of the types and probable quantities of various material classes.

SRI will produce draft and final copies of a technical report that meets both SRI standards and the guidelines established by the AZSHPO. The report will include a discussion of culture history, a brief research design and related research questions modeled on the questions developed for this treatment plan, a

discussion of methods and results of the data recovery operation and monitoring effort, the results of artifact analyses, and a synthetic discussion that incorporates excavation and analytic results in a synthetic summary and discussion that places the site in the context of local and regional history and, if applicable, pre-history. All photographs, maps, figures, and illustrations will be of high quality. In addition, all site locational information will be placed in a separate, confidential appendix. The existing ASM site card for this site will be updated and submitted to ASM.

Quality Assurance, Compliance Measures, Permits, and Curation

Quality Assurance

In 1994, SRI instituted a corporate quality assurance (QA)/quality control program designed specifically for cultural resource management services. Our quality control program allows us to anticipate and avoid problems by means of a strategically designed team structure for the management and implementation of research projects. Specific tasks identified as part of SRI's QA program are noted below; the person or persons responsible for the task are noted in parentheses after each task.

1. Review and approval of the research design, plan of work, budget, and schedule (chief research officer, chief operating officer)
2. Review of project mobilization, ensuring that all necessary subcontracts, certificates of insurance, permits, and repository agreements have been obtained; vehicles and equipment have been inspected; and Blue Stake has been notified, if needed (project manager, office director, and chief operating officer)
3. Review of field and laboratory methods to ensure that the research design, work plan, burial agreement, and safety procedures are being followed (principal investigators, project manager, and office director)
4. Routine review of all field documentation to ensure accuracy and completeness (QA technicians)
5. Review of fieldwork demobilization to ensure that all field documentation has been completed, all artifacts and samples have been submitted to the laboratory with proper inventory forms, and all vehicles and equipment have been properly maintained (QA technicians and laboratory manager)
6. Routine review of laboratory work to ensure that processing is complete and all inventory records and computer databases have been checked for completeness and accuracy (laboratory manager)
7. Review produced reports to ensure that they are complete and that review comments have been addressed (publications department director, chief research officer, and chief operating officer)
8. Review project completion to ensure that all project deliverables have been completed and that all project materials have been properly curated (chief operating officer and project manager)

To accomplish these goals, QA has been embedded into our corporate structure and project management. For this project, the QA committee will consist of the chief research officer, chief operating officer, project manager, office director, and principal investigator. This team will communicate as necessary to share information on the status of the project, resolve conflicts in scheduling and personnel and equipment resources, and discuss major issues affecting the project.

Safety Measures and Environmental Requirements

SRI is committed to ensuring that all work complies fully with relevant Occupational Safety and Health Administration (OSHA) workplace standards and regulations. Field supervisors will monitor excavations to detect potentially contaminated sediments. If these are encountered, SRI project principals will be notified, and they in turn will notify Reclamation immediately. Work in potentially contaminated areas will be halted pending consultation with Reclamation and further evaluation by a professional environmental testing firm.

Following OSHA and other relevant state and county safety standards, SRI will make every effort to ensure the safety of all personnel working on this project. All work will comply fully with relevant OSHA workplace standards and regulations. In the event of serious injury or illness, SRI supervisors will contact appropriate emergency personnel (fire department, emergency medical technicians, or hospital) and follow their instructions. We will compile an injury report and notify appropriate agencies.

Permits

SRI will obtain an ARPA permit to perform the work agreed upon in the final treatment plan prior to the start of fieldwork.

Curation

All original field notes, photographs and negatives, digital files and digital images will be submitted to Reclamation after the final report is accepted. All analyzed artifacts and unanalyzed diagnostic artifacts will be prepared by SRI for curation using archival quality tags, bags, and boxes and submitted to Reclamation for final curation.

Key Personnel and Schedule

Key Personnel

To ensure the success of the AZ X:8:74 (ASM) data recovery project, management responsibility has been assigned to team personnel according to their strengths and experience. Tucson Office Director Mr. Robert Wegener will serve as project manager. His responsibilities will include overall management of the project, quality assurance, and liaison with the client for contractual matters. He will also manage day-to-day operations in terms of staffing, scheduling, facilities, equipment, and field operations, including compliance with the safety plan. Marlesa Gray, director of SRI's historic program, will serve as principal investigator. Her responsibilities on the project will include managing day-to-day research operations, ensuring that the project budget and deadlines are met, reviewing and overseeing the analysis and report preparation, and managing the subconsultant. The field director will be Mr. William White. He will be responsible for direct oversight of the fieldwork, portions of the analysis, and report preparation. The subconsultant who will be called on to provide service on this project will be a local backhoe operator equipped with both a toothed 2-foot bucket and a smooth-edged 4- or 5-foot mucking bucket.

Schedule

SRI will commence data recovery operations no later than 30 calendar days after AZSHPO's approval of this treatment plan and Reclamation's notice to proceed. One week after conclusion of monitoring, SRI will submit to Reclamation a brief letter report summarizing preliminary fieldwork results. SRI will submit a draft report describing the results of data recovery within 90 calendar days of beginning fieldwork. Within 30 calendar days of receiving Reclamation's comments on the draft report, SRI will submit the final report to Reclamation.

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