

A Linear Pedestrian Archaeological Survey in Olmos Basin Park, San Antonio, Bexar County, Texas

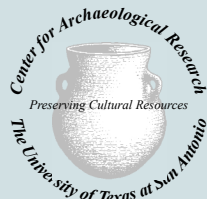


by
Sarah Wigley, Cynthia Moore Munoz, and Stephen Smith

Principal Investigator
Raymond P. Mauldin

Texas Antiquities Permit No. 6834

Prepared for:
Adams Environmental Inc.
12000 Crownpoint Drive, Suite 120
San Antonio, Texas 78233



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Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Archaeological Report, No. 439

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Abstract:

In April 2014, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) completed a linear archaeological survey along a 1.3-km proposed trail system in Olmos Basin Park for Adams Environmental, Inc. on behalf of the City of San Antonio (COSA). The survey, conducted under the requirements of the Texas Antiquities Code, was performed under Texas Antiquities Permit No. 6834, with Dr. Raymond P. Mauldin serving as Principal Investigator and Stephen Smith serving as Project Archaeologist. The work was conducted in advance of the proposed improvements. Pedestrian survey with shovel tests and backhoe trenches were used to search for cultural resources with the project right of way (ROW). The survey identified two new archaeological sites (41BX2008 and 41BX2009) and revisited one previously recorded site (41BX1426). All three sites contained buried prehistoric material in the form of lithic debitage, cores, and burned rock. Site 41BX2008 contained one lithic tool, as well as an historic component consisting of ceramics and glass. No features or temporally diagnostic prehistoric artifacts were identified on the project area. The density and depth of buried prehistoric material at all three sites suggest that they possess potential for future research. Therefore, the CAR recommends the sites be listed as having unknown eligibility with research potential on the National Register of Historic Places (NRHP) until testing to determine eligibility status can be completed. Because the surface impact from the proposed trail will range from 0-15 cm below surface (cmbs) in the area of 41BX1426, 0 cmbs in the area of 41BX2008, and 0-12 cmbs in the area of 41BX2009, it will not affect the deeply buried cultural deposits. The CAR recommends that construction of the proposed trail proceed as planned. In a letter dated June 24, 2014, the Texas Historical Commission (THC) agreed with these recommendations. The COSA Office of Historic Preservation (OHP) also concurred with the CAR's recommendations.

Artifacts collected and records generated during this project were prepared for curation according to Texas Historical Commission guidelines. They are permanently curated at the CAR at UTSA.

Table of Contents:

Abstract	iii
Table of Contents	v
List of Figures	vi
List of Tables.....	vii
Acknowledgements.....	viii
Chapter 1: Introduction and Project Summary	1
Project Summary	1
Chapter 2: Project Setting	5
The Project Area	5
Culture History	5
Prehistoric Texas	6
Historic Period	6
Previous Archaeological Investigations	6
Chapter 3: Field and Laboratory Methods	9
Field Methods	9
Laboratory Methods	9
Chapter 4: Results of Field Investigations	13
Site Revisit - 41BX1426.....	13
41BX2008.....	14
41BX2009.....	14
Chapter 5: Summary and Recommendations.....	17
References Cited	19

List of Figures:

Figure 1-1. Map of Bexar County showing the location of the project area	1
Figure 2-1. Aerial map showing the project area	3
Figure 2-2. Vegetation in the project area	4
Figure 2-3. Soil series in and near the project area	5
Figure 2-4. Postcard of the Olmos Dam from the 1940s (The Edwards Aquifer Website, Eckhardt 2014)	7
Figure 3-1. Shovel tests excavated in the project area	9
Figure 4-1. Map of positive and negative shovel tests excavated in the project area	11
Figure 4-2. Excavation of a shovel test on the southern portion of the project area	12
Figure 4-3. BHT 1 profile	13
Figure 4-4. BHT 2 profile	14
Figure 4-5. BHT 3 profile	14
Figure 4-6. Expanded boundary of 41BX1426 based on shovel test results. Positive tests are red, and negative tests are blue	15
Figure 4-7. Boundary of 41BX2008 showing positive (red) and negative (blue) shovel tests	17
Figure 4-8. Biface recovered from ST 17, Level 5	18
Figure 4-9. Boundary of 41BX2009 showing positive (red) and negative (blue) tests	19

List of Tables:

Table 4-1. Termination Depths of Shovel Tests	13
Table 4-2. Artifacts Recovered from Shovel Tests in Previously Recorded Site 41BX1426	16
Table 4-3. Prehistoric Artifacts Recovered from Shovel Tests at 41BX2008	17
Table 4-4. Historic Artifacts Recovered from Shovel Tests at 41BX2008	18
Table 4-5. Artifacts Recovered from Shovel Tests at 41BX2009	19

Acknowledgements:

The archaeological survey in this report was carried out by Alex McBride, Sarah Wigley, and Stephen Smith, all of the Center for Archaeological Research at The University of Texas at San Antonio. Stephen Smith directed the fieldwork as Project Archaeologist, Cynthia Moore Munoz acted as Project Manager, and Dr. Raymond Mauldin served as Principal Investigator. Thanks are extended to Dr. Mauldin for his assistance with lithic identification. Sarah Wigley processed and catalogued the artifacts under the direction of Laboratory Coordinator Melissa Eiring. Laura Carbajal produced the maps, Rick Young drafted the figures, and Kelly Harris edited the final manuscript. Special thanks to Sable Kitchen and the staff of Adams Environmental, Inc. for project details and the opportunity to work on the project. Thanks also to Kay Hindes of the COSA OHP and Mark Denton of the THC for their help with the project.

Chapter 1: Introduction and Project Summary

In April 2014, the Center for Archaeological Research at The University of Texas at San Antonio was contracted by Adams Environmental, Inc. to provide archaeological services to the City of San Antonio (COSA) for a proposed 1.3-km trail system and a pedestrian bridge in Olmos Basin Park located in San Antonio, Bexar County, Texas (Figure 1-1). The project area is located on the USGS San Antonio East 7.5-minute series quadrangle map. The CAR conducted a linear pedestrian survey with shovel testing and backhoe trenching to identify and document all the archaeological sites within the project area that could be impacted by the proposed expansions.

The land is owned by the COSA, a political subdivision of the State of Texas. As such, the project has to comply with

State Historic Preservation laws and the mandates of the Antiquities Code of Texas. The work was also coordinated through the COSA OHP in compliance with the COSA Unified Development Code Chapter 35. The archaeological survey was performed under Texas Antiquities Permit No. 6834 with Dr. Raymond P. Mauldin, CAR Acting Director, serving as Principal Investigator and Stephen Smith serving as Project Archaeologist.

This document presents the results of these investigations. Following this introduction, the chapter summarizes the work conducted at Olmos Basin Park for this project. Chapter 2 gives an overview of the environmental and cultural setting of the project and reviews the previous archaeological work that has been conducted in the area. Chapter 3 outlines the

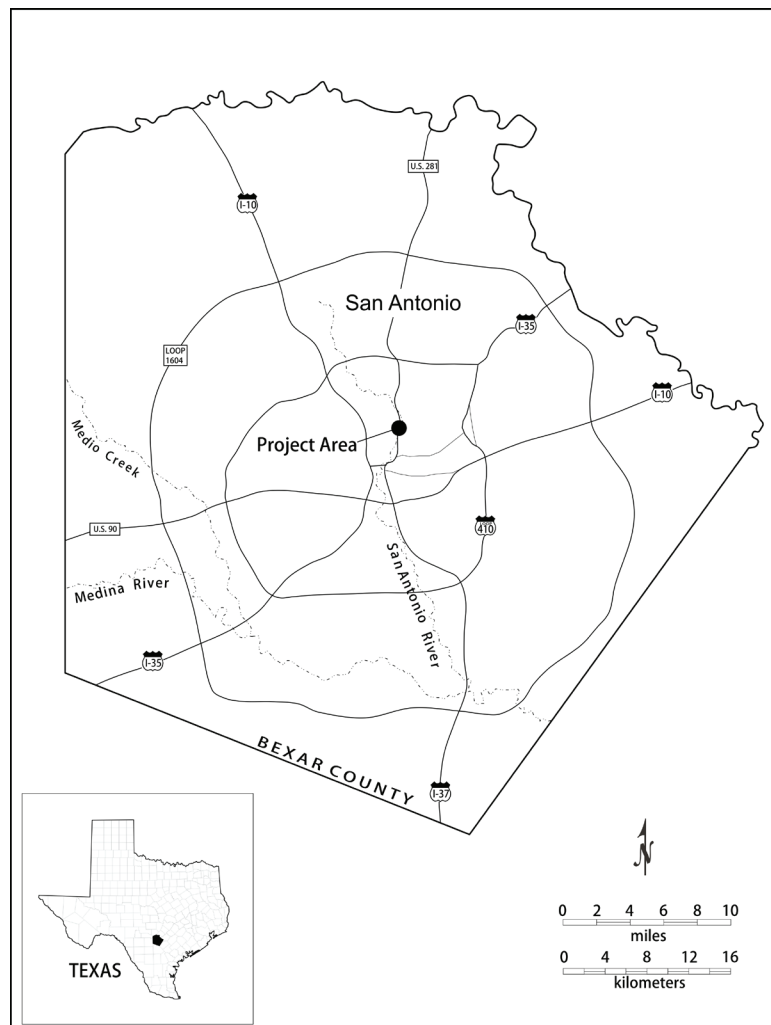


Figure 1-1. Map of Bexar County showing the location of the project area.

laboratory and field methods employed by the CAR during the project. Chapter 4 provides the results of the field investigations, and Chapter 5 summarizes the project and provides recommendations based upon the results.

Project Summary

The CAR completed a 100% intensive pedestrian survey of the proposed 1.3-km trail system, including the excavation of 36 shovel tests and three backhoe trenches. Of the 36 shovel tests, 24 were positive for cultural material. The three backhoe trenches, placed on either side of Olmos Creek within the footprint of a proposed pedestrian bridge, were void of cultural material.

The borders of a previously recorded archaeological site, 41BX1426, were delineated, and two previously unrecorded sites (41BX2008 and 41BX2009) were identified. Prehistoric deposits in all three areas extended to 60 cm below the surface (cmbs). In addition, historic material was recovered from four shovel tests within the boundaries of 41BX2008. This material, concentrated in the upper 30 cmbs in three of the tests, extended to 60 cmbs in the fourth shovel test.

Site 41BX1426 was originally recorded in 2001 by SWCA (Barile and Houk 2001) as a prehistoric site with two components; one component was concentrated at 25 cmbs and another at 60-100 cmbs. Based on the distribution of

positive shovel tests, the CAR recommends an expansion of the site from the original 5,500 m² to approximately 18,600 m². The complete extent of the site was not determined, as testing outside of the Area of Potential Effect (APE) was beyond the scope of this project. Prehistoric material, consisting of debitage, burned rock, and one core, was recovered from 10-60 cmbs.

41BX2008 with both prehistoric and historic components contained glass, ceramic, bone, brick, metal, debitage, a biface, and burned rock. The site is located midway through the project area between Jones-Maltsberger Road and US-281. Prehistoric material was recovered 10-60 cmbs, and historic material was concentrated 10-40 cmbs. Surface material is minimal.

41BX2009 was identified in the northern portion of the project area between Jones-Maltesberger Road and the exit ramp of US-281. Deposits of debitage and burned rock are concentrated from 30-60 cmbs.

Within the current APE, surface material is minimal. The surface impacts from the proposed trail are shallow throughout the APE with the exception of the creek crossing, and backhoe trenches excavated along the creek lacked cultural material. Given these factors, the CAR recommends that construction of the proposed trail proceed as planned. Both the THC and COSA OHP agree with these recommendations. Recommendations are discussed in detail in Chapter 5.

Chapter 2: Project Setting

This chapter discusses the environment and cultural history relevant to the project area. The chapter concludes with a summary of previous archaeological work conducted in the vicinity of the project area.

The Project Area

The project area is located within Olmos Basin Park in north-central San Antonio, Bexar County, Texas. The project area encompasses a proposed 1.3-km trail system in the eastern area of the park. Figure 2-1 illustrates the path of this trail system. The park, spanning 409 hectares, is bounded on the

west by US-281, on the east by Devine Road and Jones-Maltsberger Road, and on the south by Alamo Heights Boulevard and the Olmos Basin North trail.

A section of Olmos Creek crosses the park. The creek and its surrounding areas represent a likely location for archaeological materials, as they would have provided significant resources to past peoples in the area (Fox 1975). One previously recorded archaeological site (41BX1426) is within the project area. The Balcones Fault Zone runs through Bexar County and is a source for some of the largest springs in Texas. Some of the significant springs originating from this zone within Bexar County include Salado Creek, San



Figure 2-1. Aerial map showing the project area.

Antonio Springs, and San Pedro Springs. The displacement of rocks through faulting results in the escape of water within the Edwards Limestone underground reservoir due to artesian pressure (Brune 1975).

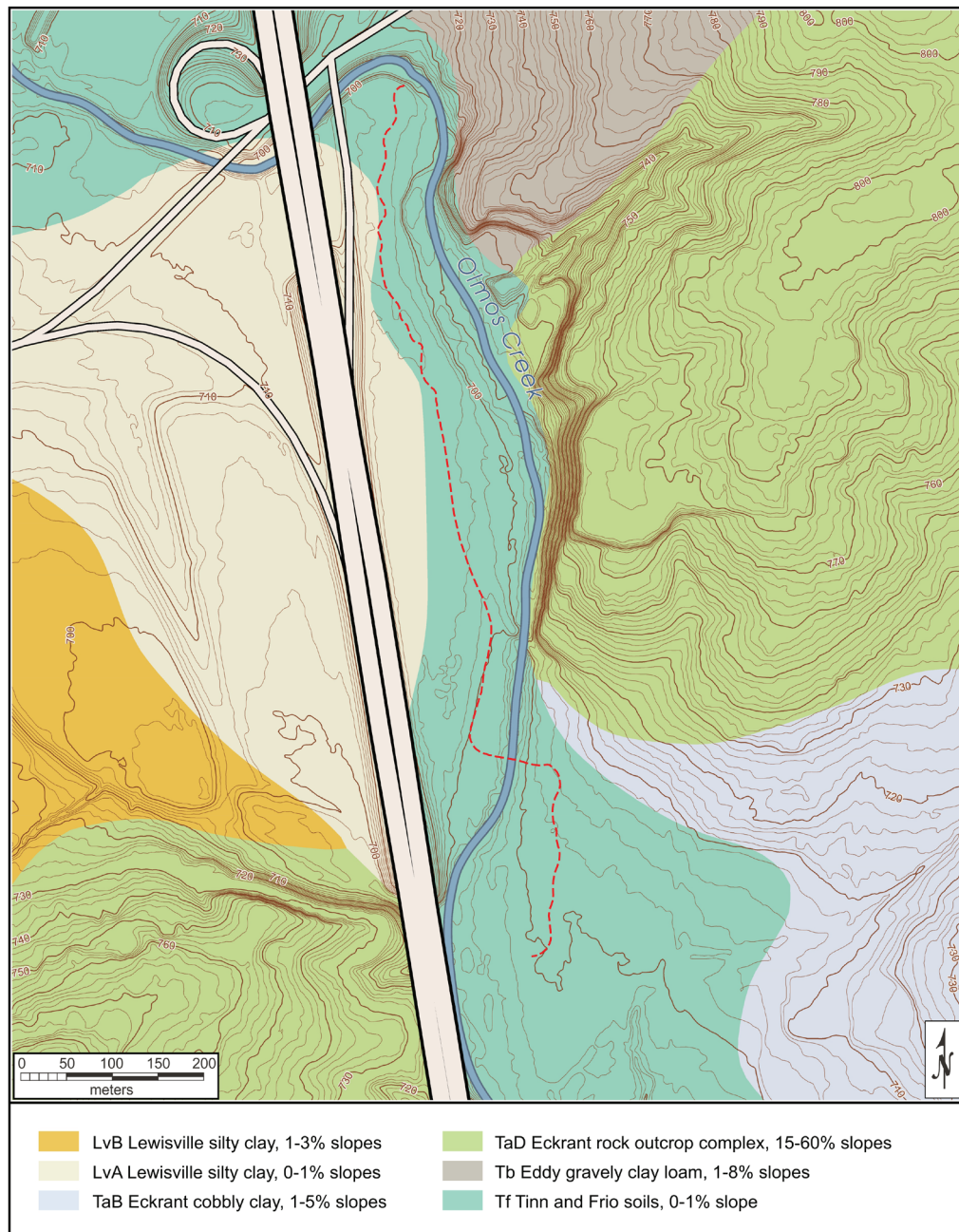
Olmos Creek originates north of the city limits of San Antonio, between Leon Creek and Salado Creek. The elevations within its watershed range from 360 m above mean sea level (msl) to 204 m msl at the lower end. The topography within its watershed is described as rolling to hilly. The Olmos Creek area is prone to severe flooding in the spring and fall due to intense local thunderstorms. Olmos Dam, located to the south of the project area, was constructed to control flooding (U.S. Army Corps of Engineers [USACOE] 1972). The environment surrounding the creek is populated by mesquite, live oak, and grasses (Figure 2-2; Texas State Historical Association 2010).

Climate in Bexar County is classified as subhumid-subtropical with mild, dry winters and hot, humid summers. Temperatures in the county range from an average low of 4°C in January to an average high of 36°C in July. An average annual rainfall of approximately 79 cm a year supports a 265-day growing season (Long 2010).

Tinn and Frio series soils (Tf) make up the majority of the project area. This series of soils is described as “very deep, moderately well drained, very slowly permeable that formed in calcareous clayey alluvium” (Figure 2-3; National Cooperative Soil Survey [NCSS] 2014c, 2014e). They are found on nearly level floodplains with slopes of < 1% (NCSS 2014c, 2014e). These soils can reach a depth of 203 cm, commonly containing two A and several B horizons (NCSS 2014c, 2014e). Lewisville series soils (LvA) are also found within the project area. This series of soils is described as “very deep, well drained, moderately permeable soils that formed in ancient loamy and calcareous sediments” and are located in stream terraces with slopes of 0-10% (NCSS 2014d). The Lewisville series (LvA and LvB) continues to the west of Olmos Park. Eddy (Tb) and Eckrant (TaB and TaD) soils lie to the east of the project area. TaD soils are also found to the southwest of the project area. Eddy series soils are characterized as “very shallow, well drained, moderately permeable soils formed in chalky limestone” and are found on ridges with slopes of 1-20% (NCSS 2014b). Eckrant series soils are described as very shallow and well drained, located above hardened limestone bedrock. They are formed in residuum derived from limestone. These soils are found on summits, shoulders and back slopes of ridges with slopes of 1-60% (NCSS 2014a).



Figure 2-2. Vegetation in the project area.



Culture History

The prehistory of south and central Texas is generally discussed in terms of three broad periods, the Paleoindian, Archaic, and Late Prehistoric, which are then more specifically subdivided temporally. Distinctions between these periods are strongly reliant on projectile point classification, which have both temporal (Bousman et al. 2004) and cultural (Collins 2004) features. Intact cultural materials from this time period are often difficult to locate due to the ephemeral nature of sites (Collins 2004; Hester 2004), the long timespan, and natural

and cultural impacts to the landscape, such as the dynamic impact of fluvial systems (Collins 2004). The area also has a complex historic component beginning with the arrival of Europeans in the region.

Prehistoric Texas

The Paleoindian period, near the end of the Pleistocene era, spans 13,000-9,000 BP. Researchers often distinguish Early and Late subperiods by the close of the Pleistocene and beginning of the Holocene. Paleoindian subsistence strategies

are distinguished by exploitation of megafauna such as bison and mammoth that were present in the area during this period (Bousman et al. 2004). Although Late Pleistocene megafauna may have constituted a part of Paleoindian subsistence, these peoples are perhaps better characterized as more generalized hunter-gatherers, exploiting a wide variety of plants and animals including large herbivores and small animals (Collins 2004; Nickels 2000). The more distinctive projectile points from this period are lanceolate in shape. Fluted Folsom and Clovis points are especially characteristic of this period, but Plainview, Midland, and Angostura are also considered diagnostic (Bousman et al. 2004). Within Bexar County, the sites of Pavo Real (41BX452) and St. Mary's Hall (41BX229) are both known to have Paleoindian components (Figueroa and Frederick 2008; Hester 1977).

Subsistence strategies in the Archaic period (9000-1200 BP) are characterized by an intensification of hunting and gathering of local resources. There is some debate over the presence of bison in the area during this period, as changing environmental conditions negatively affected their habitat (Collins 2004). Material culture, such as projectile point type, shows increased diversity, and an increase in the use of heated rocks (noted archaeologically in the form of middens, hearths, ovens and other such features) is apparent (Collins 2004). Large cemeteries, such as Loma Sandia (41LK28) and, in Bexar County, the Olmos Dam site (41BX1) and Hitzfelder Cave (41BX26), are also present in the Middle and Late Archaic in Central and South Texas (Hester 2004; Lukowski 1988; Munoz et al. 2013; Taylor and Highley 1995). Diagnostic artifact types for the period are numerous. For the Early Archaic, Guadalupe tools and a variety of point types, including Martindale and Uvalde forms, are considered diagnostic (Collins 2004; Hester 2004). For the Middle Archaic, diagnostic points include early triangular bifaces (Hester 2004) and Bell-Andice-Calf Creek, Nolan-Travis, and Taylor projectile points (Collins 2004). For the Late Archaic, a variety of dart points, including Pedernales, Montell, Castroville, Marcos, Ensor, and Frio, along with corner-tanged knives, are considered indicative of the time period (Collins 2004).

The Late Prehistoric period spans 1200-350 BP. In Central and South Texas it is defined by the use of bow and arrow technology and later, ceramics (Collins 2004; Kenmotsu and Boyd 2012). It is noted that dart points, such as Ensor, persist in south Texas somewhat later than in Central Texas (Hester 2004). The early Late Prehistoric (Austin Phase) is associated with Edwards and Scallorn projectile points, while the later phase (Toyah) is associated with pottery, prismatic blade technology, long thin bifaces, and Perdiz dart points (Collins 2004).

Historic Period

The prehistoric period closes and the historic period begins with the first documented arrival of Europeans in the area. Although early interactions between Native Americans and Europeans were infrequent in the area (Foster 1995, 1998; Wade 1998, 2003), the population had already been affected by the introduction of groups fleeing Spanish occupation and by disease introduced by Europeans (Foster 2008; Kenmotsu and Arnn 2012). In later periods, Native Americans sought refuge in the missions, which further altered their way of life (Cargill 1996).

The San Antonio Springs and the San Antonio River system were central in the historic development of San Antonio (Brune 1975; Fox 1975), and the development of the *acequia* system was critical to the success of the city (Eckhardt 2014). The area of the Olmos Basin is prone to flooding. In 1921, a severe flood occurred in this area, resulting in the deaths of 49 people (USACOE 1972). The Olmos Dam was constructed in response to this 1921 flood. Figure 2-4 depicts the dam circa 1940 (Eckhardt 2014). During its construction, the site of 41BX1, a large and complex Late Archaic site that included a cemetery, was uncovered (Kelly and Eaton 1979; Lukowski 1988). The Olmos Basin Park was constructed by the Works Progress Administration (Barile and Houk 2001).

Previous Archaeological Investigations

A number of archaeological sites are located near the project area. Site 41BX1426, recorded by SWCA, Inc. Environmental Consultants in 2001, is located within the project area. The site was discovered during an archaeological survey that was conducted to gather data in an area of the park that was the subject of a proposed rehabilitation project. Pedestrian survey and auger testing (n=16) to a depth of 100-120 cmbs uncovered burned rock fragments, chert flakes in various stages of reduction, and one core. The majority of these artifacts were located around 25 cmbs; however, another cluster was identified 60-100 cmbs. At the time of the survey, the boundaries of the site were not delineated, but it was noted that the cultural deposits were clustered within the center of the project area. No features or diagnostic artifacts were uncovered.

The most extensively documented site in the area is 41BX1, located just south of the project area. The site was initially uncovered during the construction the Olmos Dam in 1925 and was impacted by that construction. Much of the site was likely destroyed (Orchard and Campbell 1954). Systematic investigation of the area was not conducted until a 1974 archaeological survey (Luke 1974). In 1977, a surface survey



Figure 2-4. Postcard of the Olmos Dam from the 1940s (*The Edwards Aquifer Website, Eckhardt 2014*).

conducted by the CAR uncovered a scatter of prehistoric artifacts to the south of the dam and on the east bank of Olmos creek (Brown 1977). In 1979, the CAR excavated a series of 13 backhoe trenches north of the dam. The project area, proposed as a borrow pit, covered 6 hectares. The trenches uncovered a large portion of the site that had been disturbed by construction of the Olmos Dam. Only two trenches cut into areas that were undisturbed. A number of lithic artifacts, including four projectile points, were uncovered, as well as a large amount of faunal remains, snail shell, and historic artifacts that were characterized as “historic debris” (Assad 1979:18). Radiocarbon samples removed from 90 cm below the undisturbed zone in Trench 5 provided a date range of 1920-1950 B.C. (Assad 1979:21).

In the summer of 1979 a series of prehistoric burials were uncovered during the course of repair activities on the Olmos Dam. Initial emergency recovery activities carried out by the CAR-UTSA and SARA consisting of ten backhoe trenches uncovered three separate areas of occupation north of the Olmos Dam. The first area was identified as the zone previously identified by Assad (1979). The second was a small area that contained midden deposits, burned rock, and human burials, tentatively dated to the Archaic period. The burials were documented by the UTSA Summer field school. The third represented another small midden (Kelly and Eaton 1979). A mitigation project was initiated in order to locate and document the burials as well as sample the two known occupation zones of 41BX1. Thirty-six 1-x-1-m units and one 2-x-2-m unit were excavated in Zone 2, which contained the human burials, and one 2-x-2-m unit was dug in Zone 3,

which contained a small midden. In total, 13 human burials were recorded. Associated radiocarbon samples dated to the Late Archaic. Nine of the burials were somewhat disturbed by recent machine activity in the area. Associated artifacts included antler, mussel shell pendants, modified bone, and chert. In addition to the burials, features identified as burned rock concentrations and soil anomalies were noted in the course of fieldwork (Lukowski 1988).

A survey conducted from the Olmos Dam to Hildebrand Avenue by the CAR-UTSA in 1975 also documented a number of sites in the area. The sites recorded included 41BX289, the historic Brackenridge home; 41BX282, the San Antonio Spring, which was noted as a prehistoric campground site impacted by repeated flood events; 41BX283, a historic quarry site; 41BX284, a historic structure known as the “mill”; 41BX285, a historic site consisting of unidentified stone wall ruins; and 41BX287, which was noted as a possible historic site due to historic artifact scatter found on the surface. A prehistoric quarry site (41BX286) located on the east side of the basin that contained chert cobbles and a scatter of flakes was noted. In addition, five prehistoric camp sites, 41BX288, 41BX24, 41BX290, 41BX291, and 41BX292, were identified by chert and burned rock scatters on the surface (Fox 1975).

Site 41BX193 is located to the northwest of the project area across US 281 and to the east of the San Antonio gun club. It was recorded by Milton Bell in 1974. Subsurface deposits containing lithic debitage and a biface were recorded (THC 2014).

Chapter 3: Field and Laboratory Methods

Field Methods

The Scope of Work prepared for the Texas Historical Commission proposed a minimum of 13 shovel tests within the 1.3-km linear survey area to fulfill THC minimum survey standards (a density of 16 shovel tests per mile).

It was specified that the previously recorded site within the project area (41BX1426) would be revisited to better define site boundaries. Additional shovel tests were placed to define the extent of the previously unrecorded sites that were encountered. In total, 36 tests were excavated within the project area (Figure 3-1).

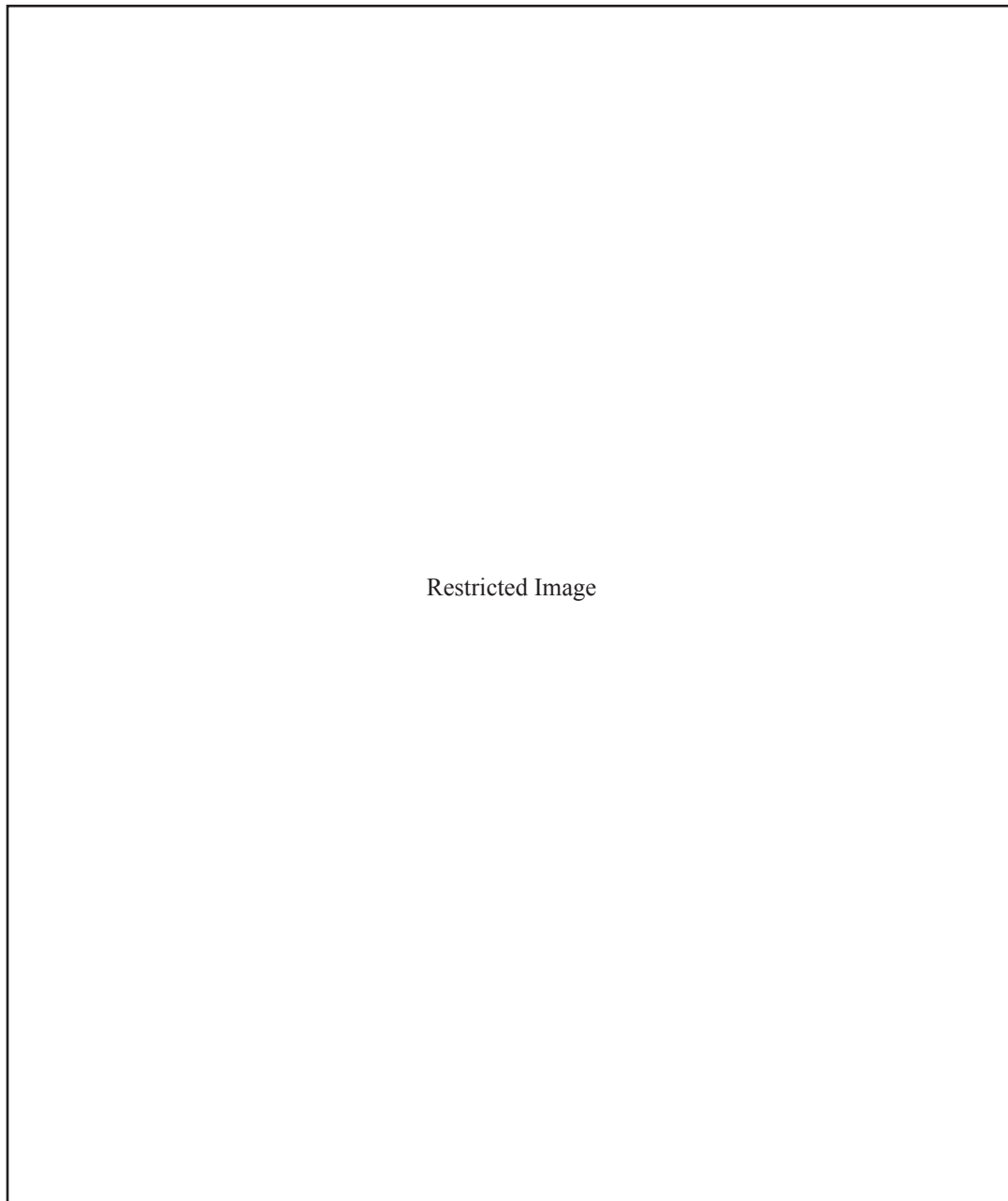


Figure 3-1. *Shovel tests excavated in the project area.*

For the purposes of this survey, an archaeological site was defined as containing: (1) five or more surface artifacts within a 15-m radius (ca. 706 m²); (2) a single cultural feature, such as a hearth, observed on the surface or exposed in shovel testing or backhoe trenching; (3) a positive shovel test containing at least three artifacts within a 10-cm level; (4) a positive shovel test or backhoe trench containing at least five artifacts; or (5) two positive shovel tests within 30 m of one another. A minimum of six shovel tests were excavated to determine the boundaries of each site. Site boundaries were plotted using an aerial map. Surface artifacts were collected only if temporally diagnostic. Surface artifacts observed that were not temporally diagnostic were recorded as isolated finds, and their location recorded with a Trimble Geo XT GPS unit.

Shovel tests were 30 cm in diameter and excavated in 10-cm increments. All were excavated to a depth of 60 cmbs with the exception of three (STs 6, 12, and 29) that were terminated due to obstructions. All soil from each level was screened with quarter-inch hardware cloth, and all encountered artifacts were recovered with appropriate provenience for laboratory processing, analysis, and curation. In addition, a soil sample was collected from each level. A shovel test form was completed for each excavated shovel test, which detailed final excavation depth, a tally of all materials recovered from each 10-cm level, and a brief soil description. Pertinent observations were also included as comments. The location of each shovel test was recorded with a GPS unit and hand sketched onto an aerial photograph as a backup.

Three backhoe trenches were excavated to explore the area intended for construction of a pedestrian bridge crossing Olmos Creek (see Figure 3-1). Trench 1 was located on the east bank of the creek. It ran parallel to the creek (roughly north-south). Only one backhoe trench was excavated on

the east bank due to the difficulty of navigating machinery within the rough terrain. Trenches 2 and 3 were excavated along the west bank of the creek. Trench 2 ran parallel to the creek (roughly north-south), and Trench 3 was placed perpendicular (roughly east-west) to Trench 2, intersecting in an L-shape.

All backhoe trenches were excavated to a depth of 150 cmbs. No backdirt was screened. The soil stratigraphy was examined, and the walls were examined for artifacts. For each trench, both walls were photographed, and a 1-m segment of one wall was profiled. All backhoe trenches locations were mapped using a GPS unit and hand sketched onto an aerial photograph as backup.

Laboratory Methods

All cultural materials and records obtained and/or generated during the project were prepared in accordance with 36 CFR part 79 and THC requirements for State Held-in-Trust collections. Artifacts processed in the CAR laboratory were washed, air-dried, and stored in 4-mm, zip-locking, archival-quality bags. Materials needing extra support were double-bagged. Acid-free labels were placed in all artifact bags. Each label contained provenience information and a corresponding lot number written in archival ink, in pencil, or with a laser printer. Tools and ceramics were labeled with permanent ink over a clear coat of acrylic and covered by another acrylic coat. In addition, a small sample of unmodified debitage from each lot was labeled with the appropriate provenience data. Artifacts were separated by class and stored in acid-free boxes. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and placed in archival-quality sleeves. All field forms were completed with pencil. Upon completion of the project, all collected materials will be housed at the CAR.

Chapter 4: Results of Field Investigations

In April 2014, an intensive, linear pedestrian survey was conducted at Olmos Basin Park. Thirty-six shovel tests were excavated along the proposed 1.3-km trail, and three backhoe trenches were excavated on the banks of Olmos Creek in the area of a proposed pedestrian bridge (Figures 4-1 and 4-2).

The survey revealed both surface and subsurface prehistoric and historic cultural materials concentrated in three areas, previously recorded site 41BX1426 and newly recorded sites 41BX2008 and 41BX2009. No cultural material was observed in the backhoe trenches.

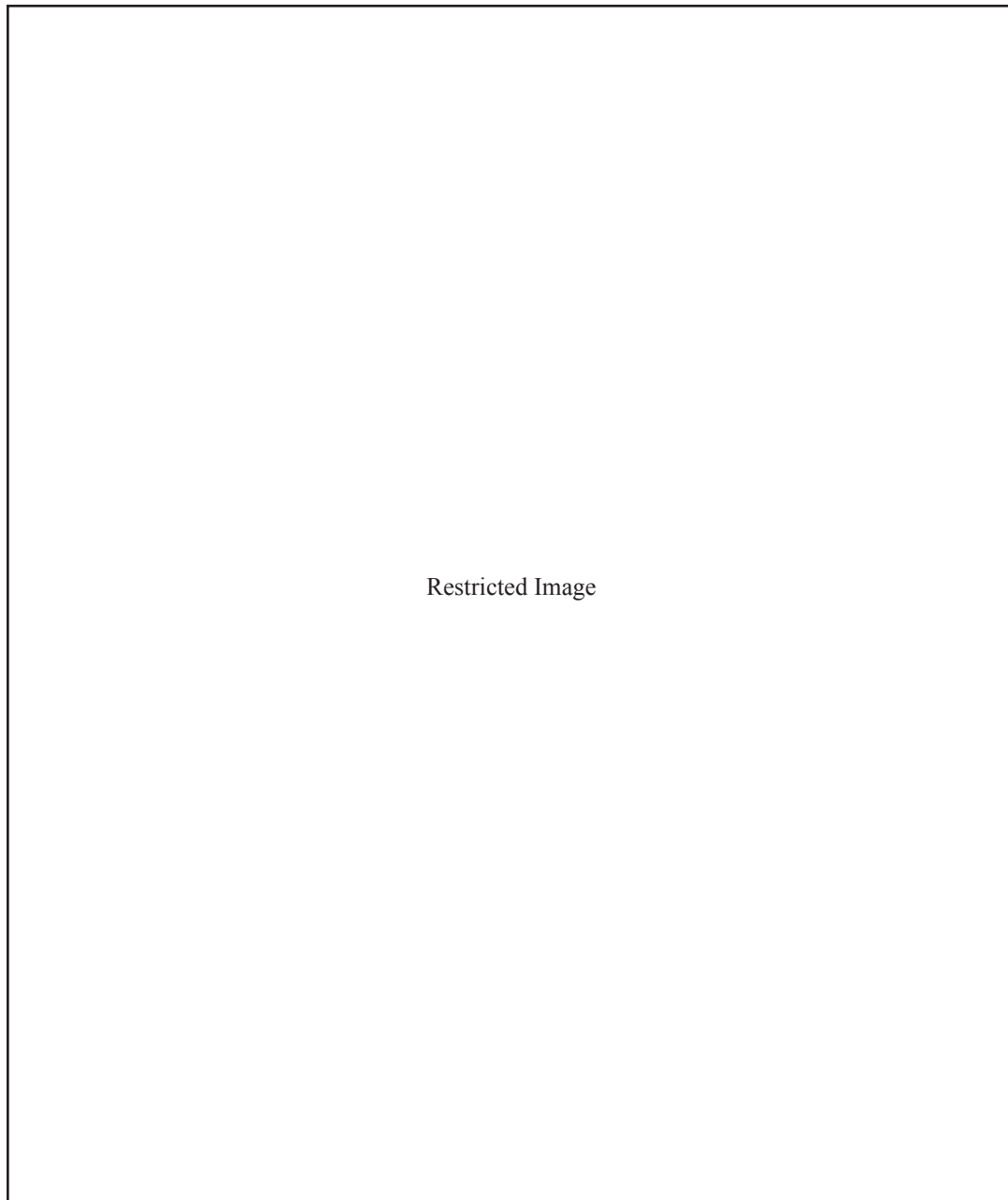


Figure 4-1. *Map of positive and negative shovel tests excavated in the project area.*



Figure 4-2. Excavation of a shovel test on the southern portion of the project area.

Of the 36 shovel tests excavated during the survey, 24 (67%) were positive. All positive shovel tests extended the full 60 cmbs, with 17 of the 24 (71%) containing cultural material below 40 cm and 13 (54%) below 50 cm (Figure 4-1 and Table 4-1). This indicates the presence of deeply buried prehistoric deposits in all three designated sites within the project area: 41BX1426, 41BX2008, and 41BX2009. During the course of the initial pedestrian survey, several tertiary flakes were noted on the surface and recorded with a GPS unit. The surface flakes were located within the boundaries of 41BX2008. No other surface material was noted.

Three backhoe trenches (BHT) were excavated on the banks of the Olmos Creek in the area of the proposed pedestrian bridge (see Figure 4-1). Backhoe trenches were dug to approximately 150 cmbs. No cultural material was observed in the trenches. A thick layer of river gravel was present in all backhoe trenches, although on the west bank of the creek this layer was somewhat shallower than on the east bank. Two layers of clay loam underlay the gravel on the west bank. The stratigraphy seems to be influenced by creek flooding, and any cultural deposits may be washed away or deeply buried. All trenches contained silty clay in the upper levels over the river gravel.

The profile of BHT 1, located on the west bank of the Olmos Creek and roughly parallel to the creek, contained four

depositional zones (Figure 4-3). Layer 1 (0-30 cmbs) was a brown (10YR 5/3), loose sandy clay loam containing a large amount of roots. Layer 2 (30-60 cmbs) was a more compact very dark gray (10YR 3/1), gravel layer containing large limestone cobbles. Layer 3 (60-100 cmbs) was a gray (10YR 5/1), compact silty clay loam layer containing some roots. Layer 4 (100-150 cmbs) was a dark grayish brown (10YR 4/2), compact silty clay loam layer containing fewer roots.

Trench 2 was excavated parallel to the east bank of Olmos Creek. Three depositional zones were observed in the profile (Figure 4-4). Layer 1 (0-30 cmbs) was a dark gray (10YR 4/1), silty clay with roots. Layer 2 (30-55 cmbs) was a grayish brown (10YR 5/2), silty clay with larger roots than the previous layer. Layer 3 (55-150 cmbs) was a thick layer of mottled brown (10YR 5/3), sandy river gravel extending to the bottom of the trench.

Backhoe Trench 3, located on the east bank of the Olmos Creek, intersected and was perpendicular to BHT 2. The deposition in this trench was very similar to BHT 2. Three layers were observed in the profile (Figure 4-5). The top sediments (0-40 cmbs) were a dark gray (10YR 4/1), silty clay with roots. Layer 2 (40-60 cmbs) was a grayish brown (10YR 5/2), clay with larger roots, and Layer 3 (60-150 cmbs) was a mottled brown (10YR 5/3), sandy gravel with caliche.

Table 4-1. Termination Depths of Shovel Tests

ST	Cultural Material Present	Terminal Depth (cmbs)	Reason for Termination	ST	Cultural Material Present	Terminal Depth (cmbs)	Reason for Termination
1	No	60	Complete	19	No	60	Complete
2	Yes	60	Complete	20	Yes	60	Complete
3	Yes	60	Complete	21	No	60	Complete
4	Yes	60	Complete	22	No	60	Complete
5	Yes	60	Complete	23	Yes	60	Complete
6	No	15	River gravel	24	No	60	Complete
7	Yes	60	Complete	25	Yes	60	Complete
8	Yes	60	Complete	26	Yes	60	Complete
9	Yes	60	Complete	27	Yes	60	Complete
10	No	60	Complete	28	No	60	Complete
11	No	60	Complete	29	No	40	Bedrock
12	No	40	Rock	30	Yes	60	Complete
13	Yes	60	Complete	31	Yes	60	Complete
14	Yes	60	Complete	32	Yes	60	Complete
15	No	60	Complete	33	Yes	60	Complete
16	Yes	60	Complete	34	Yes	60	Complete
17	Yes	60	Complete	35	Yes	60	Complete
18	Yes	60	Complete	36	Yes	60	Complete



Figure 4-3. BHT 1 profile.

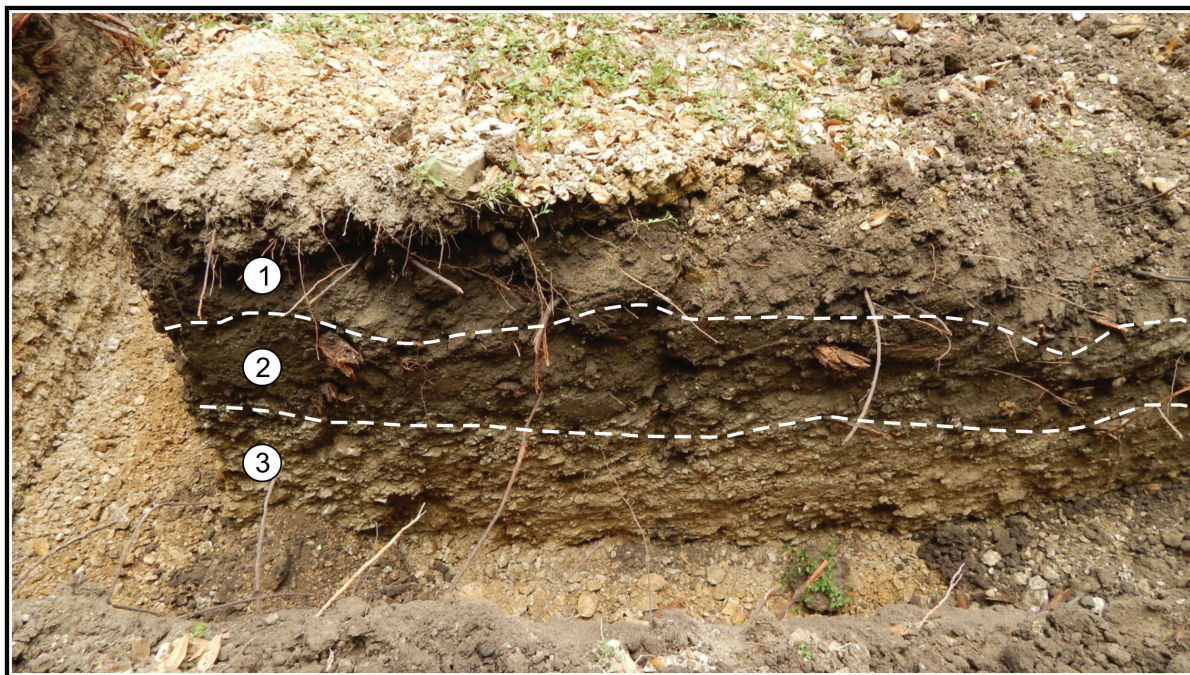


Figure 4-4. BHT 2 profile.



Figure 4-5. BHT 3 profile.

Site Revisit - 41BX1426

Site 41BX1426 was previously described as featuring two prehistoric components, one 25 cmbs and another 60-100 cmbs (Barile and Houk 2001). No diagnostic artifacts were recovered in either the previous survey or the current

investigation. Because this site is located in a portion of Olmos Basin Park that contains a playground, restrooms, and Party House, it is subject to a significant amount of visitor traffic. Eleven shovel tests were excavated to delineate the boundary of the site (Figure 4-6). Eight of the 11 were positive for artifacts, including 48 pieces of debitage, 2

cores, and 165 gm of burned rock (Table 4-2). Shovel Tests 2, 3, and 30 contained modern materials (bottle caps and glass) suggesting disturbed sediments. A large disturbance was noted within the site in the area of ST 8. Within ST 8, previous machine excavations had disturbed the sediment to a depth of at least 50 cmbs.

Shovel Test 2 contained burned rock in Level 5 (40-50 cmbs). Shovel Test 3 was positive for prehistoric material (lithic debitage and burned rock) from Level 3 to 6 (20-60 cmbs), but it also contained modern glass extending as deep

as Level 5. Shovel Test 4 was positive for prehistoric material from 20-40 cmbs and 50-60 cmbs. Shovel Test 5 contained debitage and burned rock in Level 2 (10-20 cmbs) and Levels 4 to 6 (30-60 cmbs). Shovel Test 7 recovered two flakes from 10-40 cmbs. The majority of the soil in ST 8 was mottled fill. Two pieces of lithic debitage were collected, but they may be the result of mechanical disturbance. Shovel Test 9 contained prehistoric material in all levels but Level 4 (30-40 cmbs). Shovel Test 30 was positive from Levels 2 to 5 (10-50 cmbs) for prehistoric material and for modern material in Levels 4 and 5 (30-50 cmbs).



Restricted Image

Figure 4-6. *Expanded boundary of 41BX1426 based on shovel test results. Positive tests are red, and negative tests are blue.*

Table 4-2. Artifacts Recovered from Shovel Tests in Previously Recorded Site 41BX1426

Level	Depth (cmbs)	ST 2	ST 3	ST 4	ST 5	ST 7	ST 8	ST 9	ST 30
1	0-10							1 D	
2	10-20		13 G		2 D	1 D		2 D	5 D, 1 C, BR (3 gm)
3	20-30	BC	7 G, BR (5 gm)	2 D, BR (40 gm)			2 D	1 C	3 D
4	30-40		1 D, 1 G	BR (28 gm)	5 D, BR (2 gm)	1 D			1 D, 1 G, BR (1 gm)
5	40-50	BR (22 gm)	2 D, 2 G, BR (3 gm)		6 D, BR (0.4 gm)			1 D, BR (4 gm)	1 G, BN (1 gm)
6	50-60		1 D, BR (53 gm)	1 D	6 D, BR (7 gm)			5 D, BR (1 gm)	

Key: D - debitage, C - core, BN - bone (gm), BR - burned rock (gm), G - glass, BC - bottle caps

Based on the distribution of positive shovel tests, the CAR recommends an expansion of the site from the original 5,500 m² to approximately 18,600 m². Because testing outside of the APE was beyond the scope of this project, the complete extent of the site was not determined. No features or temporally diagnostic artifacts were identified by the CAR on the site. Although the site appears disturbed by park construction and activities, with modern glass present as deep as 50 cmbs in STs 3 and 30, the depth of buried prehistoric material in STs 3, 5, and 9 suggests that the site possesses the potential for future research. Therefore, the CAR recommends that site 41BX1426 be listed as having unknown eligibility with research potential on the NRHP until testing to determine eligibility status can be completed. Because the surface impact from the proposed trail will range from 0-15 cmbs in the area of the site, it will not affect the deeply buried cultural deposits.

41BX2008

41BX2008 is located in a wooded area between Jones-Maltsberger Road and US-281. It is bounded by a utility easement on the west and an access trail on the south. The utility easement may have impacted the western boundary. An unpaved park trail follows the path of the intended trail improvements through the area. The site contains both a prehistoric and historic component with historic cultural material concentrated in its northern quarter. Of 13 shovel tests excavated in the area, 11 were positive (Figure 4-7). Artifacts recovered consist of debitage (n=26), a biface, burned rock (1.4 gm), ceramics (n=14), glass (n=68), bone (18 gm), brick (12 gm), and metal (n=4). Shovel Tests 13, 14, 16, 17, 23, and 31 were positive for prehistoric material, STs

26, 32, and 34 contained historic material, and STs 18 and 25 contained both prehistoric and historic artifacts (Tables 4-3 and 4-4).

Shovel Test 13 contained two flakes (20-40 cmbs). Shovel Test 14 was positive for lithic material in all levels but Level 4 (30-40 cmbs). Shovel Tests 16 and 17 each contained one artifact, debitage (50-60 cmbs) and a biface (40-50 cmbs), respectively. The triangular biface is missing the distal portion and, due to the polishing on the base, appears to have been hafted (Figure 4-8). Two specimens of debitage were recovered (20-40 cmbs) in ST 18 and one piece (10-20 cmbs) in ST 23. Both STs 25 and 31 contained lithic material (40-60 cmbs).

Historic artifacts recovered from the northern portion of 41BX2008 include white earthenware, a possible medicine bottle base, cut bone, red brick, a cut nail, and a wire nail. One piece of white earthenware was decorated with a rose decal design, and one specimen was identified as "flow blue." Some of the recovered glass was burned and completely opaque from heavy patination. Ceramics recovered from the site, as well as the presence of both wire and cut nails, indicate a date range from 1870-1930.

Deeply buried prehistoric material in STs 14, 16, 17, 25, and 31 suggests that the site possesses the potential for future research. Therefore, the CAR recommends that 41BX2008 be listed as having unknown eligibility with research potential on the NRHP until testing to determine eligibility status can be completed. Because no surface impact is planned from the proposed trail in the area of the site, i.e. the trail will be built up from the ground surface, construction will not affect the deeply buried cultural deposits.

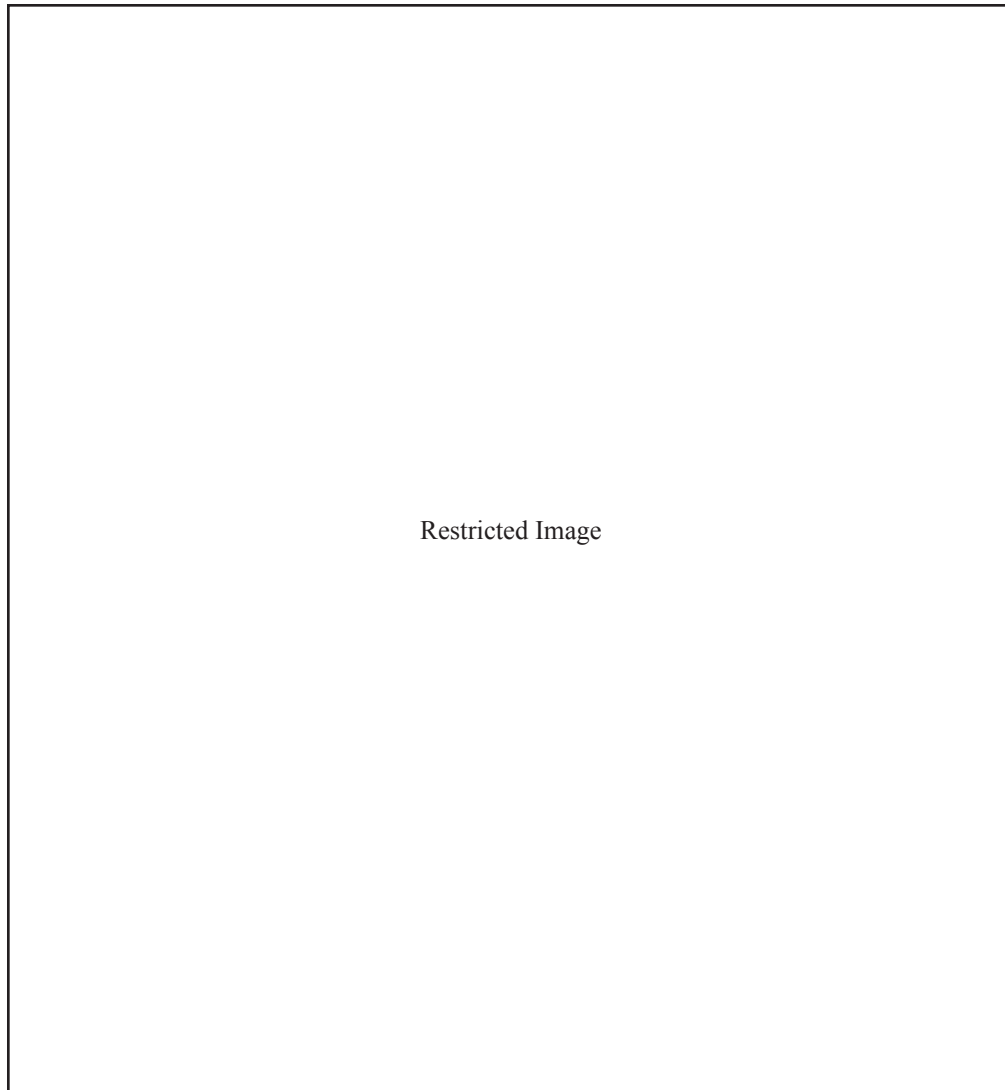


Figure 4-7. Boundary of 41BX2008 showing positive (red) and negative (blue) shovel tests.

Table 4-3. Prehistoric Artifacts Recovered from Shovel Tests at 41BX2008

Level	Depth (cmbs)	ST 13	ST 14	ST 16	ST 17	ST 18	ST 23	ST 25	ST 31
1	0-10		3 D						
2	10-20		5 D				1 D		
3	20-30	1 D	2 D			1 D			
4	30-40	2 D				1 D			
5	40-50		1 D		1 BF			3 D	2 D
6	50-60		1 D, BR (0.4 gm)	1 D				BR (1 gm)	2 D

Key: D - debitage, BF - biface, BR - burned rock (gm)

Table 4-4. Historic Artifacts Recovered from Shovel Tests at 41BX2008

Level	Depth (cmbs)	ST 18	ST 25	ST 26	ST 32	ST 34
1	0-10		BN (2 gm)	4 CR		
2	10-20	4 CR, 20 G, BN (4 gm), BK (1 gm)	1 M	4 G	4 G	
3	20-30	2 CR, 23 G, BN (6 gm)				1 CR, BK (11 gm)
4	30-40	1 G, 1 M			10 G, 1 M	
5	40-50				2 CR, 3 G, 1 M, BN (6 gm)	
6	50-60				1 CR, 3 G	

Key: CR - ceramic, G - glass, BN - bone, BK - brick, M- metal

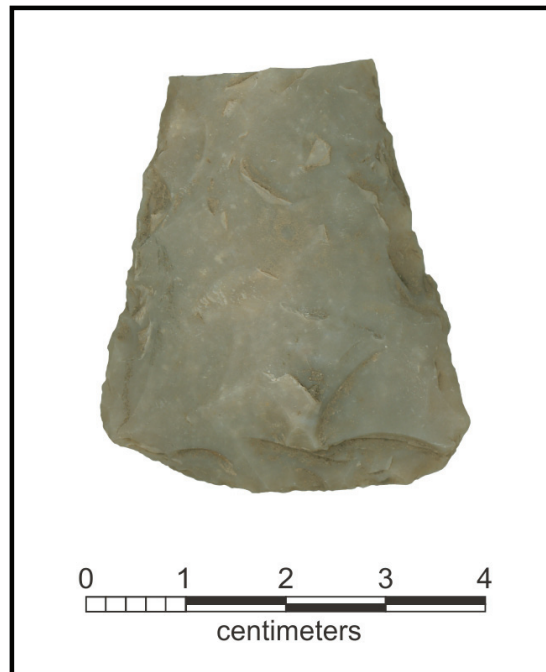


Figure 4-8. Biface recovered from ST 17, Level 5.

41BX2009

41BX2009 is a prehistoric site located in a wooded area between Jones-Maltsberger Road and the US-281 exit ramp on the far northern portion of the project area (Figure 4-9). A power line easement is located to the west, and an access trail runs through southern portion of the site. Of seven shovel tests excavated in the area of the site, five were positive (Table 4-5). Artifacts recovered include debitage (n=30), burned rock (15 gm), and glass (n=3). Most of the debitage (90%)

and all the burned rock were found from 30-60 cmbs. Fifty percent of the lithic material was recovered from below 50 cm suggesting that the site contains deeply buried prehistoric material. No features or diagnostic artifacts were present. The CAR recommends that 41BX2009 be listed as having unknown eligibility with research potential on the NRHP until testing to determine eligibility status can be completed. Because the surface impact from the proposed trail will range from 0-12 cmbs in the area of the site, construction will not affect the deeply buried cultural deposits.

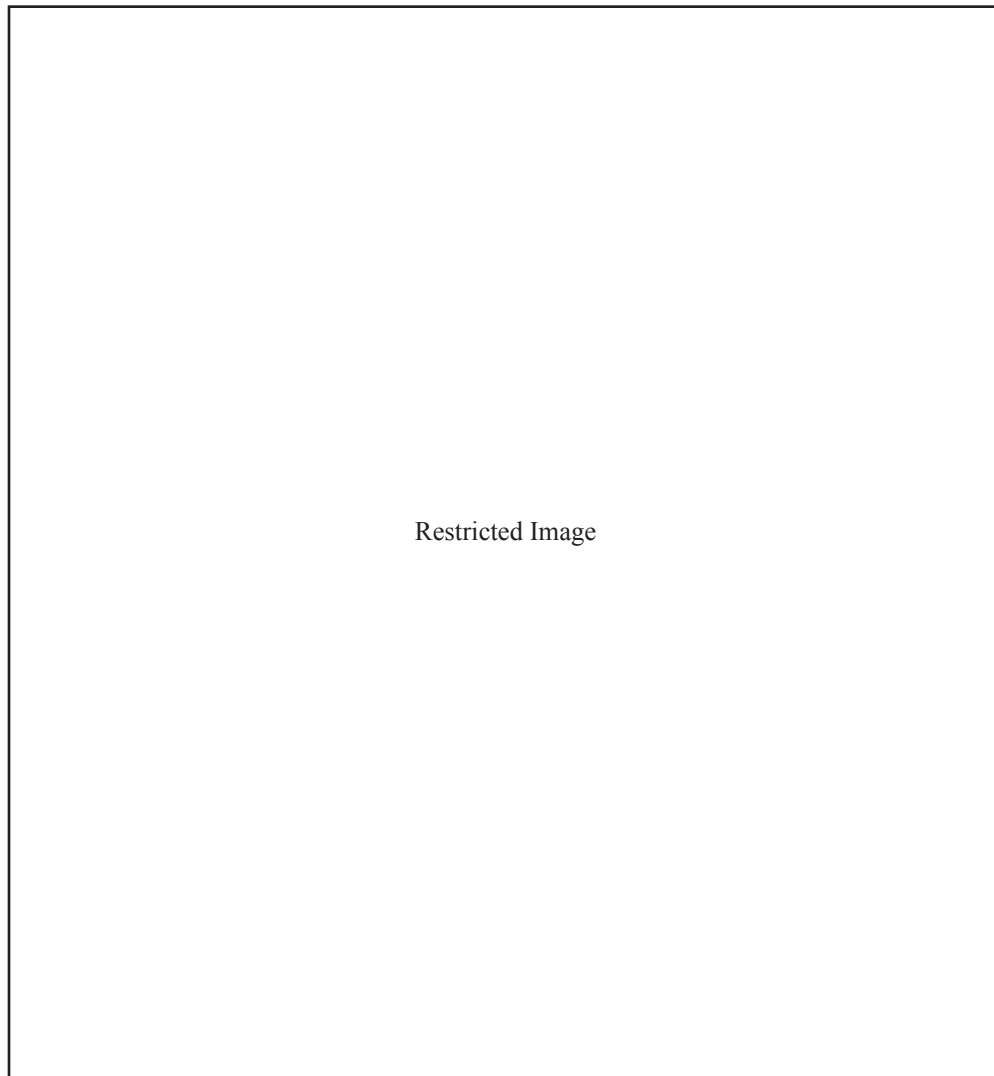


Figure 4-9. Boundary of 41BX2009 showing positive (red) and negative (blue) tests.

Table 4-5. Artifacts Recovered from Shovel Tests at 41BX2009

Level	Depth	ST 20	ST 27	ST 33	ST 35	ST 36
1	0-10					1 G
2	10-20	1 D	2 G			
3	20-30	1 D		1 D		
4	30-40		1 D, BR (2 gm)	5 D, BR (12 gm)		
5	40-50		4 D	2 D, BR (1 gm)		
6	50-60	9 D			2 D	4 D

Key: D - debitage, BF - biface, BR - burned rock (gm), G - glass

Chapter 5: Summary and Recommendations

In April 2014, the Center for Archaeological Research conducted a linear pedestrian survey along a proposed trail in Olmos Basin Park located in Bexar County, Texas, for Adams Environmental, Inc. on behalf of the City of San Antonio. The survey consisted of a pedestrian survey with shovel testing and backhoe trenching of a 1.3-km linear trail with a revisit to one previously recorded site on the project area. The archaeological work was conducted to determine whether buried cultural deposits exist in the immediate vicinity of the hike and bike alignment, to record any sites encountered, and to determine the impact of the new construction on previously recorded archaeological sites.

Three backhoe trenches were placed on the banks of Olmos Creek. No cultural material was observed within these trenches. Thirty-six shovel tests were excavated on the APE, resulting in the removal of approximately 1.5 m³ of sediment. The survey identified two new archaeological sites (41BX2008 and 41BX2009) and revisited one previously recorded site (41BX1426). All three sites contained buried prehistoric material in the form of lithic debitage, cores, and burned rock. Site 41BX2008 contained one lithic tool, as well as an historic component consisting of ceramics, metal, brick, and glass. No features or temporally diagnostic artifacts were identified on the project area. The density and depth of buried prehistoric material at all three sites suggest the possibility of deep intact deposits that may possess potential for future research. Therefore, the

CAR recommends the sites be listed as having unknown eligibility with research potential on the National Register of Historic Places (NRHP) until testing to determine eligibility status can be completed. The proposed trail pathway will run through all three archaeological sites tested during this survey. Because the surface impact from the proposed trail will range from 0-15 cmbs in the area of 41BX1426, 0 cmbs in the area of 41BX2008, and 0-12 cmbs in the area of 41BX2009, it will not affect the deeply buried cultural deposits. The CAR recommends that construction of the proposed trail proceed as planned. In a letter dated June 24, 2014, the Texas Historical Commission (THC) agreed with these recommendations. The COSA Office of Historic Preservation also concurred with the CAR's recommendations.

Initially, the CAR survey crew noted several tertiary flakes on the surface of 41BX2008. To address concerns about future looting activities, CAR personnel again walked the proposed trail to assess artifact visibility on this site, as well as in other areas. Heavy foliage and leaf litter adjacent to the current dirt trail obscures ground visibility to less than 5% in most places. Of the surface lithic artifacts noted along the entirety of the dirt trail (< 5), most were in deposits of gravel that appear to have been either brought in or resulting from flood events. The CAR concludes that surface evidence of the three buried sites on the project area is low to nonexistent and, therefore, recommends no further work on these sites at present.

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