

AN ARCHAEOLOGICAL SURVEY OF THE SITE OF THE
PROPOSED PALO ALTO TRAILS DEVELOPMENT PROJECT
IN BEXAR COUNTY, TEXAS

BVRA Project 06-18

Principal Investigator

William E. Moore

Prepared for

Rosillo Creek Development Ltd.
1616 Calle del Norte #48
Laredo, Texas 78941

Prepared by

Brazos Valley Research Associates
813 Beck Street
Bryan, Texas 77803

ABSTRACT

Brazos Valley Research Associates (BVRA) conducted an archaeological survey of an 84-acre tract in central Bexar County on August 31, 2006 and September 1, 2006 for Rosillo Creek Development Ltd. of Laredo, Texas. The area investigated will be a residential subdivision entitled Palo Alto Trails (*Los Misiones*). This action was initiated by a request from the City of San Antonio, Office of Historic Preservation. The Texas Historical Commission, Archeology Division has no jurisdiction in this project; therefore, an antiquities permit was not required.

One prehistoric site (41BX1690) was found at the western edge of the project area adjacent to Leon Creek. This site consisted of a surface scatter of flakes, a few pieces of burned rock, and a tested cobble. Shovel testing yielded few artifacts, and revealed the site to be mainly confined to the rocky surface. This site is not viewed by BVRA as significant. No artifacts were collected.

One area of interest dating to the Historic period was found in the southwest corner of the project area. This is an old crossing of the creek as evidenced by a deep depression between 15 and 18 feet into the natural surface. It is still used by the current landowner as a crossing, but its age is not known. Therefore, no site number was assigned.

Copies of the report are on file at the City of San Antonio, Office of Historic Preservation; Texas Historical Commission; Texas Archeological Research Laboratory; Rosillo Creek Development Ltd.; and BVRA.

ACKNOWLEDGMENTS

BVRA is grateful to the following individuals for their assistance and support. Kay Hinder, Staff Archeologist for the City of San Antonio, discussed the project with the Principal Investigator prior to commencement of the evaluation and reviewed the report. Jason Arechiga of Rosillo Creek Development Ltd. provided maps and obtained permission from the landowner to enter the property. The field survey consisted of James E. Warren (Project Archeologist), Art Romine, and Bobby Jemison. The background check was conducted by Jean Hughes, Records Conservator at the Texas Archeological Research Laboratory. Jennifer McMillen and Nora Rogers performed technical editing, and Lili G. Lyddon drafted the figures. Landowner James Netts shared his knowledge of the past use of the project area and the prehistoric site on his property.

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INTRODUCTION

Rosillo Creek Development Ltd. proposes construction of a subdivision to be known as Palo Alto Trails (*Los Misiones*) on an 84-acre tract of land within the city limits of San Antonio, Texas in central Bexar County (Figure 1). The property is bounded on the north by Loop 410, on the south by private property, on the east by private development (apartments and a gas station), and on the west by Leon Creek. The major drainage basin in the area is the San Antonio River. In addition to Leon Creek, the site is drained by Comanche Creek at the eastern end of the 84-acre tract. The project area is depicted on the 7.5' USGS topographic map Terrell Wells dated 1967 and photorevised 1973 (2998-241 (Figure 2).

This project will consist of three phases, is scheduled to begin in 2006, and be completed in 2009. Tax Increment Reinvestment Zone (TIRZ) will provide part of the funding for this project. This funding is provided by TIRZ to developers for lands that are hard to develop, underdeveloped, or blighted.

The engineering firm for this project is Torres Engineering of San Antonio, Texas. Construction of the subdivision will consist of commercial and residential lots, streets, utilities, a sewer system, and green space areas or parks. The entire tract will be cleared of its natural vegetation, and ornamental trees and shrubs will be planted throughout the development.

No archaeological investigations by professional archaeologists have been conducted in the project area. However, sites have been found in the vicinity, and the presence of two streams (Comanche Creek and Leon Creek) makes the project area a likely setting for a prehistoric or historic site. In order to avoid adverse impacts to significant cultural resources, Kay Hinds, staff archaeologist for the San Antonio Historic Preservation Office, requested a professional archaeologist examine the area. In order to comply with this request, Rosillo Creek Development Ltd. retained BVRA examine the 84 acres for significant archaeological sites. The legislation regulating cultural resources is the City of San Antonio's "Historic and Preservation Design Section of the Unified Development Code (Article 6 35-630 to 35-634)." Disturbance of any site or the collection of artifacts from any site on City property prior to a determination of significance is a violation of the code. Since this is a privately funded project that falls under the jurisdiction of the City of San Antonio, an antiquities permit from the Texas Historical Commission is not required.

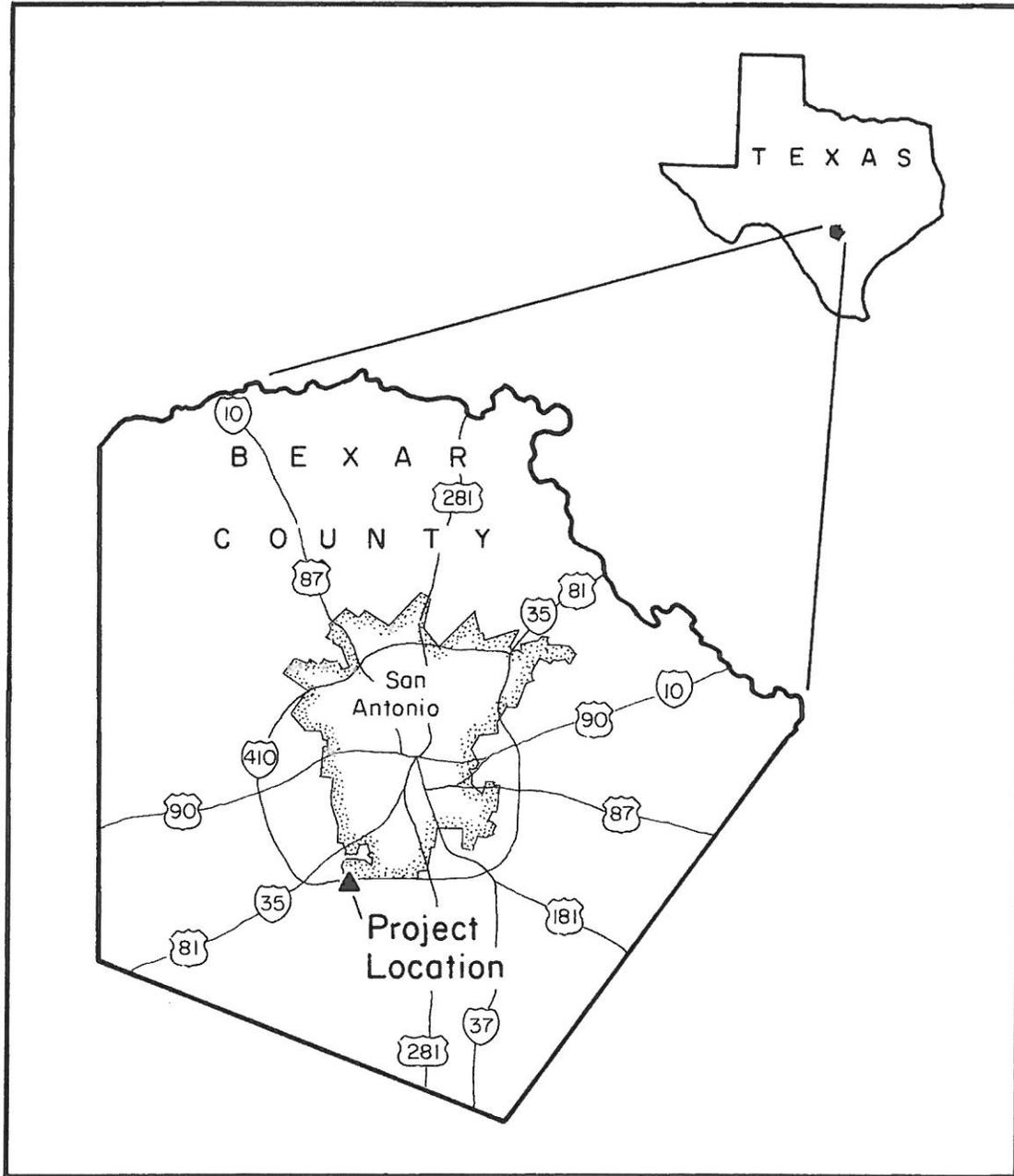


Figure 1. General Location

IMAGE RESTRICTED

Figure 2. Project Area on Topographic Map Terrell Wells

ENVIRONMENTAL SETTING

General

The following information was taken from the *Handbook of Texas* (Webb 1952), the *Texas Almanac* (2004), and the soil survey for Bexar County (Taylor et al. 1991). Bexar County is located in south-central Texas about 190 miles (305 km) west of Houston and 140 miles (225 km) inland from the Gulf of Mexico. It is 1257 square miles in size, of which 10 square miles (0.78%) are covered by water. The Balcones Escarpment bisects the county from west to northeast. To the north of the escarpment are the rocky hills, springs, and canyons of the Texas Hill Country. South of the escarpment are the Blackland Prairie and the South Texas Plains. The San Antonio River rises from springs north of downtown San Antonio and flows southward and southeastward through the county. Minerals in the area consist of gravel, sand, limestone, oil, and gas. The altitude of the county varies from 486 feet above sea level to 1892 feet above sea level. Annual rainfall is 31.0 inches. Temperatures average between 38 degrees Fahrenheit (January mean minimum) to 95 degrees Fahrenheit (July mean maximum).

Project Area Soils

According to the soil survey for Bexar County (Taylor et al. 1991), there are five soil types in the project area. In the area between Comanche Creek and State Highway 16 is Houston black gravelly clay, 1 to 3% slopes (Hub). On the margins of Comanche Creek is Trinity clay and Frio clay loam, frequently flooded (Tf) and Houston black gravelly clay, 1 to 3% slopes (HuB). Between Comanche Creek and Leon Creek is Lewisville silty clay, 0 to 1% slopes (LvA). Between the LvA soils and the upland margin of Leon Creek is Gullied land, eroded (Gu). These soils are defined below. Along the Leon Creek floodplain is Frio clay loam (Fr). Project area soils are illustrated in Figure 3 below.

Fr soils are described by Taylor et al. (1991:16) as sandy loam to clay loam soils found mainly on the floodplains of the San Antonio River, the Medina River, and their major tributaries or on low terraces bordering their floodplains. This soil floods occasionally. The surface is uneven and in a few places is dissected by partly filled old stream channels in which water stands for short periods following floods. The surface layer is about 20 inches thick. The subsurface layer is light brownish-gray in color and is about 5 inches thick. Below a depth of 25 to 30 inches, the texture ranges from sandy loam through stratified loam to clay loam. The depth to water-rounded limestone gravel ranges from 3 to 6 feet or more. This soil is limy throughout.

IMAGE RESTRICTED

Figure 3. Project Area Soils

Gu soils are described by Taylor et al. (1991:17) as occurring along rivers and streams where high terraces break to floodplains. The topography is rough, and the slope is generally between 12% and 20%. In many places, however, it is more than 50%. Gullying and sheet erosion are severe. An intricate network of shallow and deep gullies cover covers 80% to 90% of the area. These gullies may be 5 feet to 75 feet wide, 4 feet to 30 feet deep, and 3 feet to 50 feet apart. The soil material consists of grayish-brown or light grayish-brown, strongly calcareous loam, clay loam, or silty clay derived from alluvium. It washes off the steep, exposed slopes so rapidly that there is not enough time for a soil profile to develop.

HuB soils are described by Taylor et al. (1991:21) as clayey soils found in the uplands, mainly along smooth convex slopes and short undulating slopes along drainage ways. The surface layer is black and about 38 inches thick. Cracks form when it dries. Gravel ordinarily makes up 8% to 18% of this layer by volume. On long narrow ridge tops gravels may constitute 60% by volume. The subsurface layer, about 12 inches thick, is clay or gravelly clay. The gravel is discontinuous. When it occurs, however, it makes up 30% to 60% of this layer by volume. The pebbles range from half an inch to three inches in diameter. Runoff is medium or slow.

LvA soils are described by Taylor et al. (1991:25) as clayey soils found on nearly level broad terraces along rivers and creeks. The surface layer is either silty or light clay and is about 24 inches thick. The subsurface layer is brown silty clay that is very firm but crumbly when moist. It is 20 inches thick.

Tf soils are described by Taylor et al. (1991:32) as clayey soils found in long and irregularly shaped areas on the floodplains of small streams and the larger field drainage ways. These soils flood at least once a year, generally after a heavy rain. Some areas are subject to a thin deposition of sediments, and others to scouring or shifting. Stream channels in these areas are poorly defined and of small capacity. Trinity soils are 3 to 5 feet deep. The surface layer ranges from clay loam to gravelly clay in texture. Ordinarily the subsurface layer is clay, but in places it contains thin loam strata. Frio soils are 3 to 4 feet deep and are somewhat more clayey and darker colored than the Frio clay loams that occur on the floodplains of the larger streams and rivers.

ARCHAEOLOGICAL BACKGROUND

Bexar County is located in the Central Texas Cultural-geographical region of Texas as defined by Biesaat et al. (1985:Figure 15) and the Central Texas Archeological Region as defined by Mercado-Allinger et al. (1996:Figure 1.1.4). In 1985, when the statistical overview was published by Biesaat et al., there were 3507 recorded archaeological sites in region. Bexar County had 443 sites, which accounted for 12.63% of the region and 2.9% of the state. Only two counties, Travis (n=417) and Williamson (n=425) were close in numbers of sites recorded. Prior to newly recorded site 41BX1690, there were over 1600 recorded sites in Bexar County. The large number of sites in Bexar County has been recorded due to urban development (i.e., San Antonio), oil and gas production, road construction, surface mining, reservoir construction, and an active archaeological society (South Texas Archaeological Association).

Prehistoric sites in Bexar County vary in age from Paleo-Indian to Late Prehistoric, and Historic sites date from the early days of Mexican settlement through the Present. In 1985, there were 30 recorded Paleo-Indian sites, 38 Early Archaic sites, 51 Middle Archaic sites, 60 Late Archaic sites, 58 General Archaic sites, and 57 Late Prehistoric sites. At that time 34 sites had been listed in the National Register of Historic Places, and 71 sites had received the designation as a State Archeological Landmark. Bexar County is located in a part of Texas that was heavily populated by citizens of Mexico, and this is reflected in early Spanish missions, presidios, and towns. Unfortunately, many of the prehistoric and early historic sites have suffered some form of disturbance from factors such as erosion, construction, and vandalism.

PREVIOUS INVESTIGATIONS

A records check at TARL revealed that three prehistoric archaeological sites have been recorded along Leon Creek in the vicinity of the current project area. Two sites (41BX599 and 41BX1544) are described on the site form as lithic scatters with little or no depth. Site 41BX1544 consists of a slight surface scatter with buried deposits found between 20 and 70 cm. The majority of buried materials were found between 60 and 70 cm. These sites are discussed in more detail below. No sites have been recorded along Comanche Creek within the project area or in the immediate vicinity.

41BX599

This site was recorded as the "Barrow Pit site" in 1983 by the Center for Archaeological Research at The University of Texas at San Antonio during a survey for a City of San Antonio pipeline right-of-way (Snively et al. 1984). The site is described on the site form as a "thin lithic scatter with no buried deposits." It is located on the east bank of Leon Creek approximately 1600 meters southeast of newly recorded site 41BX1690 (Figure 2). At the time of this survey, this site had been disturbed through erosion, agricultural activities, and nearby borrow pits. The site is small (5 x 10 meters) and contains gray sandy loam to 30 cm. Artifacts observed include thin biface fragments, cores, flakes, and fragments of burned rock. Although a Clear Fork tool was found in the borrow pit, there is no statement on the site form regarding the age of this site. No collection was made. No comment regarding the research potential of this site appears on the site form.

41BX704

This site was recorded in 1986 by the State Department of Highways and Public Transportation (now Texas Department of Transportation) during a survey along Loop 410 in advance of highway modifications (State Department of Highways and Public Transportation 1996). The site is described on the site form as an "open campsite" with no features noted. It is located on a steep bluff overlooking the east bank of Leon Creek approximately 120 meters north of newly recorded site 41BX1690 (Figure 2). At the time of this survey, this site had been disturbed through erosion and highway and bridge construction. It is believed that this site extends to the north onto private property, but that portion within the area examined is described on the site form as destroyed. The size of the site within the project area is estimated to be at least 100 square meters. The depth is unknown due to modern disturbances. Artifacts observed include a light scatter of lithic debris mixed with broken road gravels and small cobbles. Ground stone fragments and occasional burned or "fire-reddened" limestone rock fragments were also noted. Although no diagnostic artifacts were observed, the site form states that it is either Archaic and/or Late Prehistoric. No comment regarding the research potential of this site appears on the site form.

41BX1544

This site was recorded in 2003 by Parsons Brinckerhoff Quade & Douglas, Inc. during a survey for the proposed Kelly Parkway (Ahr 2004). The site is described on the site form as a "lithic scatter" with possible buried fire-cracked rock features. It is located in an open fallow agricultural field about 300 meters west of Leon creek approximately 150 meters southwest of newly recorded site 41BX1690 (Figure 2). At the time of this survey, this site had been disturbed through erosion and plowing, but the majority of the site appeared to be intact. The size of the site within the project area is estimated to be 60 x 70 meters. The thickness of deposits is described on the site form as between 20 and 70 cm below the existing ground surface. Artifacts observed include lithic debitage, fire-cracked rock, rabdotus snail shells, and a few freshwater mussel shell fragments. No diagnostic artifacts were observed, and the site is described as unknown prehistoric. One possible feature containing fire-cracked rock at the center of the site at 60 cm below the surface was observed in a shovel test. Several large rocks and rock fragments were recovered along with some reddened sandstone. In the same zone there was a dramatic increase in the number of rabdotus snails and lithic debitage. The researchers state that this site may be eligible for listing in the National Register of Historic Places. Test units to determine its significance are recommended.

METHODS

Prior to the field survey, the Principal Investigator discussed the project with Kay Hinds, Staff Archaeologist for the City of San Antonio, to make sure the proper area would be investigated and the methods proposed by BVRA would be acceptable. Maps were obtained from Jason Arcechiga of Rosillo Creek Development Ltd. Jean Hughes at the Texas Archeological Research Laboratory was contacted in an attempt to identify any known sites in the project area and vicinity.

The field survey consisted of an on-site visit by James E. Warren, Art Romine, and Bobby Jemison on August 31, 2006 and September 1, 2006. The entire project area was traversed on foot in an attempt to locate evidence of a prehistoric or historic site. Transects were not possible along the creek because of thick brush. The survey crew walked over this area as thoroughly as possible and excavated shovel tests where the soil permitted. The rest of the project area was examined by walking transects with 30-meter intervals. Shovel tests were excavated throughout this area. All excavated earth was passed through ¼ inch hardware cloth, and the results were documented using a shovel test log (Appendix I). In all, 30 shovel tests were excavated.

A large portion of the project area had already been disturbed (Figure 4). Comanche Creek has been straightened, and some roads for the subdivision were already in place. The survey crew estimated that approximately 1/3 of the 84 acres was not available for survey because of this disturbance.

Photographs of the project area were taken with a digital camera, and a hand-held GPS was used to record the center point of site 41BX1690. The landowner, James Netts, was interviewed regarding past use of the project area and the two archaeological sites present. Figure 5 depicts the approximate location of shovel tests in the project area.



Figure 4. View of Disturbance in the Project Area

Photographs of the project area were taken with a digital camera, and a hand-held GPS was used to record the center point of site 41BX1690. The landowner, James Netts, was interviewed regarding past use of the project area and the two archaeological sites present. Figure 5 depicts the approximate location of shovel tests in the major portion of the project area.

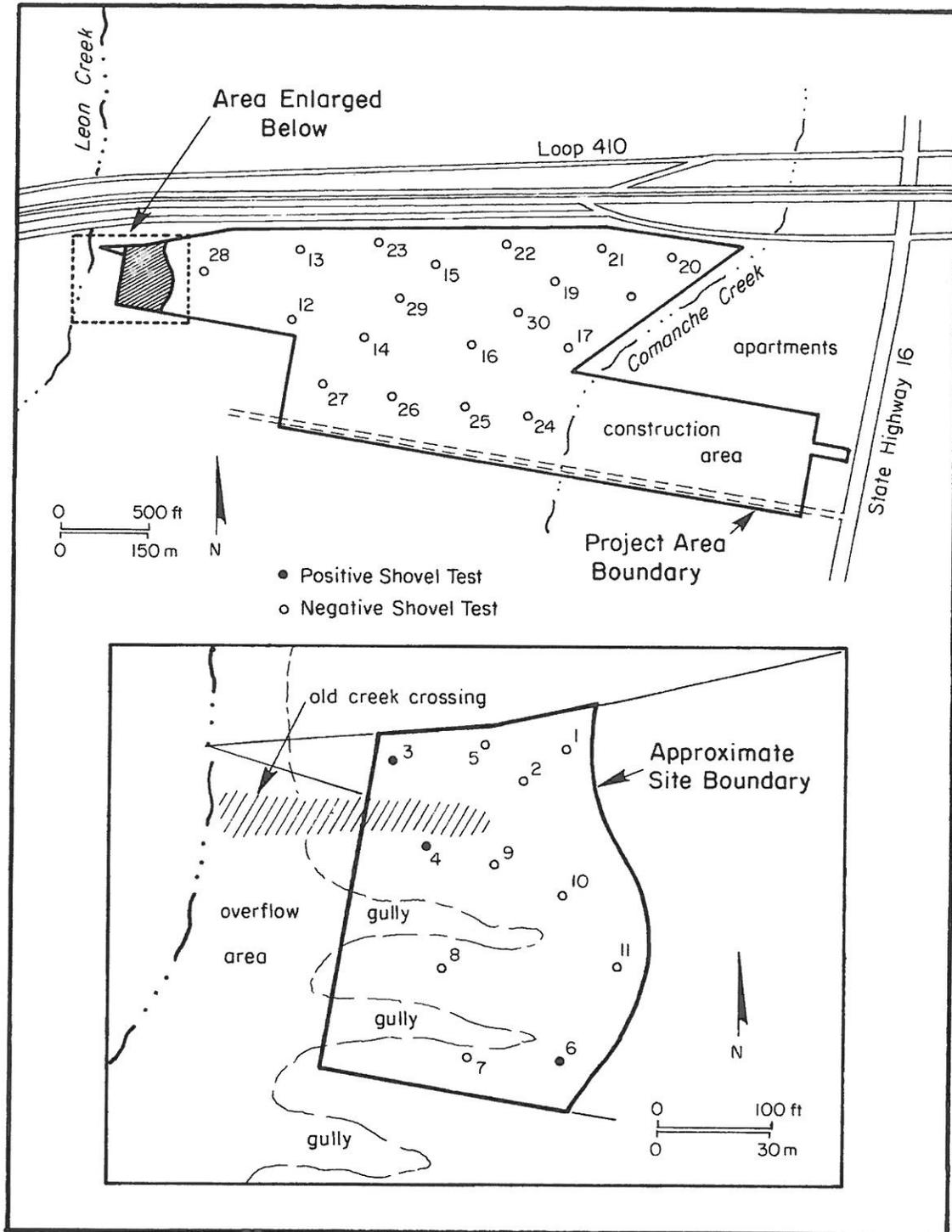


Figure 5. Location of Shovel Tests

RESULTS AND CONCLUSIONS

The project area consisted of thick woods near the creek and pasture and scattered trees in the rest of the tract (Figure 6). As stated above, a significant portion of the project area had been disturbed through construction of the proposed subdivision. Two streams are depicted on the topographic map and aerial photo in the published soil survey as being adjacent to or within the project area. Leon Creek, which parallels the western edge of the project area, contained very little water at the time of this investigation. It was not a flowing stream, and only a few scattered pools of water were visible (see cover). Comanche Creek, which flows through the eastern portion of the project area, had been completely disturbed through various forms of construction such as channelization.



Figure 6. Vegetation in Project Area

One prehistoric archaeological site was found to be present in the project area. Site 41BX1690 is a lithic scatter confined mainly to the surface with no features present. This prehistoric site consists of a scatter of lithic debitage over an area of at least 770 square meters (Figures 2 and 5). It is located on the second terrace on the east bank of Leon Creek. Artifacts observed include flakes, burned rock, and one tested cobble. Eleven shovel tests were excavated in the site area, and three were positive.

Artifacts recovered from shovel testing included one fire-fractured chert fragment at 10 cm (Shovel Test 3), one chert percussion flake at 20 cm (Shovel Test 4), and three secondary chert flakes and five tertiary chert flakes in a disturbed context; depth not known (Shovel Test 6). The tests on the site were terminated at depths of 20 to 60 cm when clay with calcium carbonate inclusions was encountered. This site is typical of others found in the area (see *Previous Investigations* above). According to Mr. Netts, projectile points have been found at this site in the past. Poor ground surface visibility in the site area (estimated at 20%) made it difficult for the crew to observe much of the ground surface. Therefore, formal tools may have been present at the time of this survey but simply not visible. BVRA does not consider site 41BX1690 to be eligible for listing in the National Register of Historic Places or for designation as a State Archeological Landmark because of the shallow, disturbed nature of the deposits, paucity of artifacts, and apparent lack of features.

An area of interest that dates to the Historic period was found in the southwest corner of the project area (Figure 6). This is a depression in the edge of the second terrace that is reputed to be a historic crossing of Leon Creek. This terrace extends between 15 and 18 feet into the creek bank. According to Mr. Netts, this depression was there when he moved to the area 35 years ago, and his family still uses it as a creek crossing. Since it is not known that the age of this crossing exceeds 50 years, no site number was assigned. Thick brush prevented the crew from taking a good quality photograph.

RECOMMENDATIONS

One archaeological site was recorded during this survey. Site 41BX1690 is not considered eligible for listing in the National Register of Historic Places or for designation as a State Archeological Landmark. It is recommended that construction be allowed to continue as planned. Should the size of the project area increase in size, additional survey by a professional archaeologist may be necessary. If evidence of a prehistoric or historic site not mentioned in this report is found, construction should cease until the situation in the area of the find can be evaluated.

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Appendix I. Shovel Test Log

Shovel Test	Depth (cm)	Profile	Results
1	60	0-40 cm 10YR 3/2 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
2	50	0-30 cm 10YR 3/2 loamy clay 30-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
3	60	0-40 cm 10YR 3/1 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	one fire fractured chert fragment at 10 cm
4	60	0-40 cm 10YR 3/2 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	one chert percussion flake (tertiary) at 20 cm
5	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
6	20	0-10 cm 10YR 3/2 loamy clay 10-20 cm 10YR 3/2 clay with CaCO3 inclusions, then asphalt	3 secondary chert flakes, 5 tertiary chert flakes, disturbed context
7	60	0-45 cm 10YR 3/2 loamy clay 45-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
8	45	0-35 cm 10YR 3/2 loamy clay 35-45 cm 10YR 3/2 clay with CaCO3 inclusions	none
9	50	0-40 cm 10YR 3/2 loamy clay 40-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
10	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
11	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
12	50	0-40 cm 10YR 3/2 loamy clay 40-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
13	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
14	55	0-40 cm 10YR 3/2 loamy clay 40-55 cm 10YR 3/2 clay with CaCO3 inclusions	none
15	50	0-40 cm 10YR 3/2 loamy clay 40-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
16	55	0-45 cm 10YR 3/2 loamy clay 45-55 cm 10YR 3/2 clay with CaCO3 inclusions	none
17	50	0-40 cm 10YR 3/2 loamy clay 40-50 cm 10YR 3/2 clay with CaCO3 inclusions	none

Shovel Test	Depth (cm)	Profile	Results
18	50	0-40 cm 10YR 3/2 loamy clay 40-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
19	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
20	60	0-40 cm 10YR 3/2 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
21	60	0-40 cm 10YR 3/2 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
22	55	0-35 cm 10YR 3/2 loamy clay 35-55 cm 10YR 3/2 clay with CaCO3 inclusions	none
23	55	0-35 cm 10YR 3/2 loamy clay 35-55 cm 10YR 3/2 clay with CaCO3 inclusions	none
24	60	0-45 cm 10YR 3/2 loamy clay with chert gravel 45-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
25	60	0-40 cm 10YR 3/2 loamy clay with chert gravel 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
26	55	0-35 cm 10YR 3/2 loamy clay with chert gravel 35-55 cm 10YR 3/2 clay with CaCO3 inclusions	none
27	60	0-40 cm 10YR 3/2 loamy clay with chert gravel 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none
28	50	0-35 cm 10YR 3/2 loamy clay 35-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
29	50	0-30 cm 10YR 3/2 loamy clay 30-50 cm 10YR 3/2 clay with CaCO3 inclusions	none
30	60	0-40 cm 10YR 3/2 loamy clay 40-60 cm 10YR 3/2 clay with CaCO3 inclusions	none