

ARCHAEOLOGICAL INVESTIGATION OF THE FIRE STATION #51 PROJECT AREA IN NORTHWEST SAN ANTONIO, BEXAR COUNTY, TEXAS

(draft)



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Texas Antiquities Permit 5571

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by
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Prepared for
Poznecki-Camarillo, Inc.
and
The City of San Antonio

by
Ecological Communications Corporation

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Cover photograph: Sign announcing site of the new Fire Station #51.

ABSTRACT

In April of 2010, Ecological Communications Corporation conducted an archaeological survey of a 2.87-acre tract located on Beckwith Boulevard in northwest San Antonio, Bexar County, Texas. Pedestrian survey and shovel testing were carried out on behalf of Poznecki-Camarillo, Inc., to locate, record, and assess any possible cultural materials within the project area. This project was sponsored by the City of San Antonio. Archaeological survey work indicated that no prehistoric or historic cultural materials were present within the project area. Jon J. Dowling served as Principal Investigator. Archaeological work was carried out under Texas Antiquities Permit 5571.

TABLE OF CONTENTS

ABSTRACT.....	iii
LIST OF FIGURES.....	v
CHAPTER 1. INTRODUCTION.....	1
CHAPTER 2. PROJECT BACKGROUND.....	3
CHAPTER 3. SURVEY METHODS.....	9
CHAPTER 4. SURVEY RESULTS.....	10
CHAPTER 5. ARCHAEOLOGICAL RECOMMENDATIONS.....	13
REFERENCES.....	14

LIST OF FIGURES

Figure 1. Project area location.	1
Figure 2. Vegetation overview.	4
Figure 3. Slowly permeable Heiden clays within APE.	4
Figure 4. Underground utility cable skirting northern boundary of APE.	10
Figure 5. Subsurface water line skirting northern boundary of APE.	11
Figure 6. Exposed ground surface with modern road fill gravels.	11
Figure 7. Distribution of shovel test excavations.	12

CHAPTER 1

INTRODUCTION

This report summarizes the results of the archaeological survey of the Fire Station #51 project area, located at 5040 Beckwith Boulevard in northwest San Antonio, Bexar County, Texas. Archaeological survey was carried out by Ecological Communications Corporation (EComm), under contract with Poznecki-Camarillo, Inc. EComm's investigations were conducted under Texas Antiquities Permit 5571, and Jon J. Dowling served as Principal Investigator.

The construction of a new fire station, sponsored by the City of San Antonio, is proposed to occur on a 2.87-acre tract located on Beckwith Boulevard, immediately west of Vance Jackson Road. The project area is plotted on the Castle Hills 7.5' USGS quadrangle sheet (Figure 1). The Area of Potential Effect (APE) is 125,017 square feet (ft²), or 11,614 square meters (m²). Detailed plans and construction schematics specifying the vertical APE are not available for review at this time, nor are specifically defined actions of the proposed construction. Depths of disturbance are presumed to be several feet.

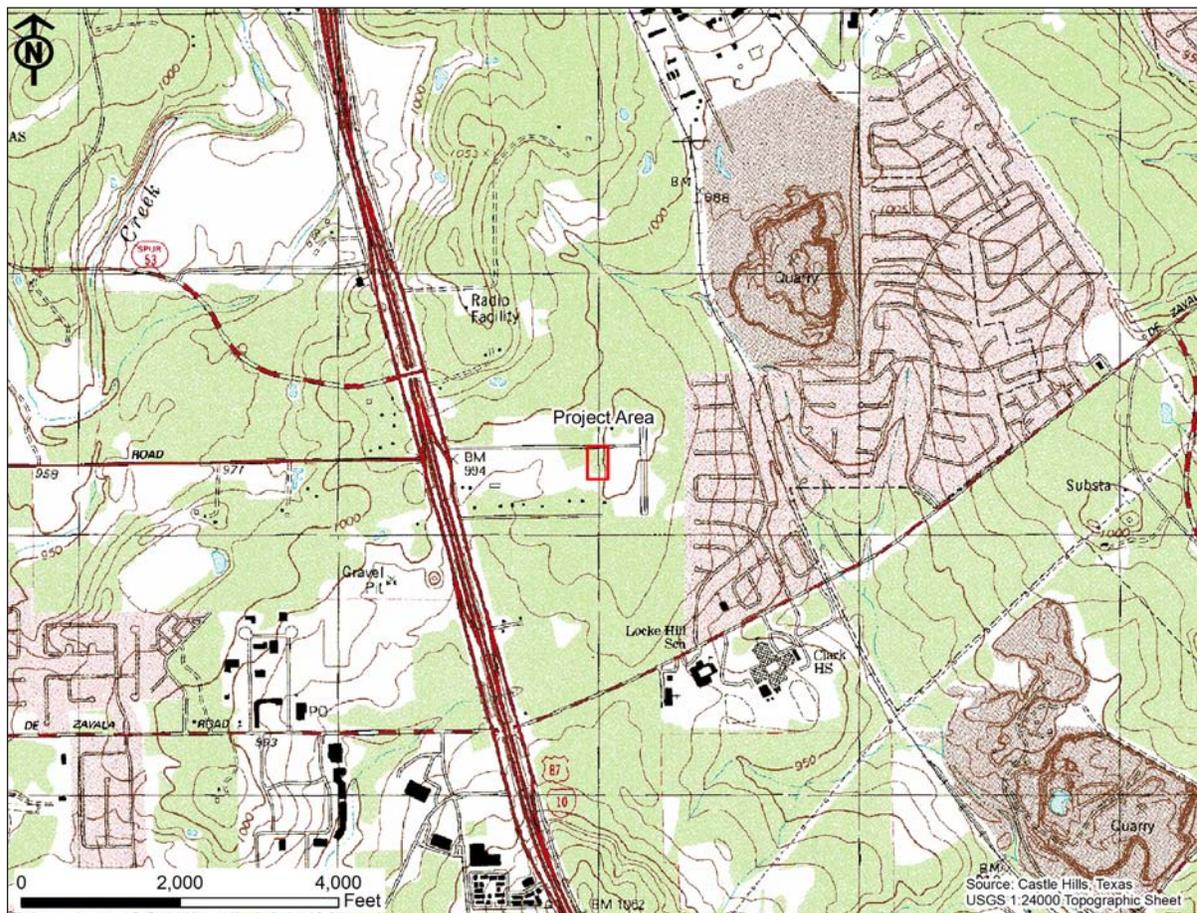


Figure 1. Project area location.

The goals of this archaeological survey were to identify any undocumented prehistoric and historic archaeological sites within the APE, establish vertical and horizontal site boundaries as appropriate, and to assess the research significance and eligibility these properties may have to the National Register of Historic Places (NRHP) and their potential designation as a State Archaeological Landmark (SAL).

Survey work was conducted to comply with National Environmental Policy Act, the Antiquities Code of Texas, and Section 106 of the National Historic Preservation Act. All work conformed to 36 CFR Part 800 and 13 TAC 26, which outline the regulations for implementing Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas, respectively. The content of this report was edited by Maggie McClain, and Joel Butler created the graphics presented herein.

This report is divided into five chapters. The environmental setting, cultural overview, and previous archaeology are presented in Chapter 2. Chapter 3 includes the field methodology used during the project, and the results of field investigations are discussed in Chapter 4. Chapter 5 presents the summary and recommendations.

CHAPTER 2

PROJECT BACKGROUND

ENVIRONMENTAL SETTING

The geographic region encompassing the project area is referred to as South Texas. This broad and diverse landscape includes Edwards Plateau to the north, the Rio Grande River to the south, the Gulf of Mexico coastline to the east, and the Lower Pecos region to the west (Norwine 1995:138). The environmental and cultural development of Bexar County specifically has been greatly shaped by its position on the edge of the Edward's Plateau. This ecotonal region provided by the Balcones Escarpment has generated diverse biotic resources, long utilized by the prehistoric inhabitants of present-day San Antonio. Of the seven biotic provinces of Texas provided by Blair (1950:112), the San Antonio area lies on the southern edge of the Balconian Province. The proximity of two neighboring provinces, the forested Texan and the arid Tamaulipan, increase resource variability that would have been available to prehistoric inhabitants.

Numerous springs, aquifers, and rivers are interspersed in and around the Balcones Escarpment due to the hinge line faulting along the Paleozoic Ouachita structural belt (Foley and Woodruff 1986). The large underwater reservoir of the Edwards Aquifer lies in west-central Texas, where water percolates through Lower Cretaceous limestone that rests on virtually impermeable pre-Cretaceous formations (Barker et al. 1994). Excellent potable water sources arise as a result of this percolation. Springs created from the Balcones Escarpment give birth to several rivers in Bexar County. Rivers generated by the Balcones Escarpment springs include the Guadalupe, Comal, San Marcos, Blanco, and San Antonio rivers. Since these rivers do not rely much on rainfall as a water source and drain smaller areas than other rivers in the state, they are shorter and clearer than other rivers in Texas.

The project area is positioned near an area where the Edwards Plateau, Blackland Prairie, and South Texas Plains converge, creating a mosaic of vegetation communities (Gould 1969). The Balcones Escarpment deviates sharply from the thin-soiled limestone uplands and the wide coastal plains. Mixed live oak, ashe juniper woodlands, and sporadic grassy openings comprise the bulk of upland vegetation. Tree canopy closure, for the most part, is generally low, and ashe juniper is most prevailing in density. Texas oak and cedar elm also occur in low densities. In upland areas, shrub density varies from low to dense. Low-density species include Texas persimmon, agarita, prickly pear, and mixed grasses. The Blackland Prairie and South Texas Plains have a gently rolling topography that sustains hickory, red oaks, and hackberry that accompanies an understory of big bluestem, switchgrass, Virginia creeper, and green briar (Gould 1969). The majority of trees observed within the project area consisted of oaks and mesquite (Figure 2).



Figure 2. Vegetation overview.



Figure 3. Slowly permeable Heiden clays within APE.

This area of Central Texas has a subhumid climate as a result of moderate rainfall and fairly warm temperatures (Bomar 1983:208–222). The annual average rainfall for San Antonio is 29.13 inches of precipitation, with the rainiest months being May, June, and September (Bomar 1983:222). Precipitation in Central Texas stems from the tumultuous transition between arctic and Gulf of Mexico air masses. Average San Antonio temperatures range from 39.0–61.7°F in January to 74.3–94.9°F in July.

The surface geology of the San Antonio area is the result of the Miocene uplifting that produced the Edwards Plateau and Balcones Escarpment. The project area landscape consists of Quaternary Alluvium and Fluvial terrace deposits, composed primarily of silts and clays overlying ancient alluvium. The northwest portion of the city consists of an upland projection of Austin limestone made up of marl, chalk, and limestone left by the receding sea-line

of the upper Cretaceous Period. The project area rests in a locality that consists of a primarily upper and lower Cretaceous geological architecture, which typically exhibit a low probability for buried archaeological deposits. Soil units within the project area consist of Heiden clays, which rest at 1–3 percent slopes. They are deep, slowly permeable clays, as seen after moderate episodes of precipitation (Figure 3). A typical profile exhibits 80 inches of clays.

REGIONAL CHRONOLOGY AND CULTURAL BACKGROUND

The project area is situated on the cusp of Central and South Texas. This culture history will reference primarily Central Texas regional patterns, but will also include relevant South Texas trends and developments. Once a culture chronology for this region of Texas has been summarized, a brief overview of archaeological work in proximity to the APE will be provided.

Paleoindian

The arrival of humans in the New World occurred during the Paleoindian period, which dates from 11,500 to 8800 BP (Collins 1995). As the Pleistocene ended, diagnostic Paleoindian materials in the form of Clovis, Folsom, and Plainview projectile points began to enter the archaeological record. These points were lanceolate-shaped and fluted for hafting to wooden spears. Using the launching momentum from atlatls (spear-throwers), large game such as mammoth, mastodons, bison, camel, and horse were frequently taken (Black 1989). In addition to megafauna, Paleoindian groups likely harvested less daunting prey including antelope, turtle, frogs, etc. Stylistic changes in projectile point technology occurred during this later portion of the period, eventually shifting to Dalton, Scottsbluff, and Golondrina traditions. While widespread in geographic range, these types occurred in high densities in the High Plains and Central Texas (Meltzer and Bever 1995). One of the oldest confirmed Clovis sites in North America is arguably the Aubrey Clovis Site (41DN479) in Denton County, Texas, with a carbon date assay of 11,550 BP (Ferring 2001). Environmental studies suggest that Late Pleistocene climates were wetter and cooler (Mauldin and Nickels 2001; Toomey et al. 1993), gradually shifting to drier and warmer conditions during the Early Holocene (Bousman 1998). As megafauna gradually died off during the shift to warmer climates, subsistence patterns shifted toward smaller game and plant foraging.

Archaic

The Archaic period, broadly divided into the Early, Middle, and Late Archaic subperiods, signifies a more intensive reliance on local floral and faunal resources with an increase in the number of projectile point styles (Collins 1995). The archaeological record begins to indicate more widespread use of burned rock middens, a wider variety of site functions, and more localized geographic distributions of these materials.

Early Archaic

Hester places the Early Archaic between 7950 and 4450 BP based on Early Corner Notched and Early Basal Notched projectile points (1995:436–438). Collins' dating of the Early Archaic period to 8800–6000 BP is founded on unstemmed point types (1995:383). Around 8000 BP, styles transitioned to stemmed varieties such as the Martindale and Uvalde (Black 1989), but unstemmed Early Triangular points were also in use as well (Turner and Hester 1999). As the extinction of megafauna herds took hold, a subsistence shift towards heavier reliance on deer, fish, and plants became necessary. In the archaeological record, this trend equates to greater

densities of ground stone artifacts, fire-cracked rock midden features, and task specific tools such as Clear Fork gouges and Guadalupe and Nueces bifaces (Turner and Hester 1999:246, 256). A great deal of Guadalupe Bifaces are recovered near river drainage systems like the San Antonio River, flowing toward the Gulf Coast off Edwards Plateau, and are thought to function as primarily woodworking tools in a hafted capacity (Steve Tomka, personal communication; Black and McGraw 1985). Most Early Archaic open-campsite concentrations were distributed along the eastern and southern margins of the Edwards Plateau in areas with reliable water sources (McKinney 1981). Population densities were relatively low and consisted of small bands with a fairly high degree of mobility (Story 1985:39). Loeve-Fox, Jetta Court, and Sleeper sites are representative sites of the Early Archaic (Collins 1995).

Middle Archaic

Middle Archaic materials date from about 6000 to 4000 BP, with increased occurrence of multiuse bifacial knives and burned rock middens (Collins 1995:383). Diagnostic points from this period include Bell, Andice, Taylor, Nolan, and Travis. The Tortugas point also appears in Middle Archaic contexts and possibly earlier (Turner and Hester 1999). According to Collins (1995), the beginning of the Middle Archaic still exhibited large-game hunting of bison, and the climate became much drier towards the end of the Middle Archaic, necessitating a heavier reliance on sotol and acorn harvesting (Weir 1976:126). An expansion of oak woodlands on the Edwards Plateau and Balcones Escarpment may have been conducive to the intensified exploitation of certain plants (Weir 1976). This period also experienced population increases, and it is possible that previously scattered bands of hunter-gatherers began to combine harvesting and processing efforts (Weir 1976:126). Panthers Spring Site, Landslide, Wounded Eye, and Gibson sites demonstrate cultural trends of the Middle Archaic (Collins 1995).

Late Archaic

The last subperiod of the Archaic falls between 4000 and 800 BP (Collins 1995:384). Dart point diagnostics of the Late Archaic are somewhat smaller, triangular points with corner notches such as the Ensor and Ellis (Turner and Hester 1999:114,122). Other Late Archaic points include Bulverde, Pedernales, Marshall, and Marcos (Collins 1995). It is not entirely clear whether this period experienced a rise (Collins 1995; Prewitt 1981) or decline (Black 1989) in population numbers, but large cemeteries, grave goods, and exotic trade items are known to occur at this time at sites such as Loma Sandia, Rudy Haiduk, Silo, Ernest Witte, and Morhiss Mound in Central and South Texas. Evidence of the Thunder Valley sinkhole cemetery has suggested that territoriality may have established during the Late Archaic, possibly as a result of population increase (Bement 1989). The frequency of burned rock middens increase and open campsites appears to increase. Characteristic Late Archaic sites include the Anthon and Loeve Fox sites (Collins 1995).

Late Prehistoric

There exists some degree of overlap between diagnostic tools that are considered Late Archaic and Late Prehistoric, but the commonly held date for the beginning of this interval is 1200 BP.

A hallmark transition for this period is the introduction of the bow and arrow, which enabled prehistoric hunters to harvest prey from greater distances with a lesser need for brushless, wide open spaces required for atlatl maneuverability. The use of arrows is indicated by smaller-sized projectile points such as Perdiz and Scallorn. Another turning point in the Late Prehistoric period is the first substantial presence of pottery in the northern South Texas Plain and Central Texas (Black 1989; Story 1985). Researchers generally agree that during this period there was a drop in population (Black 1989). Inter-group conflicts between various bands of hunter-gatherers may have also been an issue, based on evidence of arrow inflicted deaths seen in human remains from various Late Prehistoric cemeteries. Sites with distinct Late Prehistoric components include the Kyle, Smith, and Currie sites (Collins 1995). Interval divisions for this period are the Austin and Toyah phases. Johnson (1994) believes these phases to possibly be two distinct cultures (see Black and Creel 1997).

The Austin phase of the Late Prehistoric may demonstrate the most intensive use of burned rock middens (Black and Creel 1997), and includes the appearance of diagnostic point types Scallorn and Edwards (Collins 1995; Turner and Hester 1999). During this phase, the use of burned rock middens is still quite widespread and may even be on the rise (Mauldin et al. 2003). The Toyah subperiod of the Late Prehistoric suggests interaction between Central Texas and ceramic-producing traditions in East and North Texas with the presence of bone-tempered plainware ceramics (Pertulla et al. 1995). Ceramics were in common usage in East Texas by 2450 BP, but the first Central Texas plainwares did not appear until ca. 650/700 BP. Other technological traits of this phase include the diagnostic Perdiz point, alternately beveled bifaces, and specialized processing kits as an adaption to flourishing bison populations (Ricklis 1992).

Historic

Since the late AD 1500s, Europeans entered South and Central Texas only sporadically, and did not settle there until around AD 1700 (Webb 1952). First European contact on the Texas coast most likely began with the landing of Cabeza de Vaca and the Narvaez expedition survivors in 1528. Later Spanish incursions recorded insightful information on various Native American tribes like the Payaya, collectively referred to as the Coahuiltecan, who at one point lived in the area around modern-day San Antonio. Late seventeenth-century accounts describe these people as family units of hunter-gatherers that resided near streams and springs, in areas conducive to nut harvesting. These camps were revisited on a seasonal basis, allowing interaction with different groups along the way as well as bison hunting in open grassland settings (Campbell 1983:349–351; Hester 1989:80). By the eighteenth century, the cultural integrity of the Coahuiltecan was significantly compromised by European settlers and invasive neighboring Native American groups such as the Tonkawa and the Lipan Apache, made possible through access to European horses. Efficiently skilled Comanche horsemen, in turn, displaced the Lipan Apache culture, effectuating continuous raids on European and Native American settlements alike in Central Texas (Hester 1989:82–83).

In response to the continuous threat of Apache and Comanche raiders, as well as the French incursion into East Texas, a series of Spanish missions and presidios were erected along the

San Antonio River during the eighteenth century. The Spanish governor of Coahuila and Texas, Joseph de Azlor y Virto de Vera, Marques de San Miguel de Aguayo, established San Antonio as the focus of European settlement (Cox 1997).

From its establishment as a Spanish mission in 1718, San Antonio gradually became a somewhat developed provincial town. In 1821, Spain lost several continental territories when it recognized the independence of Mexico. At this time, San Antonio mostly consisted of a group of flat-roofed stone and adobe buildings centered around Main and Military plazas. Eventually, the newly independent Mexican government began granting impresario contracts to allow more prominent Anglo settlement to facilitate the town's development. Stephen F. Austin, one such settler, spearheaded a movement by Anglo and Mexican settlers against Mexican authority towards independence. As a sort of crossroads location, San Antonio de Bexar played an integral role in Texas Independence. At its center stood Mission San Antonio de Valero (known commonly as the Alamo), which brandished more cannons than any fort west of the Mississippi. Mission Valero changed hands several times during the fight for Texas Independence, falling victim to Mexican siege in 1836. The many battles took a terrible toll in lives and property, leaving San Antonio nearly deserted for some time (Fox 1979). After becoming the Republic of Texas the same year, following the decisive Battle at San Jacinto, the territory later joined the United States in 1845. The town slowly grew from a rustic Mexican villa to a lively and fast-paced commercial center. Still a major crossroads, San Antonio served as a key staging area for General Zachary Taylor's mobilization efforts during the War with Mexico. Despite the large numbers of troops that Texas committed to the American Civil War, the Confederate State of Texas was only involved in five engagements with the Union army. San Antonio's main function during the Civil war was that of a shipping hub for supplies imported from Mexico to be shipped to Confederate lines in the early 1860s (Webb 1952). The town also suffered a major cholera epidemic in 1866. In 1877, the first railroad reached San Antonio. Over the decades, immigration and population numbers increased, particularly during wartime of the 1940s. The city of San Antonio eventually developed stable military bases, educational institutions, tourism, and a medical research complex.

ARCHAEOLOGICAL OVERVIEW OF THE APE

The Texas Archeological Sites Atlas indicates that the project area had not been surveyed previous to EComm's investigation. In 2007, the Center for Archaeological Research at The University of Texas at San Antonio conducted archaeological survey along IH 10, and some survey work was carried out north of the project area for the Environmental Protection Agency in 1977. However, no archaeological work has been carried out within the boundaries of the APE. No previously recorded archaeological sites are within the APE. No cemeteries, historical markers or NRHP listed properties are within the APE. Two archaeological sites are situated within a one-kilometer (0.6 miles) radius of the APE. Site 41BX11 was recorded as a Late Archaic midden in 1969. Further work was not suggested (Fawcett 1969). Site 41BX367 is located about 800 m east of the APE. It was a circular lime kiln that was recorded in 1977, and further work was recommended (Van der Veer and Van der Veer 1977). The present status of these resources is unknown.

CHAPTER 3

SURVEY METHODS

The archaeological investigation of the Fire Station #51 project area consisted of an intensive reconnaissance walk-over survey and strategic shovel testing. Shovel tests measured 30 centimeters (cm) in diameter and ranged in depth from 75 to 80 cm below surface (cmbs). The shovel tests were excavated in 10-cm increments when possible and all soil was screened through ¼-inch hardware cloth. Typically, when cultural material is recovered from a shovel test, the shovel test is delineated at 10-m intervals until two negative shovel tests in every cardinal direction are attained, or until a project area boundary, drainage slope, exposed bedrock, or other physical hindrance is encountered. Relevant information for all shovel tests was recorded on a standardized form. This archaeological investigation was a non-collection survey. Since little occupation activity occurs on slopes in the ground surface, shovel tests fell at regular intervals in flat horizontal surfaces, absent of visible landscape disturbances.

In general, the establishment of site boundaries would adhere to several different methodologies. If a new site is to be recorded, and hindrances are present, thus precluding shovel testing, then site boundaries would be established by the distribution of artifacts on the ground surface. Typically, datums would be set for each newly recorded site, and GPS coordinates would be captured for entry into the THC's Texas Archaeological Sites Atlas. Smaller sites would be mapped with compass and pacing methods, and larger sites would be mapped with GPS linear functions.

For the purposes of this survey, an archaeological site had to contain a certain number of cultural materials or features older than 50 years within a given area. The definition of a site is: (1) five or more surface artifacts within a 15-m radius (ca. 706.9 m²), or (2) a single cultural feature, such as a hearth or burned rock midden, observed on the surface or exposed during shovel testing, or (3) a positive shovel test containing at least five total artifacts, or (4) two positive shovel tests located within 30 m of each other.

Field forms generated during this investigation were completed with pencil on acid-free paper, and GPS coordinates were captured for all shovel test excavations to ensure adequate coverage of the APE. All survey records are curated at the EComm laboratory in Austin, Texas.

CHAPTER 4

SURVEY RESULTS

This chapter presents the findings of the archaeological survey conducted by EComm personnel prior to the proposed construction of Fire Station #51 in the city of San Antonio, Bexar County, Texas. The project area, which is located at 5040 Beckwith Boulevard, immediately west of Vance Jackson Road, is roughly 125,017 ft² (11,614 m²). It was subject to 100 percent walkover pedestrian survey and 11 shovel test excavations. The APE rests on an upland formation in an urban setting. Various forms of development surround the project area that hint at previous development episodes. A dilapidated paved road is situated directly east of the project area, perpendicular to Beckwith Boulevard, suggesting modern development once rested nearby the APE.

No cultural resources were observed on the terrain of the APE. Several indications of landscape disturbances were prevalent within the project area. The far northern portion of the APE is host to various utilities that skirt Beckwith Boulevard (Figures 4 and 5). An underground utility cable and a waterline indicate ground disturbances in the north. Excavations were positioned around the utilities observed during pedestrian survey. Patches of exposed soils mixed with modern gravel concentrations on the ground surface (Figure 6) suggest that the lot at 5040

Beckwith Boulevard has been mechanically graded and cleared for future development purposes. Despite the presence of posted city ordinance signs restricting dumping, the discard of various forms of junk is evident in the southern portion of the landscape.



Figure 4. Underground utility cable skirting northern boundary of APE.

A total of 11 shovel tests were excavated within the project area (Figure 7). Soils consisted of Heiden silty clays that exhibited slow water permeability. They were very dark gray and very dark grayish brown. Modern debris was only encountered in upper levels of the shovel tests. All shovel tests were excavated to negative results, and varied in terminal depths from 70 to 80 cmbs. No historic or prehistoric deposits were found to rest under the ground surface of the project area. No evidence suggesting that historic structures once stood within the APE was identified either. In sum, no cultural resources of any kind are situated within the Fire Station #51 project area.



Figure 5. Subsurface water line skirting northern boundary of APE.



Figure 6. Exposed ground surface with modern road fill gravels.



Figure 7. Distribution of shovel test excavations.

CHAPTER 5

ARCHAEOLOGICAL RECOMMENDATIONS

Based on the results of a 100 percent pedestrian survey of the entire APE and 11 shovel tests, EComm recommends that no further archaeological work is required prior to the construction of Fire Station #51 in San Antonio, Bexar County, Texas. No archaeological sites were observed to rest within the APE. Since no cultural resources were identified that meet eligibility requirements for designation as an SAL according to 13 Texas Administrative Code (TAC) 26, additional archaeological work in connection with the proposed undertaking is not recommended. Ecological Communications recommends that the proposed Fire Station #51 project proceed to completion.

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