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## An Intensive Archaeological Survey of the Hollywood Park Cell Tower Project, Bexar County, Texas

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## An Intensive Archaeological Survey of the Hollywood Park Cell Tower Project, Bexar County, Texas

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**GTI Environmental, LLC**  
Environmental Consultants



**An Intensive Archaeological Survey of the  
Hollywood Park Cell Tower Project,  
Bexar County, Texas**

**Authors:  
Sergio A. Iruegas R.P.A.  
Melinda Tate Iruegas**

**April 2018**





**GTI Environmental, LLC**  
Environmental Consultants

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**An Intensive Archaeological Survey of the  
Hollywood Park Cell Tower Project,  
Bexar County, Texas**

**Prepared For:  
Terracon Consultants, Inc.**

**Prepared By:  
GTI Environmental, LLC**

**Antiquities Permit No. 6604**

**Principal Investigator:  
Sergio A. Iruegas, R.P.A.**

**Authors:  
Sergio A. Iruegas, R.P.A.  
Melinda Tate Iruegas**

**April 2018**



**Abstract**

This report documents the results of an intensive archaeological survey (TAC Permit 6604) for the 160 foot high self supporting Hollywood Park Telecommunications Tower (Project), in Bexar County, Texas. GTI Environmental, LLC (GTI) completed the intensive archaeological survey for the Project at the request of Terracon Consultants, Inc. (Terracon) on behalf of Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless), in accordance with the Federal Communications Commission's (FCC) *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission* (Nationwide PA [FCC 04-222]) with the Texas State Historic Preservation Office (TX-SHPO) and 36CFR800.2(a)(3) as outlined in the National Historic Preservation Act. The Project is under the jurisdiction of the FCC and the TX-SHPO. The Project is considered a *Federal Undertaking*, in accordance with the Nationwide PA and 36CFR800.16(y) as outlined in the National Historic Preservation Act. FCC regulations require that the Project Sponsor considers the effects of the proposed tower on *Historic Properties*. The Project's direct *Area of Potential Effect* (APE) for archaeological resource considerations consists of the 60 foot x 100 foot fenced parcel—less than one acre. The Project's indirect APE for consideration of historic building resources is a 0.50 mile radius from the Project location for towers 0 to 200 feet. The THC's Atlas database does not show any registered historic structures within a 0.50 mile radius of the Project's indirect APE. GTI conducted the intensive archaeological survey based on the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and the THC's *Minimum Archaeological Survey Standards for Texas*, which requires a minimum of 3 shovel tests per acre for projects 0 to 2 acres in size.

According to the THC's Atlas database three agencies sponsored archaeology surveys have been conducted within a half mile of the general project area. Several archaeological sites have been recorded near the Project's direct APE on similar topographic settings as the Project's location. Therefore, the Project's direct APE was considered a high probability area where archaeological sites were likely to be present. As required by the Nationwide PA [Stipulation VI(D)(2)(b)], "[i]dentification and evaluation relating to archeological resources shall be performed by a professional who meets the Secretary of the Interior's Professional Qualification Standards in archeology." Accordingly, Sergio A. Iruegas, RPA, served as the professional archaeologist/Principal Investigator (PI) and performed a 100 percent intensive archaeological survey of the entire Project direct APE on July 24, 2013 and documented 41BX1985 that consisted of six hearths. The ground surface visibility within the Project's direct APE was greater than 30 percent. GTI archaeologist excavated a total of three shovel tests within the Project's direct APE. All three of the shovel tests contained substantial buried cultural material. Accordingly, GTI has assessed that the proposed project may have an Effect to 41BX1985 archaeology site's eligibility for listing in the National Register of Historic Places. GTI recommends that the Project Sponsor avoid 41BX1985 or conduct National Register Testing at 41BX1985 and continue Section 106 consultation with the TX-SHPO.





**Table of Contents**

Abstract ..... ii

List of Figures ..... iii

Introduction.....5

Project Area Description.....8

    Soils .....9

    Geology.....10

Archival Review .....11

Regional Archeological Chronology .....18

    Paleo-Indian Period.....18

    Archaic Period .....18

    Late Prehistoric Period.....19

    Historic Native American Period.....19

Methodology and Results .....20

    Survey Methodology.....20

    Background Review.....20

    Survey Results – 41BX1985 Site Description.....21

Summary and Recommendations .....38

References.....40

Appendix A: Shovel Test Log .....42

**List of Figures**

Figure 1: Topographic Map of Project Location.....7

Figure 2: General View of Project’s direct APE Looking West .....8

Figure 3: USDA Soils Map of the Hollywood Park Cell Tower Project APE.....9

Figure 4: Geologic Map of the Hollywood Park Cell Tower Project APE.....10

Figure 5: 1871 Bexar County Plat Map.....12

Figure 6: 1878 Bexar County Plat Map.....12

Figure 7: 1936 Bexar County General Highway Map.....13

Figure 8: 1953 Longhorn 1:24 Topographic Map.....14

Figure 9: 1967 Longhorn 1:24 Topographic Map.....15

Figure 10: 1973 Longhorn 1:24 Topographic Map.....16

Figure 11: Topographic Map with Shovel Tests and Hearth Locations.....22

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Figure 12: Ground Surface Artifacts Near Access Road Gate .....23  
Figure 13: Hearth One with lithics and Bone Fragment.....23  
Figure 14: Hearth One Looking NE at Tower Location Area.....24  
Figure 15: Hearth One Looking East From Access Road .....24  
Figure 16: Artifacts Exposed in Access Road Area .....25  
Figure 17: Cluster of Ground Surface Artifacts with Utilized Flake .....25  
Figure 18: Utilized Flakes and Lithic Ground Surface Artifacts .....26  
Figure 19: Heart Two with Buried Artifacts in Rodent Borrow Backdirt.....26  
Figure 20: Hearth Two with Gravel Pad .....27  
Figure 21: Hearth Three with lithic and Heat Altered Lithics on the Ground Surface ....27  
Figure 22: Hearth Three Showing Hearth Two in the Background .....28  
Figure 23: Hearth Three with Gravel Pad in Background.....28  
Figure 24: Hearth Four with Hearth Three in Foreground.....29  
Figure 25: Ground Surface Artifacts Adjacent to Gravel Pad.....29  
Figure 26: Hearth Five in Tree Root Ball.....30  
Figure 27: Hearth Five with Uplifted Cultural Deposits .....31  
Figure 28: Shovel Test One Showing Charcoal and Lithic Deposits.....31  
Figure 29: Shovel Test One, Level One Artifacts .....32  
Figure 30: Shovel Test One, Level One Artifacts .....32  
Figure 31: Shovel Test Two Soil Profile.....33  
Figure 32: Shovel Test Two, Level One Artifacts .....34  
Figure 33: Shovel Test Two, Level Two Artifacts.....34  
Figure 34: Shovel Test Two, Level Three Artifacts.....35  
Figure 35: Shovel Test Three Soil Profile.....36  
Figure 36: Shovel Test Three, Level One Artifacts .....36  
Figure 37: Shovel Test Three, Level Two Artifacts.....37

**Introduction**

GTI Environmental, LLC (GTI) has prepared this intensive archaeological survey report for the proposed Hollywood Park Telecommunications Tower, in Bexar County, Texas (Figure 1). Verizon Wireless (Project Sponsor) proposes to construct a 160-foot self supporting telecommunications tower within a 60 foot x 100 foot fenced area (Project). The Project area is visible on the Longhorn (2998-422) USGS 7.5 minute quadrangle. The Project is located on land owned and controlled by the City of San Antonio's San Antonio Water Systems (SAWS), which is a political subdivision of the State of Texas. The Texas Historical Commission (THC) issued Antiquities Permit Number 6604 prior to the archaeological investigations, as required by 13TAC26.13(b)(1), and the project is under the jurisdiction of the Antiquities Code of Texas and its Chapter 26 Rules of Practice and Procedure. Sergio A. Iruegas, RPA, served as the professional archaeologist and Principal Investigator (PI) for GTI, which are considered one of the permittees along with Verizon Wireless and SAWS under 13TAC26.3(45) and 13TAC26.18.

GTI completed the intensive archaeological survey for the Project at the request of Terracon Consultants, Inc. (Terracon) on behalf of Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless), in accordance with the Federal Communications Commission's (FCC) *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission* (Nationwide PA [FCC 04-222]), with the Texas State Historic Preservation Office (TX-SHPO), and 36CFR800.2(a)(3) as outlined in the National Historic Preservation Act. The Project is under the jurisdiction of the FCC and the TX-SHPO. The Project is considered a *Federal Undertaking*, in accordance with the Nationwide PA and 36CFR800.16(y) as outlined in the National Historic Preservation Act. FCC regulations require that the Project Sponsor considers the effects of the proposed tower on *Historic Properties*. The direct *Area of Potential Effect* (APE) for archaeological resource considerations consists of the 60 foot x 100 foot fenced parcel that will contain a self supporting telecommunications tower—less than one acre. The Project's indirect APE for consideration of historic building resources is a 0.50 mile radius from the Project location for towers 0 to 200 feet. The Texas Historical Commission's (THC) Atlas database does not show any registered historic structures within a 0.50 mile radius of the Project's indirect APE. GTI conducted the intensive archaeological survey based on the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and the THC's *Minimum Archaeological Survey Standards for Texas*, which requires a minimum of 3 shovel tests per acre for projects 0 to 2 acres in size.

According to the THC's Atlas database three agencies sponsored archaeology surveys have been conducted within a half mile of the general project area. Several archaeological sites have been recorded near the Project's direct APE on similar topographic settings as the Project's location. Panther Springs is a well known water resource where prehistoric tribes settled leaving hearth fields as evidence in the

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archaeological record. Therefore, the Project's direct APE was considered a high probability area where archaeological sites were likely to be present.

As required by the Nationwide PA [Stipulation VI(D)(2)(b)], "[i]dentification and evaluation relating to archeological resources shall be performed by a professional who meets the Secretary of the Interior's Professional Qualification Standards in archeology." Accordingly, Sergio A. Iruegas, RPA, served as the professional archaeologist/Principal Investigator (PI) and performed a 100 percent intensive archaeological survey of the entire Project direct APE on July 24, 2013 and documented 41BX1985. This archeology site consisted of six hearths that were intact and partially dispersed over the great majority of the Project's direct APE. The ground surface visibility within the Project's direct APE was greater than 30 percent. The PI noted extensive artifacts on the ground surface. GTI's PI excavated a total of three shovel tests within the Project's direct APE. The shovel tests contained substantial amounts of burned limestone rocks, heat-altered lithic artifacts, lithic thinning-flakes, and charcoal. Every shovel test's 10 cm levels were positive. In some cases, shovel tests were terminated, because intact hearths were evident with charcoal or large, layered, limestone fragments made it impossible to continue shovel testing beyond approximately 30 cm below ground surface. The hearts were present from the access road to the proposed fenced in area. The hearth within the access road also contained a bone fragment on the ground surface.

Accordingly, GTI has assessed that the proposed project may have an Effect to 41BX1985 archaeology site's eligibility for listing in the National Register of Historic Places. GTI recommends that the Project Sponsor avoid 41BX1985 or conduct National Register Testing at 41BX1985 and continue Section 106 consultation with the TX-SHPO.

This report is divided into seven sections and one appendix. Following the Introduction is the Project Description which discusses the Project dimensions, and type, as well as, the topography, soils, geology, and flora of the Project area. The next section is the Archival Review presenting the examination of the historical map collections in order to identify any potential historical archaeology sites or extant structures representing homesteads, schools, churches, ranches or communities, as well as identify any locations for historic cemeteries within the Project area. The Archival Review also considers important events or individuals that may have a historic role in Texas history in the context of the National Register criteria under 36CFR60.4(a) and 36CFR60.4(b). The Regional Archaeological Chronology discusses the prehistoric and historic time periods of the Project area. Survey Methodology and Results is the subsequent section that discusses the details of the intensive archaeological survey data and assessments of affect to archaeological resources within the Project's direct APE. The Summary and Recommendations discuss the conclusions and determination of effects based the intensive archeological survey, and the References section contains all the citations used in the report. Appendix A contains the shovel test data resulting from this intensive archaeological survey.

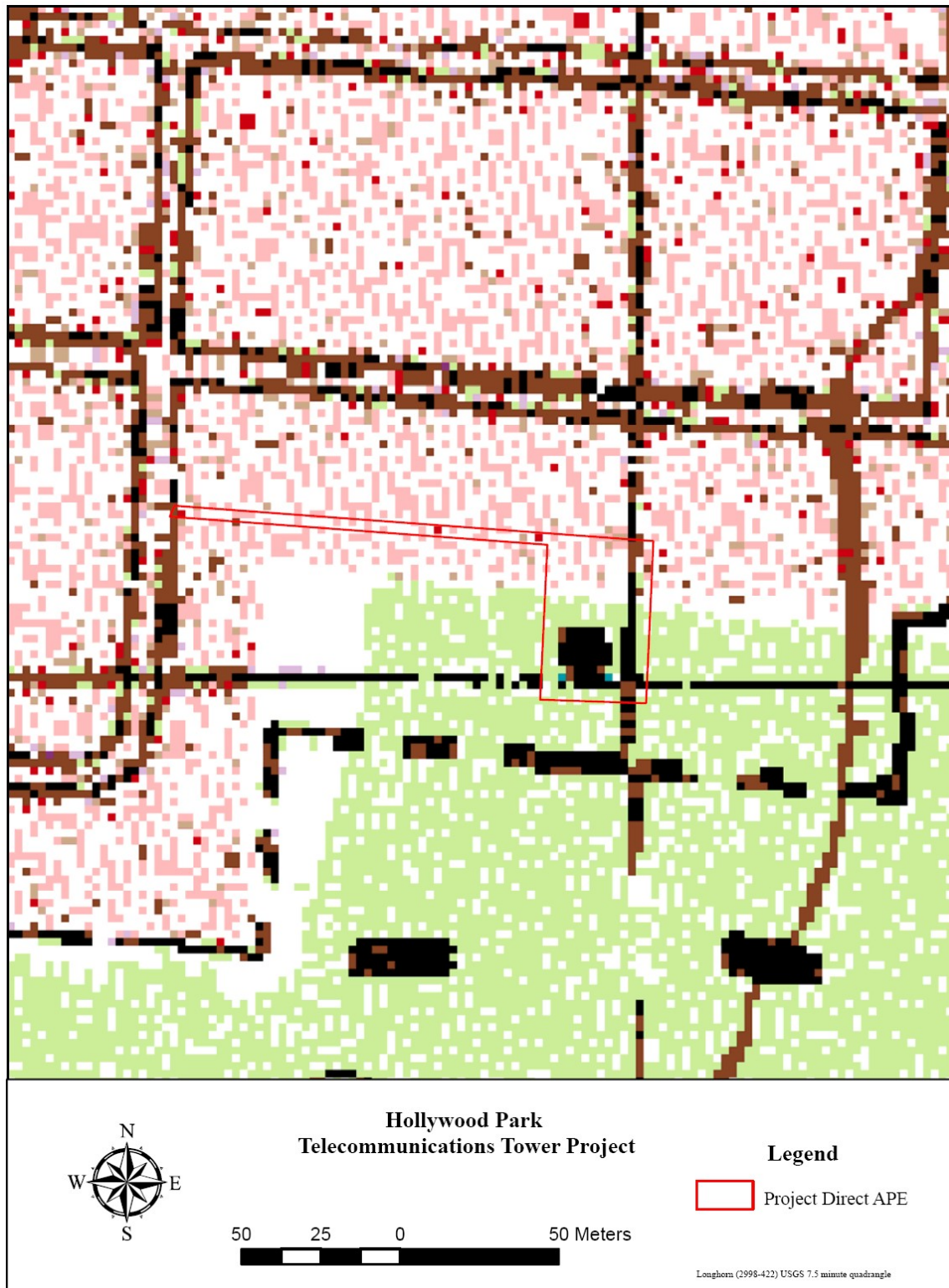


Figure 1: Topographic Map of Project Location



**Project Area Description**

The Project is located south of North Texas 1604 Loop and west of Voigt Road in north San Antonio, Texas. The Project's direct APE is located on a broad upland terrace of Panther Springs. The Project sponsor proposed to construct a 160-foot self supporting telecommunications tower within a 60 foot x 100 foot fenced area.

Bexar County is situated on both the Edwards Plateau and the interior section of the Coastal Plains of South Central Texas. The northwestern part of Bexar County lies on the Edwards Plateau ending in the Balcones Escarpment. Panther Springs is located northeast of the Project's direct APE, and serve as the drainage basin for the Project area. The area is covered primarily by silty clay loam that supports a variety of vegetation including live oak, mesquite and many varieties of grasses (Long 2013). The Project's direct APE is covered in manicured short grasses and surrounded by live oaks (Figure 2). The general topography of the Project's direct APE is on a broad flat upland terrace of Panther Springs. The elevation for the Project's direct APE is 972 feet above sea level. Rainfall averages 31 inches a year, and the growing season for Bexar County is 265 days a year (Long 2013). Ground surface visibility was greater than 30 percent during the intensive archaeological survey.



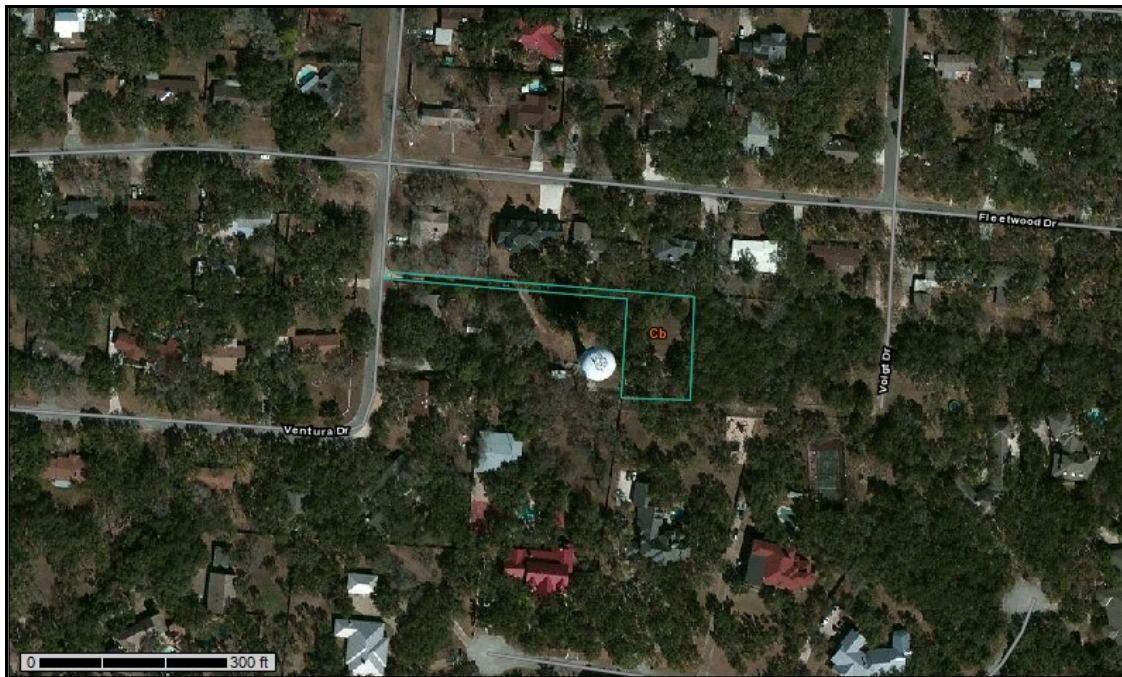
*Figure 2: General View of Project's direct APE Looking West*

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### Soils

The soil mapped within the Hollywood Park Telecommunications Tower Project's direct APE is classified as Crawford and Bexar stony soil series, (Cb) (USDA 2013; Figure 3). The Crawford and Bexar series are well drained and slowly permeable soils formed in clayey sediments. These soil series are underlain with limestone bedrock that occurs on broad to gently, sloping, uplands or upland plains (USDA 2012, 2003). The slope for these soil series ranges from 0 to 5 percent.

One hundred percent of the project APE is covered with the Crawford and Bexar (Cb) stony soils. These two soil series are considered geographically associated soils and are classified together. They are typically used as rangeland and cropland (USDA 2012, 2003). The Cb soil series are cobbly clay loams to silty clay soils, and they have abrupt to clear wavy boundaries. The upper layer of the Crawford and Bexar soil series are dark reddish brown (5YR3/2 to 2/2) and brown to dark brown (7.5YR4/2 to 3/2), respectively. On average, the depth of the upper layer for these soil series is from 0 to 8 inches, and it lacks pebbles and cobbles. The second level of the Cb soil series averages 8 to 28 inches, and it is a dark reddish brown (2.5YR 3/4 to 2.5/4). Twenty percent of the Cb soil series second layer is composed of pebbles and cobbles. The underlying layer of this soil series is composed of fractured limestone. The limestone at this level is composed of interbedded, indurated, and strongly cemented crystalline-structure, and it is present in the soil profile from depths between 32 and 38 inches (USDA 1997, 2003). The Cb soil series color changes with depth. Its texture, however, remains the same in both levels.



*Figure 3: USDA Soils Map of the Hollywood Park Cell Tower Project APE*



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## Geology

The Hollywood Park Telecommunications Tower Project's direct APE is situated within the Eagle Ford Group (Kef) consists of shale, siltstone, and limestone (Figure 4) (Bureau of Economic Geology 1982). The limestone in the group is light yellowish brown. The siltstone and sandstone in the group is very fine grained. The thickness of the Eagle Ford Group is between 30 to 75 feet.

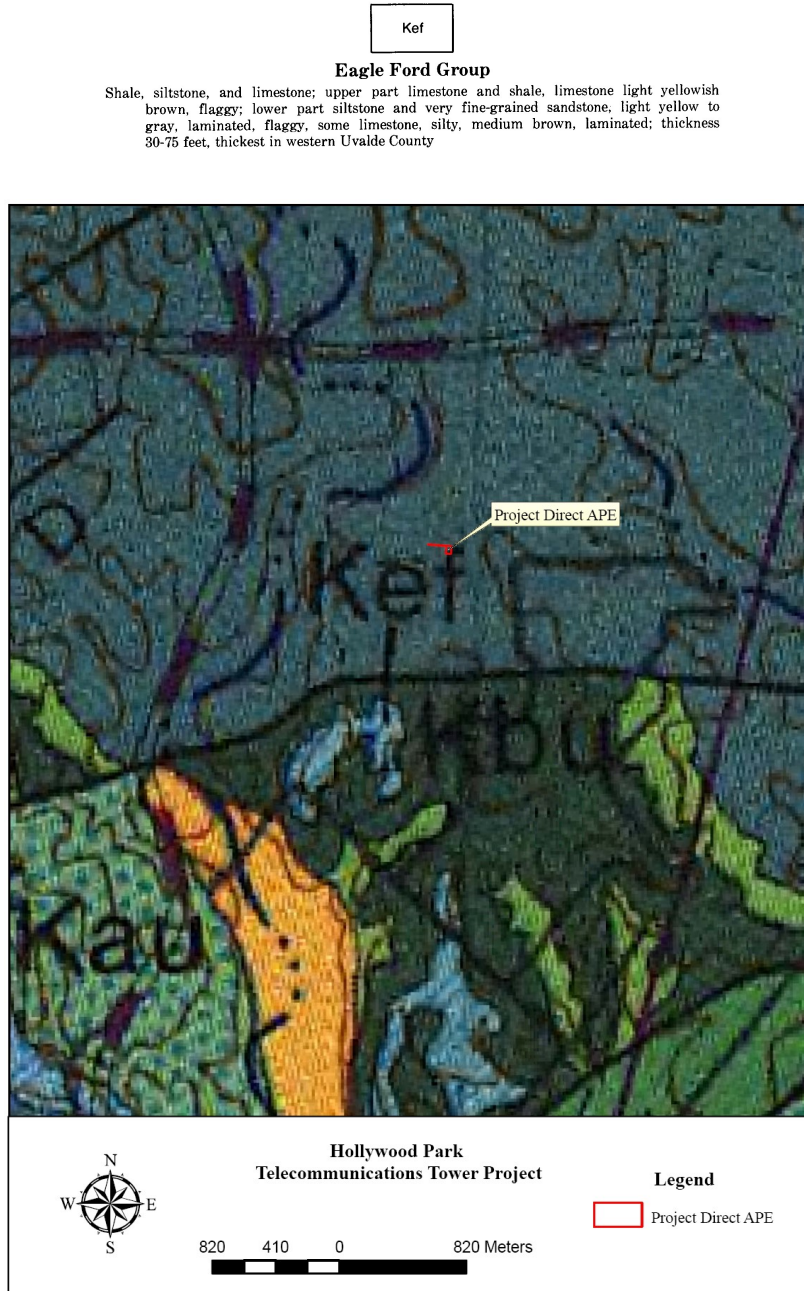


Figure 4: Geologic Map of the Hollywood Park Cell Tower Project APE.



**Archival Review**

GTI performed an archival review of historic maps and online resources. These efforts were made in order to identify any potential significant historical archaeology sites. Potential historical archaeology sites are noted on historic maps by the presence of extant structures. The archival review also included identifying any locations for historic graveyards or cemeteries within the proposed Hollywood Park Telecommunications Tower Project's direct APE. The archival review also considers important events or individuals that may have a historic role in Texas history by documenting the earliest known landowners and plat history of the Project's direct APE. This effort was performed to determine if significant individuals or events occurred within the Project's direct APE that meets the National Register criteria under 36CFR60.4(a) and 36CFR60.4(b).

GTI's historian reviewed various historic map collections including the searchable database of historic maps housed at the Texas General Land Office (GLO), Perry Castañeda Library Map Collection, Texas and the State Archives in order to identify the earliest history for Bexar County. During this research, archaeologists reviewed historic maps that included the 1871 and the 1878 Bexar County Historic Plat maps (Figure 5 and Figure 6), 1936 General Highway Map of Bexar County (Figure 7), Texas, and the 1953, 1967, and 1973 Longhorn 1:24 USGS Topographic Maps (Figure 8 through Figure 10). The general Project area is indicated on the historic maps with red-line rectangular boxes.

Bexar County was established on December 20, 1836 with San Antonio as the county seat (Long 2013). Texas Legislature representative partitioned the county begging in 1860. Since that time 128 counties have been carved from Bexar County. Efforts by the Spanish Crown to establish settlements were centralized in San Antonio. The Catholic Church offered Native Americans room and board through the establishment of Missions along the San Antonio River. Thus the settlement of San Fernando de Bexar came into being. We now know the city as San Antonio. The first civilian settlers of San Antonio included the Canary Islanders. A total of ten families left the Canary Islands to settle in San Antonio. During the journey, families grew through marriages. By the time the Canary Islands reached San Antonio a total of fifteen families and four single men settled in the city. The number of Canary Islanders totaled fifty six individuals. The arrival of these families along with the converted Native Americans living at the missions tripled the population in the region. The Canary Islanders developed the historic acequias for irrigation farming, which firmly establish the settlement of the area (Long 2013).

The majority of the population during the beginning of the Texas Revolution were Mexican or of Mexican descent, and the meztizaje continued through the mid 19th century. German immigrants began to move into the area during the 1840s. In 1850, the population for the entire county was 5,633. Over half of those individuals lived in San Antonio (Long 2013). Economic recovery after the Civil War came slowly with irrigation farming mainly for subsistence rather than for exporting. It was the ranching industry,

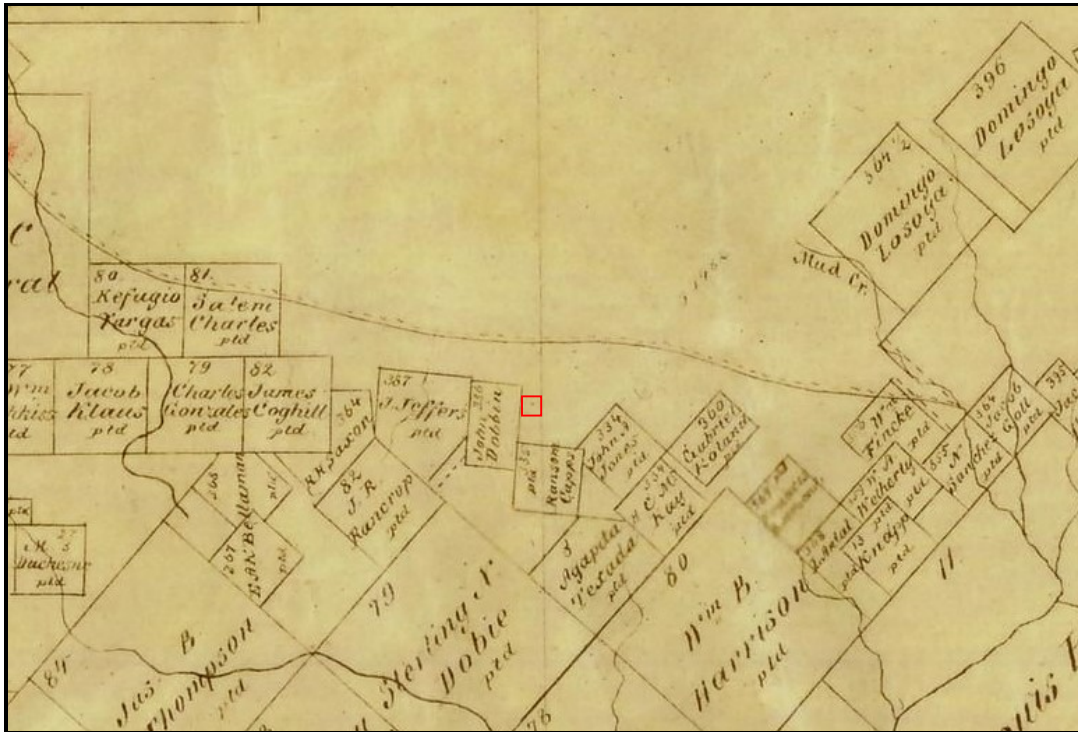


Figure 5: 1871 Bexar County Plat Map

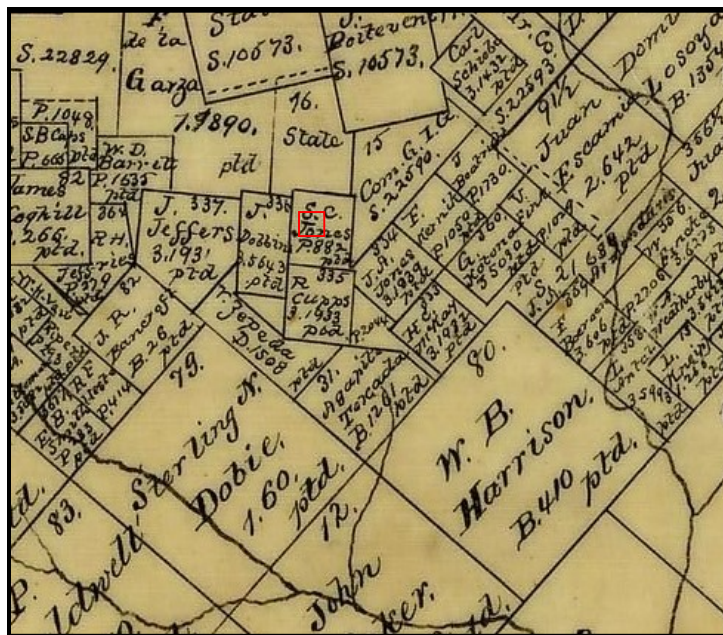
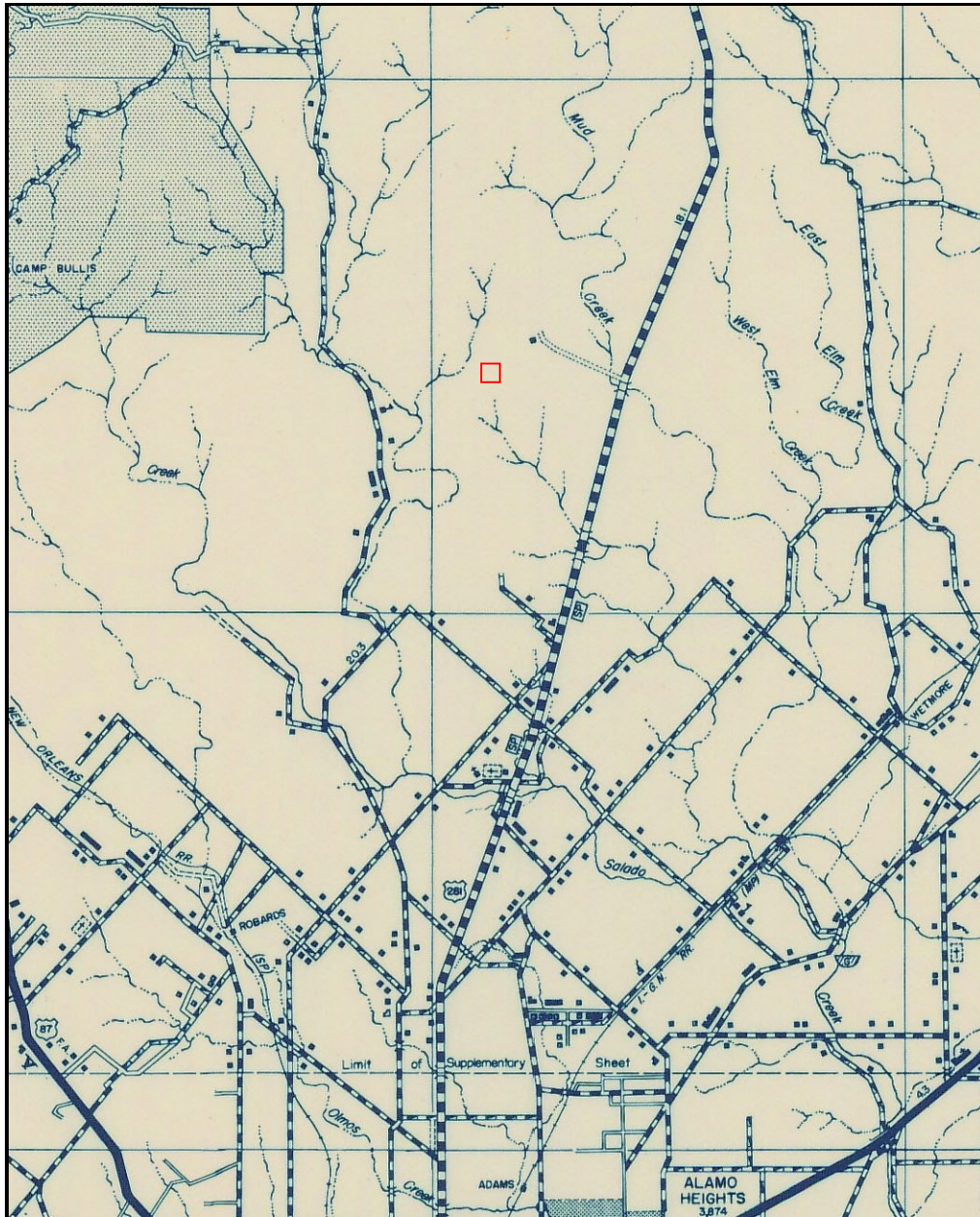


Figure 6: 1878 Bexar County Plat Map



*Figure 7: 1936 Bexar County General Highway Map*

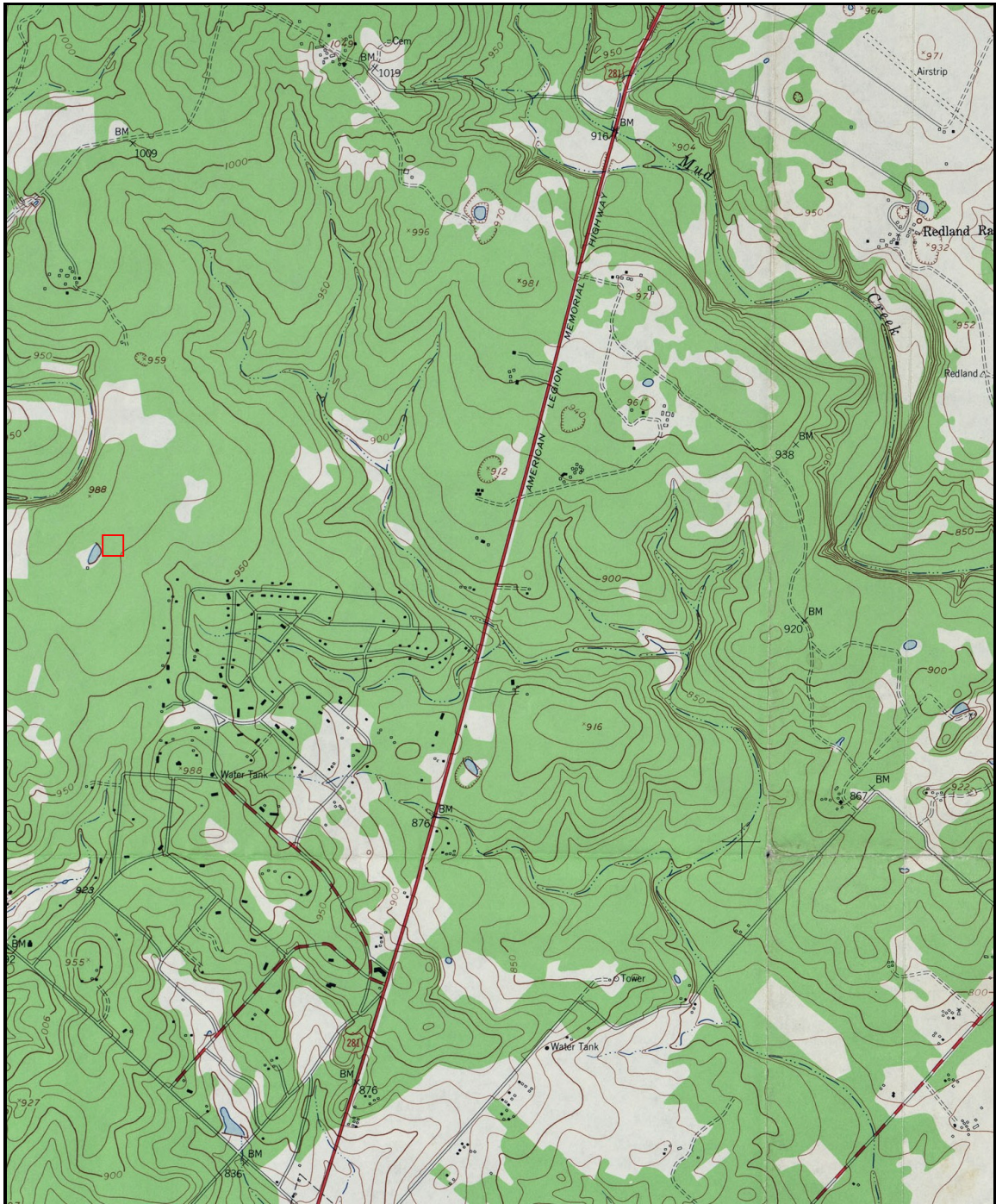


Figure 8: 1953 Longhorn 1:24 Topographic Map

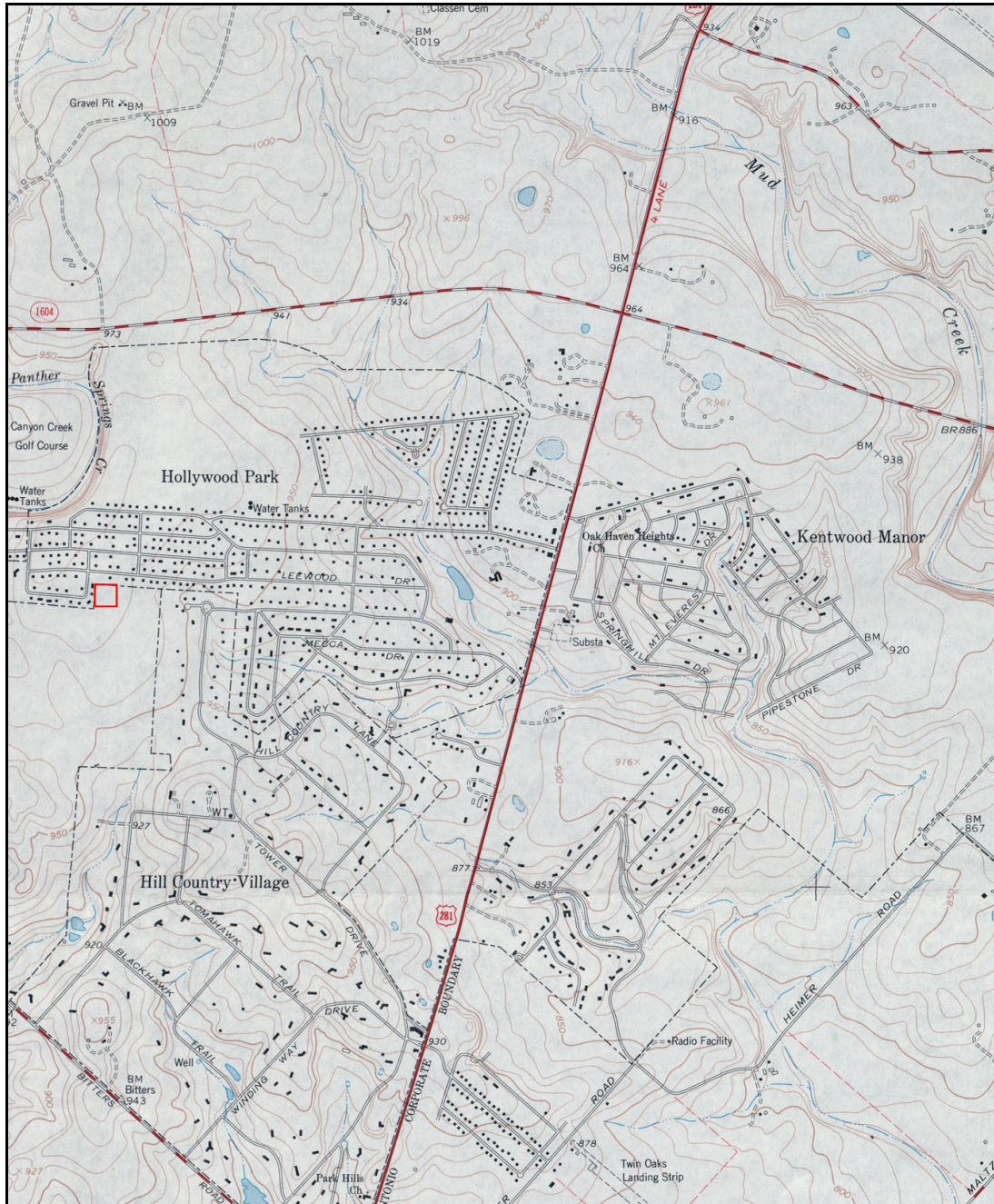
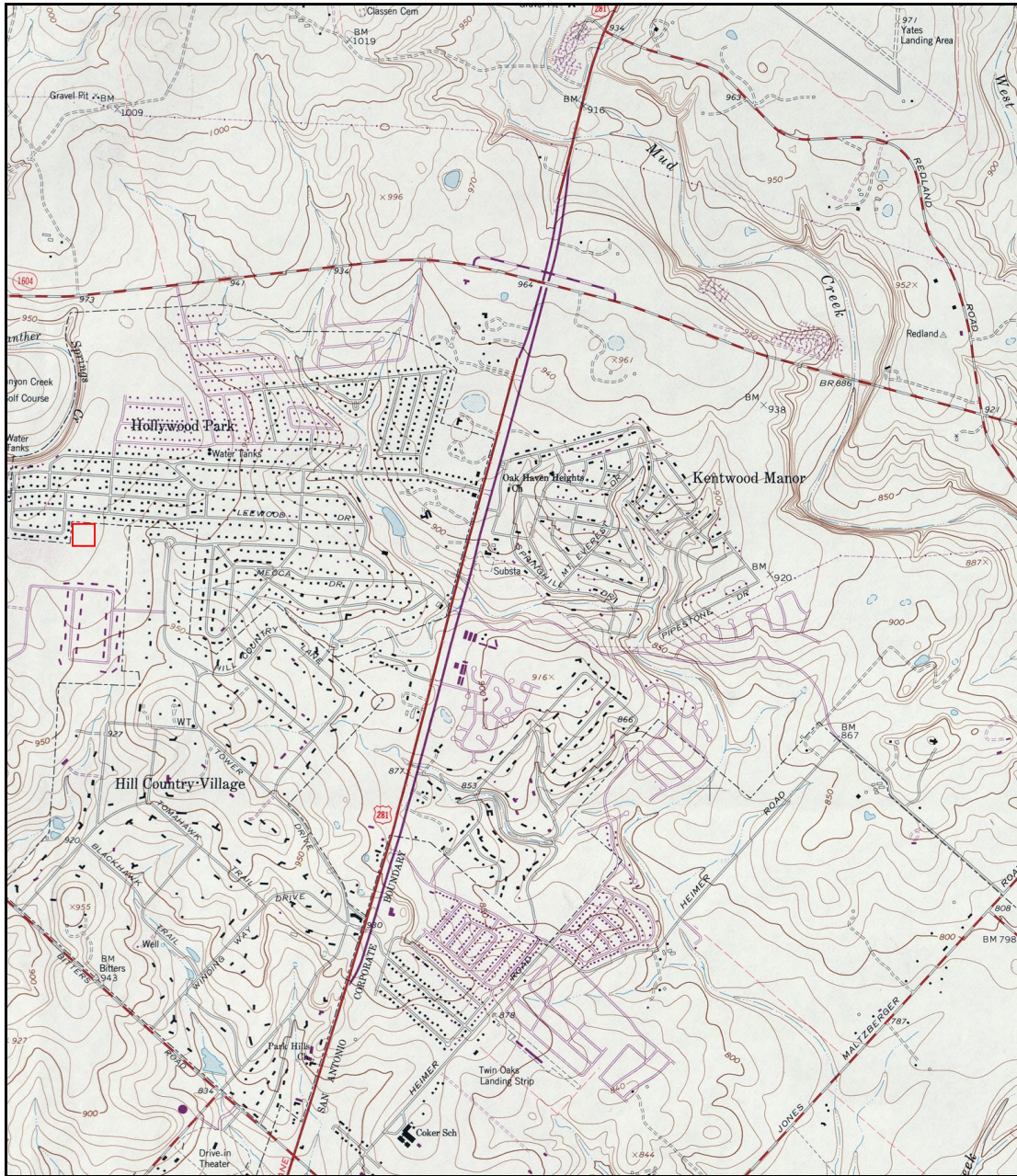


Figure 9: 1967 Longhorn 1:24 Topographic Map



*Figure 10: 1973 Longhorn 1:24 Topographic Map*

and more specially, the sheep ranching industry that spurred the economic recovery during the later part of the 19th century. True recovery came in February of 1877 with the arrival of the first railroad, the Galveston, Harrisburg and San Antonio Railway (Long 2013). The railways brought the ability to transport more goods. This led to a boom in the agricultural economy, as well as, continued growth of the cattle industry. During World War I and World War II the crops produced for export included corn, oats, vegetables, and fruit. This aided relief during the Depression Era. The export of agricultural surplus spurred growth into the mid-20th century (Long 2013).



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According to the Texas General Land Office (File Number 000882, Abstract 390, Section 335.5), the Hollywood Park Project's direct APE is located in the original land grant of the Samuel C Jones. GTI's historian reviewed early Bexar County Plat maps. The land grant was originally 160 acres, and it was granted under proof of "Preemption" having settled on public land under "An Act to Regulate the Disposal of the Public Lands of the State of Texas," approved on August 12, 1870. The 1871 Bexar County Map shows the area of the Project's direct APE as not platted (Figure 5). The land grant was patented by Samuel C. Jones on April 18, 1878 under Patent Number 149 (Patent Volume 7). The 1878 Bexar County Plat Map shows the platted and patented land grant of Samuel C. Jones, and the Project's direct APE location within the tract (Figure 6). There is no mention of this Samuel C. Jones in the Handbook of Texas.

GTI's historian also reviewed the 1936 General Highway Guadalupe County Map and the 1953, 1967, and 1973 Longhorn 1:24 USGS Topographic Maps. There was no development or extant structures located within the Project's direct APE on any of the maps reviewed. This indicated that the Project's direct APE has a low probability for historical archaeology resources.

There was no reference in the Handbook of Texas regarding Samuel C. Jones. Therefore, there are no significant individual in Texas history that lived within the Project's direct APE. Based on the archival review, there were no significant individual in Texas history that lived within the Project's direct APE, and no information regarding important events that took place within the Project's direct APE that meets the National Register criteria [36CFR60.4(a)] and [36CFR60.4(b)].



## **Regional Archeological Chronology**

A temporal framework for prehistoric archeological sites in Texas can be categorized by three main periods: the Paleo-Indian (10,500–8500 Before Present [B.P.]), the Archaic (8500–1200 B.P.), and the Late Prehistoric (1200–400 B.P.). The Archaic period is further subdivided into the Early Archaic (8500–6000 B.P.), the Middle Archaic (6000–3500 B.P.), and the Late Archaic (3500–1250 B.P.). Suhm et al. (1954), Suhm and Jelks (1962), Prewitt (1981, 1985), and Turner and Hester (1999) established this temporal framework based on projectile point type seriation and based on technological changes in diagnostic artifacts due to changing environment and subsistence strategy adaptations.

### **Paleo-Indian Period**

The Paleo-Indian period dates from approximately 10,500 to 8,000 years B.P. Archeological sites from this period have been found in rock shelters and out in the open. Mobile hunters and gathers exploited megafaunal species such as mastodon, mammoth, bison, horse, and camel. The Paleo-Indian period has been documented as the earliest occupation of Texas archeological prehistoric sites and straddles the end of the Pleistocene era and the beginning of the Holocene. Few megafaunal assemblages have been recovered at archeological sites, however, stone tool assemblages are better known. The stone tools of this period are generally lanceolate projectile points that include *Plainview*, *Clovis* and *Folsom* type points. Processing tools include *Clear Fork* bifaces *Albany* tools, and end scrapers (Hester 1999:246, 277, 280). Much debate has occurred in recent years regarding the beginning of this period or that a pre-clovis culture entered North America prior to 10,500 years B.P. and as early as 13,500 years B. P. as evidence at Monte Verde in Chile, South America. The basic chronology, however, remains the same for Texas at this time.

### **Archaic Period**

The Archaic Period dates from approximately 8,500 to 1,250 years B.P. Researchers have divided this period into the Early Archaic (8500–6000 years B.P.), Middle Archaic (6000–3500 years B. P.), and Late Archaic (3500–1250 years B.P.). This time period is characterized with warmer temperatures and rising sea levels. As sea levels rose, so did other water systems, like rivers and streams. These changing environmental conditions were the impetus for a burgeoning new ecosystem which was exploited by early inhabitants and the demise of some big game animals like the mastodon and mammoth. As the environment changed, the Archaic people's diet changed, as well as, the stone tool technology they used to procure and process these new plants and animals. Regional diversification in diet and material culture occurs during the Archaic Period. In general, Archaic people began to make their projectile points with stems and points such as the lanceolate form fell from use. During the Early Archaic *Angostura*, *Scottsbluff*, *Golondrina*, *Merserve*, *Gower*, *Hoxie*, *wells*, *Bell*, *Andice*, *Martindale*, *Uvalde*, *Baird*, and *Taylor* points show this change in stone tool technology.

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During the transition from Early Archaic to Middle Archaic periods, stemmed points become more common and begin to show a greater degree of diversity in point forms. Archaic peoples begin to make burned rock midden deposits. Point types found at burned rock midden sites typically include *Nolan*, *Travis*, *Bulverde*, *Pedernales*, *Marshall*, *Williams*, and *Lange* forms. The last three forms have been considered as transitional forms leading into the Late Archaic. Typical Late Archaic point forms include *Marcos*, *Montell*, *Castroville*, *Frio*, *Fairland*, *Enson*, and *Mahomet*. Archaic populations increased throughout this period at which time social and exchange relationships developed based on the ubiquitous variety of point types, forms and material cultural evidence.

### Late Prehistoric Period

The Late Prehistoric Period dates approximately from 1,200–400 years B.P. The greatest innovation during this period was the development of the bow and arrow. Stone tool technology evolved in step with this new innovation. Late Prehistoric people made their stone points smaller and more diverse in form depending on the game animals that were being hunted. Some of these stone arrow points include *Edwards*, *Scallorn*, *Zavala*, *Perdiz*, *Cuney*, *Padre* and *Alba* types. The second greatest innovation during this period was the development of ceramics. Settlement patterns also change at this time as sedentary and horticultural communities become more common, and corn is introduced to Texas indicating the existence of exchange networks between sedentary and nomadic groups. Archeological site types also include open camps, lithic scatters, and cemeteries.

### Historic Native American Period

The Historic Native American Period begins at the point of contact with European explorers in A.D. 1492. The first European explorer to reach Texas was Alvar Nunez Cabeza de Vaca during the 1528 Narvaez Expedition of the Gulf coast. Cabeza de Vaca was stranded in Texas for eight years and traveled throughout South Texas and Mexico meeting different Native American groups. He was eventually rescued and went back to Spain. During his journey, Cabeza de Vaca documented numerous groups of people, their customs, and cultural differences. Subsequent Spanish entradas in Texas began during the early 1700s with the establishment of the Spanish missions. Changing and shifting social and cultural ties characterize this time. For example, although the Tonkawa were one of the more numerous Native American groups in Texas, the Ervipiame moved into the area from northern Mexico and many of them joined the Tonkawa groups as a matter of survival (Hester 1980: 51). The Lipan Apaches immigrated and came from the northwest into Texas. Hester (1980: 51) has noted that by the early 1700s, the Lipan Apache numbered between 3,000 and 5,000 in population size and controlled the Central Texas area by 1775. Shortly there after, the Comanche moved into Texas from the Colorado and Wyoming areas and displaced the Tonkawa and Lipan Apache groups.

## **Methodology and Results**

### Survey Methodology

The intensive archaeological survey was accomplished by performing a 100 percent ground surface inspection within the entire Project's direct APE. Archaeologists followed the *Minimum Archaeological Survey Standards for Texas*, as well as, the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*. GTI quantified the presence or absence of any cultural deposits by documenting the shovel test soil profiles within the Project's direct APE. Survey and shovel test data was obtained in order to assess effects the Project may have to any new archaeology sites and to assess each site's potential eligibility status for listing in the National Register of Historic.

When observed, artifacts would be documented in the field. If artifacts were to be collected, the artifacts would be bagged and labeled appropriately according to curation guidelines. These artifacts would be formally curated at Texas Archaeological Research Laboratory in accordance with the curation standards for collection and preparation (36CFR79) following analysis and reporting. Field notes were maintained during the survey. Digital photos were taken when appropriate and recorded on a photograph log. A WAAS-enabled GPS unit (UTM, NAD 83) was used to mark the locations of shovel tests, as well as, any newly recorded sites and their boundaries for planning purposes. Artifacts were not collected, and they were left in the field, so there are no curation issues.

A pedestrian survey in 5-meter intervals was conducted in the APE for direct effects. Shovel tests were excavated in 10 cm arbitrary levels, and the soil profile results were documented on shovel test excavation forms. The soil matrix was screened through quarter inch wire mesh when possible or trowel sorted for culturally-modified material. Shovel tests were excavated at least 50cm to 1 meter deep or until two negative 10 cm levels had been encountered, or unconsolidated bedrock or bedrock was encountered.

### Background Review

Prior to field investigations, GTI's PI reviewed the THC's Atlas Database. According to the THC's Atlas database three agencies sponsored archaeology surveys have been conducted within a half mile of the general project area. Several archaeological sites have been recorded near the Project's direct APE on similar topographic settings as the Project's location. Panther Springs is a well known water resource where prehistoric tribes settled leaving hearth fields as evidence in the archaeological record. Therefore, the Project's direct APE was considered a high probability area where archaeological sites were likely to be present.

**Survey Results – 41BX1985 Site Description**

As required by the Nationwide PA [Stipulation VI(D)(2)(b)], “[i]dentification and evaluation relating to archeological resources shall be performed by a professional who meets the Secretary of the Interior’s Professional Qualification Standards in archeology.” Accordingly, Sergio A. Iruegas, RPA, served as the professional archaeologist/Principal Investigator (PI) and performed a 100 percent intensive archaeological survey of the entire Project direct APE on July 24, 2013 and documented 41BX1985 (Figure 11). The ground surface visibility within the Project’s direct APE was greater than 30 percent. The central portion of the Project’s direct APE was partially covered with a gravel pad. The PI noted extensive artifacts on the ground surface. GTI’s PI excavated a total of three shovel tests within the Project’s direct APE. The shovel tests contained substantial amounts of burned limestone rocks, heat-altered lithic artifacts, lithic thinning-flakes, and charcoal. Every shovel test’s 10 cm levels were positive. In some cases, shovel tests were terminated, because intact hearths were evident with charcoal or large, layered, limestone fragments made it impossible to continue shovel testing beyond approximately 30 cm below ground surface.

Archeology site 41BX1985 consisted of six hearths that were intact and partially dispersed over the great majority of the Project’s direct APE. Extensive ground surface artifacts were immediately present just inside SAWS gate at the existing access road (Figure 12). The hearts were present from the access road to the proposed fenced-in area. The hearth within the access road also contained a bone fragment on the ground surface. The PI documented this first hearth and Hearth One (H-1). The PI noted H-1 was approximately 4 m x 3 m in oval shape with lithic flakes, bone fragment, and numerous lithic fragments (Figure 13 to Figure 15). The SAWS water tower access road curves eastward and the proposed access road traverses northeastward. The PI noted artifacts exposed on the surface within the access road leading up to the tower location (Figure 16). Clusters of artifacts were noted on the ground surface, in some cases with utilized flakes consistent with a hearth field type archaeology site (Figure 17 and Figure 18).

The PI noted H-2 within the context of a tree and rodent borrow in the southwest area of the Project’s direct APE. Examination of the rodent burrow backdirt showed evidence of buried artifacts, such as large core fragments, lithic and heat treated limestone (Figure 19 and Figure 20). The hearth was approximately 2 m x 3 m in size. Hearth Three was approximately 4m x 2m in size in the north-central portion of the Project’s direct APE (Figure 21 to Figure 23). The hearth contained heat treated limestone and lithic artifacts, as well as the lithic debris spread over the ground surface. The hearth appeared partially dispersed by the tree adjacent to the hearth. Hearth Four was a smaller hearth directly adjacent and west of H-3. The hearth was approximately 1 m x 0.75 m in size with numerous tested cobbles (Figure 24). The PI noted the ground surface artifacts extended up to the gravel pad (Figure 25), which indicated the gravel pad potentially covers intact cultural deposits and possible hearths on the original ground surface.





*Figure 12: Ground Surface Artifacts Near Access Road Gate*



*Figure 13: Hearth One with lithics and Bone Fragment*





*Figure 14: Hearth One Looking NE at Tower Location Area*



*Figure 15: Hearth One Looking East From Access Road*



*Figure 16: Artifacts Exposed in Access Road Area*



*Figure 17: Cluster of Ground Surface Artifacts with Utilized Flake*



*Figure 18: Utilized Flakes and Lithic Ground Surface Artifacts*



*Figure 19: Heart Two with Buried Artifacts in Rodent Borrow Backdirt*



*Figure 20: Hearth Two with Gravel Pad*



*Figure 21: Hearth Three with lithic and Heat Altered Lithics on the Ground Surface*



*Figure 22: Hearth Three Showing Hearth Two in the Background*



*Figure 23: Hearth Three with Gravel Pad in Background*



*Figure 24: Hearth Four with Hearth Three in Foreground*



*Figure 25: Ground Surface Artifacts Adjacent to Gravel Pad*

The north eastern portion of the Project's direct APE showed some evidence of ground leveling in preparation of the gravel pad, perhaps. A cut tree's root ball was partially pulled, which exposed the potential depth of the cultural deposits. The PI examined the tree root ball for evidence of cultural deposits and noted H-5. The hearth is approximately 1 m x 2 m in size with visible exposed lithic artifacts on the ground surface. The upturned tree root ball partially disturbed the hearth, and a portion of the intact hearth was uplifted with the root ball (Figure 26 and Figure 27).



*Figure 26: Hearth Five in Tree Root Ball*

The southeast portion of the Project's direct APE contained the largest intact heart. Hearth Six measured approximately 5 m x 3 m in size. Initially, the PI considered this portion of the Project's direct APE as an area where a concentration of lithics and heat treated limestone was present. Based on Shovel Test One (ST-1), it was apparent this area was an intact hearth that was more level with the ground elevation compared to the other hearths, which were typically raised slightly above the ground elevation. Hearth Six was buried and partially exposed on the ground surface.

Within the first few centimeters (0 – 6 cm) of ST-1, the PI noted evidence of charcoal and ash and extensive cultural deposits (Figure 28). The PI determined it was better to preserve this hearth's intact nature and terminate the shovel test at 6 cm below ground surface, because of the high frequency of artifacts and organic cultural material. For instance, ST-1 Level One (L-1) contained 28 tertiary flakes showing heat alteration and five larger lithic artifacts along with ash and charcoal staining within a 30 cm diameter shovel test 6 cm deep (Figure 29 and Figure 30). The antiquities permit scope of work did not include collecting soil samples, and the quality of the preserved cultural material requires such archaeological methods reserved for National Register testing.



*Figure 27: Hearth Five with Uplifted Cultural Deposits*



*Figure 28: Shovel Test One Showing Charcoal and Lithic Deposits*





*Figure 29: Shovel Test One, Level One Artifacts*



*Figure 30: Shovel Test One, Level One Artifacts*

Shovel Test Two was excavated in the southwestern area of the Project's direct APE just north of H-2. The PI noted three natural stratigraphic layers in ST-2 soil profile (Figure 31). The first layer was a brown silty loam 0 to 9 cm below ground surface. This was followed by a dark-brown clayey silty loam with limestone from 9 to 23 cm below ground surface, and a brown silty loam with limestone from 23 cm to 33 cm below ground surface. Each shovel test 10 cm level (L-1, L-2, and L-3) was positive for cultural material. Level One contained 11 tertiary flakes, 2 cores, and 3 heat treated limestone fragments from 0-10 cm below ground surface (Figure 32). The second (10cm – 20 cm) increased in frequency and had 20 tertiary flakes and 3 piece of heat altered limestone (Figure 33). The last level was 13 cm thick from 20 cm to 33 cm, and the frequency was increasing with depth. Level Three contained 21 tertiary flakes and 11 larger tertiary heat treating and thermal alteration (Figure 34). Shovel Test Two was terminated at the large flat limestone layer that made further excavation with a shovel impractical. This layer of large layered limestone was visible in the uprooted tree stump. It is unknown if cultural material is present below the layers of limestone. This limestone layer does not show the cultural modified heat alteration of the limestone above these larger flat layered limestones. Natural soil deposition processes suggest that this layer is intact and cultural material below this layer is improbable. It is probable that the depth of 41BX1985 is approximately 30 to 40 cm below ground surface in this portion it's vertical site boundary.



*Figure 31: Shovel Test Two Soil Profile*



*Figure 32: Shovel Test Two, Level One Artifacts*



*Figure 33: Shovel Test Two, Level Two Artifacts*



*Figure 34: Shovel Test Two, Level Three Artifacts*

GTI's PI excavated ST-3 in the northwestern area of the Project's direct APE. The tree root ball demonstrated the depth of cultural deposits in the northeastern Project's direct APE. Due to time constraints of SAWS representative, the PI terminated ST-3 at 20 cm below ground surface (Figure 35). The shovel test data was similar to ST-2; a high frequency of buried cultural material. The PI noted the brown silty loam natural stratigraphic soil layer from 0 to 3 cm below ground surface followed by the brown silty loam with limestone from 3 cm to 20 cm below ground surface. The first arbitrary 10cm level contained 7 tertiary flakes and 15 heat treated lithics (Figure 36). Level Two was excavated from 10 cm to 20 cm, and it contained 6 tertiary flakes and 8 heat altered limestone fragments (Figure 37).



*Figure 35: Shovel Test Three Soil Profile*



*Figure 36: Shovel Test Three, Level One Artifacts*



*Figure 37: Shovel Test Three, Level Two Artifacts*

**Summary and Recommendations**

This report documents the results of an intensive archaeological survey for the 160 foot high self supporting Hollywood Park Telecommunications Tower (Project), in Bexar County, Texas. GTI Environmental, LLC (GTI) completed the intensive archaeological survey for the Project under Antiquities Permit Number 6604 at the request of Terracon Consultants, Inc. (Terracon) on behalf of Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless), in accordance with the Federal Communications Commission's (FCC) *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission* (Nationwide PA [FCC 04-222]) with the Texas State Historic Preservation Office (TX-SHPO) and 36CFR800.2(a)(3) as outlined in the National Historic Preservation Act. The Project is under the jurisdiction of the FCC and the TX-SHPO. The Project is considered a *Federal Undertaking*, in accordance with the Nationwide PA and 36CFR800.16(y) as outlined in the National Historic Preservation Act. FCC regulations require that the Project Sponsor considers the effects of the proposed tower on *Historic Properties*. The Project's direct *Area of Potential Effect* (APE) for archaeological resource considerations consists of the 60 foot x 100 foot fenced parcel—less than one acre. The Project is located on land owned and controlled by the City of San Antonio's San Antonio Water Systems (SAWS), which is a political subdivision of the State of Texas. The Texas Historical Commission (THC) issued Antiquities Permit Number 6604 prior to the archaeological investigations, as required by 13TAC26.13(b)(1), and the project is under the jurisdiction of the Antiquities Code of Texas and its Rules of Practice and Procedure. Sergio A. Iruegas, RPA, served as the professional archaeologist and Principal Investigator for GTI, which are considered one of the permittees along with Verizon Wireless and SAWS under 13TAC26.3(45) and 13TAC26.18. The Project's indirect APE for consideration of historic building resources is a 0.50 mile radius from the Project location for towers 0 to 200 feet. The THC's Atlas database does not show any registered historic structures within a 0.50 mile radius of the Project's indirect APE. GTI conducted the intensive archaeological survey based on the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and the THC's *Minimum Archaeological Survey Standards for Texas*, which requires a minimum of 3 shovel tests per acre for projects 0 to 2 acres in size.

According to the THC's Atlas database three agencies sponsored archaeology surveys have been conducted within a half mile of the general project area. Several archaeological sites have been recorded near the Project's direct APE on similar topographic settings as the Project's location. Therefore, the Project's direct APE was considered a high probability area where archaeological sites were likely to be present. As required by the Nationwide PA [Stipulation VI (D)(2)(b)], "[i]dentification and evaluation relating to archeological resources shall be performed by a professional who meets the Secretary of the Interior's Professional Qualification Standards in archeology."

## GTI Environmental, LLC

GTI's PI performed a 100 percent intensive archaeological survey of the entire Project direct APE on July 24, 2013 and documented 41BX1985. This archeology site consisted of six hearths that were intact and partially dispersed over the great majority of the Project's direct APE. The ground surface visibility within the Project's direct APE was greater than 30 percent. The PI noted extensive artifacts on the ground surface. GTI's PI excavated a total of three shovel tests within the Project's direct APE. The shovel tests contained substantial amounts of burned limestone fragments, heat-altered lithic artifacts, lithic thinning-flakes, and charcoal. Every shovel test's 10 cm levels were positive. In some cases, shovel tests were terminated, because intact hearths were evident with charcoal or large, layered, limestone fragments made it impossible to continue shovel testing beyond approximately 30 cm below ground surface. The hearts were present from the access road to the proposed fenced in area. The hearth within the access road also contained a bone fragment on the ground surface.

Accordingly, GTI has assessed that the proposed project may have an Effect to 41BX1985 archaeology site's eligibility for listing in the National Register of Historic Places. GTI recommends that the Project Sponsor avoid 41BX1985 or conduct National Register Testing at 41BX1985 and continue Section 106 consultation with the TX-SHPO.



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**Appendix A: Shovel Test Log**

Site #	Shovel Test #	Easting	Northing	Level	Depth (cm)	Soil Description	Color	Artifacts
41BX1985	1	548969	3274207	1	0-6	Silty Loam	Brown	L1: 28 Heat Treated Tertiary Flakes, 5 Larger Heat Treated Lithics
41BX1985	2	548948	3274209	1	0-9	Silty Loam	Brown	L:1: 11 Tertiary Flakes, 2 Cores, 3 Heat Altered Limestone
41BX1985	2	548948	3274209	1-3	9-23	Clayee and Silty Loam with Limestone	Dark Brown	L2: 20 Tertiary Flakes, 3 Heat Altered Limestone
41BX1985	2	548948	3274209	3-4	23-33	Silty Loam with Limestone	Brown	L3: 21 Tertiary Flakes, 11 Larger Tertiary Flakes that are Heat Altered.
41BX1985	3	548951	3274226	1	0-3	Silty Loam	Brown	L1: 7 Tertiary Flakes, 15 Heat Treated Lithics
41BX1985	3	548951	3274226	1-2	3-20	Silty Loam with Limestone	Brown	L2: 6 Tertiary Flakes, 8 Heat Altered Limestone

Site #	Feature #	Easting	Northing	Level	Depth (cm)	Soil Description	Color	Artifacts
41BX1985	1	548829	3274254	Surface	N/A	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts
41BX1985	2	548950	3274204	Surface	N/A	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts
41BX1985	3	548959	3274226	Surface	N/A	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts
41BX1985	4	548953	3274225	Surface	N/A	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts
41BX1985	5	548969	3274231	Surface	N/A	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts
41BX1985	6	548969	3274205	Surface	0-23	N/A	N/A	Heat Altered Limestone and Chert Cobbles with Lithic Artifacts