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Archeological Survey Of A Proposed VA Outpatient Clinic In The City Of San Antonio, Bexar County, Texas

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ARCHEOLOGICAL SURVEY OF A PROPOSED VA OUTPATIENT CLINIC IN THE CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS

By

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ABSTRACT

This report documents the results of an intensive archeological survey carried out in advance of construction of a proposed U.S. Veterans Affairs (VA) outpatient clinic on 25 privately-owned acres in the City of San Antonio, Bexar County, Texas. The survey was conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966. Archeologists from AmaTerra Environmental, Inc. (AmaTerra) visually inspected the entire Area of Potential Effects (APE) and excavated fourteen shovel tests in support of the survey. Approximately 13 acres of the APE were found to have been covered by large quantities of fill material on the surface. No new archeological sites were discovered as a result of the survey and no artifacts were observed within the APE. No artifacts were collected during this survey. AmaTerra recommends that no further archeological work is warranted prior to construction.

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Contents

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Figures

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CHAPTER 1: INTRODUCTION

On May 23, 2018, AmaTerra Environmental, Inc. (AmaTerra) conducted an archeological resource survey in advance of construction of a proposed outpatient clinic in the City of San Antonio in Bexar County, Texas. The goal of this survey was to identify and define any archeological resources that could be impacted by the construction of the outpatient clinic. As the project proponent, the U.S. Department of Veterans Affairs (VA) will construct the clinic on land to be purchased from a private owner. Because the project is federally funded, it is subject to review under the National Historic Preservation Act (NHPA) of 1966. Section 106 of the NHPA directs federal agencies to inventory and assess properties that could be affected by a federal undertaking.

The proposed VA clinic will be located northeast of State Highway 151 and Rogers Road in the western portion of the City of San Antonio (**Figure 1**). The Area of Potential Effect (APE) for this undertaking was defined as the entire proposed 25-acre parcel to a depth of three feet.

This report is divided into six chapters. The environmental setting and regional cultural overview are discussed in Chapters 2 and 3 respectively. Chapter 4 includes the field methodology implemented during the project and the results of the archeological field investigations are discussed in Chapter 5. Chapter 6 consists of the summary and recommendations. The **Appendix** contains the log of shovel test results excavated on the property.

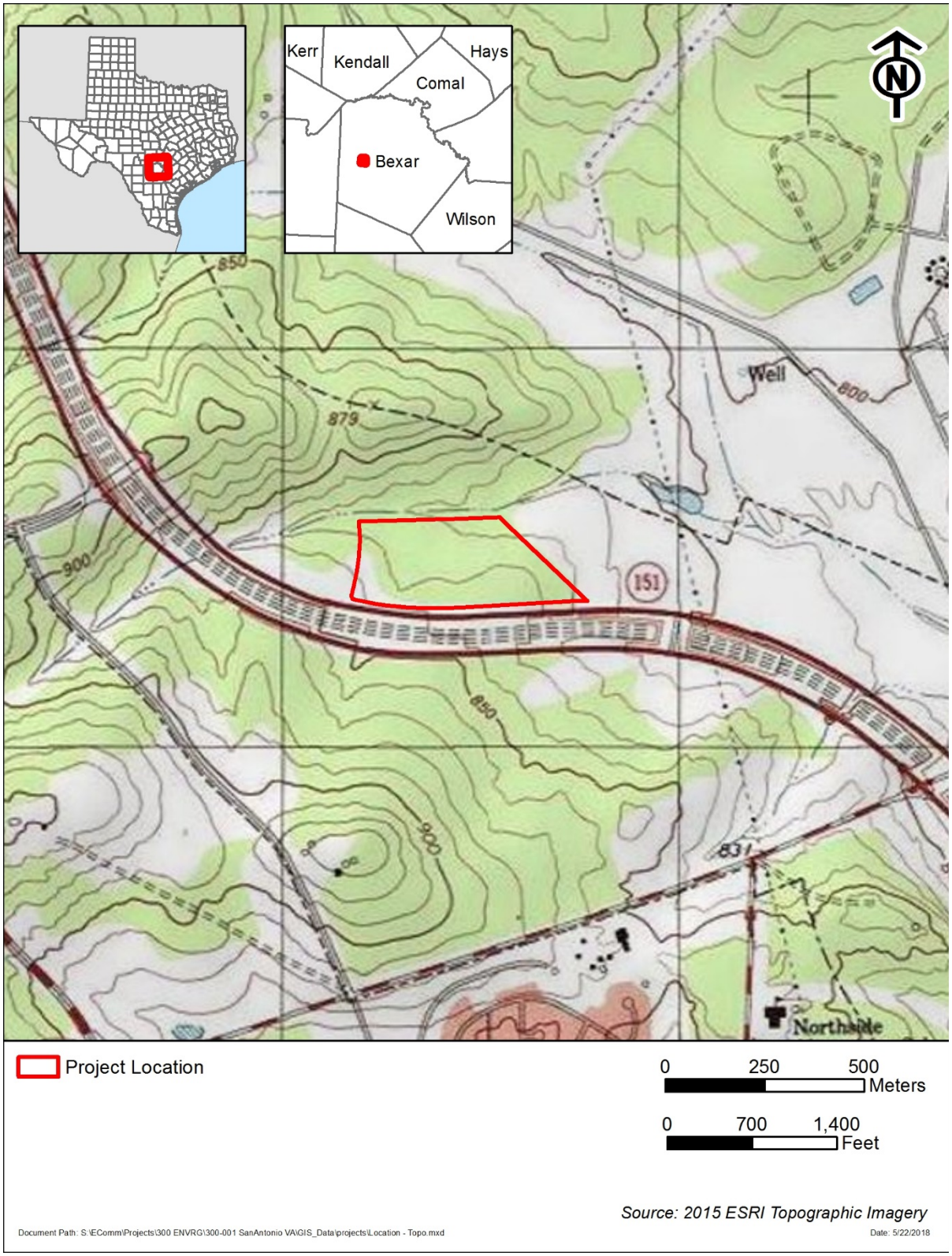

Figure 1. Project Location/APE overlaid on the 1983 Culebra Hill, Texas USGS 7.5-minute topographic map.

CHAPTER 2: ENVIRONMENTAL SETTING

The project area is located on the west side of the city of San Antonio and situated within the Northern Blackland Prairie, a subregion of the Texas Blackland Prairies (Griffith et al. 2007). These rolling to nearly level plains are crisscrossed by low to moderate gradient streams with silty, clayey, and sandy substrates (Griffith et al. 2007).

Historically, the Northern Blackland Prairie was blanketed by a tallgrass prairie vegetation consisting of little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), yellow Indiangrass (*Sorghastrum nutans*), tall dropseed (*Sporobolus asper*), Silveanus dropseed (*Sporobolus silveanus*), Mead's sedge (*Carex meadii*), and long spike tridens (*Tridens strictus*). In the lowlands and more mesic areas, or those areas containing a moderate amount of moisture, eastern gamagrass (*Tripsacum dactyloides*) and switchgrass (*Panicum virgatum*) flourished. Forbs native to this subregion include asters (*Aster* spp.), prairie bluet (*Hedyotis nigricans*), prairie clovers (*Dalea* spp.), and coneflowers (*Rudbeckia* spp.). While not common within the Northern Blackland Prairie, woodlands composed of bur oak (*Quercus macrocarpa*), Shumard oak (*Quercus shumardii*), sugar hackberry (*Celtis laevigata*), elm (*Ulmus* spp.), ash (*Fraxinus* spp.), eastern cottonwood (*Populus deltoides*), and pecan (*Carya illinoinensis*) are often found near riparian areas, or stream bottoms (Griffith et al. 2007).

The bedrock geology of the Northern Blackland Prairie is composed of Upper Cretaceous chalks, marls, limestones, and shales. However, the surficial geology is described as "Quaternary to Tertiary silty clay decomposition residuum" (Griffith et al. 2007: 63). The underlying geology of the project area consists of Upper Cretaceous Austin Chalk (Kau), Pecan Gap Chalk (Kpg) and Anacacho Limestone (Kac) (TWDB 2018) (**Figure 2**).

Soils within the Northern Blackland Prairie are mainly "fine-textured, dark, calcareous, and productive vertisols, or a clayey soil with little organic matter that occurs in regions having distinct wet and dry seasons" (Griffith et al. 2007: 61). The project location is on an upland surface with an ephemeral stream bed along the northern project boundary. Within the project area, soils consist primarily of the Whitewright-Austin complex with one to five percent slopes, with Brackett gravelly clay loam with three to twelve percent slopes, Houston Black clay and Lewisville silty clay both with one to three percent slopes. These groups are characterized by well-drained silty clay loam formed from weathered chalk that overlays fractured chalk bedrock at around 13 to 74 centimeters in the southern portion of the project area. The northern portion along the dry stream bed is characterized by deep, moderately well drained clay and silty clay (USDA-NRCS 2018). According to the Texas Department of Transportation (TxDOT) San Antonio Potential Archeological Liability Map (PALM), soils within the majority of the project area have moderate potential for cultural resources with some high potential in the northwest corner (**Figure 3**).

Bexar County averages 32.91 inches of rainfall per year. The average high temperature is 79.8 degrees Fahrenheit and the average low is 57.6 degrees Fahrenheit (US 2018). The dry stream bed along the northern project boundary serves as a tributary to Leon Creek, which occurs about 2.41 miles to the east. The surrounding area is characterized by level to undulating topography dissected by several creeks that flow into the San Antonio River to the east in central San Antonio.

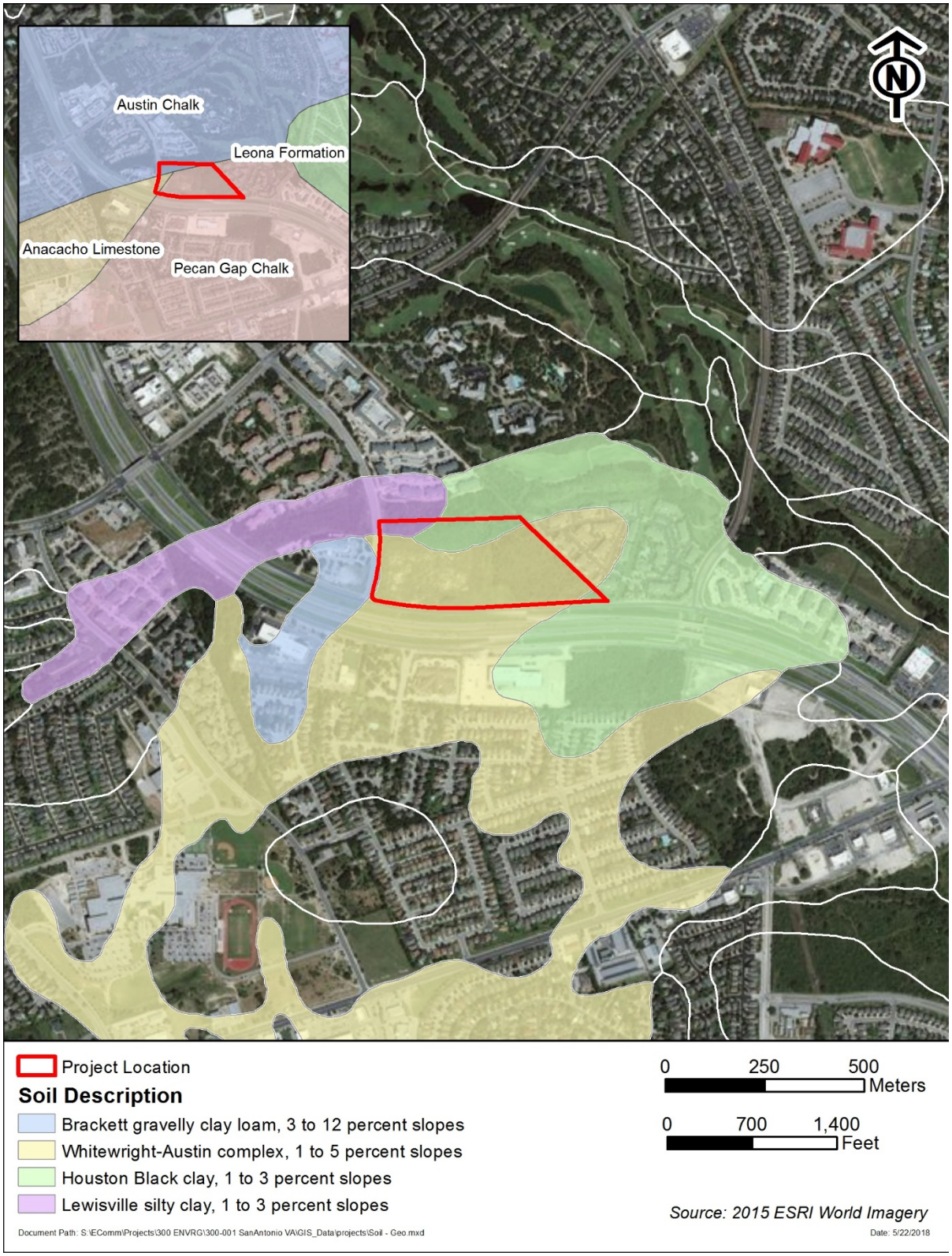

Figure 2. Soil groups and geologic units located within the Project Area.

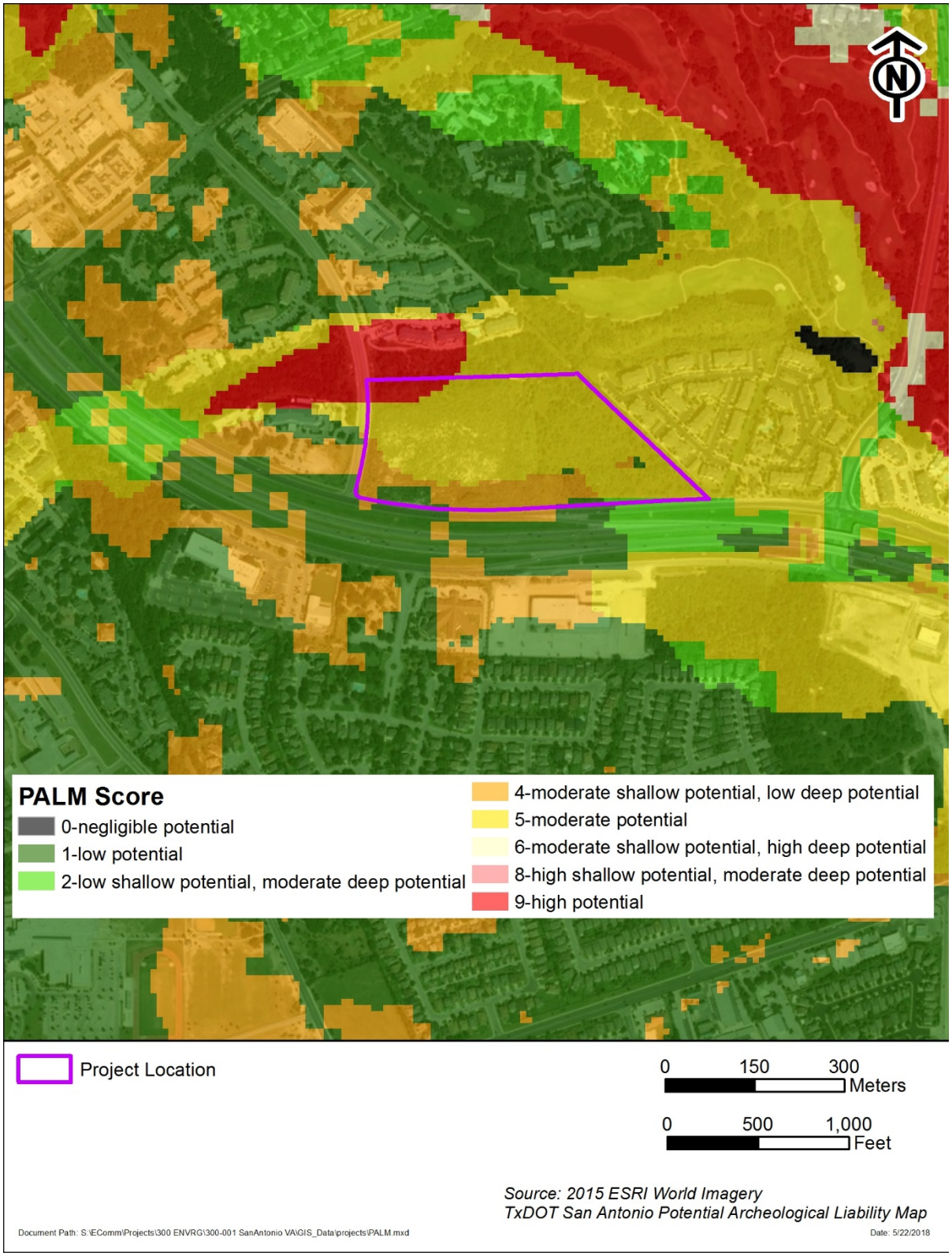

Figure 3. TxDOT San Antonio Potential Archeological Liability Map overlay of the Project Area.

Current Setting

The earliest available aerial photograph from 1953 (**Figure 4**) shows the project area as undeveloped scrubland. A 1953 topographic map shows no development or structures with the project area or its vicinity (**Figure 5**). Evidence from aerial imagery suggests that the project area has not been developed up until the early 21st century. Imagery from 2008 shows severe disturbance throughout the western portion of the project area (**Figure 6**). This area appears to have been cleared, bladed and filled with imported rocks and gravel. Today, the project area is a vacant lot located along TX 151 and surrounded by both undeveloped property and commercial and residential structures (**Figure 7**).

Figure 4. 1953 aerial imagery of the Project Area.

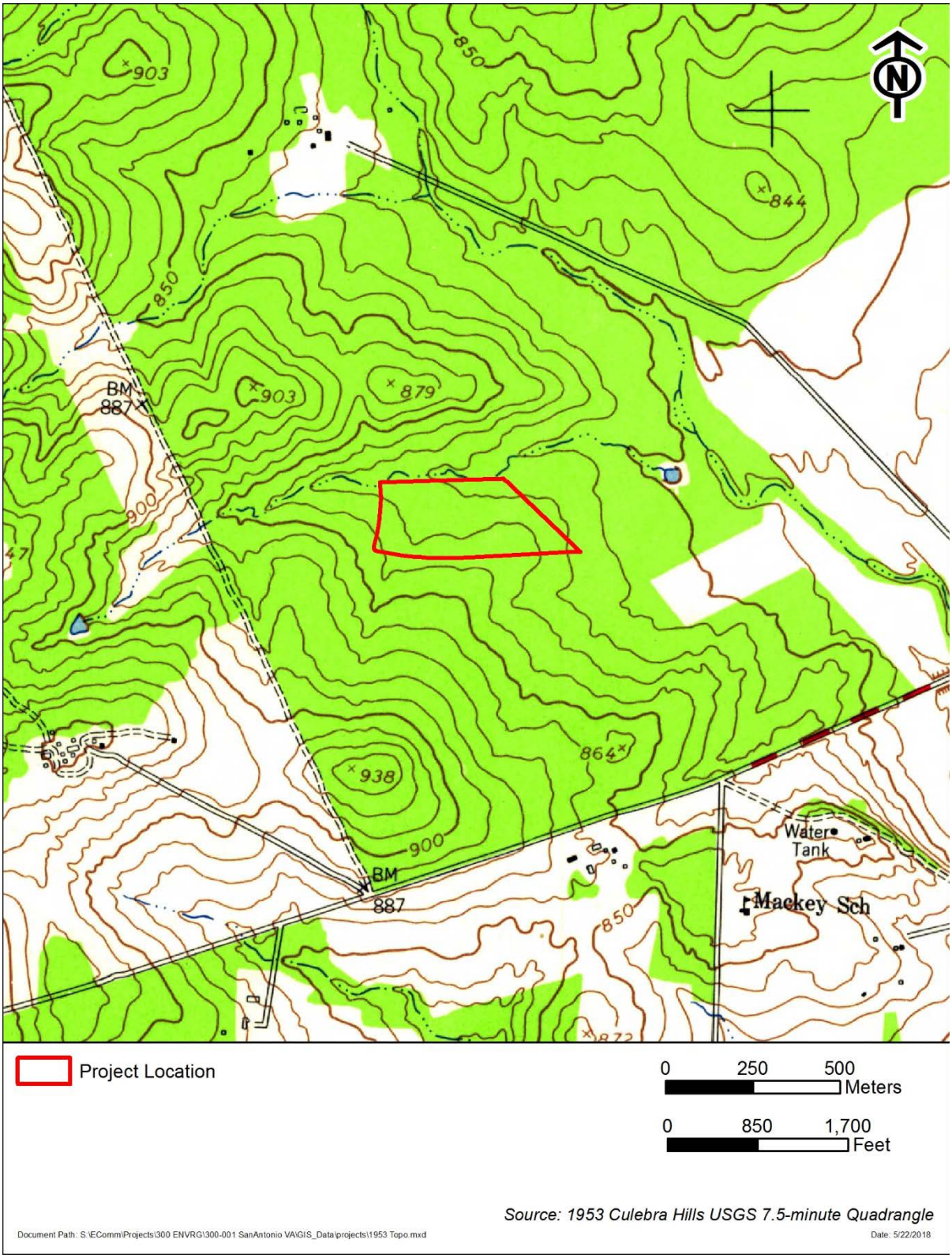

Figure 5. The Project Area overlaid on a 1953 Culebra Hills USGS 7.5-minute Quadrangle topographic map.

Figure 6. 2008 aerial imagery of the Project Area showing disturbance.

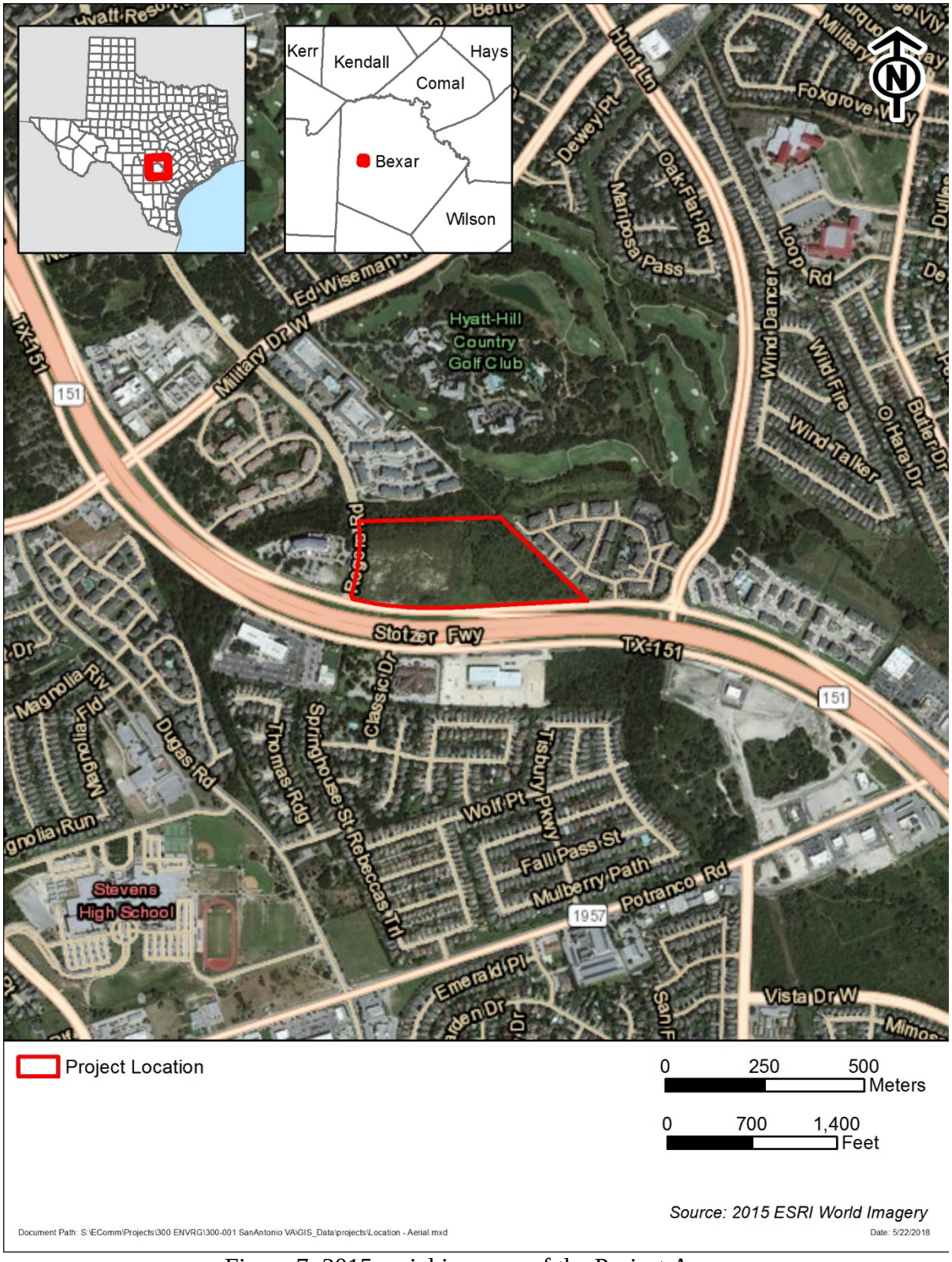

Figure 7. 2015 aerial imagery of the Project Area.

CHAPTER 3: CULTURAL BACKGROUND

The project area lies within the South Texas Archeological Region as defined by Black (1989). Although the South Texas archeological region is generally considered to be distinct from other areas of Texas, much of what is known of the area is in part derived from comparisons and extrapolation with adjacent regions that have been subjected to more intensive investigation, particularly the Central Texas archeological region. Archeologists generally divide prehistory of this regions into four distinct cultural periods: the Paleoindian (11,200–8000 BP [before present]), Archaic (8000–1200 BP), Late Prehistoric (1200–400 BP), and Protohistoric (400–300 BP). Similar to the cultural chronology provided by the Central Texas region, these divisions are not absolute, but represent contrived temporal categories based on perceived cultural expressions reflected in lithic technology, subsistence practices, mortuary behavior, and other sorts of material remains. These material expressions further reflect broader patterns in the environment and human behavior.

The most commonly recorded sites in South Texas are open occupation sites. In much of South Texas, meaningful excavation of these sites has proven to be a challenge to archeologists, due to the exclusively horizontal patterning of many open occupation sites in the region (Hester 1995). Open occupation sites tend to exist as laterally extensive use areas where temporally separated components occur on a single surface without overlapping (Hester 1995). Other open occupation sites, especially in upland settings, occur on stable ancient surfaces with very shallow or deflated cultural deposits that are sometimes impossible to conclusively attribute to a particular time period. Comparatively few deeply stratified occupation sites have been excavated in South Texas, though they do exist in active alluvial environments, such as Salado Creek or the San Antonio River. Common site types in South Texas include lithic procurement and reduction sites, rock shelters, artifact caches, and burials.

Paleoindian Period

The Paleoindian stage (11,200–8000 BP) was initially characterized throughout Texas by nomadic big-game hunters who heavily relied on megafauna of the Pleistocene (e.g., mammoth, mastodon, bison, camel, and horse) for subsistence. However, recent studies have revised this notion. A more accurate description of this stage is presented by Bousman et al. (1990:22): "… this period may have seen use by small, mobile bands of nonspecialized hunters and gathers occasionally utilizing megafauna perhaps only as the opportunity arose." Thus, according to Bousman et al. (1990), Paleoindians used a wider variety of resources than previously thought. Evidence of this broader resource subsistence is based on the works of Johnson (1977), Collins (1998:1505–1506), and Collins and Brown (2000). Johnson (1977) reviewed reports on numerous Paleoindian sites that indicated a range of small and medium fauna were harvested in addition to big game. Investigations at the Wilson-Leonard site (41WM235), the Gault site (41BL323), and Lubbock Lake (41LU1) provide evidence of small and medium faunal remains (i.e. turtle, rabbit, squirrel, snakes, gopher, and deer) associated with megafaunal remains (i.e. bison and mammoth) (Collins 1998:1505–1506). Clovis and Folsom points are the primary diagnostic artifacts associated with this stage (Collins 1995; Turner and Hester 1999).

Archaic Period

The Archaic Period (8000–1200 BP) spans nearly 7,000 years of prehistory. In Texas, the primary cultural marker of this period is the burned rock midden (Collins 2004:119). These piles of burned

limestone, sandstone, and other lithic debris represent the remains of multiple ovens that were used, reused, and discarded over time. Their appearance signifies a shift from a big-game hunting subsistence strategy to a less mobile, generalized subsistence strategy. Projectile points also changed; lanceolate-shaped points gave way to dart points that were stemmed and barbed (Black 1989). During the Archaic period the climate changed from wet and mild conditions seen in the Paleoindian stage to warmer and drier conditions. Researchers believe that the changes in climate influenced prehistoric subsistence strategies (Story 1985:38– 39; Weir 1976) Although many Archaic period manifestations in South Texas resemble that of Central Texas, the lithic tradition of South Texas peoples continue to rely heavily on smaller triangular-shaped points and bifaces, over the bifurcated stem points that came to dominate Central Texas assemblages of the same period.

The Archaic period is typically divided into three sub-stages: early, middle and late. The Early Archaic stage is still relatively obscure in the archeological record. The majority of Early Archaic sites are distributed around the Edwards Plateau along the eastern and southern margins, suggesting concentrations near reliable water sources with a variety of food resources. These sites are generally described as small with highly diverse tool assemblages. Cultural material associated with Early Archaic sites are points (specifically Angostura, Early Split Stem, and Martindale-Uvalde; Collins 2004), Clear Fork and Guadalupe bifaces, manos, hammerstones, burins, metates, circular scrapers, and various biface styles, suggesting specialized tool usage. Also, burials have been found associated with this stage—although very few (Prewitt 1981; Story 1985).

During the Middle Archaic, the climate became very warm and dry. The number and size of burned rock middens from this period increased dramatically, leading many archeologists to posit not only a population increase, but also intensification in the types of food processing typically done in earth ovens. Types of projectile points that frequently occur on Middle Archaic sites are Bulverde, Langtry, and Kinney dart points (Hall et al. 1986). Other materials found among Middle Archaic assemblages are an increase of wooden and bone implements, plant processing implements, and the intensive use of large burned rock features. Burials during this stage become more frequent than in the previous stage.

During the Late Archaic, climatic conditions once again became more mesic. Cultural traditions observed in the Middle Archaic carry over into the Late Archaic. There is an intensification of the Middle Archaic traditions as well as newly developed ones. Trade is observed during this period with the exchanging of material from different localities. Coastal materials, such as shells used as ornaments, have been reported to have been exchanged for both finished tools and raw material (Story 1985). Rock ovens and hearths were continuously used as a means to prepare food, and bison once again became available. Ritualized mortuary practice became more common during the Late Archaic with interments becoming quite elaborate in terms of associated burial furniture. Large cemeteries were established along drainages suggesting the importance of the location, and perhaps territorial ties by groups to these localities (Story 1985). Location of these cemeteries "are believed to be the result of the same cultural group using a place on the landscape to reaffirm their rights of descent and control/access to critical resources" (Taylor 1998; Taylor et al. 1995:627–631).

Late Prehistoric Period

Of the prehistoric stages, the Late Prehistoric stage (1200–400 BP) is the best defined, marked by the presence of the bow and arrow and by the production of small arrow points (Hester 1981:122). The emergence of agriculture and ceramics also occurred in the Late Prehistoric. While incipient agricultural and ceramic use is evident in South Texas most researchers believe that these technologies diffused into South Texas from other regions (Bousman et al. 1990). Much of the ample evidence for late prehistoric lifeways indicates that people exploited a wide range of animal and plant resources for their diets. Food processing techniques relied heavily on manos (hand held grinding stone), metates (a large slab that plant material was ground against with a mano to process food), and earth ovens for cooking. Diagnostic artifacts of this period include Scallorn, Edwards, and Perdiz arrow points. Sites tend to be more closely clustered around creeks rather than dispersed along other landforms, suggesting intensifying nucleation around reliable natural resources.

Protohistoric and Historic Period

The Protohistoric period is defined as the period that post-dates the first European contact, but that falls prior to the earliest colonization of Texas by Europeans (ca. 1700). The Protohistoric (ca. AD 1528–1700) is marked by the venture into South and Southeast Texas by Spanish explorer Cabeza de Vaca beginning in 1528. Following his travels through what is today central and South Texas, Cabeza de Vaca documented his observations of Native American lifeways in the region. He noted a sparsely populated landscape occupied by seasonal hunter and gatherer groups that relied on mesquite beans, prickly pear, pecans, deer and small game that included insects and lizards (Cabeza de Vaca 2002). In 1690, the expedition party of Domingo Terán de los Rios crossed the San Antonio River on its way to establish missions in East Texas. According to Habig (1968), Terán crossed the river somewhere near the present day site of Mission San Juan De Capistrano, near the current project area, where he stayed several days within a peaceful village of Payaya Indians. Archeological sites representing this subperiod can contain a mix of both European (e.g., metal and glass arrow points, trade beads, and wheel-made or glazed ceramics) and traditional Native American artifacts (e.g., manufactured stone tools; Hester 1995).

During the Protohistoric and historic periods, many of the small hunting and gathering groups scattered throughout South Texas were called Coahuiltecans by the Spanish. The majority of the information that we have about Coahuiltecans during the Protohistoric comes from the chronicles of Cabeza de Vaca. They consisted of many small groups with their own distinctive names and territories. They were semi-nomadic hunters and gatherers who would camp at preferred locations for a few weeks at a time. These groups were often small, though they would congregate in large numbers during seasonal harvests of wild plant foods such as prickly pear in the summer and acorns and pecans in the fall. The Coahuiltecans engaged in hunting an array of wild animals including bison, white tailed deer, javelina, rabbits, antelope and small mammals, turtles and other reptiles.

Riverine environments were often frequented for the abundance of fish, snails and wild plants that occurred there. The social and political spheres were loosely organized and lacked the presence of structures such as tribes or chiefs, while marriage was a common practice. With the exception of hide capes and blankets, little clothing was worn. Other material culture associated with the Coahuiltecans includes basketry, the bow and arrow, curved wooded clubs, woven mats, stone grinding slabs and wooden mortar and pestles. Nets were used for fishing, hunting and carrying objects, while hollowed prickly-pear pads, gourds and human skull caps were other common

storage items (Hester 1989). Ceramics are present in the archeological record during the Late Prehistoric period, some of which were still produced south of San Antonio into the Historic period (Hester 2004). However, most Coahuiltecan groups did not use ceramic wares until they were introduced by the Spanish (Hester 1989).

The establishment of the first Spanish missions and the expansion of the Spanish Colonial Empire mark the Historic substage (ca. 1700–present). Most of our knowledge of this substage is through the written records of early Spanish missionaries though a number of archeological sites have been documented in San Antonio with Spanish Colonial components. In 1718, the Spanish military and Roman Catholic Franciscan missionaries established the Presidio San Antonio de Bexar and the Mission Antonio de Valero on San Pedro Creek. The following year a second mission was established, the Mission San Jose y San Miguel de Aguayo, and in 1731 three additional missions were founded, forming a chain running along the San Antonio River. Almost immediately the missions began attracting Native American groups seeking shelter and stability from raiding Apaches. The city of San Antonio grew out of these early Spanish settlements, becoming the largest and most important settlement in Spain's northern territory, incorporating not just Spanish colonists, but indigenous groups as well (Gonzales 2010). San Antonio de Béxar became the capital of Spanish Texas in 1773. The population of roughly 2,000 included Native Americans, Europeans, mestizos, and a few black slaves. By 1795, all of the missions were at least partially secularized, and San Antonio de Valero Mission (later, the Alamo) became a military barracks (Fehrenbach 2012).

During the Texas Revolution, San Antonio witnessed several major battles, including the Siege of Bexar and the famous Battle of the Alamo (Fehrenbach 2012). In 1835 the grounds around Mission Concepción was the site of the battle of Concepción, in which Texas revolutionaries defeated Mexican troops and the mission came under control of the Republic of Texas. Population dwindled during the Republic of Texas years (1836–1845), largely due to repeated attacks from Mexico. Following the Republic's annexation by the United States, San Antonio's population and economy soared as the city became a way station in westward expansion (Fehrenbach 2012).

Following the Civil War, San Antonio became a major player in the cattle industry as railroads made it the shipping center of South Texas. Today, with a population approaching 1.4 million, San Antonio remains one of the most important American cities with education, military, medical, and increasingly tourism contributing to the local economy (Fehrenbach 2012).

Previous Cultural Resource Investigations

Background research for this project included an online records search through the Texas Historical Commission's Archeological Sites Atlas for previously recorded cultural resources or archeological surveys within one kilometer of the APE. This search indicated that no NRHP properties, SALs, OTHMs, cemeteries or archeological sites have been recorded within one kilometer of the APE. Two archaeological surveys have been conducted within one kilometer (0.62-mile) of the APE (Atlas 2018) (**Figure 8**). A 1985 survey was conducted by the State Department of Highways and Public Transportation (SDHPT) (Atlas number 8500002766) along TX 151. This survey occurred along the southern boundary of the current project area. Another survey was conducted in 1987 on behalf of the Federal Highway Administration (Atlas Number 8400002766) about 0.43 mile southwest of the project area.

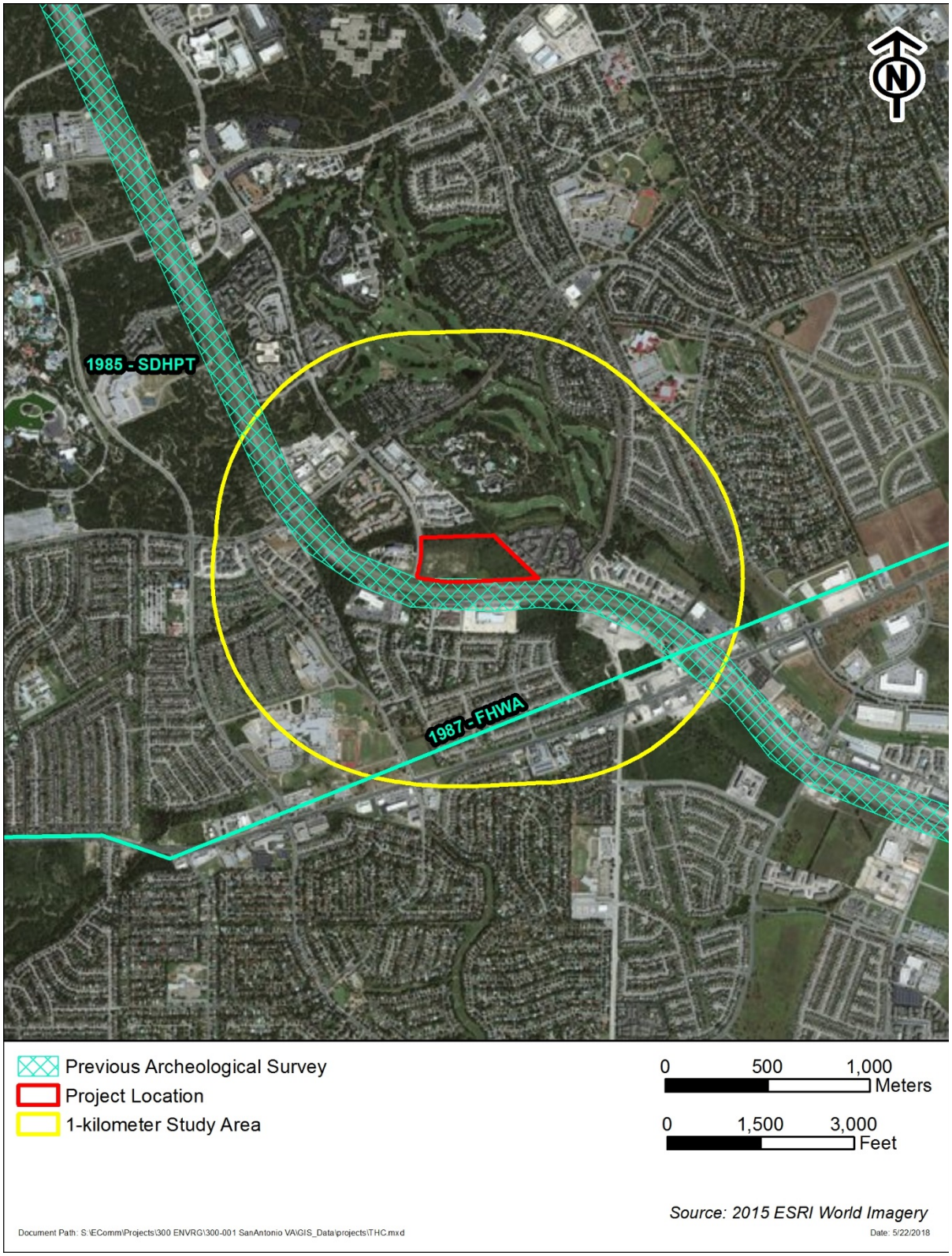

Figure 8. Previously conducted cultural resource surveys within one-kilometer of the Project Area.

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CHAPTER 4: METHODS

AmaTerra personnel performed an intensive survey (pedestrian survey supplemented by shovel testing) following the Council of Texas Archeologists' (CTA) guidelines.

Pedestrian survey involved inspecting the ground surface for evidence of archeological artifacts or features. Per CTA guidelines, the 25.4-acre project area required a minimum of thirteen shovel tests (one test per two acres). Shovel tests measured 30 centimeters (cm) in diameter and extended to a maximum depth of 80 cm below surface (cmbs). The shovel tests were excavated in 20-cm increments and all soil was screened through ¼-inch hardware cloth.

Documentation included narrative notes, maps, and photographs. Relevant information for all shovel tests (UTM coordinates, soil color, type, stratigraphic sequence, and findings) was recorded on standardized forms.

Because the project area is in an upland setting not associated with deep deposits and the portion of the project area along the creek does not contain deep alluvial deposition, backhoe trenching was not used as a survey method during fieldwork. However, one 50 cm-wide section of the vertical stream bank at the north end of the project area was shovel scraped and documented in order to investigate the likelihood for deep alluvial deposits.

No artifacts or other materials were collected during the survey. Archeologists documented the work through notes and photographs, which will be housed permanently at AmaTerra’s office in Austin.

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CHAPTER 5: RESULTS

Fieldwork was carried out on May 23, 2018 and led by AmaTerra archeologist Heath Bentley with Chris Davis of ERG serving as field technician. Conditions were fair and warm, and no complications or access issues were encountered during the survey. The APE and survey results are presented on current aerial imagery with the results of survey in **Figure 9**.

Surface Inspection

Visual inspection confirmed that over half of the project area had been heavily impacted by landscape modification. Based on communications with the site owner's representative, disturbances include the creation of a north-south drainage easement in the rough center of the property (**Figure 10**), the installation of silt-fencing and a sewer line (**Figure 11**) along the northern project boundary as well as blading and land-clearing (**Figure 12**). Additionally, large amounts of imported soil were dumped onto the western half of the project area prior to 2008 (see **Figure 6**). Visual inspection was conducted through 100 percent of the project area. The east side of the project area appeared to be relatively pristine and undisturbed, characterized by stands of persimmon, honey mesquite and sweet acacia trees along with prickly pear, yucca and various shrubs (**Figure 13**). Some bare patches of ground were exposed with surface visibility estimated at about 15 to 20 percent. Visual inspection included pedestrian survey along the creek at the north end of the project area (**Figure 14**). One 50 cm-wide section of the southern stream bank was shovel-scraped in order to document the stratigraphy within the bank profile (**Figure 15**). The profile revealed very dark grayish brown clay that transitioned to grayish brown lightly mottled clay at about 60 cmbs. The stream itself was found to be heavily eroded with long sections of exposed tree roots protruding from the banks.

Shovel Testing

A total of fourteen shovel tests were placed throughout the APE in areas that were determined to be relatively undisturbed based on field observations (see **Figure 9, Appendix**). Shovel tests were excavated primarily in areas that we suspected to have the highest probability for cultural resources, such as the stream bank at the north end of the project area and two terraces on the east side of the project area (see **Figure 1**). Shovel tests were excavated to depths that ranged from 20 to 45 cmbs. Throughout upland portion of the project area, soils were documented as grayish brown and dark brown silty clay and silty loam overlaying compact soil mottled with calcium carbonate. Shovel tests placed along the creek on the north end of the project area recorded very dark brown silty clay and clay. Shovel tests were terminated upon encountering compact, mottle soils and dense clay at depths that range from 20 to 45 cmbs.

No artifacts were discovered on the surface or within shovel tests and no archeological resources were identified in the APE for the proposed VA outpatient clinic.

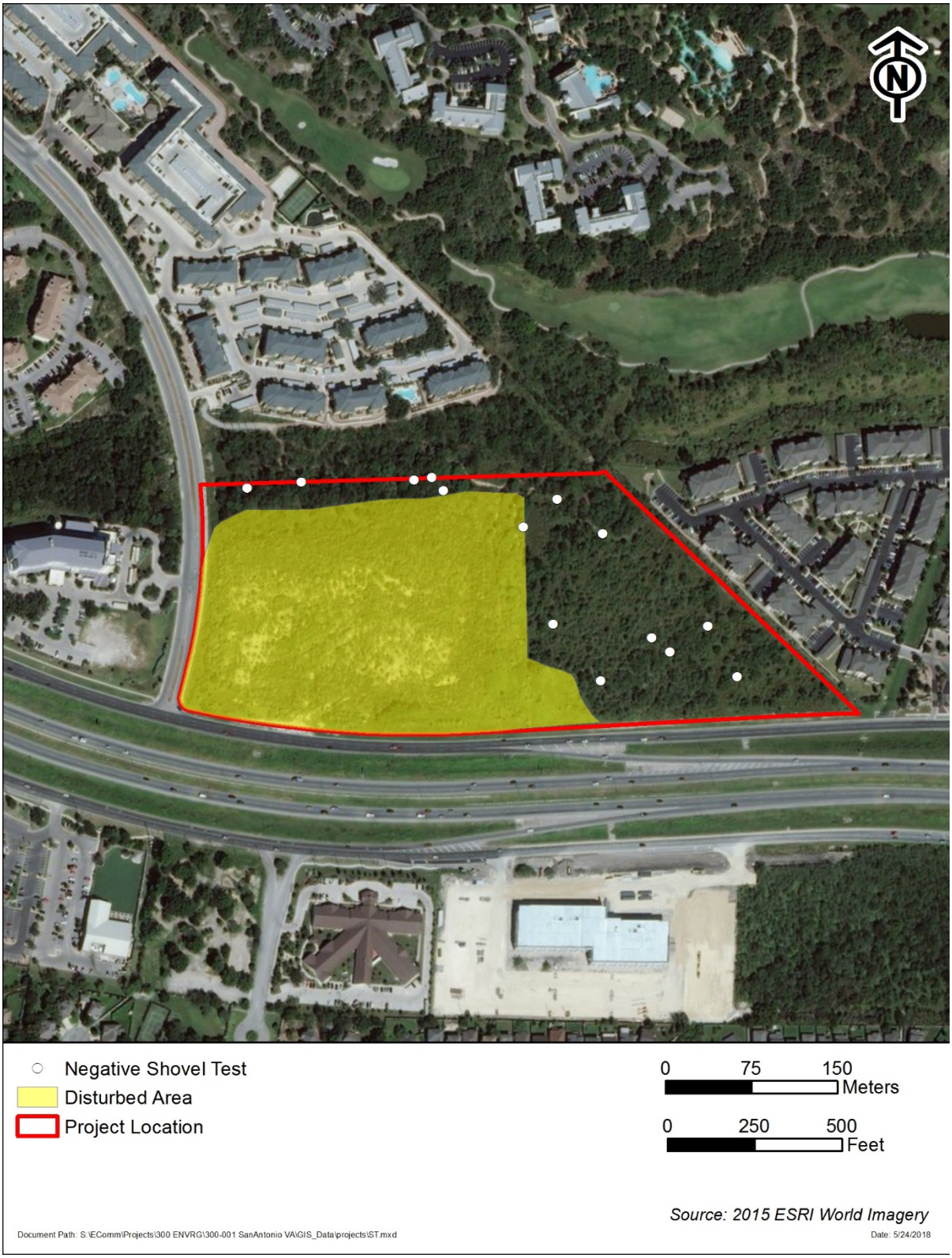

Figure 9. Archaeological survey results within the APE overlaid on recent aerial imagery.

Figure 10. Photograph of the drainage easement, facing south.

Figure 11. Photograph of sewer line cap along the drainage at north end of project area, facing northeast.

Figure 12. Photograph of cleared/ bladed area in the central portion of the project area, facing north.

Figure 13. Photograph of the eastern portion of the project area, facing south.

Figure 14. Photograph of the unnamed drainage streambed with exposed tree roots, facing west.

Figure 15. Photograph of a profile column of the south bank of the unnamed drainage. The dashed line delineates darker clay soil in upper column from lighter mottled clay beneath.

CHAPTER 6: SUMMARY AND RECOMMENDATIONS

On May 23, 21018 AmaTerra Archeology field director Heath Bentley and ERG archeological technician Chris Davis carried out an intensive survey in advance of construction of a proposed VA outpatient clinic on privately owned property in the City of San Antonio, Bexar County, Texas. A 100-percent surface inspection was conducted, and fourteen shovel tests were excavated within the APE, finding no archeological resources above or below the surface.

Because no archeological resources were identified within the APE, AmaTerra recommends that construction proceed with no further archeological work. No artifacts or other materials were collected during fieldwork, and all notes and paperwork generated during the investigation will be permanently housed at AmaTerra's office in Austin, Texas.

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APPENDIX: SHOVEL TEST DATA

Shovel Test	Positive/ Negative	Easting	Northing	Depth (cmbs)	Color	Texture	Reason for Termination	Topographic Setting
HB-1	neg	531638	3257604	0-25	10YR 4/2	Silt clay	Compact soil with CaCo3 at base	Level terrace
HB-2	neg	531579	3257626	0-45	10YR 5/2	Silt loam	Compact soil with CaCo3 at base	Level terrace
HB-3	neg	531579	3257638	0-30	10YR 5/1	Silt loam	Compact soil with CaCo3 at base	Level terrace
HB-4	neg	531519	3257601	0-20	10YR 3/3	Silt clay	Compact soil with CaCo3 at base	Level terrace
HB-5	neg	531519	3257767	0-40	10YR 2/2	Silt clay	Compact clay with limestone gravels at base	Stream bank
HB-6	neg	531371	3257778	0-30	10YR 2/2	Silt clay	Compact clay with limestone gravels at base	Stream bank
HB-7	neg	531209	3257769	0-10	10YR 4/3	Sandy loam	Compact clay with limestone gravels at base	Stream bank
				10-15	2.5YR 5/8	Sand		
				15-40	10YR 3/2	Loamy clay		
CD-1	neg	531613	3257648	0-35	7.5YR 6/3	Sandy loam	Compact soil	Level terrace
CD-2	neg	531520	3257729	0-25	7.5YR 3/2	Sandy loam	Compact soil	Level terrace
CD-3	neg	531451	3257135	0-20	7.5YR 3/2	Loamy clay	Compact soil	Disturbed/ bladed area
CD-4	neg	531477	3257650	0-30	7.5YR 3/2	Sandy loam	Compact soil	Disturbed/ bladed area
CD-5	neg	531480	3257759	0-25	7.5YR 3/2	Loamy clay	Compact soil	Stream bank
CD-6	neg	531355	3257775	0-25	7.5YR 3/2	Loamy clay	Compact soil	Stream bank
CD-7	neg	531257	3257774	0-30	7.5YR 3/2	Dark brown	Compact soil	Stream bank