Volume 2018 Article 110

2018

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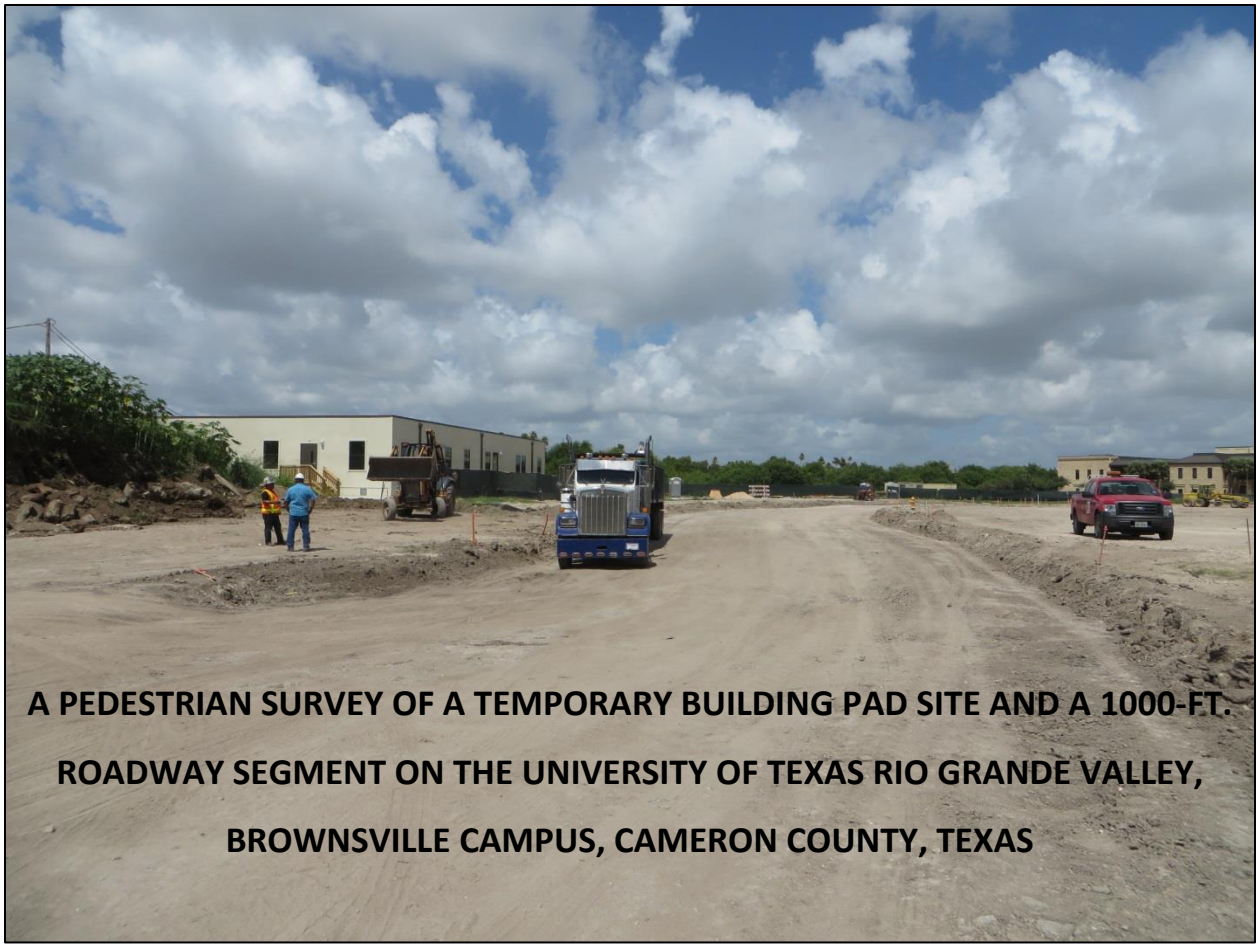

A PEDESTRIAN SURVEY OF A TEMPORARY BUILDING PAD SITE AND A 1000-FT. ROADWAY SEGMENT ON THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY, BROWNSVILLE CAMPUS, CAMERON COUNTY, TEXAS

by:
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RABA KISTNER ENVIRONMENTAL

Prepared for:
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Non-RESTRICTED

FINAL (REDACTED)

Texas Antiquities Committee Permit Number: 7307
ASF15-091-00

May 10, 2018

Management Summary:

In June 2015, The University of Texas Rio Grande Valley, Brownsville (UTRGVB) (Client) contracted with **Raba Kistner Environmental, Inc. (RKEI)** to perform an intensive cultural resources survey for a temporary building pad site and a 1000-ft. road segment and accompanying parking lot to be constructed on the UTRGVB Campus, Brownsville, Cameron County, Texas. In addition, the asphalt pavement over an existing parking lot was to be removed. The project is sponsored and the right-of-way is owned by the University. Given these parameters, the project falls under the jurisdiction of the Antiquities Code of Texas as administered by the Texas Historical Commission (THC). The project is located near historic Fort Brown (41CF96), a National Register of Historic Places District.

The purpose of the survey was to determine whether historic or prehistoric cultural resources are located within the Area of Potential Effect (APE), and if so, assess their significance and eligibility for formal designation as State Antiquities Landmarks (SALs) and for inclusion on the National Register of Historic Places (NRHP). The project was carried out on June 12, 2015 under Texas Antiquities Committee Permit No. 7307. Dr. Steve A. Tomka served as Principal Investigator and Mark Luzmoor was the Project Archaeologist.

Upon arrival to the project area, it was apparent that construction activities for the temporary building and pad site had already begun. The 1000-ft road segment had been graded just prior to the investigation. Therefore, the field work consisted of the visual inspection of the graded areas and shovel testing along the roadway in search of shallowly buried cultural materials.

Having been shallowly graded, surface visibility was 100% throughout the APE. Reconnaissance of the right-of-way identified no cultural features exposed on surface. In addition, examination of the soils that had been piled near the ROW discovered no cultural materials what would have been scraped off the original surface during grading. Finally, the four shovel tests (STs) that were excavated along the APE identified no buried or surface-exposed historic or prehistoric materials or features.

Therefore, while the project area has been impacted by grading prior to the inception of the field investigations, the oversight actually created a high surface visibility context that improved the potential to encounter shallowly buried cultural deposits and features. Despite this high visibility and the excavation of a small number of shovel tests, no prehistoric or historic cultural deposits were noted during the field investigations. As a result, since the proposed and already underway project will not impact cultural deposits, **RKEI** suggests that the project may proceed as planned. All project-related documents are permanently housed at the Texas Archeological Research Laboratory.

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Chapter 1: Introduction and Area of Potential Effect

Raba Kistner Environmental (**RKEI**) was contracted by The University of Texas Rio Grande Valley, Brownsville (UTRGVB) (CLIENT) to perform an intensive cultural resources survey of a new temporary building pad site and a 1000-ft. service road and accompanying parking lot to be constructed on the UTRGVB campus in Brownsville, Cameron County, Texas (**Figure 1-1**).

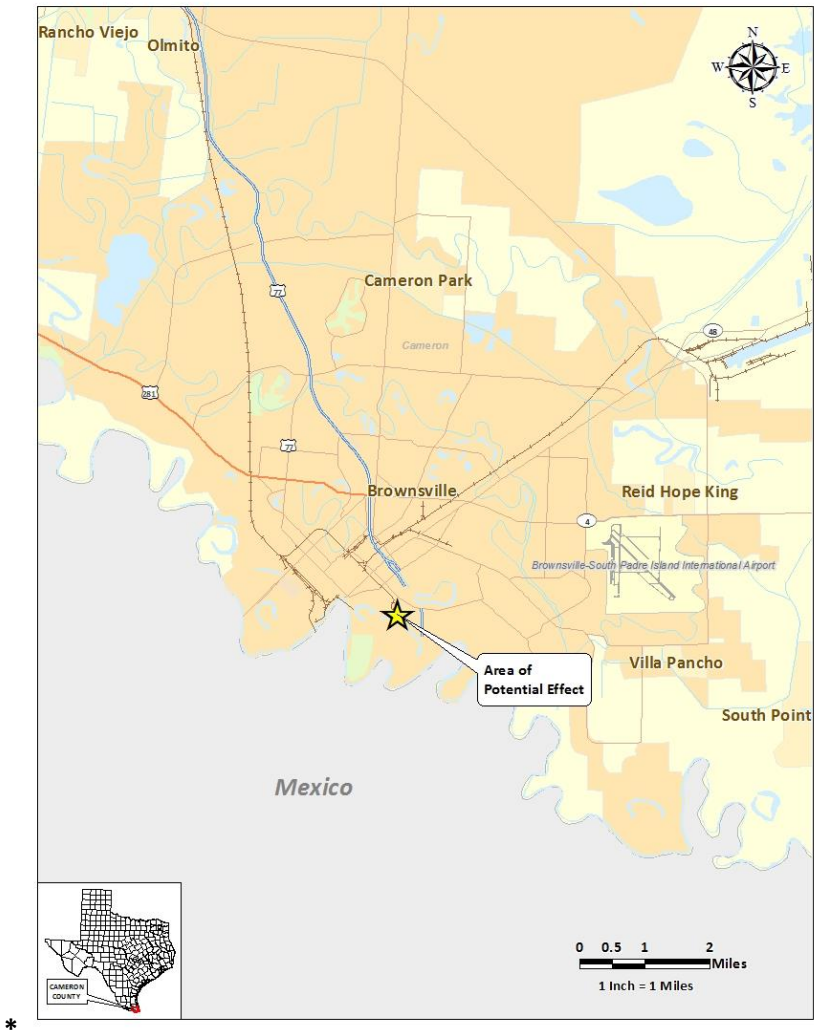

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Figure 1-1. Location of APE in Brownsville, Cameron County, Texas.

The overall project area covers 4.4-acres. The UTRGVB Campus was created in 1991 and occupies 320-acres in Brownsville. The campus is located 0.3 miles northeast of the boundaries of historic Fort Brown (41CF96). Due to Fort Brown's historic significance and the possibility of prehistoric habitation along the numerous *resacas* in the region, the likelihood of encountering historic and/or prehistoric occupation

debris is considered relatively high in the study area. Furthermore, since the project area is currently owned by a political subdivision of the state, the project falls under the Antiquities Code of Texas as administered by the Texas Historical Commission (THC). The archaeological survey was conducted under Texas Antiquities Permit No. 7307 issued to Dr. Steve A. Tomka (Principal Investigator). Mark Luzmoor served as the Project Archaeologist.

The Area of Potential Effect

The Area of Potential Effect (APE) is located on the *East Brownsville* (2597-433) USGS 7.5 Minute Quadrangle Map (**Figure 1-2**). The proposed improvements will impact an area measuring approximately 4.4-acres on the UTRGVB campus. The various improvement activities area encompassed within a rough rectangular area bounded by E. Jackson Street on the east and north, a parking lot and the Biomedical Research Building to the west, and the Lozano Banco Resaca to the south.

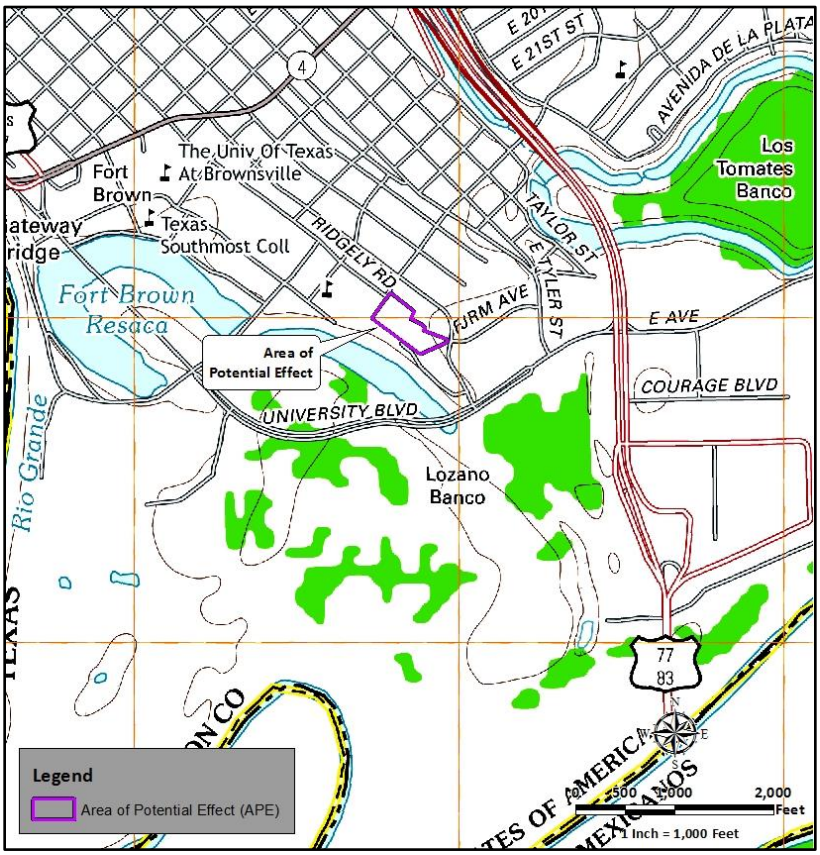

Figure 1-2. Project area on the *East Brownsville* (2597-433) *7*.5 Minute U.S.G.S. Topographic Quadrangle Map in Brownsville, Cameron County, Texas.

A brief review of the aerial photographs of the APE indicates that by 1962, significant facilities had been built in the vicinity of the project area and several dirt roads crossed the vicinity ((**Figure 1-3**). Between this time and the mid-1990s, little had changed in the vicinity of the APE. A second major episode of construction was initiated in 1996, resulting in what appear to be dramatic but perhaps shallow impacts across the APE (**Figure 1-4**).

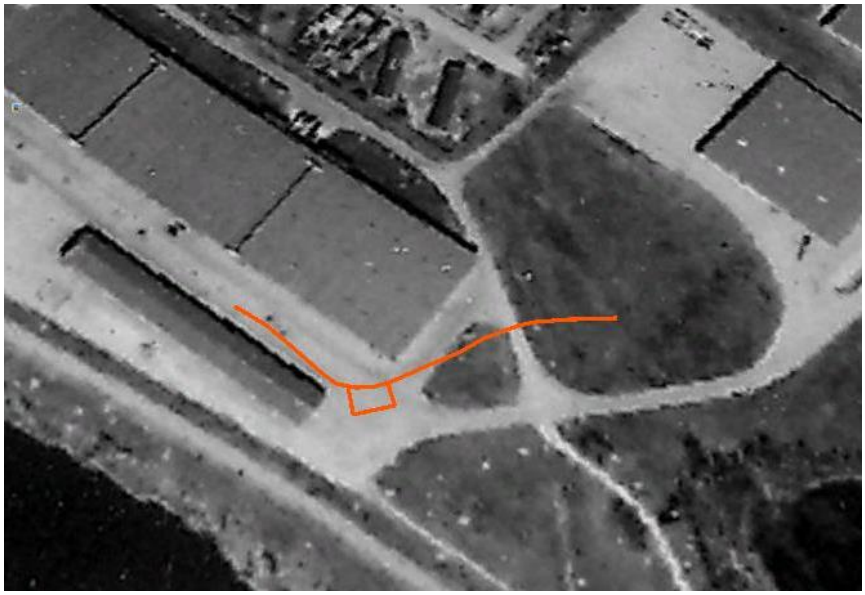

Figure 1-3. The APE and its vicinity, as seen in a 1962 aerial image.

Figure 1-4. A 1996 aerial image of the APE. Note the significant degree of earth moving across the study area.

The APE had already been extensively impacted by shallow grading and utilities installations by the time of the inception of the pedestrian survey. The road had been graded (**Figure 1-5**), utility lines had been installed, and piles of soil derived from the grading process, were temporarily deposited along the margins of the APE (**Figure 1-6**).

Figure 1-5. View of the Project Area facing West.

Figure 1-6. View of a utility line that runs along the southern edge of the new road.

Descriptions of the project parameters employed in the production of the Scope of Work for the Texas Antiquities Committee permit application indicated that the project consists of the installation of a modular office building, an associated parking lot, and the construction of an access road connecting these facilities to existing transportation arteries. It was anticipated that subsurface project impacts would be limited to the upper 18-24-inches with utility lines installed no deeper than 18-inches below grade.

Chapter 2: Environmental Setting

Project Area Setting

The project area is located in the geographic region referred to as South Texas. The region is bordered by the Rio Grande River to the south and west, and the Gulf of Mexico coastline to the east, (Norwine 1995:138). A gently rolling landscape with seasonal drainages dominates the area. Elevations across the project area are approximately 30-ft above mean sea level. The Rio Grande River is 0.9-km to the south of the APE. The entire APE had been mechanically bulldozed prior to the arrival of **RKEI** personnel on site.

The remains of Fort Brown are found approximately 1.08-km to the southwest of the APE. Fort Brown was originally composed of 358 acres immediately east of the Rio Grande River. The fort, which was the first United States military post in Texas, was established on March 28, 1846, by General Zachary Taylor. On May 17, 1846, it was named Fort Taylor. The fort was soon renamed Fort Brown in honor of Major Jacob Brown who was killed in its defense on May 9, 1846. The fort had accommodations for one company of cavalry, one battery of artillery and four companies of infantry. The main fort was made up of earthworks in a hexagon shape that encompassed an 800 yard perimeter, walls that were 9.5 feet high, a parapet that was 15 feet wide, and a ditch that was 8.5 feet deep and 15-20 feet wide. There were also 6 bastions; one on each corner. Even though the fort was continuously occupied from 1846 until 1944, no effort was made to preserve the original fortification. By 1944, the only remains were grass covered mounds. Approximately 18 buildings were constructed during the first year and another 70 buildings were erected in 1869 after the Civil War (Garza and Lang 2010). A national cemetery was located on the point of land bounded by the Fort Brown Resaca (THC 2015).

Soils

The APE crosses the Rio Grande silt loam association (*Web Soil Survey* 2015). This association consists of deep, very well drained, gently sloping, loamy to sandy soils. This area is dominated by two distinct soil types: Rio Grande silt loam and Camargo silty clay loam. Camargo soils occur in the flood plains. These soils are typically deep silty clay loams that are dark gray and calcareous. They have 0-1 percent slopes and permeability is moderately high to high from 0.5 to 2 inches per hour. Corrosion potential is high to very high due to moisture content. The soils susceptibility to erosion is none to moderate. Rio Grande silt loam is dark gray in color near the surface and light gray below 10 inches. It is moderately well drained and has 0-1 percent slopes. Due to its shallow slopes, the permeability rate is high from 2 to 6

inches per hour. The shrink-swell potential of this soil is very high easily resulting in the vertical displacement of artifacts deposited on surface.

Flora and Fauna

The project area is located in the Taumaulipan biotic province (Blair 1950). There is one major geographic region near the project area: the South Texas Plains. Trees, plants, and grasses in this region include maguey (*Agave Americana*), lechuguilla (*Agave lecheguilla*), sotol (*Dasylirion texanum*), Texas mountain laurel (*Sophora secundiflora*), peyote (iLophorphora williamsii), live oak (*Quercus fusiformis*), honey mesquite (*Prosopis glandulosa*), acacia (*Acacia anegadensis*), cenizo (*Leucophyllum frutescens*), prickly pear cactus (*Opuntia engelmannii var. lindheimeri*).

The fauna that inhabit the South Texas region includes at least 485 bird and 83 mammal species. The area also contains a wide array of reptiles, fish and amphibians. Mammal species that were noted throughout the project area include white-tailed deer (*Odocoileus virginianus*), nine-banded armadillo (*Dasypus novemcinctus*), Virginia opossum (*Didelphis virgininana*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), feral hog, and squirrel. Bird species include crested caracara (*Caracara cheriway*), red tailed hawk (*Buteo jamaicensis*), cardinal (*Cardinalis cardinalis*), and northern mockingbird (*Mimus polyglottos*).

South Texas Climate

The climate in South Texas is humid subtropical with hot and humid summers. From May through September, hot weather dominates the environment with the cool season beginning by around the first of November and extending through March. Winters are typically short and mild with little precipitation. Brownsville averages only 26 inches of rain per year (SRCC 2015; based on monthly averages from 1980 to 2010). Monthly temperature averages range between 50°F in January to 94°F in July.

Chapter 3: Culture Chronology and Previous Archaeology

Culture Chronology

The cultural history of the project area, which falls within the generally-defined archaeological region of South Texas, spans approximately 11,200 years. Though there has been some archaeological work done and multiple sites have been recorded in South Texas, the overall archaeological knowledge is limited and incomplete. This area lacks well-defined culture historical sequence, a projectile point chronology, and understanding of the tool assemblages associated with each time period (Newcomb 1961:31; Hester 2004). The following section focuses on a general chronology consisting of the four main periods: Paleoindian, Archaic, Late Prehistoric, and Historic. While we do not have an independently verified paleoenvironmental sequence (Albert 2006), the climatological patterns developed based on south-central Texas localities (Bousman 1998), indicates that the lengthy sequence of human occupation and use of the region was characterized by changes in climatic conditions, distinct vegetation types and structure, and concomitant adaptive changes by human populations in hunting and gathering technologies and strategies, general material culture, and at the tail end of the cultural sequence, the arrival of non-indigenous populations (Hester 2004; Ricklis 2004).

Paleoindian Period

The oldest cultural materials found in the region date to the Paleoindian Period. The period spans roughly from 11,200-8800 B.P. (Hester 2004). Hunter-gatherer groups foraged for plant foods, and when possible, hunted small to medium mammals including rabbits, deer and, when present in the region, the now-extinct mega-fauna such as mastodon and *Bison antiquus*. From sites within the Falcón Reservoir on the Rio Grande, 22 Paleoindian points were reportedly collected (Hester 2004:133). Evidence of climatic change in South Texas is difficult to obtain. The nearest data comes from the Choke Canyon area, some 185 miles north of the APE. The results of phytolith analyses suggest alternating wet and dry episodes during the Late Pleistocene (Robinson 1982).

The early portion of the Paleoindian Period was characterized by the appearance of Clovis and Folsom fluted projectile points that were used for hunting mega-fauna. Typical projectile points produced at sites with occupations dating to the later portion of the Paleoindian period included the Plainview, Dalton, Angostura, Golandrina, Meserve, and Scottsbluff types. Meltzer and Bever (1995) have identified 406 Clovis sites in Texas. One of the earliest, 41RB1, yielded radiocarbon assays that put the maximum

age for the Paleoindian component at 11,415 ± 125 B.P. (Bousman et al. 2004:47).

Currently, there are no known sites that contain a Paleoindian component in the Rio Grande Valley. Given the geological history of the formation of the Rio Grande Delta, it is likely that Paleoindian components are found on the continental shelf. Ancient shorelines were located approximately 90 km to the east of the current coastline (Brown et al. 1980). Gustavson and Collins (1998) contend that the late Pleistocene surface within the Rio Grande Delta is underlain by at least 30 meters of Late Quaternary sediments.

Archaic Period

The Archaic Period dates between ca. 8800 to 1200 B.P. It is divided into three subperiods: Early, Middle, and Late. During the Archaic, mobility strategies may have shifted to more frequent short distance movements that allowed the exploitation of seasonal resource patches. The intermittent presence of bison in parts of Texas, combined with changes in climatic conditions and the primary productivity of the plant resources may have contributed to shifts in subsistence strategies and associated technological repertoire. When bison was not present in the region, hunting strategies focused on medium to small game along with continued foraging for plant resources. When bison was available, hunter-gatherers targeted the larger-bodied prey on a regular basis (Bousman and Oksanen 2012). Shellfish and oysters were the main food staple of this time period (Ricklis 2004).

Early Archaic

Hester (2004) suggests that the Early Archaic spans from 8800 to 4500 B.P. Projectile point styles characteristic of the Early Archaic include Angostura, Early Split Stem, Martindale, and Uvalde (Collins 1995). There are two projectile point horizons during the Early Archaic: the early corner-notched horizon, and the early basal-notched horizon (Hester 2004:136).

Again, paleoclimatic data from south-central Texas suggests that the Early Archaic climate was drier than during the Paleoindian Period and witnessed a return to grasslands in central Texas (Bousman 1998). The mega-fauna of the Paleoindian period could not survive the new climate and ecosystems, and therefore eventually died out. During the Early Archaic, exploitation of medium to small fauna intensified (Ricklis 2004).

Middle Archaic

The Middle Archaic subperiod spans from 4500 to 2400 B.P. (Hester 2004). Archaeological data indicates a population increase during this time. Climate was gradually drying leading to the onset of a long drought period. Changes to the demographics and cultural characteristics were likely in response to the warmer and more arid conditions. Projectile point styles characteristic of this subperiod include Bell, Andice, Calf Creek, Taylor, Tortuga, Nolan, and Travis.

Subsistence during the Middle Archaic saw an increased reliance on nuts and other products of riverine environments (Black 1989). The increase of burned rock middens in the riverine portion of South Texas during the Middle Archaic represented a focus on the use of plant resources (Black 1989; Johnson and Goode 1994; Hester 2004:139). There is an apparent lack of dense shell deposits dating to between ca 4200 and 3100 B.P. in sites found on the Central Texas coast (Ricklis 2004:165). In the Choke Canyon and Chaparrosa study areas, open camp sites are found along present and former stream channels (Hester 2004:139).

Burial practices during the Middle Archaic have been encountered at the site of Loma Sandia near Three Rivers, Texas. This prehistoric cemetery contained the remains of 205 individuals and over 400 artifacts were associated with the burials. These burial goods included a number of triangular points (Tortugas, Abasolo, Lange Morhiss, and Pedernales points), tabular pieces of sandstone and tubular sandstone pipes. Sites in Falcon Reservoir also yielded multiple burials and numerous grave goods (Hester 2004:139-40). Sites 41HG125 and 41HG118 just south of Mission, TX both yielded Tortuga points (THC 2015).

Late Archaic

The Late Archaic spans from 2400 to 1400 B.P. (Hester 2004). Points associated with this sub-period include: Bulverde, Shumla, Kinney, Lange, Marshall, Williams, Marcos, Montell, Castroville, Ellis, Ensor, Frio, Fairland and Darl projectile points. The early part of the Late Archaic exhibited fluctuations in the temperature and rainfall (Bousman and Oksanen 2012).

In the riverine portion of South Texas and on the Edwards Plateau to its north, the use of burned rock middens and earth ovens appears to increase during the period. Evidence from Choke Canyon yielded a large accumulation of fire-cracked rocks as well as considerable amounts of freshwater mussel shell. Faunal assemblages signal the regular utilization of a wide range of small prey including turtles, fish,

lizards, snakes, rabbits and rodents in addition to deer (Hester 2004:140). The widening diet suggests the decreased availability of larger bodied prey species in the region.

Human remains related to the Late Archaic in South Texas suggest the region saw an increase in population. This increase may have prompted the establishment of territorial boundaries which resulted in boundary disputes (Story 1985). Human remains dating to this subperiod have been encountered near Lake Corpus Christi, south of Laredo, and in Karnes County. Increased trade is also noted during this subperiod with large, small-stemmed bifaces from Central Texas being found in Frio County and a cache of 50 bifaces that were made of Edwards chert that were found at Falcon Reservoir (Hester 2004:142-3).

Late Prehistoric Period

The Late Prehistoric Period begins ca. 1400 B.P. (Hester 2004), and appears to continue until the beginning of the Protohistoric Period (ca. A.D. 1700). This area was dominated by the Coahuiltecans during this time, numbering some 200 tribes and bands. The term Late Prehistoric is used in Central and South Texas to designate the time following the end of the Archaic Period. A series of cultural traits characterizes the shift from the Archaic to the Late Prehistoric Period. The main technological changes were the shift to the bow and arrow and the introduction of pottery. The Late Prehistoric Period is divided into two phases: The Austin Phase and the Toyah Phase.

At the beginning of this period, environmental conditions were deemed to be warm and dry. Moister conditions appear after 1000 B.P. (Mauldin and Nickels 2001). Subsistence practices appeared similar to the Late Archaic. Projectile points associated with the Austin Phase (ca. A.D. 600-1200) include the Scallorn and Edwards types. The Toyah Phase (ca. A.D. 1250/1300-1600/1650) is characterized by the prominence of the Perdiz point (Hester 2004). Examples of the Toyah Phase can be seen throughout South Texas at sites such as Hinojosa, 41LK201, 41ME19, and Berclair. Cultural materials from these sites include Perdiz points, beveled and flake knives, small end scrapers, ceramic figurines, pottery, mussel shell ornaments, and bone beads (Hester 2004:146).

Early ceramics in South Texas (ca. A.D. 1250 to 1300) are associated with the Toyah Phase of the Late Prehistoric and are referred to as Leon Plain ware. The Leon Plain ceramic types are undecorated, bone-tempered bowls, jars, and ollas with oxidized, burnished and floated exterior surfaces (Ricklis 2004). There is notable variation within the type (Black 1986; Johnson 1994; Kalter et al. 2005). This variation can be attributed to differences in manufacturing techniques. Analysis of residues on ceramic sherds

suggests that vessels were used to process bison bone grease/fat, mesquite bean and deer bone grease (Quigg et al. 1993).

Roughly contemporaneously with the Toyah Phase (ca A.D. 1000), the Rio Grande Delta was the site of the emergence of the Brownsville Complex centered on Cameron and Starr Counties. The complex is characterized by a well-developed shell industry, triangular arrow points of the Fresno and Cameron types, pin drills used in shell pendant manufacture, small rounded thumb-nail scrapers and the manufacture of bone and shell beads. From the limited excavations along the Rio Grande Delta, it is assumed that these groups were more or less mobile, establishing temporary/seasonal camps with proximity to economically useful resources (Ricklis 2004:178-9).

Historic Period

The historic period of the Rio Grande Delta subregion and South Texas begins with the Spanish exploration and the eventual settling of the region, colonization, and conversion of local Native American tribes to Catholicism. Some scholars believe that Álvar Núñez Cabeza de Vaca was the first to arrive and spend time among the natives of South Texas between 1528 and 1535, as a part of the Pánfilo de Narváez expedition (Newcomb 1961:33-4). Others argue that Alvarez de Pineda made landfall along the coast near the Rio Grande around 1519 (Weber 1992:34). Regardless, extensive colonization of South Texas and the Rio Grande Delta region did not occur until the mid-18th Century when José de Escandón established the community of San Juan de los Esteros in 1765 on the south banks of the Rio Grande. After Mexico's War of Independence in 1821, this community was renamed Matamoros (Garza and Long 2006).

South Texas, and specifically the Rio Grande Delta, thrived economically after independence was won from Spain. Trade and cattle ranching were the main avenues for wealth during this time. By 1836, small communities had sprung up on the northern side of the Rio Grande directly across from Matamoros after Texas had declared its independence from Mexico. The area was sparsely populated. The region's ownership was heavily contested between Mexico and Texas. General Zachary Taylor arrived in early 1846 to provide a US presence should there be an attack from Mexican forces. After taking up a location directly across from Matamoros, Taylor and his forces began the construction of a defensive fort near this settlement. Originally called Fort Texas, the compound was soon renamed Fort Brown in honor of Major Jacob Brown who died in defense of the fort on May 3, 1846, when Mexican forces fired upon the fort (Garza and Long 2006).

In 1848, after the signing of the Treaty of Guadalupe Hidalgo, the Rio Grande became the international border between the United States and Mexico. That same year, entrepreneur Charles Stillman and his partner, Samuel Belden, purchased 4,676 acres northwest of Fort Brown and laid out a town they called Brownsville (Garza and Long 2006). Business thrived throughout the region until the Civil War in 1861. Since most of the Confederate ports were blockaded by Union troops along the coast, Brownsville was one of the last ports to send supplies to Europe in exchange for guns and ammunition. On November 1, 1863, a Federal force under Major-General Nathaniel P. Banks landed on Brazos de Santiago, just south of present day South Padre Island, with a force of some 7,000 men. Upon hearing of this news, the Confederate force, which had barely 1,200 men at Fort Brown, burned the fort and other government buildings before evacuating. The fire would eventually destroy an entire block of city property and ignited 8,000 pounds of gun powder, which was stored in the garrison (Pierce 1917).

After the war, the Union army launched a massive reconstruction effort to repair the war-damaged Fort Brown and its affiliated buildings. By 1869, 70 new buildings had been constructed to house the cavalry, infantry, and artillery units that were stationed there. The Brownsville economy, which was doing well with the smuggling trade during the war years, was slower to recover. By 1884, the town's population was only 5,000. However, with the introduction of large scale irrigation and truck farming projects (horticultural practice of growing multiple vegetable crops on a large scale for the shipment to distant markets) and the planting of the first commercial citrus orchard, the population and economy began to improve drastically. The population had increased to 22,000 by 1930 due to the introduction of new railroad routes and numerous land-seekers. The economy was also spurred on by the construction of a shipping channel. On May 15, 1936, the Port of Brownsville was opened. During World War II, Fort Brown was used as a training base for the 124th Calvary, and a large number of servicemen passed through the fort. The fort was deactivated in 1945, and the grounds were eventually turned over to the City of Brownsville (Garza and Long 2010).

Previous Archaeology

No archaeological sites fall within the current APE (**Figure 3-1**). However, thirteen archaeological sites, four historic markers, eleven archaeological surveys, and one historic cemetery fall within a one kilometer radius of the current APE (**Figure 3-1**).

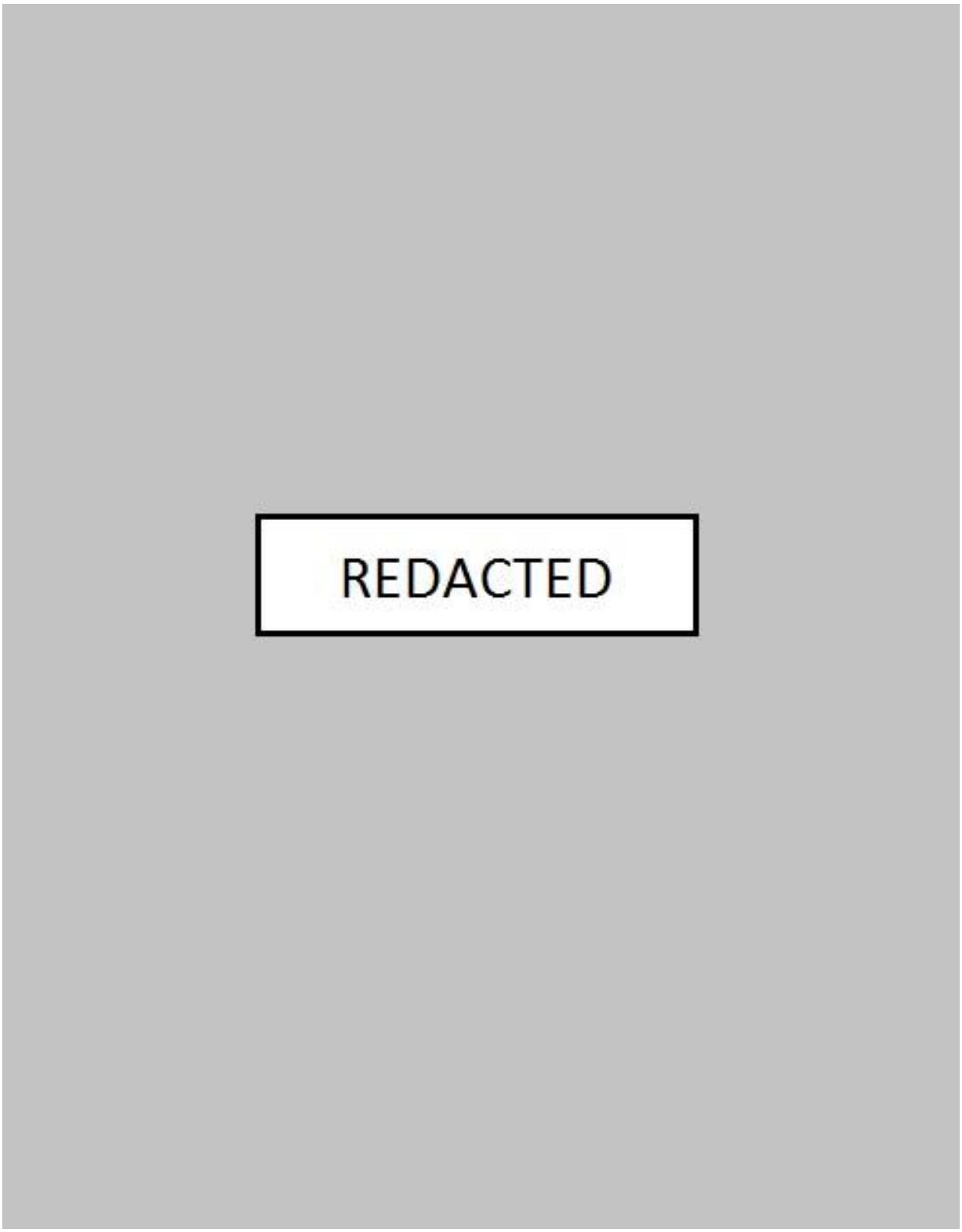

Figure 3-1. Archaeological sites, National Register Districts, and Historic Markers within a 1-km radius of the APE.

In 1987, the International Boundary and Water Commission carried out an archaeological survey of a large area south of the APE. The investigation included the region surrounding Fort Brown (41CF96). This site is composed of a small earthwork, which is the only remains of the original Fort Brown fortification. Fort Brown was first recorded in 1970 by Elton R. Prewitt for the Texas Historical Commission, and then was re-recorded in 1981 by Cynthia Banks. The boundary of the Fort Brown National Register District is shown in Figure 3-1.

In 1995, a linear survey was carried out 0.7 km to the east of the APE by the Federal Highway Administration and TXDOT. No cultural materials were encountered during the course of the survey. The following year, an intensive pedestrian survey was carried out by Espey Huston and Associates in an area immediately surrounding and to the southeast of the APE. The survey documented nine sites: 41CF148, 41CF149, 41CF150, 41CF151, 41CF152, 41CF154, 41CF155, 41CF156 and 41CF157. 41CF148 is a historic site dating to the mid-1800s. The site produced brick, glass and historic ceramics. 41CF148 is listed as an NRHP-eligible property. 41CF149 is listed as a historic site on the THC Sites Atlas. 41CF150 is a historic site that dates to the late-20th century. This site consists of building materials and domestic refuse. The site is ineligible for listing on the NRHP. 41CF151 is a historic site and is not eligible for listing on the National Register. 41CF154 is a historic site dating to the late-20th century. It consists of domestic refuse and building materials related to a demolished house. It is ineligible for listing on the NRHP and no further work was recommended. 41CF155 is a historic site that is also not eligible for listing on the National Register. 41CF156 is a historic site dating to the late-20th century, consisting of construction materials and domestic refuse. 41CF157 is a historic site not eligible for listing on the National Register.

In 1998, The University of Texas at Brownsville conducted a large archaeological survey that examined an approximate 350-acre area immediately surrounding the APE. The survey re-located one site, 41CF95. Site 41CF95 is the Neale Home site which consists of two of the earliest homes in Brownsville, dating to ca. 1850. These houses were first recorded by Elton R. Prewitt in May of 1970. No further work was recommended.

In 1990, and again in 1999, archaeologists from Texas A&M University conducted excavations within Fort Brown (41CF96). One hundred and forty-seven different locations were investigated using backhoe trenches and backhoe scrapes, test units and auger bores. Nearly 14,000 artifacts were recovered and multiple cultural features were recorded (Carlson et al. 1990; Hartmann et al. 1999).

In 2002, a linear survey was conducted 0.1 km east of the APE by SWCA for a TXDOT roadway project (Barile et al. 2003). No surface or subsurface cultural materials were encountered during the 21.8 acre survey. A 0.6-acre portion of this survey was located in the current APE (**Figure 1-3**). This portion is excluded from the current survey APE.

In 2004, Ruth Mathews and J. Mooney from Michael Baker Jr., Inc. conducted a small survey 0.8 km east of the project area. No sites were recorded during this survey.

In 2007, Raba Kistner performed a pedestrian survey for a proposed Wellness, Recreation and Fitness Center on the University of Texas at Brownsville Campus (Held 2007). The project area was located south of University Avenue and east of Ringold Road, in the former Pablo Valente Park, south of Fort Brown Resaca and east of the current project area. One shovel test, located on the eastern edge of the project area contained historic cultural materials in a disturbed context (Held 2007).

In 2008, the US Army conducted a small survey 0.85 km west of the APE and south of the Fort Brown Resaca. No cultural resources were recorded during this survey.

In 2009, the planned construction of the La Placita Center for Early Childhood Studies precipitated yet another pedestrian survey in the general vicinity of the current project area (Held 2009). The project area was located on a landform surrounded by the Fort Brown Resaca. The entire area was severely disturbed and no intact cultural deposits were identified during the survey (Held 2009).

In 2011, GTI Environmental, Inc. conducted a survey 0.8 km west of the APE. Two sites were documented during this survey: 41CF213 and 41CF214. Site 41CF213 is a surface scatter of prehistoric chipped flakes. This scatter included three tertiary flakes. Site 41CF214 is the probable remains of the military housing for Fort Brown. A brick pier and burned trash pit was recorded by GTI Environmental in 2011 (THC 2015).

In 2012, Gina Gage and Eric Cox from Northland Research, Inc. conducted a small survey 0.8 km southeast of the APE along W. University Blvd. No new sites were recorded.

In 2012, SWCA conducted an intensive pedestrian survey along a proposed 5.2-mile long roadway that begins 0.85 km to the east of the APE and extended east (Miller et al. 2012). Two sites were recorded (41CF215 and 41CF216) during this survey.

More recently, in December 2014, RKEI staff conducted an intensive pedestrian survey of a 1.9-acre lot on the southern bank of the *resaca*, bordering the present APE. The survey was carried out in advance of the construction of a new Academic Education Building. The survey included shovel testing and backhoe trenching and identified no historic or prehistoric cultural deposits in the study area (Luzmoor 2015).

One of the historical markers within the one kilometer radius of the APE is the Fort Brown Cavalry Barracks. The marker is located 0.6 km to the northwest of the APE. The one story brick building housed cavalry units from the Civil War until World War I when it became a quartermaster warehouse and commissary. It is now owned by Texas Southmost College and became a Historical Landmark in 1987.

A second Historical marker is located 0.88 km to the northwest of the APE. This includes the morgue and linen storage buildings from Fort Brown: Buildings 85 and 86. These buildings were constructed in 1867 and became Historical Landmarks in 1965. Near these two buildings is another Historical Marker: The Post Hospital Annex. The Annex housed personnel assigned to work in the nearby Post Hospital. This structure was constructed in 1869 and became a Historic Landmark in 1962.

Another Historical Marker is located 0.89 km to the northwest of the APE. This marker represents the Fort Brown Commissary/Guardhouse. Originally constructed in 1905 as a food storage facility, it was abandoned a year later when Fort Brown was closed. However, upon reactivation of the fort during the Mexican border disturbances, this building served as a guardhouse and jail.

A fourth Historical Marker is located 0.91 km to the west of the APE. This marker represents the house of William Neale, who occupied the residence from 1834 to 1896. This property became a Historic Landmark in 1964.

A fourth historical marker is 0.92-km to the northwest of the APE. This marker represents the launching site of the first U.S. Army Warplane. In 1915, two Signal Corps officers, Lts. Byron Q. Jones and Thos. Milling, flew a Martin T.O. Curtiss 75 along the border to spot the movements of Mexican revolutionist Pancho Villa. The flight reached 2,600 feet and was in the air for 20 minutes (THC, 2015).

Approximately 0.6 km to the northwest of the APE was the National Cemetery which was utilized by Fort Brown. This cemetery was located in the middle of the Fort Brown Resaca (**Figure 3-2**). The cemetery was used until 1911 when 1,537 bodies were exhumed and relocated to the Alexandria National

Cemetery in Pineville, Louisiana. However, according to an inspector's report in 1872, there were 1,532 known and 1,195 unknown internments in the Brownsville National Cemetery. The location of the remaining 1,190 remains is unknown (Holt 2010:13-4).

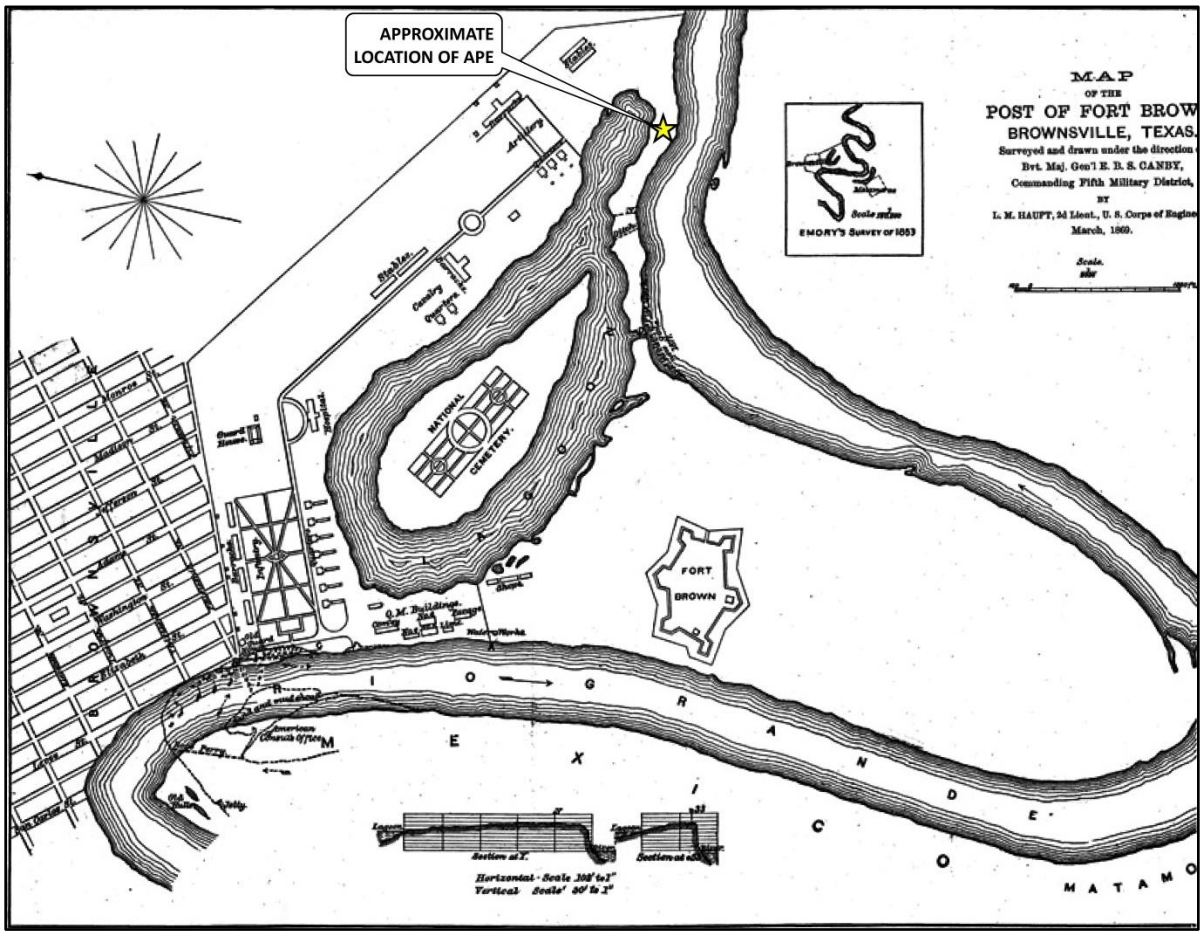

Figure 3-2. Fort Brown in 1869 with National Cemetery, the main fortification and affiliated buildings.

Chapter 4: Methods of Investigation

Field Methods

The project area covers approximately 4.4-acres on the University of Texas Rio Grande Valley Campus in Brownsville, Texas. As part of the pedestrian survey of the APE, **RKEI** utilized surface reconnaissance and shovel testing to search for shallowly buried archaeological deposits. No backhoe trenches were recommended due to the amount of previous disturbance and the anticipated shallowness of the utilities installations (18-24 inches below surface).

Shovel Testing

Due to the shallow grading that had taken place across the project APE prior to the arrival of the Project Archaeologists, surface visibility along the project area was 100 percent. Therefore, **RKEI** staff concentrated on surface reconnaissance of the APE to determine whether any archaeological deposits were noted on the surface and within the backdirt derived from the grading. To determine whether any shallowly buried cultural materials were present across the project area, four shovel tests were excavated along the APE.

All shovel tests extended to a depth of 60 centimeters below surface (cmbs). They ranged from 32 to 35 cm in maximum diameter and were excavated in 10 cm levels. A shovel test form was filled out for each excavated unit. The form contained information on the soils encountered, the artifacts recovered (if any), disturbances noted, and references to samples retained and photographs taken.

Laboratory Methods

All project related documentation produced during the survey was prepared in accordance with federal regulation 36 CFR Part 79, and THC requirements for State Held-in-Trust collections. Field notes, field forms, photographs, and field drawings were placed into labeled archival folders and converted into electronic files. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and were placed in archival-quality plastic sleeves when needed. All field forms were completed with pencil. Ink-jet produced maps and illustrations were placed in archival quality plastic page protectors to prevent against accidental smearing due to moisture. A copy of the report and all digital materials was saved onto a CD and stored with field notes and documents. Since no artifacts were encountered during the course of the project, no cultural material was curate. All project-related

documentation is permanently housed at **Texas Archeological Research Laboratory**.

Chapter 5: Results of Investigations

On June 12, 2015, **RKEI** staff performed a pedestrian survey of a 4.4-acre property owned by The University of Texas, Rio Grande Valley, Brownsville Campus in Brownsville, Cameron County, Texas. The survey consisted of the visual inspection of the ground surface for cultural materials and shovel testing. Four shovel tests were placed throughout the property (three along the road path and one within the old parking lot (**Figure 5-1**).

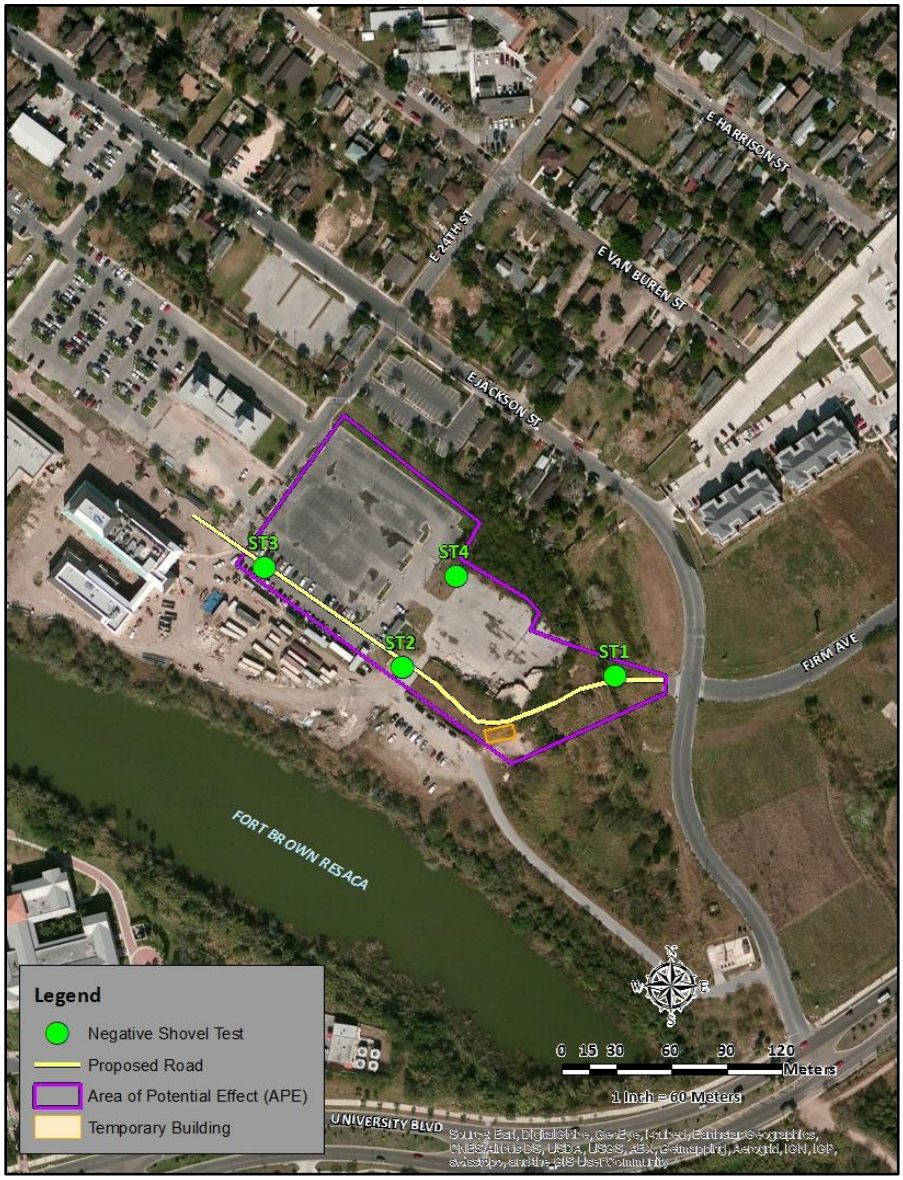

Figure 5-1. Location of the shovel tests excavated within the APE.

Pedestrian Survey and Shovel Testing

Construction activities were well underway by the time the Project Archaeologist arrived on site. The temporary modular building was already completed, and the former paved parking lot had been removed. The roadway connecting these facilities has been graded. Anywhere from 5-30 centimeters of top soil had been removed during the dragging, depending on the original gradient of the surface.

Although none of these activities were to have been initiated prior to the archaeological survey, the grading aided the completion of the pedestrian survey by increasing surface visibility within the easement. Surface visibility shifted from roughly 45-50 percent prior to grading to 100 percent at the time of the survey. Given the excellent surface visibility, the Project Archaeologist shifted from a methodology that emphasized shovel testing to one that relied on surface reconnaissance. All portions of the project APE that had been graded were carefully walked by RKEI personnel in search of exposed features and cultural debris. In addition, the faces of the shallow cuts resulting from grading also were inspected as were the piles of soil that had been accumulated along the project easement. It was anticipated that hearth features, such as concentrations of reddish colored clay, would be easily visible given the excellent surface visibility. Similarly, it was anticipated that cultural debris, whether historic or prehistoric, also could be easily identified since the soils consisted of sandy clay loam. The pedestrian reconnaissance of the APE, and the inspection of the backdirt piles found in its vicinity, revealed no cultural features and/or cultural debris.

Given the lack findings, the Project Archaeologist was advised to excavate a small number of shovel tests to determine whether cultural materials may be shallowly buried just below the graded surface. Four shovel tests were excavated along the graded surface of the road that connected all of the facilities (**Figure 5-1**). The soil in each shovel test ranged from a very dark grayish brown (10YR3/2) to a dark yellowish brown color (10YR4/4; **Table 5-1**).

Table 5-1. Shovel tests with Munsell colors

Shovel Test Number	0-10 cmbs	10-20 cmbs	20-30 cmbs	30-40 cmbs	40-50 cmbs	50-60 cmbs
1	10YR5/1	10YR5/1	10YR4/3	10YR4/3	10YR4/3	
2	10YR5/1	10YR5/3	10YR5/3	10YR5/3	10YR2/2	10YR2/2
3	7.5YR4/3	10YR4/3	10YR2/2	10YR2/2	10YR2/1	10YR2/1
4	10YR5/1	10YR5/1	10YR2/1	10YR5/1	10YR5/1	10YR5/1

Shovel Test 1 (ST 1) was located near the eastern terminus of the APE, along the north side of the proposed roadway. This area had experienced heavy truck traffic due to the recent construction activities. The traffic compacted the soil making excavation of the shovel test somewhat difficult. Large gravels were noted at the bottom of Level 5 (40-50 cm below surface; cmbs). Due to the gravel layer, the unit was terminated at 50 cmbs (**Figure 5-2**). Artifacts recovered (**Table 5-2**) consisted of one round wire nail found in Level 3 (20-30 cmbs) and five small fragments of clear glass in Level 4 (30-40 cmbs). Since these artifacts were clearly modern items, none of them were collected.

Table 5-2. Artifacts from Shovel Test Units.

Shovel Test /Level	wire nail	white earthen ware	asphalt	clear glass	concrete
1/3	1				
2/1		1			
3/3			3		
4/1				5	
4/2					1

all artifacts were modern and not collected

Figure 5-2. ST 1 at terminal depth. Note the large gravels at the bottom.

ST 2 was excavated approximately 40 meters to the northwest of the temporary building, along the southern edge of the proposed roadway. Recent grading activities in the area had already removed some 35 cm of topsoil from the area. Levels 1 through 3 (0-30 cmbs) exhibited very compact mottled soils indicative of extensive disturbances. One fragment of undecorated white earthenware (**Table 5-2**) was encountered in Level 1 (0-10 cmbs) but not collected since it was from a disturbed context. Levels 4 through 6 (30-60 cmbs) were less compact and had a dark gray to black in color (10YR2/2). Both levels were devoid of cultural materials and features.

Figure 5-3. ST 2 at terminal depth, showcasing the amount of previous disturbance.

ST 3 was excavated near the eastern terminus of the project area (**Figure 5-4**). Roughly 20 cm of the topsoil had been graded from this surface prior to the excavation of the unit. Disturbances were evident even within this unit as exemplified by large (5-10-cm in diameter) pieces of asphalt (**Table 5-2**) encountered in Level 3 (20-30-cmbs). No other artifacts were encountered.

Figure 5-4. ST 3 with tar inclusions in the walls of the profile.

ST 4 was excavated near the northeastern edge of the APE under what was once a parking lot (**Figure 5-1**). The ST was excavated to determine if there were any cultural materials under the previous parking lot. In Level 2 (10-20-cmbs), a large piece of concrete (**Table 5-2**) was encountered embedded in the southwestern wall of the unit (**Figure 5-5**). This piece of concrete was most likely a remnant of the parking lot. No artifacts were discovered in any level of the ST.

Figure 5-5. Large fragment of concrete in southwest wall of ST 4, approximately 20-cmbs.

Chapter 6: Summary and Recommendations

On June 12, 2015, **RKEI** archaeologists conducted a pedestrian survey of approximately 4.4-acres on the University of Texas Rio Grande Valley's Brownsville Campus in Cameron County, Texas. The investigation was to be undertaken prior to proposed construction activities for a new temporary building and a 1000-ft roadway. However, extensive grading and other construction activities had already commenced prior to the arrival of the **RKEI** Project Archaeologist on site.

The APE is located within one kilometer of the historic Fort Brown (41CF96), a National Register-listed property. The Fort was established on March 28, 1846 by General Zachary Taylor. It was the first United States military post in Texas, in service until 1944. The Fort played an important role in American History. The Fort was involved in almost every US military event from 1846 until its closing in 1944. During the Civil War, Fort Brown became a focal point for both Federal and Confederate troops to control since it was located near a main water channel which had access to the coast. After the Civil War, the Fort was expanded to a sizeable installation that contained approximately 70 buildings that housed infantry, cavalry, and artillery troops and their commanders. The Fort also boasted a hospital, chapel, bakery, stables and a National Cemetery on the island in the middle of the Fort Brown Resaca.

Extensive disturbance was noted throughout the APE prior to the pedestrian survey. The temporary building was already constructed and the proposed road was already graded by the time **RKEI** arrived on site. Given the 100 percent surface visibility along the APE, the Project Archaeologist conducted a surface reconnaissance of the project area prior to the excavation of four shovel tests. No features or cultural materials were noted during the reconnaissance. Four shovel tests were excavated during the survey to search for shallowly buried cultural deposits. These STs encountered a total of eleven modern artifacts (1 piece of concrete [ST 4/L-2; 3 pieces of asphalt [ST 3/L-3; 1 white earthenware ceramic [ST 2/L-1; 1 wire nail [ST 1/L-3]; and 5 pieces of white glass [ST 1/L-4) derived from highly disturbed depositional contexts. It was surmised that the disturbances occurred during the early 1960s and 1990s, as indicated by the historic aerial photographs of the APE. No significant surface-exposed or buried historic or prehistoric materials and/or features were identified during the survey.

The lack of historic or prehistoric cultural material during the survey of the APE indicates that there is low probability that the area contains significant buried historic or prehistoric cultural deposits. Therefore, **RKEI** recommends that no further archaeological investigations are warranted and the planned improvements can proceed as scheduled since they will not impact significant cultural deposits.

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