# Archaeological Investigations of the Proposed Fire Station #24, San Antonio, Bexar County, Texas

by
Antonia L. Figueroa and Leonard Kemp



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Texas Antiquities Permit No. 8888

#### **REDACTED**

Principal Investigator José E. Zapata



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## **Abstract:**

In May 2019 through November 2021, the University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR), in response to a request from the City of San Antonio (COSA), conducted archaeological investigations for the replacement of Fire Station No. 24 located in San Antonio, Bexar County, Texas. This work was accomplished in response to a request from the COSA Office of Historic Preservation (OHP). The project required review under the COSA Unified Development Code (Article 6 35-630 to 35-634) and performed under the Texas Historical Commission (THC) Texas Antiquities Permit No. 8888, with José E. Zapata serving as the Principal Investigator and Antonia L. Figueroa and Leonard Kemp serving as the Project Archaeologists.

The initial archaeological investigation consisted of exploratory backhoe trenching within the project area that consisted of 0.77 hectare (1.7 acres). Backhoe trenching did not identify any cultural material or features. The project was modified in May 2021 at the behest of COSA Public Works Department and the archaeological permit amended to include a storm drain outside the original project area (0.01 hectare or 0.02 acre). CAR excavated four shovel tests along the projected path of the storm drain. All but one shovel test encountered construction debris that resulted in their early termination. No artifacts or features were discovered during this phase of testing. CAR monitored the excavation for the storm drain and found that the northwest portion of the proposed storm drain was significantly modified with the addition of construction fill. No features or artifacts were found during the monitoring phase. CAR recommends no further archaeological investigations be conducted for the project. The THC and the OHP agreed with these recommendations. All records generated during the project were prepared in accordance with Code of Federal Regulations (CFR) Title 36 Part 79 and THC requirements for State Held-in-Trust collections. All project related materials, including the final report, are permanently stored at the CAR facilities in accession file number 2181.



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# **Chapter 1: Introduction**

Beginning in May 2019 through November 2021, the University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR) conducted archaeological investigations for construction of a new fire station to replace

the existing Fire Station No. 24 (FS 24) at 2265 Austin Highway in the city limits of San Antonio, Bexar County, Texas (Figure 1-1). The archaeological work consisted of exploratory backhoe trenching within the project area



Figure 1-1. Location of the Project Area satellite imagery.

including approximately 0.7 ha (1.7 acres). Shovel testing and archaeological monitoring were conducted when a storm drain was added to the project. This additional work will encompass the installation of approximately 77 m (253 ft.) of storm line, three junction boxes, and an outlet. The Fire Station No. 24 replacement project is a City of San Antonio (COSA) funded project through the 2017 Go Public Safety Improvement Bond (City of San Antonio 2021). The new station will also be built on COSA-owned property. As a public municipal property, undertakings that might affect archaeological or historical sites are subject to regulatory review. This work was accomplished in response to a request from the City of San Antonio Office of Historic Preservation Office (COSA-OHP) and required review under the City's Unified Development Code (UDC) Article 6 35-630 to 35-634 and the Texas Historical Commission (THC). The archaeological investigation was conducted under Texas Antiquities Permit No. 8888 with José E. Zapata serving as Principal Investigator. Antonia L. Figueroa and Leonard Kemp served as project archaeologists.

The goal of the exploratory backhoe excavations was to identify and document all prehistoric and/or historic archaeological sites that might be impacted during construction. CAR staff monitored the excavation of four backhoe trenches with negative results. CAR also excavated four shovel tests and monitored the excavation associated with the storm line beginning in the northwest portion of the project area. No cultural material or archaeological features were discovered during this phase of the investigation. CAR recommends that construction of Fire Station No. 24 proceed as planned, with

no additional archaeology investigation recommended. Both the OHP and the THC concurred with these recommendations.

# **Project Description and Area**

The project area is located in northeast San Antonio, Bexar County, Texas. The project area includes 0.7 ha (1.7 acres) along Austin Highway and east of Salado Creek (Figure 1-2). The southeast portion of the project area, along Austin Highway, is comprised of a paved parking lot (Figure 1-3). The remainder of the project area is an open field where all archaeological investigations were conducted (Figure 1-3). In May 2021, CAR requested an amendment to the original permit to include additional excavation, associated with an off-site storm drain not covered by the original permit as requested by COSA Public Works Department The storm drain begins in the northwest portion of the project area, crosses a private road and exits into a drainage to Beitel Creek (Figure 1-4). This linear excavation is approximately 77 m (253 ft.) in length, 2 m (6.5 ft.) wide, and exceeds 3 m (9 ft.) in depth encompassing 0.01 hectare or 0.02 acre.

# **Report Organization**

The remainder of this report consists of four additional chapters. Following this introduction, Chapter 2 provides the project setting. The field, laboratory, and curation methods for the project are presented in Chapter 3. Chapter 4 discusses the results of the archaeological investigations. Chapter 5 provides a summary of the project activities and recommendations made by CAR.

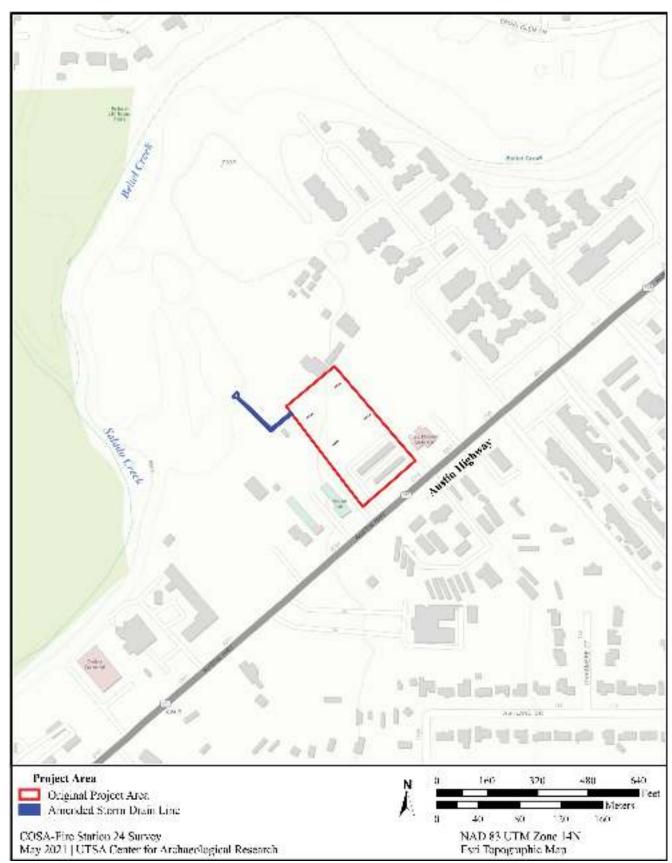


Figure 1-2. The project area depicted on an Esri topographic map.



Figure 1-3. The southeast paved portion of the project area (top). The open field portion of the project area was trenched with a backhoe (bottom).



Figure 1-4. View to the east of the proposed storm drain from Junction Box 1 in the project area (top). View to the northwest of the proposed storm line to the Beitel Creek outfall (bottom). In both images, the storm drain footprint is shaded.



# **Chapter 2: Project Setting**

This chapter describes the project area's physical environment, including a brief summary of the climate, soils and vegetation. Following the environmental setting discussion is a brief account of the culture history of the region. It is followed by a discussion on the previous archaeology within 500 m (0.3 miles) of the project area.

# **Environmental Setting**

The project area is located in northeast San Antonio at an elevation of 710 ft. above mean sea level (amsl). Climate for the San Antonio region is moderate, subtropical, and humid with generally cool winters and hot summers (Norwine 1995; Taylor et al. 1991). The average annual temperature for the region varies between 65° to 70°F and the annual precipitation for the region varies between 31 and 38 in. (79 to 97 cm; NRCS 2019).

The soil series that dominates the project area is Branyon clay, 0 to 1 percent slopes (HtA). This soil is a deep, dark clay found on stream terraces (NRCS 2019). The Tinn-Frio (Tf) series, 0 to 1 percent slopes, represent frequently flooded soils found in the northwest portion of the storm drain excavation. These soils are clays and clay loam and are typically found in floodplains (NRCS 2019). The nearest sources of water to the project area are the Salado Creek 0.15 km (0.1 mi.) to the west and Bietel Creek 0.19 km (0.12 mi.) to the north.

The Salado Creek watershed system crosses through three major physiographic zones that include the Balcones Escarpment, the Blackland Prairie and the interior Coastal Plain (Potter et al. 1995). The project area is located in the northern portion of the Blackland Prairie ecological zone (NRCS 2019). This ecological zone is described as temperate grassland. Historically the ecological region was a tallgrass prairie with deciduous woodlands along waterways. Grasses that dominated the tallgrass prairie included big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), eastern gamagrass (*Tripsacum dactyloides*) and little bluestem (*Schizachyrium scoparium*). Trees that are native to the region include live oak (*Quercus virginiana*) and hackberry (*Celtis* spp; NRCS 2019).

## **Culture History**

The San Antonio area has been occupied by various cultural groups for well over 10,000 years. Sites dating to the Paleoindian period (13,000-9,000 years before present

[BP]) have been recorded along the San Antonio River (Bousman et al. 2004:62). Locally and within the city's core, the best evidence for prehistoric occupations to date has been in the area of the headwaters of the San Antonio River (Fox 1975:7-8).

#### Paleoindian (13,000-9000 BP)

The Paleoindian period is characterized by open campsites that are attributable to nomadic bands of hunter-gatherers. Such sites are typically heavily eroded and feature concentrations of lithic flakes and burned rock middens (Hester 2004:133-136). Clovis and Folsom projectile points are commonly associated with this period. These projectile points are typically long, thin, and fluted, and were used to hunt large game, such as mammoth and later bison. A large number of projectile points, such as the Plainview, Golondrina, and Angustura (Hester 2004:134), represents the later Paleoindian period in southern Texas.

#### **Archaic (9000-1200 BP)**

Evidence for Archaic period (9000-1200 BP) occupation is common in the San Antonio area (see Cliff et al. 1990; Hester 1974; Pagoulatos 2008). The period is divided into three sequences or sub-periods: Early (9000-6000 BP), Middle (6000-4000 BP), and Late (4000-1200 BP). The Archaic period is marked by a growth in population, less mobility, and an increase in hunting and gathering of local resources. Burned rock middens are common during this period, as are cemeteries (Hester 2004:136-142).

#### Late Prehistoric (1200–350 BP)

Late Prehistoric sites date to between 1200 and 350 BP. This period is notable for the introduction of agriculture, pottery, and the bow and arrow, but these advancements did not occur simultaneously. The bow and arrow, which required the production of smaller and lighter projectiles, was the first innovation to make its way into Central Texas (Collins 2004:122). Whether locally produced or imported, pottery and agriculture were introduced into this area late in the period and were of minor importance (Collins 2004:122).

#### Historic (Late 1600s-ca. 1950)

Native habitation of the San Antonia area was prolonged, as evidenced by the prehistoric record (see Collins 2004 and

Hester 2004). The historic record attests to the presence of several Coahuiltecan-speaking groups, as well as Apache and Comanche in the area (Collins 2004:123-124). European contact with Coahuiltecan groups can be traced back to 1528, when Cabeza de Vaca and three companions, survivors of a shipwreck along the Texas Coast, spent several years with multiple Indigenous groups (see Krieger 2002). Settlement of the area that would become San Antonio began in the early 1700s (Fisher 1996:16-17). Founding of the presidio of San Antonio de Béxar and the Mission San Antonio de Valero in 1718 was followed in 1731 with the founding of the Villa San Fernando de Béxar (Austin 1905:288-293). Early-nineteenth century events brought significant challenges, particularly Mexico's fight for and eventual independence from Spain in 1821, and Texas' fight for independence from Mexico in 1836 (Ramos 2008:90-105). These major episodes were followed by the United States' annexation of Texas in 1845 and the war with Mexico (1845-48).

San Antonio's population increased dramatically during the late 1840s (Valentine 2014:14-20). In 1850, the city's population numbered 3,488 (Texas Almanac 2020). The arrival of the railroad in 1877 greatly stimulated the city's growth and prosperity (Cox 1997). In 1880, within a matter of 30 years, the population had soared to 20,550, and by 1900, numbered 53,321 (Texas Almanac 2020). While there was a slowing of growth associated with the Great Depression, San Antonio's population exceeded 400,000 by 1950 (Texas Almanac 2020).

## **Previous Archaeology**

As mentioned, the project area is located east of the Salado Creek where several archaeological sites have been recorded. More recently, CAR was responsible for several archaeological projects along the Salado Creek and within a 1 km (0.6 mi.) of the project area. The projects were associated with the archaeological survey of Salado Creek Greenway (Munoz 2008; Munoz 2014) and testing of the Granberg site (Munoz et al. 2011 and Thompson 2006).

For the purposes of this report, only archaeological resources within 500 m (0.3 mi.) were reviewed. There are six prehistoric archaeological sites located within 500 m (0.3 mi.) of the project area (Table 2-1). Five of the sites are located along the Salado Creek (41BX478, 41BX479, 41BX480, 41BX481, 41BX482; Figure 2-1). CAR staff identified and recorded the sites in 1977 as part of an archaeological survey and assessment of the Tobin Oakwell Farm project (McGraw and Valdez 1977). All five sites were identified as lithic scatters and further investigations were not recommended. As part of investigations for the Salado Creek Greenway project, CAR revisited the sites (Munoz 2008). The only evidence of the previously recorded sites was a lithic scatter found near site 41BX478.

In 2010, 41BX1884 was recorded south of the project area (THC 2019). The site was described as a lithic scatter. As there was a potential for deeply buried features, further archaeological investigations were recommended at the site to determine the vertical depth of the potential deposits (THC 2019).

Site	Time Period	Site Type	Eligibility	Publication	
41BX478	prehistoric	lithic scatter	N/A	McGraw and Valdez 1977	
41BX479	prehistoric	lithic workshop/quarry	N/A	McGraw and Valdez 1977	
41BX480	prehistoric	lithic scatter	N/A	McGraw and Valdez 1977	
41BX481	prehistoric	lithic workshop/occupation	N/A	McGraw and Valdez 1977	
41BX482	prehistoric	lithic scatter	N/A	McGraw and Valdez 1977	
41BX1884	prehistoric	lithic scatter	N/A	THC Sites Atlas 2019	

Table 2-1. Archaeological Sites within 500 m of the Project

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Archaeological Investigations of the Proposed Fire Station #24, San Antonio, Bexar County, Texas

Figure 2-1. Previously recorded sites within 500 m of the project area.

Chapter 2: Project Setting		

# **Chapter 3: Field and Laboratory Methods**

#### **Field Methods**

The initial fieldwork for the project consisted of exploratory backhoe trenching focused on the open field portion of the project area. The backhoe trenches were 1 m (3.2 ft.) in width and 5 m (16.4 ft.) in length. The trench excavations extended to a depth of 1.2 to 1.3 meters below surface (mbs) or 3.9 to 4.2 ft. All four backhoe trenches were excavated perpendicular to the creek and orientated northeast/southwest. CAR staff completed a standard form to record details about each backhoe trench. Measured drawings of the trench profiles were completed, which detailed a onemeter segment of each backhoe trench. All backhoe trench locations were recorded with a Trimble handheld global positioning system (GPS) unit and photo documented.

In May 2021, CAR requested an amendment to the original permit to include additional excavation associated with an off-site storm drain. This new construction would encompass the installation of approximately 77 m (252 ft.) of storm line, three junction boxes, and an outlet. The depth of these excavations were estimated to be up to 3.0 m (9.8 ft.) below the existing grade and approximately 2 m (6.5 ft.) in width. This additional fieldwork consisted of the shovel testing and monitoring for said storm drain.

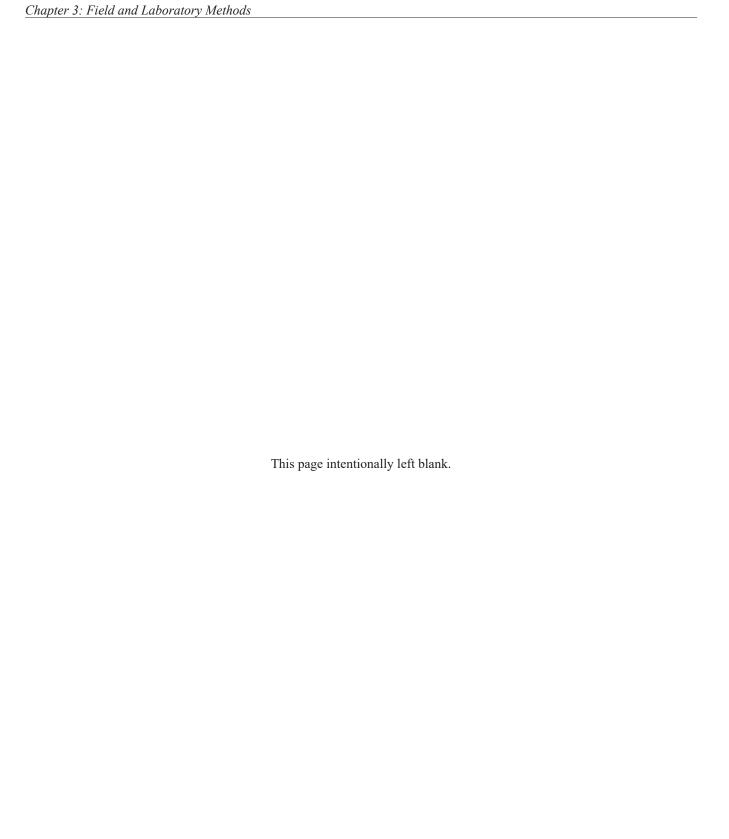
Per permit requirements, CAR excavated four shovel tests within the length of the planned storm drain, a number that exceeds current THC linear survey standards. The shovel tests were 30 cm in diameter and where possible

excavated to depths of 80 cm (31.4 inches [in.])below the ground surface. Shovel tests were excavated in 20-cm (7.6-in.) arbitrary levels and all soil matrices were screened through one-quarter inch hardware cloth. Shovel tests were terminated if excavators encountered bedrock, disturbances, or sterile sub-soil. At the conclusion of each shovel test, the excavator recorded natural stratigraphic levels when possible and refilled the hole with the screened soil.

In addition, given the depth of the excavations and the possibility that intact cultural deposits might exist below the proposed depth of the shovel tests (80 cm), CAR monitored the excavation for the new storm drain infrastructure. The archaeologists maintained a standard form consisting of a daily log of activities. All activities observed were documented in this log, and supported with digital data, including photographs and location-recording Trimble GPS.

## **Laboratory Methods**

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper and placed in archival-quality page protectors. All records generated during the project were prepared in accordance with federal regulations Code of Federal Regulations (CFR) Title 36 Part 79 and THC requirements for State Held-in-Trust collections. All project related materials, including the final report, are permanently stored at the CAR curation facility in accession file number 2181.



# **Chapter 4: Results of the Field Investigations**

As stated in the previous chapter, CAR conducted a twophase investigation of the project area for the new Fire Station 24. The first phase consisted of exploratory backhoe trenching (Figure 4-1). After this phase, the archaeological investigation went dormant for an extended period of time when the project underwent redesign to incorporate a storm drain. The second phase of the investigation consisted of shovel tests and monitoring for the planned storm drain.



Figure 4-1. Aerial imagery of project area showing the locations of trenches and shovel tests.

## **Trenching**

On May 1, 2019, CAR staff conducted exploratory backhoe trenching for the COSA Fire Station No. 24. Four backhoe trenches were excavated during CAR's investigations (Figure 4-1). The goal of the exploratory backhoe excavations was to identify and document all prehistoric and/or historic archaeological sites that might be impacted during the project. No archaeological sites were encountered or recorded during the investigation. This chapter presents the results of the backhoe trenching as well as a description of each trench.

Backhoe Trench 1 (BHT 1) was excavated on the northernmost portion of the property. This backhoe trench reached a depth of 120 cm below ground surface (cmbs). Two soil zones were noted in the southeast profile of the trench (Figure 4-2). The first soil zone consisted of a dark grayish brown (10YR 4/2) sandy clay with 20 percent gravel inclusions that comprised the first 30 cm of the profile. One piece of metal was observed in the first 20 cm of the trench excavations. However, the metal was modern and

was not collected. The second soil zone observed in the backhoe trench profile was a silty black clay (10YR 2/1) and comprised the bottom 90 cm of the trench profile.

BHT 2 was excavated southeast of BHT 1 to a depth of 120 cmbs. Similar to BHT 1, two soil horizons were noted in the trench profile (Figure 4-3). The first soil horizon was 20 cm thick and consisted of dark grayish brown (10YR 4/2) sandy clay with 10 percent gravel inclusions. The second soil horizon was a silty clay that spanned the remaining depth of the backhoe trench. BHT 2 was void of cultural material.

BHT 3 was located southwest of BHT 2 and had three soil zones, as seen in the southeast profile of the trench (Figure 4-4). The first soil zone was 25 to 30 cm thick. This soil zone was a dark brown (10YR 3/3) sandy clay with 2 percent gravel inclusions. The second soil zone was a dark brown sandy clay mottled with a brownish yellow (10YR 6/6) sand and 15 percent gravel inclusions. This soil zone extended 54 cm to 94 cm from the trench bottom. The third soil zone was a black (10YR 2/1) silty clay that occupied the remainder of the trench profile. No cultural material was observed or collected in BHT 3.



Figure 4-2. Southeast profile of BHT 1.



Figure 4-3. Northwest profile of BHT 2.



Figure 4-4. Southeast profile of BHT 3.



Figure 4-5. Northwest profile of BHT 4.

BHT 4 was located northwest of BHT 3. The northwest profile of backhoe trench revealed two soil horizons (Figure 4-5). The first soil horizon was a yellow (10YR 7/6) sandy clay with 10 percent gravel inclusions that was 30 cm in thickness. The second soil horizon was a dark brown (10YR 3/3) silty clay that extended to the bottom of the backhoe trench. No cultural material was observed or collected from BHT 4.

# **Shovel Testing and Monitoring**

CAR archaeologists excavated four shovel tests within the footprint of the proposed storm drain on June 16, 2021. Unfortunately, only shovel test (ST 1) was excavated to the desired depth of 80 cmbs. This shovel test penetrated through an upper gravel lens approximately 20 cm in thickness to a

Table 4-1. Summary of Shovel Test Results

Shovel Test	Terminal Depth (cmbs)	Reason for Termination	Findings
1	80	n/a	Negative
2	15	construction fill	Negative
3	15	construction fill	Negative
4	5	construction fill	Negative

very dark brown (10YR2/2) and dark grayish brown (10YR 4/2) silt clay. No artifacts or features were found. The three remaining shovel test were terminated early because they encountered road base, gravels, and concrete. No cultural artifacts or features were observed during shovel testing. Table 4-1 summarizes the shovel test results.

A CAR archaeologist monitored the excavation for the storm drain beginning September 27, 2021 through November 5, 2021. As reported earlier, the storm line is approximately 77 m (252 ft.) in length, 2 m (6.5 ft.) wide and 3 m (9.8 ft.) in depth. In addition, three junction boxes were excavated where the line changed direction and elevation. The excavation began in the northwest corner of the project area, crossed a private road, and terminated in a drainage to Beitel Creek.

The soil profile of the initial excavation trench is shown in Figure 4-6. The top 50 cm is gravelly silty loam followed by a dark brown silty clay (50 to 150 cmbs) over a light brown clay. The terminal level is caliche over a sandy clay intermixed with limestone and chert cobbles. This soil profile was observed in the first 22 m of trenching to the second junction box (see Figure 1-4). The excavation beginning at this box shows increasing use of construction fill of concrete, asphalt, brick, wire cables, and soil to build up the landform and to stabilize the drainage area. This depth of disturbance is approximately 70 cm in depth increasing to more than 3 m in depth in the remaining portion of the storm drain excavation (Figure 4-7). No cultural artifacts or features were observed during monitoring of excavation for the storm drain.



Figure 4-6. View of north wall profile for storm drain showing intact portion of the project area.



Figure 4-7. Images showing construction fill used to build up and stabilize the landform in the northwest portion of the project area (storm drain) and the outlet to Beitel Creek.

# **Chapter 5: Summary and Recommendations**

CAR began archaeological investigation for the replacement of Firehouse 24 on May 1, 2019 through November 5, 2021. Initially this investigation consisted of four exploratory backhoe trenches. After the project was changed and the archaeological permit amended, it included four shovel tests and monitoring for the excavation of a storm drain. The goal of the investigation was to identify and document all prehistoric and/or historic archaeological sites that could be impacted during the project due to its proximity to Salado Creek, where several archaeological sites have been recorded. No cultural

artifacts, features or archaeological sites were observed during the investigations. CAR recommends no further work in the project area. The OHP and the THC agreed with these recommendations. Construction of the proposed Fire Station No. 24 should proceed as planned.

All records generated during the project were prepared in accordance with federal regulations 36 CFR Part 79 and THC requirements for State Held-in-Trust collections. All project related materials, including the final report, are permanently stored at the CAR facilities in accession file number 2181.

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Chapter 5: Summary and Recommendations

#### **References Cited:**

#### Austin, M.A.

1905 The Municipal Government of San Fernando de Bexar, 1730-1800. *The Quarterly of the Texas State Historical Association* 8 (4):277-352.

#### Bousman, C.B., B.W. Baker, and A.C. Kerr

2004 Paleoindian Archeology in Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 15-97. Texas A&M University Press, College Station.

#### City of San Antonio

2021 Fire Station #24 Replacement. Electronic document, https://sapapp1.sanantonio.gov/,accessed November 2021.

#### Cliff, M.B., M.E. Brown, D.E. Peter, and S.N. Allday

1990 Cultural Resources Survey along Salado Creek, Bexar County, Texas. Report of Investigations, No. 17. Geomarine, Plano.

#### Collins, M.B.

2004 Archeology in Central Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 101-126. Texas A&M University Press, College Station.

#### Cox, I.W.

1997 The Growth of San Antonio. In *Archaeology at the Alamodome: Investigations of a San Antonio Neighborhood in Transition. Volume 1, Historical, Architectural, and Oral History Research*, edited by A.A. Fox, M. Renner, and R.J. Hard, pp. 8-44. Archaeological Report No. 236. Center for Archaeological Research, The University of Texas at San Antonio.

#### Fisher, L.W.

1996 Saving San Antonio. Texas Tech University Press, Lubbock

#### Fox. A.A.

1975 An Archaeological Assessment of the Southern Portion of the Olmos Basin, Bexar County, Texas. Archaeological Survey Report No. 9. The Center for Archaeological Research, The University of Texas at San Antonio, San Antonio, Texas.

#### Hester, T.R.

- 1974 Archaeological Survey of Areas Proposed for Modification in the Salado Creek Watershed, Bexar County, Texas. Archaeological Survey Report, No. 3. Center for Archaeological Research, The University of Texas at San Antonio
- 2004 The Prehistory of South Texas. In *The Prehistory of Texas*, edited by T. K. Perttula, pp. 127-151. Texas A&M University Press, College Station.

#### Krieger, A.D.

2002 We Came Naked and Barefoot: The Journey of Cabeza De Vaca Across North America. Edited by M.H. Krieger. The University of Austin Press, Austin Texas

#### McGraw, A.J., and F. Valdez, Jr.

1977 A Preliminary Assessment of Archaeological Resources at Tobin Oakwell Farm, San Antonio, Texas. Archaeological Survey Report, No. 43. Center for Archaeological Research, The University of Texas at San Antonio.

#### Munoz, C.M.

2008 An Intensive Pedestrian Archaeological Survey of the Salado Creek Greenway, Wetmore Avenue to Eisenhauer Road, San Antonio, Bexar County, Texas Phase I: N.E. Loop 410 to Eisenhauer Road. Technical Report, No. 8. Center for Archaeological Research, The University of Texas at San Antonio.

2014 National Register of Historic Places Eligibility Testing of 41BX474 for the Laurens Lane Hike and Bike Connection to the Salado Creek Greenway, San Antonio, Bexar County, Texas. Archaeological Report, No. 438. Center for Archaeological Research, The University of Texas at San Antonio.

#### Munoz, C.M., R.P. Mauldin, and J.L. Thompson

2011 Archaeological Significance Testing at 41BX17/271, The Grandberg Site: A Multi-Component Site along the Salado Creek in Bexar County, Texas. Archaeological Survey Report, No. 43. Center for Archaeological Research, The University of Texas at San Antonio.

#### Natural Resources Conservation Service (NRCS)

2019 Web Soil Survey. United States Department of Agriculture. Electronic document, http://websoilsurvey.nrcs.usda.gov/, accessed August, 25 2019.

#### Norwine, J.

1995 The Changing Climate of South Texas: Patterns and Trends. In *The Changing Climate of Texas: Predictability and Implications for the Future*, edited J. Norwine, J.R. Giardino, G.R. North, and J.B. Valdes, pp. 138-155. Texas A&M University, College Station.

#### Pagoulatos, P.

2008 Middle/Late Archaic Occupations on the Southern Edge of the Edwards Plateau, Camp Bullis, Texas. *North American Archaeologist* 29(1):91-116.

#### Potter, D.R., S.L. Black and K. Jolly

1995 Archeology along the Wurzbach Parkway Module 1: Introduction, Conceptual Framework, and Contexts of Archaeological Investigations in Bexar County, South-Central Texas. Studies in Archeology 17. Texas Archeological Research Laboratory, The University of Texas at Austin.

#### Ramos, R.A.

2008 Beyond the Alamo: Forging Mexican Ethnicity in San Antonio, 1821-1861. University of North Carolina Press, Chapel Hill, NC.

#### Taylor, F.B., R.B. Hailey, and D.L. Richmond

1991 Soil Survey of Bexar County, Texas. United States Department of Agriculture, Soil Conservation Service, Washington, D.C.

#### Texas Almanac

2020 City Population History from 1850–2000. Texas State Historical Association. Electronic document, https://texasalmanac.com, accessed January 2020.

#### Texas Historical Commission (THC)

2019 Texas Archeological Sites Atlas. Electronic document, https://atlas.thc.state.tx.us/, accessed May 3, 2019.

#### Thompson, J.L.

2006 National Register of Historic Places/State Archeological Landmark Eligibility Testing of the Granberg Site (41BX17). Manuscript on file. The Center for Archaeological Research, University of Texas San Antonio, Texas.

#### Valentine, M.

2014 John H. Kampmann, Master Builder: San Antonio's German Influence in the 19th Century. Beaufort Books, New York, NY.