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## Archaeological Monitoring of South Alamo Street Improvements, Pereida Street to César Chávez Boulevard, San Antonio, Bexar County, Texas

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## Archaeological Monitoring of South Alamo Street Improvements, Pereida Street to César Chávez Boulevard, San Antonio, Bexar County, Texas

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# Archaeological Monitoring of South Alamo Street Improvements, Pereida Street to César Chávez Boulevard, San Antonio, Bexar County, Texas



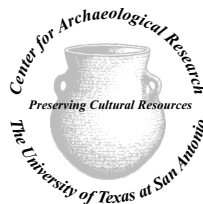
by  
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Texas Antiquities Permit No. 8563

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Archaeological Report, No. 474

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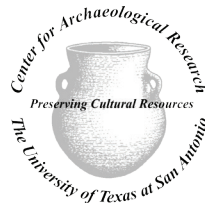
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## **Abstract:**

From October 31, 2018, through February 13, 2019, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio conducted archaeological monitoring for the South Alamo Street Improvements Project located in downtown San Antonio, Bexar County, Texas. The excavation of 20 boreholes and more than 772 meters of trench were monitored. The work was performed for the City of San Antonio (COSA) to fulfill the requirements of the COSA's Unified Development Code and the Antiquities Code of Texas. The project was conducted under Texas Antiquities Permit No. 8563. Dr. Paul Shawn Marceaux, CAR Director, served as the Principal Investigator, and Sarah Wigley served as the Project Archaeologist.

The project area is located on COSA property along South Alamo Street between César Chávez Boulevard and Pereida Street in central San Antonio. The monitoring consisted of trenching for the installation of an electrical conduit and the excavation of boreholes for new light poles located on either side of South Alamo Street between Turner Street and Pereida Street. The project area runs directly through the two national Historic Districts, the Lavaca Neighborhood Historic District and the South Alamo Street-South St. Mary's Street Historic District, and it is included in the two local Historic Districts (the Lavaca Neighborhood and King William Historic District). These Historic Districts are known to contain significant historic sites, including the Acequia Madre de Valero (41BX8) and the Concepción Acequia (41BX1887; COSA Office of Historic Preservation 2019a).

During the monitoring, part of an intact wall of the Acequia Madre de Valero (41BX8) was uncovered near the intersection of Beauregard Street on the west side of South Alamo Street, although documentation of the feature was limited to the extent of the utility trench. In addition to the *acequia* wall section, five other architectural features, some potentially Spanish Colonial in nature, were documented, and four new sites designated 41BX2286, 41BX2287, 41BX2288, and 41BX2289 were recorded. A small number of temporally diagnostic historic artifacts were collected during the course of the project.

The CAR recommends that the section of 41BX8 (Acequia Madre de Valero) documented during the course of this project is eligible for inclusion to the National Register of Historical Places (NRHP) and designation as a State Antiquities Landmark (SAL), and all impacts should be avoided. Site 41BX8 has previously been determined to be eligible for inclusion on the NRHP, and it is designated as a Historic American Engineering Record and a Recorded Texas Historic Landmark (THC 2019). The portion of the site that was encountered during monitoring remains intact. It was covered with a protective layer of sand before backfilling. Site 41BX2286, a portion of a historic limestone and mortar wall, should also be avoided until its significance can be more clearly defined. Currently, the CAR cannot determine this site's potential eligibility for inclusion to the NRHP or listing as a SAL due to the limited nature of the investigation. The portion of the site documented during monitoring remains intact. It was covered with a protective layer of sand before backfilling. The CAR recommends that sites 41BX2287, 41BX2288, and 41BX2289 are not significant. The portions of these sites documented during monitoring remain intact and were covered with a protective layer of sand before backfilling. These three sites are not recommended as eligible for inclusion to the NRHP or for designation as SAL.

All artifacts collected during the course of this project are curated at the CAR. All forms, documents, and photographs compiled during the project and a copy of this report are archived in Project Accession file 2180 at the CAR.

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## Chapter 1: Introduction

From October 31, 2018, to February 13, 2019, the Center for Archaeological Research (CAR) conducted archaeological monitoring for the South Alamo Street Improvements Project in response to a request from the City of San Antonio (COSA). The activities recommended for monitoring by the COSA Office of Historic Preservation (OHP) were the excavation of trenches for the installation of an electrical conduit and the digging of boreholes for the installation of new light poles. The excavation of 20 boreholes and more than 772 meters (m) of trench were monitored.

The work was conducted under the requirements of the COSA Unified Development Code and the Antiquities Code of Texas under Texas Antiquities Permit No. 8563. Dr. Paul Shawn Marceaux, CAR Director, served as the Principal Investigator, and Sarah Wigley served as the Project Archaeologist. The project area is located in central San Antonio and consists of an 839-m section of South (S.) Alamo Street bordered to the south by Pereida Street and to the north by César Chávez Boulevard (Figure 1-1). The Area of Potential Effect (APE) was defined by the 467-m portion of the project area in which trenches for electrical conduit were excavated and holes for new light poles were bored. The APE extended from Pereida Street to Turner Street on the west side of S. Alamo Street and from Pereida Street to north of Cedar Street on the east side.

The project area runs through two national historic districts and two local historic districts. The Lavaca Neighborhood Historic District, recognized both locally and nationally, extends north of Presa Street into the northern portion of the project area. The South Alamo Street-South St. Mary's Historic District, a national Historic District, encompasses the southern portion of the project area south of St. Mary's Street. The local King William Historic District also encompasses this part of the APE. These historic districts include a number of cultural resources that could potentially be impacted by construction activities. One such cultural resource is a portion of San Antonio's *acequia* system, which were originally used for irrigation and to supply water for the

Spanish missions. The *Acequia Madre de Valero* (41BX8) is depicted on the 1892 and 1896 Sanborn Fire Insurance Maps (Sanborn Map Company [Sanborn] 1892, 1896) crossing S. Alamo Street just south of the modern intersection with César Chávez Boulevard and south of Turner Street. The *acequia* is depicted on Rullman's *Historic Map of Old San Antonio de Bexar in 1837* (1912) running closely to the west of S. Alamo Street from modern St. Mary's Street to Pereida Street. The intersection of the *Acequia Madre de Valero* and the *Concepción Acequia* is depicted (Cox 1995; Rullman 1912) as occurring near the intersection of S. Alamo Street and St. Mary's Street.

During the course of monitoring, the CAR documented an intact wall of the *Acequia Madre de Valero* (41BX8) south of the intersection of S. Alamo Street and Beauregard Street. Site 41BX8 has previously been determined to be eligible for inclusion on the National Register of Historic Places (NRHP), and it is designated as a Historic American Engineering Record and a Recorded Texas Landmark (THC 2019). The *acequia* was not definitively encountered again during the course of monitoring, likely due to the location and depth of the trench excavations. In addition to the *acequia*, four previously undocumented historic sites were recorded, and all were architectural in nature. Throughout the project, only temporally diagnostic artifacts were collected. The majority of these were found in association with the *acequia*, and all were historic in nature. Collected artifacts included complete glass medicine bottles and historic ceramics.

This report includes five chapters. Following this introduction, the second chapter provides a brief environmental and culture history background on the project area that is followed by a review of the previous archaeology conducted within 250 m of the project area. The third chapter discusses the lab and field methods employed by the CAR during the completion of this project. The fourth chapter provides a discussion of the results of archaeological monitoring, and the fifth chapter provides a summary as well as the CAR's recommendations.



Figure 1-1. Project area and APE on an Esri topographic map.

## Chapter 2: Project Setting

This chapter provides a discussion of the natural environment and culture history of the project area. The chapter concludes with a brief discussion of previous archaeology in the area.

### Environment

The project area is located in central San Antonio in Bexar County, Texas. The project area is approximately 0.5 km east of the San Antonio River and is at 252 m above sea level. The project area runs along either side of the section of S. Alamo Street located south of César Chávez Boulevard and north of Pereida Street. The modern area is heavily developed. Historically, this development was primarily residential in nature, but currently, there is significant commercial development.

The soils within the project area are classified as Branyon clays. These soils have one to three percent slopes, are moderately well-drained, and reach depths of more than 2 meters. They are found on stream terraces and are described as prime farmland (National Resources Conservation Service [NRCS] 2019). The project area is located within the Southern Backland Prairie ecoregion. Natural vegetation in this ecoregion includes tallgrass species such as big bluestem, Indiangrass, switchgrass, eastern gramagrass, little bluestem, abundant midgrasses, a wide variety of forbs, cedar elm, eastern red cedar, and honey locust. As is the case in the project area, most of this natural vegetation has been lost, first due to agricultural activities, then to urban development, and less than one percent of the native prairie environment remains (NRCS 2019).

San Antonio is located where the southernmost Great Plains meets the Gulf Coast, demarcated by the Balcones Escarpment. The city is also located near a significant climate boundary, partitioning a humid-subtropical from an arid zone (Petersen 2001), which divides Central Texas. The city's location near these significant geological and climactic boundaries results in a varied resource base. The area contains a number of reliable freshwater sources, including the San Antonio River, freshwater artesian springs, and the Edwards Aquifer. The growing season lasts 270 days (Petersen 2001). The average annual rainfall is approximately 76.2 cm (30 inches) and peaks in the spring and fall, but it is highly variable both seasonally and annually (Petersen 2001).

### Culture History

Though San Antonio's culture history includes a significant prehistoric component (see Collins 2004 for a review of the

prehistoric culture history of the region), this background will focus on the Historic period as no prehistoric materials were documented during the course of this project. In Central Texas, the historic period began with the first documented appearance of Europeans as early as 1528. Although early interactions between Europeans and indigenous populations in the area were infrequent, the lifeways of the indigenous populations were still impacted by loss of population due to disease and the arrival of Native American groups from other regions of North America who were fleeing European incursions (Foster 1998; Kenmotsu and Arnn 2012).

In 1519, following the Alonso Álvarez de Pineda voyage, Spain laid claim to the area that would become Texas, but it made little attempt to establish settlement (Chipman and Joseph 2010). Concerns about French colonization in Louisiana in the early 1700s and encroachment into Texas in 1685 by Robert Cavalier, Sieur de la Salle's expedition led the Spanish government to strengthen its hold on Texas, which previously was sparsely populated by Europeans (Cruz 1988). A Spanish expedition intended to initiate contact with the indigenous population and prevent them from establishing trade relationships with the French reached the San Pedro Springs in present-day San Antonio on April, 13, 1709 (Cruz 1988).

The primary institutions Spain employed to secure its colonies were the missions, intended to assimilate the indigenous population through religious conversion, the presidio, which played a military defensive role, and, ultimately, the establishment of chartered town settlements (Cox 1997; de la Teja 2000). The mission and the presidio were intended to be transitory institutions, whose land and possessions would ultimately be distributed among successfully converted indigenous families (de la Teja 2000). The first mission in the area was the Mission San Antonio de Valero (Mission Valero), which was established in the spring of 1718 (Cox 1997). The mission was moved twice before settling at its final location (Anderson et al. 2017; Cox 1997; Fox 1976; Nichols 2015a, 2015b; Zapata 2017). The Presidio de Bejar was established five days after the Mission Valero (Fox 1977). Four more missions were founded in the area between 1720 and 1731 (de la Teja 2000).

The project area is located in an area that served as the *labor*, or farmland, belonging to the Mission Valero during the colonial period. *Labores* served as organizational blocks for San Antonio de Bexar's farmland, and each labor contained a number of *suertes*, a subdivisional organizational section

assigned by the drawing of lots (de la Teja 1995). In 1793, the Mission de Valero was secularized, and its farmlands were distributed. The farmland containing the project area was distributed to the 14 family heads and unmarried adults of the mission (Cox 1997). This area became known as the Labor de los Mochos (Cox 1997), and “mochos” may be an archaic, derogatory term for a common soldier (Burkholder 1976).

A failed uprising for independence from Spain in 1812 depleted San Antonio’s population and negatively affected the city’s development for decades (Cox 1997). Mexico gained independence from Spain in 1821, and Texas became part of the state of Coahuila. Texas revolted against Mexico in 1835. Mexican General Cos fortified the old Mission Valero against the Texans, including diverting a branch of its *acequia* to flow outside the mission compound (Cox 1997). A number of sites downtown include features associated with this military activity, including 41BX1752 (Hanson 2016), and 41BX2170 (Kemp et al. 2019). The Texans defeated General Cos, but they were defeated themselves by Santa Anna after 13-day siege in 1836 at what became known as the Battle of the Alamo (Cox 1997). However, in the fall of 1836, Santa Anna was ultimately defeated, and Texas became a Republic (Cox 1997).

During the century that followed Texas’s break with Mexico, San Antonio saw considerable growth despite the impact of numerous conflicts. In December of 1837, San Antonio was incorporated as one of the early acts of the newly established Republic of Texas. After a turbulent period in which Texas saw conflict with both Mexico, which did not accept the new Republic’s independence, and local Native American groups, Texas became part of the United States in 1846. In the 1840s, a number of French and German immigrants began to settle in San Antonio and the surrounding area. By the 1850s recent European settlers outnumbered the Mexican and Anglo populations in the city (Cox 1997). Texas seceded from the United States and joined the Confederacy in 1861 and primarily served a supply role during the Civil War. Five years later, Texas surrendered to the Union and rejoined the United States (Wooster 2018). The arrival of the railroad to the city in 1877 resulted in significant growth in San Antonio (Cox 1997). The late 1800s saw infrastructure and economic development, including water, electric, and gas utilities (Heusinger 1951). By 1924 San Antonio’s expansion led to the city being considered “The Metropolis of the Southwest” (Heusinger 1951:65).

### The *Acequia* System

San Antonio is one of the few large cities of Spanish origin that still contains traces of its original *acequia* system, spanning more than 80 km. Many of its streets, including the portion

of S. Alamo Street monitored during this project, still follow the path of the *acequias* (Cox 2005). The *acequia* system originally served as a water and irrigation source. Careful construction in order to ensure a precise grade was necessary to ensure the system flowed properly along its length.

Mission Valero was served by the *Acequia Madre de Valero* (41BX8). Remnants of this *acequia* have been documented in a number of areas downtown (Fox 1985; Nichols et al. 2017 Zapata 2017; Zapata et al. 2019). Construction of the *acequia* began in 1719 and was considered vital enough to the success of the mission that work on the stone church was delayed in order to ensure its completion (Cox 2005). The original *acequia* extended approximately 5.6 km and later additions to the channel brought this total to 16 km (Cox 2005:22). One of these additions to the *Acequia Madre de Valero* intersected the *Concepción Acequia*, near the modern intersection of S. Alamo Street and St. Mary’s Street within the APE. An intact portion of the *Concepción*, or *Pajalache*, *Acequia* (41BX1887) has been documented near Roosevelt Park (Hanson 2011). Initially the *Acequia Madre de Valero* crossed over the wide *Concepción Acequia* by means of a *canoas*, or hollow log, that was later replaced, likely during the mid-1800s, with a stone aqueduct (Cox 2005:30). Archival research suggests this aqueduct may be present beneath the street 30.5 m from the center line of S. Alamo Street, along the eastern edge of St. Mary’s Street (Cox 1995:5). An ethnohistorical study of the *acequia* systems in the southwestern United States notes that they were fundamentally community systems, requiring community activity to construct, keep clean, maintain, and apportion water for community use (Rivera 1998). Rules regarding how this was to be done were incorporated into the early laws governing all Spanish colonial communities. *Acequias* throughout the Spanish colonies served as place markers and local political subdivisions (Rivera 1998).

As the city grew, the *acequia* system became befouled with waste, contributing to multiple cholera epidemics in the 1800s (Cox 2005). The city attempted to address the issue by organizing clean-ups and imposing fines for disposing of waste in the *acequia*, or ditch as it was called at this point in time, but these efforts were ultimately unsuccessful (Cox 2005). The *acequia* system was damaged by flooding, and damage to the *Acequia Madre de Valero* from a flood in 1865 was recorded as totaling \$354 (Cox 2005:54). In the 1870s, the City attempted to expand the *acequia* system but encountered issues in engineering the ditches properly. The *Acequia Madre de Valero* was first recommended to be condemned in 1883 (Cox 2005:62). However, although a modern piped system had mostly replaced the *acequia* as a water source by this time, no alternative sewer or drainage system was in place. The ditch was closed in 1901, but it reopened in 1903 due to continuing drainage issues.

In 1905, the ditch was ordered to be filled with street sweepings and closed for good (Cox 2005:69). Filling in of the *acequia* is apparent on Sanborn Fire Insurance maps from the period. An 1896 Sanborn map showing S. Alamo Street south of modern César Chávez Boulevard and north of modern S. St. Mary's Street depicts a portion of the Alamo Ditch, as 41BX8 is described in later documents, within the APE. By 1904, the ditch is no longer recorded on the Sanborn map of the area (Figure 2-1; Sanborn 1904). While this part of the project area is outside the APE, the cultural material recovered from Feature 1 is consistent with the closure of the ditch during this time period south of Turner Street as well.

In 2016, a branch of the *acequia* was encountered north of the project area near Martínez Street, near the area depicted on the Sanborn maps (Figure 2-1; Galindo 2017). This branch was not stone-lined, in contrast with the portion of the *acequia* documented during the course of this project.

### Neighborhood History

This section discusses the local development of the project area and the surrounding neighborhoods. Burkholder (1976) conducted a detailed archival study of the individual properties within the local historic districts, including the project area, and this discussion primarily follows this work.

As shown on the Rullman (1912) map depicting San Antonio as it was in 1837 (Figure 2-2), the land on the west side of S. Alamo Street south of St. Mary's Street, where monitoring took place, was owned mostly by Vicente Amador with a small tract in the north owned by Pedro Huizar. Vicente Amador was responsible for assigning land grants after the Mission Valero was secularized, and Pedro Huizar served as the surveyor (Burkholder 1976; de la Teja 1995). Vicente Amador later served as the *alcalde* (mayor) of La Villita, then referred to as the Pueblo de Valero, which was a distinct



Figure 2-1. The 1896 Sanborn map shows the acequia as still present west of the project area, and by 1904, the acequia has disappeared from the map. Acequia highlighted in blue.

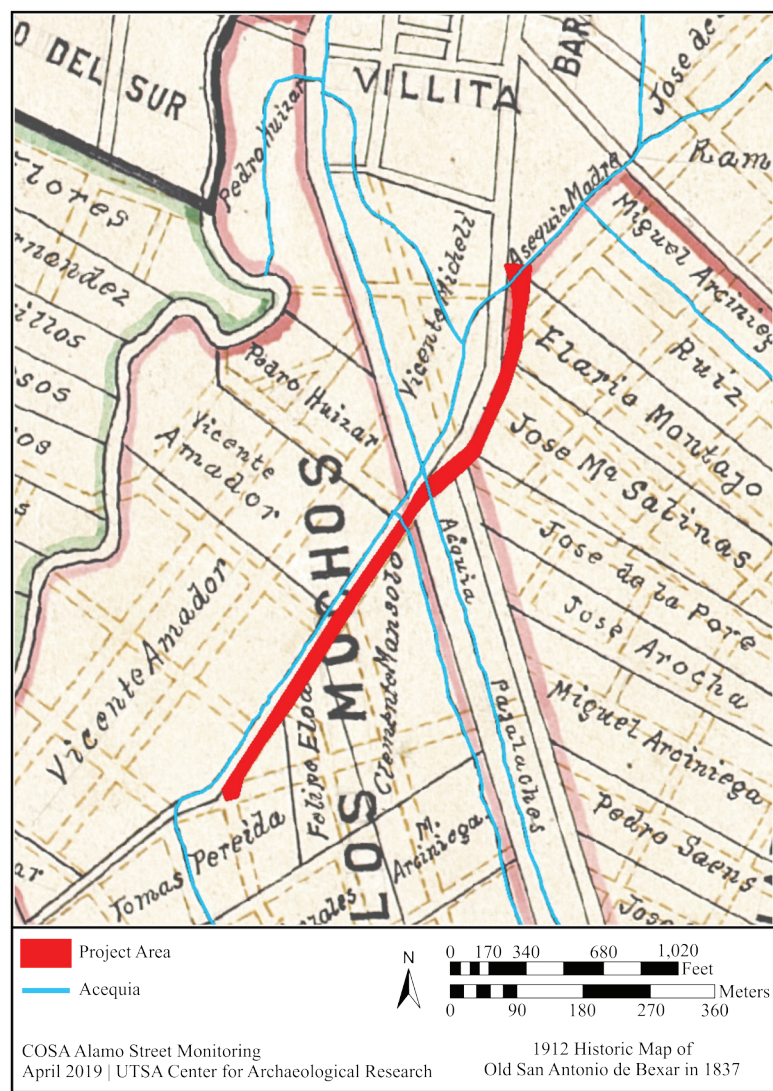


Figure 2-2. The project area as shown on the Rullman map (1912).  
Project area in red, and acequia highlighted in blue.

political entity from 1795-1809 (COSAlamo Street Monitoring 2019b). The Rullman Map depicts the land on the east side of the street south of St. Mary's Street as owned by Clemente Mansolo in the north, Felipe Eloa directly south, and Tomas Pereida in the far southern portion of the project area (Rullman 1912). Clemente Mansolo likely inherited the land from Anastacio Mansolo, who granted the land in recognition of his father's service in the Spanish army (Burkholder 1976). Felipe Eloa was an emancipated African-American who bought the land from descendants of the original grantees, Bentura Hinajosa and Domingo Losoya. Bentura Hinajosa descended from Native Americans from the Mission de Valero who were granted land in the area, and Domingo Losoya, who was descended from Spanish refugees who took shelter at the Alamo, received his grant in 1806 (Burkholder 1976). Tomas Pereida also purchased his property from Bentura Hinajosa. Pereida was one of the earliest developers of the area (Burkholder 1976).

The land within the project area began to be platted and developed for home building in the 1860s (Burkholder 1976; COSAlamo Street Monitoring 2019a). Thomas J. Devine and Newton Mitchell were primarily responsible for development of the west side of S. Alamo Street, while Ernst Wehrhahn, Adalina Dane, Hardin B. Adams, and E.D.L. Wickes were responsible for the development on the east side (Burkholder 1976:11). In 1858, Wehrhahn purchased the Mansolo property, which had been purchased by Eleanor Elliot from Clemente Mansolo in 1847, and he began selling lots for development in 1865 (Burkholder 1976:11). Adalina Dane began developing the Felipe Eloa property, selling the first lots for development in 1881 (Burkholder 1976:13). Adam and Wickes purchased Tomas Pereida's property in 1871 (Burkholder 1976:12).

S. Alamo Street is one of the older streets in the vicinity of the project area, and it was previously referred to as Labor

Road because it passed through the old mission *labores* (Burkholder 1976). It became known as Mill Street after the construction of Guenther Mills in 1859, and the name was changed to S. Alamo Street in 1891 (Burkholder 1976:17). The land was primarily used for farming until the mid-to-late 1800s (Katz 1978), when houses began to be constructed along the street. It is apparent from the Rullman map that the modern configuration of the streets is little changed from historic layout (Rullman 1912). An undated photograph of the Eckenroth/Gaul house at 915 S. Alamo Street in the northern portion of the project area shows the *acequia* running in front of the house, crossed by a bridge (Burkholder 1976).

Early development within the project area is primarily associated with residences constructed by German immigrants (Burkholder 1976), and the King William area at one point was referred to by local citizens as “Sauerkraut Bend” (COSA-OHP 2019a). The number of German immigrants to San Antonio increased significantly in the 1840s through the late 1850s (Jordan 1966). German immigrants to the region were a heterogeneous group from a wide variety of backgrounds, attracted to the concept of leaving Germany for economic and political reasons (Gawenda 1986; Jordan 1966). During the Civil War German immigrants were known to be a heavily pro-Union group (Brookins 2018), although not uniformly so, and a number of German immigrants also served in the Confederate Army (Jordan 1966). This created a divide with pro-secessionist San Antonians and led to a number of lynchings, including the Nueces Massacre. Some members of San Antonio’s German immigrant population fled the city either to the north or to Mexico during the Civil War due to fears for their safety (Brookins 2018). However, close ties with the U.S. Army after the war helped many German immigrant families establish themselves more securely in San Antonio during Reconstruction (Brookins 2018). Nearby sites from this period include the Mayer House (41BX326; Ivey 1978), 41BX303, and 41BX304 (Katz 1978). Characteristic features of sites in the area dating to this time period include limestone foundations, cisterns, trash pits, privy features, and unlined irrigation ditches (Ivey 1978; Katz 1978). Characteristic artifact assemblages include metal, glass, and white earthenware (Mauldin and Kemp 2016).

The area remained primarily residential until the late 1960s, when some of the properties were purchased by corporations for development (Burkholder 1976). The majority of the properties in the neighborhood now serve commercial purposes, including restaurants, a bed and breakfast, and law offices.

## Previous Archaeology

Twenty-one sites are recorded within 250 m of the project area. All of these sites are located north of the APE (Figure

2-3; Table 2-1). All of the sites are historic in nature and include house foundations, military fortifications, historic middens, and structures. All but two (41BX236 and 41BX326) are associated with Hemisfair Park to the north, and most are associated with historic residential structures. The recorded site distribution is likely due to the numerous archaeological projects that have taken place in Hemisfair Park, in contrast with the area surrounding the APE where no previous archaeological investigations have been recorded.

The CAR conducted a survey of the recorded archaeological, architectural, and historic sites in 1979 that included the project area. This survey consisted of a review of sites recorded within the area rather than new archaeological work. However, the review is included in this discussion because it includes historic homes that were not investigated archaeologically. With the exception of the *acequias*, no sites were recorded within the project area (Fox 1979). The survey consisted primarily of a review of available literature of the area, which included archaeological work at 41BX303 that includes all of New City Block 901, 41BX326 (Mayer House), and 41BX329 (Dolores Aldrete House). Site 41BX303 was investigated by the CAR in 1976 due to proposed construction of a hotel on the property. Seven features, including irrigation ditches, a midden, and a privy, were documented (Katz 1978). Site 41BX326 was investigated by the CAR in 1978 due to planned renovations by the San Antonio Conservation Society. The CAR documented the house foundation as well as a number of historic artifacts (Ivey 1978). Site 41BX329, the Dolores Aldrete House, was investigated by CAR in 1978. Colonial and early historic artifacts were recovered (Fox et al. 1978).

Site 41BX236 is a historic home recorded by the San Antonio Conservation Society in 1974 (THC 2019). There is no associated report, and it appears that no archaeology was conducted there. It is described as a mid-nineteenth-century house that has been impacted by parking lot construction. The home is not included in CAR’s review of archaeological and historic resources (Fox 1979), but a review of recent aerial imagery suggests that it is still standing.

Sites 41BX577 (Schultz House), 41BX578 (Halff House), 41BX584 (Beethoven Hall), 41BX585 (Acosta House), 41BX586 (Kampmann/Halff House), 41BX587 (Eager House), 41BX588 (Hermann Carriage House), 41BX589 (Smith House), 41BX590 (Solis House), 41BX591 (Pereida House), 41BX592 (Koehler House), and 41BX593 (Espinosa House) are historic homes that were recorded during the course of a literature and archival survey of Hemisfair Park (Cox and Fox 1983). A “windshield” field survey of the area was also conducted at that time (Cox and Fox 1983; THC 2019). Sites 41BX578, 41BX586, 41BX589, 41BX591,



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Figure 2-3. Archaeological sites within 250 m of the project area.



Table 2-1. Archaeological Sites within 250 m of the Project Area

Site	Name	Historic Time Period	Site Type
41BX236	101 King William St.	mid-to-late 19th century	structure
41BX303		mid-to-late 19th century	structures, including latrines, middens, cisterns, and unlined irrigation ditches
41BX326	Mayer House	early 20th century	structure, late 19th to early 20th century artifacts
41BX329	Dolores Aldrete House	19th century	two stone, brick, and jacal structures
41BX577	Schultz House	mid-19th century	structure (reconstructed)
41BX578	Halff House	1893	structure (renovated)
41BX584	Beethoven Hall	mid-19th century	structure
41BX585	Acosta House	ca. 1892	structure (renovated)
41BX586	Kampmann/Halff House	1877	structure (renovated)
41BX587	Eager House	1869	structure (renovated)
41BX588	Hermann Carriage House	1917	structure (renovated, relocated)
41BX589	Smith House	ca. 1857	structure (renovated), glass, and metal
41BX590	Solis House	ca. 1855	structure (relocated)
41BX591	Pereida House	ca. 1883	structure (renovated), capped cistern, metal, brick, and faunal material
41BX592	Koehler House	ca. 1877	structures (renovated), ceramics, glass, metal, and bone
41BX593	Espinosa House	ca. 1877	structures (renovated), ceramics, glass, metal, and bone
41BX677	La Villita	1830-1850	military fortification; ceramics, military items, and faunal remains
41BX982	Heubaum House	1859-1864	architectural feature (limestone foundation, house razed)
41BX2068		mid-to-late 19th century	trash pit, including ceramics, glass, metal, and bone
41BX2123	Zizik House	ca. 1886	architectural feature (house foundation)
41BX2124	Gimbel House	ca. 1856	architectural feature (house foundation)

41BX592, and 41BX593 were revisited during a recent CAR project in Hemisfair Park (Zapata et al. 2019). Site 41BX577 is a reconstructed historic structure (Cox and Fox 1983; THC 2019). Sites 41BX578, 41BX585, 41BX586, 41BX587, 41BX589, 41BX591, 41BX592, and 41BX593 have been renovated (Cox and Fox 1983; THC 2019). Sites 41BX588 and 41BX590 have been relocated from their original locations (Cox and Fox 1983; THC 2019).

Site 41BX677 (La Villita) is the site of Mexican siege fortification related to the second battle of the Alamo in 1836. It was investigated by CAR, with the assistance of the Southern Texas Archaeological association and the Texas Archaeological Society, in 1985 due to hotel construction in the area. An L-shaped ditch feature containing a significant amount of fill, including cultural material, such as ceramics, military items and faunal remains, was documented there (Labadie et al. 1986; THC 2019).

Site 41BX982, the Heubaum House, is a historic home foundation recorded by CAR in 1992 during archaeological monitoring of utilities in Hemisfair Park. The foundation was constructed of limestone (Cox 1992).

Site 41BX2068 was documented at Hemisfair Park by Prewitt and Associates in 2015 (Field et al. 2015). The site is a midden deposit dating to the latter half of the nineteenth century, likely associated with the Volpert family or their tenants (Field et al. 2015, THC 2019).

Sites 41BX2123 and 41BX2124 were recorded by CAR at Hemisfair Park (Zapata et al. 2019). Site 41BX2123 (Zizik House) is a house foundation, constructed around 1886, that was exposed during utility trenching (Zapata et al. 2019). Site 41BX2124 (Gimbel House) is a house foundation, constructed around 1856, that was exposed during utility trenching (Zapata et al. 2019).

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## Chapter 3: Field and Laboratory Methods

This chapter discusses the field and laboratory methods employed by the CAR during the completion of this project. This methodology was defined in a Scope of Work (SOW) created by the CAR prior to commencement of the project and approved by the COSA-OHP and the THC.

### Pre-Field Methods

Prior to the beginning of fieldwork, the CAR conducted a limited archival review in order to identify and locate potentially significant historical features that could be impacted by construction activities. This review identified the Acequia Madre de Valero (41BX8) as the primary feature of concern within the project area.

The earliest Sanborn Fire Insurance maps of the APE date to 1896 (Sanborn 1896). The 1896 and 1904 Sanborn maps of the area show a discrepancy in the methods of home construction. Structures shown as limestone (blue on map) in 1896 are shown in 1904 as being of adobe construction (yellow

on map; Figure 3-1). This is potentially due to confusion between limestone and adobe construction. A number of the historic homes still extant within the project area are at least partially of limestone construction, although many of them show evidence of numerous additions and modifications over time (Figure 3-2). This suggests that early structures in the area are likely constructed of limestone or wood, but due to the discrepancy, late-1900s adobe structures are a possibility. Therefore any architectural features identified could be associated with wood, limestone, or adobe construction, as all are indicated in early maps of the area. It is also possible that architectural features are associated with the extensive building modification apparent in the area.

### Field Methods

While construction activities occurred throughout the project area, it was determined in consultation with COSA-OHP that monitoring was only required for the trench excavation for the electrical conduit and boring of holes for light poles. The

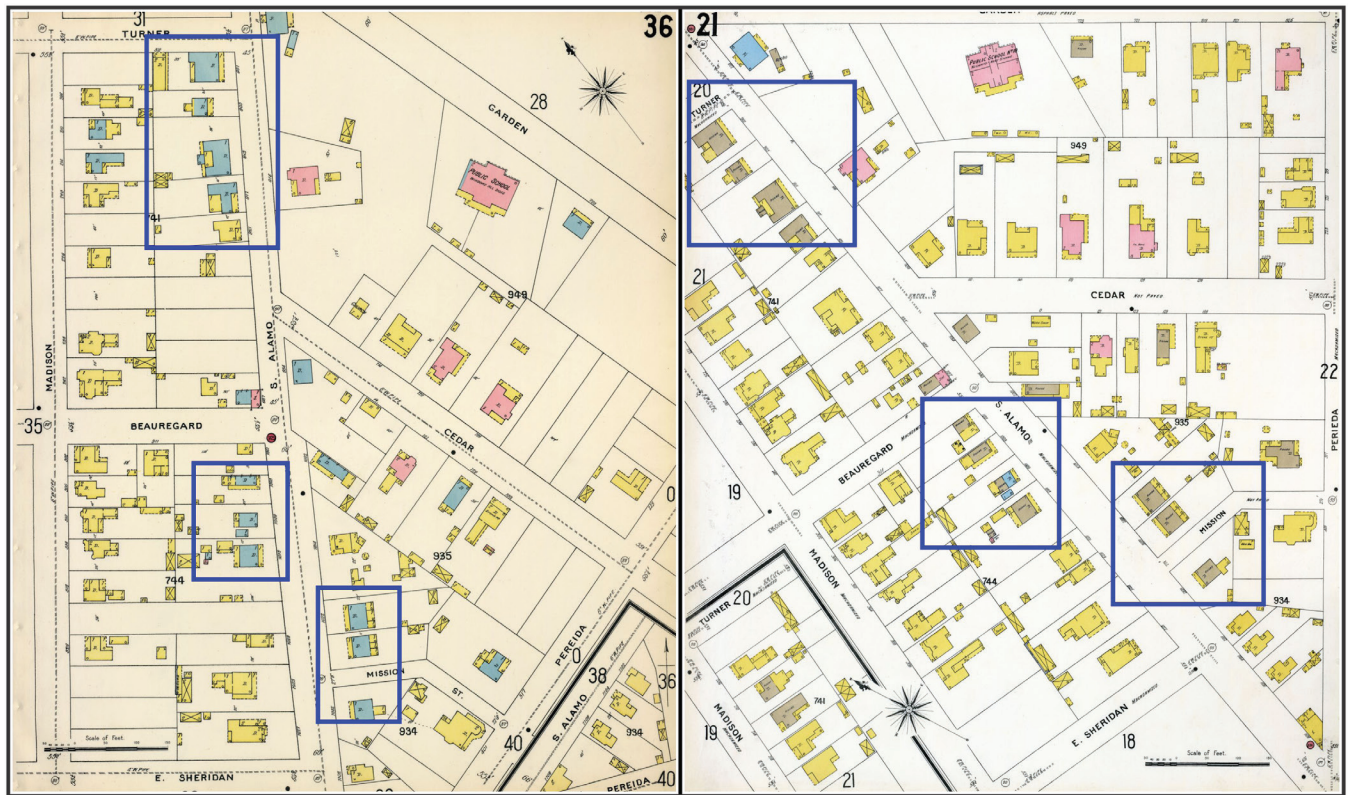


Figure 3-1. Discrepancies between depictions of construction methods, blue for limestone and yellow for adobe, on the 1896 (left) and 1904 (right) Sanborn maps. Structures under discussion highlighted in blue boxes. Maps courtesy of Dolph Briscoe Center for American History, University of Texas at Austin.



Figure 3-2. 1009 S. Alamo Street. Yellow delineates separate construction episodes. Section *b* appears to be original limestone construction; *a*, *c*, and *d* are likely later additions.

project area was defined as both sides of S. Alamo Street between César Chávez Boulevard and Pereida Street, while the APE consisted of the portion of the project in which trenches for the electrical conduit and boring for light poles took place. Trenches ran on either side of S. Alamo Street, from Pereida to Turner Street on the west side and from Pereida Street to north of Cedar Street on the east. Trenches extended to a depth of 50-85 cm below the surface (cmbs) and were approximately 45-80 cm wide. In total, 20 boreholes were excavated within the APE. Boreholes extended to a depth of 150 cm and were approximately 45 cm in diameter.

Archaeological monitors maintained a daily log of activities, including standard forms for documenting details of the trench and borehole excavations. This documentation supported by digital data, including Trimble GPS observations and photographs, where appropriate. Monitors maintained a photographic log, and the photographic data were downloaded and archived at the CAR laboratory.

Features of archaeological interest were defined as predating 1865, such as a Spanish Colonial-era wall or midden. If archaeological features that predated 1865 were found during

monitoring, the COSA City Archaeologist in the Office of Historic Preservation was notified immediately, and work was halted in that area. The feature was investigated to determine its nature and cultural material, and work proceeded as determined through consultation between the CAR and the City Archaeologist. If archaeological features that post-dated 1865 were identified, work was halted, and the feature was investigated to determine its nature and the presence of cultural material. The feature was then photographed, its location was recorded with a GPS unit, and the feature was documented before construction was allowed to proceed. The limited perspective provided by the narrow boreholes, and the narrow, shallow trenches in some cases made it difficult for monitors to accurately identify and characterize features.

The CAR documented archaeological features using feature forms, measured drawings, and photographs. Diagnostic artifacts were collected. Collected material was transported to the CAR laboratory for processing, analysis, and curation pursuant to requirements in the permit.

For the purposes of this project, a historical archaeological site is defined as the presence of features, such as walls or

other architectural elements, and civil infrastructure, such as street car rail, wells, or middens. CAR created site boundaries based on the relationship of these features to their location on georeferenced Sanborn Fire Insurance or other historical maps. If these features could not be referenced on historical maps, site boundaries were determined by their relationship to each other within a 15-m radius. For individual features, a site boundary with a 5-m buffer was used in order to provide additional protection for features. Following THC guidelines, each site location was recorded using either a GPS or a TDS unit and plotted on topographic and aerial maps. An archaeological site form was completed for each new site and submitted to the THC. If new information was documented regarding a previously recorded site, an update form was submitted to the THC.

### **Laboratory Methods**

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. Field forms were printed on acid-free paper and completed with pencil. Artifacts collected during the monitoring were brought

to the CAR laboratory, washed, air-dried, and stored in 4-mil zip-lock, archival-quality bags. Any materials needing extra support, such as organic or metal artifacts, were double-bagged, and acid-free labels were placed in all artifact bags. Labels were generated using a laser printer, and each label contains provenience information and a corresponding lot number. Artifacts were separated by class and stored in acid-free boxes labeled with standard tags.

Analysis of artifacts was primarily targeted at identifying temporally diagnostic characteristics such as unique markings, designs, or methods of manufacture. A variety of sources were consulted during the course of this analysis, including relevant archaeological literature and electronic sources.

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper and labeled with archival-quality page protectors to prevent accidental smearing due to moisture. Finally, following completion of the monitoring, all recovered artifacts and project-related materials, including the final report, were permanently stored at the CAR curation facility in Project Accession file 2180.

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## Chapter 4: Results of Monitoring

CAR staff conducted archaeological monitoring of trenching for the installation of an electrical conduit and the boring of holes for new light posts within the APE from October 31, 2018, to February 13, 2019. The APE is located in downtown San Antonio along either side of S. Alamo Street, between Pereida Street and Turner Street. In total, six features were recorded during the course of monitoring. This chapter discusses these results in detail.

### Electrical Conduit Trenches

Trenching for the electrical conduit began on October 31, 2018. Primary excavation consisted of two north-south trenches extending along either side of S. Alamo Street. The trench along the eastern side of the street extended 350 meters. The trench along the western side of the street extended 422 m (Figure 4-1). Trenches extended to a depth of 50-85 cmbs and were approximately 45-80 cm wide. Five architectural features (Features 2-6) were recorded in these trenches. As a section of conduit trench was completed, sleeve for conduit was laid down, and sand was used to backfill the trench. Flowable fill was placed on top of the sand, and the area was asphalted. This process allowed the construction of long sections of trench to be excavated with minimal disruption to traffic in the busy area.

Five shorter lateral trenches, oriented east-west, were excavated in order to locate and connect existing electrical lines. These lateral trenches were located just south of the S. Alamo Street and Beauregard Street intersection on the west side of the street, at the S. Alamo Street and Cedar Street intersection on the west side of the street, and near the S. Alamo Street and Sheridan Street intersection on the west side of the street. In addition, one trench was excavated all the way across S. Alamo Street at the Beauregard Street intersection. One feature, identified as 41BX8, was documented within a lateral trench. All other documented features were recorded within the two primary trenches.

Initial monitoring on October 31 consisted of a small trench across the sidewalk on the west side of the street. The trench ran perpendicular to the street south of the intersection of S. Alamo Street and Beauregard Street. It was excavated in order to locate existing conduit and provide a connection to the new conduit. One wall of the Acequia Madre de Valero (41BX8), designated Feature 1, was identified in this trench.

Monitoring also took place on November 16, 2018, near S. Alamo Street and Cedar Street and on November 21, 2018,

near S. Alamo Street and Sheridan Street. These lateral trenches were excavated in order to locate existing electrical lines.

Trenching for the new electrical conduit began on January 8, 2019, on the east side of S. Alamo Street on the southern edge of the APE, at the intersection of S. Alamo Street and Pereida Street. This trench ended north of the Cedar Street intersection near 928 S. Alamo Street on January 23, 2019. Trenching on the west side of the street began on January 28, 2019, at intersection of S. Alamo Street and Pereida Street, and it continued north to the intersection of S. Alamo Street and Turner Street. Trenching was completed on February 13, 2019.

Trenches throughout the project area showed a thick zone of previous road surfaces layered on top of one another and road base, extending to nearly 50 cm in some areas. This road base was sandy, very pale brown (10YR 7/4), and it contained large limestone cobbles and an estimated 35-60 percent gravels. A layer of asphalt was laid directly on top of it. This layer was sterile of cultural material. It was more pronounced on the west side of the street and appeared to be associated with leveling and widening of the street, as shown in the profile of a trench that extended into the street at the Beauregard Street intersection (Figure 4-2). Below this road base was a layer of dark gray (10YR 4/1) Branyon clay, which included limestone gravels in some areas. At depths below 100 cm, very pale brown (10YR 8/2) caliche deposits were encountered; however, only the borehole excavations reached these depths. The top 50-60 cm showed extensive disturbance throughout the project, with various utility pipes located near the bottom of the conduit trench excavations or obvious construction trenches extending below the termination of the excavations (Figure 4-3). However, the discovery of the intact *acequia* wall 80 cmbs and five other architectural features at a similar depth suggests the potential for intact deposits within the APE below this disturbed layer.

### Boreholes

Drilling of boreholes (n=20) for the installation of new light posts began on January 18, 2019. In total, the excavation of 18 boreholes was monitored during the course of this project. Due to simultaneous trenching and drilling activities during the project, the monitor was required to alternate attention between locations. The excavations of the first two boreholes were not monitored due to a lack of notice. However, their locations were recorded, and their profiles and backdirt were inspected. Figure 4-4 shows the distribution of boreholes within the APE. Boreholes extended to a depth of 150 cm



Figure 4-1. Trench locations within the project area.





Figure 4-2. Trench profile depicting previous road layers and road base associated with multiple street modifications. Dotted white lines to the left show old concrete, to the right show layer of road base.



Figure 4-3. Utility pipes within monitored trench. Dotted white lines illustrate pipes.

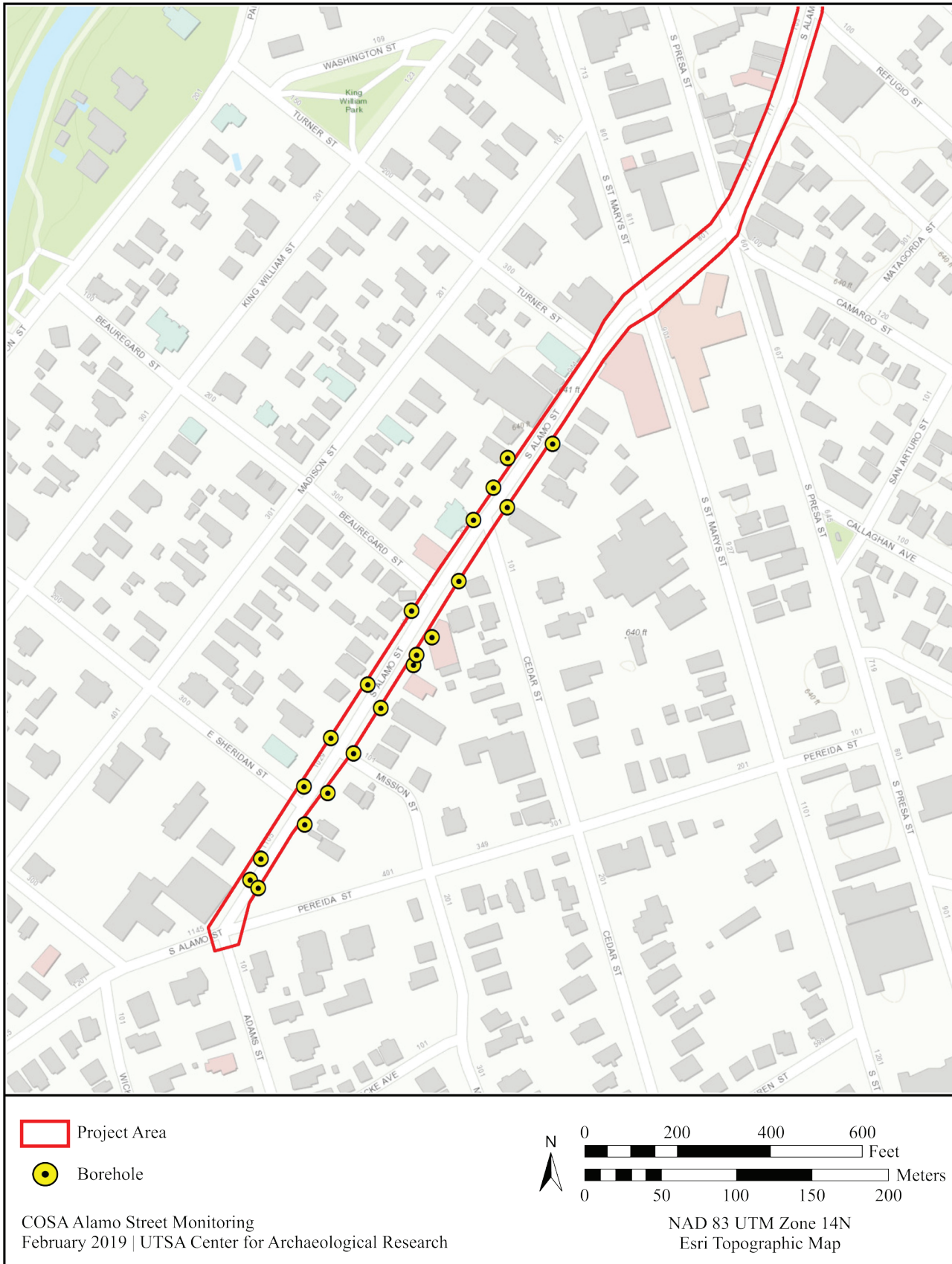


Figure 4-4. Borehole locations within the project area.

and were approximately 45 cm in diameter. A small amount of non-diagnostic, late historic cultural material (primarily small brick fragments) was documented during drilling. A limestone obstruction, discussed in more detail later in the chapter, was encountered near 41BX8. Drilling of holes for new light posts was completed on January 28, 2019.

### Sites Recorded

Six features were recorded during the course of monitoring, and all were within utility trenches excavated for electrical conduit (Table 4-1; Figure 4-5). Feature 1 is a portion of the wall of the Acequia Madre de Valero (41BX8). Features 2, 3, 4, and 5 were limestone architectural features, and Feature 6 was a wooden post. Features 2, 3, and 6 have been recorded as sites 41BX2286, 41BX2287, and 41BX2289, respectively, and Features 4 and 5 have been recorded as site 41BX2288. Features 2-6 could not be located on georeferenced Sanborn Fire Insurance maps or any other historic maps consulted. Feature 1 was the only feature with associated artifacts that were temporally diagnostic. In general, determining the nature of features encountered and delineating site boundaries was complicated by the limited perspective offered by the utility trenches.

#### 41BX8 (Feature 1)

A portion of the wall (Feature 1) of the Acequia Madre de Valero (41BX8) was located in the initial perpendicular trench near S. Alamo Street and Beauregard Streets on the west side of S. Alamo Street (Figures 4-6 and 4-7). The wall was of limestone construction and was encountered at a depth of 80 cmbs. A layer of caliche slurry and cultural material, including glass, metal, white earthenware, and faunal bone, was encountered beginning about 5 cm above the feature. This material likely originates from the filling of the *acequia* in 1905 (Cox 2005). The north wall of the trench directly above the feature showed charcoal and ferrous stains. Approximately 60 cm of the *acequia* wall was exposed. Only the eastern edge of the wall was defined, and the rest of the feature extends into the trench walls. The wall was located

in the far western portion of the trench, directly below the current sidewalk. East of the wall, the profile of the trench showed a dark clay layer before encountering an extensive disturbance near the street.

Due to the narrow perspective offered by the utility trench, it is unclear if Feature 1 is the east or west wall of the *acequia*. It is possible that the feature is the west wall of the *acequia*, and the east wall was destroyed by this disturbance. However, the lack of evidence of an interior channel suggests that this is the intact east wall and that the west wall is located west of the current sidewalk location, outside the boundaries of the utility trench. This suggests that the west wall of the *acequia*, if intact, is located on private property in much of the APE. The feature is located approximately 10 m east of its depicted location on the Rullman map (Figure 4-8; Rullman 1912). In general, the path of the *acequia* system in San Antonio is documented primarily through archival research, rather than being verified through archaeology; therefore, deviations from projected paths are significant.

The *acequia* was not definitively encountered again during the course of monitoring. While a lateral utility trench at the Beauregard Street intersection crossed the projected path of the *acequia*, it only reached a depth 65 cmbs, and no features were documented. A complete medicine bottle, discussed in detail later in this chapter, was recovered from this trench. The remainder of the trenches excavated along the west side of S. Alamo Street were east of the likely *acequia* path. Just south of the Turner Street intersection, the Rullman map (1912) shows a branch of the *acequia* crossing the street, but monitoring in this area encountered no features. Again, this was likely due to the shallow nature of the trench, which only reached 50 cmbs.

One borehole, located slightly to the south of Feature 1, encountered a limestone obstruction potentially associated with 41BX8. This limestone obstruction was encountered at a depth of 80 cmbs. Figure 4-9 shows the borehole location in relation to Feature 1. The City Archaeologist was contacted

Table 4-1. Sites and Features Documented during Monitoring

Site	Feature	Type
41BX8	1	portion of <i>acequia</i> wall
41BX2286	2	limestone and mortar wall
41BX2287	3	two rough limestone blocks with mortar
41BX2288	4	limestone block
	5	limestone block
41BX2289	6	wood post



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Figure 4-5. Location of sites on topographic map. Site boundaries drawn as 5-m buffer around individual features.



Figure 4-6. Site 41BX8 (Feature 1), facing south. Top of acequia wall (edge of feature) marked in white. The northern, southern, and western edges of the feature extend outside the boundaries of the utility excavation.



Figure 4-7. Site 41BX8 (Feature 1), facing west. Top of acequia wall, (edge of feature) marked in white. The northern, southern, and western edges of the feature extend outside the boundaries of the utility excavation.



Figure 4-8. Site 41BX8 (Feature 1) location on Rullman (1912) map. Note discrepancy the location of Feature 1 and the path of the acequia depicted on the Rullman map.

and directed that boring continue past the limestone obstruction (Figure 4-10). The only artifacts recovered from this borehole were a few red brick fragments.

#### 41BX2286 (Feature 2)

Site 41BX2286 is a previously unrecorded site consisting of a limestone and mortar wall designated Feature 2. The feature is oriented north-south and located on the eastern side of S. Alamo Street just north of the Sheridan Street intersection (Figure 4-11). Feature 2 was uncovered at the terminal depth of the trench (80 cmbs) and may represent the “high point,” of

a larger feature, as attempts to locate the north and south ends of the features suggested that the feature continued both north and south below the 80 cmbs terminal depth. The feature was 45 cm in width, and 150 cm of the feature was exposed north-south. The feature is of rough limestone construction. The feature could not be aligned with any structure identified on the historic maps consulted. The method of construction and the fact that it is not identifiable on any later Sanborn maps suggest it may be date to the Spanish Colonial period. As the feature was located at the terminal depth of the trench, it was left in place and covered with sand. The electrical conduit was placed on top of the sand layer.

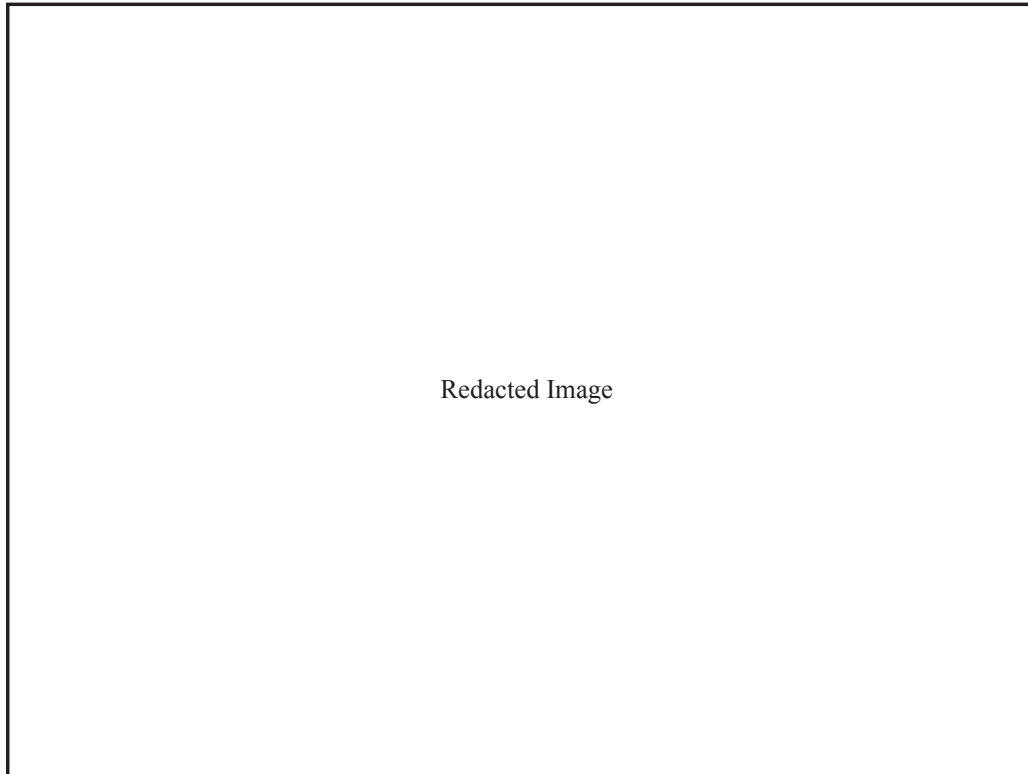


Figure 4-9. Borehole location (white painted circle on brick) in proximity to acequia. Note proximity of borehole to 41BX8 (Feature 1) outlined with yellow square.



Figure 4-10. Borehole near acequia. Limestone obstruction at the bottom marked in white. Feature extends into the north (upper left) portion of the borehole wall.

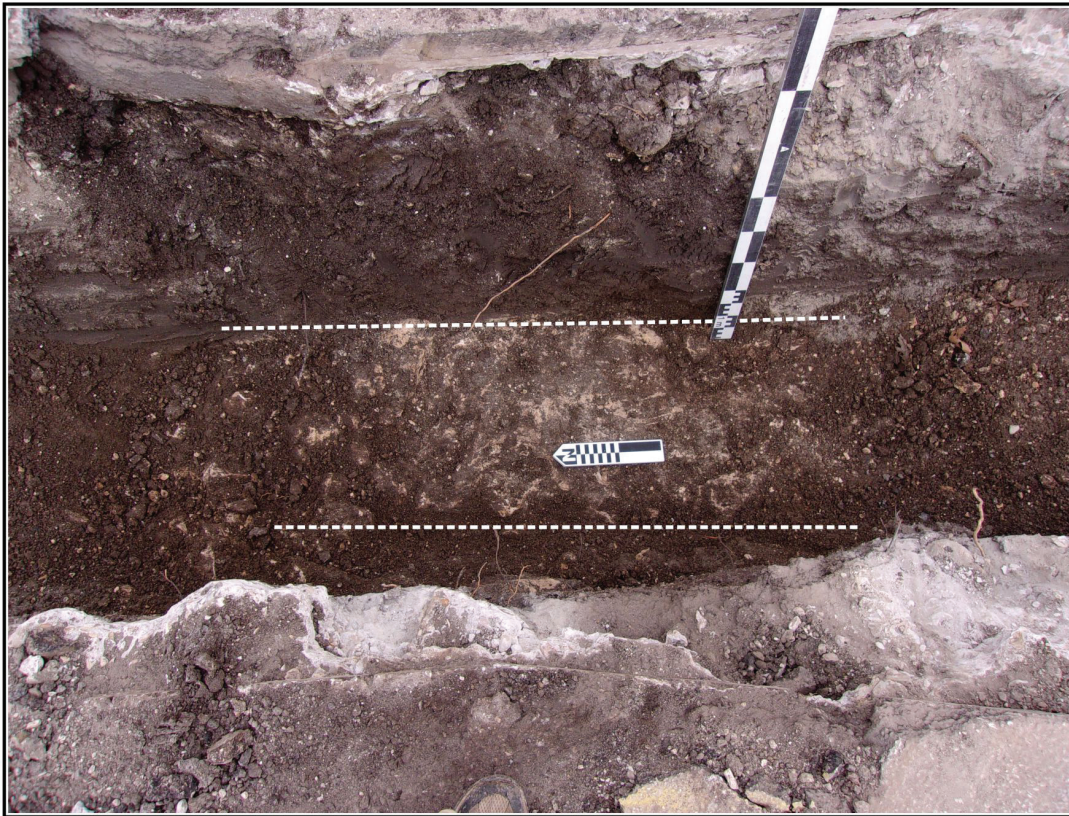


Figure 4-11. Site 41BX2286 (Feature 2), limestone wall. Edge of feature marked in white.

### 41BX2287 (Feature 3)

Site 41BX2287 is a previously unrecorded site consisting of two rough limestone blocks (Feature 3) with mortar that were encountered at the bottom of the trench (85 cmbs) on the east side of S. Alamo Street just north of Mission Street (Figure 4-12). The feature had been partially disturbed by a pipe, and the stones may have been displaced previously. No artifacts were associated with the feature. The feature was left in place and covered with sand. The electrical conduit was placed on top of the sand.

### 41BX2288 (Features 4 and 5)

Site 41BX2288 is a previously unrecorded site consisting of two limestone blocks, designated Features 4 and 5. The two blocks were roughly aligned and located 11 m apart. Due to their proximity, they were recorded as part of the same site in accordance with the site definition (see Chapter 3).

Feature 4 (Figure 4-13) is a large limestone block located on the east side of S. Alamo Street south of the Beauregard Street intersection. There was no evidence of artifacts or mortar. The block is oriented north-south and is 1.25 m in length. The total width of the feature could not be determined because the block extended into the walls. The feature was

identified at 80 cmbs in the bottom of a narrow and shallow trench, which made it difficult to accurately locate the feature boundaries. The feature was left in place and covered with sand. Electrical conduit was laid over sand above the feature, and flowable fill was placed over the sand and conduit.

Feature 5 (Figure 4-14) is a large limestone block located approximately 11 m north of Feature 4 (Figure 4-16). The feature was identified at 80 cmbs in the bottom of a narrow and shallow trench, which made it difficult to accurately locate the feature boundaries. No mortar or artifacts were associated with the feature. The block spanned approximately 1 m in length, north-south, and was 45 cm in width. The feature was left in place and covered with sand. The electrical conduit was placed on top of the sand. This feature is located within 15 m of Feature 1 (41BX8).

### 41BX2289 (Feature 6)

Site 41BX2289 is a previously unrecorded site consisting of the base of a wooden post (Feature 6) uncovered within the electrical conduit trench on the east side of S. Alamo Street just north of the intersection with Cedar Street (Figure 4-18). The feature was identified at 65 cmbs. The post was about 25 cm wide, and the wood appeared untreated. The narrow diameter of the post suggests that it is not a utility pole but,



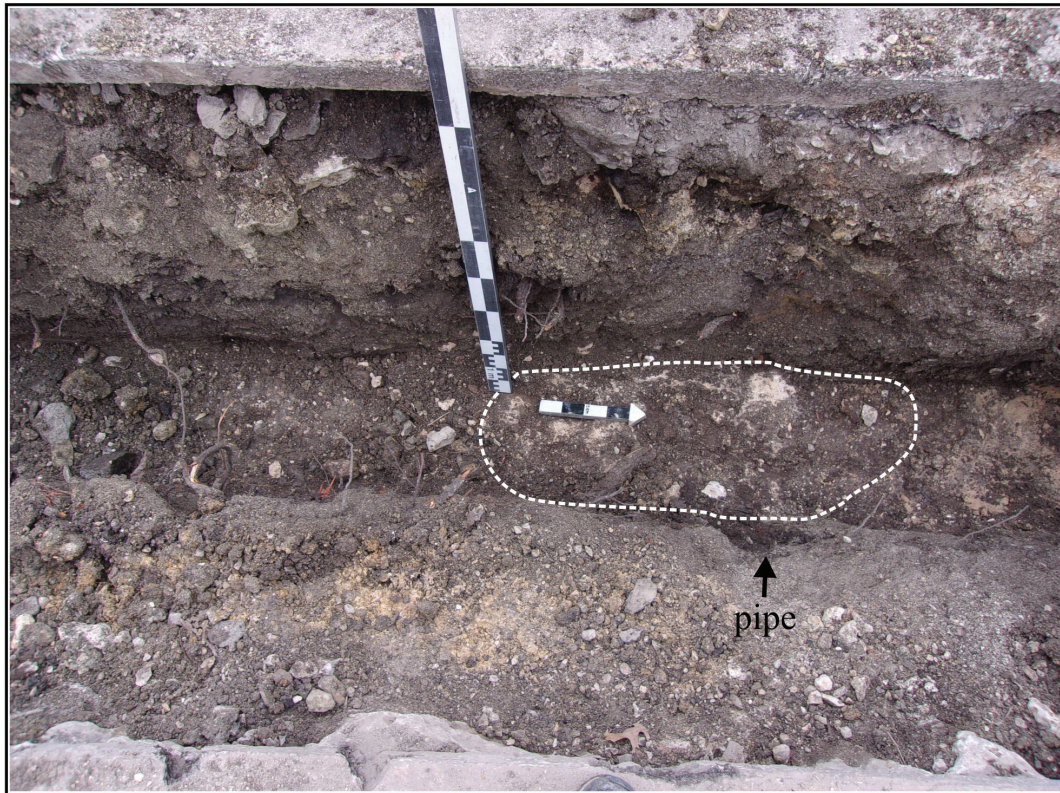


Figure 4-12. Site 41BX2287 (Feature 3), rough limestone blocks with mortar. Feature marked in white. Note intrusion by pipe.



Figure 4-13. Site 41BX2288 (Feature 4), rough limestone block. Feature marked in white.



Figure 4-14. Site 41BX2288 (Feature 5), rough limestone block. Feature marked in white.



Figure 4-15. Site 41BX2289 (Feature 6), wooden post. Feature marked in white.

potentially, a signpost or boundary marking. Two complete yellow bricks with no markings were found within the trench prior to encountering the feature, and yellow brick fragments were found in the backfill associated with the feature.

### Artifact Analysis

All temporally diagnostic artifacts encountered were collected during the course of monitoring. In addition, a representative sample of non-diagnostic artifacts associated with Feature 1 (the only feature with associated artifacts) was collected. The artifacts collected date to the nineteenth and early twentieth century and consist of domestic materials, such as table ceramics and container glass. Artifacts were examined for potentially temporally diagnostic characteristics, such as design or indications of methods of manufacture. Table 4-2 lists all artifacts collected during the course of monitoring and their proveniences.

The majority of the temporally diagnostic artifacts collected were recovered from the 5-cm layer directly above the wall of the Acequia Madre de Valero (Feature 1; Table 4-2). These artifacts include a complete aqua medicine bottle (Figure 4-16) embossed with “MEXICAN MUSTANG LINIMENT LYONS MFG CO NEW YORK.” Mexican Mustang Liniment (Figure 4-17) was introduced in 1825 and claimed

to cure “outward ailments of man and beast” (Odyssey’s Virtual Museum 2019). The bottle has a tooled finish and appears to have been manufactured in a cup-bottom mold. This specific bottle style was likely manufactured around 1900 (National Museum of American History 2019). During processing in the laboratory, a small fragment of the cork was recovered from within the bottle. Half of an Ironstone plate (Figure 4-16) with a maker’s mark dating 1882-1964 (Gibson 2011) was also collected, along with an undecorated porcelain body sherd, a heavily patinated body sherd of amber glass with a distinct mold seam, and clear glass body fragments embossed “TRIUMPH - ” “-AIN M-” (Figure 4-18). Materials observed but not collected included undecorated white earthenware, clear glass, unidentifiable ferrous fragments, and charcoal. The temporally diagnostic artifacts recovered are consistent with the proposition that this material likely originates from the filling of the *acequia* in 1905 with street sweepings (Cox 2005).

Another complete aqua medicine bottle was recovered from a disturbed trench above a utility installation just south of 955 S. Alamo Street, directly above the projected path of the Acequia Madre de Valero. This bottle was embossed “DR. PIERCE’S ANURIC TABLETS FOR KIDNEYS AND BACKACHES” and likely dates to around 1915 (Museum of

Table 4-2. Artifacts Recovered from Monitoring

Provenience	Description	Marks	Time Period
Feature 1 (Acequia Madre), 80 cmbd*	approximately 1/2 an ironstone plate, base to rim	“-STONE CHINA,” upper arch, 1/2 standing Royal Coat of Arms visible	1882-1964
Feature 1 (Acequia Madre), 80 cmbd	undecorated porcelain body sherd	None	
Feature 1 (Acequia Madre), 80 cmbd	complete aqua medicine bottle, cup-bottom mold, tooled finish, patinated, small fragment of cork still present	“MEXICAN MUSTANG LINIMENT LYONS MFG CO NEW YORK”	ca. 1900
Feature 1 (Acequia Madre), 80 cmbd	clear body fragments, refit, patinated	“TRIUMPH -” “-AIN M-”	
Feature 1 (Acequia Madre), 80 cmbd	amber body fragment, mold seam, heavy patina	None	
Feature 1 (Acequia Madre), 80 cmbd	unidentified faunal bone	N/A	
Near Beauregard intersection, east side of street	white earthenware (Flow Blue)	None	1828-1929
Near Beauregard intersection, east side of street	white earthenware (Annular ware)	None	1785-1840
Near Beauregard intersection, west side of street	complete aqua medicine bottle, cup-bottom mold, tooled finish, bubbles present, patinated	“DR. PIERCE’S ANURIC TABLETS FOR KIDNEYS AND BACKACHES”	ca. 1915

\*cmbd = cm below the datum



Figure 4-16. Diagnostic artifacts recovered from 41BX8 (Feature 1). Ironstone plate (left), aqua medicine bottle with cork piece (top right), and clear embossed glass (bottom right).



Figure 4-17. Undated advertisement for Mexican Mustang Liniment (U.S. National Library of Medicine 2019).



Figure 4-18. Artifacts recovered from the vicinity of the Beauregard Street intersection. Aqua medicine bottle (left), annular ware (top right), and flow blue (bottom right).

Historical Medical Artifacts 2019; Figure 4-18). This bottle appears to have been manufactured in a cup-bottom mold and has a tooled finish.

Two decorated body sherds of white earthenware were recovered from the west side of the street near the Beauregard Street intersection, outside of 1014 S. Alamo Street. The first is a fragment of flow blue, which dates from approximately 1828-1929 (Samford 2014). The second is a sherd of blue, white, and brown annular ware, dating from approximately 1785-1840 (Florida Museum of Natural History 2019; Figure 4-18). Non-diagnostic artifacts observed but not collected in this area included red brick fragments.

In general, very little cultural material, including modern trash, was observed during monitoring. The majority of matrix removed during trenching was sterile road base, and trenches reached the natural clays found in the project area only in the bottom 10-30 centimeters. With the exception of the Feature 1 material, all artifacts observed were found in disturbed contexts. All temporally diagnostic artifacts collected were recovered from the vicinity of the S. Alamo Street and Beauregard Street intersection. Cultural material observed but not collected during monitoring included red, orange, and yellow brick (none with markings), unidentifiable ferrous metal fragments, and faunal bone. No prehistoric or Spanish Colonial period cultural material was observed.

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## Chapter 5: Summary and Recommendations

From October 2018 to February 2019, the CAR conducted archaeological monitoring of electrical conduit trenching and boring of holes for light poles along the section of S. Alamo Street between the Turner Street intersection to the north and the Pereida Street intersection to the south. The project area contains significant cultural resources, including two national Historic Districts (the Lavaca Neighborhood and the South Alamo Street-South St. Mary's Street District) as well as two local Historic Districts (the Lavaca Neighborhood and King William). Two *acequias*, the Acequia Madre de Valero and the Concepción Acequia, are recorded within the project area in historic documents. Little below-ground archaeological work had been conducted in the area, and the condition of the cultural deposits in the area was unknown.

During the project, more than 772 m of trench and 20 boreholes were monitored. Six features were documented, all architectural in nature, including a portion of one wall of the Acequia Madre de Valero (41BX8), extending the known site boundary south. All features documented during the course of monitoring remain intact and were covered with a protective layer of sand before backfilling, with the exception of a limestone obstruction encountered in the borehole near Beauregard Street. Four new historic sites, 41BX2286, 41BX2287, 41BX2288, and 41BX2289 were identified and documented. A limited number of historic artifacts were encountered, mostly associated with the *acequia*. All diagnostic artifacts collected were recovered from the vicinity of the S. Alamo Street and Beauregard Street intersection.

A small portion of wall (Feature 1) from the Acequia Madre de Valero (41BX8) was documented, suggesting that intact sections of the *acequia* likely exist elsewhere in the project area outside of the trenching locations. Architectural features, some potentially Spanish Colonial, were also documented during the course of monitoring. All of these features were documented between 80-85 cmbs. This suggests that while the upper 50 cmbs deposits in the area appear heavily disturbed there is potential for intact deposits below this depth.

Due to the limited perspective offered by the trench excavation, it was difficult to determine the potential significance of the sites documented during the course of

this project. Site 41BX8 has previously been determined to be eligible for inclusion on the National Register of Historic Places (NRHP), and it is designated as a Historic American Engineering Record and a Recorded Texas Historic Landmark (THC 2019). CAR recommends the intact section of 41BX8 documented during the course of this project is eligible for inclusion to the NRHP and designation as a State Antiquities Landmark (SAL). Avoidance of any impact to this site is recommended.

Site 41BX2286 (Feature 2) has no associated artifacts and appears to have limited research value according to the small portion the CAR was able to document. However, the potential Spanish Colonial age of this feature, the limited data available concerning its nature and the potential for more intact deposits outside of the limited area of excavation make it difficult to make a definitive determination of its significance. If this site is to be impacted, further investigation is recommended to determine its true extent, potential significance, and research value. The CAR was not able to make a recommendation concerning the site's eligibility for the NRHP or as SAL based on the limited portion of the feature archaeologists were able to document during utility monitoring.

Site 41BX2287 (Feature 3) is of unknown age and has no associated artifacts. It has been impacted by prior disturbance and appears to be out of context. The data recovered from this limited investigation suggests that the site is not significant. Site 41BX2288 was identified by two limestone blocks (Features 4 and 5). No artifacts are associated with these two features. Site 41BX2289 (Feature 6) consists of the remains of a wooden post and some associated yellow brick fragments. The site appears to have limited research value and is not significant. These three sites are not recommended as eligible for inclusion on the NRHP or for listing as a SAL.

Any additional work in the project area that may impact below the depth determined to be disturbed during the course of this project (50 cmbs) should be monitored. Systematic testing of the project area would provide a broader perspective of the location of intact deposits and the nature and extent of the features documented here, although such testing would likely be difficult due to the developed nature of the area.

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## References Cited:

- Anderson, N.J., K.M. Nichols, S. Tomka, C. McKenzie, A. Young, M. Nichols, M.J. Galindo, S. Marceaux, J. Zapata, J. Perez, and S. Wigley  
2017 *Archaeological Testing of Site 41BX6, The Alamo, City of San Antonio, Bexar County, Texas*. Pape-Dawson, Austin.
- Brookins, J.  
2018 Incorporating German Texas: Immigrant Nation-Building in the Southwest. In *Reconstruction in a Globalizing World*, edited by D. Prior, pp. 145-171. Fordham University, New York.
- Burkholder, M.V.  
1976 *Down the Acequia Madre in the King William Historic District*. Privately printed, San Antonio.
- City of San Antonio Office of Historic Preservation (COSA-OHP)  
2019a King William. Historic Districts. City of San Antonio. Electronic document, <https://www.sanantonio.gov/historic/historicsites/HistoricDistricts/KingWilliam>, accessed March 19, 2019.  
2019b La Villita. Historic Districts. City of San Antonio. Electronic document, <https://www.sanantonio.gov/historic/historicsites/HistoricDistricts/LaVillita>, accessed April 24, 2019.
- Collins, M.B.  
2004 Archeology in Central Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 205-265. Texas A&M University Press, College Station.
- Cox, I.W.  
1992 *Archaeological Monitoring for the Tri-Part Improvements Project, San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 204. Center for Archaeological Research, The University of Texas at San Antonio.  
1995 *An Archival Search for the Alamo-Concepción Aqueduct*. Archaeological Survey Report, No. 231. Center for Archaeological Research, The University of Texas at San Antonio.  
1997 Chapter 2: The Growth of San Antonio. In *Archaeology at the Alamodome: Investigations of a San Antonio Neighborhood in Transition. Volume I: Historical, Architectural, and Oral History Research*, edited by A.A. Fox, M. Renner, and R.J. Hard, pp.8-45. Center for Archaeological Research, The University of Texas at San Antonio.  
2005 *The Spanish Acequias of San Antonio*. Maverick Publishing Company, San Antonio.
- Cox, I.W., and A.A Fox  
1983 Literature and Archival Study for the Development of HemisFair Plaza, San Antonio, Texas. Manuscript on file, Center for Archaeological Research, The University of Texas at San Antonio.
- Cruz, G.R.  
1988 *Let There Be Towns: Spanish Municipal Origins in the American Southwest, 1610-1810*. Texas A&M University Press, College Station.
- de la Teja, J.  
1995 *San Antonio de Bejar: A Community on New Spain's Northern Frontier*. University of New Mexico Press, Albuquerque.  
2000 A Spanish Borderlands Community: San Antonio. *OAH Magazine of History* 14(4):25-28.

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References Cited

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Fields, R.C., A.R. Norment, and A.E. Dase

2015 *Archaeological Investigations at Yanaguana Garden in HemisFair Park, San Antonio, Bexar County, Texas*. Report of Investigations No. 179. Prewitt and Associates, Austin.

Figueroa, A.L., and R.P. Mauldin

2005 *Test Excavations and Monitoring at 41BX1598: A Multicomponent Historic Site in Bexar County, Texas*. Archaeological Survey Report, No. 360. Center for Archaeological Research, The University of Texas at San Antonio.

Florida Museum of Natural History

2019 Annular ware, Banded. Historical Archaeology Type Collection. Electronic document, <https://www.floridamuseum.ufl.edu/typeceramics/type/annular-ware-banded/>, accessed March 19, 2019.

Foster, W.C.

1998 *The La Salle Expedition to Texas: The Journal of Henri Joutel 1664-1687*. Texas State Historical Association, Austin.

Fox, A.

1976 *The Archaeology and History of Alamo Plaza*. Archaeological Survey Report, No. 16. Center for Archaeological Research, The University of Texas at San Antonio.

1977 *The Archaeology and History of the Spanish Governor's Palace Park*. Archaeological Survey Report, No. 31. Center for Archaeological Research, The University of Texas at San Antonio.

1979 *A Survey of Archaeological, Architectural, and Historical Sites on the San Antonio River from Olmos Dam to South Alamo Street and on San Pedro Creek from San Pedro Park to Guadalupe Street*. Archaeological Survey Report, No. 80. Center for Archaeological Research, The University of Texas at San Antonio.

1985 *Testing for the Location of the Alamo Acequia (41BX8) at HemisFair Plaza, San Antonio, Texas*. Archaeological Survey Report, No. 142. Center for Archaeological Research, The University of Texas at San Antonio.

Fox, D.E., D. Scurlock, and J.W. Clark, Jr.

1977 *Archaeological Excavations at San Fernando Cathedral San Antonio, Texas: A Preliminary Report*. Office of the State Archaeologist, Texas Historical Commission, Austin.

Fox, D.E., F.Valdez, Jr., and L. Osborne Bobbitt

1978 *An Archaeological Assessment of the Dolores Aldrete Property, San Antonio, Texas*. Archaeological Survey Report, No. 58. Center for Archaeological Research, The University of Texas at San Antonio.

Galindo, M.J., K. Hill, and J.I. Sullivan

2017 *Intensive Archaeological Survey of the HemisFair Martinez Street Surface Parking Lot and a Segment of the Acequia del Alamo/Acequia Madre (41BX8), San Antonio, Bexar County, Texas*. Pape-Dawson Engineers, Austin.

Gawenda, P.B.

1986 *The Use of the German Language in the Schools of San Antonio, Texas, from 1880-1910*. PhD Dissertation, University of Houston.

Gibson, E.

2011 *Ceramic Maker's Marks*. Left Coast Press Inc., Walnut Creek, California.

Hanson, C.

2011 *Intensive Archaeological Survey "Mission Trails" Enhancement Project, Package IV, Mission Road Realignment, Bexar County, Texas*. PBS&J, San Antonio.

2016 *Archaeological Investigations for the Main Plaza Redevelopment Project, San Antonio, Bexar County, Texas*. Atkins, Austin.

Heusinger, E.W.

1951 *A Chronology of Events in San Antonio: Being a Concise History of the City Year by Year from the Beginning of Its Establishment to the End of the First Half of the Twentieth Century*. Standard Printing Co., San Antonio.

Ivey, J.E.

1978 *Archaeological Investigations at the Mayer House (41BX326), San Antonio, Texas*. Archaeological Survey Report, No. 59. Center for Archaeological Research, The University of Texas at San Antonio.

Jordan, T.G.

1966 *German Seed in Texas Soil: Immigrant Farmers in Nineteenth Century Texas*. University of Texas Press, Austin.

Katz, P.R.

1978 *Archaeological and Historical Investigations in the Arciniaga Street Area, Downtown San Antonio, Texas*. Archaeological Survey Report, No. 61. Center for Archaeological Research, The University of Texas at San Antonio.

Kemp, L., J.E. Zapata, C.M.M. McKenzie, M. Pfeiffer, and R. Curilla

2019 *Archaeological Monitoring of the Downtown Street Reconstruction Project at North Main Avenue and Soledad Street and the State Antiquities Landmark Testing of 41BX2164 and 41BX2170, San Antonio, Bexar County, Texas*. Archaeological Report, No. 462. Center for Archaeological Research, The University of Texas at San Antonio.

Kenmotsu, N.A., and J.W. Arnn

2012 The Toyah Phase and the Ethnohistorical Record: A Case for Population Aggregation. In *The Toyah Phase of Central Texas, Late Prehistoric Economic and Social Processes*, edited by N.A. Kenmotsu and D.K. Boyd, pp. 99-43. Texas A&M University Press, College Station.

Labadie, J.H., K.M. Brown, A.A. Fox, S.P. Smith, P.D. Storch, D.D. Turner, S. Van Der Veer, and A.J. Winkler

1986 *La Villita Earthworks (41BX677): San Antonio, Texas. A Preliminary Report of Investigations of Mexican Siege Works at the Battle of the Alamo*. Archaeological Survey Report, No. 159. Center for Archaeological research, The University of Texas at San Antonio.

Mauldin, R., and L. Kemp

2016 Chapter 12: Spatial Patterns at the Plaza de Armas Buildings. In *Archaeological Monitoring and Test Excavations at the 1722 Presidio San Antonio de Bexar (Plaza de Armas Buildings)*, by C.M. McKenzie, L. Martinez, and R. Mauldin, pp. 123-134. Archaeological Report, No. 445. Center for Archaeological Research, The University of Texas at San Antonio.

McKenzie, C.M., L. Martinez, and R. Mauldin

2016 *Archaeological Monitoring and Test Excavations at the 1722 Presidio San Antonio de Bexar (Plaza de Armas Buildings)*. Archaeological Report, No. 445. Center for Archaeological Research, The University of Texas at San Antonio.

Museum of Historical Medical Artifacts

2019 Dr. Pierce's Anuric Tablets. The Instruments. Medicine Bottles. Electronic document, [https://www.mohma.org/instruments/category/medicine\\_bottles/dr-pierces-anuric-tablets/](https://www.mohma.org/instruments/category/medicine_bottles/dr-pierces-anuric-tablets/), accessed March 19, 2019.

National Museum of American History

2019 Mexican Mustang Liniment. Electronic document, [http://americanhistory.si.edu/collections/search/object/nmah\\_1298526](http://americanhistory.si.edu/collections/search/object/nmah_1298526), accessed March 19, 2019.

Natural Resources Conservation Service (NRCS)

2019 Web Soil Survey. United States Department of Agriculture. Electronic document, <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>, accessed March 13, 2019.

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References Cited

---

Nichols, K.M.

2015a *Archaeological Investigations at the Christopher Columbus Italian Society Property and Columbus Park: 41BX1968, the Possible First Site of the Mission de Valero*. Archaeological Report, No. 432. Center for Archaeological Research, The University of Texas at San Antonio.

2015b *Archaeological Investigations at 41BX1968, San Antonio, Bexar County, Texas*. Raba-Kistner Environmental, Inc., San Antonio.

Nichols, K., M. Luzmoor, and A. Jones.

2017 *Uncovering and Documenting the Acequia de Valero on the Grounds of the Planned Civic Park at the Henry B. Gonzalez Convention Center Expansion Project, San Antonio, Bexar County, Texas*. Vol. 1. Raba Kistner Environmental, Inc., San Antonio.

Odyssey's Virtual Museum

2019 Mexican Mustang Liniment Bottle. Bottles. Medicine and Health. Odyssey Marine Exploration, Inc. Electronic document, <http://www.odysseysvirtualmuseum.com/products/Mexican-Mustang-Liniment-Bottle.html>, accessed March 19, 2019.

Petersen, J.F.

2001 San Antonio: An Environmental Crossroads on the Texas Spring Line. In *On the Border: an Environmental History of San Antonio*, edited by C. Miller, pp.17-41. University of Pittsburgh Press, Pennsylvania.

Rivera, J.A.

1998 *Acequia Culture: Water, Land, and Community in the Southwest*. University of New Mexico Press, Albuquerque.

Rullman, J.D.

1912 *Historic Map of Old San Antonio de Bexar in 1837*. Map on file, Center for Archaeological Research, The University of Texas at San Antonio.

Samford, P.

2014 Colonial Ceramics and Post-Colonial Ceramics. Pottery Presentation Fall 2014, Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park and Museum, Maryland Historical Trust/Maryland Dept. of Planning. Electronic resource, <http://www.jefpat.org/diagnostic/index.htm>, accessed March 19, 2019.

Sanborn Map Company (Sanborn)

1892 Sanborn Fire Insurance Map, San Antonio, Texas, Sheet 18. New York, New York. Digital Sanborn Map, Perry-Castañeda Collection, University of Texas at Austin. Electronic documents, <https://legacy.lib.utexas.edu/maps/sanborn/texas.html>, accessed January 30, 2019.

1896 Sanborn Fire Insurance Map, San Antonio, Texas, Sheet 31. New York, New York. Digital Sanborn Map, Perry-Castañeda Collection, University of Texas at Austin. Electronic documents, <https://legacy.lib.utexas.edu/maps/sanborn/texas.html>, accessed January 30, 2019.

1904 Sanborn Fire Insurance Map, San Antonio, Texas, Sheet 20. New York, New York. Digital Sanborn Map, Perry-Castañeda Collection, University of Texas at Austin. Electronic documents, <https://legacy.lib.utexas.edu/maps/sanborn/texas.html>, accessed January 30, 2019.

Texas Historical Commission (THC)

2019 Texas Archaeological Site Atlas. Electronic document, <https://atlas.thc.state.tx.us/>, accessed May 21, 2019.

U.S. National Library of Medicine

2019 Mexican Mustang Liniment. Advertisements. Electronic document, <https://collections.nlm.nih.gov/catalog.nlm.nlmuid-101701641-img>, accessed April 24, 2019.

Wooster, R.A.

2018 Civil War. Handbook of Texas Online. Texas State Historical Association. Electronic document, <https://tshaonline.org/handbook/online/articles/qdc02>, accessed March 18, 2019.

Zapata, J.E.

2017 *The 2006 UTSA Field School at Mission de Valero (41BX6), the Alamo, San Antonio, Bexar County, Texas*. Archaeological Report, No. 453. Center for Archaeological Research, The University of Texas at San Antonio.

2017 *Archaeological Investigations for the Mother of Faith Formation Center, San Antonio, Bexar County, Texas*. Archaeological Report, No. 458. Center for Archaeological Research, The University of Texas at San Antonio.

Zapata, J.E., A.L. Figueroa, C.S. Smith, and C.M.M. McKenzie

2019 *Archaeological Monitoring and Limited Testing for Recent Redevelopment in Hemisfair Park, San Antonio, Bexar County, Texas*. Archaeological Report, No. 456. Center for Archaeological Research, The University of Texas at San Antonio.