

**Intensive Survey and Testing Associated with the
Rediscovery of the *Acequia Madre* and Alamo Dam, San
Antonio, Bexar County, Texas**

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DRAFT

Texas Historical Commission Permit No. 5783

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Abstract

In November and December of 2010, The Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) was contracted by Ford, Powell, and Carson Architects and Planners Inc. to conduct intensive pedestrian survey and testing in search of the *Acequia Madre* (41BX8) and Alamo Dam on the grounds of the Witte Museum. Archival research was conducted to search for information that would pinpoint the location of the dam and irrigation ditch. Historic maps were consulted and overlaid on current aerials of the project area to offer insight regarding the potential location of these features. The investigations consisted of the excavation of nine backhoe trenches (BHTs) and three auger borings. Each backhoe trench extended to at least a depth of 1.5 meters below the surface, although most exceeded this depth. The auger borings extended to a maximum depth of 1.5 meters.

A portion of the Alamo Dam was located in BHT 7, adjacent to the current channel of the San Antonio River. The dam consisted of large, stacked limestone blocks. It appears that the top of the dam was likely sheared off in the 1930s during the construction of the stone wall lining the channel of the river.

Evidence of the *Acequia Madre* (41BX8) was found in BHT 9, located in the grassy area in front of the Pioneer Hall between Curiosity Lane and Broadway. This trench extended to a depth of twelve feet below the surface before encountering the water table. Two ditch outlines were noted in the profile of the trench, one undercuts the other. They represent two paths of the *acequia*, one older than the other.

Trenches were photo-documented and mapped prior to being backfilled. A small number of artifacts were collected at the site and returned to the CAR laboratory for processing and curation. All project related documentation and artifacts are permanently curated at the CAR facility.

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Chapter 1: Introduction

In 2010, the Center for Archaeological Research of The University of Texas at San Antonio was contracted by Ford, Powell and Carson Architects and Planners Inc. to perform an intensive pedestrian survey and testing of the Witte Museum grounds in an effort to rediscover the location of the *Acequia Madre* and the Alamo Dam. The project was sponsored by the San Antonio River Authority, and is part of Phase II of the Park Segment of the more encompassing San Antonio River Improvements Project.

The *Acequia Madre* and Dam were constructed between 1719 and 1720 to provide irrigation water to Mission Valero, later known as The Alamo. While historians have suspected that these two features were located on a tract of land just north of Pioneer Hall, their exact location was unknown. In addition, no information was available regarding the condition of these two features at the time of their closure or at their subsequent filling and burial. Therefore, the goals of this intensive pedestrian survey and testing effort were to rediscover the location of these two features and document their current condition(s).

As of this writing, The Witte Museum is undergoing several phases of expansion. The *acequia* and dam will play a critical role in the Witte Museum's new Center for Rivers and Aquifers. Once the location of the features is known, and their preservation condition is ascertained, the Witte Museum will be in a more informed position to develop appropriate interpretive exhibits focusing on these features.

Project investigations focused on the rediscovery of the location of the two features as separate and different from other archaeological services that had been requested by the Witte Museum in association with the aforementioned expansion projects. However, because the field investigations occurred on land owned by the City of San Antonio, a political subdivision of the State of Texas, and the project sponsor is the San Antonio River Authority, (also a political subdivision of the state), the archaeological investigations fall under the jurisdiction of the Antiquities Code of Texas. Furthermore, the project also falls under the oversight of the City of San Antonio's Office of Historic Preservation (COSAOHP) as laid out in the City of San Antonio's Unified Development Code, Chapter 35. The investigations were conducted under Texas Historical Commission (THC) Permit No. 5783. Dr. Steve Tomka served as Principal Investigator and Kristi Miller Ulrich served as Project Archaeologist.

Location of the Project Area or Area of Potential Effect

The Witte Museum is located at 3801 Broadway Avenue in San Antonio, Bexar County, Texas. The project area, or Area of Potential Effect (APE) is located on the east bank of the San Antonio River, just

north of the Tuleta Drive and Broadway Avenue intersection (Figure 1-1). The Witte Museum grounds are located on the west side of Broadway Avenue, abutting the San Antonio River to the west.

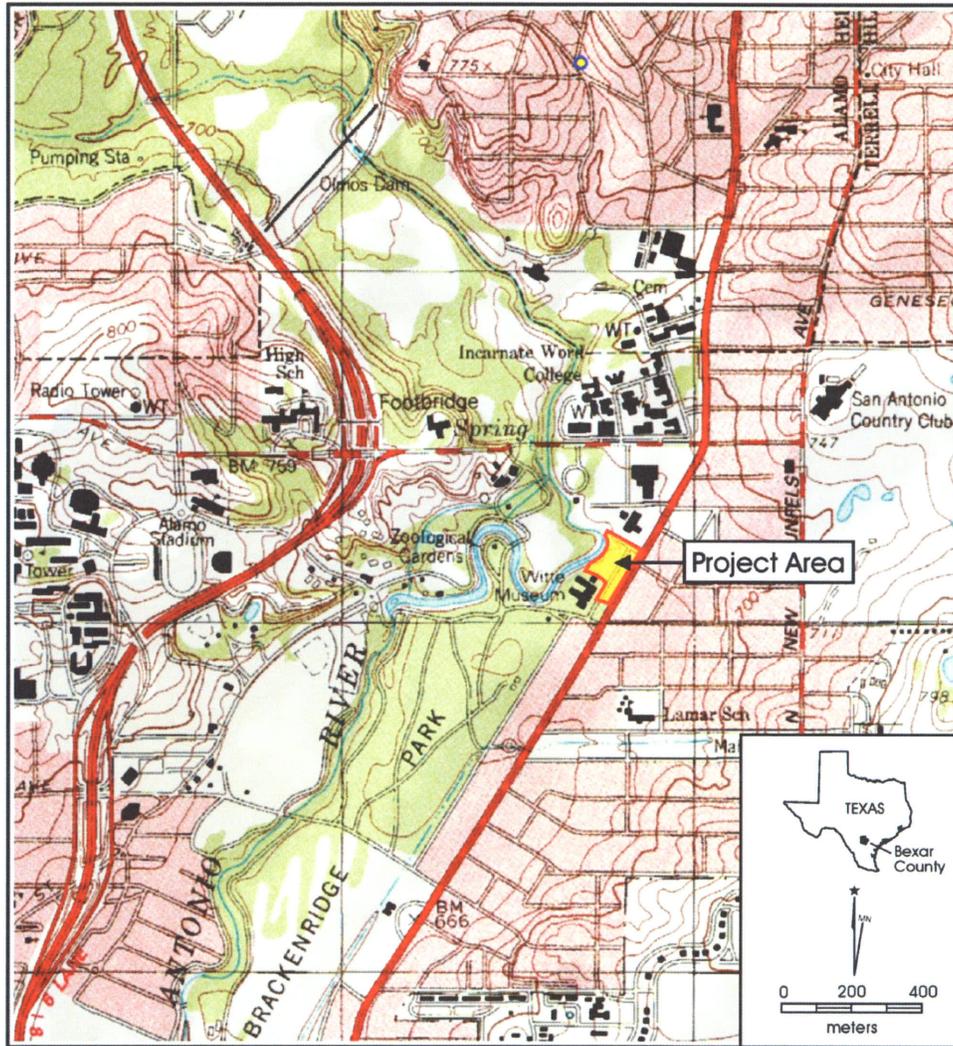


Figure 1-1. The project area depicted on the San Antonio East 7.5 minute series USGS quadrangle map.

Historic maps, such as Louis Giraud's 1879 drawing (Figure 1-2), indicate that the head of the *Acequia Madre*, also known as the *Alamo Acequia*, was located at the bend in the San Antonio River just north of the Witte Museum. The *acequia* began on the east bank of the river and ran to Mission San Antonio de Valero (Cox 2005). The principal aims of the project scope of work, were to find remnants of the Alamo

Dam and to rediscover the route of the original 1719-1720 *Acequia Madre* within the project area.

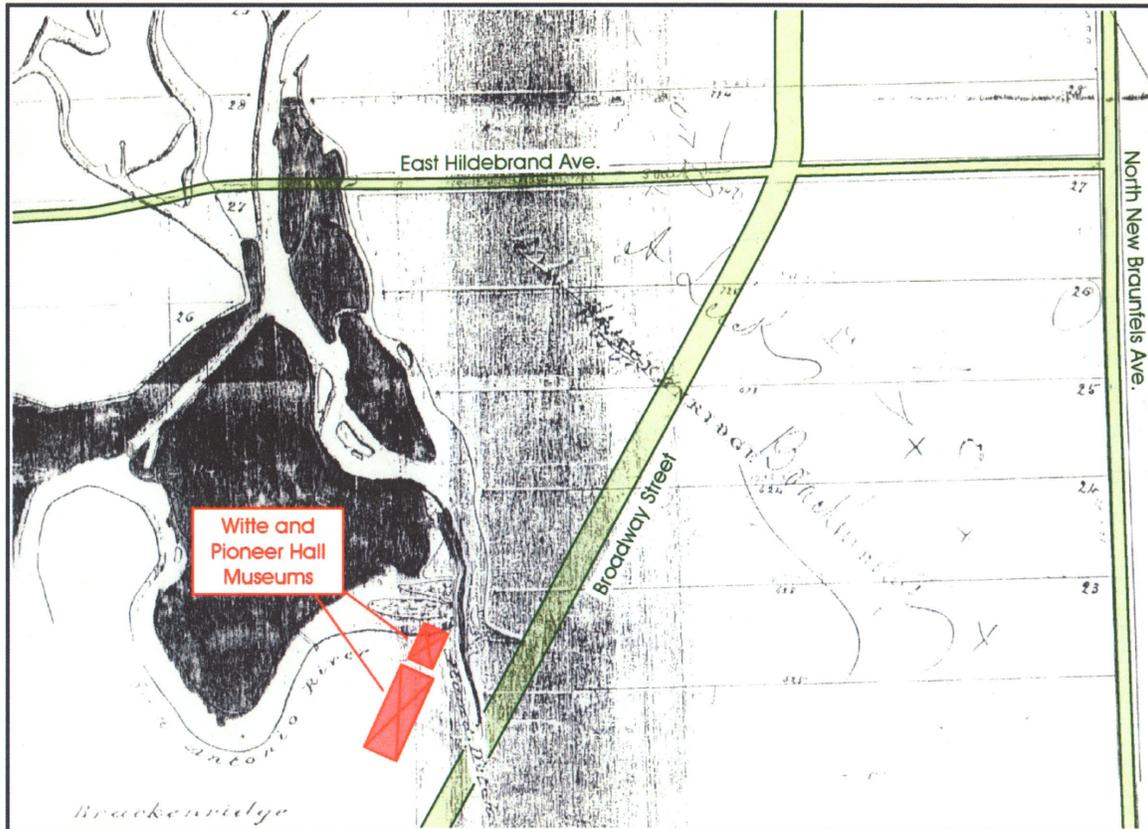


Figure 1-2. Map of the project area drawn by City Engineer Louis Giraud in 1879 showing the San Antonio River and the alignment of the Alamo Acequia and dam. Museum complex and selected streets added for reference.

Chapter 2: Previous Archaeology

The area surrounding the Witte Museum has undergone many archaeological investigations. Brackenridge Park, located on the opposite bank of the San Antonio River from the Witte, is rich with cultural resources providing valuable information of the occupation and use of the River throughout prehistoric and historic times. Archaeological work within the Brackenridge Park began as early as the late 1970s. CAR and the Texas Archeological Research Laboratory (TARL) conducted two of the largest investigations of Brackenridge Park in 1979.

Several archaeological surveys of the area have occurred since the early 1970s, though not early enough to fully document many sites that were destroyed due to the construction of Olmos Dam. During the 1920s and 30s, amateur archaeologist, C.D. Orchard recorded sites and collected artifacts. Orchard published much of his findings during the 1960s and 70s (Fox 1975: 3). Professional archaeological investigations were conducted near the current project area by the Center for Archaeological Research in 1975 (Fox 1975). This survey focused on documenting recorded and reported sites on the grounds of Incarnated Word College (known today as the University of the Incarnate Word). During the course of the project, twelve recorded sites were visited: 41BX289, 41BX282, 41BX283, 41BX284, 41BX285, 41BX286, 41BX287, 41BX288, 41BX24, 41BX290, 41BX291, and 41BX292. In addition to the twelve sites, Orchard identified the location of five areas that contained cultural remains prior to the construction activities at the Olmos Dam and Incarnate Word. These sites were not issued trinomials, but their locations were recorded on a sketch map of the area. Of the twelve sites recorded, eleven are located within a half mile radius of the current project area. Site 41BX288 is a prehistoric open campsite consisting of a scatter of burned rock and chert flakes. Site 41BX290 is a prehistoric open campsite characterized by the presence of burned rock, cores, and chert flakes. Site 41BX291 is a prehistoric open campsite that produced cores, debitage, and biface fragments, as well as a few historic artifacts. Site 41BX292 is a prehistoric open campsite exhibiting cores, debitage, burned rock, and biface fragments.

Near Olmos Dam, a cluster of prehistoric middens was identified and designated as Site 41BX24. The site is an open camp with a large midden. This midden yielded faunal remains, debitage, scrapers, gouges, and fragments of projectile points, as well as a couple of historic ceramic fragments. The site is approximately 250 meters in diameter, and is suspected to extend to the southern end of a crescent mound as observed by Orchard and Campbell (1954: 457-458). The majority of the site has been disturbed (Fox 1975:8).

Site 41BX283 is a historic quarry located on the University of the Incarnate Word grounds. The quarry is

rumored to have been first used during the Colonial Period, although no artifacts were noted to support the claim. The quarry does not appear to have been used prior to 1890. By 1938, it was abandoned. Located on the site was a metal frame bridge that was recommended for preservation (Fox 1975:4).

Site 41BX285 is also located on the University of the Incarnate Word grounds. This site consists of the remains of a stone foundation. There were likely several stone structures present at the site. C. D. Orchard recalled that he helped to tear down several rock houses in that location during the early 1900s. The stone foundation at the time of the recording of the site (1975) was partially obscured by a trash dump.

Site 41BX282, the San Antonio Springs (the Blue Hole), consists of an unidentified metal structure and pipes, as well as a concrete casing around the top of a natural spring located on the University of the Incarnate Word grounds. The spring is at the headwaters of the San Antonio River, west of Brackenridge Villa. The surrounding land was likely used as a campground prior to European contact. Historic military encampments were located in the vicinity of the springs during the early 19th century according to historical records; no cultural remains dating to this period have been located at the site (Fox 1975:4).

Site 41BX284 is a cut-stone structure across an un-named tributary of the San Antonio River on the grounds of the University of the Incarnate Word. According to local tradition, the structure was part of a mill, though the building would be considered very small at just 18 feet across. In addition to this, the current flow of the tributary would not provide enough energy.

Site 41BX287 is a possible historic dump located on the University of the Incarnate Word grounds. The dump contained glass, ceramic, burned rock, bricks, and metal fragments. The majority of the artifacts indicate a late 19th century temporal affiliation.

Site 41BX289, also known as Fernridge, is a historic house located on the grounds of the University of the Incarnate Word. The property was purchased by J. R. Sweet who constructed the East Wing in 1852. George W. Brackenridge later purchased Sweet's holdings, then built a three story addition to the structure in 1886. Each building episode is typical of the styles of the period. In 1872, Brackenridge offered the city of San Antonio the Sweet property, along with his other holdings, totaling 217 acres, for a sum of \$50,000. The city considered the offer for approximately two years before finally rejecting it due to the inability of both parties to negotiate a better price (Dunn 1975). In 1897, the Sisters of Charity of the Incarnate Word petitioned Brackenridge to sell them the parcel of land that contained the Fernridge structure. Brackenridge agreed, but only under the condition that they purchase his entire holdings, approximately 300 acres, for the sum of \$125,000. This was an amazing sum of money to the order, but

they accepted and utilized Fernridge as the convent until they were able to construct the Mother House (Ramsdell 1959:213). Today, the structure is known as Brackenridge Villa, and is used by the university as meeting space.

In 1976, the Incarnate Word College Archaeological Field School conducted test excavations at 41BX291. The field school ran for twenty three days during July and August of 1976. Ten 2x2 meter units were set up and two backhoe trenches were excavated. The excavations indicated a multi-component site with two major occupation episodes. The earlier episode dates to the Terminal Archaic (ca. 1750-1250 BP) and the later dates to the Late Prehistoric Period (ca. 1250-200 BP). Both occupations of the site were characterized by artifacts relating to short-term, repeated, hunting and gathering activities (Katz and Katz 1982).

During the last few weeks of December 1976, the Center for Archaeological Research conducted an archaeological and historical survey within the boundaries of Brackenridge Park. Four prehistoric sites were recorded. These included 41BX321, 41BX322, 41BX264, and 41BX323 (Katz and Fox 1979).

Site 41BX323, known as the Paddle Boat Site, exhibits a prehistoric component with debitage, burned rock, and a projectile point. The prehistoric component of the site was recorded as being “Neo-American” or Late Prehistoric in age. Recent excavations produced Leon Plain ware pottery from the upper levels of deposits (Figueroa and Dowling 2008). Site 41BX264 is a prehistoric lithic scatter that may have contained a burned rock midden. The construction of the Polo Field at Brackenridge Park likely destroyed the majority of the site. The area has since been leveled and is currently covered with grass; however, there is a possibility that parts of the site remain. Artifacts noted included cores, flakes, choppers, scrapers, burned rock, bifacial blanks and several projectile points—all indicating an Early to Middle Archaic subperiod. All four of the identified sites were partially destroyed and were deemed in danger of further destruction at the time of the survey in 1976. In addition to these recorded sites, eleven “collection localities” were noted that contained some prehistoric material, however, enough material was not recorded to warrant site designation(s) (Katz and Fox 1979).

Additional archaeological work on the grounds of the University of the Incarnate Word encountered a multi-component site, 41BX261, The prehistoric portion of the site is a possible lithic workshop dating to the Late Archaic. Artifacts encountered relating to the prehistoric sub-period included: biface fragments, chert flakes, blanks, preforms, cores, a fragment of Leon Plain ware, and two Late Archaic projectile points. The historic component of the site is a dump, possibly dating to the 1880s, that contained fragments of glass, metal, and historic ceramics (Stohtert 1989:82; THC 2008).

In June 1977, The Center for Archaeological Research conducted a pedestrian survey in the vicinity of the Olmos Dam. The survey was conducted to evaluate cultural deposits that might be affected by two proposed alternate roads through Olmos Basin. It was recommended that archaeological testing occur along the proposed routes (Brown 1977).

During November of 1977, the Center for Archaeological Research conducted archaeological testing just south of the Olmos Dam at 41BX291. The project resulted with the delineation of the northern boundary of the site, which extended north of the Incarnate Word property, into the Olmos Dam right-of-way. The site produced Paleo-Indian through Historic Period deposits.

In December of 1977, UTSA-CAR conducted test excavations at 41BX322. One unit was excavated to determine the content of the site and stratigraphic integrity of the deposits. The test unit indicated that the area was utilized as a temporary campsite. No temporally diagnostic materials were recovered. Therefore, no further investigations were recommended (Fox and Frkuska 1978).

The Center for Archaeological Research conducted archaeological investigations at portions of 41BX1 spanning December 1979 to May 1980. The project consisted of the excavation of backhoe trenches, block excavations, and documentation of *in situ* burials. Excavations revealed Middle Archaic and Late Archaic components, with a single Paleo-Indian point recovered from one excavation area. The excavation of the burials provided a wealth of information on the people, as well as insights into the burial practices of the Late Archaic sub-period (Lukowski 1988).

In October of 1997 and March of 1998, SWCA, Inc. Environmental Consultants conducted cultural resource investigations within Brackenridge Park (Miller et al. 1999). The purpose of the project was to test 41BX323 and investigate the Second Waterworks Canal prior to the installation of a proposed pipeline. SWCA recommended that 41BX323 either be avoided, or construction impacts mitigated. This was due to the potential the site had for producing information concerning the paleo-environment, prehistoric technology and subsistence patterns of the region. Also, because the proposed pipeline was to cross a portion of the Upper Labor Acequia, further investigations were recommended in that area. Cultural materials recovered during the SWCA investigation included lithic debitage and tools, ceramics, and faunal remains (Miller et al. 1999).

SWCA returned to 41BX323 in the fall and winter of 1998 to conduct additional archaeological excavations. Excavations were carried out along the proposed pipeline easement. The investigation produced Archaic deposits with intact burned rock features, and a shallow Late Prehistoric deposit along one terrace. The cultural deposits at the site appear to date primarily to the Early Archaic, with evidence

of occupation in the Late and Transitional Archaic sub-periods (Miller et al. 1999).

In 2001, SWCA returned to Brackenridge Park once more to conduct a survey of 28.3-acres of the park (Houk and Miller 2001). The western portion of the survey focused on 41BX323. Much of the site produced sparse cultural materials, though a concentration of burned rock, debitage and mussel shell were yielded along one section. The potential for the site to produce additional information about the prehistoric occupation of the area was once more recognized. Site 41BX323 was again recommended for further testing, if impacts were to occur within the site boundaries. In addition to visiting 41BX323, a previous unrecorded site was documented along the eastern portion of the project area. Site 41BX1425 was identified as a multi-component site with Transitional Archaic and historic components. The prehistoric component consisted of an Ensor point, burned rock, and debitage. The historic component is at or near the surface, and comprises of historic ceramics, glass fragments, and metal objects that date to the late 19th and 20th centuries (Houk and Miller 2001).

In September 2007, CAR conducted archaeological investigations at 41BX323 consisting of both a pedestrian survey and controlled excavation of test units and trenches. Two components were noted during the investigations along the eastern margin of the site. One component is Late Prehistoric in age, while the deeper deposit may be Early Archaic; however, the absence of temporally diagnostic artifacts makes positive assignment it to this time period impossible (Figueroa and Dowling 2008).

Site 41BX170 is a historic site consisting of the outline of a lime kiln and remnants of stone foundations. Historic artifacts including fragments of a large ceramic pot and glass were noted when the site was recorded in 1994 (THC 2008).

Meskill and Frederick (1995) conducted archaeological testing at the Witte Museum. The work was conducted prior to the construction of the new science building that was to be located on an area previously recorded as part of 41BX323. Two backhoe trenches were excavated in the area down to the water table. Diagnostic material was not recovered from the trenches, though the excavators did note the presence of debitage, charcoal and burned rock. Historic ceramics were also noted within the trenches and consisted of fragments of white earthenware, stoneware, and porcelain. In addition to ceramic, other historic items included: wire nails, window glass, bottle caps and other metal artifact fragments. A hearth-like feature was encountered in one of the trenches.

Additional testing was recommended prior to the construction of the H-E-B Treehouse located on the grounds of The Witte Museum. In 2000, twenty-three test units were excavated to examine the prehistoric component of the site. During fieldwork, three Archaic Period features were encountered in

test units. Despite natural erosion and bio-turbation affecting the integrity of the deposits, the site still provided insights into the utilization of the San Antonio River during the Archaic Period (Meskill et al. 2000).

In 1996, a portion of the Upper Labor Acequia was exposed in Brackenridge Park prompting the Parks and Recreation Department of the City of San Antonio to contract with CAR to investigate the feature. A prehistoric component was revealed during the investigation, located approximately 120 cm below the current surface (Cox et al. 1999). The prehistoric component consisted of lithic debitage. During the course of the investigation, Site 41BX1273 was identified and documented as the location of the Upper Labor Dam, a dam constructed of limestone blocks in 1776 by Spanish colonists. Its function was to divert water from the river to the Upper Labor Acequia. The dam was modified with dressed stone during the 19th century, and set at a slightly different orientation.

Chapter 3: Historical Background

by

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Spanish Origins

These rich archaeological deposits attest to the areas desirability as a camping place wherein Native Americans found both abundant water and shelter. The oasis-like environment of the San Antonio River and San Pedro Creek, located west of Brackenridge Park, attracted Spanish expeditions traveling through the region in the late seventeenth and early eighteenth centuries. On June 13, 1691, a group led by Domingo Terán de los Rios and Father Damian Massanet arrived at a Payaya Indian village named Yanaguana. Because the explorers arrived on the feast day of St. Anthony, they called the place San Antonio de Padua. The location of Yanaguana is not known.

Shortly after their arrival, the Spanish began to construct an elaborate system of hand-dug ditches (*acequias*) designed to carry water from the San Antonio River and San Pedro Creek for both domestic and agricultural use. Two of these *acequias*—the *Acequia Madre* and *Acequia Labor de Arriba* (Upper Labor Acequia) flowed from the river located within modern day Brackenridge Park.

A permanent settlement comprised of Mission San Antonio de Valero and the Villa de Bexar was established in the spring of 1718 by the governor of Texas, Martín de Alarcón and a small group of priests, soldiers, and families. The mission was situated west of the river, with the villa a short distance away on San Pedro Creek. Raids by Lipan Apaches soon threatened the villa and mission, and they were moved south to more protected areas in what is present day downtown San Antonio (de la Teja 1995: 8-9).

Civilian, military and religious settlers were joined in 1731 by sixteen Canary Island families sent by the King of Spain to establish a permanent municipality. As the community grew, its residents were often at odds over control of land and water. These internal disputes ultimately shaped the area that became Brackenridge Park.

The *Acequia Madre* (1719-20) originated on the river's east bank just above present day Pioneer Hall. The course ran south, irrigating the lands of Mission San Antonio de Valero, then returned to the river below the mission (Figure 3-1). It had numerous returns, or "*desagues*," along this path where water

returned to the main channel of the river. The land between the river and the main ditch was controlled by the mission. It was not until after the mission's secularization in 1793 that these fields were granted to individual owners, notably to the Adaesanos who had relocated to San Antonio when the Presidio de los Adaes was abandoned in 1773.

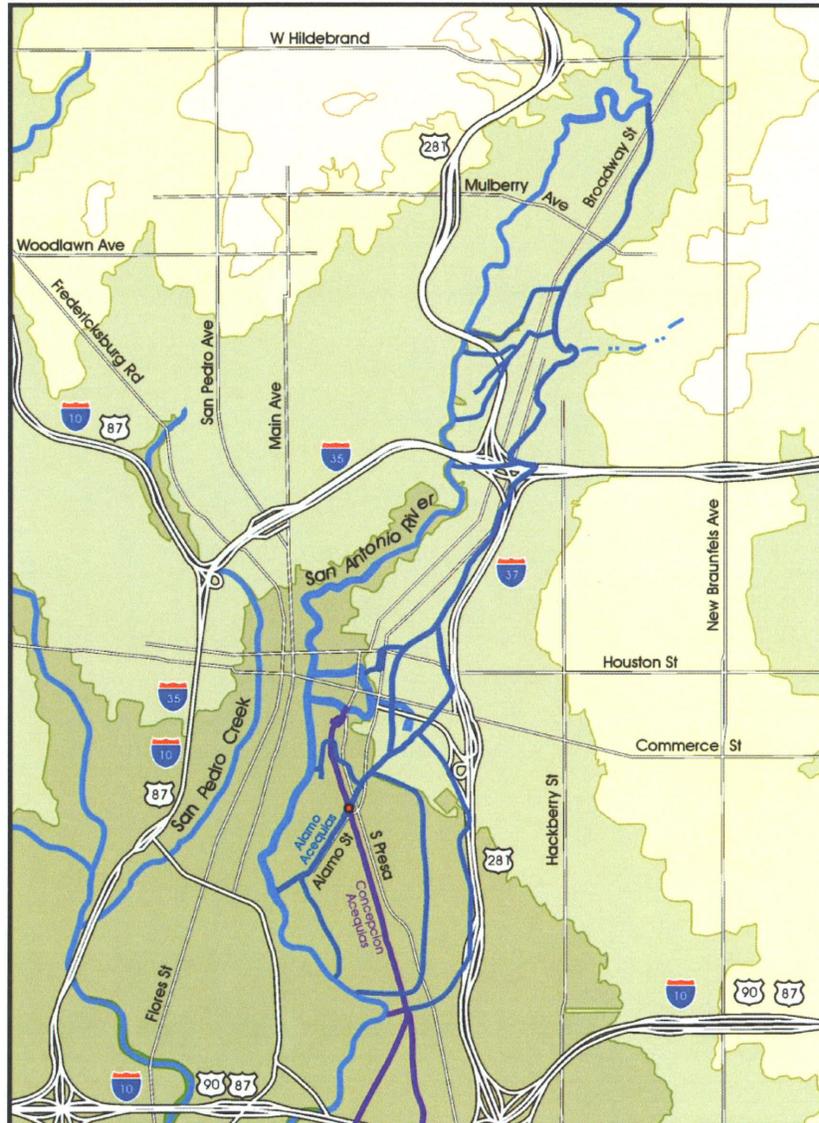


Figure 3-1. Map of the Alamo Acequia (Acequia Madre) and its recorded desagues.

The portion of the “Adaesanos farm” lying within Brackenridge Park was granted to Vicente Flores and José Antonio de la Garza. The Flores’ property at the north end of the park included the head gate of the *Acequia Madre* where the ditch left the San Antonio River. The *Acequia Madre* had at least two head gates over the span of its history. The first head gate fell into disrepair. Its replacement consisted of

placing a subsequent gate behind the first, then filling the gap in with cement.

To the south, the de la Garza property included a return or waste channel of the *Acequia Madre* that joined to the river at the south of the park. Much of the Flores and de la Garza land remained family-owned until the mid-nineteenth century (de la Teja 1996: 83-84).

By the 1760s, serious consideration was given to building an *acequia* to irrigate the land to the west of the river to San Pedro Creek. The area became known as the “upper farm”—formally named Nuestra Señora de los Dolores (Our Lady of Sorrows). The Upper Labor *acequia* (1776-78) branched from the river’s west bank within the park to just below present day Hildebrand Avenue. Twenty-six long, narrow parcels (*suertes*) running from the *acequia* to the river, were awarded in the late 1770s to those who financed the ditch. The northernmost parcels were retained by the city and not sold until the nineteenth century. Other land west of the Upper Labor ditch (within today’s park boundaries), was retained by the city. This portion has remained publicly owned since the Spanish era (de la Teja: 1996; 80-83).

The Upper Labor dam was partially excavated and documented in the 1990s during park renovation. The *acequia* channel is still visible within the park and its zoological garden. Though portions of the *Acequia Madre* outside the park have been documented, the dam and channel within the park had not been excavated until the current project.

Acequia Madre (41BX8)

The *Acequia Madre* (41BX8) is the name given to the irrigation ditch that had its head gates located on the current grounds of the Witte Museum. The *Acequia Madre* is one of the oldest *acequias* established in the San Antonio area. The location and path of the *acequia*, as with all *acequias*, was carefully planned and executed. For the construction of the *Acequia Madre*, the head gate had to be placed in a location along the San Antonio River where rising and diverting water into the *acequia* channel would be relatively easy. It is highly likely that the engineer of the early *acequias* in San Antonio was Captain Álvarez Barreiro. Captain Barreiro was a member of the Royal Corps of Engineers and accompanied Governor Alarcón to San Antonio. The construction of the *Acequia Madre* commenced in 1719. The ditch was considered massive, although it was said to have not required much effort to construct in its northern area due to the natural topography of the region. The *acequia* ran past Mission San Antonio de Valero, then re-entered the river at about a mile and a half south of the mission. The completed *acequia* was located approximately 3.5 miles from the head gates. Considering later additions and the many branches along the route, the *acequia’s* length total length was approximately 10 miles. Additions were constructed to irrigate farmlands located to the south and east of the mission (Cox 2005).

The exact date of the completion of the *Acequia Madre* unknown. Nonetheless, upon the basis of several accounts in the Spanish Colonial records, indication is that it took years to complete. In 1720, records noted that increased attacks from the Apaches caused work on the *acequia* to halt while Mission Valero was being fortified. A hurricane struck the San Antonio area in 1824, and accounts mentioned that the *acequia* was still under construction. It seems that at this time, the equipment employed in the construction of the *acequia* had changed from a simple plow to the cut of crowbars (Cox 2005). The Aguayo Map (Figure 3-2) drawn in the late 1720s shows that the *Acequia Madre* was completed up to Mission Valero, and possibly up to a portion of town near Villa de San Antonio de Bexar, but at this time, it did not re-enter the river in the area of the present day King William District (Schuetz 1970).

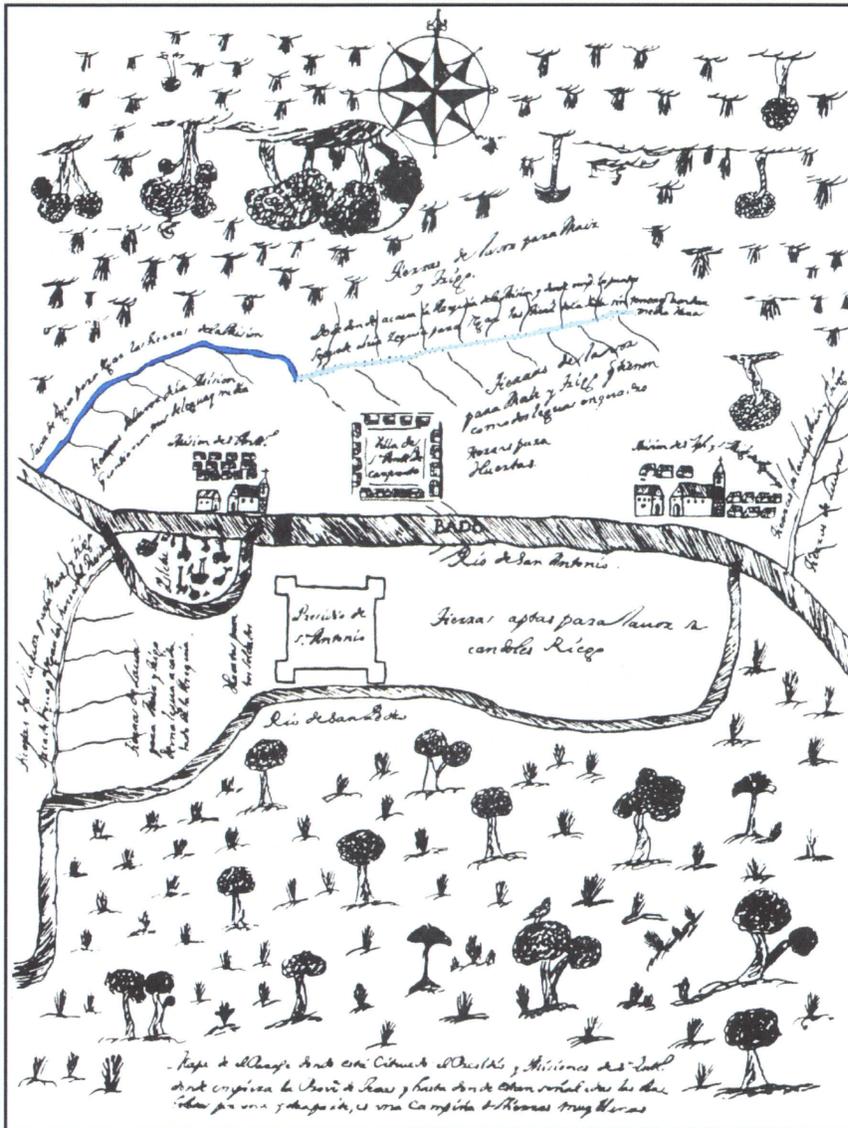


Figure 3-2. The Aguayo map depicting San Antonio in the 1720s. The completed portion of the *Acequia Madre* is highlighted in dark blue while a proposed extension of the acequia is depicted in light blue.

The 1764 map drawn by Menchaca (Figure 3-3), illustrates that the *Acequia Madre* led to Mission Valero. On this map, the path south of the mission was depicted with a dotted line (Schuetz 1970).

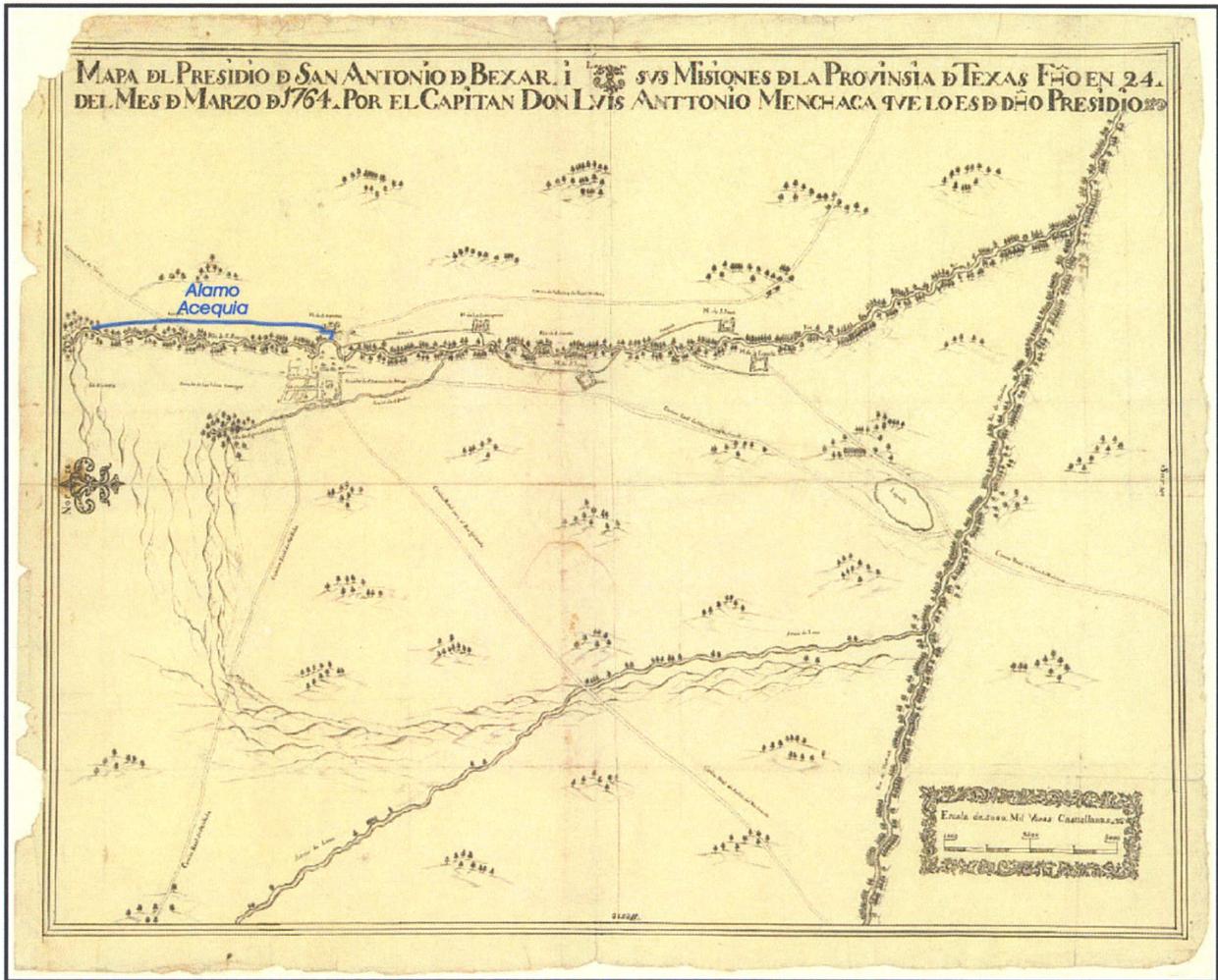


Figure 3-3. The Antonio Menchaca map showing San Antonio de Béxar in 1764.

The purpose of *Acequia Madre* was intended to serve solely the lands of Mission Valero and its native inhabitants. The *acequia* irrigated the crop lands associated with the mission, providing a water source to the mission itself as well as to the livestock on its ranchlands and corrals. The *acequia* also served as the main water source for the community that sprang up immediately surrounding the mission. The remaining community of San Fernando de Bexar and Villa de Bexar were serviced by the San Pedro Acequia that was constructed after the arrival of the Canary Islanders in 1731(Glick 1972). The *Acequia Madre* continued to serve Mission Valero and the adjacent community throughout the entirety of the mission period.

The process of the *dula* (turn) appears to have been put into effect by the 1740s. The use of the water

from the *acequia* was allotted into time slots, with each inhabitant receiving a set time of water use per cycle. This was designed as a fair way of distributing water throughout the route of the *acequias*, however, many disputes between the townspeople and mission inhabitants were recorded during these early years. Council documents in 1747 indicate that each *dula* lasted about four days for the labors, and one day for the town (Glick 1972). One person had to be elected to manage the division of time every fifth day for the town. That person would have to determine whose gates could be open and for how long to ensure that all the townspeople along the path of the *acequia* would receive their fair share (Glick 1972). Secularization of the mission in 1794 paved the way for additional usage and changes to the *acequia* in the next few decades, although it appears that the system of the *dula* continued even after the mission lands were parceled out.

After secularization, committees were formed that set forth the rules and regulations of the usage of the *acequias*. Mexico gained independence from Spain in 1821, though political turmoil did not stop the everyday functioning of the city of San Antonio or the needs of the community when it came to water allotments. During meetings, the town council would often bring up issues concerning the use and upkeep of the *acequias*. As early as 1828, proposals of closing certain *acequias* were brought before the council. The Concepción Acequia was recommended for closure at its head gates, with a proposal to be connected with the *Acequia Madre* to serve farmlands south of the *Acequia Madre*. This proposal was brought to the council because the Concepción Dam could not perform during times of heavy rains, and the erosion caused threatened the integrity of roads leading into the lower missions. A committee was formed to investigate the ditch as well as the potential for connecting it with the *Acequia Madre*, and to determine what would be the best solution. After several years, although no formal solution was found, the city council required that the landholders along the Concepción Acequia be delegated the responsibility to keeping the dam and ditch in working order and to determine a way to stop the erosion (Cox 2005).

By the fall of 1834, a cholera epidemic was in full swing in San Antonio. Citizens did not realize that the disease was spread through contaminated water nor that the main culprit was the *acequia* system. The death toll was not fully recorded, but by October of that year, many had died of the disease.

The following year, unrest in the region occurred once more. In 1835, General Cos occupied San Antonio and worked to fortify Mission Valero, which was now called The Alamo. The *Acequia Madre* originally ran through the mission compound and had supplied the inhabitants with water throughout the mission period. General Cos worried about the possibility of enemy troops contaminating the water supply to the north of The Alamo, and ordered that the *acequia* be diverted to flow outside of the Alamo complex. A

well was dug within the compound to supply soldiers with water from that point on (Cox 2005).

After Texas won its independence from Mexico, the same ordinances were followed until a new government was set up that could handle the needs of the new territory and its communities. In San Antonio, by March of 1838, a council was set up that decided the new regulations regarding the use of the *acequias*. The need to improve the sanitation of the irrigation ditches and the river were the main impetus for these new regulations. The main tenets of these regulations were that there would be no slaughtering of animals within the city limits, or in areas that would contaminate either the *acequias* or the creeks to the north of the city. In addition, the council decided that the owners of the parcels of land along the *acequias* still needed to maintain them as set forth prior in the ordinances of the Spanish Colonial Period.

Beginning in 1840, discussion of widening the *acequias* was brought before the council. The idea was quickly tabled due to a Comanche attack on San Antonio, but it illustrates a precedent for altering the *acequias* were a concern at this time. A few years later, due to the influx of European immigrants, review of the ordinances concerning the use of the *acequia* were revisited.

German immigration into San Antonio led to a change in the appearance of the *acequias*. Portions were stone-lined by the German occupants. A portion of the *Acequia Madre* that ran through the developed part of town in the 19th Century was lined with cut limestone. Evidence of this was found during the 1966 excavations that resulted after the demolition structures in preparation of the Hemis Fair. Additional excavations were conducted in 1983 within Hemisfair Plaza. Excavations were revisited in 1989. A portion of the stone-lined *Acequia Madre* within Hemisfair Park was excavated in 1966 and restored. Artifacts recovered during these excavations indicated that the *acequia* was kept clean and in working order during the Spanish Colonial period. The material recovered from the investigation dated to the late 19th and early 20th centuries, coinciding with the closure of the *Acequia Madre*.

In December of 1968, another portion of the *Acequia Madre* was uncovered in association with the Zilker Property, located approximately two blocks northeast of Mission Valero. This section of the *acequia* was also lined with cut limestone. The property had been a pastureland during the Spanish Colonial period, and was portioned into a city lot during the city survey in 1852 (Schuetz 1970). Although the property was owned by the Charles Zilker, it appears that he did not purchase the parcel until 1909, after the closure of the *Acequia Madre*. It is likely that the lining of the ditch occurred after the parcel of land was sold in 1852.

A torrential rainstorm that occurred on March 26, 1865 caused much flooding throughout the developed portion of the city. After the clean-up of the damage all the flooding caused, the issue of flood prevention

became a hot topic at the city council meetings. At this time, it was suggested to create another branch off of the *Acequia Madre* to bring water to the east side of San Antonio. A committee met at the Alamo Dam to inspect the possibility of adding the branch. The dam was described as being in good condition with little repairs necessary. A few suggested changes to the dam were thought to be sufficient to allow for enough of the river flow into the *Acequia Madre* and into the newly proposed ditch.

The committee reviewed the head-gates and the channel of the *acequia* itself during this meeting as well. The head gate at the time was said to be in good condition, needing only minor repair. It was reported as being "...a double gate, about eight feet in width and six feet in depth" (Cox 2005). The committee stated that about four feet of water was being held back within the gate. This was ascertained at the time for the annual cleaning and therefore, the gate was closed. Additional observations included that the gate needed to only be opened about a third of the way to supply the ditch with sufficient water, or else it would overflow the banks of the *acequia*.

The proposed new ditch was approved by the council, but the drive to construct the ditch never reached full momentum. Even a year after the 1865 meeting, the new ditch was not under construction. The idea was revived again four years later, though at this time a different location was suggested (Cox 2005). The *Acequia Madre* did not undergo any changes at that time.

The water works system that was put into use in 1878 led to the need to reassess the necessity and sanitation of the *acequias* in San Antonio. Drinking water was no longer obtained from *acequias*, and they were functioning for the most part as storm drainages soon after the water works was constructed. The ditch commissioner was tasked to investigate the subject to determine how much it would cost to keep the *acequias* working and whether this was necessary. In 1880, the *Acequia Madre* was noted as needing the head gates repaired. The gate at the Brackenridge location was recommended to be augmented with a second gate placed about a foot behind the existing wall and cement was to fill the space between (Cox 2005). In addition, it was noted that the banks of the *Acequia Madre* were overflowing and flooding fields. To remedy that, the council suggested that "heavy banks of earth be thrown up, using lumber also where the weakest points are" (Cox 2005).

By the 1890s, the need for city *acequias* was no longer necessary. By this time, they posed more of a health hazard, and the expense to up keep the ditches led the council to start closing the ditches. The *Acequia Madre* was ordered to be closed in 1901. Citizens argued that the *acequia* was a much needed outlet for storm water, but the council won out and the ditch was closed at a cost of \$2,800. Shortly afterward, the closure of the *Acequia Madre* led to drainage problems. The storm water would pool in

areas along the path of the ditch, and flood city streets. The ditch was ordered to be re-opened in 1903. Plans were made at this point to improve the drainage in areas that would reduce the flooding to both the *acequia* and roads.

In 1905, the *Acequia Madre* was ordered to be closed once more. It was estimated that it would cost approximately \$2,000 to fill the ditch, but an alderman at the time came up with a different plan. He suggested that the ditch be filled with street sweepings which would dramatically reduce the cost to close the ditch. By mid-1905, the *Acequia Madre* was closed for the final time (Cox 2005). Though the *acequia* was closed, the path of the ditch was noted on several maps of the area that were drawn after 1905. These maps, plus ones that were drawn in the mid to late 1800s, were used to help determine the path of the *acequia* on the Witte grounds (Figure 3-4).

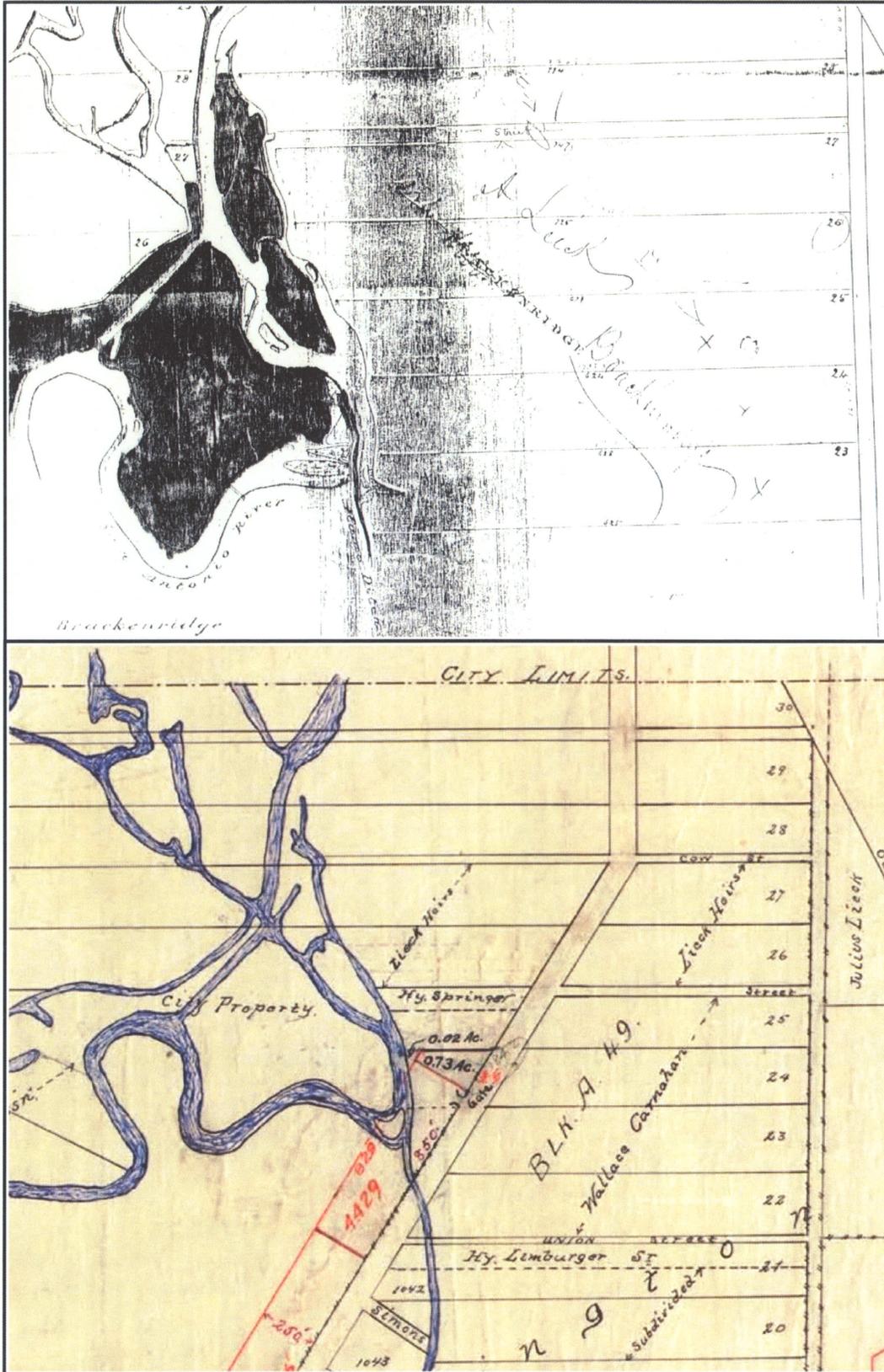


Figure 3-4. The 1879 Giraud map (top) compared to the 1908 City Engineer map (bottom) showing the area of the headwaters of the Acequia Madre.

19th Century San Antonio

Initiated by the unrest that brewed between Texas and Mexico, much change occurred throughout San Antonio during the 19th Century. After the Texans gained their independence, San Antonio witnessed an influx of people that helped to shape cultural and physical landscape of the growing town.

Though plans were entertained in 1828 to change the *Acequia Madre* to be able to irrigate additional crop-land, it never came to fruition. Initial ideas were to create a new ditch at the Alamo Dam to service the area between Alamo City and Powderhouse Hill (Cox 2005). Plans appeared to stall, until the idea was taken back up in again 1867. A study was conducted of the current *Acequia Madre* and the Alamo Dam to determine if the creation of a new ditch was possible. The cause gained momentum, with City Council approving the proposed route. Within a year, though, it appeared that the plans of altering the *acequia* died. No work was ever completed on the proposed alterations of the *Acequia Madre*.

Brackenridge Park remained a rural, agricultural area with scattered dwellings until after Texas joined the Union in 1846. The river and Spanish-built *acequias* continued to provide water for farmers and households. Travelers passed east and west of the park on roads leading to Austin and Fredericksburg and land to the north was used for farming and ranching.

San Antonio grew from 3,488 to 12,256 residents between 1850 and 1870. The demands of this growing population ultimately led to the park's transformation from irrigated farmland to industrial and commercial uses. This process began in the early 1850s, and accelerated during and after the Civil War.

In the early years of statehood, the City Council planned to sell surplus tracts of city-owned property to meet its growing budgetary needs. Because records of the original town tract boundaries had been lost, the city entered into a lawsuit to re-establish its claims and hired Francois Giraud to complete a new survey of the town tract. Land sales finally began in 1852.

The majority of land comprising Brackenridge Park was already privately owned, but the 1852 land sale included property immediately to the north and east where springs forming the San Antonio River were located. The "head of the river" as it came to be called was purchased by city alderman, James Sweet. Seventeen years later, it was acquired by George W. Brackenridge.

George Brackenridge moved to San Antonio in late 1865. His success as a cotton trader during the Civil War and his connections with political and business leaders both statewide and nationally served him well. In early 1866, Brackenridge established the San Antonio National Bank that became the foundation

of his extensive business holdings. Three years later, he purchased a 108-acre tract and antebellum home at the head of the San Antonio River. Because the word “bracken” is the Scottish word for “fern,” Brackenridge named his new home “Fernridge.” (Sibley 1973:91).

The property acquired by Brackenridge contained springs that formed the river and fed the city’s two major *acequias* a short distance to the south. The “head of the river” had remained city-owned until 1852 when it was acquired by James Sweet at the auction of public lands. The sale was controversial—not only was the city’s main water supply sold to a private owner, but the owner was a sitting city alderman.

The transfer of the river’s headwaters from public to private control was still remembered by locals when, in the aftermath of the cholera epidemic of 1866, local physicians argued for construction of a safe municipal water system. Progress on this issue was slowed by Reconstructionist politics and an overall lack of public support.

A local newspaper began campaigning for repurchase of the head of the river property in 1872, leading the city to begin negotiations with George Brackenridge. A \$50,000 contract was accepted by the City Council, but after public outcry over Brackenridge’s potential profit, the sale was eventually voided in April 1872, and he retained control of the headwaters (Sibley 1973: 128-130; CCM D:36-37).

The city had failed to reacquire the headwaters and was not making progress in establishing a public water system. It was in this context that George Brackenridge began to purchase additional riverfront land. Though his motives are not proven, he was likely positioning himself to play a key role in the future water system.

George Brackenridge acquired four of the upper five lots in the tannery tract west of, and adjoining the river in 1875, and purchased the fifth lot in 1881. Brackenridge made his most significant purchase in June 1876, when he and his brother, John, paid Mary A. Maverick \$25,000 for a wooded 200-acre tract on the east side of the river that ran from the head gate of the *Acequia Madre* ditch south to the property owned by Francois Guilbeau. The land was bounded on both the west and north by the river and on the east by the *Acequia Madre* (BCDR 4:473; BCDR 25:612).

The 200-acre tract had been acquired in Mary Maverick’s name in June 1843 shortly after her husband, Texas Declaration of Independence signer, Samuel A. Maverick, returned to Texas after being held for seven months in Perote prison. Mary Maverick wrote in her diary, “In June, and again in September, Mr. Maverick visited San Antonio—to attend to court and land business.” It was apparently during his June trip that Maverick purchased the property at auction for the high bid of \$267 and placed it in his wife’s

name (BCDR B2: 162; Maverick 1921: 78-81). The Maverick's land remained largely undeveloped, and was probably used for farming during their thirty-two year ownership. A lease signed only six months before the property was acquired by George and John Brackenridge, provides a glimpse of the property and its use. The lessee, M.M. Morales, was to maintain the irrigation ditches and protect the pecan, walnut, oak and elm trees. Mr. Morales was allowed to cultivate and harvest crops in addition to the sugar cane that was already growing on the property (BCDR 4:470).

George Brackenridge's Water Works Company donated 199 acres of riverfront land to the City of San Antonio for use as a park. The gift, accepted by the City Council on December 4, 1899, was celebrated by newspapers in both *The San Antonio Light* and *Daily Express*.

This place [sic] of property is one of the loveliest pieces of land of Texas and for beauty is unrivaled. It is the largest natural park in the south controlled by a city, its scenery back on the river bank being unsurpassed (*San Antonio Light* Nov 7, 1899).

Outside of Fairmount Park in Philadelphia, there is probably no city park that is in any way comparable to it (*San Antonio Daily Express* Nov 11, 1899).

The gift of the Water Works property was generous, but tightly constrained by reservations and restrictions. These caveats were at least partially attributable to years of distrust between Brackenridge and the city over financial dealings. The Water Works Company retained a 250-foot wide strip running the length of the property along the west side of River Avenue, and a 25-foot strip along each side of the river and the east bank of the Upper Labor ditch. The company retained full control of ingress and egress to the park as well as to the banks of the river and *acequia*. A fence was built around the park and access was restricted to two locations. Perhaps most notably, the bequest was restricted by its prohibition of the sale or consumption of alcoholic beverages in the park (BCDR 185:183; CCM N: 284, 291, 304-305). The issue of access remained unresolved until after Brackenridge sold the Water Works in 1906.

The use of the *acequias* in San Antonio to supply water to its inhabitants began to decline about the turn of the century. Several cholera epidemics, the constant need to repair the *acequias*, and the fact that people were using them to discard trash and sewage making them unclean, encouraged city officials to work to close them. Between 1899 and 1901, the *Acequia Madre* came under attack. Because it was too narrow to contain the storm water and act as a proper drainage. In 1901, it was decided to close the *Acequia Madre*, and \$2,800 was allotted to fill the ditch. Though the ditch was filled, it ended up causing additional problems within the next few years. Storm water pooled in the streets, making some areas impassable. In 1903, the ditch was ordered to be reopened. The *Acequia Madre* remained open until

1905, when it was ordered closed again. Street sweepings were used to fill the ditch, which was not opened again (Cox 2005).

The Witte Museum: 1926

San Antonio did not have a public museum by the middle 1920s when museum advocates convinced city commissioners to build such a facility in San Pedro Park. Ground was broken on September 22, 1925, just two days before local businessman Alfred G. Witte died and left an unusual bequest. Witte gave the city \$75,000 to construct a museum of art, science and natural history to be built in Brackenridge Park and named for his parents. Construction halted at the San Pedro Park site, whereby museum proponents, the mayor, and Ray Lambert set out to find a new location in Brackenridge Park.

The new museum site was located between the river and Broadway at the “third entrance” to the park—today’s Tuleta Drive. The vacant property, located to the south of where the *Acequia Madre* left the river, had been part of the 200-acre tract sold by Mary Maverick to George Brackenridge in 1876. It was acquired by the city from the Water Works Company in 1908 as part of the settlement for access to Brackenridge Park. Architects Ayres and Ayres moved building materials to the Brackenridge Park site, enlarged the building plan, and began construction. The museum opened to the public on October 8, 1926.

The Witte Museum has been expanded and remodeled several times since 1926. An extensive remodeling in 1962 altered the original façade designed by Ayres and Ayres (Figure 3-5).



Figure 3-5. *The Witte Museum.*

Three historic structures stand behind the museum, near the river. These buildings, originally located in downtown San Antonio, were preserved from demolition and relocated to the museum grounds in the 1940s through the efforts of local preservationists. They are: John Twohig house- relocated in 1942 (Figure 3-6); Francisco Ruiz house- relocated in 1943 (Figure 3-7); and Celso Navarro house- relocated in 1947 (Figure 3-8).



Figure 3-6. *The Twohig House.*



Figure 3-7. *The Ruiz House.*



Figure 3-8. *The Navarro House.*

The H-E-B Science Treehouse was constructed behind the museum along the river during the 1990s. In 2008, the Onderdonk family's art studio was relocated to the grounds from the Monte Vista National Register Historic District.

In 2008, Pioneer Hall housed exhibits of the Texas pioneers and trail drivers' associations. The building is included in the Witte Museum master plan and will be used as the South Texas Heritage Center.

The Reptile Garden

The reptile garden is located to the north of the current Pioneer Hall near what may be the location of the *Acequia Madre* head-gate. The once-popular attraction was originally opened by the Witte Museum to provide additional income during the Depression. In early 1933, the idea of beginning a reptile exhibit and research facility was brought before the director of the Witte by W. A. Bevan. The prior year, funds for museum maintenance had been withdrawn, leaving the Witte to have to fend for itself. The idea of establishing a new exhibit that would attract visitors was hard to pass up. At the time the idea was brought to attention, the Witte had a total of \$2.45 in the treasury.

In May of 1933, the Reptile Garden and Research Bureau was authorized by the City of San Antonio to operate at a location approximately 70 feet north of the Witte Memorial Museum. The location was described as being:

70 feet north of the northeast corner of the Witte Museum following north and northwestern boundary of the road to the northern entrance to Brackenridge Park and on

to the south or southwestern line of the ditch leading from Broadway to the San Antonio River, then along the southwestern boundary of the ditch to the southeastern band from the San Antonio River, then in a southwesterly direction along a line parallel to Broadway to where said line intersects with the road circling the Witte Museum. (Witte Museum Files)

It is possible that the ditch referred to in the description is the *Acequia Madre*. Topographical maps created in the 1930s indicate that a low spot ran through the finished Reptile Garden supporting the idea that the *acequia* once ran through this area.

At its first location, The Reptile Garden was constructed in approximately three weeks (Figure 3-9).



Figure 3-9. View of the Witte grounds in the 1930s after a flood. The Reptile Garden is in the background. This is likely the first location.

The cost of the facility's construction was \$500. On June 9, 1933, the facility was opened to the public with an elaborate opening ceremony. Eight hundred people were in attendance, though this number did not include the people who were not allowed inside due to lack of space. The opening lasted well into the night, with 600 snakes being released into the enclosure. During the evening of the opening, several snakes found an opening in the fencing and tried to escape. The problem was identified and remedied before the morning the next day. The popularity of the Reptile Garden was evident in the number of attendees the first night and during the remainder of the first week. The Reptile Garden collected enough entrance fees (admittance was 10 ¢) during that first week to pay for the construction of the facility and the salaries of the Garden operators. Enough was left over to put towards the museum employee salaries (Quillin n.d.).

The Reptile Garden aided not only the Museum itself by bringing in enough revenue during the Great Depression to keep afloat, but it also provided a valuable resource to the public. Reptiles that were displayed at the Garden were supplied by the public. People who were in desperate need to earn some money would collect live snakes and alligators. The Garden would pay by the pound or foot for the reptiles. The price ranged between 15 and 25¢ per pound for rattlesnake, 10¢ per pound for water snakes, and 50¢ per foot for alligators (Huddleston 2005). Many people were able to rid their properties of the nuisance, while earning some money for necessities during a rough time. One farmer commented: "Five dozen eggs brought me sixty cents, and the rattlesnake I caught in the coop brought seventy-five cents" (Quillin n.d.). People would sometimes go to great lengths to get their snakes to the Garden. One man wrapped the tails of the rattlesnakes he caught in cotton, then packed them in a suitcase and took a bus to San Antonio from South Texas. The 35 snakes he brought were worth \$19.75 (*San Antonio Light* 1942).

With the impending construction of the Pioneer Hall, the Reptile Garden began to make some changes in 1937. First, the curator's house was moved to the northeast side of the Garden in early February. The house was remodeled at this time. Towards the end of the year, the Reptile Garden was torn down and rebuilt at a new location to the northeast of the Pioneer Hall. Much of the movement was chronicled in the local newspapers due to the inability of the Witte and members of the Trail Drivers Memorial Association to agree on the Pioneer Hall design. The need for a service drive to the Hall caused the most problems. Early designs had the drive running right through the center of the Reptile Garden. Park Commissioner Rubiola delayed any final decisions on the design until the Hall was completed. It appears at that time, the best solution was to move the Garden.

Late in 1938, discussions of creating a more permanent, rock facility started. The Reptile Garden at that point was a wooden structure that was smaller than its original incarnation (Figure 3-10). The Trail Drivers Memorial Association (TDMA), one of the groups associated with Pioneer Hall, took the opportunity to fight the relocation and reopening of the Reptile Garden.



Figure 3-10. *The second location of the Reptile Garden.*

Over the next year, the members of the Witte Board and members of TDMA fought over the Garden. Initially, many of the plans would have resulted in the Reptile Garden being reduced by 50%. Quillin, the Witte Director, adamantly fought against this. She felt that the Garden provided a valuable resource to the community. Ultimately, the Garden was relocated once more, to the final location further north of the Pioneer Hall, and just south of the channel coming off of the San Antonio River. Located behind the facility was an alligator pond that had to be filled in when the Garden moved. This pond had apparently become unsightly due to stagnant water, and the proposal during the planning for the new Garden stated that the pond was to be “filled in and beautified” (*San Antonio Express* Sept 9,1937). The third Reptile Garden was constructed of rock by members of the local National Youth Administration (NYA). The NYA was a New Deal program that aimed at giving work to local youths and was intended to teach them marketable skills.

Starting in 1934, to add to the draw, the Reptile Garden started offering snake fries after the show on Sundays. For the 10¢ admission, you were treated to the snake handling show, and then served a snake sandwich (a piece of fried rattlesnake between slices of bread). It became a regular stop for military families, and groups would come from all around just to see the show. The operators of the show were

unsure if the snake fry would be accepted by the public. They did some advertising prior to the first fry, but also hired four “stooges” to eat the rattlesnake in front of the crowd to prove that it was edible and allay any fears. The public took to the snake fry like crazy. It was an oddity to eat the snake meat, and people from all over and of varying social classes came to give it a try (Quillin n.d.). The snake fries continued for the next sixteen years. The last snake fry was held on September 14, 1950 (Huddleston 2005).

In addition to the snake fries, the snake show added snake “milking” to their repertoire. The snakes were milked for their venom in front of the crowds. Not only did this make for a good spectacle, but it led to experimentation and publicity for the Garden in the scientific world. Several scientists became regulars at the Garden to study the venom and work on the creation of anti-venom. Large leaps were made in the ability to treat people bitten by poisonous snakes (Quillin n.d.).

During the mid-1940s, the operation of the Reptile Garden fell away from the Witte. The Witte Museum leased the property to several different operators until the 1970s. Early leases indicated that the lease had to pay the Witte a portion (50%) of the gate fees. Later contracts relied on a set fee for the operator. The Reptile Garden, which was referred to as the Alligator Garden in later years, was closed to the public in 1975 (Figure 3-11).



Figure 3-11. *The final Reptile Garden prior to the removal of the roof.*

During the 1980s and 1990s, several ideas of how to use the facility were brought to the City's attention, though none were ever followed through. It was suggested to rent the facility out for private parties, but since the reptiles had long been removed, it was unsure as to what the drawing power would be. In the 1990s, an individual petitioned to turn the facility into a bike corral, for local bicyclists to stop for water and rest.

The Texas Pioneers, Trail Drivers, Rangers Memorial

(generally known as Pioneer Hall)

“With the rapid passing and enfeeblement of members of the trail drivers, pioneer freighters and other organizations it was felt that the museum is the proper institution to perpetuate the memory and deeds of these pioneers.” (WMM, January 7, 1933)

Pioneer Hall: 1933-35

Recognition of the important contributions of early Texas settlers was central to the founding purpose of the Witte Museum when it opened in 1926. The museum was the site of exhibits, dances and demonstrations that documented and celebrated the legacy of those who helped build the state (Figure 3-12). These events outgrew the museum's History Hall, and representatives of the Witte, Old Trail Drivers Association and San Antonio Pioneers Association discussed the possibility of constructing an all-purpose hall for their joint use. No firm plans were made before the beginning of the Depression (Woolford and Quillin 1966:264).



Figure 3-12. *The Pioneer Hall.*

Depression-era programs and the upcoming 1936 Texas centennial celebration brought the promise of funding for public projects and with it, a flurry of planning activity. As early as August 22, 1933, Ellen Quillin wrote to Mayor C.K. Quin, asking his opinion about a loan from the Federal government to construct an addition to the museum. A subsequent application to the Public Works Administration (PWA) included an addition with a memorial section for the state's trail drivers and an auditorium (Letter Quillin to Quin Aug. 22, 1933; San Antonio Express, Aug 29, 1934).

The project was not funded, but the discussion of an addition continued. Notes by museum director Ellen Quillin, titled, "Sequence of Active Work of Museum Board of Directors in Securing the Pioneer Hall," include the following notation for September 1934:

(The) idea of a Pioneer Hall and Trail Drivers Patio had its origin in the Director's office at the Museum when Mrs. Quillin was discussing the need of an auditorium with Bess Carroll and Major Fletcher Gardner. Miss Carroll asked why the Museum didn't get in on the Centennial money for Texas. We all agreed and within twenty-four hours, Mrs. Quillin presented Mr. Atlee B. Ayres with a pencil sketch for a Pioneer Hall and Trail Drivers Patio to be built adjacent to the museum, but as a separate unit for special use by the Pioneers, Rangers and Trail Drivers. (WMA Pioneer Hall Volume)

The Texas State Legislature appointed a permanent centennial commission in June 1934, and the group began to study bids from three Texas cities— Dallas, Houston and San Antonio—to host the Central Centennial Exposition. San Antonio leaders presented plans by architect Harvey P. Smith and landscape architect H.E. Kincaid for an exposition that encompassed much of Brackenridge Park and adjacent San Jacinto Park (the site of today's Trinity University). The plan echoed the concept of an international exposition proposed for the same site ten years earlier (*San Antonio Express*, Jan. 31, 1925; *San Antonio Light* Feb. 1, 1925; *San Antonio Light* Aug. 26, 1925).

The centennial commission visited San Antonio on September 8, 1934, to assess the city's proposal. Commissioners visited "Brackenridge Park and adjacent lands in San Antonio," including the Witte Museum. Park attractions were "all located in the area proposed for a Centennial site" (TSBC Sep. 8, 1934). In spite of arguments that San Antonio, with its rich history, was a "logical Texas centennial site," commissioners selected Dallas, the least historic of the three cities. It was reported at the State Board of Control meeting on November 19, 1934, that the choice of Dallas had been "reaffirmed" (TSBC Sep. 8, 1934; TSBC Nov. 19, 1934).

The selection of Dallas as the center of the centennial celebration did not deter San Antonians from making their own plans. Ellen Quillin's notes state that in October 1934 the architectural firm of Ayres and Ayres presented plans for "a Texas Pioneer Hall." The plans were approved by the museum's board on November 5, 1934. Over sixty community organizations sent letters of support to the local centennial commission headed by Morris Stern, H.H. Ochs and Mrs. O.M. Farnsworth. Ellen Quillin and museum chairman, Mrs. J.K. Beretta, summarized the Witte's proposal in a letter to Morris Stern dated January 7, 1935 (Beretta and Quillin to Stern, Jan. 7, 1935).

The following are the plans of the Witte Museum Board of Directors and its Affiliated Organizations for Expansion of the Museum in preparation for the Centennial Celebration, 1936. Halls and Improvements are listed in order of importance and necessity: Texas Pioneer Hall, including diorama and art gallery on second floor; Texas Trail Drivers Patio; Semi-tropical Garden; Landscaping Grounds; Indian-Frontier Village and Trading Post; Texas Industrial Hall; Transportation Hall; Texas Indian Hall; Frontier Animal-Life Hall; More Imposing Entrance to Brackenridge Park; and Furnishings, in part, for above additions.

The total cost of these improvements was estimated at \$250,000 including \$50,000 for Texas Pioneer Hall, \$10,000 for the hall's diorama, and \$10,000 for the Trail Drivers' Patio. Beretta and Quillin told Stern, "Any or all may be done in proportion to funds allotted" (Beretta and Quillin to Stern, Jan. 7, 1935).

Plans for San Antonio's centennial celebration continued to evolve in the first six months of 1935. Soon after Morris Stern's committee approved the Witte's concept for Pioneer Hall, it was disbanded and replaced by a new committee headed by Harry Hertzberg and C.A. Goeth. Mrs. Quillin appeared before the new body to request funding for the Pioneer Hall and the Trail Drivers Patio, and the board proceeded with its "original plans for expansion." These plans included the addition of a second story to the two-story wings, construction of a transportation hall, and improvements to the museum grounds and the reptile garden. The firm of Ayres and Ayres was authorized to draw plans in July, and on September 3, 1935, Atlee Ayres wrote to board member, Colonel W.B. Tuttle, "We have prepared preliminary sketches and an estimate of cost covering additions to the present Witte Museum Building" (WMM June 18, 1935; WMM Jul 15, 1935; WMM Aug. 23, 1935; WMM Sep 3, 1935; Witte Museum Annual Report 1934-35).

An undated floor plan of the proposed addition including a memorial hall and adjacent patio is bound with Witte reports and letters from October 1935 and carries the names of architects Atlee B. and Robert M. Ayres and Richard Vanderstraten. The plan includes a rectangular addition to the back of the museum measuring approximately 52' X 94' (WMA).

A typescript titled, "Order of Unit Building Plan," presumably written by Ellen Quillin, describes the hall's arrangement. Exhibit cases in the center of the memorial hall would be rolled back for dances and chuck wagon suppers. Additional cases for display of Western memorabilia lined the outside walls. A door led outside to the yard and barbecue pit. The area would be fenced with rails "much along the lines of our present corral patio" (WMA Pioneer Hall volume).

Other projects were also put forward during 1935 including a larger Texas Centennial Hall to honor Texas pioneers. It was suggested that the museum's board and the Pioneers Association manage the proposed hall to be built at an estimated cost of \$240,000 in nearby San Jacinto Park. This project did not advance beyond the discussion phase (Quillin Notes January 4 & 8, 1935, July 7, 1935).

Aware that funds would be needed to supplement state and federal allocations for local centennial projects, San Antonio city commissioners voted on August 22, 1935, to hold a \$500,000 bond election to fund five centennial projects. The Texas Centennial Hall in San Jacinto Park was not included. Proposed projects were:

\$300,000 for a coliseum in Roosevelt Park (today's Riverside Park, adjacent to the old exposition grounds)

\$130,000 for a sports stadium in San Jacinto Park (a long-time dream of sports' enthusiasts)

\$50,000 for monuments in public places

\$10,000 for the addition to the Witte Museum

\$10,000 for improvements to the Sunken Garden

Failure of the bond package by a three to one margin on October 15, 1935, was attributed to low turnout and an intense radio campaign against the propositions (CCM M: 615; San Antonio Express October 15 & 15, 1935).

Two days after the bond package failed, Ellen Quillin sent blueprints of the Witte's project to Mrs. Robinson Hodge, chairman of the planning committee of San Antonio's Woman's Centennial Committee planning committee. She wrote:

The Texas Pioneer Hall, while a part of the museum, would be a separate unit in the sense that it would belong to Pioneers and their children. It would serve for their meetings, have an office and desk for their secretary, be used for their old time dances, be used as a lecture hall for our regular Sunday afternoon lectures and use the wall space for Pioneer exhibits. The hall, by virtue of its connection with the museum, will serve both the pioneers and the museum as a whole (Quillin to Hodge Oct. 17, 1935).

The museum's plan included a patio dedicated to the trail drivers and ranch house replica. Quillin urged Mrs. Hodge to support funding for these improvements of "permanent value" (the hall at an estimated cost of \$50,000 and the patio, \$25,000). Quillin also provided details of the plan in her October 25, 1935, memo to Harry Hertzberg's centennial committee.

The Hall will be built of brick and stone, with two floors, 52 X 94 feet. The lower floor will have a small stage for the use of musicians, speakers, general entertainment, and demonstration of old-time Crafts. Flooring to be hard wood, so as to be more suitable for old-time gatherings. Walls of first floor to be used for exhibits, photographs of our Pioneers, documents, etc. (Witte Museum to San Antonio Planning Committee, Oct. 25, 1935).

Mrs. Quillin's notes indicate that on November 2, 1935, the Hertzberg committee recommended \$40,000

for the Pioneer Hall project and another \$10,000 for the Trail Drivers Patio. She also noted that the Trail Drivers monument, a separate project of the Trail Drivers Association, had been left out of the recommendations (Quillin journal).

The final recommendation on expenditure of the city's \$400,000 allocation was left to the eight-member Centennial Advisory Committee chaired by Colonel Claude Birkhead. Ellen Quillin retrieved the letters of support she had gathered in 1934 and resubmitted them to Birkhead and Ernest J. Altgelt—a San Antonian who served as the assistant commissioner to the United States Commissioner General for the Texas Centennial Exposition. Among the letters of support was that of Edwin Chamberlain, president of the State Association of Texas Pioneers to San Antonio mayor, Phil Wright (Witte Museum Annual Report 1934-35; Quillin to Stern Oct. 19, 1935; Quillin to Birkhead Nov 18, 1935).

Funding for San Antonio centennial projects was further complicated at the December 10, 1935 meeting of the Centennial Advisory Commission when Bessie Terry Lesser, president of the Old Trail Drivers Association, switched the group's support from the Trail Drivers Patio to a new project—a stadium she suggested be called the "Trail Drivers Corral." Lesser and her group knew that committee chairman, Claude Birkhead, favored the stadium project that had been defeated in the October 1935 bond election. Support of this project was seen as a way to achieve recognition for the state's trail drivers. Ellen Quillin remarked, "I don't know why the change was made. I didn't know a thing about it until this minute" (WMM Jan 6, 1936).

Pioneer Hall: 1936

The Centennial Advisory Commission ultimately submitted a majority and minority report on funding recommendations to the United States Texas Centennial Commission. The majority report favored the stadium over Pioneer Hall, while the minority report included \$45,000 for the hall. When the list of centennial projects to be funded by the \$400,000 Federal appropriation was finally announced on March 5, 1936, it included the stadium, but did not include the Witte Museum. The board revived Atlee Ayres' plans for the transportation hall and began modest improvements to the grounds (WMM May 13, 1936).

The sequence of events related to Pioneer Hall between March and August 1936 is not clear. This is complicated by a gap in Witte Museum board meeting minutes from June 8 until September 11, 1936. The final decision on San Antonio's centennial projects lay with Vice President John Nance Garner who chaired the Federal Texas Centennial Commission. In late August, Garner approved plans for the stadium project to be constructed at an undisclosed site. The following day, both the state and local centennial commissions "freely admitted" that the stadium project had been eliminated and the allocation would be

divided among three “substitute projects.” Ernest Altgelt explained the stadium’s elimination due to both cost and location (*San Antonio Light* Aug. 27, 1936).

First they wanted it in San Jacinto Park. Then some people living near there didn’t want it. Then they talked about some place on the south side. The city wanted it on the east side (Exposition Park). The Sports Association, who originally wanted a stadium, said they would rather have any than have it at Exposition Park.

On August 27, 1936, local newspapers announced “Fete Building planned for San Antonio, \$100,000 memorial building honoring Texas trail drivers, pioneers, and rangers will be the biggest item in San Antonio’s \$400,000 centennial program” (*San Antonio Light*, Aug. 27, 1936). The memorial building would be constructed in Brackenridge Park, “possibly adjacent to the Witte Memorial Museum.” The building would include offices for these three organizations and a small auditorium.

The “historical building at the Witte Memorial Museum to be dedicated to Texas Pioneers, Trail Drivers and Rangers” was described in the *San Antonio Express* as follows:

That use of the fund doubtless will be gratifying to patriotic citizens generally. Such a building for San Antonio will match the new Texas State Museum on the University Campus at Austin, the Hall of State on the Exposition grounds at Dallas, the Sam Houston Memorial Museum at Huntsville, the Big Bend Historical Memorial Museum at Alpine and like structures in Texas cities. When so many communities were commemorating the centennial in that creditable manner—providing safe, worthy housing for relics, family heirlooms, documents, and other priceless mementoes of Texas’ first hundred years—the most historic city in the state and one of the richest in historical material could not afford to be found remiss. San Antonio was subject of censure on that score, until the allotment just announced provided means to repair the neglect (*San Antonio Express*, Sep 8, 1936).

The first meeting between the Witte Museum board and the committee for Pioneer Memorial Hall was held on September 11, 1936. Ernest Altgelt reported that the building would be located “north of and in line with” the present Witte Museum. “At present it would be as a unit building as the United States Government would require this. At a future date, it may and should be connected with a patio, wing, or closed colonnade” (Witte Museum Board of Directors and Pioneer Memorial Hall joint meeting minutes Sept 11, 1936).

The architectural firms of Ayres and Ayres and Phelps and Dewees were selected to design Pioneer Memorial Hall. The new structure would follow “the architecture of the present building.” Pioneer Hall, however, would be built of stone “with the hope that a stone veneer will be added to the present (Witte) building.” The building, not to exceed 60 X 120 feet, was described as having two floors—the first with an exhibit hall and the second to be used for lectures, “old time parties,” and other functions. The second floor would be closed off when not in use. The building was to be steam heated but not air-conditioned. Early in the planning process, the colonnade originally planned for the rear of the building was changed to the middle of the building (Quillin journal Sept 25, 1936).

Minutes record Ernest Altgelt’s response to questions about the building’s management.

In reference to management Mr. Altgelt said it was the idea of the committee in time to have one big complete plant and that this addition would probably encourage some of San Antonio’s people with more money than they could use to provide a similar building on the south side to balance Pioneer Hall (Quillin journal Sept 25, 1936; Joint meeting minutes Sep 11, 1936).

Altgelt deferred the final management decision to a later date.

Five days after the first joint meeting between the museum board and Pioneer Hall committee, Witte board chairman, Mrs. J.K. Beretta, wrote to Ernest Altgelt.

We have had many years of experience during our management of the museum. We have no wish to dictate to you in any way, as we recognize your services and ability. We feel, however, that we might be able to make valuable suggestions. Therefore we should be most appreciative if you would give us an opportunity to confer with you and the architects before the final plans for the new centennial building go into effect (Beretta to Altgelt, Sep 16, 1936).

Altgelt responded that it “would be his pleasure to ask you to meet with architects for a discussion.” He anticipated that it would be at least ten days before the architects were prepared to meet. Altgelt continued:

Inasmuch as the building is to be dedicated to the pioneers, trail drivers and rangers of Texas, their suggestions and recommendations will have to be considered first and you

know there is always a little danger of a conflict or an argument arising unless there is really something definite to talk about (Altgelt to Beretta, Sep. 18, 1936).

Mrs. Beretta, understanding the significance of Altgelt's remarks, provided the letter to Ellen Quillin for inclusion in the Witte Museum's records. Quillin recalled that following the joint meeting on September 11, 1936, a city ordinance was passed that effectively removed the Witte Museum from management and use of the hall (WMA Pioneer Hall volume).

City Ordinance OH-200 passed on September 18, 1936, stated:

...this building will be the assembly hall and place for the housing of the historical relics, the records and other property of the organizations named (the Pioneers, Trail Drivers and Texas Rangers)... the city of San Antonio assumes all obligation of maintenance, repair and preservation of said structure, and agrees that the property shall be used only for the purposes for which it is intended (San Antonio City Ordinance, OH-200, Sep. 18, 1936).

Ellen Quillin concluded, "Within a week's time, Mr. Altgelt with others secretly put through this ordinance...apparently the museum's influence and work was no longer needed" (WMA Pioneer Hall volume).

Construction of Pioneer Hall: 1937

Ayres and Ayres and Phelps and Dewees were well underway with plans for Pioneer Hall by the time their contract was finalized by the State Board of Control on November 5, 1936. An elevation drawing of the cream colored limestone building with a red tile roof appeared on the front page of the *San Antonio Express* on October 4, 1936. The newspaper noted that the "construction and furnishings of the interior are in keeping with the building's purpose." Elevation drawings for Pioneer Hall were approved by the Witte Museum's board on October 7, having been previously approved by the pioneers, trail drivers and rangers organizations (*San Antonio Express*, Sep 20, 1936; State Board of Control Records Centennial Division minutes, Box 1991/016-80; *San Antonio Light*, October 7, 1936).

Plans were put out to bid and opened on January 21, 1937. The low bid was by Christy and Smith of San Antonio at \$82,257. After some changes, the general construction contract totaled \$78,432. Shafer Plumbing Company's contract totaled \$10,619 and the contract with Nathan Alterman Electric Company was \$2,582.

The following changes were made to the plans prior to construction: change marble toilet stalls and screen partitions to metal partitions and doors; change tile wainscot in toilets to cement plaster and terrazzo base; change marble wainscot to terrazzo base, etc. in Memorial Hall; Omit sliding curtains and tracks in ballroom; Omit cabinets and counters in kitchen and service room (these were added back in a later change order); omit glass panels of special lighting fixture leaving allowance; omit glass ceiling fixture; omit wood roof strips and substitute Spanish tile for Mission tile.

The site selected for Pioneer Hall did not necessitate moving the Witte's reptile garden, but it was ultimately relocated to the north to provide better access and views of Pioneer Hall. The museum's watchman house was also relocated (*San Antonio Express*, Jan. 24, 1937).

Bad weather delayed groundbreaking which took place on February 6, 1937. The ceremony, planned by Bessie Terry Lesser, president of the Old Trail Drivers Association, was attended by representatives of the trail drivers, rangers and pioneers. Mrs. J.K. Beretta represented the museum (WMM Jan. 5, 1934; Feb. 22, 1937).

Mrs. Quillin and Mrs. Beretta continued to offer guidance in the construction and ultimate management of Pioneer Hall. When the local press persisted in calling the building the "museum annex," Quillin requested that it be called the Centennial Memorial Hall in recognition of being built entirely with Federal funds. She discussed with Mayor Quin the possibility of appointing representatives of the pioneer, trail driver and ranger groups to the museum board to manage the new building. Quin postponed establishing a "board of control" for the building until after its completion when it would be turned over to the city by the Federal government (WMM Jan. 5, 1934; Feb. 22, 1937).

Construction of Pioneer Hall apparently proceeded smoothly. Minutes of the State Board of Control's Centennial Division reflect few change orders and no problems. Approved changes were minimal. The word "Texas" was added to the building's inscription which was originally planned to read "Pioneers, Trail Drivers and Rangers Memorial," and gold leaf was added to the lettering. (The lettering was completed by Rodriguez Brothers.) A platform and curtains were added to the ballroom, Venetian blinds were approved for the first and second floors, and the sixteen ballroom bracket lights were changed to cast plaster (State Board of Control Records, Centennial Division minutes, Box 1991/016-90. November 1936 through October 1937).

The building was substantially completed by September 1937, and final contractor invoices were approved in October. Witte Museum employees removed trees that stood between Pioneer Hall and Broadway to provide a better view of the new building (Witte Museum, Building and Grounds Report,

September 1937).

Opening Pioneer Hall: 1936-37

The first joint meeting of the museum board and Pioneer Hall committee had been held on September 11, 1936. The group did not meet again until August 6, 1937, when the building was almost complete. The meeting was attended by the mayor's appointees to the joint board—representatives of the Witte, the Art League, the Conservation Society, Archaeological Society, San Antonio Pioneers Association, Old Trail Drivers Association and Texas Rangers.

Correspondence found in the Texas State Board of Control records indicates that as early as February 1937, assurances were given to Bessie Terry Lesser of the Old Trail Drivers Association that both the Board of Control and United States Texas Centennial Commission believed "... the management of the building would be lodged in the Rangers, Pioneers and Trail Drivers organizations so long as they are existent" (Garner to Lesser Feb. 12, 1937). Board of Control chairman, Claude Teer, wrote to Mayor Quin on February 25, 1937:

Of course, the ownership of the property will be in the City of San Antonio, but it is the wish and intention of the Board of Control, as well as the Federal Centennial Commission and the State Commission of Control, that this building shall be used only by the three organizations for which it was originally planned.

It is not known whether or not Mrs. Beretta and Mrs. Quillin were aware of this correspondence when they called on Mayor Quin to suggest joint management of the museum and Pioneer Hall. Quin did initiate committee appointments; though it is clear from Mrs. Quillin's notes dated June and July 1937 that the mayor encountered some difficulties in getting individuals to serve. It became evident during the summer of 1937 that the September 1936 city ordinance was being interpreted to leave the Witte Museum out of the management structure of Pioneer Hall. Nonetheless, the mayor appointed a joint committee which discussed management issues at its August 6 meeting. The issue was not resolved, but it was agreed that the three organizations would "take sole charge of the program for the official opening" (WMM Aug. 6, 1937).

Ellen Quillin was aware in late July that Bessie Terry Lesser had told Mayor Quin that the Old Trail Drivers Association would finance Pioneer Hall at no cost to the city. Relations between the Witte Museum and Trail Drivers Association deteriorated when the latter group was inadvertently left out of newspaper accounts of Pioneer Hall published on August 2, 1936. The situation was further complicated

by decisions made on the placement of access roads as well as the relocation of the Witte's reptile garden (Quillin journal Aug. 1- Oct. 1, 1936).

Ellen Quillin's notes concerning Pioneer Hall end with an entry on October 1, 1936, written after visiting with Pioneers Association representative, Dr. P.B. Hill. "Saw Dr. P.B. Hill at his office and talked over new hall. So this time, I am withdrawing for good. Four years effort wasted" (Quillin journal Oct. 1, 1936).

State officials advised Bessie Terry Lesser that the issue of the building's management lay with local officials. Planning continued for the opening ceremonies that the Trail Drivers Association hoped would coincide with their annual convention on October 7 and 8, 1937. The ceremony was delayed, pending final completion and transfer of the structure to local control. Thus, the ceremony was not held in conjunction with the annual convention of the Trail Drivers Association, or even by the end of that year, but rather commenced on the first day of January, 1938.

Ernest Altgelt, the former assistant to the United States Commissioner General for the Texas Centennial Exposition was asked to assist with details for the opening ceremonies. In this capacity, he wrote to Claude Teer, chairman of the State Board of Control:

It is with great pleasure that I say to you that this is a beautiful building, and I believe in the end it will stand up with any of the Texas Centennial projects (Altgelt to Teer, Sep. 23, 1937).

Pioneer Hall was dedicated on Saturday, January 1, 1938. An evening ball followed the afternoon dedication ceremony.

Chapter 4: Field and Laboratory Methodology

The archeological services associated with the rediscovery of the *Acequia Madre* and Alamo Dam had three principal goals: (1) rediscover remnants of the *Acequia Madre* in the east banks of the San Antonio River; specifically in relation to the original *acequia* built over three years and opened in 1719; (2) document and assessment of the condition of the *Acequia Madre* and the Alamo Dam for future interpretation; and (3) expose a short segment of the *Acequia Madre* to serve as a contributing element to future interpretive strategies, water features, and public programming associated with the Witte Museum's Center for Rivers and Aquifers. It is not the intent of these future interpretive plans to recreate a functioning *acequia* with water flowing from the River through the *acequia*. Rather, it was simply to expose a portion of the *acequia* to show its morphology and methodology of construction, and perhaps, to collect associated artifacts that may be incorporated into an exhibit related to the feature.

Background Research

Archaeologists at CAR conducted archival research consisting of consulting historic maps and documents that gave information concerning the location and use of the *acequia* and dam. This included compiling historical documentation, including maps, photographs, and aerial photographs depicting the location to serve as guides during the field investigations. The research focused principally on determining the location of the original 1719 *Acequia Madre*, but also focused on documenting changes in *acequia* location and use over time. This background research allowed the archaeologists to map the projected location of the dam and *acequia* prior to sub-surface investigations. Over the course of the project, additional information, such as maps and photographs were located that aided in the modification of the initial investigation plan. A number of historic maps were consulted and assessed for clues and guides to excavation locations. These ultimately resulted in an increase in the number of backhoe trenches that were proposed to be excavated at the site.

One of the earliest relatively detailed maps showing the *acequia* was drawn by Louis Giraud in 1875 (Figure 4-1). It depicts the dam at its very northernmost portion in located to the meander of the river. The *acequia* begins immediately east of the dam as a narrow channel.

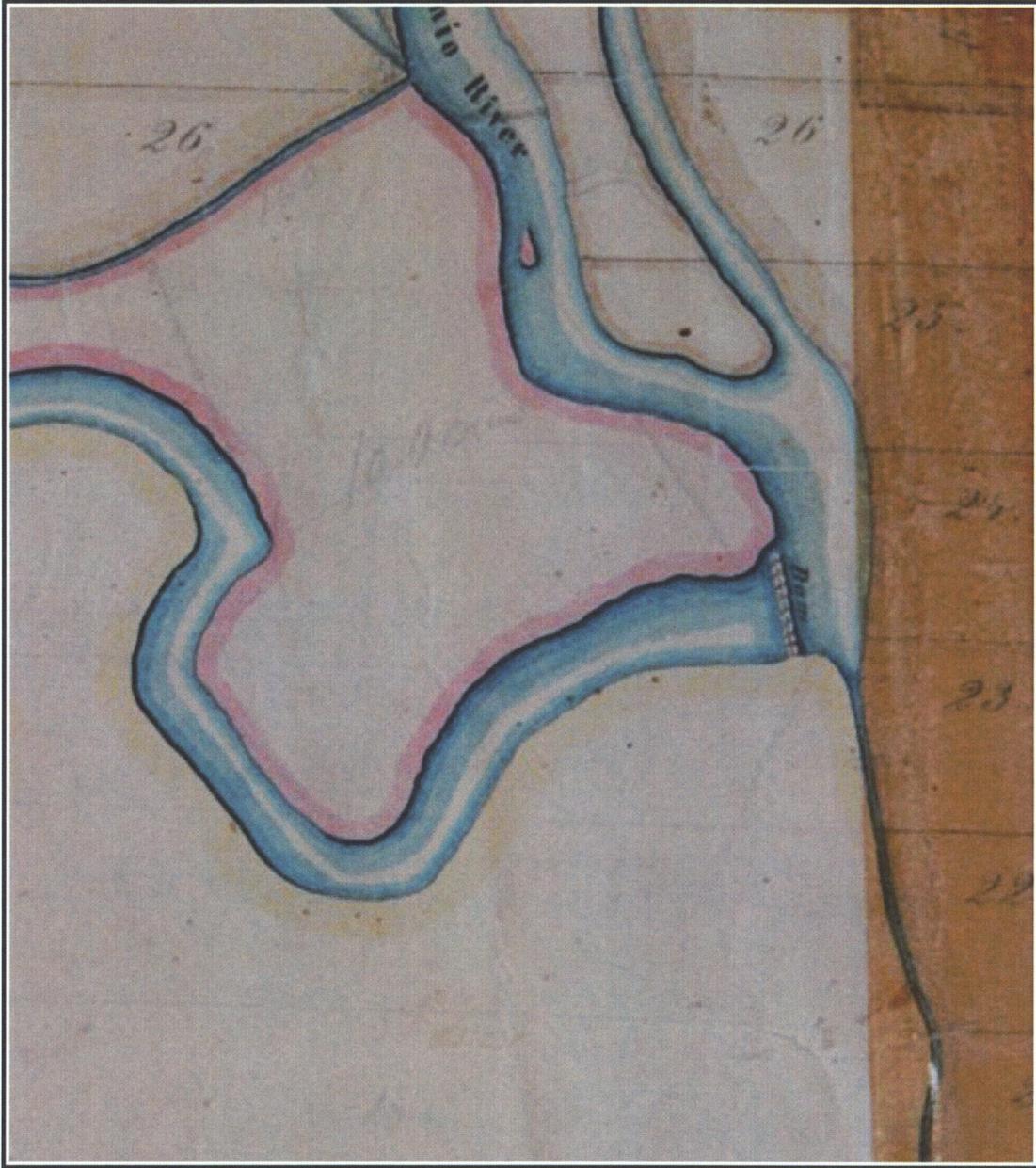


Figure 4-1. *The Acequia Madre and Alamo Dam as drawn by Louis Giraud in 1875.*

CAR staff then overlaid Louis Giraud's 1879 map onto a current aerial map of the APE (Figure 4-2).

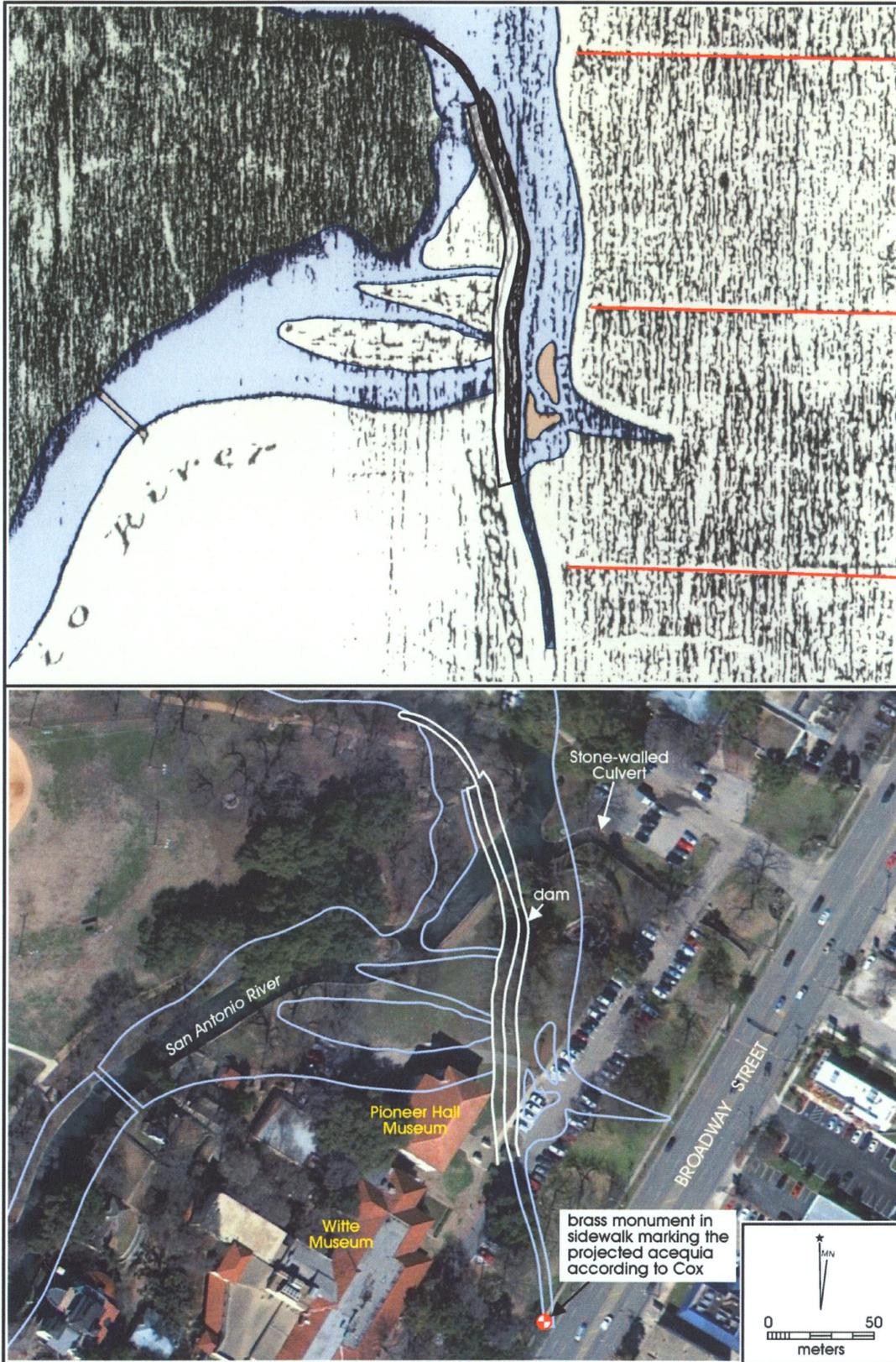


Figure 4-2. The Acequia Madre as drawn by Giraud in 1879 (above) overlaid on a current aerial of the APE.

for approximately three years by 1908—the time of this maps' interpretation.

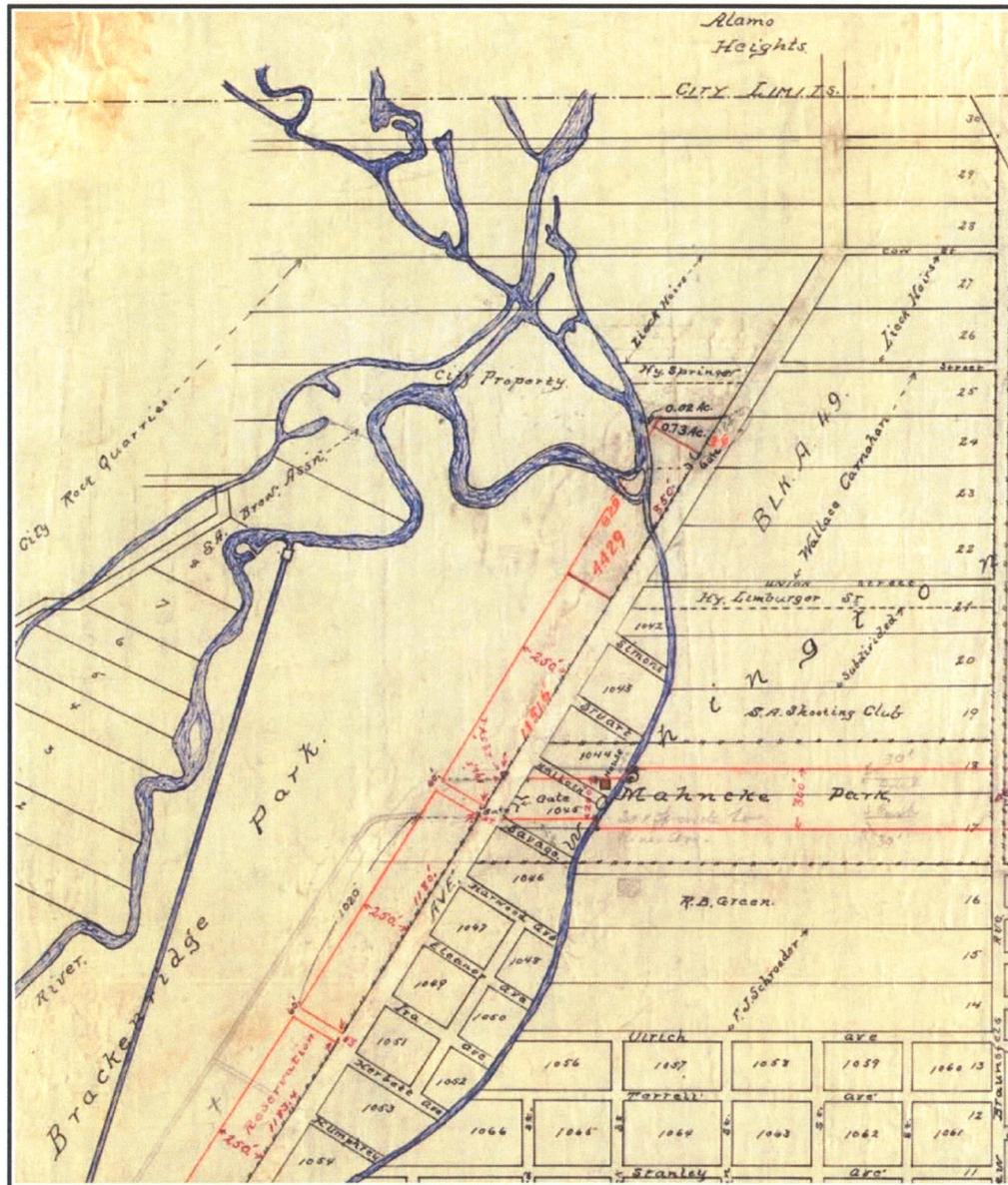


Figure 4-4. Map of Brackenridge Park in 1908 showing the orientation of the Acequia Madre.

Another historic map was consulted. Dating to a few years after the aforementioned map, Jules A. Appler's map of San Antonio and its suburbs, was likely drawn in or around the year 1914 (Figure 4-5). Even though the *acequia* was closed by this time, this map too, just as its 1908 predecessor, depicts the *acequia*'s route. Appler's map shows the point at which the *acequia* emanates from the channel of the San Antonio River. It should be noted that the accuracy of this map may be questionable, due to potential lack of detail at such a large scale (only an enlarged section of a smaller area is shown in figure 4-5).

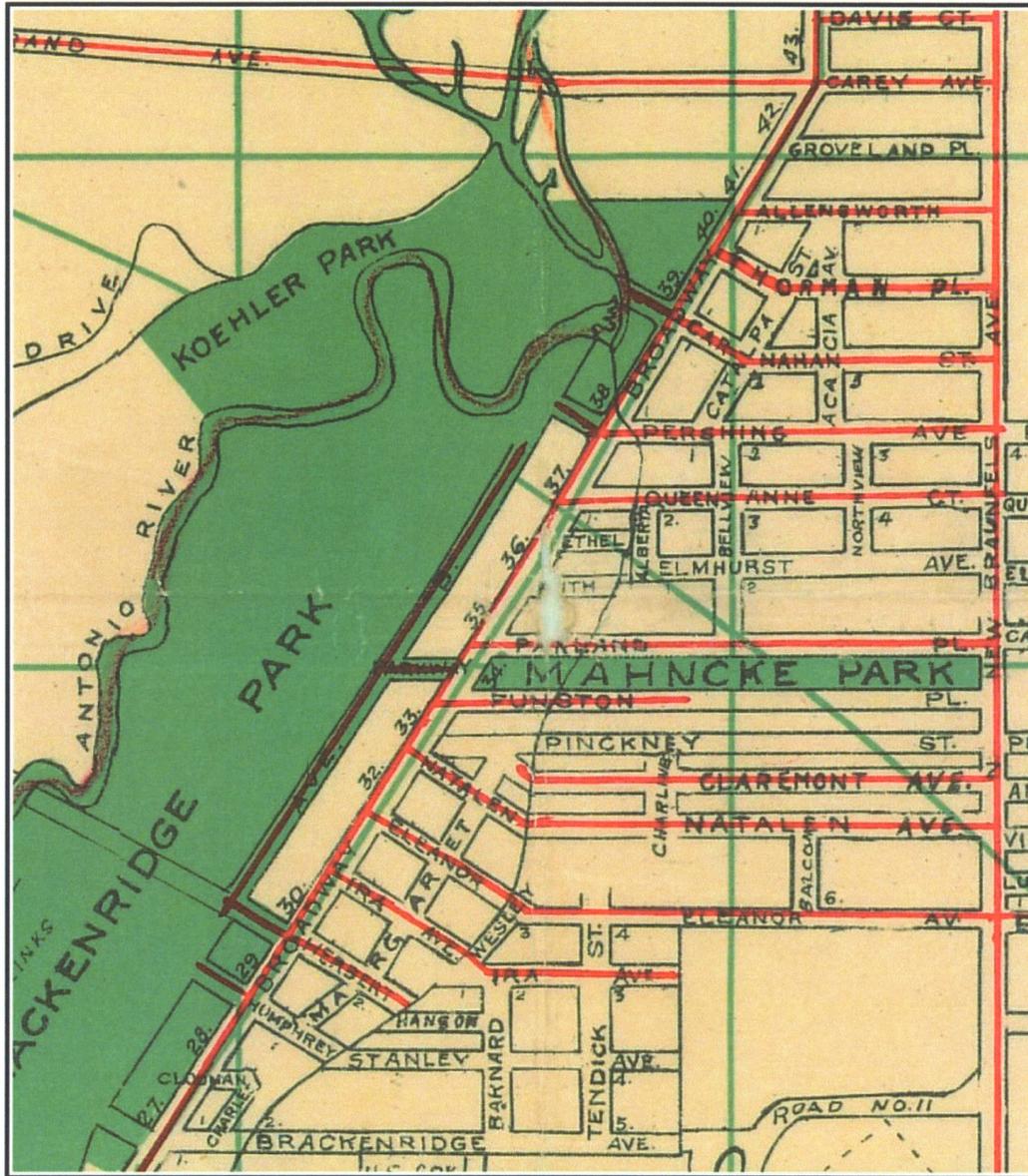


Figure 4-5. Detail of an early 1900s map of the city showing the Brackenridge Park area and the orientation of the Acequia Madre.

During archival research conducted on the Reptile Garden, an article written in the *San Antonio Express* was located discussing the construction of Pioneer Hall and its subsequent need for a service road. The article discussed conflict the Witte Museum was having with the Texas Trail Riders Memorial organization about how the road would impact the second location of the Reptile Garden. The map, dating to 1935, was a map of the Witte Memorial Museum as drawn by A. Marbach. A rendering of the map with elevations accompanied the article, but specifics were difficult to glean from this particular rendering (Figure 4-6).

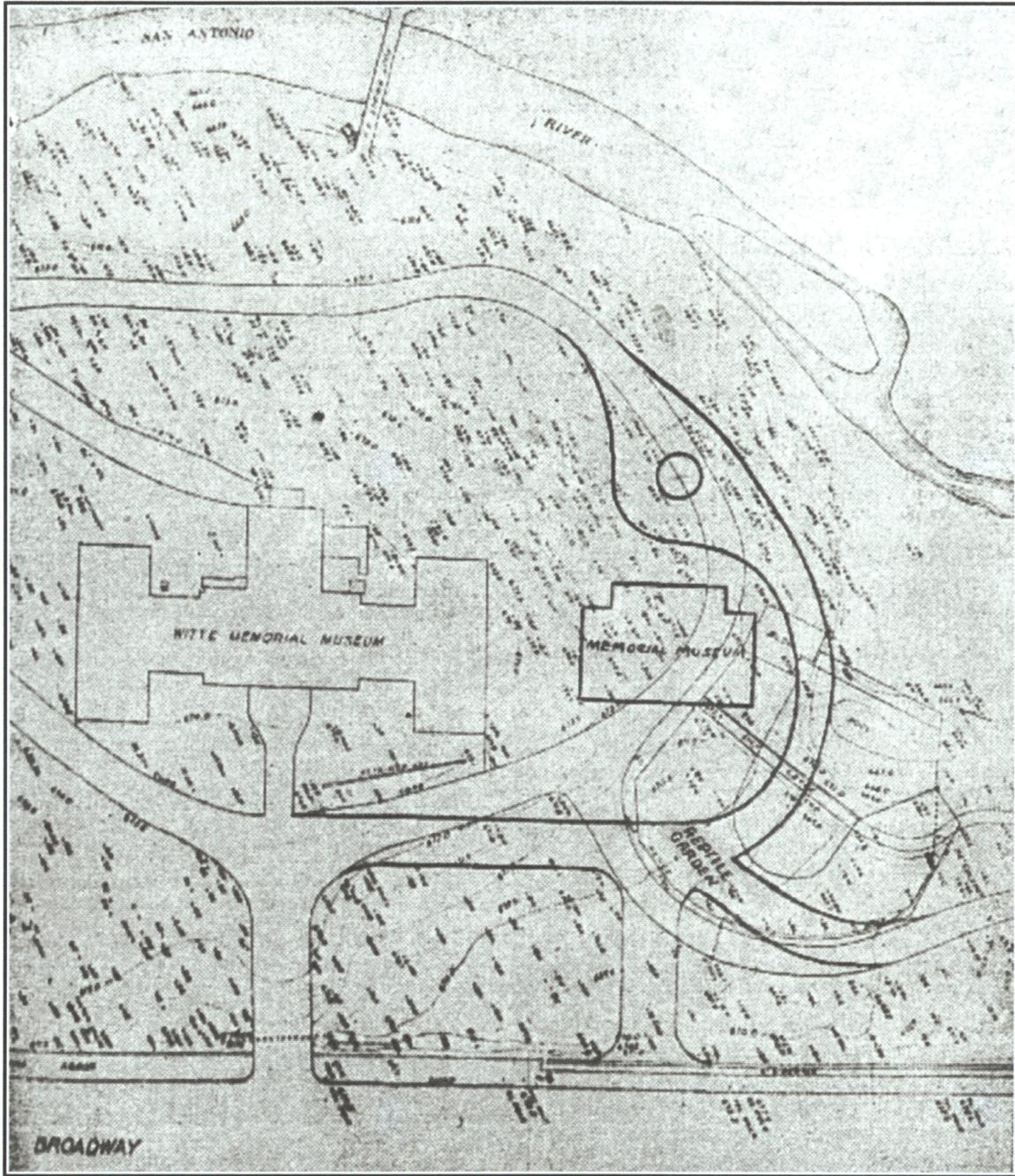


Figure 4-6. Map of the Witte Museum complex showing Pioneer Hall (labeled Memorial Museum) and other proposed changes (San Antonio Express News 1937).

Due to the maps' being relatively indecipherable, the staff initiated an extended search for the original map. It was suspected that the original map would be more legible, and furthermore, would allow for determining the degree of elevation changes across the landform. Two versions of the Marbach map were located at the City Municipal Archives. Fortunately, one was the original with notations (Figure 4-7). The second map found at the City Municipal Archives was a vellum copy of its original.

relocated to the complex. It is likely that this map dates to the 1970s, though a date was not evident on the map. Recorded elevations show that the swale area as seen in the 1935 map (refer back to Figure 4-7) had a raised elevation of approximately six feet.

Armed with two possible locations at the beginning of the project, the search for the location of the *acequia* and dam was conducted by the excavation of backhoe trenches across the eastern-most location (e.g., perpendicularly crossing the path described by the large cypress trees) taking care as to not damage the cypress trees that are supposed to line the *acequia* route. The idea was that if this trench did not reveal the *acequia*, the trench would be extended to the west toward the original location expected based upon the Giraud map. Cox suggested that the *acequia* would not be stone lined but it should still be very easily identifiable based on the clay-enriched damp soil, the feature's ditch-like morphology, and artifact content (I.W. Cox personal communication, 2001). Since the initial trenches did not reveal the *acequia*, additional backhoe trenches were excavated in areas believed to have the most potential for encountering the Alamo Dam and the *Acequia Madre*.

Field Methodology

A total of nine backhoe trenches were excavated during the archaeological investigations conducted to rediscover the location of the *Acequia Madre* and the Alamo Dam (Figure 4-8). Trenches were placed in areas that had the potential for encountering historic features without causing too much damage to the root systems of the large trees within the APE. Each trench was excavated to a depth that offered insight into the subsurface deposits on the Witte grounds. Each trench was documented then backfilled prior to the completion of the project excavations. In addition to the backhoe trenches, three auger boring tests were excavated on the Witte grounds in hopes of encountering evidence of the *Acequia Madre* or the Alamo Dam (Figure 4-6). Similar to the backhoe trenches, the auger tests were documented, locations recorded and excavation areas backfilled.

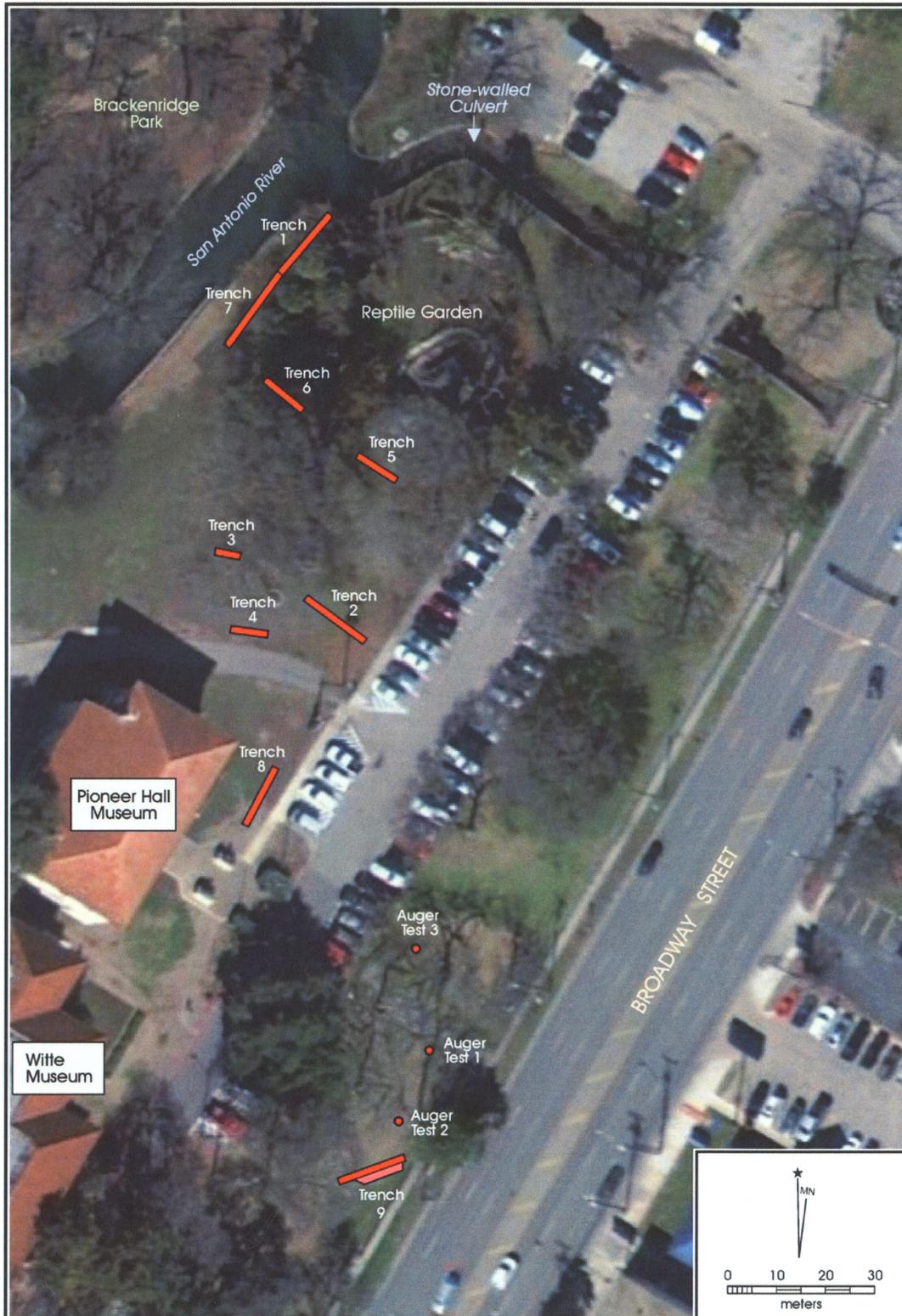


Figure 4-8. Aerial photograph showing the project area as well as trench and auger boring locations across the northern portion of the Witte complex.

All trenches excavated during the project were to be approximated to the standard of 1 meter in width, 1.5

meters in depth, and 3 meters in length. Actual length, width and depth were modified, if necessary, for each individual trench. In the case that it appeared that the trench should exceed 1.5 meters, the trench was benched according to OSHA standards to allow for safe entry at a greater depth. If this was not possible, entry into the trench was not attempted. A minimum of five backhoe trenches were initially proposed to be excavated during the course of the project. The location of each trench was recorded with a Trimble Geo XT GPS. Once the *acequia* and dam were located, the features and trenches were recorded with a Total Data Station (TDS) to gather precise data for creating an accurate map. In addition, the TDS was used to gather data to examine the current elevations of the project area.

Backhoe Trench 1 (BHT 1) was placed alongside the San Antonio River, between the stone wall lining the channel, and the San Antonio Water System (SAWS) sewer line. This location was chosen for two reasons. First, if the channel of the *acequia* sourced immediately off of the river channel, there could be a potential for encountering a portion of the *Acequia Madre* in the northern most portion of the trench. Second, a rock formation at the bottom of the river channel appeared to have been a portion of the original Alamo Dam further suggesting that the location was near the confluence of the dam and *acequia*. Backhoe Trench 2 (BHT 2) was placed north of a pecan tree, in an area that has cypress trees that appear to form a corridor. Previous research by Wayne Cox led him to believe that the cypress trees lined the edge of the path of the *Acequia Madre*. The location of BHT 2 would illuminate that possibility without disturbing the roots of the cypress trees. Backhoe Trench 3 (BHT 3) was placed south of BHT 2, after a lack of evidence for the *acequia* was noted in BHT 2. The realization that the trajectory of the *acequia* may not match original assumptions prompted the excavation of BHT 3. Backhoe Trench 4 (BHT 4) was placed between BHTs 2 and 3 and oriented slightly to the south. Based on the 1879 Giraud map (Figure 4-2), this location could have potentially crossed the Alamo Dam. Backhoe Trench 5 (BHT 5) was placed just south of the Reptile Garden, in the center of the corridor of cypress trees. BHT 5 was excavated in the hopes of encountering a portion of the Alamo *Acequia*, as the Cox research and the 1875 Giraud map suggested that the *acequia* potentially followed the path of the cypress trees. After a lack of evidence that the *acequia* was located in BHT 5, Backhoe Trench 6 (BHT 6) was excavated to the west in search of the *acequia*. BHT 6 was located between BHT 5 and the SAWS sewer line. After careful considerations, and re-examining historic maps, BHT 1 was extended to the southwest. Because BHT 1 was already backfilled, this extension onto BHT 1, was named Backhoe Trench 7 (BHT 7). BHT 7 was excavated anticipating that the historic maps were slightly off, and the location of the Alamo Dam was actually south of where it was initially believed based upon prior research. Backhoe Trench 8 (BHT 8) was located to the east of Pioneer Hall in hopes that the end of the dam and the channel of the *acequia* would be encountered. Backhoe Trench 9 (BHT 9) was placed in front of the Witte Museum and Pioneer Hall,

in the grassy area close to Broadway Avenue. The map overlay (refer back to Figure 4-2) indicated that a defined channel of the *acequia* should be present in this area. It was assumed that this location would be the most likely spot where a well defined channel of the *acequia* could be identified.

In addition to the backhoe trenching, mechanical auger testing was also conducted to investigate an area that was off-limits to trenching. This was not a method set forth in the Scope of Work, but rather a modification of it, in order to determine if evidence of the *acequia* or dam was in locations that were not able to be examined through backhoe trenching due to either a potential hazard it may have posed to pedestrians, or its proximity to large roots. The auger holes were approximately 50 centimeters in diameter and extended to a depth of up to 6 feet below surface. Locations of each auger test were recorded with the GPS. Soil was removed from tested areas and placed on plywood for the archaeologists to observe if any cultural material was present. Soil changes were also noted. After boring was completed, all tested areas were backfilled.

Laboratory Methodology

All cultural materials and records obtained and generated during the project were prepared in accordance with federal regulation 36 CFR Part 79, and THC requirements for State Held-in-Trust collections. Additionally, the materials are curated in accordance with current CAR guidelines. The few artifacts recovered during the project were processed in the CAR laboratory. Laboratory processing began by washing and subsequent air-drying. The artifacts are stored in 4 mil zip locking archival-quality bags. Acid-free labels were placed into all artifact bags. Each laser jet print generated label contains provenience information and a corresponding lot number. Artifacts were identified, separated by class and stored in acid-free boxes. Field notes, field forms, photographs, and field drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and placed in archival-quality plastic sleeves. All field forms were completed with pencil. Any soiled forms were placed in archival quality page protectors. Ink-jet produced maps and illustrations were placed in archival quality page protectors to prevent against accidental smearing due to moisture. All collected materials and project related documentation is permanently housed at CAR and will, upon request, be made available for loan to the Witte Museum for its public outreach programming.

Chapter 5: Results of Investigations

Backhoe Trench 1

Backhoe Trench 1 was excavated along the bank of the river, just south of the drainage channel located in the northern portion of the Witte Museum grounds (Figure 4-8 and 5-1).



Figure 5-1. *Excavation of BHT 1 near the stone-lined culvert (foreground) in the area between the San Antonio River and a 36" storm-sewer pipeline. View toward the south.*

The trench was approximately 10 meters in length and reached a maximum depth of 1.45 meters below the surface (mbs). This trench was placed between the stone wall along the river and the SAWS sewage line. The excavation of BHT 1 was conducted in a tight area, and therefore required the use of a mini-excavator to allow for matrix to be placed in the correct location. No weight was allowed on the sewage line. This meant that neither the excavator nor the backdirt were allowed to sit directly atop the line. Matrix was placed to the west of the trench, and silt fencing was set up prior to excavation to prevent soil from falling into the river. The trench was excavated over the course of two days. The trench was excavated to a maximum depth of 140 cm below surface in the northern portion of the trench. The water

table was reached at this depth.

After a thin layer of topsoil (Zone 1) and fill (Zones 2 and 3) was removed, a layer of small limestone rocks mixed in a yellowish-brown soil was noted (Zone 4, Figure 5-2).

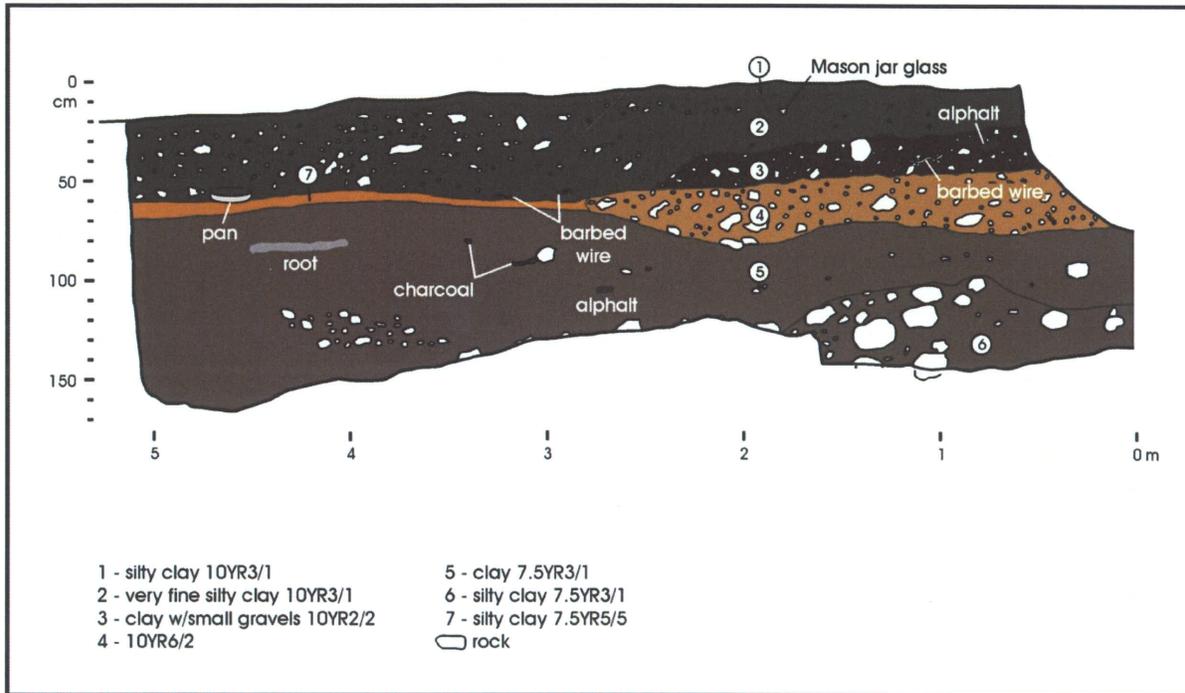


Figure 5-2. Profile of the east wall of BHT 1.

The layer formed a hump that extended deeper towards the north end of the trench. At the time, it was believed that this may have been some buildup on top of the historic dam. In the northern portion of the trench, at what appeared to be the bottom of the slope of small limestone, larger limestone rocks were noted (Zone 6). Further excavation with the backhoe found that the small limestone layer may have been a fill episode rather than material placed on top of the dam. To determine the nature and purpose of the large limestone rocks, the backhoe operator was instructed to remove the stones. Removal of the stones revealed that they were only one course thick and therefore, not part of a dam. These stones sat on top of very thick, sticky black clay. Potentially, the stones that were located in this trench may be related to the construction of the stone wall that lines the San Antonio River up to this date. The wall was constructed during the late 1930s, funded with federal money given to the City of San Antonio during the Great Depression, as part of the WPA.

In the northwestern wall of the trench, a metal artifact was exposed. After profiling the trench walls, archaeologists removed the object to find that it was a metal frying pan (Figure 5-3). The pan was made

of a thin, ferrous material, and exhibited an insulated handle. The pan was collected and returned to the lab. It is likely that this pan is related to the snake fries that were held during the operation of the Reptile Garden. People were invited to fry up the snakes or gators during these events. These events occurred between the late 1930s (at the second location of the garden) until the 1960s (at the final location of the garden). The Witte Museum used to purchase snakes from the public at a rate of 15 and 25¢ per pound for all types except water snakes, which were 10¢ a pound.



Figure 5-3. *Metal frying pan recovered from the northern portion of BHT 1.*

Backhoe Trench 2

Backhoe Trench 2 was excavated alongside the northern portion of the driveway that ran beside the Pioneer Museum (Figure 4-9). The trench was placed outside of the current temporary construction fence, while the expansion of the Pioneer Museum is underway. The trench began approximately 1 meter west of the sidewalk, was approximately 15 meters in length, and reached a maximum depth of 2.8 meters below the surface.

Excavation of the trench revealed that roughly 60 cm of top soil covered approximately 7 to 9 feet of fill, except in the portion of the trench closest to the sidewalk (eastern portion). The top layer of fill consisted

of large limestone rocks with very little tan colored soil. The fill was very loose, and would often fall in from the walls of the trench (Figure 5-4).

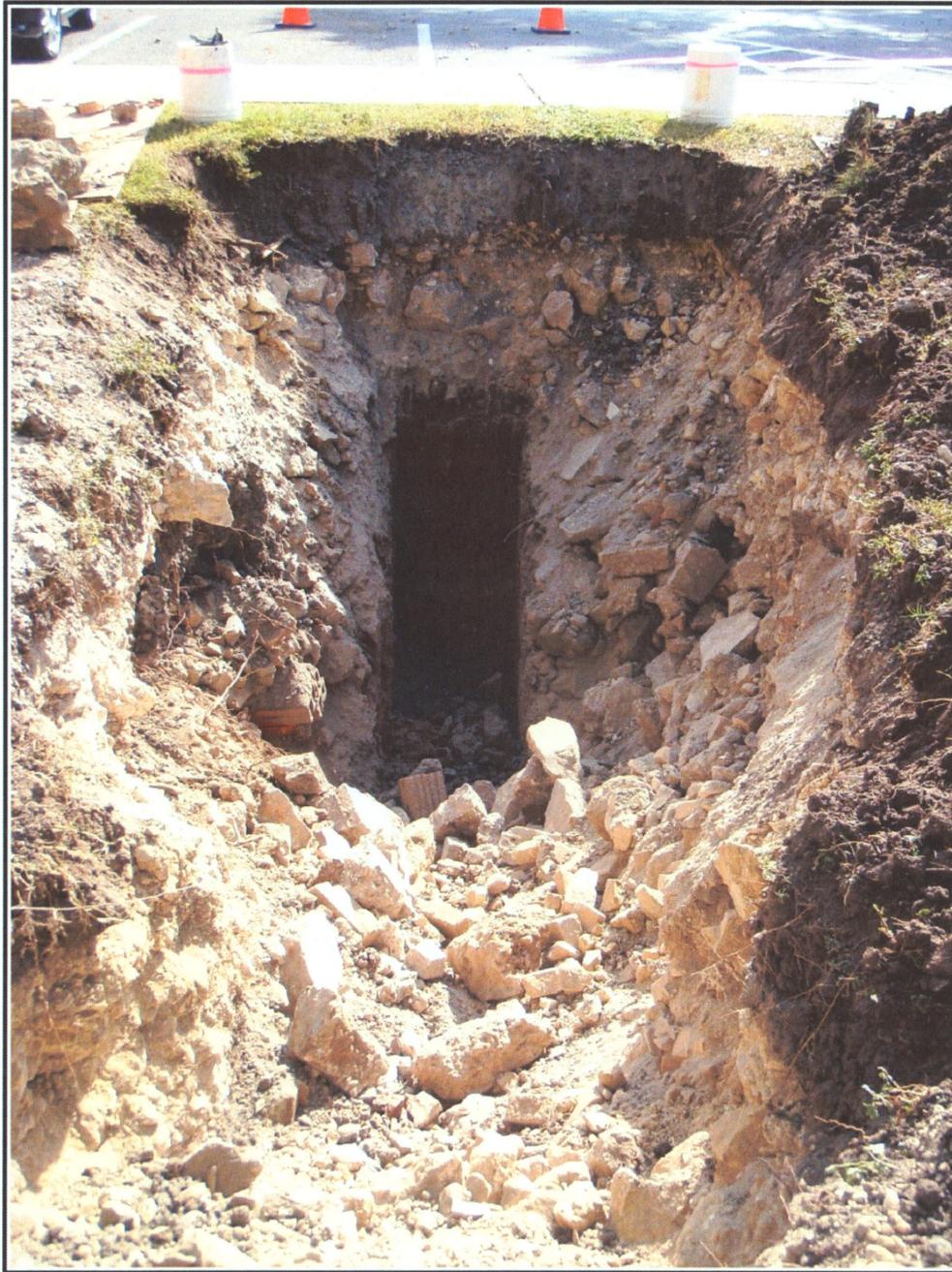


Figure 5-4. Eastern end of BHT 2 showing massive zone of unconsolidated fill materials overlaying a deeply buried clay deposit. View is looking east.

Beneath the limestone was a layer of fill that consisted of a similar tan colored soil, but once past the limestone were large fragments building materials. These materials consisted of concrete, yellow and red

bricks, brick tiles and subway tiles, to list a few. Similar to its upper layer, the matrix was very loose, thus the walls collapsed. For safety measures, the trench was widened as excavations exceeded 1.5 m in depth. The eastern portion of the trench revealed another layer that sloped to the west beneath the fill. The layer consisted of reddish-brown, coarse, silty clay. This layer was negative for presence of artifacts or large fill material. The layer was only noted in the eastern portion of the trench, between 7 to 9 feet in depth(Figure 5-5). The excavation of the trench was terminated at approximately 2.8 meters below surface.

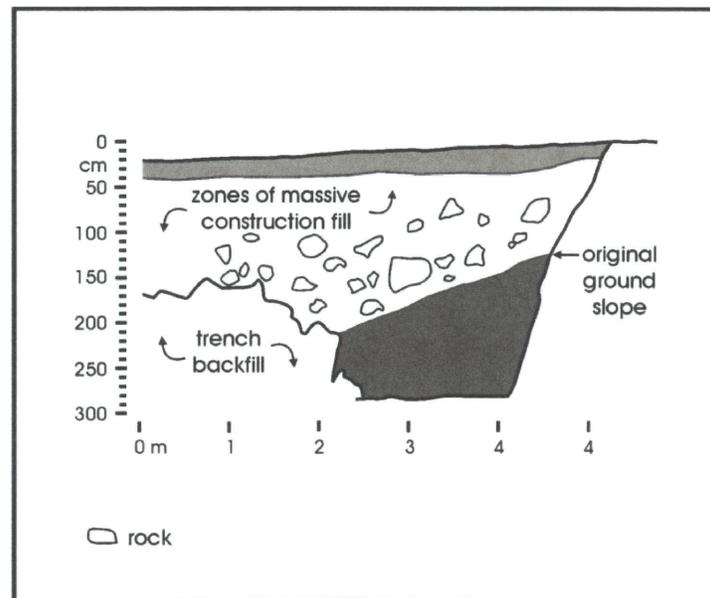


Figure 5-5. Stylized profile of the north wall of BHT 2.

No artifacts were collected from this trench.

Backhoe Trench 3

BHT 3 was placed to the west of BHT 2, on the other side of a large pecan tree (Figure 4-9). The Witte had requested that we not harm large roots of the cypress or pecan trees, so the trench was placed at a distance from the pecan in the hopes of not encountering the roots. The first passes of the backhoe revealed pecan tree roots. At this point, the trench was moved slightly to the west. The western portion of the trench encountered a half-inch metal pipe that was a water line (Figure 5-6). The path of the water line was noted by the construction crew responsible for the expansion of Pioneer Hall and the Witte Director of Facilities. The line acted as the western boundary to the trench. The remainder of the trench was taken to a depth of 2 meters below the surface. Similar to Backhoe Trench 2, the first layer of soil

encountered was approximately 50 centimeters worth of top soil. Beneath that, fill was encountered. The fill in BHT 3 was slightly different. The fill in Backhoe Trench 3 contained less building material. It did contain more limestone rocks and concrete fragments. A few yellow bricks were noted. The soil within the fill layer consisted of the same tan colored soil noted in BHT 2. Fill was noted all the way to the base of the trench. The depth of the trench was not extended beyond 2 meters, as the fill was loose and the walls of the trench unstable.



Figure 5-6. *Unconsolidated fill materials encountered in BHT 3. Note the water pipe flagged with orange ribbon that caused the trench excavation to be abandoned. View toward the west.*

Backhoe Trench 4

Trench 4 was excavated on the northern side of the driveway adjacent to Pioneer Hall, within the current construction yard (Figure 5-7).



Figure 5-7. North wall of BHT 4, looking northeast.

Initially, it was proposed to locate the trench to the south of the drive, but the potential for encountering electrical lines here caused the shift in location. Space constraints determined the length of the trench. The position of the work-yard fence and the office allowed for a trench of approximately 6 meters in length. The trench extended to a depth of approximately 2.4 meters.

The upper 50 cm of the trench consisted of topsoil (Figure 5-8). Beneath the topsoil layer was a caliche layer in the western portion of the trench that appeared to be road base associated with the drive. Beneath the caliche was a layer of tan colored soil with large limestone rocks. This appears to be consistent with the fill noted in BHTs 2 and 3. The eastern portion of the trench revealed grayish-brown soil and

contained red bricks, yellow bricks, tile, concrete and other building material. These materials were consistent with what was encountered in BHT 2.

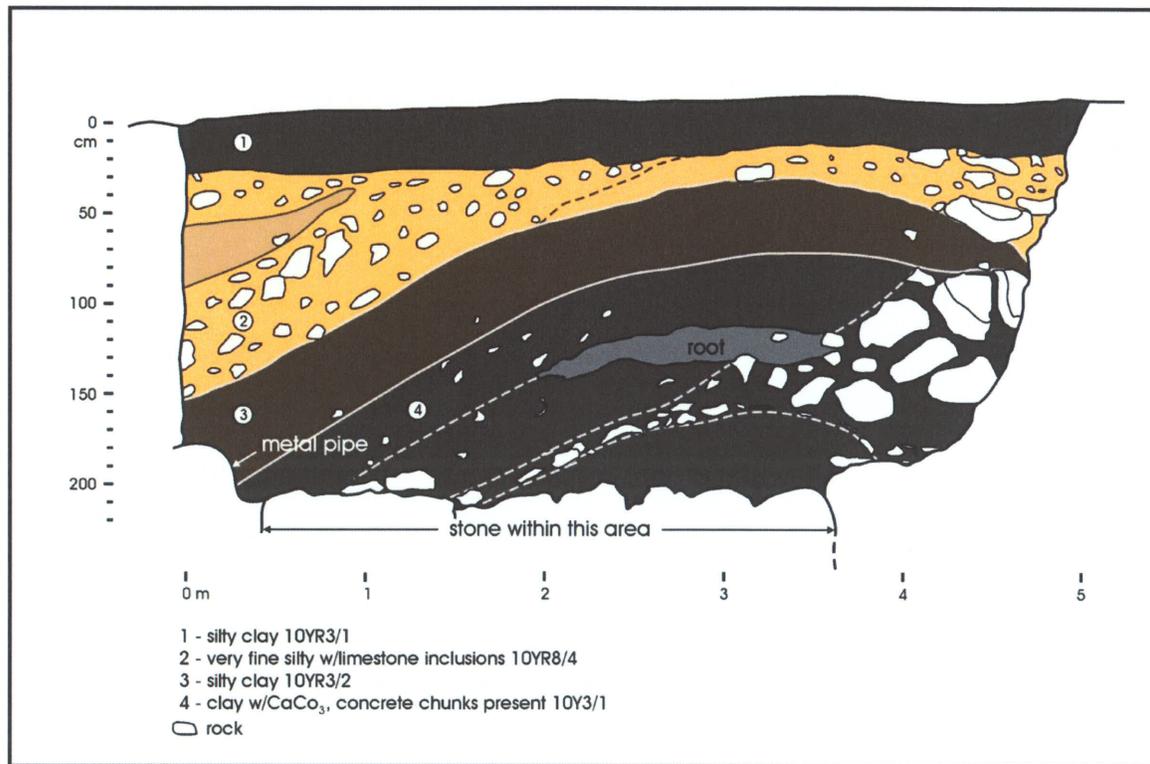


Figure 5-8. Profile of the north wall of BHT 4.

Large limestone rocks were observed at the base of the western portion of the trench. The stones proved to be fairly resistant to removal by excavators. In addition to this, at the depth in which they were encountered, it became difficult to determine the nature of the stone. The eastern portion of the trench became unstable due to the loose nature of the fill. The concrete chunks and bricks were not held in place, and would slide into the trench after each pass of the bucket. The location of the trench prevented the benching of the trench that would have allowed for the archaeologists to investigate further or enter the trench. After photographing and profiling the trench, the trench was backfilled.

Backhoe Trench 5

BHT 5 was excavated along the northern portion of the Reptile Garden (Figure 4-9 and 5-9). Care was taken not to damage the cypress tree roots in the area. The trench was approximately 6 meters in length, and reached a maximum depth of approximately 1.75 meters.



Figure 5-9. *Excavation of BHT 5 just south of the Reptile Garden in the vicinity of the Cypress trees. View toward the west.*

Similar to the other trenches excavated, topsoil was noted that sat atop various layers of fill (Figure 5-10). This trench was slightly different, but reminiscent of BHT 3. One picture frame glass was recovered from BHT 5. The pane was broken into two pieces during the trenching, but both pieces were recovered. The oval glass pane appeared to be hand shaped and had a beveled edge. In addition to the glass, other material noted in this trench included yellow and red brick, cement fragments, a ferrous cog, and clear and brown glass container glass. The excavation of the trench was terminated upon the presence of cypress tree roots.

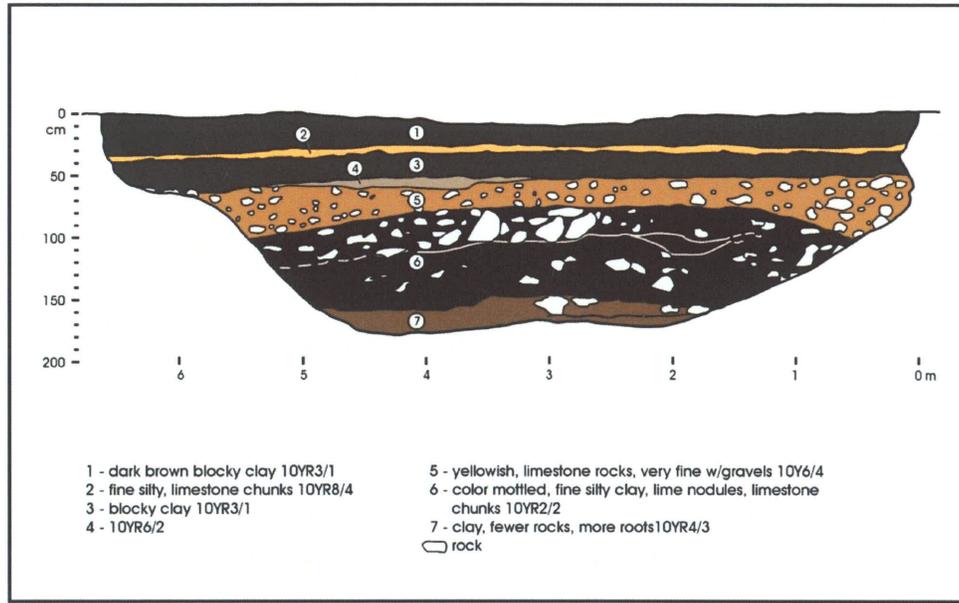


Figure 5-10. Profile of the south wall of BHT 5.

Backhoe Trench 6

BHT 6 was excavated to the west of BHT 5 (Figure 4-9). The trench was orientated east-west, and was approximately 6 meters in length (Figure 5-11).



Figure 5-11. View of BHT 6 looking east.

According to the Giraud map, a portion of the dam should have been located within BHT 6. The trench was excavated in hopes of encountering a portion of the Alamo dam. Similar to other trenches, topsoil comprised the first layer of soil (Zone 1). The fill beneath the topsoil appeared to be different in BHT 6 than in other excavated trenches (Zone 2, Figure 5-12).

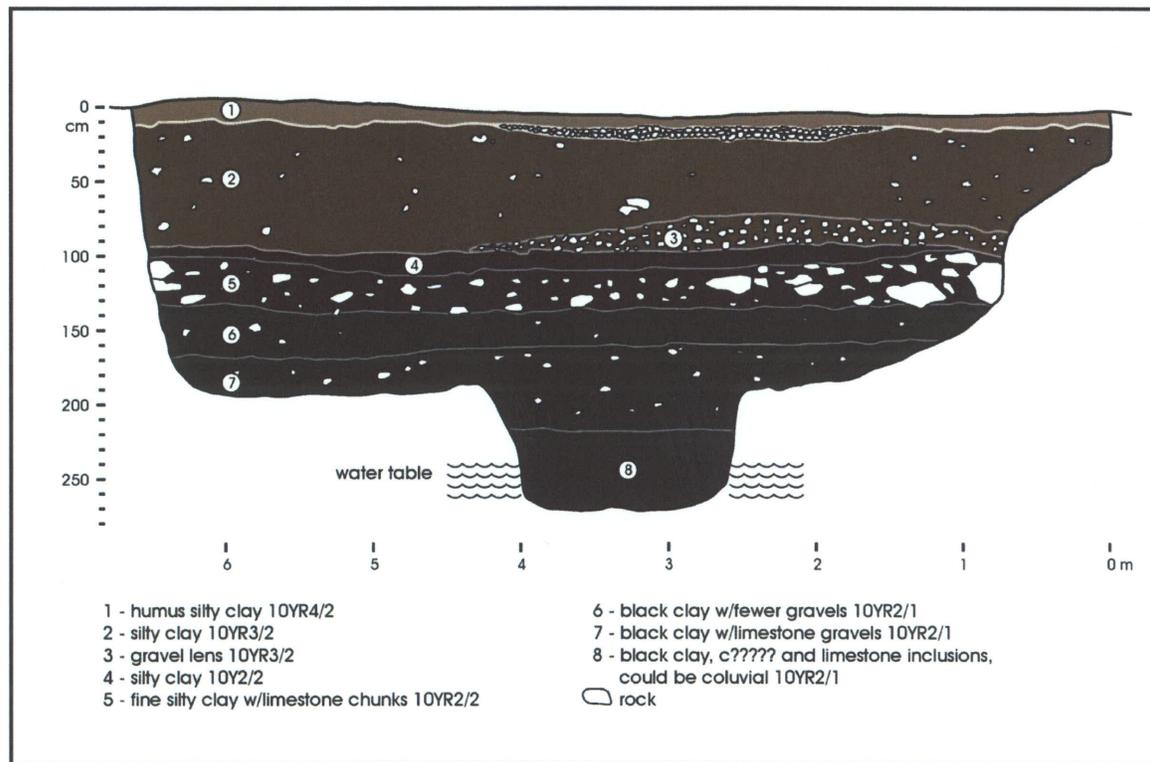


Figure 5-12. Profile of the north wall of BHT 6.

A silty-clay layer was encountered with a small limestone inclusion (Zone 3). Beneath this layer was additional fill that started to include larger limestone chunks and concrete fragments (Zone 4). A few yellow and red bricks were noted in Zone 5. In addition to the bricks, fragments of Transfer print white earthenware and some large faunal remains were also noted within this layer. The density of artifacts was very low, but what was present appeared to date circa late 19th to early 20th century.

The lower levels of the trench (Zones 6 through 9), though they continued to contain the limestone and concrete chunks, consisted of black clay. The soils are not *in situ* due to the inclusion of the building material fill, but density of the fill material dramatically dropped off towards the bottom of the trench. Because of this drop off of fill and the potential for artifacts below the current excavated layer, the backhoe operator was asked to excavate a portion of the trench to a deeper level. At approximately 240 cm below surface, it was evident that the water table was encountered. It would appear that the soils encountered below the water table were intact. Excavations continued to approximately 260 cm below

the surface to examine the matrix. The base of the trench consisted of black clay with some limestone inclusions that may be colluvial. Excavations ceased at this point in the trench due to the amount of water that was rushing into the base of the trench. Evidence of the Alamo Dam was not encountered in BHT 6.

Backhoe Trench 7

Backhoe Trench 7 was an extension of BHT 1 (Figure 4-9). The trench was extended in hopes of encountering a portion of the Alamo Dam. The southern edge of BHT 1 was relocated, then commencement began on BHT 7. The soil layers were consistent with what was seen in the walls of Trench 1. At approximately 3.5 meters south from the point where BHT 1 met BHT 7, large limestone rocks were encountered at a depth of approximately 190 cm below surface (Figure 5-13).

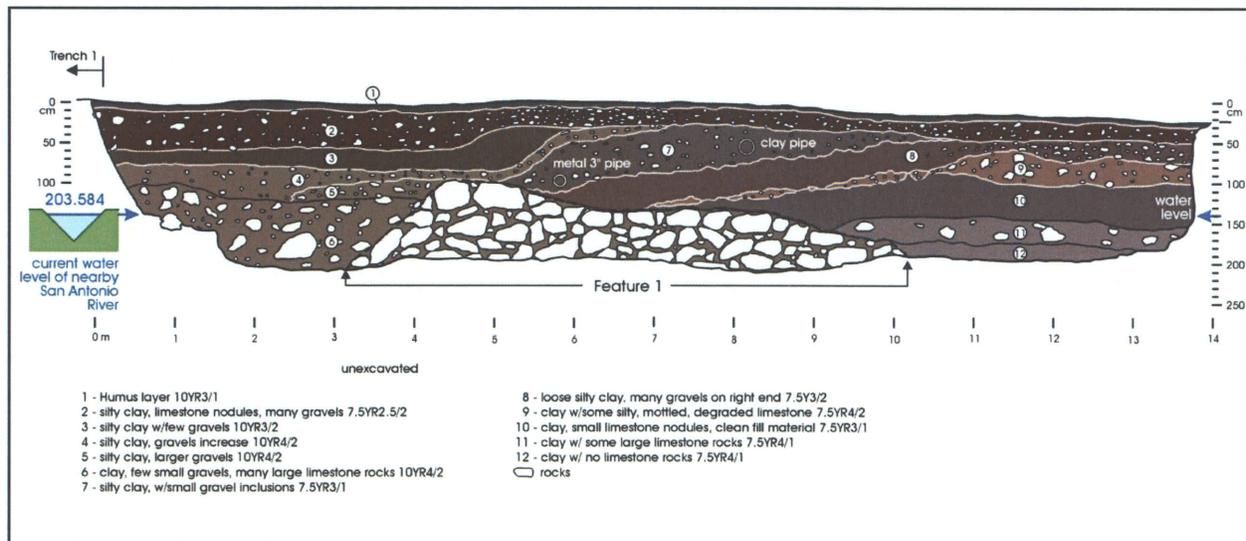


Figure 5-13. Profile of the east wall of BHT 7 showing Feature 1, remnants of the Alamo Dam.

Towards the south, there seemed to be a pattern in the alignment of the stones, as they were stacked one atop each other. At their maximum height, the tops of the stones were noted at approximately 1 meter below the surface. Just above the stones, a steel pipe was located. The pipe was part of a drainage system that emptied into the San Antonio River through the stone wall in the bank. The stones were located just beneath the pipe. The limestone continued to the south for approximately 7 meters, with the south face sloping down. It is likely that this may be part of the dam, and that the upper portion was sheared off during the 1930s work. To ensure that the feature was not the same as the rock layer encountered in BHT 1, the upper layer of stones was removed from the trench to determine if the stones were more than one course thick. After the stones were removed, it was evident that the stones were purposefully stacked on top of each other. Reviews of the historic maps and aerials indicate that these walls were constructed between 1935 and 1939. The map of the compound created in 1935 shows that the San Antonio River

was not stone lined. The 1939 aerial of the area shows the stone line culvert and reveals that the banks of the river were stone lined. The steel pipe would have been placed in this location between those years.

Deeper excavation in the northern portion of BHT 7 revealed the water table. The stones were documented by profiling the trench walls prior to the bottom of the trench filling with water. Archaeologists were unable to keep the trench open as it was safety issue, and the amount of water that had entered the trench during the profiling process made observing the remaining stones difficult. Many of the stones fell out of the wall as the trench was being excavated. Due to the influx of water, the trench was profiled using the voids from fallen rock as guidelines as to the shape of the. The tops of the stones reached barely 25-30 cm above the waterline, but it is believed that in its original shape, the dam would have been considerably taller.

Backhoe Trench 8

Backhoe Trench 8 was located in front of Pioneer Hall (Figure 4-9). The trench was placed in this location because of the potential of encountering part of the Alamo Dam as it is depicted on the 1879 Giraud map . It was also possible to encounter a portion of the *Alamo Acequia*. Excavation of the trench revealed the same layer of topsoil as noted in all of the previous trenches excavated (Figure 5-14).

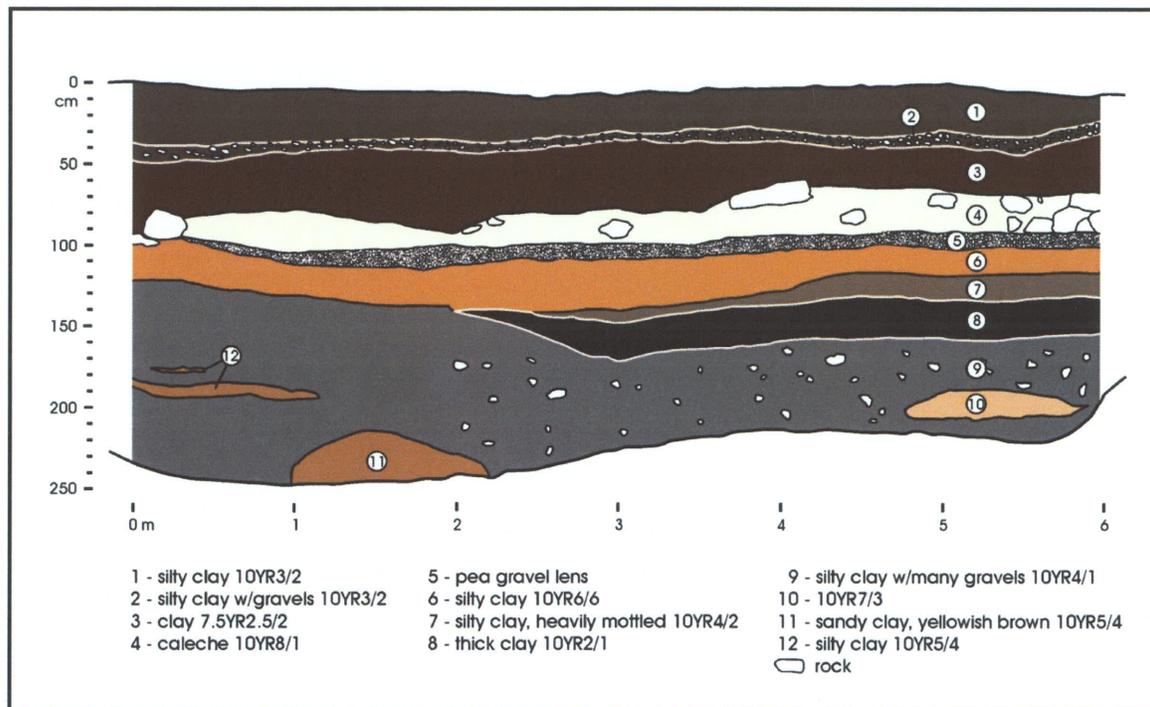


Figure 5-14. Profile of the east wall of BHT 8.

Beneath the topsoil layer was a gravel lens. This consisted of a silty-clay matrix with small gravels present. Beneath the gravel layer was a clay layer that differed from all other matrix noted in the previous trenches. Beneath the clay appeared to be a caliche fill that contained limestone. The majority of the limestone was concentrated in the eastern portion of the trench. The limestone did not appear in the same quantities as encountered in the other trenches. Directly below the caliche and limestone layer was a lens of pea gravel. This layer was not seen in any other trench excavated during the investigations.

Backhoe Trench 9

Backhoe Trench 9 was located in front of the Pioneer Hall in the grassy area between the fountain and the walkway from Broadway (Figure 4-9). At the request of the Witte Museum and the City Arborist, the trench was deliberately kept away from the drip line of the trees in the vicinity. The trench was approximately 9 meters in length and extended to a depth of 12 feet below the surface. The water table was encountered at this depth, thus the base of the trench was backfilled, raising the trench to approximately 11 feet below surface. To allow for safe entry, one side of the trench was benched at two intervals. This allowed for a better view of the north wall of the trench. After clearing the north wall of the trench, the profile revealed a complex stratigraphy (Figure 5-15).

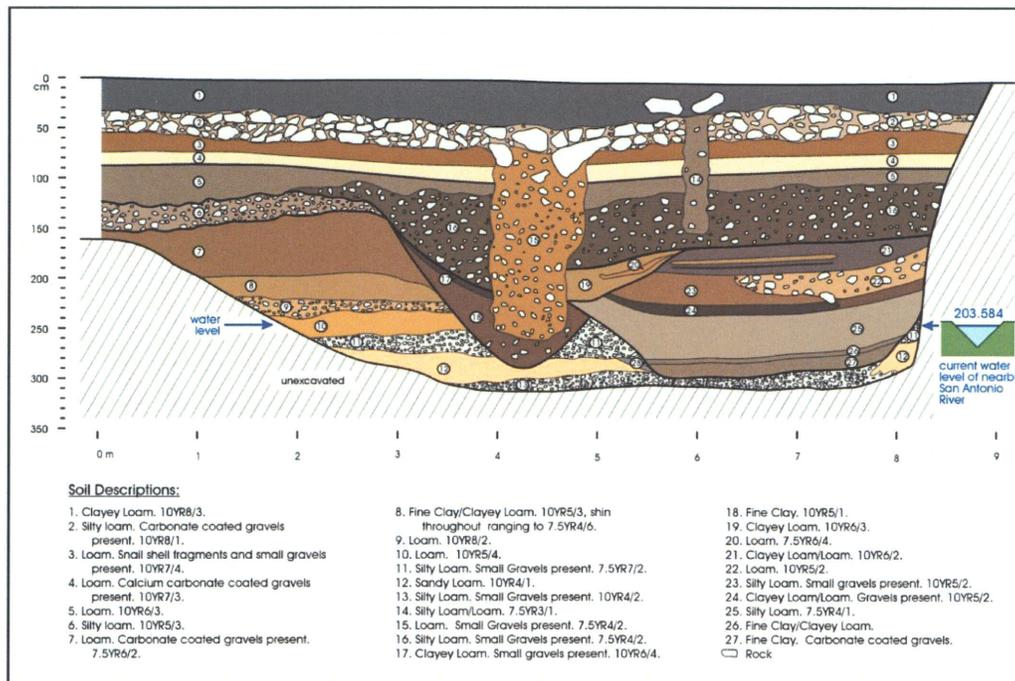


Figure 5-15. Profile of the north wall of BHT 9.

The first 30 cm below the surface consisted of top soil (Zone 1). Beneath the topsoil was a layer of limestone rocks that had very little matrix (Zone 2). The matrix between the stones was fine and

yellowish-tan in color. A layer of reddish brown soil (Zone 3), approximately 20 cm thick, was noted above packed caliche (Zone 4). The caliche had crushed limestone and a few gravels. Below the caliche was a brown clay loam matrix (Zone 5). Just beneath Zone 5, the matrix consisted of dark brown clay with gravel, limestone chunks, and lime nodules (Zone 16). These upper layers were all fill layers that appear to have been placed sometime after 1935. Below the fill, two features were evident in the profile. Feature 2 appears to be a narrow trench cut into clay and the natural caliche at the base of the backhoe trench (Figure 5-16).

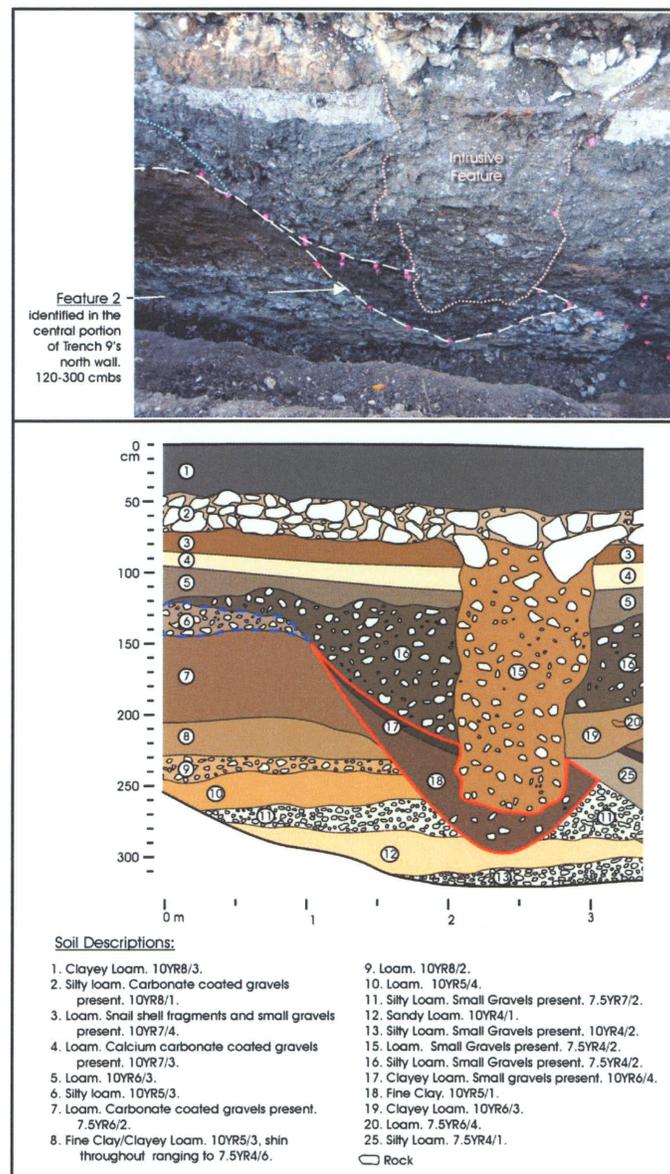


Figure 5-16. Feature 2 as identified in the north wall of BHT 9.

This feature is narrow, at approximately 2 meters wide, when considering that it should be part of the

large *acequia* trench that serviced much of San Antonio during the early years of the missions and colonization. The trench was later filled in with a mixture of gravel and soil, although it appears that a much later disturbance in the form of a posthole was present. The posthole extended almost to the base of the *acequia* trench (Zone 15). Luckily, the posthole did not cut into the base, leaving the profile of the trench intact. As of yet, it is unclear what the disturbance may have been related to, but it is likely that it may have to do with the installation of lighting along the Witte Museum grounds.

Feature 3 was noted within the profile of Backhoe Trench 9 (Figure 5-17). This second feature was located adjacent to the first feature, and appears to cut into Feature 2. Feature 2 as well as Feature 3 consisted of a cut into natural soils and caliche.

The trench profile reveals that this feature is wider than Feature 1, and may be from a second generation of the Alamo Acequia. The soil layers that are found within the trench cut are consistent with layers that are deposited by flooding and natural deposition within an irrigation ditch. It is a likely hypothesis that this feature is a later version of the Alamo Acequia; one that was not as maintained as was the first. The much wider cut for an irrigation ditch, at approximately 4 meters, would have better served the community, rather than the narrow version. Since it was not a meticulously maintained, it may have not been used towards the end of the era when such ditches were commonplace. Layers of deposits present indicated that the ditch had not been cleaned for quite some time before falling into disuse.

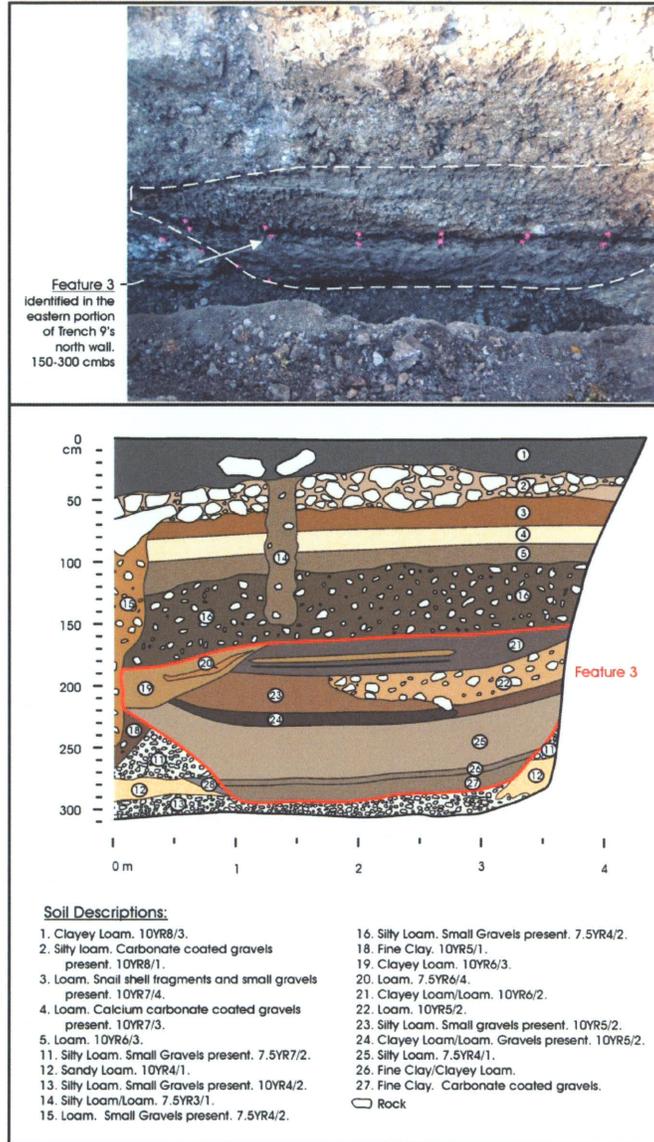


Figure 5-17. Feature 3 as identified in the north wall of BHT 9.

Auger testing occurred prior to the excavation of Backhoe Trench 9 and was intended to search for evidence of the *acequia* in areas that were requested not to be disturbed by backhoe trenching. The area, although off-limits to intensive survey, was of interest because it appeared to be less disturbed than the area of the museum grounds closer to the river. Historic maps indicated that a swale passed through this portion of the APE. There was also an indication that because of its higher elevation, it would have required less fill when the landscape was being altered.

Auger Boring 1

Auger 1 was located just south of the walkway leading to Pioneer Hall on the east side of Curiosity Lane (Figure 4-9). Initially the auger was conducted by hand using a hand-auger and a sharp-shooter shovel.

The first 22 cm below the surface consisted of top soil with a few gravels. Beneath the topsoil, fill material was encountered. The auger was hand excavated to a depth of 60 cm below the surface. A mechanical auger was utilized to test the hole deeper. Between 22 and 70 cm below surface, the matrix consisted of limestone rocks with very little soil. The stones were relatively well set, only a little bit of the present soil was loose—thus the stones were difficult to remove. Between 70 and 92 cm below surface, a layer of gravel with chert flakes was encountered that appeared to have been created mechanically. The matrix consisted of dark brown clay. Noted between 92 and 153 cm below surface, was medium brown colored clay with small chert flakes.

An absence of significant cultural material was noted in Auger 1. The soils encountered indicated that the fill extended to at least a depth of 153 cm below surface (or 5 feet) (Figure 5-18). The auger test did not appear to penetrate through to the fill material.



Figure 5-18. Auger Boring 1, note limestone zone near top of unit identical to Zone 2 in BHT 9 profile.

Auger Boring 2

Auger 2 was located further south of Auger 1 (Figure 4-9). The auger test was placed between the pecan trees in the area that was noted as a swale on the 1935 map of the Witte Museum. Initially this auger test was also excavated by hand, but further excavation was done by mechanical auger after reaching a depth

of 60 cm below surface (Figure 5-19).



Figure 5-19. Excavation of mechanical Auger Boring 2 just north of BHT 9.

From the surface to 37 cm below, the matrix consisted of the topsoil that has been noted throughout the Witte property. Between 37 and 61 cm below surface, the limestone fill also noted in Auger 1 was present. Very little soil was present between the limestone rocks. Hand excavations ended in this level due to the difficulty of removing the stones. The mechanical auger proceeded to excavate the test hole to a depth of 183 cm below surface. Between 61 and 85 cm below surface, Auger 2 penetrated through clay that had gravels, chert, and limestone nodules. Between 85 and 183 cm below surface, the matrix consisted of brown clay. No significant cultural material was noted during the excavation of Auger 2. The soils that were observed indicated that fill material extended to at least the depth of 183 cm below the surface.

Auger Boring 3

Auger 3 was excavated northwest of Auger 1, on the north side of the walkway leading to the Pioneer Hall (Figure 4-9). This auger test was not hand excavated; rather the entirety was excavated by the mechanical auger (Figure 5-20). The soils and stratigraphy encountered in this test were very similar to

the other two auger tests. The soil consisted of the same topsoil that had been encountered in the previous auger tests to a depth of approximately 29 cm below surface. Between 29 and 63 cm below surface, limestone fill was noted. Between 63 and 88 cm below surface, the matrix consisted of brown clay with lime nodules, gravel and chert nodules. The bottom layer of the auger test, between 88 and 193 cm below surface encountered the same brown clay as in other auger tests.



Figure 5-20. *Excavation of Auger Boring 3 just north of the sidewalk leading to Pioneer Hall.*

No cultural material was encountered during the excavation of this auger hole. Fill continued to the base of the auger hole, indicating that the fill extended to at least a depth of 193 cm below surface. There was not any evidence of a feature.

Chapter 6: Summary and Recommendations

The property on which the Witte Museum is situated has a very long history of use. Prior to Spanish colonization, the area was extensively occupied by local Native American groups due to its abundance of natural resources. The prehistoric sites that have been documented within Brackenridge Park have indicated that the occupation of the area extended well into the Early Archaic Period.

At the time of the arrival of the Spaniards, the area would likely still have been an important resource to Native Americans. Though the Spanish missionaries chose locations south of the current project area for their mission sites and residences, the need for irrigation compelled them to alter the landscape to the north of the main portion of town. In 1719, the construction commenced on the *Acequia Madre*, later also referred to as the Alamo Ditch. The irrigation ditch started at a bend in the river south of the headwaters of the San Antonio River. The path of the *acequia* headed to the south, running parallel to present day Broadway Avenue. The *acequia* passed by Mission San Antonio de Valero, and continued in several branches until it re-entered with the River north of its juncture with San Pedro Creek. Several *desaguas* were present north of the final re-entry into the River. Some of these were later additions and changes to the original channel that started near the Witte Museum (Figure 3-1).

The *Acequia Madre* would have been a ditch excavated in the natural clays and caliche of the area. The channel was not lined with cut stone as was done to other *acequia* routes later in history by German settlers. Archival research indicates that some *acequias* were lined with lime, but there is not specific notation to this happening on the *Acequia Madre*.

The use of the *acequia* as a means of providing water to cultivated land was an important aspect of the Spanish Mission system. In addition, the *acequia* provided potable water to individuals that resided along the path of the ditch. Over the years, problems arose concerning the maintenance, ownership, water rights, and path of the *acequia*. Sediment would congest and clog the ditch. Yearly cleanings were mandated to help refurbish the ditch. No one individual owned the *acequia*, though individuals who needed the *acequia* to irrigate crops were awarded rights to the water in increments of hours and days wherein water could be drawn from the ditch. These individuals were also responsible for the maintenance of the ditch. Sections were to be cleaned of mud and silt, and fines were levied against those who failed to participate.

The Alamo Dam was constructed to direct water into the head of the *Acequia Madre*. Early construction of the dam likely resembled that of the Upper Labor Dam, located upstream of the current project area.

Large limestone blocks would have been the main construction material utilized, with smaller stones acting as chinking. The dam would have diverted the flow of a portion of the San Antonio River into the mouth of the *Acequia Madre*. It is likely that the dam had been refurbished and altered throughout the years due to normal wear and intermittent flood damage during its lengthy use.

Full flow into the *acequia* would often result in overbank flooding near the mouth of the irrigation ditch. For instance, late 19th Century maps of the area show that the area immediately adjacent to the Alamo Dam was a swamp (see Figure 4-2). To reduce the frequency of flooding the head gate was only partially open.

The *Acequia Madre* was in use until 1901. For a few years prior to this closing, the benefits of keeping the *acequia* working were often argued. The costs of maintenance steadily increased and fewer and fewer individuals adhered to the long-standing regulations. Many people argued that the *acequia* was a means of spreading disease and unsanitary conditions. The ditch was often used for the disposal of waste and refuse. Others argued it was needed as a storm drain and to prevent flooding of areas along the river. In May of 1901, it was finally decided that the *acequia* was to be closed, whereupon funding was allotted for the task. Immediately after the channel ceased to be used, San Antonio experienced a series of torrential rains. After each occurrence it became evident that closing the *acequia* was a mistake. The lack of drainage for the storm water resulted in streets and sidewalks being inundated, making them impassable. This precipitated the re-opening of the *acequia* in 1903. The plan was to reopen the *acequia* while improvements were made to drainages downstream that would reduce or entirely alleviate flooding caused by the *Acequia Madre*. The *acequia* was active for the next two years, approximately. In 1905, the desire to close the ditch again was raised. The decrease in rains and the escalating cost of maintenance was used as arguments in favor of closing of the ditch permanently. Approximately \$2,000 was thought to be sufficient to close the ditch. In an effort to cut down costs, an alderman proposed that street sweepings be used instead. Later in 1905, the *Acequia Madre* was closed for good, using the suggested street sweepings as the fill material.

The property at which the head-gates of the *Acequia Madre* stood remained undeveloped throughout the early history of San Antonio. The dam, the gate, and the ditch itself were the only improvements in the immediate area. Deed records discussed sale of property in the area beginning in 1852, making references to the head-gate as a hallmark to property divisions, although they do not mention the buildings in the immediate vicinity. It appears the property remained undeveloped until the construction of the Witte Memorial Museum.

The construction of the Witte Museum began in 1926. The museum and the grounds have had several alterations and additions since. The Witte was opened to the public on October 8, 1926. In the early 1930s, the Witte stopped receiving funding from public venues and had to rely solely on admission fees to cover its operating costs. The Witte had to become inventive to survive during the Great Depression. Around this time, the idea of starting a reptile exhibit and research facility on the grounds of the Witte was brought before the board. After a short period of consideration, plans to create the Reptile Garden were born. The Reptile Garden was built in three weeks by the National Youth Administration, a federally funded organization that provided work to local youths as part of the New Deal. The Garden opened with much ado, and collected enough admission fees by the end of its first week to pay for the construction.

The Reptile Garden not only became important to the existence of the Witte Museum itself, but also provided a valuable service to the local community. The Reptile Garden paid patrons by the pound for snakes to house in their exhibit. The surrounding communities were suffering from the effects of the Great Depression. The ability to collect the snakes, which were considered pests, and sell them to the Reptile Garden was an opportunity that many people grasped. The money paid to individuals who brought in the snakes allowed them to survive during hard times. In turn, the exhibit became a popular tourist attraction. Admission costs not only covered the operation of the Garden, but kept the Witte Museum in operation.

At the time of the construction of both the Witte Museum and the first location of the Reptile Garden, the *Acequia Madre* had long been filled. Though the ditch was no longer in use, descriptions of the location of the Reptile Garden indicate that the route of the *Acequia Madre* may have still been visible. The topographic map of the complex, completed in 1935 (Figure 6-1) shows a swale that may be the location of the *acequia*.

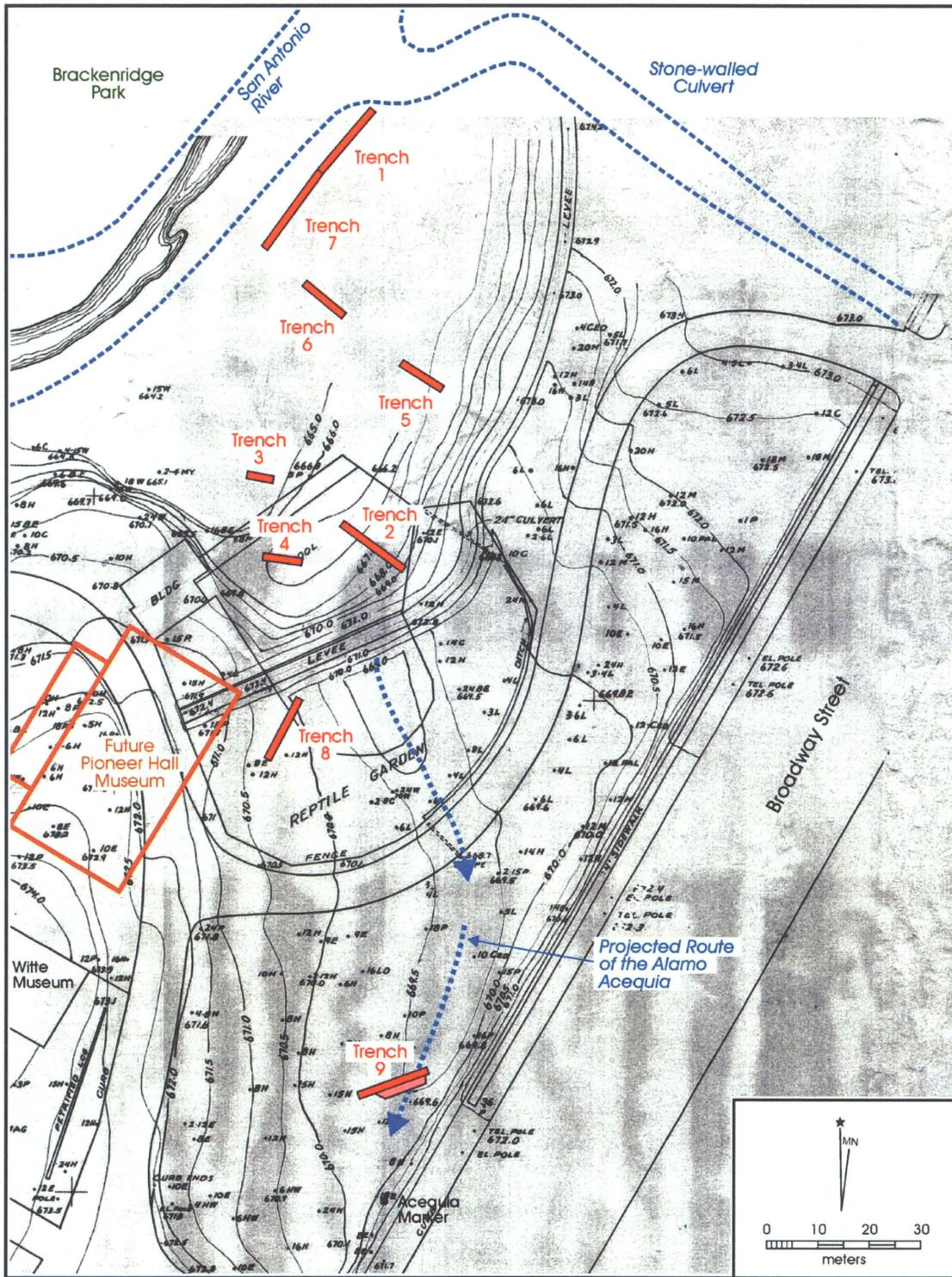


Figure 6-1. Topographic map of the northern portion of the Witte Museum grounds prior to the construction of the Pioneer Hall in 1933. Note the absence of the stone-walled river and culvert at the north and western portion of the property. Trenches 1 through 9, as well as the projected route of the Acequia Madre, are shown for reference.

The initial field investigations in search of the dam and acequia focused on the area north and

immediately adjacent to Pioneer Hall. Eight backhoe trenches were excavated across this area. The trenches were positioned in locations that would have revealed the *Acequia Madre* (BHTs 2-8) and its dam (BHTs 1 and 7), as they had been estimated based on the historic maps. BHT 1 was excavated parallel to the current river channel in the extreme northwestern portion of the project area. It uncovered a layer of limestone cobbles on top of undisturbed clay but no evidence of the dam. Since the rocks extend under the existing rock wall lining the channel of the river, they were likely placed there during the late 30s construction of the stone wall. BHT 2 was excavated at the southeastern corner of the project area where it was anticipated that it would encounter the *acequia* channel. Instead, it exposed a rapidly dipping subsurface suggestive of a pit or a bank filled with massive quantities of construction debris. Judging from its relative position, the slope seen at the eastern end of the trench is the same as seen in Figure 6-1. BHTs 3-6 were placed in the central portion of the landform and while they penetrated to depths exceeding 6-feet, none of them positively identified evidence of the dam or the *acequia* channel. A layer of large limestone cobbles uncovered in the western portion of BHT 4, at a depth of roughly 2.2 meters below surface, matches the expected location of the *acequia* dam. Unfortunately, the matrix sitting on top of these cobbles consisted of loose construction rubble that formed very unstable trench walls and did not allow for the inspection of the basal rock by CAR personnel. Therefore, it cannot be substantiated whether or not the rocks formed part of the dam, or were a distinct layer of construction fill. It is also likely that the hump seen in the trench profile is the same low ridge as appears on Figure 6-1, just west of the “pond” notation.

To more fully understand the nature of the landform and subsurface deposits found north of Pioneer Hall, pre-construction elevation readings obtained from the 1933 map (Figure 6-1) were compared with modern topographic map shot by the CAR crew (Figure 6-2).

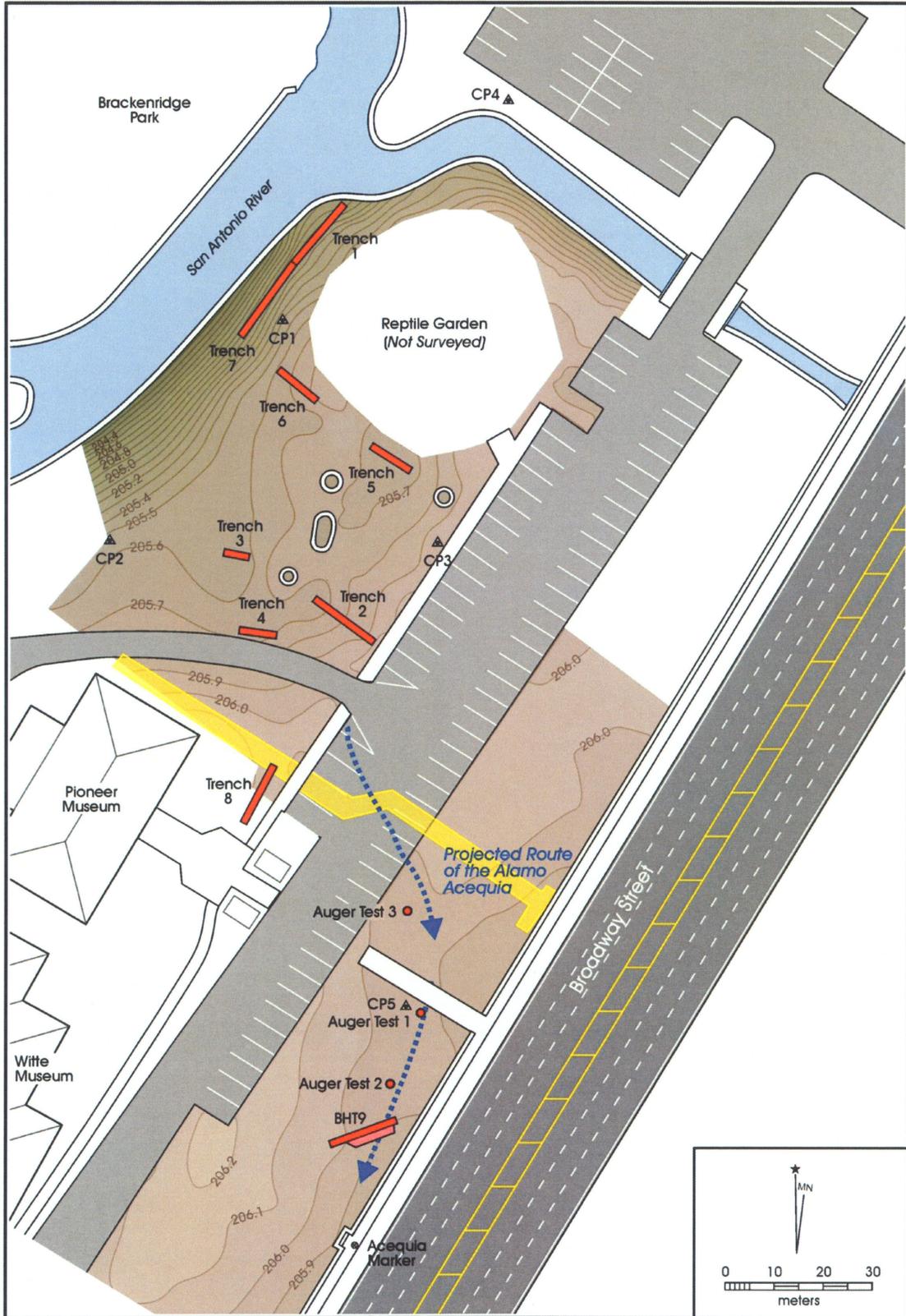


Figure 6-2. Current topographic map of the project area showing trench and auger test locations along with the projected route of the Acequia Madre across the Witte complex.

Figure 6-3 shows that the thickest amount (6-7 feet) of fill was found in locations that were associated with the “pond,” located behind the Reptile Garden, as well as in the area to the east of Pioneer Hall. This map revealed that substantial amounts of fill were to be added to the area in order to raise and level the landform.

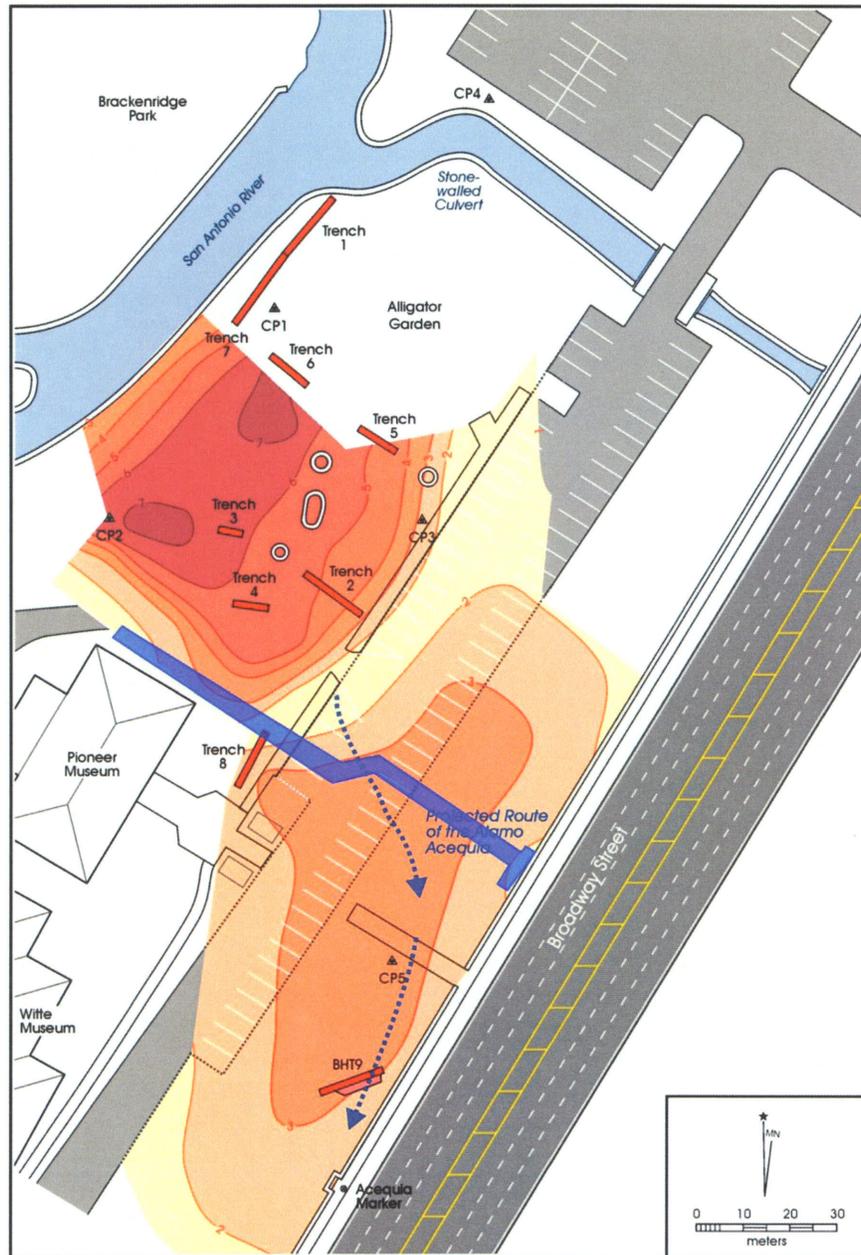


Figure 6-3. Map of the project area showing calculated depth (ft) of construction debris and fill material distributed across the northern portion of the Witte complex.

Overall, the results of the backhoe trenching, particularly BHTs 1-6, revealed substantial changes in the landform situated immediately north of Pioneer Hall. Specifically, the stratigraphy of the trenches

revealed massive amounts of fill that have been introduced in the area resulting in a rise in the elevation of the landform. This increase in elevation may have been purposeful to raise the area out of its low-lying marshy setting resulting in the expansion of dry land on the east bank of the river. This interpretation is supported by the Pioneer Hall preconstruction maps and a careful scrutiny of other historic maps (i.e., Figure 4-2; 4-4; 4-5). These sources indicate that the upper (northern) portion of the San Antonio River's meander extended well into this landform in part because this curb in the meander was a low-lying area. The impression given is that the original bank of the river at this meander was the levee that is shown in Figure 6-1. If this is a correct interpretation, it means that the six BHTs placed in this area were all within a low-lying marshy area and that the fill material noted in each trench was placed there to reclaim the area as dry bank. In addition, it also suggests that while the search for the Alamo Dam within this area was appropriate, it should not have been expected to locate the acequia itself within this section of the meander due to the marshy pool. Diverting the flow of water by damming this meander through this low-lying area makes sense, but having an *acequia* through it does not. This interpretation also implies that Giraud drew the dam as a lengthy feature on his 1879 map because it had to cross this broad bend in the river. Furthermore, this is why evidence of the *acequia* would be only found further east, or on the bank of the original meander, rather than within the meander proper.

Having provided background to the overall findings from the field investigations, the remaining section discusses the specific findings of the project. Three features associated with the Acequia Madre and Dam were identified and documented during the field investigations.

Feature 1 was found in BHT 7 and represents the remnants of the Alamo Dam (Figure 5-14). The backhoe trench cross-sectioned the feature roughly perpendicularly and exposed an elongated mound of stacked limestone. The top of the stack was noted at approximately 90 cmbs lying immediately below a water pipe that continued to the bank of the river and extended through the stone wall lining the channel. It appears that the installation of the pipe during the late 1930s may have truncated the upper reaches of the dam. The current water level in the channel is roughly 35-40 cm below the top of the stacked cobbles. The base of the stacked stones was not reached because water began seeping into the bottom of the trench making the continuation of the trenching operation impossible.

Features 2 and 3 were discovered in the walls of BHT 9. This trench was placed in the grassy median between Broadway Avenue and Curiosity Lane, approximately 15 meters south of the concrete sidewalk outside of the drip line of the nearby trees. The trench was excavated to a depth of approximately 12 feet below the surface, at which time the water table was encountered. Soil was placed back in the base of the trench to stop the influx of water, and the south wall of the trench was benched to allow for access into

the trench. Features 2 and 3 were revealed in the north wall of the trench. Both features are ditches, and both are in line with Cox's proposed route of the *Acequia Madre* although the route of the *acequia* does not follow between the large cypress trees as conjectured by Cox during past visits to the site.

Feature 2 is one of the two irrigation canals identified in the profile of BHT 9 (Figure 5-16). It originated above a brown clay layer and has been dug through several depositional layers including a silty loam zone containing cemented gravels (Zone 11). Material from this silty loam layer is found atop the brown clay zone (Zone 6) from which the trench was excavated. The top of the trench appears approximately four feet below the current surface. Extrapolating the width of the trench, it appears to have been approximately 2.5 meters wide near the top and roughly 140 cm deep. Because Feature 3 cuts into Feature 2, the latter pre-dates Feature 3. Such a narrow ditch would likely not have been able to accommodate the flow without overflowing its banks. It is possible that the head-gate was only partially open to accommodate the reduced flow-capacity of the channel. It is possible that this ditch was only used for a short period of time and is not the 1719-version of the *Acequia Madre*. On the other hand, we believe that it is more likely that Feature 2 is the original *Acequia Madre*. The lack of stratified sediments in the bottom of the trench is consistent with systematic and repeated cleaning of the ditch as was regulated over the years to ensure that the *acequia* was in working condition. The ditch may have been able to sustain the community throughout the Spanish Colonial period and into the late 19th Century. Furthermore, the material that serves as fill (Zone 16) is consistent with street sweepings that are mentioned in the historic record as having been used to fill the trench following the 1901 decision of the City Council. Small fragments of glass were noted among the dirt and gravels as BHT 9 was being backfilled mechanically and by hand following profiling.

Feature 3 cuts into the eastern edge of Feature 2 (Figure 5-17). Feature 3 appears to be a much wider ditch measuring approximately 3.5-4.0 meters in width and roughly 120 cm in depth. It has a flat bottom that terminates in a second layer of cemented gravels in a silty loam zone. Due to its dimensions, this ditch would likely better suit the needs of the *acequia* flow. It is possible that this second ditch was made wider to increase flow-capacity and therefore it is possible that this trench was cut in 1903 when the *Acequia Madre* was re-opened and after complaints by citizens about the frequent flooding of the river. Feature 3 contains at least seven distinct depositional lenses that appear to be low energy silt deposits. As such, these lenses may be a result of the lack of cleaning that most likely would have been associated with the later usage of the *acequia*. City council records do mention the increased problems the City was facing as a result of the unwillingness of the inhabitants to take part in the regular cleaning of the ditch by the early 20th century. The Spanish Colonial Period and into the early Statehood Period was known for its meticulous upkeep of the *acequias*. In contrast, beginning in the late 19th Century, annual cleaning of the

ditches decreased. The 1.2 meters worth of sediment that was noted within the ditch could have accumulated over the short time the *acequia* was re-opened between 1903-1905. Feature 3 is filled with the same street-sweeping deposits as Feature 2 indicating that not much time has passed between the abandonment of the two features.

One other aspect of the two ditches that is intriguing is the current water table, and where the water level falls within the ditches. Judging from the depth of the water table at the time BHT 9 was excavated, it appears that the water table would cover only the bottom 40 cm of the narrower trench, Feature 2. This would suggest that under the current water table, very little water would be flowing through the *acequia*. Historically of course, it is likely that the water table was much higher and therefore more water was present in the trench. In contrast, Feature 3, the later trench, is slightly deeper than Feature 2 and it has a flatter bottom. Both of these characteristics hint at the possibility that it was designed in this manner exactly because the water table was lower at the time it was built. Of course, however, it is not known exactly by how much the dam would have risen the water level within the *acequia* to compensate for the lower water table.

The inspection of historic maps drawn between 1929 and 1935 and 1939 aerial photograph of the area (see Figures 4-6, , 4-7, 6-1, 6-4, and 6-5) also has allowed that the stone lining of the San Antonio River and the culvert that enters the River from the east were built sometime between 1935 and 1939. It had been initially believed that the work was done under the jurisdiction of the Civilian Conservation Corps (CCC). Further research found little evidence that would link the construction of the walls to the CCC, although federal money would have been used in the project. Federal money was released to the City of San Antonio during the late 1930s for public projects. Local groups were organized to complete the work. It is likely that the walls lining the channel of the river and the culvert were constructed by one of these groups, and this may have occurred between 1935 and 1939, but unfortunately, records documenting this have not been located to date.

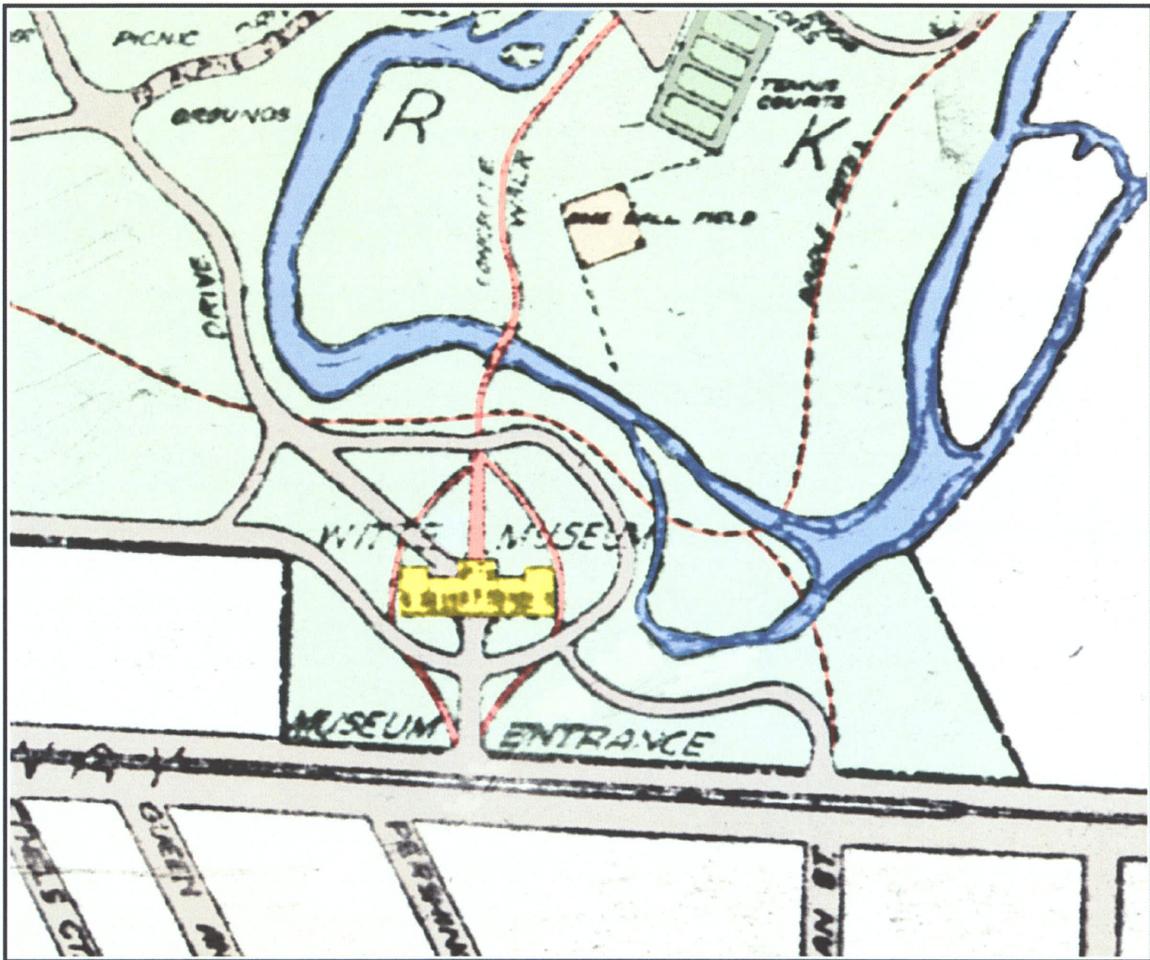


Figure 6-4. Map of the Witte Museum complex drawn between 1926 and 1933 showing the natural bends in the San Antonio River. Notice that a pond exists to the northwest of the museum while the stone-walled culvert has not yet been constructed.

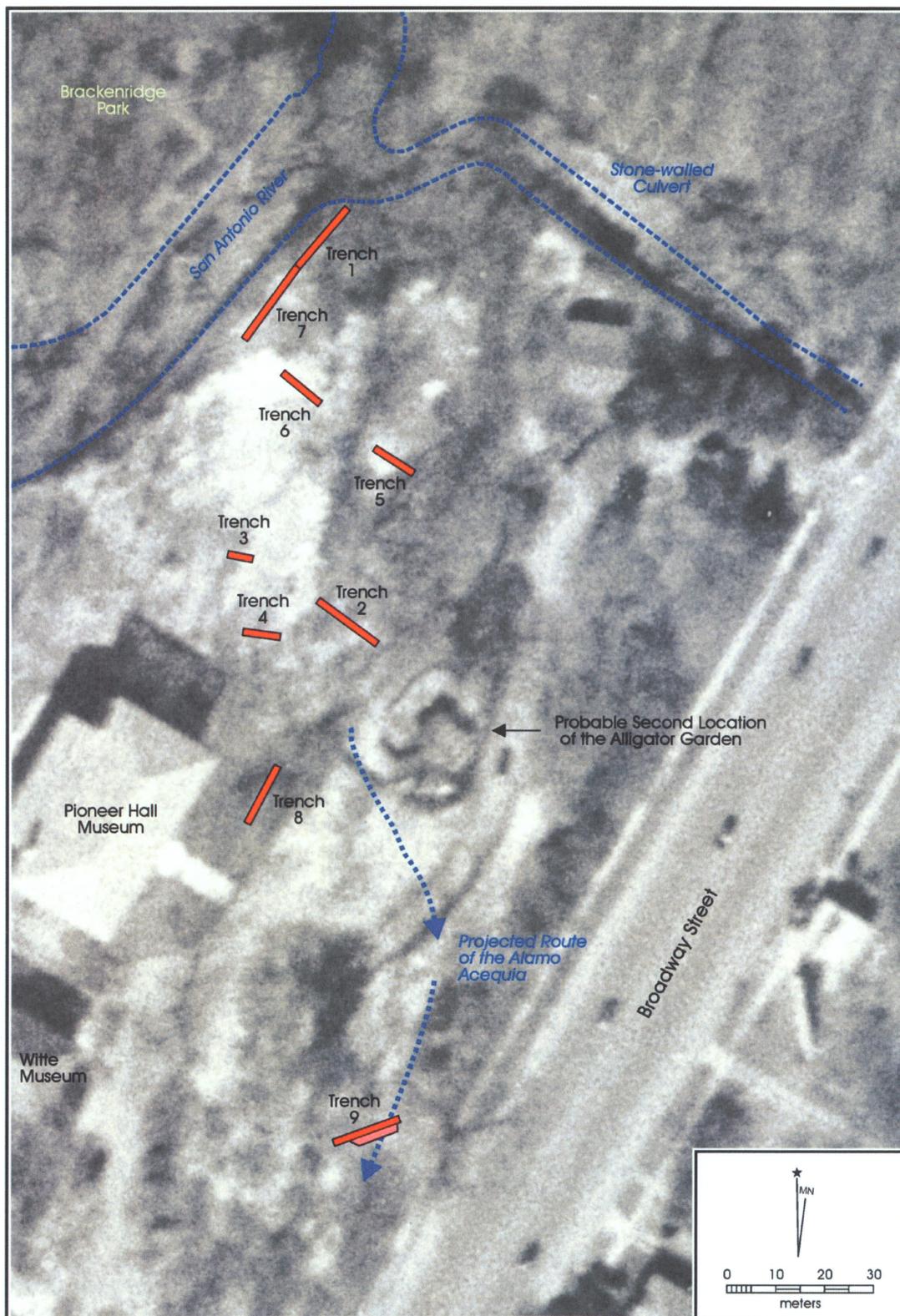


Figure 6-5. Aerial photograph of the project area flown on February 3, 1939. Note the presence of the stone-walled culvert to the north of the property and the likely second location of the Reptile Garden immediately east of Pioneer Hall Museum. Trenches 1 through 9, as well as the projected route of the Acequia Madre, are shown for reference.

Recommendations

The archaeological investigations conducted during the course of this project were undertaken to identify the location and preservation conditions of the Alamo Dam and the *Acequia Madre*. The Witte Museum plans to create an interpretive facility, the Center for Rivers and Aquifers, to focus on the role of water and the *acequia* system in the city's prehistoric and historic communities. Because prior to this project the Witte Museum did not have knowledge of where the *acequia* and dam were located, let alone their preservation condition, they could not develop a precise plan regarding exactly how to incorporate these features within the planned Center. One principal goal of this project was to locate the features and provide information related to these aspects.

While the field investigations summarized here have located the dam in the east bank of the river and also identified two generations of the *Acequia Madre*, the headgate of the *acequia* has not been found, nor is it known whether there are other alignments or generations of the *acequia* within the project area. Similarly, the dam in the west bank of the river's meander has not been uncovered. With these issues in mind, it is recommend that future work in the project area and its vicinity focus on the following themes: 1) examine the *acequia* channels in other portions of the project area; 2) locate the head-gate that controlled water flow into the *acequia*; 3) search for the dam in the west bank of the river; and 4) uncover the dam in the vicinity of the head-gate or further east of the active channel to allow its exposure without the concern for the high water table.

It is our expectation that additional backhoe trenches positioned between BHTs 2 and 8 should cross-section the channel and provide at least one other exposure of the *acequia* ditches. It is this same area that we would expect to locate the head-gate of the *acequia* since it is here that we emerge out of the marshy pond deposits and the channel of the *acequia* becomes better defined. The west bank of the river within the meander appears to have undergone major changes during historic times. Specifically, it appears that while the outer edge of the meander was being eroded away by the river, significant amounts of sediment were being deposited along the inner portion of the meander. This depositional process led to an expansion of the landform outward into the active channel of the stream. Therefore, it is likely that the west end of the dam is well inside the bank under recent silt deposits. Nonetheless, locating the end of the dam would allow for definition its orientation. Finally, based on our reconstructions, the majority of the BHTs were excavated within the active channel or an immediately adjacent marshy area. While we expect that the dam is present here, it is so deeply buried under fill that it is not feasible to uncover and examine it in great detail. However, future backhoe trenching in the vicinity of BHT 8 may locate the extreme eastern edge of the dam just outside of the marshy deposit allowing easier access to it under

shallower fill. It is possible that the eastern end of the dam and the location of the head-gate would coincide giving us an opportunity to document both features at the same time.

The brief archival data collected during the course of the project indicated that the Reptile Garden played a part in the continuance and success of the Witte Museum during the Great Depression. The Reptile Garden, built using the NYA, not only provided entertainment to the community and visitors which supplied funds to keep the exhibit and museum open, but also provided a source of income to locals. The fact that the Garden played such a large role in the community should not be forgotten. CAR suggests that further information be gathered concerning the history of the Reptile Garden. Thoughtful consideration, as well as consultation with the Texas Historical Commission, should occur prior to the removal of the current facility.

Finally, CAR also recommends that further archival research be conducted to gather information concerning the construction of the stone walls that line the San Antonio River and found on the Witte grounds. The 1935 map and the 1939 aerial bracket the date of construction, but information concerning who constructed it could not be located.

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WMM

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