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Cultural Resources Monitoring of the San Antonio Water System Parland Place Water and Sewer Main Installation Project, San Antonio, Bexar County, Texas

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CULTURAL RESOURCES MONITORING OF THE SAN ANTONIO WATER SYSTEM PARLAND PLACE WATER AND SEWER MAIN INSTALLATION PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

FINAL REPORT (Redacted)

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RABA KISTNER ENVIRONMENTAL

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Texas Antiquities Committee Permit Number 8371

Cultural Resources Report No. 18-015
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MANAGEMENT SUMMARY

Raba Kistner Environmental, Inc. (**RKEI**), was contracted by K FRIESE + ASSOCIATES (CLIENT), on behalf of San Antonio Water System (SAWS), to perform cultural resources monitoring investigations for the Parland Place Water and Sewer Replacement Project in San Antonio, Bexar County, Texas. The undertaking involved the installation of a new sewer main, water main, and associated service connections within the Parland Place right-of-way (ROW) in northeastern downtown San Antonio. The Project Area began at the Parland Place–Broadway Street intersection and extended east for approximately 2,420 feet (738 meters [m]), intersecting Milton Street and Bellview Street, before terminating at New Braunfels Avenue. Each new main was installed within its own utility easement, parallel to one another within the center and southern street ROWs; however, the new sewer main was only installed within two sections of the Project Area, while the new water main extended the entire length of the Project Area.

A preliminary review by the City of San Antonio (COSA) Office of Historic Preservation (OHP) determined that archaeological monitoring was required for the Project Area given that *Acequia Madre de Valero* was projected as crossing Parland Place, 500 feet (152 m) east of its intersection with Broadway Street. For archaeological purposes, the initial APE consisted of a 300 foot (91 m) section of the proposed alignment, beginning 330 feet (101 m) east of Broadway Street. However, monitoring investigations were extended 50 feet (15 m) to the west in order to investigate a grassy ditch that was observed within the Project Area. The total area monitored for the project included a 350-foot APE, or 0.03-acres of disturbance for both water and sewer main installations.

The project was located on lands controlled by the COSA, a political subdivision of the State of Texas. As such, the project is subject to review under the City of San Antonio's Unified Development Code (UDC) (Chapter 35 Article VI), as well as the Antiquities Code of Texas (ACT; Texas Natural Resource Code, Title 9, Chapter 191). Steve Tomka served as the Principal Investigator and all work was conducted under the Texas Antiquities Committee (TAC) Permit No. 8371. Rhiana D. Ward served as Project Archaeologist, and fieldwork was conducted by Chris Matthews, Rhiana D. Ward, and Jason Whitaker.

In August-October 2018, **RKEI** conducted cultural resources monitoring for the SAWS Parland Place Water and Sewer Main Installation Project. No cultural deposits or features of any temporal affiliation were observed during project excavations; however, field observations of the general Project Area identified a grassy ditch to the northwest of the APE, within an empty residential lot. The ditch measured between 6.5 to 8 feet (2 and 2.5 m) wide, approximately 12 to 18 inches (30 to 46 cm) deep, and projected at a 186-degree orientation. It is possible that the grassy ditch to the north of the Project Area is a remnant of the acequia, however, any subsurface evidence of the channel had been destroyed during the installation/construction of a 33 foot-long concrete utility observed during water main excavations. The ditch was photo documented, but because the private lot was located beyond the project boundary, no subsurface investigations could be conducted to verify the nature of the ditch. Overall, no cultural deposits or features of any temporal affiliation were observed during the excavations of the SAWS Parland Place Water and Sewer Main Installation Project. As such **RKEI** does not recommend any further archaeological investigations within the areas monitored. However, should additional excavations in the APE occur, further work may be required.

All field records and photographs will be curated at the University of Texas at San Antonio Center for Archaeological Research.

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CHAPTER 1. INTRODUCTION

Raba Kistner Environmental, Inc. (**RKEI**), was contracted by K FRIESE + ASSOCIATES (CLIENT), on behalf of San Antonio Water System (SAWS), to perform cultural resources monitoring investigations for the Parland Place Water and Sewer Replacement Project in San Antonio, Bexar County, Texas (**Figure 1-1**). The project was located on lands controlled by the City of San Antonio (COSA), a political subdivision of the State of Texas. As such, the project is subject to review under the City of San Antonio's Unified Development Code (UDC) (Chapter 35 Article VI), as well as the Antiquities Code of Texas (ACT; Texas Natural Resource Code, Title 9, Chapter 191). The purpose of investigations was to identify any archaeological deposits that may be present within the Project Area, and if possible, assess their significance and eligibility for National Register of Historic Places (NRHP) and State Archaeological Landmark (SAL) designation. This report summarizes the results of investigations and provides recommendations for future endeavors.

Project Description and Area of Potential Effects

The undertaking involved the installation of a new sewer main, water main, and associated service connections within the Parland Place right-of-way (ROW) in northeastern downtown San Antonio. The Project Area began at the Parland Place–Broadway Street intersection and extended east for approximately 2,420 feet (738 meters [m]), intersecting Milton Street and Bellview Street, before terminating at New Braunfels Avenue. Each new main was installed within its own utility easement, parallel to one another within the center and southern street ROWs; however, the new sewer main was only installed within two sections of the Project Area, while the new water main extended the entire length of the Project Area (**Figure 1-2**).

The first section of new sewer main installation was located 350 feet (107 m) east of Broadway Street and measured 380 feet (116 m) long. The second section was located 60 feet (18 m) west of the Parland Place–New Braunfels Avenue intersection and measured 530 feet (162 m) in length. A total of 15 sewer service lines were also installed, each measuring approximately 30 feet (9 m) long, for a total of 450 feet (137 m) of sewer service connection lines. Excavations for the new sewer main and service lines measured 2 feet wide (61 centimeters [cm]) and 8 feet (2 m) deep. Overall, the total disturbance for the new sewer main and service installations measured 0.06-acre, or 806 cubic yards of soil.

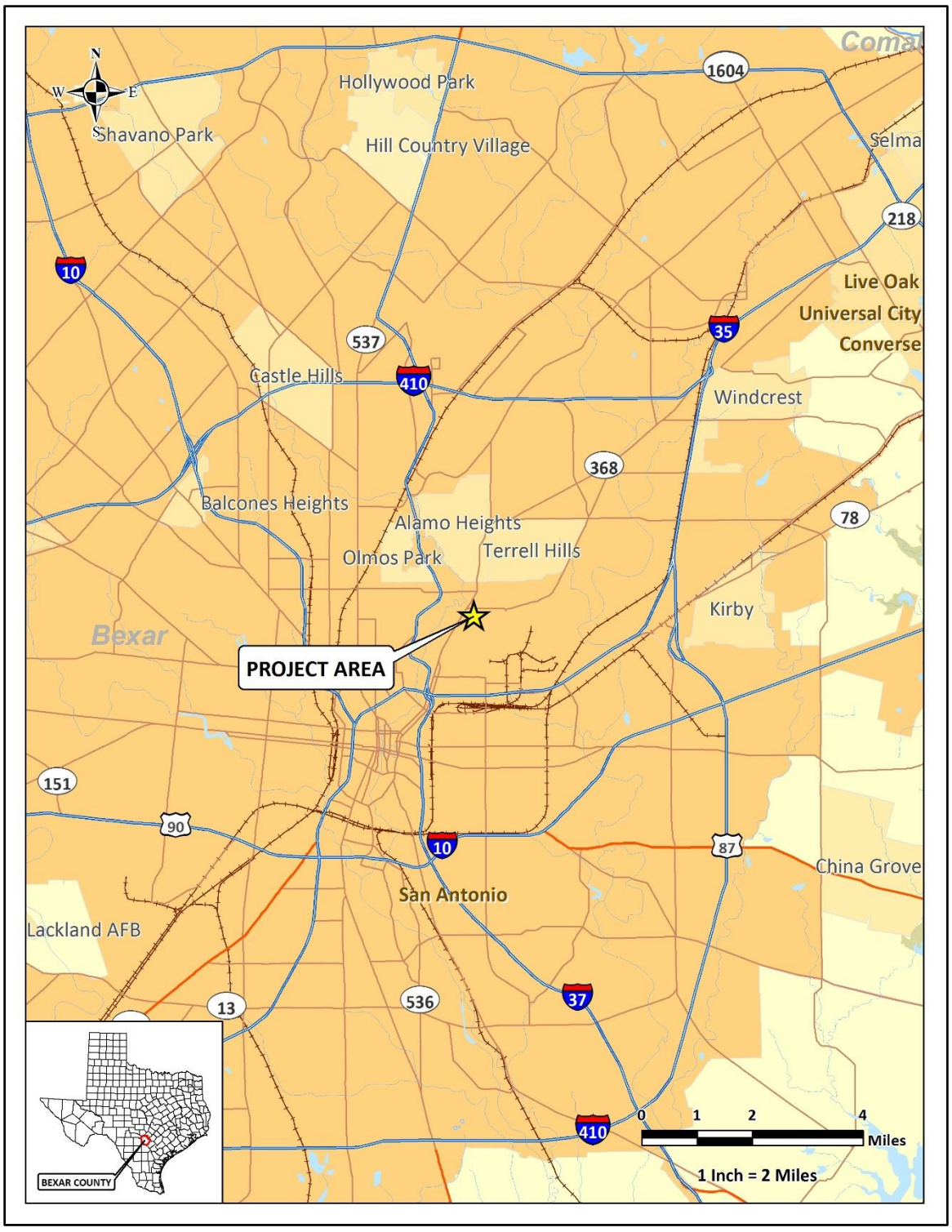

Figure 1-1. Project location.

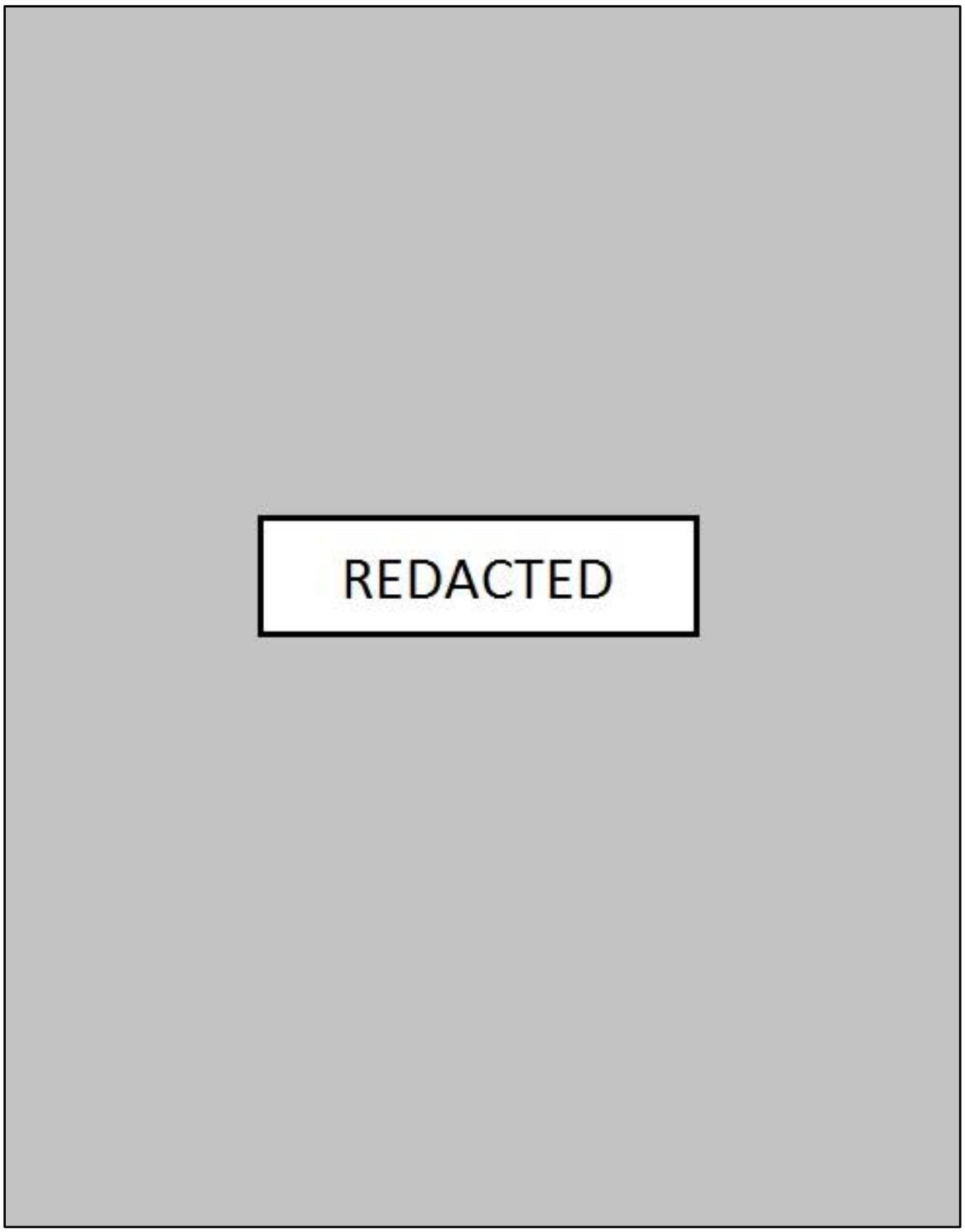

Figure 1-2. Map of the Project Area and Areas of Potential Effect

The new water main began at the intersection of Broadway Street and Parland Place, and directed east for approximately 2,420 feet (738 m) before terminating at its intersection with New Braunfels Avenue. Excavations for the new water main measured 5 feet (1.5 m) deep and 2 feet (61 cm) wide. A total of 35 service connections were also installed, each measuring 40 feet (12 m) long, for a total of 1,400 feet (427 m) of water service connection lines. The overall disturbance area for the new water main and service installations measured 0.2-acre, or 1,415 cubic yards of soil.

The Project Area is generally located within a highly urbanized setting dominated by residential housing to the north and Mahncke Park to the south. Lamar Elementary School is located at the corner of Parland Place and Bellview Street, just north of the Project Area, and the San Antonio Botanical Gardens are located immediately east of the eastern project terminus. The Project Area intersects a gradually sloping (5 to 15 percent slope) upland terrace of the San Antonio River, 1,800 feet (549 m) west of the western project terminus. Vegetation generally consists of manicured residential lawns and grassy fields mixed with mesquite and oak trees within Mahncke Park to the south.

A preliminary review by the COSA Office of Historic Preservation (OHP) determined that archaeological monitoring was required for the Project Area given that *Acequia Madre de Valero* was projected as crossing Parland Place, 500 feet (152 m) east of its intersection with Broadway Street. However, it was determined that only the portions immediately adjacent to the projected *acequia* route would require cultural monitoring. The remaining portions of the Project Area alignment would not be monitored for cultural resources due to its low potential to contain intact, significant cultural deposits. For archaeological purposes, the initial Areas of Potential Effect (APE) for the SAWS Parland Place Water and Sewer Main Installation Project consisted of a 300 foot (91 m) section of the proposed alignment, beginning 330 feet (101 m) east of Broadway Street (see **Figure 1-2**). However, monitoring investigations were extended to the west by 50 feet in order to investigate a grassy ditch that was observed within the Project Area. Overall, the total area monitored for the Parland Place Water and Sewer Replacement Project included a 350-foot APE, or 0.03-acres of disturbance for both water and sewer main installations.

CHAPTER 2. ENVIRONMENTAL SETTING

The Project Area is located within the Blackland Prairie ecoregion. The Blackland Prairie is an area of low topographic relief and poor drainage, prone to frequent flooding (Collins 1995). The Blackland Prairie ecoregion is characterized by gently undulating topography and is generally defined as grasslands punctuated by riparian bands along creeks, rivers, and other drainages. Creation of the Blackland Prairies occurred during the late Tertiary, with the erosions of soils on the Edwards Plateau. These soils were deposited by eolian and colluvial processes across an existing, eroded parent material of the Gulf Coastal Plain, creating a mix of deep Tertiary and Quaternary calcareous clay soils (Black 1989).

Geology

The entire Project Area is underlain by a single geological unit: Uvalde Gravel (QTu) of Pleistocene-age (Bureau of Economic Geology [BEG] 1983). The Uvalde Gravel deposits consist of fine to medium-grained quartz sand with some areas of silt mixed with some caliche nodules and Mollusca and vertebrate fossils. Thickness averages 85 feet (26 m) with deposits feathering out laterally (BEG 1983).

Soils

Soils within the Project Area are mapped as Lewisville silty clays, Houston Black gravelly clay, and Heiden-Ferris complex, severely eroded (Natural Resources Conservation Service [NRCS] 2018) (**Figure 2-1**). Lewisville silty clays make up 490 feet (149 m) of the western terminus of the Project Area and consist of very deep, well drained, moderately permeable soils that formed in ancient loamy can clayey calcareous sediments on upland formation. Approximately 1,550 feet (472 m) of the central portion of the Project area consists of Houston Black gravelly clay. Houston Black soils are characterized as very deep, moderately well drained soils that formed in clayey residuum derived from calcareous mudstone of Cretaceous-age on nearly level to moderately sloping formations. The Heiden-Ferris complex makes up the eastern 380 feet (116 m) of the Project Area and consists of deep to very deep mudstone, well drained that formed on footslopes of base slopes, shoulders of interfluves, and backslopes of side slopes of ridges on dissected plains. The APE is evenly divided between Lewisville silty clays to the west, and Houston Black gravelly clay to the east.

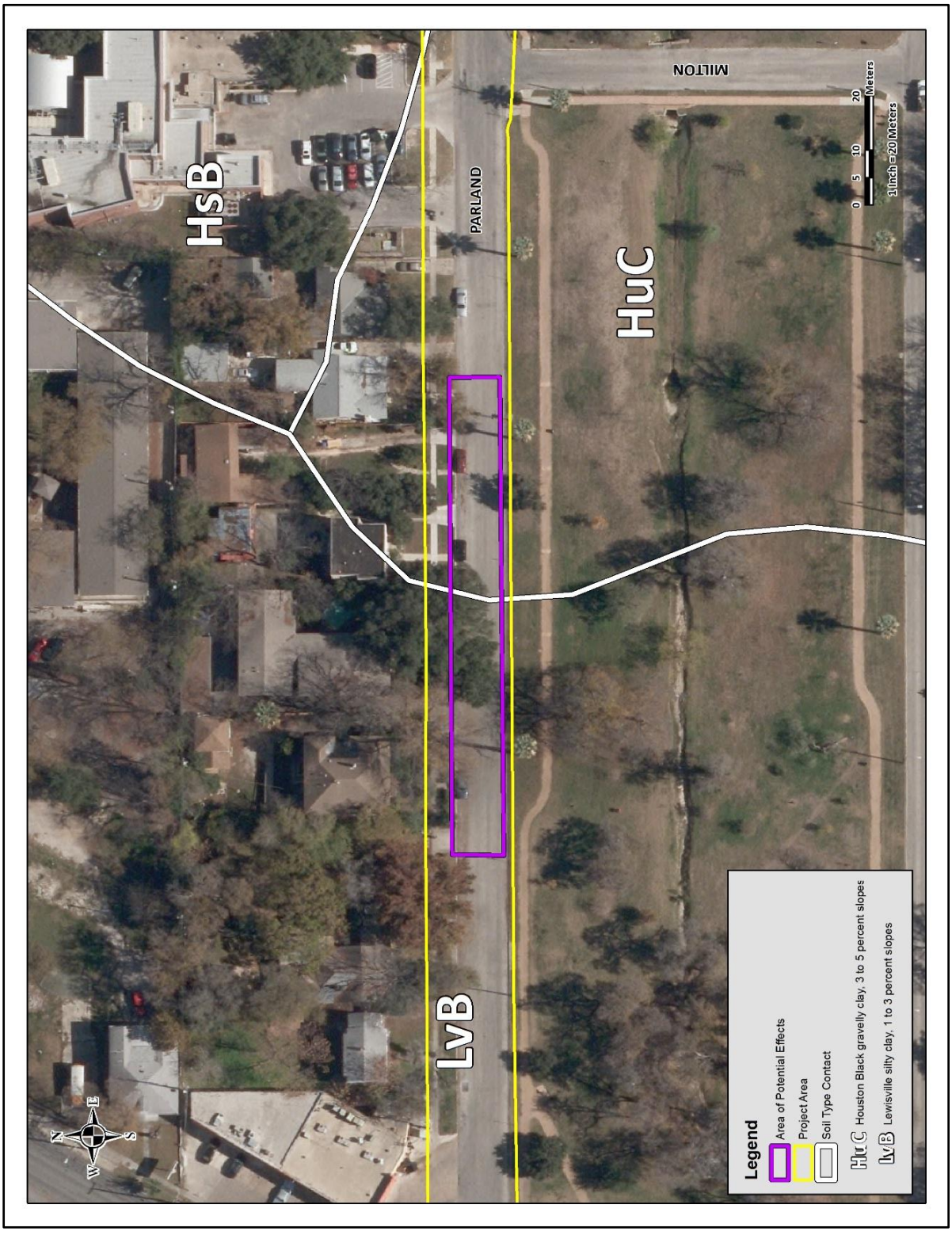

Figure 2-1. Soils within the Project Area.

Flora and Fauna

The APE is located near the intersection of the Balconian and Taumaulipan biotic provinces. Floral and faunal resources consist of a mix of species from the Austroriparian, Taumaulipan, Chihuahuan, Kansan, Balconian, and Texan biotic provinces. There are three major geographic regions nearby the Project Area: the Edwards Plateau, the Blackland Prairie, and the South Texas Plains. Trees, plants, and grasses in this region include cedar (*Juniperus ashei*), live oak (*Quercus fusiformis*), Texas mountain laurel (*Sophora secundiflora*), mesquite (*Prosopis glandulosa*), prickly pear (*Optunia* sp.), agarita (*Berberis trifoliolata*), cat claw (*Smilax bona-nox*), mustang grape (*Vitis mustangensis*), sotol (*Dasylirion texanum*), and Spanish dagger (*Yucca* sp.).

The fauna that inhabit the south-central Texas region includes at least 95 bird and 29 mammal species. The area also contains a wide array of reptiles, fish, and amphibians. Mammal species that were noted within the APE include white-tailed deer (*Odocoileus virginianus*), nine-banded armadillo (*Dasypus novemcinctus*), Virginia opossum (*Didelphis virgininana*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), cottontail rabbit (*Sylvilagus audubonii*), feral hog, domestic and feral cat, and squirrel.

South Texas Climate

The climate in south-central Texas is humid subtropical with hot and humid summers. From May through September, hot weather dominates with the cool season beginning around the first of November and extending through March. Winters are typically short and mild with little precipitation. San Antonio averages only 33 inches of rain per year (Southern Reginal Climate Center 2015; based on monthly averages from 1980 to 2010). Monthly temperature averages range between 52°F in January to 85°F in August.

CHAPTER 3. CULTURAL CONTEXT

The Project Area is located at the cusp of Central Texas and South Texas archaeological regions (Turner and Hester 1999). Based on extensive research conducted by Black (1989), Collins (2004), Hester (2004), Johnson et al. (1962), Prewitt (1981, 1985), Sorrow et al. (1967), Suhm (1957, 1960), Suhm et al. (1954), and Weir (1976), Central Texas has a well-established chronological sequence beginning 12,000 years ago. The sequence for South Texas is less defined, though the Project Area likely shares many of the attributes identified for Central Texas. The chronological sequence of Central Texas is divided in to four cultural periods: Paleoindian (11,500–8,800 B.P.), Archaic (8,000–1,200 B.P.), Late Prehistoric (1,200–400 B.P.), and Historic (400 B.P. to present).

Although the South Texas Plains archaeological region is generally considered a distinct archaeological entity, much of what is known of the area is in part derived from comparisons and extrapolation with adjacent areas that been the subjected to more intensive investigation, particularly the Central Texas archaeological region. Similar to the cultural chronology provided by the Central Texas region, the South Texas chronology follows the same fourfold divisions. Following Hester's (2004) chronology, the four prehistoric cultural periods in South Texas include the Paleoindian (11,200–8,000 B.P), Archaic (8,000–1,200 B.P.), Late Prehistoric (1,200–400 B.P.), and Protohistoric (400–300 B.P).

These divisions are not absolute, but represent contrived temporal categories based on perceived cultural expressions reflected in lithic technology, subsistence practices, mortuary behavior, and other sorts of material remains. These material expressions further reflect boarder patterns in the environment and human behavior.

The most commonly recorded sites in South Texas are open occupation sites. In some cases, meaningful excavation of these sites has proven to be a challenge to archaeologists (Hester 2004). This vexing situation stems from the exclusively horizontal patterning of many open occupation sites in the region. These sites tend to exist as laterally extensive occupation and use areas where temporally separated components occur on a single surface without overlapping (Hester 2004). Other open occupation sites, especially in upland settings, occur on stable ancient surfaces with very shallow or deflated cultural deposits that are sometimes impossible to conclusively attribute to a particular time period. Comparatively few deeply stratified occupation sites have been excavated in South Texas. Black (1989)

posits that this is the result of both settlement patterning and depositional context. Common site types in South Texas include lithic procurement and reduction sites. By contrast, the Central Texas archaeological region is one of the most intensively studied in Texas (Black 1989). More sites have been recorded and excavated in Central Texas than any other region. Aside from procurement and reduction sites, burned rock middens, located on hilltops or upland settings are the most characteristic prehistoric site type in Central Texas. However, site types also include buried terrace occupation sites, sites in rock shelters, and burials.

Paleoindian

The Paleoindian period was commonly characterized throughout Texas by nomadic big-game hunters who heavily relied on megafauna of the Pleistocene (e.g., mammoth, mastodon, bison, camel, and horse) for subsistence (*sensu* Willey 1966). However, a more accurate description of this period is presented by Bousman et al. (1990:22): "…this period may have seen use by small, mobile bands of nonspecialized hunters and gathers occasionally utilizing megafauna perhaps only as the opportunity arose." Thus, according to Bousman et al. (1990), Paleoindians used a wider variety of resources than previously thought. Evidence of this broader resource subsistence is based on the works of Johnson (1977), Collins (1998:155–156), and Collins and Brown (2000). Johnson (1977) reviewed reports on numerous Paleoindian sites that indicated a range of small and medium fauna were harvested in addition to big game. Investigations at the Wilson-Leonard site (41WM235), the Gault site (41BL323), and Lubbock Lake (41LU1) provide evidence of small and medium faunal remains (i.e., turtle, rabbit, squirrel, snakes, gopher, and deer) associated with megafaunal remains (i.e., bison and mammoth) (Collins 1998:155–156). Clovis and Folsom points are the primary diagnostic artifacts associated with this period (Collins 2004; Turner and Hester 1999).

Archaic Period

The Archaic period spans nearly 7,000 years of prehistory. The primary cultural marker of this time period is the burned rock midden (Collins 2004:119). These piles of burned limestone, sandstone, and other lithic debris represent the remains of multiple ovens that were used, reused, and discarded over time. Their appearance signifies a shift from a big-game hunting subsistence strategy to a less mobile, generalized subsistence strategy. Projectile point technology also changed; lanceolate-shaped points gave way to dart

points that were stemmed and barbed (Black 1989). During the Archaic period, the climate changed from wet and mild conditions seen in the Paleoindian period, to warmer and drier conditions. Researchers believe that the changes in climate influenced prehistoric subsistence strategies (Story 1985:38–39; Weir 1976).

The Archaic period is typically divided into three sub-periods: early, middle and late. The Early Archaic period is still relatively obscure in the archaeological record. The majority of Early Archaic sites are distributed around the Edwards Plateau along the eastern and southern margins, suggesting concentrations near reliable water sources with a variety of food resources. These sites are generally described as small with highly diverse tool assemblages. Cultural material associated with Early Archaic sites are points (specifically Angostura, Early Split Stem, and Martindale-Uvalde) (Collins 2004), Clear Fork and Guadalupe bifaces, manos, hammerstones, burins, metates, circular scrapers, and various biface styles (Osburn et al. 2007), suggesting specialized tool usage. Also, burials have been found associated with this period, although very few (Prewitt 1981; Story 1985).

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

During the Late Archaic, climatic conditions once again became more mesic. Cultural traditions observed in the Middle Archaic carry over in to the Late Archaic. There is an intensification of the Middle Archaic traditions. Trade is observed during this period with the exchanging of material from different localities. Coastal materials, such as shells used as ornaments, have been reported to have been exchanged in for both finished tools and raw material (Story 1985). Rock ovens and hearths were continuously used as a means to prepare food, and bison once again became available. Ritualized mortuary practice became more common during the Late Archaic, with interments becoming quite elaborate in terms of associated burial furniture. Large cemeteries established along drainages suggested the importance of the location, and perhaps territorial ties by groups to these localities (Story 1985). Location of these cemeteries “are

believed to be the result of the same cultural group using a place on the landscape to reaffirm their rights of descent and control/access to critical resources" (Osburn et al. 2007:15; see Taylor et al. 1995:627–631 and Taylor 1998).

Late Prehistoric

Of the prehistoric periods, the Late Prehistoric period is the best defined, marked by the adoption of the bow and arrow and the production of small arrow points (Hester 1981:122). The emergence of agriculture and ceramics, also occurred in the Late Prehistoric. While incipient agricultural and ceramic use is evident in South Texas, most researchers believe that these technologies diffused into South Texas from other regions (Bousman et al. 1990). Late Prehistoric hunter-gathers exploited a wide range of animal and plant resources. Food processing techniques relied heavily on manos and metates, and earth ovens for cooking. Diagnostic artifacts of this time period include Scallorn, Edwards and Perdiz arrow points. Sites tend to be more closely clustered to creeks, rather than dispersed along other landforms, suggesting intensifying nucleation around reliable natural resources.

Protohistoric Period

The Protohistoric period (ca. A.D. 1528–1700) is ushered in by the arrival of the Spanish explorer Cabeza de Vaca in 1528 into south and southeast Texas. Hester (2004) generally considers the period prior to 1700 as Protohistoric. Archaeological sites dated to this sub-period contain a mix of European (e.g., metal and glass arrow points, trade beads, and wheel-made or glazed ceramics) and traditional Native American artifacts (e.g., manufactured stone tools). The effect the Spanish presence in Mexico had on Indians in Texas prior to about 1700 is not well-understood. What is known is that the initial arrival of Spanish missionaries and explorers spread severe disease that killed, displaced, and fragmented a huge percentage of the population. As colonization spread from Mexico, some of the Native American groups moved northward to avoid the Spanish. Many others formed extensive confederacies to protect each other, resist against the Spanish settlers, and maintain access to Central Texas bison hunting territories (Tomka, Personal Communication 2017). At the same time, invading Indian groups from the north put pressure on Native American groups in North Texas (Nickels et al. 1997). Historians believe that these pressures led to intense territorial disputes, further destabilizing Native American populations.

Historic Period

The beginnings of San Antonio came about with the establishment of Mission San Antonio de Valero in 1718. Fray Antonio de San Buenaventura y Olivares briefly visited the site several years prior, and petitioned to set up a mission at the headwaters of the San Antonio River to act as a waypoint in the journey to East Texas. The Marques de Valero, Viceroy of New Spain, granted Olivares' request (de la Teja 1995). The mission, presidio, and villa were first established on the San Pedro Creek, the "first spring" of the San Antonio River. Mission Valero occupied at least one other location on the east side of the San Antonio River before it was moved in 1724 to its final location.

Four days after Mission Valero was founded, Presidio de Bexar was established on May 5, 1718. The presidio was to house the Spanish soldiers who had come along with the expedition to found the Mission. Typically, the families that followed the soldiers lived just outside the presidio.

Two years later, in 1720, Mission San José y San Miguel de Aguayo was established on the opposite bank of the San Antonio River, and to the south of Mission Valero and Presidio San Antonio de Bexar. This mission was established to help serve native groups that did not want to reside at Mission Valero because they were not on friendly terms with groups already living there. The original location of Mission San José was along the east bank of the San Antonio River, approximately three leagues from Mission Valero. The mission was then moved to the opposite bank sometime between 1724 and 1729, and relocated to its present site during the 1740s due to an epidemic (Scurlock et al. 1976:222).

In 1722, just two years after Mission San José was founded, Mission San Francisco Xavier de Nàjera was established. The mission was to serve a group of 50 Ervipiami families that came from the Brazos River area (Schuetz 1968:11). Mission San Francisco Xavier de Nàjera was located on or near the present site of Mission Concepción. The mission was unsuccessful due to a lack of funding. An attempt was made to make the mission a sub-mission of Valero, but this failed as well (Habig 1968:78-81). Its doors closed in 1726 (Schuetz 1968:11). Ivey (1984:13) argued that the closure of the mission was due to the natives' lack of interest in entering mission life.

Within the next few years, three other missions were established within the San Antonio area. The remaining three missions were established in San Antonio within weeks of each other in 1731. These three missions, Mission Nuestra Señora de la Purisima Concepción, Mission San Juan de Capistrano, and Mission San Francisco de la Espada, were originally missions established in east Texas. When each failed along the eastern border, they were moved to San Antonio.

In 1731, in addition to the five missions, Villa San Fernando de Bexar was established by the Canary Islanders. Prior to the establishment of Villa San Fernando, Villa de Bexar had been settled by 30 presidial soldiers, seven of whom were married and brought their families. Archival research indicates that upon arrival, the Canary Islanders immediately took over the land surrounding the garrison. This land was used as pasture and was originally property of Mission Valero. There had been a lack of cleared agricultural land at the time, leading Captain Juan Antonio Pérez de Almazán to allow the Canary Islanders use of the property (de la Teja 1995). The initial plan was for additional Canary Island settlers to be sent to San Antonio after the first group was established. Due to high costs to the Spanish Crown, no more groups were brought to Texas. The Canary Islanders launched a formal complaint against Mission Valero. In 1731, the Canary Islanders established their own villa, named San Fernando de Bexar, with their own church. The arrival of the *Isleños* resulted in the first clearly defined civilian settlement in San Antonio.

With the establishment of the San Antonio Missions, the Spanish constructed a system of *acequias* (irrigation ditches) utilizing local springs, streams, and the San Antonio River to supply water for the agricultural fields of the missions, personal use, and house hold purposes (Cox 2005; Porter 2009). The first *acequias* were simple, soil-lined, gravity-flow canals whose depressions can still be seen today in certain areas around central San Antonio (Cox et al. 1999). This system allowed the Spanish to sustain the large population of the Native Americans, settlers, and soldiers that occupied the area.

Acequia Madre de Valero

According to the COSA OHP *Acequia* Maps, the *Acequia Madre de Valero*, also known as the Alamo *Acequia*, the Alamo Ditch, the Mother Ditch, and archaeological site 41BX8, intersects the SAWS Parland Place Water and Sewer Main Installation Project approximately 500 feet (152 m) east of the Parland Place–Broadway Street intersection. As the Spanish established missions in Bexar County, they also devised an irrigation and water supply system using spring water. The system distributed water for

agriculture, personal consumption, and other household uses (Porter 2009:48). The first *acequias* were simple, soil-lined, gravity-flow canals whose depressions can still be seen today in certain areas of Brackenridge Park (Cox et al. 1999).

The initial construction date of the *Acequia Madre de Valero* started in January of 1719 in order to bring water to the fields of Mission *San Antonio de Valero*. The irrigation ditch began at a diversion dam (the Alamo Dam) at the San Antonio River, located just north of the former Pioneer Hall, within the grounds of the present day Witte Museum (Cox 1985; Ulrich 2011). Water was diverted to the east crossing the bank just south of a large Cypress trees still standing on the property. The *acequia* extended to the southwest on the east side of the San Antonio River, following, more or less, Broadway Avenue towards Mission *San Antonio de Valero*. Tomka indicates that a plot of the route of the *Acequia Madre de Valero* on a Digital Elevation Model (DEM) of the upper San Antonio River valley shows that the *acequia's* route along the eastern margin of the river valley closely follows the 680 foot (207 m) contour line (Tomka, Personal Communication 2018). The *acequia* branches approximately 0.2 mile (322 m) northeast of the mission, with one branch flowing southwest onto the mission grounds, and one branch flowing south (Cox 1985). The two branches then rejoin in the area known as HemisFair Park and continue flowing southwest before reconnecting to the largest bend of the San Antonio River, just southeast of the King Williams District (Cox 1985, 2005). The *Acequia Madre de Valero* is estimated to span 6 to 10 total miles, irrigating approximately 900 acres of land between its main channel and a network of lateral ditches, *desagues, and extensions* (Arneson 1921; Cox 2005).

Early depictions of the *Acequia Madre de Valero* within the project area are found within the 1912 reprint of the 1837 San Antonio City Officials Map (**Figure 3-1**), the 1887 J.D. Rullman Map of Bexar County, and the 1889 J.J. Olson Map of San Antonio (Foster et al. 2006). All three maps depict the *acequia* as intersecting the Project Area along the same projection as the COSA OHP *Acequia* Map. Modern city block and street configuration does not appear within the general vicinity of the Project Area until the 1889 J.J. Olson Map; however, the historic Sanborn Fire Insurance (Sanborn) Maps do not depict the vicinity of the Project Area until 1904. Review of the 1904 Sanborn Key Sheet (Volume 2) depicts the *acequia* as intersecting the western terminus of the Project Area, just east of River Road at Simons Road (**Figure 3-2**). No city streets north of Ulrich Avenue (Eleanor Avenue) and east of the *acequia* are depicted on the 1904 Key. The 1912 Sanborn Key Sheet (Volume 2) of northeastern San Antonio illustrates an evolving city street layout with Fort Sam Houston dominating the landscape to the south and east of the APE. Although

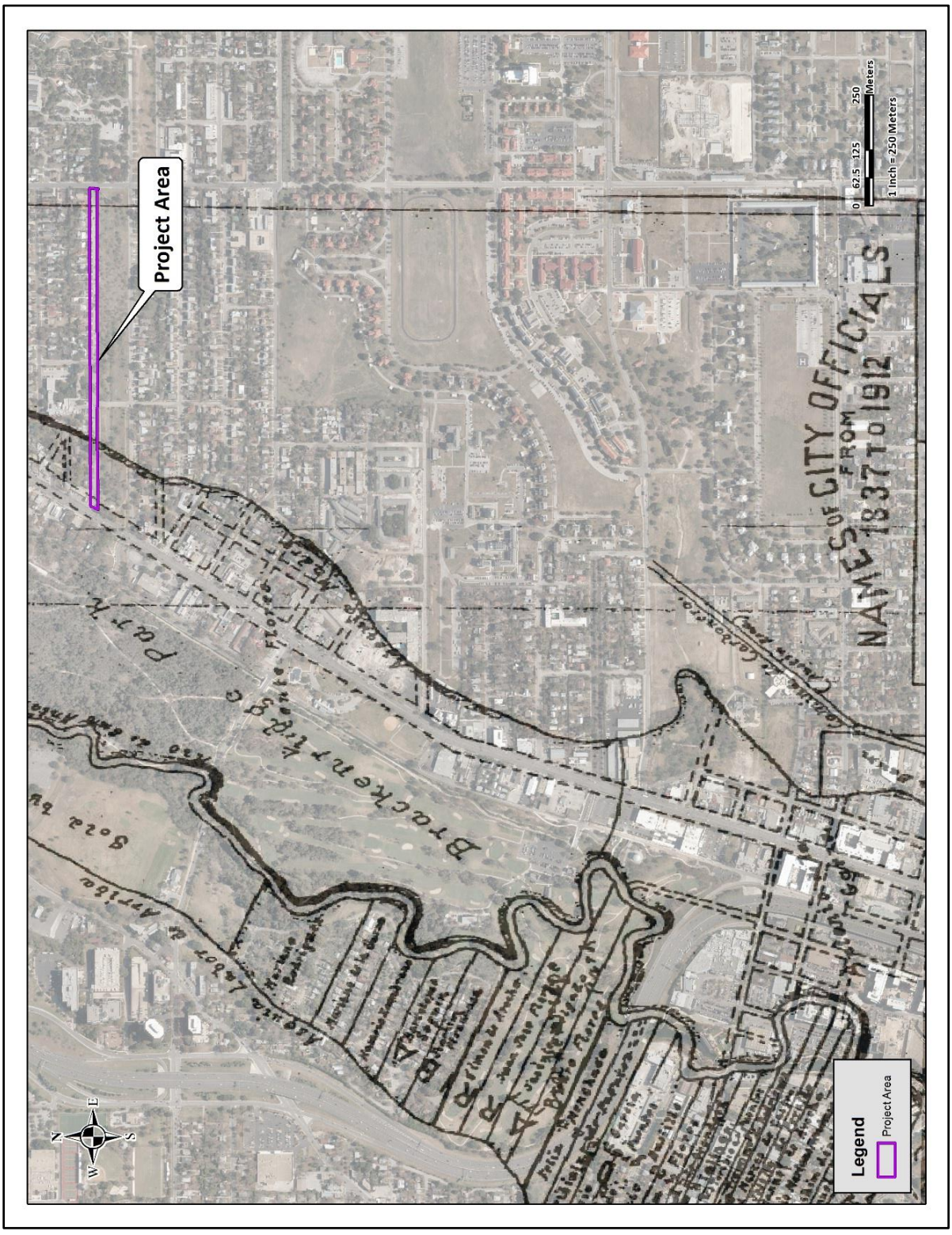

Figure 4-1. Project Area on 1912 reprint of 1837 San Antonio Officials Map.

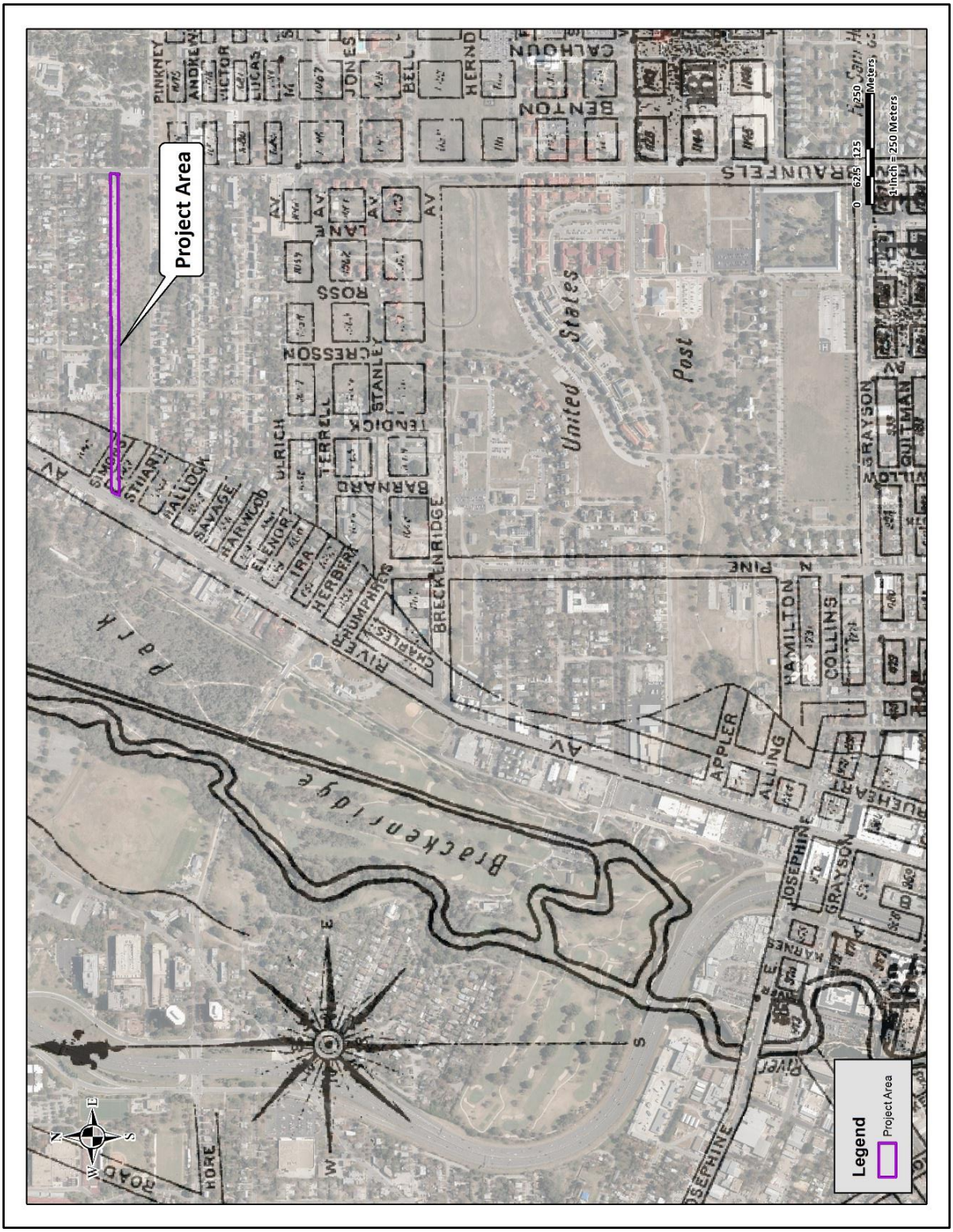

Figure 3-2. Project area on 1904 Sanborn Fire Insurance Map Key.

River Avenue and New Braunfels Avenue are depicted on the 1912 Key, the area between Pinkney Street (now Pickney Street) and Reservoir Street (now Pershing Avenue) remains undeveloped with no city streets or blocks evident. The *Acequia Madre de Valero* is no longer depicted on the 1912 Sanborn Maps.

Previous Archaeological Investigations and Cultural Resources

RKEI conducted a desktop review to determine if any previously conducted archaeological investigations or any cultural resources have been documented within the Project Area. Review of the Texas Archaeological Sites Atlas (*Atlas*) determined that the Project Area had not been previously investigated for cultural resources, and that one known archaeological site, 41BX8 (the *Acequia Madre de Valero*), is located within the Project Area. Further review identified four previously conducted cultural resources investigations within a 1,000 foot (305 m) radius of the Project Area, as well as three known archaeological sites, one National Register (NR) Historic District, one locally designated Historic District, and three locally designated Historic Sites (**Figure 3-3**).

In 1976, a 40-acre historical and archaeological assessment was conducted by the University of Texas at San Antonio-Center for Archaeological Research at the (UTSA-CAR) within the grounds of the San Antonio Botanical Center. The survey was located southeast of the Project Area and was conducted under ACT Permit Number 122. Although no cultural resources were documented during the 1976 investigations, no further information on the survey is available on *Atlas* (THC 2018).

In 1979, a large area survey was conducted by UTSA-CAR immediately west of the Project Area (Fox 1979). The survey was completed on behalf of the U.S. Army Corps of Engineers in order to document all historical, architectural, and archaeological sites for 0.25–mile on either side of the San Antonio River from the Olmos Dam to South Alamo Street, and the San Pedro Creek from San Pedro Park to Guadalupe Street. The purpose of the survey was to compile as much information on prehistoric and historic sites for use in future flood control projects. Details of the survey and its finding are reported in Fox 1979.

In 2011, a monitoring project was conducted within the 12-acre area of Mahncke Park, immediately south of the Project Area (THC 2018). The monitoring project was conducted under ACT Permit Number 5786; however, no further information on the project is available on *Atlas* or on UTSA-CAR's online digital library. No archaeological sites associated with the survey were identified on *Atlas* (THC 2018).

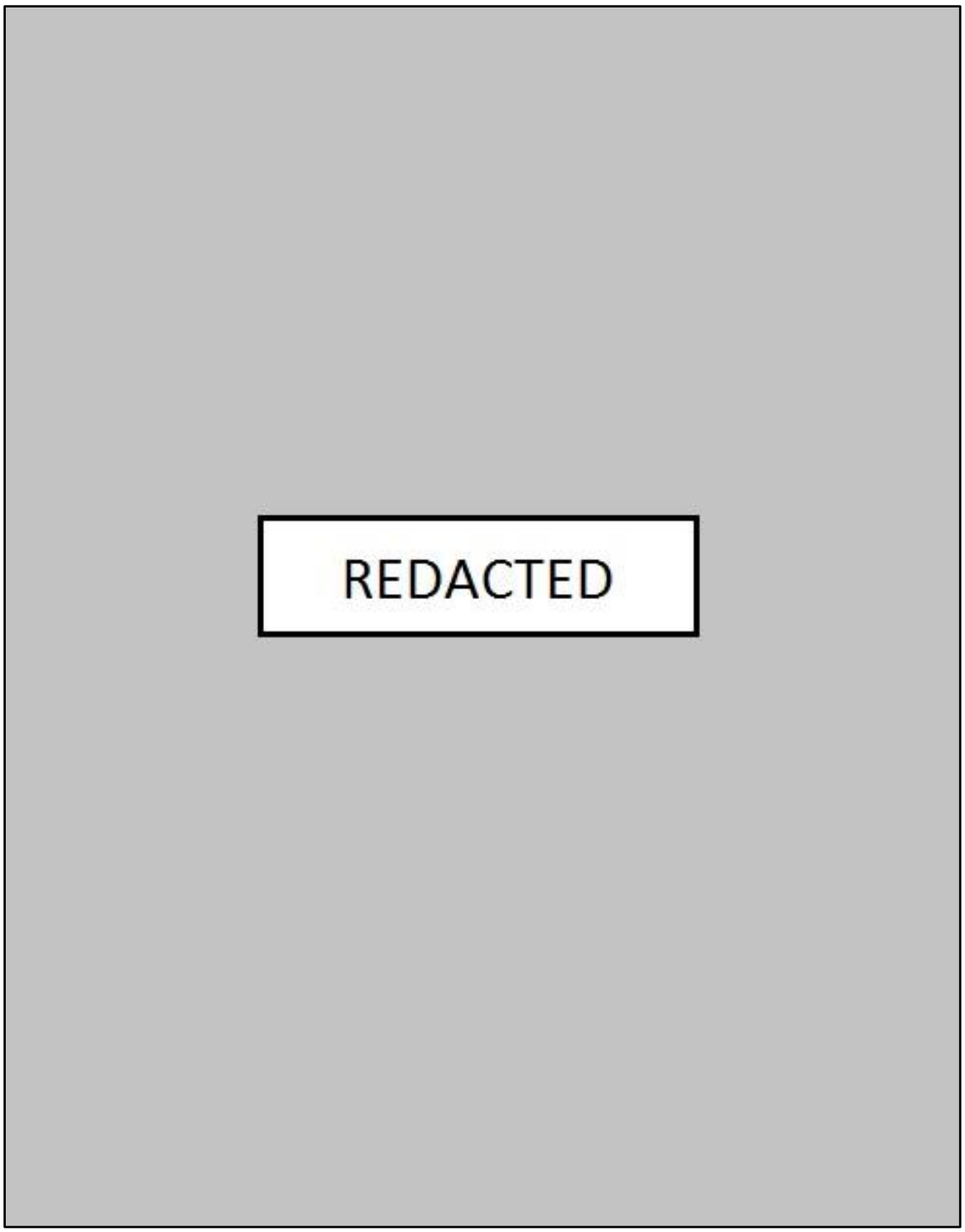

Figure 3-3. Previous investigations and archaeological sites within 0.5-kilometer of the Project Area.

From 2013 to 2014, UTSA-CAR conducted a series of testing and monitoring investigations within Brackenridge Park, west of the Project Area (McKenzie 2017). The investigations were conducted under ACT Permit Number 6449 in anticipation of planned park improvements along the east and west banks of the San Antonio River. Investigations focused in the areas of the Alamo Dam and the Upper Labor Dam and resulted in the documentation of the two Spanish Colonial features, in addition to late nineteenth and twentieth century impacts/improvements (McKenzie 2017).

In addition to the *Acequia Madre de Valero* (41BX8), three previously recorded archaeological sites are located within a 1,000-foot (305 m) radius of the Project Area: 41BX323, 41BX1773, and 41BX2073 (THC 2018). Other cultural resources within 1,000-feet (305 m) of the Project Area include the Brackenridge Park NR Historic District, the locally designated Brackenridge Park Historic District, and three locally designated Historic Sites: residential dwelling at 310 Elmhurst; residential dwelling at 347 Parland Place; and the Sullivan Carriage House within the Botanical Gardens Park. Site 41BX323, known as the Paddle Boat Site, is a Late Paleo to Late Prehistoric lithic scatter, midden, and occupation site originally recorded in 1976 by UTSA-CAR. The site is listed as eligible for listing as a NRHP and was designated as an SAL in 2000. Site 41BX1773 is a prehistoric occupation site of an unknown temporal affiliation. The site was recorded in 2008, and is listed as eligibility undetermined for listing as a NRHP or SAL. Both sites 41BX232 and 41BX1773 are located within Brackenridge Park, roughly 875 feet (267 m) northwest of the Project Area. Site 41BX2073, located 280 feet (85 m) southeast of the Project Area, is a twentieth century historic occupation site, recorded in 2012. The site consist of a subsurface (0 to 30 centimeters below surface [cmbs]) historic deposits associated with twentieth century residential houses that once stood in the area. The site was listed as ineligible within the ROW in 2015 (THC 2018).

CHAPTER 4. METHODS OF INVESTIGATION

To ensure that construction did not impact significant archaeological resources, **RKEI** archaeologists conducted archaeological monitoring of ground disturbing activities within the 300-foot (91 m) APE, as well as a 50 foot (15 m) extension of the APE to the west. No cultural resources monitoring was conducted for the remaining 2,070-feet (631 m) of Project Area. All work complied with THC and CTA standards for the overall project. In order to conduct this work, an **RKEI** archaeologist stood on the edge of the active excavation, within a safe distance of heavy equipment, and observed the removal of soil matrix. None of the matrix removed during the mechanical excavation was screened for artifacts. Artifacts noted in the back dirt were inspected and collected if they were temporally diagnostic. If, during monitoring, clusters of artifacts were exposed, excavations were temporarily suspended in the area to allow for careful inspection of the feature. No architectural or other cultural features were noted during cultural monitoring, and no subsurface evidence of the *Acequia Madre de Valero* was documented.

The project adhered to a temporally diagnostic artifact collection only policy. As a result, no artifacts were collected during the course of the investigations, and no artifacts will be curated at the completion of the project. The only materials to be processed and curated consist of documents and digital photographs produced during field investigations. Digital photographs were printed on acid-free paper, labeled with archival-quality materials, and placed in archival-quality plastic sleeves. Ink-jet produced maps and illustrations were placed in archival quality plastic page protectors to prevent against accidental smearing due to moisture. Field notes, field forms, photographs, and field drawings were placed into labeled archival folders and were also converted into electronic files (i.e., pdf). A copy of the report and all digital material were burned onto a CD and permanently curated with field notes and documents. All field records generated by this project will be permanently curated at UTSA-CAR.

CHAPTER 5. RESULTS OF INVESTIGATIONS

In August-October 2018, **RKEI** conducted cultural resources monitoring for a 350 foot (407 m) section of the SAWS Parland Place Water and Sewer Main Installation Project. The undertaking initially included approximately 270 feet (82 m) of sewer main installation and 300 feet (91 m) of water main installation within the APE; however, an additional 50 foot (15 m) extension was added to the APE during field investigations. Steve Tomka served as the Principal Investigator and Rhiana D. Ward served as Project Archaeologist. All work was conducted under the Texas Antiquities Committee (TAC) Permit No. 8371 and monitoring activities were conducted by field work was conducted by Chris Matthews, Rhiana D. Ward, and Jason Whitaker. Monitoring investigations did not observe any subsurface cultural materials or features, and no subsurface evidence of the *Acequia de Madre* was noted. However, a small ditch, which may represent the remains of the *acequia*, was documented immediately northwest of the APE.

The APE consisted of a city street flanked by residential housing to the north and a city park to the south (**Figure 5-1**). Topography along the western end of the APE was generally level, but increased in elevation by a 5-10 percent slope, roughly mid-way through the monitoring area. Monitoring investigations for the new sewer main installation were conducted from August 27–31, 2018, and investigations for the new water line were completed on October 22–25, 2018. All excavations were conducted by a backhoe, and all spoil matrix (with the exception of asphalt fragments) were deposited on the ground surface adjacent to the trench for use as backfill material.

Excavations began with the location of the existing sewer line and the installation of a new manhole at the western end of the APE (**Figure 5-2**). Excavations for the new manhole measured 5 feet by 5 feet (1.5 m by 1.5 m) and were excavated to 8 feet (2.4 m) deep in order to expose the existing SAWS sewer main (**Figure 5-3**). The existing main projected north to south and multiple existing manholes associated with the utility were observed within the immediately vicinity of the Project Area (see **Figure 5-2**). Disturbance from the existing utility was observed within the northern and southern profile walls of excavation box, but no cultural deposits or features were observed throughout the remaining profile.

Figure 5-1. Overview of the APE with new sewer main marked in green, facing west.

Once the new manhole was installed, trenching excavations for the new sewer main projected east, toward Milton Street (**Figure 5-4**). Excavations measured 3 feet (1 m) wide and 8 feet (2.4 m) deep. The average soil profile for the western end of the APE consisted of (**Figure 5-5**):

- 0 to 4 inches (0 to 10 cmbs)–asphalt;
- 4 to 12 inches (10 to 30 cmbs)– gravel construction base;
- 12 to 26 inches (30 to 65 cmbs)–10YR 2/2 very dark brown silty clay with less than 2-percent gravel inclusions;
- 26 to 45 inches (65 to 115 cmbs)–10YR 3/2 very dark grayish-brown silty clay with less than 10-percent eroding bedrock/marl;
- 45 to 72 inches (115 to 183 cmbs)–10YR 6/2 light brownish-gray silty clay with 60 to 70 percent eroding bedrock/marl;
- 72 to 91 inches (183 to 230 cmbs)–10YR 7/1 light gray eroding bedrock/marl with 80 to 90-percent friable limestone rock.

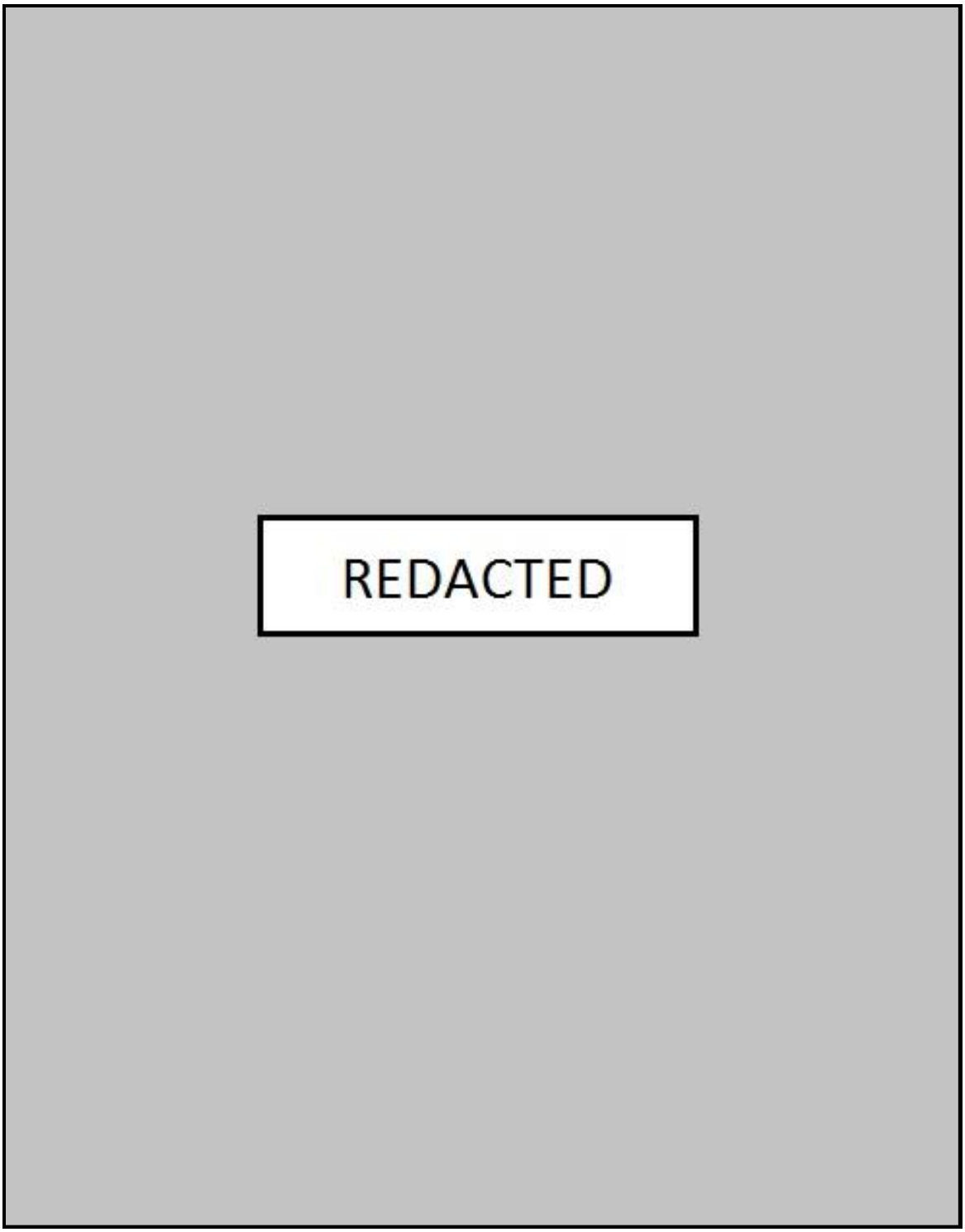

Figure 5-2. Results of cultural monitoring investigations for the SAWS Parland Place Water and Sewer Main Installation Project.

Figure 5-3. Installation of new sewer manhole at the junction of an existing SAWS sewer main, facing northeast.

Figure 5-4. Overview of sewer main installation excavations within the APE, facing southeast.

Figure 5-5. Average soil profile at the western end of the APE during sewer main installation excavations, facing southwest.

Soils appeared to be intact stratigraphic deposits, uniform throughout. As excavations continued east and neared the base of an upland slope, the soil profile transitioned into shallower deposits of eroding bedrock overlain with a layer of dark silty clays with chert grave inclusions (**Figure 5-6**):

- 0 to 4 inches (0 to 10 cmbs)–asphalt;
- 4 to 12 inches (10 to 30 cmbs)–gravel construction base;
- 12 to 39 inches (30 to 100 cmbs)–10YR 3/2 very dark grayish-brown silty clay with less than 2-percent chert gravel inclusions;
- 39 to 63 inches (100 to 160 cmbs)–10YR 4/1 dark gray clay with 5-percent calcium carbonate nodules and 5 to 10-percent chert gravel inclusions;
- 63 to 67 inches (160 to 170 cmbs)–10YR 6/2 light brownish-gray clay with 60 to 70-percent eroding bedrock/marl;
- 67 inches to 91 inches (170 to 230 cmbs)–10YR 7/1 light gray eroding bedrock/marl, no friable limestone rock observed.

Figure 5-6. Average soil profile at the center of the APE during sewer main installation excavations, facing south.

As soils transitioned near the center of the APE, excavations approached the projected alignment of the *acequia*. Field documentation observed a metal medallion set into the sidewalk near the residential dwelling at 135 Parland Place (**Figure 5-7**). The medallion was engraved with "1718/*Acequia* Madre", with a water line symbol illustrated (**Figure 5-8**). The orientation of the water line (approximately a 220-degree orientation) appeared to correlate with the projection of the *acequia* as depicted on the COSA OHP *Acequia* Maps. However, sewer main excavations within the vicinity of the projection did not identify any evidence of the *Acequia Madre de Valero*.

Monitoring investigations of the remaining western APE documented another soil transition as excavations ascended the gently sloping (5 to 10-percent slope) terrace. Chert gravel and cobble inclusions (5 to 10 cm in diameter) dramatically increased to 60 to 80-percent, with evidence of some sandy matrix observe near the lower levels of excavation. The average soil profile of the eastern APE consisted of (**Figure 5-9**):

- 0 to 4 inches (0 to 10 cmbs)–asphalt ;
- 4 to 12 inches (10 to 30 cmbs)–yellow gravel construction base;

Figure 5-7. *Acequia* medallion set in the northern sidewalk of the Parland Place ROW.

Figure 5-8. Overview of APE at its intersection with the projected alignment of the *acequia*. Note the medallion set into the sidewalk in foreground, facing south-southwest.

Figure 5-9. Average soil profile at the eastern end of the APE during sewer main installation excavations, facing south.

- 12 to 39 inches (30 to 100 cmbs)–10YR 3/2 very dark grayish-brown clay loam with less than 2-percent calcium carbonate inclusions and 20 to 30 percent chert gravel/cobble inclusions;
- 39 to 51 inches (100 to 130 cmbs)–10YR 4/2 dark grayish-brown clay loam with less than 2-percent calcium carbonate inclusions and 40 to 50 percent chert gravel/cobble inclusions;
- 51 to 63 inches (130 to 160 cmbs)–10YR 3/4 dark yellowish-brown clay loam with 60 to 80 percent chert gravel/cobble inclusions;
- 63 to 65 inches (160 to 165 cmbs)–10YR 5/6 yellowish-brown sandy loam with 80 to 90 percent chert gravel/cobble inclusions;
- 65 to 91 inches (165 to 230 cmbs)–10YR 6/1 gray, 10YR 8/1 white, and 10YR 7/6 yellow mottled clay.

Overall, no cultural deposits or features of any temporal affiliation were observed during the new sewer main installation. Furthermore, no subsurface evidence of the *Acequia Madre de Valero* was observed during trenching excavations. However, field observations of the general Project Area identified a grassy ditch to the northwest of the APE, within an empty residential lot (**Figure 5-10 and 5-11**). The ditch measured between 6.5 to 8 feet (2 and 2.5 m) wide, approximately 12 to 18 (30 to 46 cm) deep, and

Figure 5-10. Overview of grassy ditch projection in relation to APE and new sewer main manhole installation, facing north.

Figure 5-11. Overview of grassy ditch located within an empty lot to the northwest of the APE, facing northwest.

projected at a 186-degree orientation (**Figure 5-12**). A single, small palm tree is located within the ditch at its intersection with the Parland Place ROW. No evidence of the ditch was observed south of the Project Area or within any of the residential lots along the Funstone Place ROW, south of the APE. Observation of the lot to the north of the grassy ditch, along Elmhurst Avenue, also showed evidence of the ditch; however, the northern lot appears to be been heavily modified from parking lot construction and building demolition. At the time of the sewer main investigations, it was unclear if the grassy ditch served as an atypical drainage ditch, or if it represented a remnant of the *Acequia Madre de Valero.*

Figure 5-12. Overview of grassy ditch to the northwest of the APE, facing north.

In order to determine if the ditch observed to the north of the Project Area was a remnant of the *Acequia Madre de Valero*, an additional 50-foot (15 m) section of water main excavations immediately west of the APE was also monitored for cultural resources. Water main excavations within the extended APE were monitored from October 22–26, 2018, beginning east of the Broadway Street–Parland Place intersection. Trenching was conducted south of the new sewer main alignment, along the southern Parland Place ROW, and measured 2 feet (61 cm) wide and 5 feet (1.5 m) deep (**Figure 5-13**).

Figure 5-13. Overview of water main installation excavations along the southern boundary of the Parland Place ROW, facing east-southeast.

Monitoring investigations observed heavily disturbed soils at the western end of the extended APE, associated with underground utility installations, including existing sewer, water, and storm drain easements. A 33 foot (10 m)-long concrete slab was also observed at 4.5 feet (1.4 m) below surface in the area where the grassy ditch projection would have intersected the new water main excavations (**Figure 5-14**). It is unclear if the concrete slab is the structural remains of a building that may have once occupied the area prior to the construction of the Parland Place ROW (circa 1912–1951), or is associated with an existing underground utility. The fine-grain, grey concrete construction matrix suggests a modern-construction and supports the theory of an existing underground utility.

Continued monitoring investigations for the remaining APE observed the same soil stratigraphy as that was observed for the sewer main installation excavations (**Figure 5-15**). Overall, no cultural deposits or features of any temporal affiliation were observed during the new water main installation. Furthermore, no subsurface evidence of the *Acequia Madre de Valero* was observed.

Figure 5-14. Modern concrete slab observed within the extended APE monitoring area, facing west.

Figure 5-15. Overview of water main installations within the APE, facing west.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

In August-October 2018, **RKEI** conducted cultural resources monitoring for the SAWS Parland Place Water and Sewer Main Installation Project. A preliminary review by the COSA-OHP determined that archaeological monitoring was required for the Project Area given that *Acequia Madre de Valero* was projected as crossing Parland Place, 500 feet (152 m) east of its intersection with Broadway Street. For archaeological purposes, the initial APE consisted of a 300 foot (91 m) section of the proposed alignment, beginning 330 feet (101 m) east of Broadway Street. However, monitoring investigations were extended 50 feet to the west in order to investigate a grassy ditch that was observed within the Project Area. The total area monitored for the project included a 350-foot APE, or 0.03-acres of disturbance for both water and sewer main installations.

Excavations began with the new sewer main excavations. Investigations observed mostly undisturbed soils, with the exception of the existing sewer main to be tied into. Multiple soil transitions were observed as sewer main excavations moved from west to east, including a transition from silty clay deposits to a densely cobbled, sandy matrix at the base of the upper terrace slope. No subsurface evidence of the *Acequia Madre de Valero* was observed during sewer main trenching excavations, but it is interesting to note that the projected alignment of the *acequia* identified by historic maps directly correlates with the cobbly soil transition and changes in upland topography.

No cultural deposits or features of any temporal affiliation were observed during the new sewer main installation; however, field observations of the general Project Area identified a grassy ditch to the northwest of the APE, within an empty residential lot. The ditch measured between 6.5 to 8 feet (2 and 2.5 m) wide, approximately 12 to 18 inches (30 to 46 cm) deep, and projected at a 186-degree orientation. In order to determine if the ditch observed to the north of the Project Area was a remnant of the *Acequia Madre de Valero*, an additional 50-foot (15 m) section of water main excavations immediately west of the APE was also monitored for cultural resources.

Water main excavations were conducted south of the new sewer main alignment, along the southern Parland Place ROW. Soils at the western end of the extended APE were heavily disturbed from the installation of underground utility installations, including existing sewer, water, and storm drain easements. A 33 foot-(10 m) long concrete slab was observed at 4.5 feet (1.4 m) below surface in the area

where the grassy ditch would have intersected the new water main excavations. The slab is likely associated with an existing underground utility based on the modern, fine-grain concrete construction of the slab.

It is possible that the grassy ditch to the north of the Project Area is a remnant of the acequia, however, any subsurface evidence of the channel within the APE had been destroyed during the installation/construction of the concrete utility. The ditch was photo documented, but because the private lot was located beyond the project boundary, no subsurface investigations could be conducted to verify the nature of the ditch. As such, no trinomial or site designation was assigned. Overall, no cultural deposits or features of any temporal affiliation were observed during the excavations of the SAWS Parland Place Water and Sewer Main Installation Project. As such **RKEI** does not recommend any further archaeological investigations within the areas monitored. However, should additional excavations in the APE occur, further work may be required.

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