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Cultural Resources Investigations for the CPS Energy 401 Dwyer Avenue Overhead to Underground Service Conversion Project, San Antonio, Bexar County, Texas

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FINAL REPORT (Redacted)

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MANAGEMENT SUMMARY

Raba Kistner Environmental, Inc. (RKEI), was contracted by CPS Energy (CLIENT) to conduct cultural resources monitoring investigations for the CPS Energy (CPSE) 401 Dwyer Avenue Overhead to Underground Service Conversion Project (401 Dwyer Avenue Project) in downtown San Antonio, Texas. The project consisted of 2,585 feet (788 meters [m]) of overhead to underground electrical service conversions within the Old Guilbeau Street, South Main Street, Stumberg Street, Woodward Street, and Dwyer Avenue right-of-ways (ROWs). Given that the project took place within a publicly owned ROW and because CPSE is a political subdivision of the State of Texas, the project was subject to review under the jurisdiction of Chapter 35 of the Unified Development Code (UDC) of the City of San Antonio (COSA) (Article VI, Historic Preservation and Urban Design, COSA UDC), as well as the Antiquities Code of Texas (ACT) (Texas Natural Resources Code, Title 9, Chapter 191).

An archaeological desktop review conducted in October 2018 determined that the San Pedro *Acequia*, also known as the *Acequia Principal*, intersected a portion of the project alignment along the Old Guilbeau Street ROW. As such, cultural resources monitoring was required by the COSA Office of Historic Preservation for a 360-foot (104 m) section of the Project Area within the Old Guilbeau Street ROW, west of its intersection with South Main Street. No monitoring was required for the remaining 2,225 feet (678 m) of remaining conduit installations associated with the project. For the purpose of archaeological investigations, the Area of Potential Effects (APE) encompassed 443 cubic yards, or 0.03 acre of soil disturbance.

RKEI conducted monitoring investigations for the APE on November 29, December 3, and December 6, 2018. Rhiana Ward served as Project Manager and Principal Investigator, and all field work was conducted by Kirsten Atwood. Investigations resulted in the identification and documentation of the San Pedro *Acequia*, previously recorded archaeological site 41BX337. The San Pedro *Acequia* was identified approximately 170 feet (52 m) southeast of the South Flores Street–Old Guilbeau Street intersection, within the northeastern trench profile wall. The ditch measured 73 inch (185 cm) wide with evidence of stone-lining. Although none of the cultural materials observed in association with the *acequia* displayed individual diagnostic markers, the collection appeared to be consistent with the late-1800s to early 1900s time period, which is contemporaneous with the closure of the San Pedro *Acequia* in this area. A review of the historic San Antonio Sanborn Fire Insurance Maps determined that the documented profile closely matches the projected alignment of the *acequia* as illustrated on the 1892 and 1904 Sanborn Maps.

In addition to the *acequia*, an additional basin-shaped feature was documented. The feature was located approximately 70 inches (180 centimeters) northwest of the *acequia* profile, and measured 47 inches (120 cm) wide, from 31 to 40 inches (80 to 100 cm) below surface. No evidence of the feature was visible within the northern trench profile wall. It is possible that the basin-shaped feature may represent an earlier channel of the *acequia,* such as that illustrated on the 1889 City Engineering Map; however, a lack of cultural materials and the absence of the feature in the northern trench profile wall prevented a positive identification of the feature.

RKEI made a reasonable and good faith effort to identify cultural resources within the given APE. As a result, a portion of the San Pedro *Acequia* was identified and documented. Confirmation of the ditch and its location contributes important information to the history of the region and is a contributing element to the eligibility of archaeological site 41BX337 as a National Register Property and State Antiquities Landmark. **RKEI** recommends no further archaeological investigations for the current APE. However, should additions be made to the Project Area, additional cultural resources investigations may be required.

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CHAPTER 1. INTRODUCTION

Raba Kistner Environmental, Inc. (RKEI), was contracted by CPS Energy (CLIENT) to conduct cultural resources monitoring investigations for the CPS Energy (CPSE) 401 Dwyer Avenue Overhead to Underground Service Conversion Project (401 Dwyer Avenue Project) in downtown San Antonio, Texas (**Figure 1-1**). The project consisted of 2,585 feet (788 meters [m]) of overhead to underground electrical service conversions within the Old Guilbeau Street, South Main Street, Stumberg Street, Woodward Street, and Dwyer Avenue right-of-ways (ROWs). This report summarizes the results of the investigations, including the confirmation and documentation of the Spanish Colonial San Pedro *Acequia*, archaeological site 41BX337.

Given that the project took place within a publicly owned ROW and because CPSE is a political subdivision of the State of Texas, the project was subject to review under the jurisdiction of Chapter 35 of the Unified Development Code (UDC) of the City of San Antonio (COSA) (Article VI, Historic Preservation and Urban Design, COSA UDC), as well as the Antiquities Code of Texas (ACT) (Texas Natural Resources Code, Title 9, Chapter 191). These legislations call for the assessment of all improvement activities that have a potential to disturb historically significant resources and significant subsurface deposits on lands owned by the State. Oversight of compliance with the UDC is provided by the COSA Office of Historic Preservation (OHP), while the ACT is administered by the Texas Historical Commission (THC).

Area of Potential Effects

CPSE installed 2,585 feet (788 m) of underground electrical service lines within multiple city street ROWs. Specifically, the project installed: 545 feet (166 m) of conduit and two manholes within the Stumberg Street ROW; 600 feet (183 m) of conduit and two manholes within the South Main Street ROW; 140 feet (43 m) of conduit and one manhole within the Dwyer Street ROW; 880 feet (268 m) of conduit and two manholes within the Old Guilbeau Street ROW; and 420 feet (128 m) of conduit and one manhole within the Woodward Street ROW. Conduit excavations measured 36 inches (91 centimeters [cm]) wide and 108 inches (274 cm) deep. Excavation dimensions for the manhole installations measured 11.5-x-13-foot (3.5-x-4-m) and were excavated to 15 feet (4.5 m) below surface.

Figure 1-1. Project Area location in downtown San Antonio, Bexar County, Texas.

An archaeological desktop review of the 401 Dwyer Avenue Project was conducted by **RKEI** in October 2018. The review determined that the San Pedro *Acequia*, also known as the *Acequia Principal*, intersects a portion of the project alignments along the Old Guilbeau Street ROW. As such, cultural resources monitoring was required by the COSA OHP for a 360-foot (104 m) section of the Project Area within the Old Guilbeau Street ROW, west of its intersection with South Main Avenue. No monitoring was required for the remaining 2,225 feet (678 m) of remaining conduit and manhole installations associated with the project. For the purpose of archaeological investigations, the Area of Potential Effects (APE) encompassed 443 cubic yards, or 0.03 acre of soil disturbance (**Figure 1-2**).

The APE was generally situated within a heavily developed urban setting that has been the focus of recent development and revitalization efforts. At the time of these investigations, new parking facilities for the HEB/Arsenal Campus were under construction to the southeast of the APE, and a new multiple-family residential complex was under construction to the north. Furthermore, the lot immediately south of the APE had been developed into an open parking lot earlier in the year, and the open lot to the northeast of the APE was undergoing grading activities for an unknown development. The San Antonio River is located 870 feet (265 m) east of the APE, and the San Pedro Creek is 450 feet (137 m) to the west. Furthermore, the APE was located on the boundary between the San Antonio East (2998-133) 7.5-minute United States Geological Survey (USGS) topographic quadrangle maps.

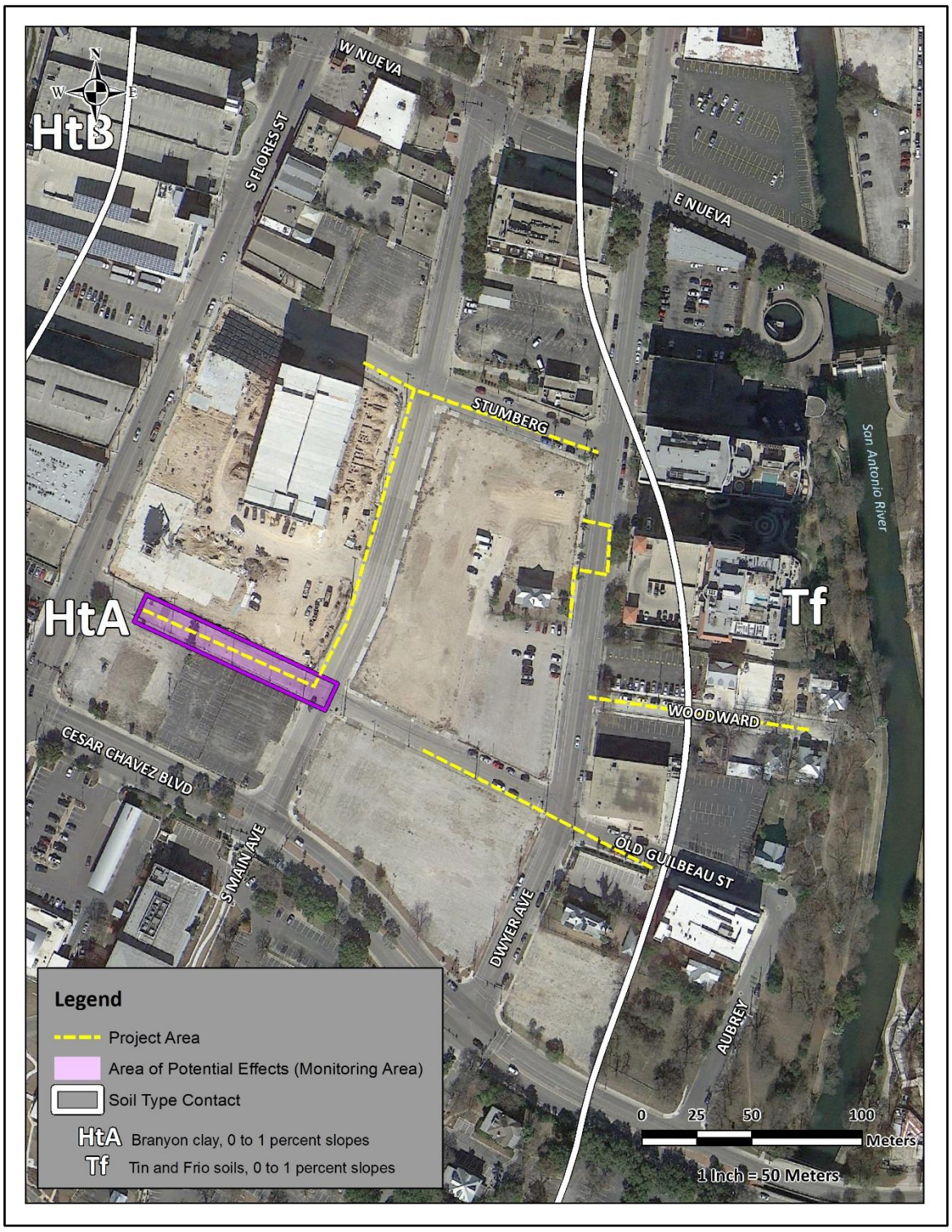


Figure 1-2. Overview of the Project Area and APE with soils.

CHAPTER 2. ENVIRONMENTAL SETTING

Project Area Setting

The 401 Dwyer Avenue Project is located in the south-central Texas geographic region 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 physiographic region 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 Prairie 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 1989a).

Geology

The underlying geology of the APE is mapped as 100-percent Terrace deposits of Pleistocene and Holocene age (Barnes 1983). Terrace deposits consist of sands, silts, clays, and gravels in various proportions with indurated calcium carbonates (caliche) that form along stream terraces (Barnes 1983).

Soils

Soils within the APE are mapped as Branyon clays (Natural Resources Conservation Services [NRCS] 2019) (see **Figure 1-2**). Branyon soils are characterized as very deep, moderately well drained soils that formed in calcareous clayey alluvium derived from mudstone of Pleistocene-age on nearly level to very gently sloping treads of stream terraces on river valleys. (NRCS 2019).

Flora and Fauna

The APE is located near the juncture of the Balconian and Taumaulipan biotic provinces (Blair 1950). The Balconian Biotic Province is associated with the Edwards Plateau, which is typically characterized by open savannah rangeland interspersed with live oak-ashe juniper woodlands and small brush (Griffith and Omernik 2019). The Texan Biotic Province, associated with the Blackland Prairie physiographic region, is characterized by gently undulating topography and generally defined as grasslands punctuated by riparian bands along creeks, rivers, and other drainages (Griffith and Omernik 2019).

Due to the location of the APE, floral and faunal resources consist of a mix of the two provinces. Common vegetation types of the area include post oak (Quercus stellate), live oak (Quercus virginiana), bald cypress (Taxodium distichum), pecan trees (Carya illinoinensis), cedar (Juniperus ashei), 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.). A brief list of some of the animal species found in Bexar County includes the eastern cottontail (Sylvilagus floridianus), nine-banded armadillo (Dasypus novemcincus), white-tailed deer (Odocoileus virginianus), Virginia opossum (Didelphis virginiana), common raccoon (Procyon lotor), fox squirrel (Sciurus niger), striped skunk (Mephitis mephitis), Carolina chickadee (Poecile carolinensis), northern cardinal (Cardinalis cardinalis), great horned owl (Bubo virginianus), mourning dove (Zenaida macroura), red-shouldered hawk (Buteo jamaicensis), northern mockingbird (Mimus polyglottos), Texas rat snake (Elaphe obsoleta lindheimeri), western coachwhip (Masticophis flagellum), Texas toad (Bufo speciosus), Texas spiny lizard (Sceloporus olivaceus), and the western diamondback rattlesnake (Crotalus atrox) (Blair 1950).

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 Regional Climate Center 2019; 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 401 Dwyer Avenue Project is located at the cusp of the Central Texas and South Texas archaeological regions (Turner and Hester 1999). Based on extensive research conducted by Black (1989b), Collins (1995, 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. Nonetheless, the chronological sequence of Bexar County and the vicinity is divided in to four cultural periods, spanning approximately 11,500 years. Archaeologists have divided the occupation of the region into four principal periods and several sub-periods: Paleoindian (11,500–8800 B.P.), Archaic (8000–1200 B.P.), Late Prehistoric (1200–400 B.P.), and Historic (400 B.P. to present). The periods are characterized by changes climatic conditions, distinct vegetation types and structure, and concomitant adaptive changes by human populations in hunting and gathering technologies and strategies, general material culture, and at the tail end of the cultural sequence, the arrival of non-indigenous populations.

Paleoindian Period

The oldest cultural materials found in the region date to the Paleoindian period. The period spans roughly from 11,500–8,800 B.P. (Collins 1995, 2004). The Aubrey site in Denton County has one of the earliest occupations, with radiocarbon assays dating to between 11,542 ± 11 B.P. and 11,590 ± 93 B.P. (Bousman et al. 2004:48). Paleoclimatic proxy measures suggest that a cooler climate with increased precipitation was predominant during the Late Pleistocene (Mauldin and Nickels 2001; Toomey et al. 1993), the later portion of the period.

Initial reconstructions of Paleoindian adaptations typically viewed these hunter-gatherers as traversing extreme distances in pursuit of now extinct mega-fauna such as mammoth and mastodon. While these Paleoindian populations did exploit the Late Pleistocene mega-fauna when it was accessible, a number of faunal assemblages from a larger number of sites indicate that the Paleoindian diet was more varied and consisted of a wide range of resources, including small game and plants. The Lewisville (Winkler 1982) and the Aubrey sites (Ferring 2001) produced faunal assemblages that represented a wide range of taxa, including large, medium, and small species. Information on the consumption of plant resources during the

Paleoindian period is lacking. Bousman et al. (2004) reported that the late Paleoindian component at the Wilson-Leonard site reflected the exploitation of riparian, forest, and grassland species. Analysis of Paleoindian skeletal remains indicates that the diets of the Paleoindian and later Archaic hunter-gatherers may have been similar (Bousman et al. 2004; Powell and Steele 1994).

The early portion of the Paleoindian period was characterized by the appearance of Clovis and Folsom fluted projectile points that were used for hunting mega-fauna. Typical projectile points produced at sites with occupations dating to the later portion of the Paleoindian period included the Plainview, Dalton, Angostura, Golandrina, Meserve, and Scottsbluff types. Meltzer and Bever (1995) have identified 406 Clovis sites in Texas. One of the earliest, 41RB1, yielded radiocarbon assays that put the maximum age for the Paleoindian component at 11,415 ± 125 B.P. (Bousman et al. 2004:47).

Sites in Bexar County that contain Paleoindian components include St. Mary's Hall (Hester 1978, 1990), Pavo Real (Collins et al. 2003), the Richard Beene site (Thoms et al. 1996; Thoms and Mandel 2006) and 41BX1396 (Tomka 2012). St. Mary's Hall, 41BX229, was first encountered in 1972 during the construction of a house just outside the school's property. The Pavo Real site, 41BX52, is located along Leon Creek in northwest Bexar County. The site was first documented in 1970 and has been investigated several times over the past 40 years (Collins et al. 2003). The Richard Beene site, 41BX831, is located along the Medina River in southern Bexar County (Thoms et al. 1996). Site 41BX1396 is located in Brackenridge Park in San Antonio, and was encountered during installations for lighting in 2010. Dating of organic samples indicated that occupation at the site occurred as early as 10,490–10,230 B.P.

Archaic Period

The Archaic period dates between ca. 8,800 to 1,200 B.P. It is divided into three subperiods: Early, Middle, and Late. During the Archaic, mobility strategies may have shifted to more frequent short distance movements that allowed the exploitation of seasonal resource patches. The intermittent presence of bison in parts of Texas, combined with changes is climatic conditions and the primary productivity of the plant resources may have contributed to shifts in subsistence strategies and associated technological repertoire. When bison was not present in the region, hunting strategies focused on medium to small game along with continued foraging for plant resources. When bison was available, hunter-gatherers targeted the larger-bodied prey on a regular basis.

Early Archaic

The Early Archaic spans from 8,800 to 6,000 B.P. (Collins 1995, 2004). Projectile point styles characteristic of the Early Archaic include Angostura, Early Split Stem, Martindale, and Uvalde (Collins 1995, 2004). The Early Archaic climate was drier than the Paleoindian period and witnessed a return to grasslands (Bousman 1998). Mega-fauna of the Paleoindian period could not survive the new climate and ecosystems, therefore eventually dying out. Early Archaic exploitation of medium to small fauna intensified.

The excavations at the Wilson-Leonard site (41WM235) produced a wealth of cultural materials representative of a lengthy period in regional prehistory. The projectile point assemblages from the site indicate that the lanceolate Paleoindian point forms continue from the Paleoindian into the Early Archaic (Angostura). However, relatively quickly during the Early Archaic, they are replaced by corner- and basally-notched and shouldered forms (Early Triangular, Andice, Bell) that quickly become the dominant points tipping the atlatl-thrown darts. In addition, the uses of small to medium hearths similar to the previous period were noted. The appearance of earth ovens suggests another shift in subsistence strategies. The earth ovens encountered at the Wilson-Leonard site were used to cook wild hyacinth along with aquatic and terrestrial resources (Collins et al. 1998). Analyses of Early Archaic human remains encountered in Kerr County (Bement 1991) reveal diets low in carbohydrates in comparison to the Early Archaic populations found in the Lower Pecos region.

Middle Archaic

The Middle Archaic sub-period spans from 6,000 to 4,000 B.P. (Collins 1995, 2004; Weir 1976). Archaeological data indicates that there appeared to be a population increase during this time. The climate was gradually drying leading to the onset of a long drought period. Changes to the demographics and cultural characteristics were likely in response to the warmer and more arid conditions. Projectile point styles characteristic of this sub-period include Bell, Andice, Calf Creek, Taylor, Nolan, and Travis.

Subsistence during the Middle Archaic saw an increased reliance on nuts and other products of riverine environments (Black 1989b). The increase of burned rock middens during the Middle Archaic represented the increased focus on the use of plant resources (Black 1989b; Johnson and Goode 1994). Little is known about burial practices during the Middle Archaic. An excavation in an Uvalde County sinkhole (41UV4) contained 25–50 individuals (Johnson and Goode 1994:28).

Late Archaic

The Late Archaic spans from 4,000 to 1,200 B.P. (Collins 1995, 2004). It is represented by the Bulverde, Pedernales, Kinney, Lange, Marshall, Williams, Marcos, Montell, Castroville, Ensor, Frio, Fairland, and Darl projectile points. The early part of the Late Archaic exhibited fluctuations in the temperature and rainfall. There appears to have been an increase in population at this time (Nickels et al. 1998).

Some researchers believe that the use of burned rock middens decreased during the Late Archaic. Some research has challenged this notion (Black and Creel 1997; Mauldin et al. 2003). Johnson and Goode (1994) discuss the role of burned rock middens in relation to acorn processing.

Human remains from burials related to the Late Archaic in Central and South Texas suggest the region saw an increase in population. This increase may have prompted the establishment of territorial boundaries which resulted in boundary disputes (Story 1985). Human remains dating to this sub-period have been encountered near the Edwards Plateau.

Late Prehistoric Period

The Late Prehistoric period begins ca. 1,200 B.P. (Collins 1995, 2004), and appears to continue until the beginning of the Protohistoric period (ca. A.D. 1700 for Bexar County). The term Late Prehistoric is used in Central and South Texas to designate the time following the end of the Archaic period. A series of traits characterizes the shift from the Archaic to the Late Prehistoric period. The main technological changes were the shift to the bow and arrow and the introduction of pottery. The Late Prehistoric period is divided into two phases: the Austin phase and the Toyah phase.

At the beginning of this period, environmental conditions were deemed to be warm and dry. Moister conditions appear after 1,000 B.P. (Mauldin and Nickels 2001). Subsistence practices appeared similar to the Late Archaic. Projectile points associated with the Austin phase include the Scallorn and Edwards types. The Toyah phase is characterized by the prominence of the Perdiz point (Collins 1995, 2004).

Most researchers concur that the early portion of the Late Prehistoric period saw a decrease in population density (Black 1989b:32). Radiocarbon dates from some sites have indicated that the middens were utilized during the Late Prehistoric. Some archaeologists feel the peak of midden use was after A.D. 1 and

into the Late Prehistoric (Black and Creel 1997:273). Radiocarbon dates from Camp Bowie middens provide evidence that supports Black and Creel's arguments that burned rock middens were a primarily Late Prehistoric occurrence (Mauldin et al. 2003).

Beginning rather abruptly at about 650 B.P., a shift in technology occurred. This shift is characterized by the introduction of blade technology, the first ceramics in Central Texas (bone-tempered plainwares), the appearance of Perdiz arrow points, and alternately beveled bifaces (Black 1989b:32; Huebner 1991:346). Prewitt (1981) suggests this technology originated in north-central Texas. Patterson (1988), however, notes that the Perdiz point was first seen in southeast Texas by about 1,350 B.P., and was introduced to west Texas some 600 to 700 years later.

Early ceramics in Central Texas (ca. A.D. 1250 to 1300) are associated with the Toyah phase of the Late Prehistoric and are referred to as Leon Plain ware. The Leon Plain ceramic types are undecorated, bone-tempered bowls, jars, and ollas with oxidized, burnished, and floated exterior surfaces (Ricklis 1995). There is notable variation within the type (Black 1986; Johnson 1994; Kalter et al. 2005). This variation can be attributed to differences in manufacturing techniques and cultural affiliation. Analysis of residues on ceramic sherds suggests that vessels were used to process bison bone grease/fat, mesquite bean/bison bone grease and deer/bison bone grease (Quigg et al. 1993).

The return of bison to South and Central Texas during the Late Prehistoric resulted from a drier climate in the plains located to the north of Texas and increased grasses in the Cross-Timbers and Post Oak Savannah in north-central Texas (Huebner 1991). The increased grasses in the two biotas formed the "bison corridor" along the eastern edge of the Edwards Plateau and into the South Texas Plain (Huebner 1991:354–355). Rock shelter sites, such as Scorpion Cave in Medina County (Highley et al. 1978) and Classen Rock Shelter in northern Bexar County (Fox and Fox 1967), have indicated a shift in settlement strategies (Skinner 1981). Burials encountered that dated to this period often reveal evidence on conflict (Black 1989b:32).

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 presidio 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.

San Pedro Acequia

At the time of the establishment of Mission Valero and San Antonio de Bexar, the need for water for consumption and to irrigate crop lands was in the forefront of priorities to address. A system of *acequias* was developed to supply water to the missions, villas, presidio, and farm land. The first *acequia* is believed to have emanated from San Pedro Springs and connected to the San Antonio River (Cox 2005; Porter 2009), although archival research based on the Mezquia and Celiz diaries speak of planned *acequias* not

necessarily the finished product. Juan Antonio de la Peña indicated that, upon returning San Antonio in January 1722, Aguayo found that the Presidio was indefensible and did not have the ability to irrigate lands (Hadley et al. 1997). Aguayo ordered that an *acequia* to be constructed "from the San Pedro River" to irrigate "two leagues of land in the cove the San Pedro Rivers forms as it joins, below the presidio, with the San Antonio River where it widens making a small island in what is enclosed from where the presidio is to be constructed" (Hadley et al. 1997). This account in the 1722 diary would indicate that there had not been an *acequia* constructed between San Pedro Creek and the San Antonio River by January 1722.

In 1731, the Canary Islanders arrived at San Antonio de Bexar to establish a community. The *Isleños* set up their own villa, Villa San Fernando de Bexar, and requested land for farming. The presidio captain, Almazán, was tasked with laying out the villa's plaza as well as portioning off tracts of lands for the *Isleños*. In July 1731, Almazán gathered the heads of the *Isleños* households and portioned out the lands to the north and south of the presidio. Unfortunately, the captain did not consider that the families of the presidio soldiers had already cleared the land and dug an *acequia*, both major tasks. Rather, Almazán wanted the *Isleños* to be immediately farming the cleared land, thus the land was usurped (Cox 2005).

Although Almazán dispossessed the first group in favor of the Canary Islanders, it was something he could easily do as the titles to the land had not been officially granted (Porter 2009). Almazán reserved 20-percent of all lands that were to be distributed for the villa to rent or sell, creating a source of income. In addition to the 20-percent of the land, the *cabildo* reserved 20-percent of the water from San Pedro Creek to rent rights so the villa had another source of income (Porter 2009). The *Isleños' cabildo* took possession of the water in San Pedro Creek in October 1733 (Porter 2009). To irrigate the lands distributed to the *Isleños*, an additional *acequia* was established at San Pedro Springs and entered the San Antonio River near the confluence of the two waterways (Cox 2005; Porter 2009). This *acequia* would be able to provide water to fields on both sides, rather than just one as the other *acequias* in the system did.

The San Pedro *Acequia* appears to have been flowing by 1735 (Cox 2005; Glick 1972). No exact records of the construction or completion of the *acequia* is known, but certain disagreements between some of the *Isleños* in 1735 refer to the *acequia* (Cox 2005; Glick 1972). The *acequia* was said to have been 72 inches (183 cm) wide, 24 inches (61 cm) deep, and 4 miles (6 kilometers [km]) long upon completion (Dobkins 1959; Frkuska 1981). This *acequia* was able to irrigate approximately 400 acres. In addition to providing water for crops, the *acequia* supplied drinking water to the inhabitants and many rules and regulations

were enacted to make sure that the water supply was kept clean. The *cabildo* ordered that no washing was to take place in the *acequia* to make sure that the water was clean for the residents downstream (Porter 2009). Punishment for being caught washing clothes in the *acequia* was confiscation of the clothes (Porter 2009).

The use of the San Pedro *Acequia* and the other *acequias* in town were highly regulated and maintenance was mandatory for all those who used the system. Time allotments were awarded or rented, bought and sold, and adhered to stringently with a *mayordomo* overseeing the dealings (Porter 2009). The system, although there were some disagreements among the residents, ran rather smoothly during the Spanish Colonial Period. However, during secularization the oversight of the *acequia* system became a rather cumbersome issue (Frkuska 1981). The *cabildo* now had many more miles of *acequia* to oversee, regulate, and manage, and the Mexican Revolution had caused many residents to flee from the region. As a result, the *acequias* were not well kept, as suggested by a complaint made to the city in 1822 that indicated the city was not keeping up maintenance of the San Pedro *Acequia* (Frkuska 1981).

During the Texan fight for independence, the Mexican military caused conflict enough to drive residents that had returned after the Mexican Revolution away. The Mexicans also took many of the city's records that dealt with land titles and water rights (Frkuska 1981). As a result, even less is known about the water usage during the Texas Revolution period, but it is likely that the *acequia* system likely fell into greater disrepair during this time.

After Texas gained independence and the population of San Antonio began to grow, the issue of the *acequia* system and water rights was revisited. An influx of Anglos led to a shift in the local government and eventually in control of the water system (Montejano 1987). As the demographics changed, some of the regulations regarding *acequia* use and management did as well, even though the new Anglo-dominated government had promised to keep the previous ordinances (Cox 2005).

Sanitation within the *acequia* system remained one of the main concerns (Cox 2005). In 1838, city government created ordinances that dealt with the maintenance and cleaning of the *acequia* system; however, by 1840, it appeared that the residents were not following the council's ordinances. As a response, a new water ordinance granting oversight of the ditch system to the ditch commissioner was created with harsher punishments for failure of the landowners to maintain their portions of the system.

If the landowner did not maintain their portion of the system, the council enacted a fine of fifty-cents per *vara* for maintenance to be done for them. If the fine was not paid within 10 days, the council revoked the landowner's water rights for 12 months (Cox 2005). In addition to the cleaning of the ditches, the council decreed that no one was allowed to impeded the flow of the *acequia* less be served a fine for each instance. These new regulations were in response to the main ditch emanating from San Pedro Springs (San Pedro *Acequia*) not being maintained for many years. On May 15, 1847, the city council altered the water rights ordinance to include a clause that created a water supply for the city, with every fifth day being set aside for city use (Frkuska 1981). Up until 1851, all ordinances concerning *acequia* use were related to the needs of the San Pedro *Acequia,* but in May 1851, the council created a regulation aimed at the use of the Alamo ditch (Cox 2005).

In 1856, the corporate boundaries of the city were extended 6 miles (10 km) from the city center (San Fernando Cathedral), creating new issues with water rights and usage. The new city charter developed in 1857 gave the mayor and the city council the ability to reopen irrigation ditches that had been previously closed. In addition, the charter once again addressed the issue of contaminating the San Pedro *Acequia* by washing clothes, watering horses, and dumping refuse/material into the ditch (Frkuska 1981).

The United States Army acquired the tracts of land for the site of the new Arsenal in 1859. A portion of the San Pedro *Acequia* passed through the Arsenal grounds, just to the east of the Devine House that had been constructed just a few years prior to the sale. The *acequia* was still in use at the time of the sale (Frkuska 1981). It appears that the United States Army lined the portion of the *acequia* within the grounds with cut limestone by 1860.

During the 1880s, there was a revived interest in the maintenance and use of the *acequia* system; however, any modification to the *acequia* channels required approval by the city council (Frkuska 1981). In 1883, a petition was made to the city council to line the San Pedro *Acequia* within San Pedro Park. Acting in favor of the petition, approximately 300 to 400 feet (91 to 122 m) of the *acequia* was stone lined. Although, another petition soon after requested that the height of the channel be raised another 12 inches to protect from overflow (Frkuska 1981).

The late 1880s and into the 1890s saw the drilling of artesian wells in San Antonio, which reduced the water table in the area. The drilling caused the natural springs in San Antonio, including San Pedro Springs, to produce less water. The lack of water at the spring translated to an unreliable source of clean water in the *acequia*. Eventually, inhabitants relied less on the *acequias* for drinking water and more for collecting storm water run-off, thus, the San Pedro *Acequia* became a place filled with refuse and rubbish that washed in during the rains (Frkuska 1981).

In time the use of the *acequia* as a storm drain proved to be problematic and were considered public nuisances. The *acequias* were not able to deal with the capacity of the water brought in by storms and flooded the area. In addition, water that was in the *acequia* channel was often stagnant. As a result, the public began petitioning for the *acequia* system to close near the end of the nineteenth century (Frkuska 1981; Cox 2005). In 1899, the ditch commissioner's office was closed (Revised City Charter, August 7, 1899; Chapter XII, pg. 185), and on September 3, 1912 the city passed an ordinance that officially closed the San Pedro *Acequia* (City Council Minutes, Vol. V., Sept. 3, 1912).

Previous Archaeological Investigations

On October 23, 2018, **RKEI** conducted a cultural resources desktop review for the 401 Dwyer Avenue Project (THC 2019) (**Figure 3-1**). The review determined that known archaeological site 41BX337, the San Pedro *Acequia,* intersected a portion of the project within the Old Guilbeau Street ROW. The *acequia* is designated as a local Historic Landmark by the COSA-OHP, as well as a National Historic Civil Engineering Landmark and a contributing element to the San Antonio Missions UNESCO World Heritage Site designation. Furthermore, the review determined that the Project Area was located within the *Survey of Archaeological, Architectural and Historical Sites on the San Antonio River from Olmos Dam to South Alamo Street* study, conducted by the Center for Archaeological Research at the University of Texas at San Antonio (CAR UTSA) in 1979 (Fox). It is unlikely that archaeological investigations were conducted within the APE during the course of this survey. Rather, the Project Area was most likely included during holistic archival and historical research. In addition to the APE, a review of a 1,000-foot (305 m) study buffer was conducted for the Project Area (**Table 3-1**) (THC 2019).

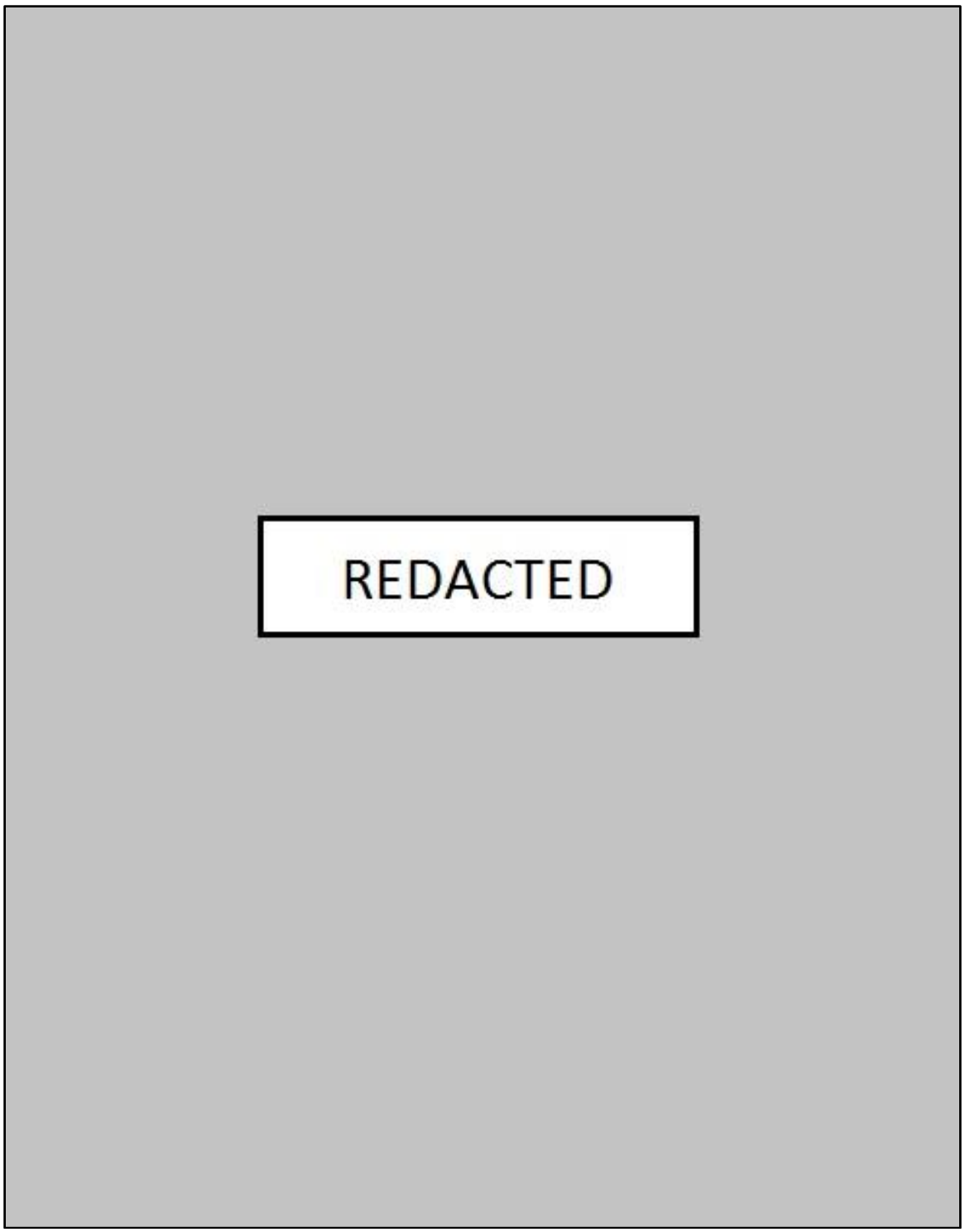


Figure 3-1. Overview of cultural resources and previous investigations within a 1,000 foot (305 m) radius of the Project Area.

Table 3-1. Known cultural resources within a 1,000-foot (305 m) radius of the Project Area

Resources	Distance/Direction from Project Area	Brief Resource Description	Eligibility Determination
41BX269	463–feet/east	Espada *Acequia*. Spanish Colonial *acequia* dating to 1731.	No determination
41BX302	890–feet/northwest	Historic Jose Antonio Navarro House, consisting of three buildings dating to the 1840s.	Eligible; additionally a State Antiquities Landmark
41BX303	862–feet/east	Standing structures and subsurface foundations dating primarily to the latter half of the nineteenth century. At least one latrine, trash pit, and cistern are present, as well as at least three unlined irrigation ditches.	No determination
41BX326	999–feet/southeast	Historic Mayer House, an early twentieth century brick residence.	No determination
41BX334	421–feet/northeast	Archaeological investigations of the Court House Annex identified limestone foundations and artifacts associated with the Campbell House and date to the late nineteenth century.	Eligible; additionally a State Antiquities Landmark
41BX335	449–feet/north	Rubble foundations associated with a house and kitchen were identified during trenching for the Court House Annex. Charcoal and other burned materials indicates that the structure may have burned.	Eligible; additionally a State Antiquities Landmark.
41BX336	440–feet/north	The Rulling House (c. 1879) was used as a grocery and family home. Archaeological investigations identified several different architectural styles in the foundation suggesting several construction phases.	No determination
41BX351	889–feet/southwest	The site includes the Old Commanders House (1850 and 1880) and portions of the *acequia*.	Eligible; additionally a City Historic Landmark
41BX369	974–feet/northeast	Historic Gresser-Hayes House. Foundation traces of Mexican Spanish Colonial house abutting S. wall of stone German house. A possible *acequia* branches located in the eastern portion of site, paralleling South Presa.	No determination
41BX622	622–feet/south	This eight acre site contains several historic buildings from the United States San Antonio Arsenal dating between 1858 and 1950. Civil War-era artifacts recovered during excavations have been sampled and stabilized.	Listed
41BX648	809–feet/northeast	Historic house/store dating to the 1840's (Mojaras/Goeth property).	No determination

Resources	Distance/Direction from Project Area	Brief Resource Description	Eligibility Determination
41BX786	241–feet/northwest	Archaeological investigations of the new Bexar County Justice Center parking garage identified architectural features and artifacts associated with the Vollrath Blacksmith shop (1874-1916).	No determination
41BX1753	765–feet/northeast	Historic site made up five subsurface historic features from the French/Spanish Colonial, Early Statehood, Republic of Texas, Mexican, and Middle Statehood Periods.	Eligible; additionally a State Antiquities Landmark.
41BX1775	551–feet/north	Historic site made up of eight architectural features that do not appear to be associated with one another but are rather they are remains of late nineteenth century or early twentieth century structures.	No determination
41BX1977	464–feet/southeast	The site is composed of a deeply-buried deposit of burned rock, debitage, and late eighteenth to early nineteenth century glass bottle base. Given that these materials were found between 130 and 200 cmbs may represent isolated finds associated with mixed deposits from a former channel of the San Antonio River.	No determination
41BX2088	1,000–feet/north	Historic occupation site with midden. The site is associated with the Presidio during the Colonial period and was the site of nineteen buildings.	No determination
Pajalache/Conception *Acequia*	615–feet/east	Spanish Colonial *acequia* dating to 1731.	–
King William Historic District	710–feet/south	Architectural significance.	NR District
La Villita Historic District	574–feet/east	Architectural significance.	NR District
Main and Military Plazas Historic District	408–feet/north	Historic, architectural, and archaeological significance.	NR District; additionally a City Historic District.
Navarro, Jose Antonio, House Complex	814–feet/northwest	Architectural and significant person criteria for National Register District listing met.	NR District
San Antonio Downtown and River Walk Historic District	58–feet/northeast	Architectural, community planning and development, and commercial significance.	NR District
United States San Antonio Arsenal	612–feet/southwest	Historic significance.	NR District; additionally a City Historic District.
Vogel Belt Complex	980–feet/north	Historic and architectural significance.	NR District
Bexar County Courthouse	914–feet/northeast	Late 19th century Romanesque-style building with historical and architectural significance.	NR Property

Resources	Distance/Direction from Project Area	Brief Resource Description	Eligibility Determination
Smith--Young Tower	975–feet/northeast	31-story Late Gothic Revival office tower constructed in 1927–1928.	NR Property
RIO-3	Partially Within	Zoning overlay intended to help protect, preserve, and enhance the San Antonio River and its improvements.	–
RIO-Districts (additional): 4	1,000–foot/radius	Zoning overlays intended to help protect, preserve, and enhance the San Antonio River and its improvements.	–
City Historic Site	85–feet/south	315 Dwyer Avenue. No other information available.	–
City Historic Sites (non-adjacent): many	1,000–foot/radius	Locally-recognized site of historic and/or architectural importance.	–
Historical Marker #399	930–feet/northeast	Bexar County Courthouse, constructed in the late 1800s.	–
Historical Marker #3555	945–feet/northwest	Navarro Houses. Residential structures dating to the 1840s.	–
Historical Marker #3680	867–feet/east	Oge House, an 1857 Neoclassical-style residence built of stone.	–
Historical Marker # 14565	129–feet/south	W. B. Teagarden House, a 1903 Queen Anne-style residence.	–
Historical Marker #16997	956–feet/east	Gustav Blersch House, a two-story limestone residence constructed in 1860.	–

San Antonio Sanborn Fire Insurance Maps

A review of historic Sanborn Fire Insurance (Sanborn) Maps was conducted in order to determine where the projected route of the San Pedro *Acequia* would intersect within the Project Area. The Project Area did not appear on the Sanborn Maps in detail until 1892; however, an 1889 City Engineering Map by J.J. Olson does depict the general vicinity of the project with the *acequia* as intersecting the APE, approximately 165 feet (50 m) southeast of South Flores Street within the Old Guilbeau Road ROW (see Nichols et al. 2017). Further review identified the *acequia* as approximately 170 feet (52 m) southeast of South Flores Street on the 1892 Sanborn Map (**Figure 3-2**) and 1904 Sanborn Map(**Figure 3-3**), while the 1912 Sanborn Maps depict the ditch as 188 feet (57 m) to the southeast (**Figure 3-4**).

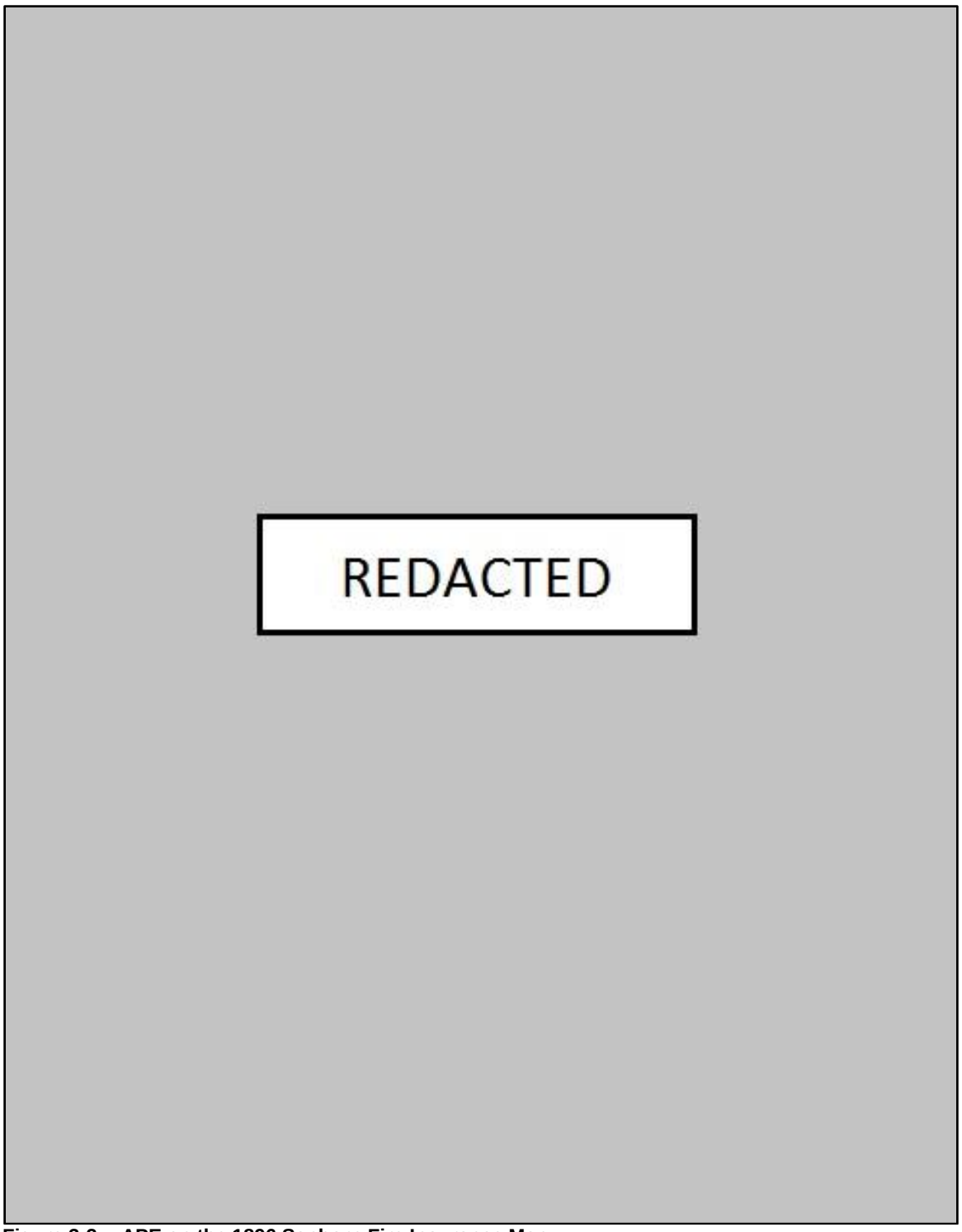
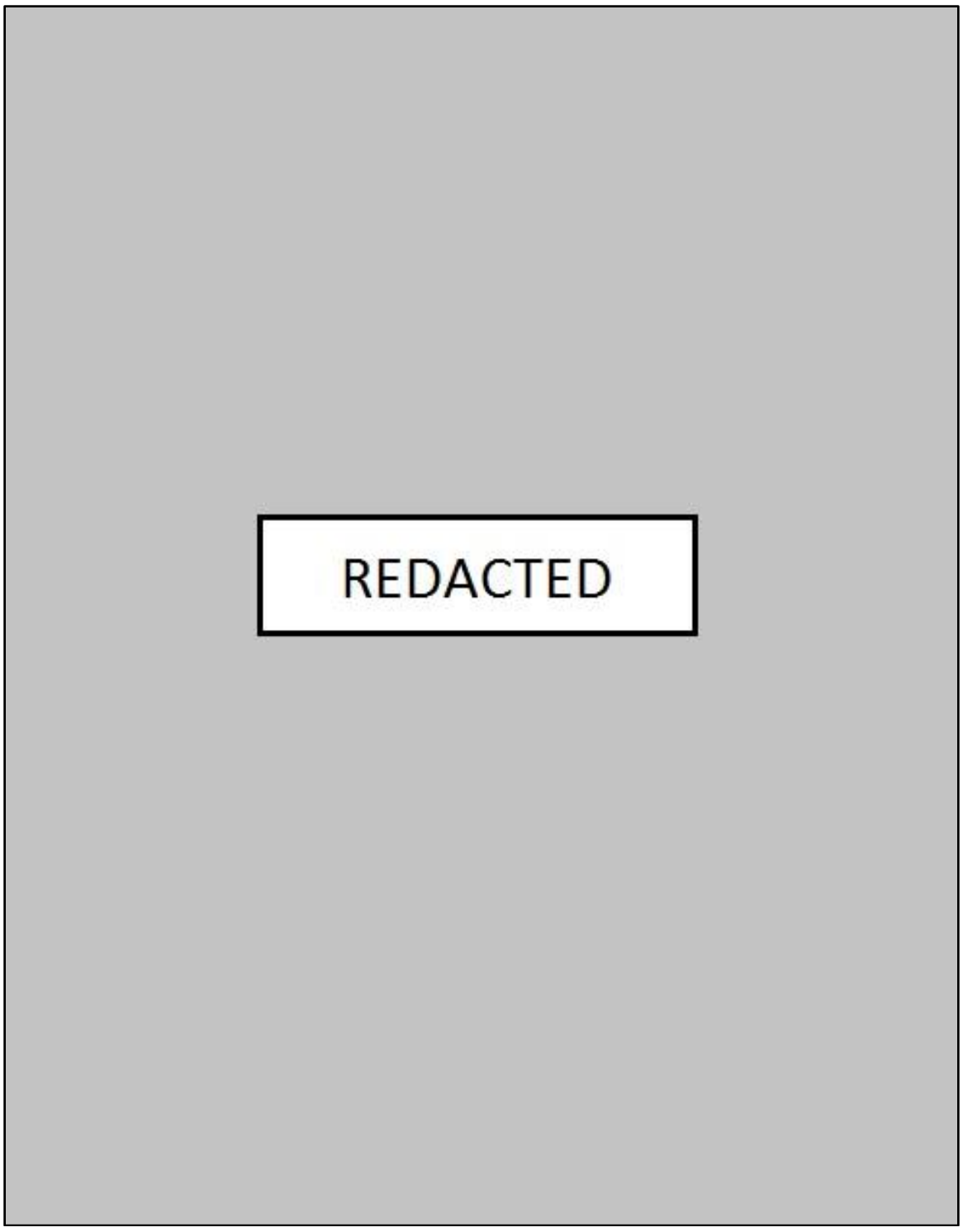


Figure 3-2. APE on the 1896 Sanborn Fire Insurance Map.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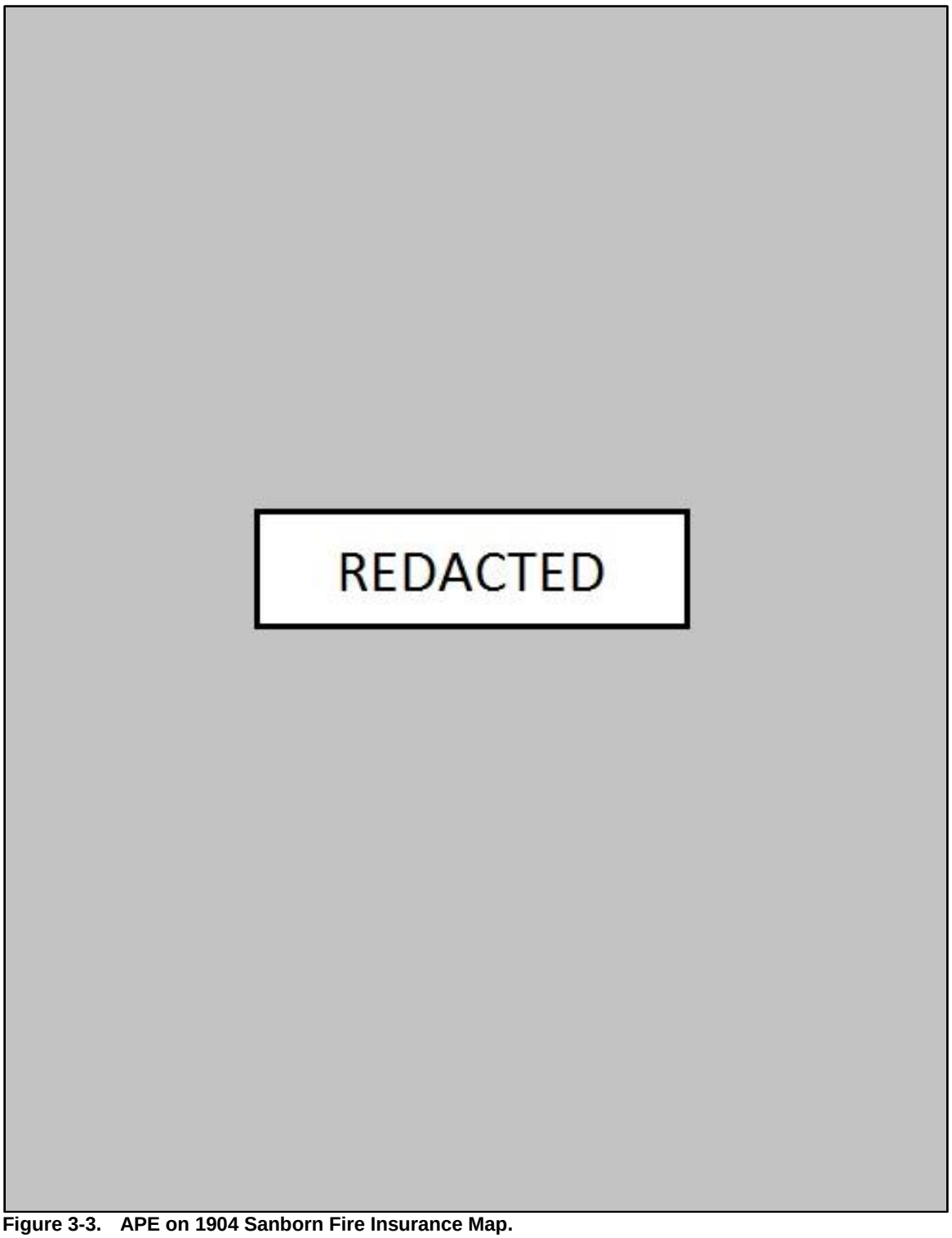

Figure 3-3. APE on 1904 Sanborn Fire Insurance Map.

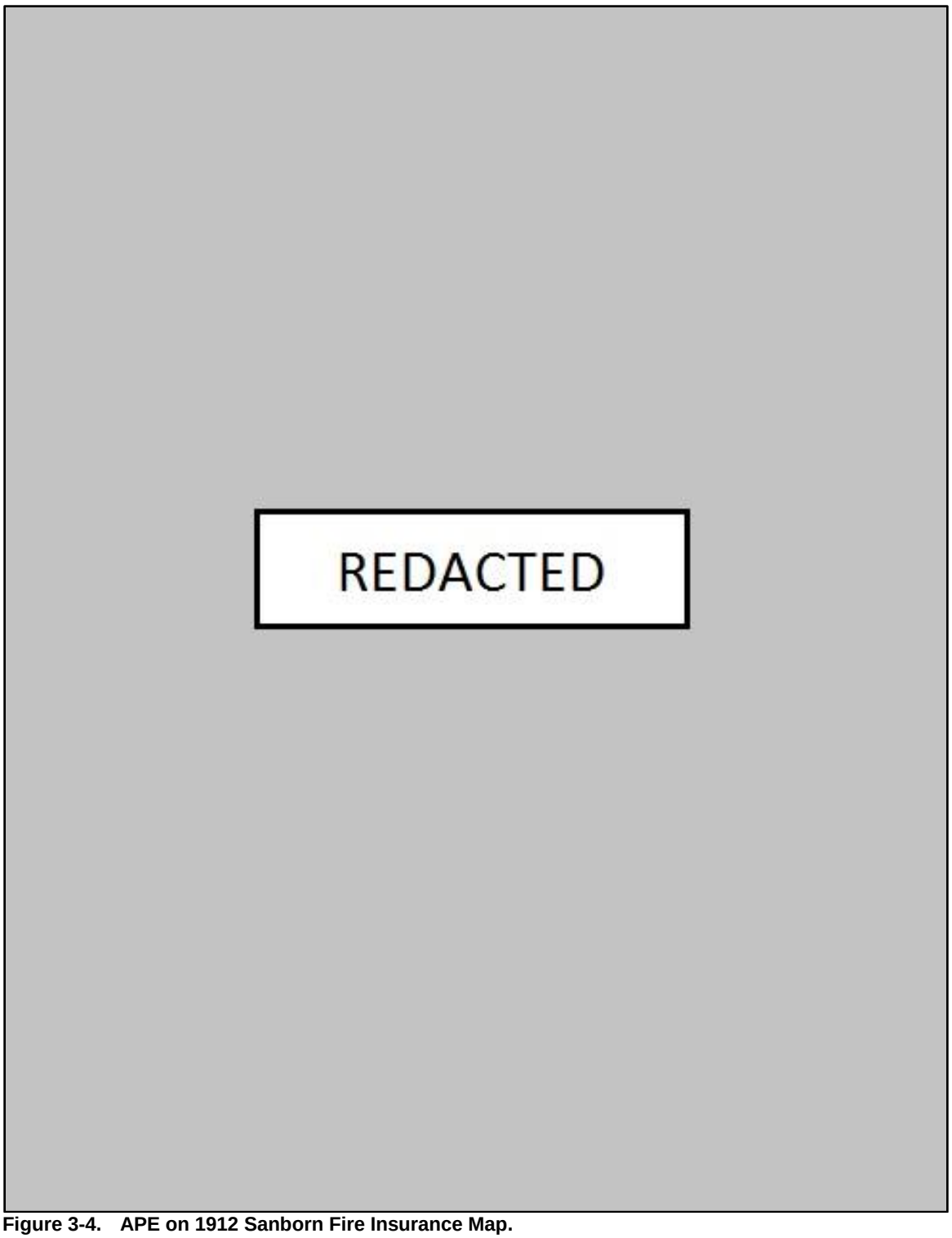

Figure 3-4. APE on 1912 Sanborn Fire Insurance Map.

CHAPTER 4. METHODS OF INVESTIGATION

To ensure that construction did not impact significant archaeological resources, **RKEI** archaeologists conducted archaeological monitoring for ground disturbing activities within a 360-foot (104 m) section of the Old Guilbeau Street ROW. No monitoring was required for the remaining 2,225 feet (678 m) of conduit installations associated with the project. 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. If, during monitoring, clusters of artifacts were exposed, excavations were temporarily suspended in the area to allow for careful inspection of the feature.

The project adhered to a temporally diagnostic artifact collection only policy. No diagnostic artifacts were collected during the course of the investigations, thus, 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 archivally appropriate 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 in accordance with the CAR UTSA.

CHAPTER 5. RESULTS OF INVESTIGATIONS

RKEI conducted monitoring investigations for the 401 Dwyer Avenue Project APE on November 29, December 3, and December 6, 2018. Rhiana D. Ward served as Project Manager and Principal Investigator, and all field work was conducted by Archaeologist Kirsten Atwood. Investigations resulted in the identification and documentation of the San Pedro *Acequia*, previously recorded archaeological site 41BX337 (**Figure 5-1**).

Opening excavations began with linear trenching within the Old Guilbeau Street ROW, approximately 65 feet (20 m) southeast of its intersection with South Flores Street (**Figure 5-2**). Excavation measured 36 inches (91 cm) wide by 108 inches (275 cm) deep and extended for 75 feet (23 m) before terminating due to a change in construction planning. A 5-inch metal pipe (abandoned) was located at 35 inches (90 cm) below surface throughout most of the trench and was removed during excavation; however, the northern profile of the excavation appeared to be mostly intact with the following average soil profile (**Figure 5-3**):

- 0 to 3 inches (0 to 8 cm) - asphalt;
- 3 to 13 inches (8 to 33 cm) - yellow construction gravel;
- 13 to 18 inches (33 to 46 cm) - very dark grayish-brown (10YR3/2) silty clay with 1-percent or less of limestone gravel inclusions;
- 18 to 22 inches (46 to 55 cm) - dark grayish-grown (10YR4/2) silty clay with 1-percent or less of limestone gravel inclusions;
- 22 to 30 inches (55 to 76 cm) - brown (10YR4/3) silty clay with 1-percent or less of limestone gravel inclusions;
- 30 to 37 inches (76 to 95 cm) - brown (10YR 5/3) silty clay with 1-percent or less of limestone gravel inclusions;
- 37 to 45 inches (95 to 115 cm) - brownish- yellow (10YR6/6) silty clay with 20-percent caliche inclusions;
- 45 to 65 inches (115 to 165 cm) - very pale brown (10YR7/4) clayey sand with 85-percent limestone gravel inclusions;
- 65 to 93 inches (165 to 235 cm) - yellow (10YR7/8) sand with 85-percent limestone gravel inclusions;
- 92 to 108 inches (235 to 275 cm) - very pale brown (10YR8/2) clay.

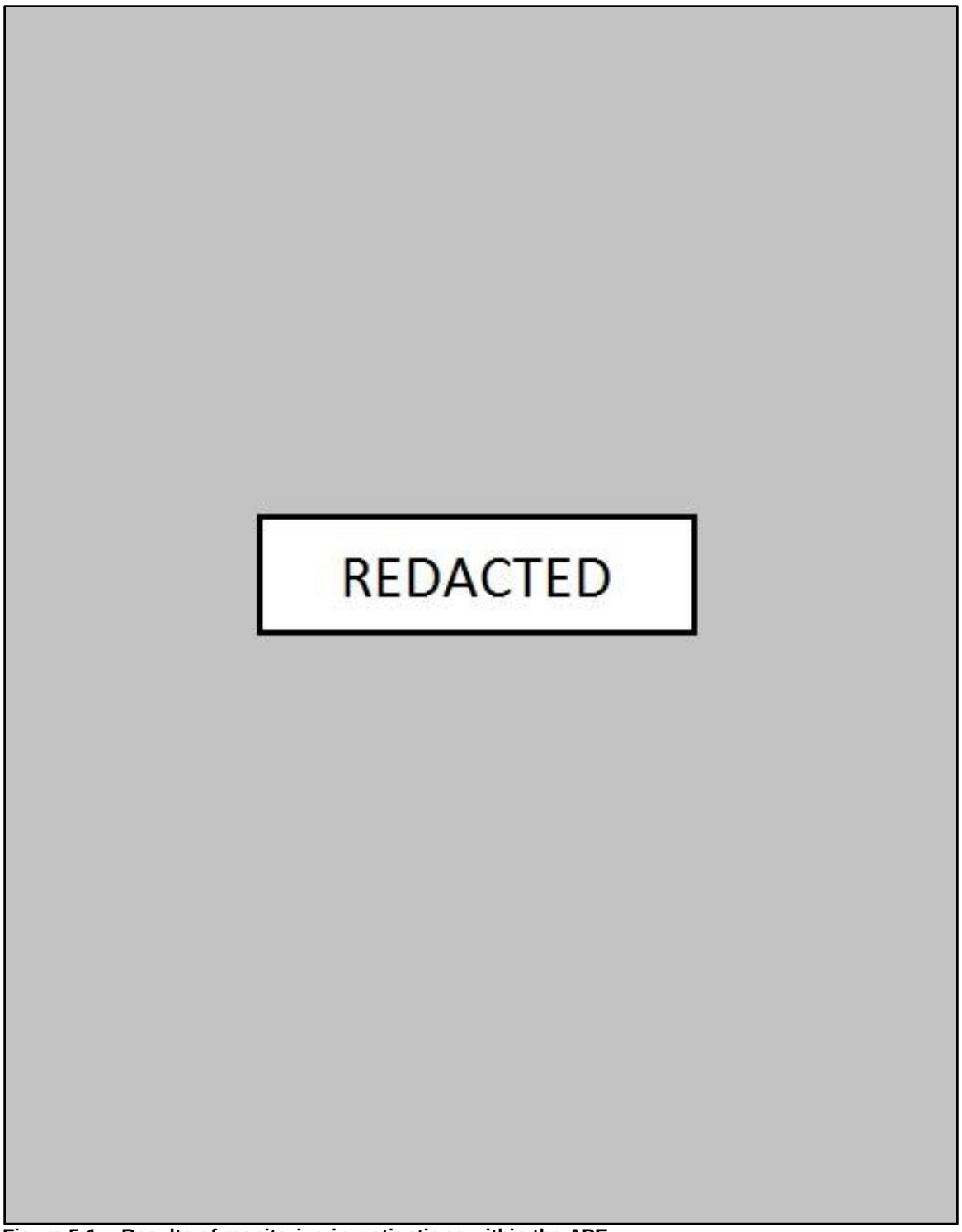

Figure 5-1. Results of monitoring investigations within the APE.

Figure 5-2. Overview of the APE excavations, facing east.

Figure 5-3. Average soil profile along the northwestern end of the APE, facing south-southwest.

Spoils from excavation were placed directly in a haul-off truck and were removed from the Project Area, thus, no spoils were made available for close inspection. However, examination of trench profile walls did not identify any cultural materials or features during initial excavations.

Construction activities resumed with the excavation of an 11.5-x-13-foot (3.5-x-4 m) pit for a manhole installation, approximately 79 feet (24 m) northwest of the Old Guilbeau Street–South Main Street intersection. For safety purposes, the northern and southern ends of the pit were first excavated down to 15 feet (4.5 m) and metal shoring plates were installed before any soil matrix was removed from the center of the pit (**Figure 5-4**). Examination of the pit profile walls determined that multiple existing utilities had heavily impacted the southeastern and northeastern profiles from 0 to 5 feet (0 to 1.5 m) below surface. The northwestern and most of the southwestern profile walls reflected an intact soil deposition, similar to the opening excavations detailed above (**Figure 5-5**). No evidence of the San Pedro *Acequia* was observed within the pit excavation profile walls.

Once safety shoring was installed, soil excavations for the central portion of the pit were monitored to 4-5 feet (1-1.5 m) below surface. Excavations beyond the 4 to 5 foot-depth (1 to 1.5 m) were not monitored as it was determined that no Holocene-age deposits extended beyond this depth. The only historic-age artifact observed during pit excavations consisted of a stoneware ink bottle (**Figure 5-6**). The wheel-thrown ink bottle measured 2 inches (5 cm) in diameter at its base, and 1.7 inches (4.5 cm) tall, with a 0.7 inch (2 cm) wide opening. Ceramic was the standard material used for ink bottles and inkwells prior to the beginning of the nineteenth century (Lindsey 2019). Specifically, the bottle observed during excavations may date from 1850 to 1880 based on a representative image on the Society of Historic Archaeology Bottle Typing Website (Lindsey 2019); however, no maker's marks or diagnostic marks are evident on the base. The ink bottle was found in a disturbed context which also contained modern trash, such as disposable foam earplugs.

Once the pit excavations were completed and the manhole installed, trenching excavations resumed within the Old Guilbeau Street ROW. Excavations picked up from their stopping point, approximately 140 feet (43 m) southeast of the South Flores Street intersection and directed west for approximately 30 feet (9 m) before the profile of the San Pedro *Acequia* was exposed (**Figure 5-7** and **Figure 5-8**). The profile of the *acequia* was observed within the northeastern profile wall and consisted of an earthen ditch with evidence of stone-lining. No evidence of the feature was observed within the southern profile of the trench, which had been impacted from existing utilities.

Figure 5-4. Overview of manhole pit excavation with shoring plates set along the northwestern and southeastern profiles, facing southeast.

Figure 5-5. Average soil profile for manhole pit excavations, facing south.

Figure 5-6. Stoneware ink bottle documented within disturbed soils of manhole pit excavations.

Figure 5-7. Overview of *acequia* profile within northern trench profile wall, facing northeast.

Figure 5-8. Overview of *acequia* profile within northern trench profile wall, facing northwest.

The basin-shaped *acequia* measured approximately 73 inches (185 cm) wide and ranged from 16 to 30 inches (40 to 77 cm) below surface (**Figure 5-9**). The feature was located just below the gravel road base (Level II, 3 to 13 inches [8 to 33 cm] below surface), and cut into a stratigraphic layer consisting of dark gray silty clay with 40-percent gravel and 20-percent charcoal and ferrous material inclusions. The base of the feature rested atop a brown silty clay layer with charcoal smears that likely resulted from excavations of the above stratigraphic level (Level V, 31 to 46 inches [78 to 118 cmbs]).

Two rough-cut limestone rocks were positioned along the eastern and western edges of the ditch, and additional limestone cobbles and gravels were also observed along the base of the lens. It is unclear if the smaller materials represented additional lining of the feature, or were associated with the fill material. The ditch was filled with a dark yellowish-brown clay matrix with 40-percent limestone gravels, charcoal flecks and nodules, and ferrous metal inclusions (**Figure 5-10**). Fragments of red brick were also observed within the fill matrix, along with aqua container glass fragments, 1 decorative wooden handle base fragment (likely from a kitchen utensil), 1 fragment of carnival glass, and a single fragment of grey slate roof tile (**Figure 5-11**). Fragments of metal that may represent nails or wire were also observe, but were

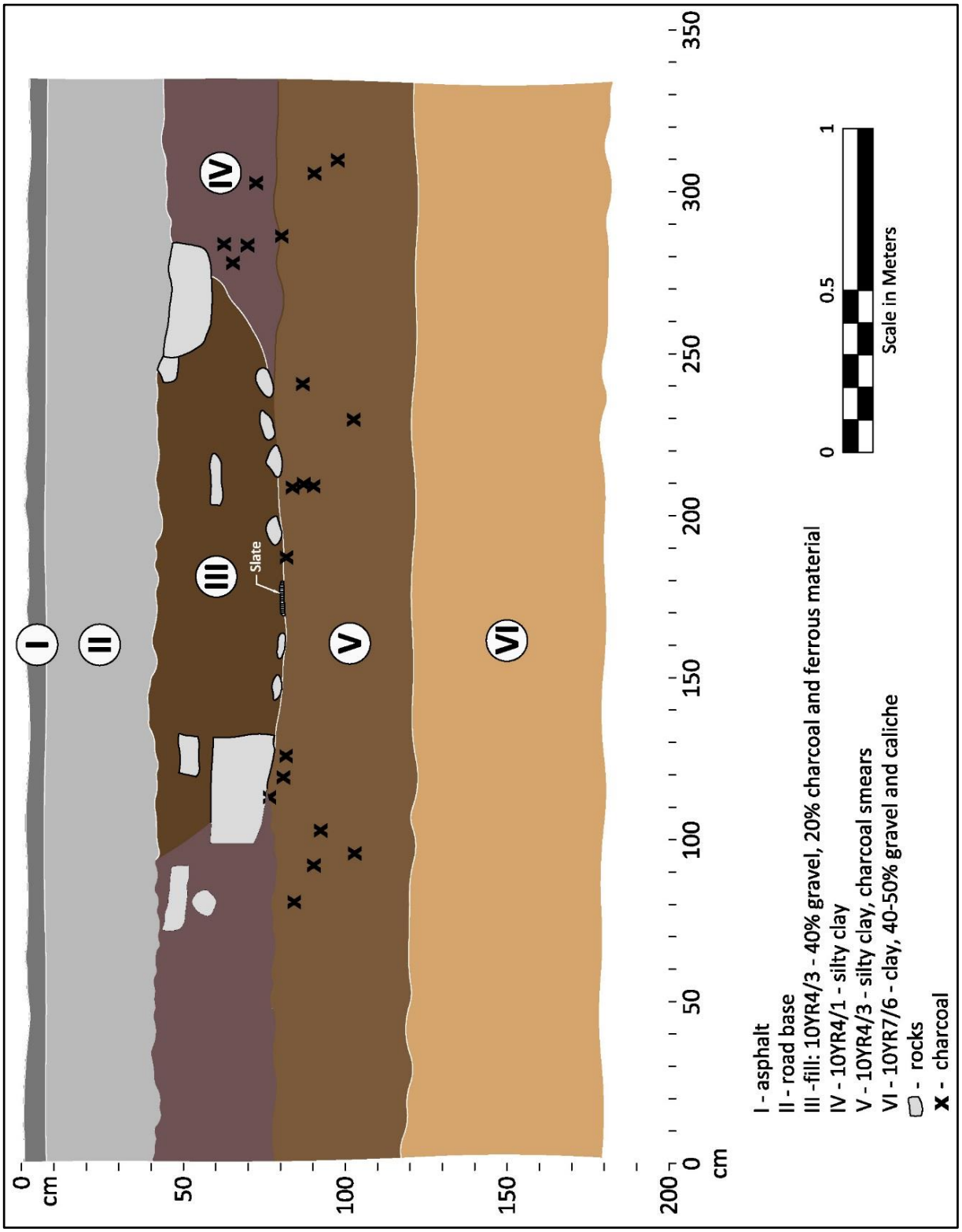

Figure 5-9. Scaled drawing of documented *acequia* feature within the APE.

Figure 5-10. Close up of fill matrix exhibiting ferrous metal inclusions, charcoal, and a single piece of grey slate roof tile (indicated by red arrow) at the base of the feature.

Figure 5-11. Sample of artifacts documented with the *acequia* fill matrix.

heavily fragmented and oxidized and did not allow for positive identification. Although none of the cultural materials observed displayed individual diagnostic markers, the collection appeared to be consistent with the late-1800s to early 1900s time period, which is contemporaneous with the final closure of the San Pedro *Acequia* in this area.

Further inspection of the trench profile wall within the vicinity of the feature identified an additional basin-shaped feature, approximately 70 inches (180 cm) northwest of the ditch profile (**Figure 5-12**). The shallow feature was situated just below an existing utility easement within the southern trench profile wall, and ranged from 31 to 40 inches (80 to 100 cm) below surface at approximately 47 inches (120 cm) wide. No evidence of the basin-shaped lens was evident within the northern trench profile wall. The lens was filled with a dark grayish-brown (10YR4/2) silty clay matrix with 25-percent small limestone gravel inclusions. No evidence of a lining was observed. One fragment of yellow brick was documented within the feature, in addition to two limestone blocks along the eastern edge of the lens. The fragmented state of the stones made it difficult to discern if they were native or rough-cut. No other cultural materials were found in association with the feature.

Figure 5-12. Basin-shaped feature located approximately 70 inches (180 cm) northwest of the *acequia* ditch profile, facing south.

Once the *acequia* and the additional lens feature were documented, construction excavations were allowed to continue to the southeast. Monitoring was conducted for an additional 10 feet (3 m) before cultural resources investigations were concluded under the advisement of the CPSE Archaeologists. No monitoring investigations were conducted for the approximate 160 feet (49 m) of trench excavations that remained along the southeastern end of the APE.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

RKEI was contracted by CPSE to conduct cultural resources monitoring investigations for the 401 Dwyer Avenue Project in downtown San Antonio, Texas. The project consisted of 2,585 feet (788 m) of overhead to underground electrical service conversions within the Old Guilbeau Street, South Main Street, Stumberg Street, Woodward Street, and Dwyer Avenue ROWs. An archaeological desktop and historic map review determined that the projected route of the San Pedro *Acequia* intersected a portion of the project alignments along the Old Guilbeau Street ROW. As such, cultural resources monitoring was required by the COSA OHP for a 360-foot (104 m) section of conduit and a single manhole installation within the Old Guilbeau Street ROW. The APE encompassed 443 cubic yards, or 0.03 acre of soil disturbance. Monitoring investigations resulted in the identification and documentation of the San Pedro *Acequia*, previously recorded archaeological site 41BX337.

RKEI conducted monitoring investigations for the 401 Dwyer Avenue Project APE on November 29, December 3, and December 6, 2018. Construction activities began with a 75 foot (23 m) trench within the Old Guilbeau Street ROW, followed by the excavation of an 11.5-x-13-foot (3.5-x-4 m) pit for a manhole installation. The only historic-age cultural material identified during initial trenching and the manhole pit excavations consisted of a stoneware ink bottle that dates to the mid-nineteenth century. The bottle was documented within a disturbed context that also contained modern trash and was not associated within intact cultural deposits or feature. As such, the bottle was recorded in the field but not collected for curation.

Once the pit excavations were completed, linear trenching excavations resumed within the Old Guilbeau Street ROW. The linear excavations encountered the profile of the San Pedro *Acequia* approximately 170 feet (52 m) southeast of the South Flores Street–Old Guilbeau Street intersection, as well as a basin-shaped feature approximately 165 feet (50 m) to the southeast of the intersection. The *acequia* profile was observed within the northeastern trench profile wall and consisted of a 73-inch (185 cm) wide earthen ditch with evidence of stone-lining. No evidence of the *acequia* was observed within the southern profile of the trench, which had been impacted from existing utilities. The basin-shaped *acequia* ranged from 16 to 30 inches (40 to 77 cm) below surface at its lowest point, and was filled with a dark yellowish-brown clay matrix with 40-percent limestone gravels, charcoal flecks, and ferrous metal inclusions. Two rough-cut limestone rocks were positioned along the eastern and western edges of the ditch, and additional

limestone cobbles and gravels were also observed along the base of the lens. Fragments of red brick were also observed within the fill matrix, along with aqua container glass fragments, 1 decorative wooden handle base fragment, 1 fragment of carnival glass, and a single fragment of grey slate roof tile. Although none of the cultural materials observed displayed individual diagnostic markers, the collection appeared to be consistent with the late-1800s to early 1900s time period, which is contemporaneous with the closure of the San Pedro *Acequia* in this area. A review of the historic Sanborn Maps determined that the documented profile of the San Pedro *Acequia* closely matches the projected alignment of the *acequia* as illustrated on the 1892 and 1904 Sanborn Maps. These findings are further supported by previous archaeological investigations within the vicinity that also identified portions of the *acequia* as within or close to the 1892/1904 projection (Nichols et al. 2017; Nichols and Ward 2018).

Further inspection of the trench profile wall identified an additional feature, approximately 70 inches (180 cm) northwest of the *acequia* profile. The 47-inch (120 cm) wide, basin-shaped feature was positioned just below an existing utility easement, 31 to 40 inches (80 to 100 cm) below surface. No evidence of the feature was visible within the northern trench profile wall. The lens was filled with a dark grayish-brown silty clay matrix with 25-percent small limestone gravel inclusions, with no evidence of a lining observed. One fragment of yellow brick was also documented within the feature, in addition to two limestone blocks along the eastern edge of the lens. It is possible that the basin-shaped feature may represent an earlier route of the *acequia,* such as that illustrated on the 1889 City Engineering Map. Previous investigations immediately south of the APE also identified two possible *acequia* channels within close proximity to each other (Nichols and Ward 2018); however, a lack of cultural materials and the absence of the feature in the northern trench profile wall prevented a positive identification of the feature.

RKEI made a reasonable and good faith effort to identify cultural resources within the given APE. As a result, a portion of the San Pedro *Acequia* was identified and documented. Confirmation of the ditch and its location contributes important information to the history of the region and is a contributing element to the eligibility of archaeological site 41BX337 as a NRHP and State Antiquities Landmark. **RKEI** recommends no further archaeological investigations for the current APE. However, should additions be made to the Project Area, additional cultural resources investigations may be required.

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