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Intensive Cultural Resources Survey of the Proposed Bagdad Road at County Road 278 Improvements Project, Williamson County, Texas

Mercedes C. Cody

Christina Nielsen

Victoria Myers

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Texas Antiquities Permit No. 8044
SWCA Cultural Resources Report No. 17-351

October 2017

SUBMITTED TO:

Lockwood, Andrews & Newnam, Inc.
and
Williamson County, Texas

SUBMITTED BY:

SWCA Environmental Consultants
4407 Monterey Oaks Boulevard
Building 1, Suite 110
Austin, Texas 78749

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INTENSIVE CULTURAL RESOURCES SURVEY OF THE PROPOSED BAGDAD ROAD AT COUNTY ROAD 278 IMPROVEMENTS PROJECT, WILLIAMSON COUNTY, TEXAS

Prepared for

LOCKWOOD, ANDREWS & NEWNAM, INC.
10101 Reunion Place,
Suite 200
San Antonio, Texas 78216

and

WILLIAMSON COUNTY, TEXAS
710 South Main Street,
Suite 1001
Georgetown, Texas 78626

Prepared by

Mercedes C. Cody, B.A., Christina Nielsen, M.A., and Victoria Myers, M.A.

Principal Investigator
Brandon Young, M.A.

SWCA ENVIRONMENTAL CONSULTANTS
4407 Monterey Oaks Boulevard
Building 1, Suite 110
Austin, Texas 78749

www.swca.com

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ABSTRACT

At the request of Lockwood, Andrews & Newnam, Inc., and on behalf of Williamson County, Texas, SWCA Environmental Consultants conducted an intensive cultural resources survey of the proposed approximately 4,500-foot-long (1371.6 meters [m]) Bagdad Road (County Road [CR] 279) Improvements Project extending 1,000 feet (304.8 m) north and south of CR 278 and 2,500 feet (762.0 m) west-southwest of CR 278 in western Williamson County, Texas. The project area is located between the communities of Liberty Hill and Leander along the intersection of CR 279, also known as Bagdad Road, and CR 278. Since the project involves lands that will be acquired and controlled by Williamson County (a subdivision of the State of Texas), the project is subject to review under the Antiquities Code of Texas (ACT). SWCA conducted the investigations under Texas Antiquities Permit No. 8044.

The proposed project will involve improvements to the existing Bagdad Road and CR 278 intersection and the construction of new roadway (to be called "River Ranch County Park Road") west-southwest of the intersection, to allow access to the River Ranch County Park. The planned improvements will be located along the existing Bagdad Road from 1,000 feet (304.8 m) north and south of CR 278. The planned new roadway will extend 2,500 feet (762.0 m) west-southwest of the Bagdad Road and CR 278 intersection to the southeastern edge of River Ranch County Park. Overall, the direct area of potential effects (APE) encompasses approximately 13.8 acres (5.6 hectares [ha]), composed of a 4,500-foot-long (1371.6 m) and approximately 25- to 70-foot (7.6- to 21.3-m) wide proposed right-of-way. The depth of impacts is anticipated to extend 3 to 4 feet (0.9 to 2.2 m) below ground surface for roadway construction and up to 10 feet (3.1 m) for culverts.

Investigations included a background and historic map review, and an intensive pedestrian survey with shovel testing of the proposed APE. The background review determined that no previously conducted cultural resources investigations and no previously recorded archaeological sites are located within the direct APE. One cultural resources testing project and eight previously recorded archaeological sites are located within a 1-mile radius of the project area. The review of maps on the Texas Department of Transportation Historic Overlay, U.S. Geological Survey TopoView, and Historic Maps revealed one possible historic-age structure adjacent to the APE.

The field investigations included extensive visual inspection and intensive pedestrian survey with shovel testing throughout the APE. The investigations revealed the APE is along the existing county roads and within the undeveloped land and residential development that surrounds the roadways. The undeveloped land consists of rocky uplands with exposed limestone bedrock, cobbles, and gravels along the ground surface. Previous and current impacts to the area include clearing and grading activities, construction of existing roads and driveways, associated infrastructure installation, impervious cover, gravel filled areas, residential development, and overhead and buried utility installations particularly along and immediately adjacent to the roadways. SWCA excavated a total of 15 shovel tests within the APE, which revealed shallow soils atop of bedrock. SWCA's investigations exceeded the Texas Historical Commission's requirements and identified no prehistoric or historic cultural materials within the APE. One historic-age standing structure was identified during the historic map review and field investigations immediately adjacent to the APE located on the southeast corner of the intersection of Bagdad Road and CR 278. An SWCA architectural historian evaluated the structure and determined that based on historic aerials the date of construction is circa 1940, but that while it is historic age it lacks integrity and is recommended as NOT ELIGIBLE for the National Register of Historic Places (NRHP).

In accordance with the ACT and 36 Code of Federal Regulations (CFR) 800.4, SWCA made a reasonable and good faith effort to identify cultural resources within the direct APE. As no archaeological sites were identified that may meet the criteria for designation as a State Antiquities Landmark, per 13 Texas Administrative Code 26.12, or standing structures for listing on the NRHP, according to 36 CFR 60.4,

SWCA recommends that no further cultural resources investigations are warranted within the *surveyed* portions of the APE and that a determination of *No Historic Properties Affected* be granted for the proposed project.

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INTRODUCTION

At the request of Lockwood, Andrews & Newnam, Inc. (LAN), and on behalf of Williamson County, Texas, SWCA Environmental Consultants (SWCA) conducted an intensive cultural resources survey of the proposed approximately 4,500-foot-long (1,371.6 meters [m]) Bagdad Road (County Road [CR] 279) Improvements Project extending 1,000 feet (304.8 m) north and south of CR 278 and 2,500 feet (762.0 m) west-southwest of CR 278 in western Williamson County, Texas (Figure 1). The project area is located between the communities of Liberty Hill and Leander along the intersection of CR 279, also known as Bagdad Road, and CR 278 (Figure 2). Since the project involves lands that will be acquired and controlled by Williamson County (a subdivision of the State of Texas), the project is subject to review under the Antiquities Code of Texas (ACT). SWCA conducted the investigations under Texas Antiquities Permit (TAP) No. 8044.

Investigations consisted of a background and historic map review, and an intensive archaeological survey with shovel testing of the proposed project area. All investigations were conducted in accordance with Texas Historical Commission (THC) and Council of Texas Archeologists (CTA) standards, as well as the guidelines provided in Section 106 of the National Historic Preservation Act (NHPA) (National Park Service 1983).

PROJECT PERSONNEL

Brandon Young served as Principal Investigator for the duration of the project. Christina Nielsen served as Task Leader, ably overseeing overall logistics and organization, and managing reporting and agency consultation. The survey was completed by Archaeologists Christina Nielsen and Mercedes C. Cody on June 22, 2017, under TAP No. 8044. Carole Carpenter expertly produced all field and report maps for the project and Lauri Logan provided technical editing and document preparation.

PROJECT DESCRIPTION

The proposed project area appears on a portion of the *Liberty Hill, TX* (3097-323) U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map (see Figure 1). Based on current aerial photography, the project area is surrounded by undeveloped land and rapidly increasing residential development. A tributary of the South Fork San Gabriel River terminates just east of the northern margin and a tributary of Jinks Branch runs roughly southeast/northwest, intersecting the southern margin.

The proposed project will involve improvements to the existing Bagdad Road and CR 278 intersection and the construction of new roadway (to be called “River Ranch County Park Road”) west-southwest of the intersection, to allow access to the River Ranch County Park (see Figure 2). The planned improvements will be located along the existing Bagdad Road from 1,000 feet (304.8 m) north and south of CR 278. The planned new roadway will extend 2,500 feet (762.0 m) west-southwest of the Bagdad Road and CR 278 intersection, to the southeastern edge of River Ranch County Park. Overall, the direct area of potential effects (APE) encompasses approximately 13.8 acres (5.6 hectares [ha]), composed of a 4,500-foot-long (1371.6 m) and approximately 25- to 70-foot (7.6- to 21.3 m) wide proposed right-of-way (ROW). The depth of impacts is anticipated to extend 3 to 4 feet (0.9 to 2.2 m) below ground surface for roadway construction and up to 10 feet (3.1 m) for culverts.

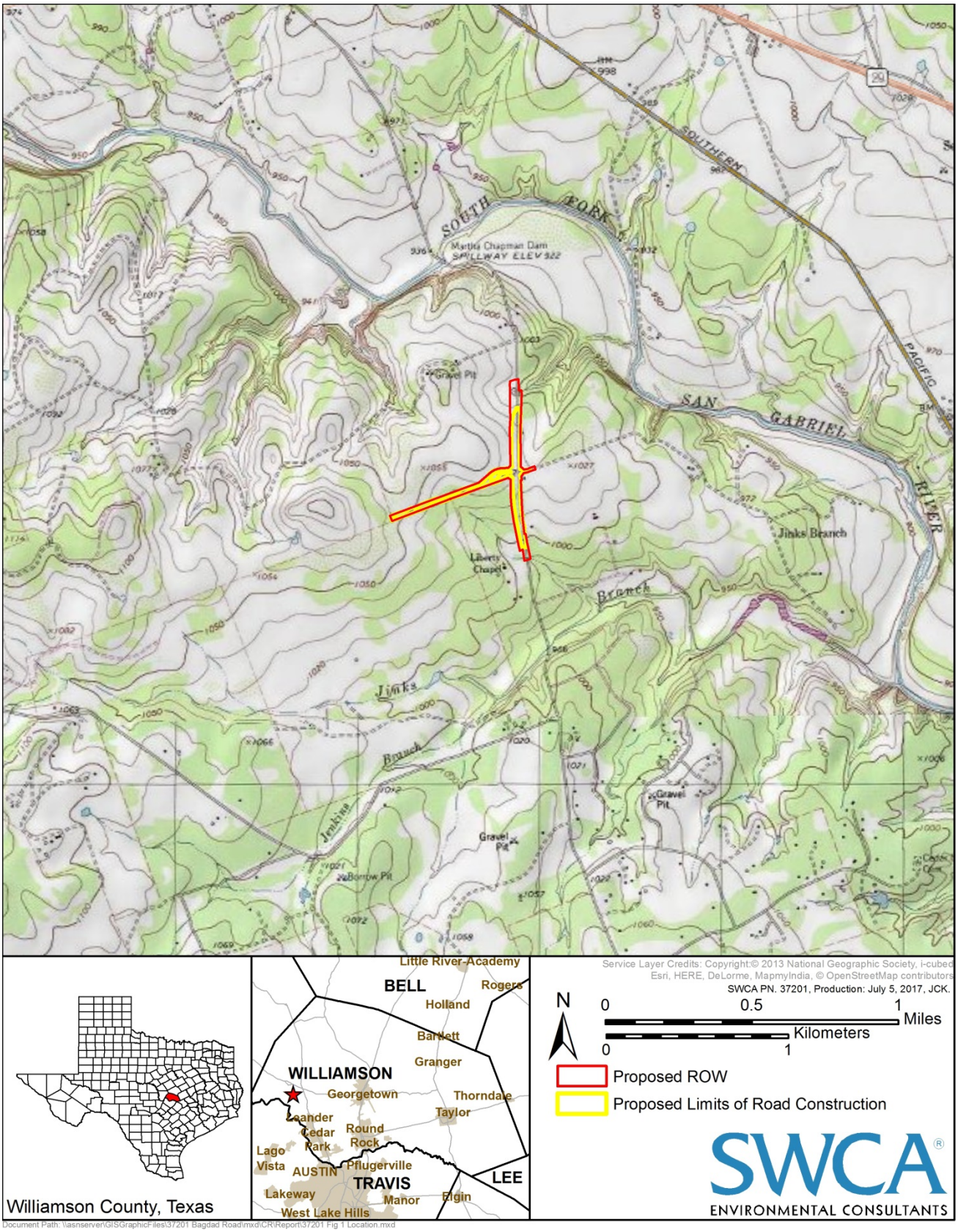

Figure 1. Project area, USGS topographic quadrangle map.

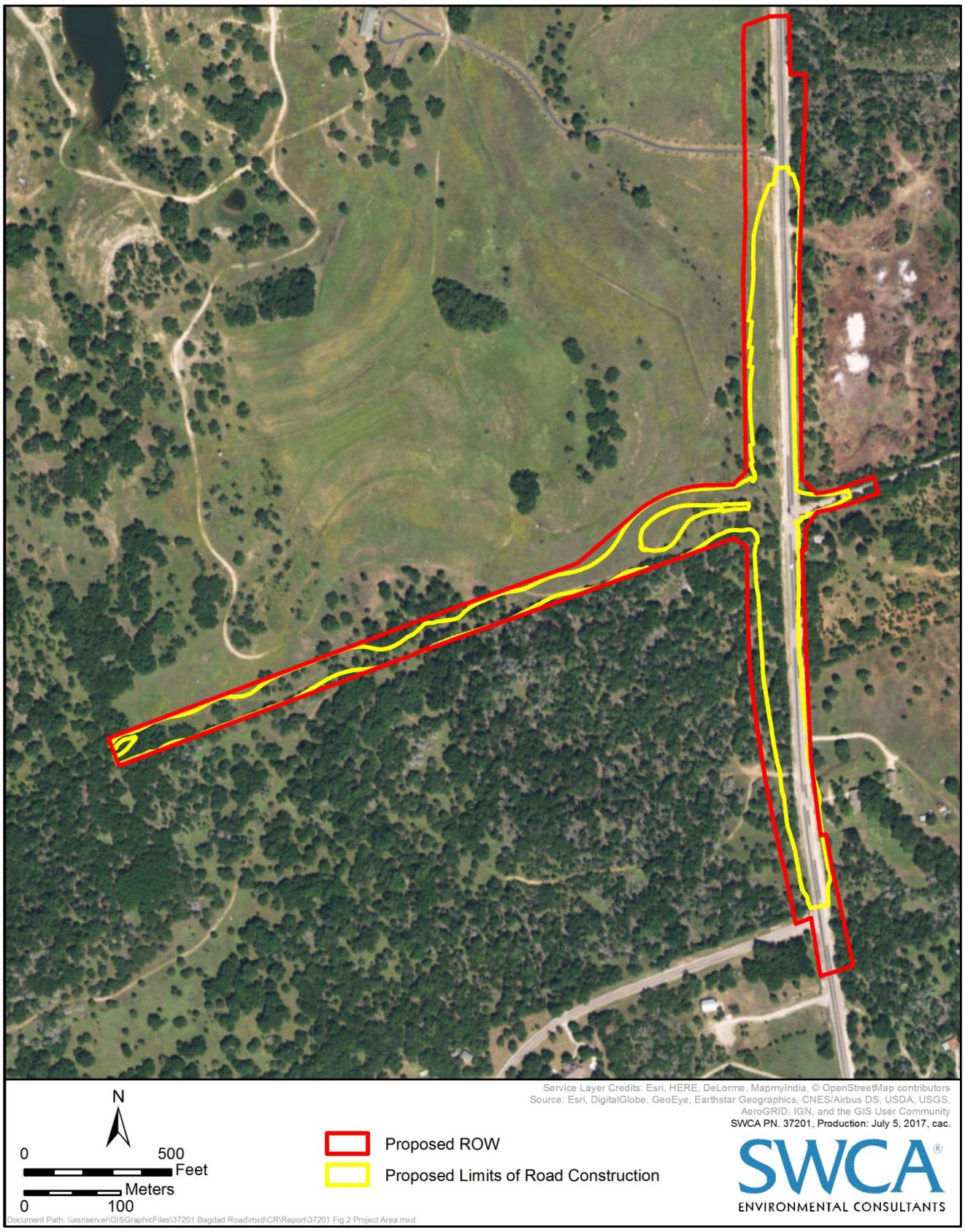

Figure 2. Project area, aerial overview.

ENVIRONMENTAL SETTING

GEOLOGY

The underlying geology throughout the project area consists of Early Cretaceous-age Glen Rose Limestone and Walnut Clay deposits. The Glen Rose Limestone Formation in the eastern half of the project area consists of limestone, dolomite, and marl approximately 380 feet (116 m) thick (Barnes 1974). The Walnut clay deposits are located within the western half of the Project area and consist of clay, limestone, and shale approximately 125–175 feet (38-53 m) thick (Barnes 1974). Given the age of these formations, they have virtually no potential to contain intact buried archaeological resources.

SOILS

Project area soils are mapped as approximately 56 percent Doss silty clay, moist, 1 to 5 percent slopes, 24 percent Brackett gravelly clay loam, 3 to 12 percent slopes, and 20 percent Eckrant cobbly clay, 1 to 8 percent slopes (Figure 3) (Natural Resources Conservation Service [NRCS] 2016; Werchan and Coker 1983). The Doss series soils are found on upland plains and consist of shallow to weakly cemented limestone that developed in place from calcareous loamy and clayey residuum derived from marls and limestone. A typical profile exhibits dense silty clay from 0 to 48 inches (0 to 122 centimeters [cm]) below ground surface overlying weakly cemented limestone bedrock (NRCS 2016; Werchan and Coker 1983).

The Brackett series soils developed in situ from residuum weathered from limestone of Cretaceous age, mainly from the Glen Rose formation (NRCS 2016; Werchan and Coker 1983). A typical profile of Brackett series soils exhibits paragravelly clay loam from 0 to 15 inches (0 to 38 cm) below ground surface overlying paragravelly clay loam to 36 inches (91 cm) below ground surface that overlies weakly cemented, fractured and weathered limestone bedrock from 36 to 152 inches (91 to 386 cm) below ground surface.

Eckrant series soils are found on broad ridges and in shallow valleys on uplands and developed in place from limestone residuum. The typical profile consists of extremely stony clay from 0 to 11 inches (0 to 28 cm) below ground surface overlying limestone bedrock (NRCS 2016; Werchan and Coker 1983). These soils developed in place from the underlying limestone; therefore, they have little to no potential to contain deeply buried archaeological materials.

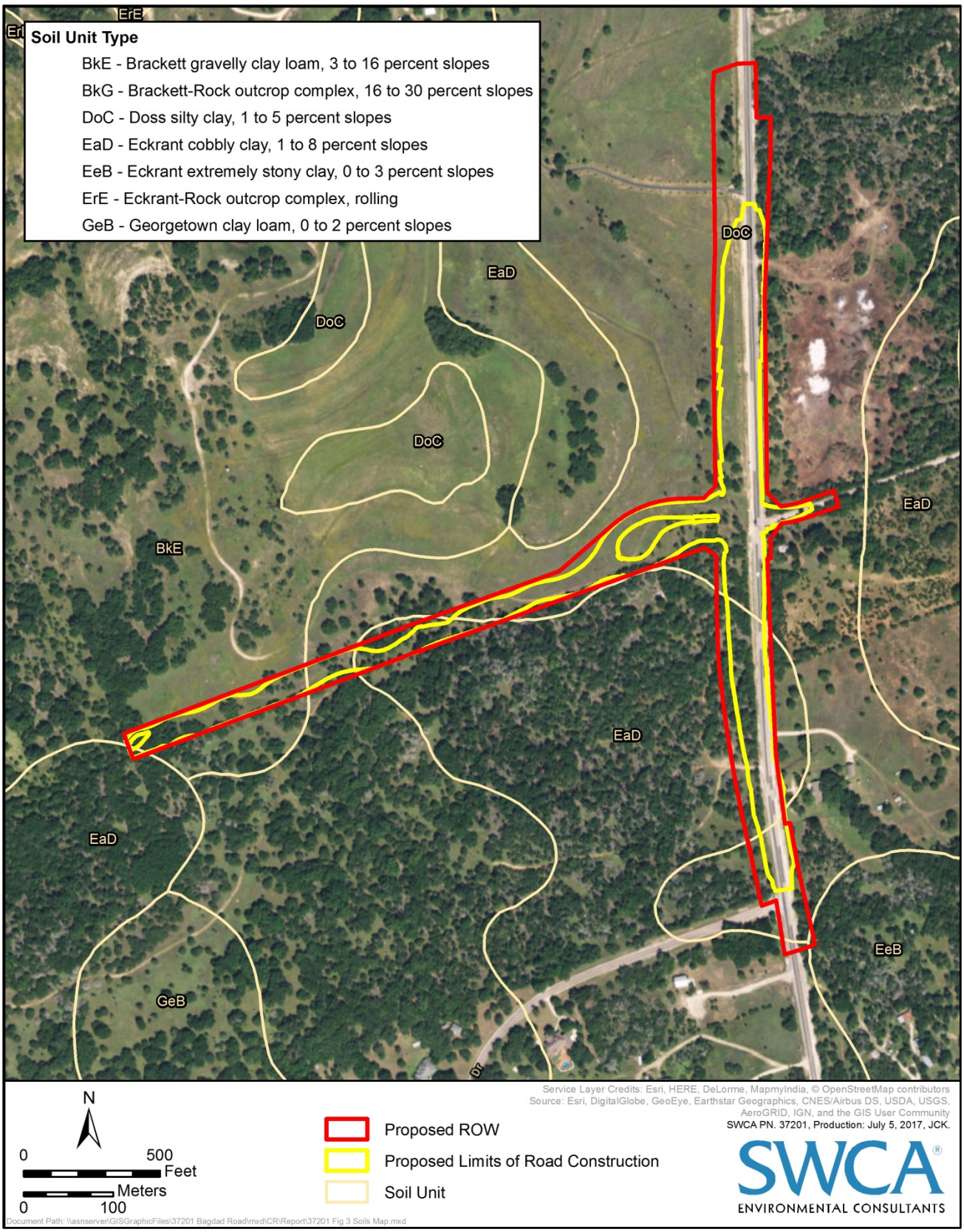

Figure 3. Project area, soils.

CULTURAL SETTING

Williamson County is on the eastern edge of the Edwards Plateau and near the eastern margins of the Central Texas archaeological region, as defined by Collins (2004), Prewitt (1981, 1985), Suhm (1960), and other researchers. The Central Texas archaeological region is an artificial construct, and its boundaries are somewhat arbitrary (Collins 2004:102). As Collins (2004:103) points out, it is unlikely that any group in the past 11,000 years had their key resources, geographic range, or political sphere conform to these boundaries. It is worth noting that Perttula (2004:Figure 1.1) extends the boundaries of Central Texas much farther east than many researchers. Nevertheless, situated as it is on the Edwards Plateau's margins, the sites identified within the project area share many traits in common with "classic" Central Texas sites (i.e., those above the Balcones Escarpment).

As noted above, the project area is near the eastern edge of the Central Texas archaeological region. Its occupants likely ranged west, deeper into the Edwards Plateau, and east, onto the rolling Blackland Prairie. Inhabitants of the area, therefore, were influenced by cultural developments taking place in Central Texas, as well as to the east. Regardless of the intensity or nature of influences from off the plateau, we rely on more developed chronologies from Central Texas to summarize the cultural history of the area. Following standard chronological divisions, we divide the prehistoric cultural sequence into three periods: Paleoindian, Archaic, and Late Prehistoric. The Archaic period is commonly subdivided into three subperiods (Early, Middle, and Late), although, as this report addresses, various labels have been applied to the last few centuries of the Archaic.

PALEOINDIAN PERIOD

The Paleoindian period, which includes the earliest known peoples in the area, began during the close of the Pleistocene. The presence of Paleoindian artifacts and sites, dating from about 11,500 to 8800 B.P., are not considered uncommon in Central Texas (Collins 2004). Two of the more important Paleoindian sites in Texas are near the project area: the Wilson-Leonard site (41WM235) on Brushy Creek in southern Williamson County, and the Gault site (41BL323) in adjacent Bell County.

Diagnostic artifacts of the period include lanceolate-shaped and fluted projectile points such as Clovis, Folsom, and Plainview. These projectile points were hafted onto wooden spears and often used to hunt big game such as mammoth, mastodon, bison, camel, and horse (Black 1989; Bousman et al. 2004). Recent research has demonstrated that Paleoindian people relied on a more diverse subsistence base than previously thought, exploiting a variety of plants and small fauna in addition to the larger animals (Bousman et al. 2004). Paleoindian lifeways gradually transitioned to a more Archaic-style adaptation (increasing reliance on plants and smaller game, better-defined and smaller group territories, and regional diversification in projectile point styles) as the big game died off and the climate warmed following the end of the Pleistocene ice age (Bousman et al. 2004).

ARCHAIC PERIOD

As the Paleoindian period came to an end, humans began to harvest local floral and faunal resources more intensively. Material culture became more regionally diversified, and the use of burned rock middens and ovens became widespread. This period is known as the Archaic period and dates from approximately 8800 to 1200 B.P. in Central Texas (Collins 2004; Johnson and Goode 1994).

EARLY ARCHAIC

The Early Archaic is commonly dated to ca. 8800 to 6000 B.P. (Collins 2004:119). Research suggests that Early Archaic people became increasingly reliant on local resources and residential mobility decreased (Prewitt 1981:73; Suhm et al. 1954:18). Early Archaic populations utilized base camps for longer periods, perhaps seasonally, and hunted a diverse array of small (e.g., snakes, turtles, rodents, rabbits), medium (e.g., opossums and raccoons), and large (e.g., deer and antelope) game; fished local rivers; and cooked wild plant bulbs in earth ovens. It is likely that the reduction in residential mobility was related to a variety of factors including diminished bison populations, population increase, tribal territoriality issues, and climatic change. By the start of the Early Archaic, well-established resident populations lived in every biogeographical region of Texas.

Collins (2004:120) and McKinney (1981) observe that a large number of Early Archaic sites are documented along the eastern and southern margins of the Edwards Plateau. They argue that if our current understanding of Early Archaic site distribution reflects prehistoric land use, then the Early Archaic was a time period when people were living in the better-watered parts of the Edwards Plateau. With very low population densities across the state at the beginning of the Archaic, it makes sense that the environmentally desirable zones, such as the well-watered ecotone along the margins of the Edwards Plateau, would be the first areas to have been more heavily settled.

During the Early Archaic, projectile points became more regionally diversified, and stemmed forms replaced the lanceolate points of the Paleoindian period. This technological shift may have been due, in part, to the development of a more localized, broad-based hunting and gathering economy that necessitated differing point types for different game (Johnson and Goode 1994; Story 1985). Early Archaic populations supplemented their hunting diet with a diverse assemblage of processed plant foods. This is most evident through the use of hot rock cooking technologies, which become commonplace at Early Archaic sites. Early Archaic burned rock features are most often small- to medium-sized hearths, with minimal evidence of reuse. However, at a few Early Archaic sites (e.g., Wilson-Leonard and Loeve), larger earth ovens have been documented (Collins et al. 1998; Prewitt 1982); these are believed to be the precursors to burned rock middens.

A burned rock midden is a large, dense feature of burned rocks and ash-stained soil that accumulates from use and reuse as a thermal cooking feature (Black et al. 1997; Mahoney et al. 2003; Suhm 1960). The number of burned rock middens increased throughout the Archaic period and it seems clear that their technological roots lie in the first earth ovens of the Early Archaic (Black et al. 1997; Collins et al. 1998; Decker et al. 2000). Burned rock midden technology appears to have first developed in the eastern plateau around 8,500 to 8,000 years ago and gradually spread into the western plateau ca. 6,500 to 5,000 years ago (Decker et al. 2000:301). These large features vary greatly in size and form, but share the common functional purpose of serving as an earth oven or similar cooking device (Black et al. 1997; Weir 1976).

Work completed on the Gatlin site, 41KR621, in southern Central Texas highlighted the complexity and diversity in the Early Archaic settlement system noted by previous researchers (Houk et al. 2008). As Johnson (1991:159) states, “people acquired different foods at different suitable places,” meaning that certain sites were visited repeatedly on a seasonal basis. Johnson (1991:160) speculated that people in the eastern part of Central Texas may not have had large base camps, instead they traveled from site to site in small groups; the Gatlin site data for the Early Archaic period supports this hypothesis. In fact, based on a study conducted as part of the Gatlin site analysis, only the Wilson-Leonard site was classified as an Early Archaic base camp out of 16 well-documented Early Archaic components in Central Texas. The other sites all represent short-term, specialized activity sites (Houk et al. 2008).

MIDDLE ARCHAIC

The Middle Archaic is commonly dated to ca. 6000 to 4000 B.P. (Collins 2004:120). During the beginning of the Middle Archaic, from approximately 5750 to 5250 B.P., Johnson and Goode (1994:73) contend that a brief warm and dry period arose. Hudler (2000) also documents a major climatic shift towards warmer and drier conditions ca. 5300 B.P., followed by a very brief wet interval. Johnson and Goode (1994:73) also believe this dry period was followed by a short period of climatic amelioration between 5250 to 4600 B.P. with moderately wet and cool conditions.

The Middle Archaic is marked by a significant increase in archaeological sites on the Edwards Plateau. It is difficult to determine if this increase is due to a larger, denser population or an increase in residential mobility (Turpin 2004). In either case, there is abundant evidence that settlement and subsistence became more regionally specialized during this time. Burned rock hearths, scatters, and concentrations are common at Middle Archaic sites; however, none of these features is more pronounced than the burned rock midden, the use of which proliferated during the Middle Archaic (Black et al. 1997; Prewitt 1981; Shafer 1988). There is widespread evidence supporting an increased reliance on the processing of geophytes and succulent plant bulbs such as sotol, yucca, and lechuguilla in burned rock middens (Dering 1999). Three distinct types of burned rock middens documented during the Middle Archaic: 1) sheet middens, 2) dome middens, and 3) annular middens (Mahoney et al. 2003). Sheet middens are loose accumulations of displaced and mixed burned rocks, usually derived from several burned rock features. The rock displacement may be caused by natural or cultural processes, including erosion, flooding, feature maintenance, and/or reuse. Dome middens are round, dome-shaped accumulations of burned rock that can be several feet thick. Dome middens form through repeated feature use and maintenance, thus resulting in a massive, dense accumulation of burned rock. Annular middens (also called crescent, ring, or donut middens) are circular or semicircular-shaped accumulations of burned rock with a centralized depression. Like dome middens, they may be several feet thick.

Early Triangular dart points appear in the beginning of the Middle Archaic subperiod, around 5300 B.P. at the Gatlin site (Houk et al. 2008:Figure 13.2). This unstemmed type co-occurs with Bell and Andice points, which are basally notched, stemmed point forms (Mahoney et al. 2003; Sorrow et al. 1967). Wyckoff's (1995) research suggests that Bell and Andice points (also known as Calf Creek points) are intrinsically linked to bison hunting. Their appearance at the beginning of the Middle Archaic is presumably related to the return of bison to the area ca. 5000 B.P. Nolan and La Jita points, which have square to rectangular stems with weak, rounded, or abrupt shoulders, appear in the Central Texas archaeological record ca. 4800 B.P. and persist into the beginning of the Late Archaic (Houk et al. 2008:Figure 13.2).

LATE ARCHAIC

The Late Archaic began around ca. 4000 B.P. and lasted until ca. 1200 B.P., ending when the bow and arrow was introduced into Central Texas (Collins 2004:121). Late Archaic sites are more numerous than earlier Archaic period sites (Black 1989; Collins 2004), and some researchers argue that population increased during the Late Archaic (Johnson and Goode 1994; Prewitt 1981; Weir 1976). Increasingly complex cultural manifestations are characterized in the Late Archaic archaeological record, and increased population size may have contributed to this complexity (Johnson and Goode 1994).

Territoriality issues may have also been more commonplace in the Late Archaic. This argument is somewhat supported by the development of more formal cemeteries in many areas of Texas (Hall 1981; Lukowski 1987; Taylor and Highley 1995). Burials from these cemeteries often contain grave goods such as marine shell ornaments (from the Texas coast), boatstones (from Arkansas), and corner tang knives (from the Edwards Plateau). The presence of these items ultimately suggests that plateau populations participated in some form of a trade system during the Late Archaic (Hall 1981).

Compared to previous subperiods, an extremely diverse assemblage of projectile point forms was utilized during the Late Archaic. Pedernales, Kinney, and Tortugas points appeared at the beginning of the period. Pedernales points have bifurcated stems and a narrow to broad, often leaf-shaped blade (Turner and Hester 1999). Montell, Lange, Marshall, Williams, Marcos, Castroville, and Shumla points appear slightly later and for the most part are all broad-bladed points that generally have expanding stems and prominent, barbed shoulders. Many of these early Late Archaic points were apparently used for bison hunting (Dibble and Lorrain 1968).

Hot rock cooking technologies developed in previous periods continued to be employed during the Late Archaic, and burned rock middens are a very common Late Archaic site feature. Many of the burned rock middens that formed during the Middle Archaic continued to be used by Late Archaic peoples (Black et al. 1997).

THE END OF THE ARCHAIC AND THE BEGINNING OF THE LATE PREHISTORIC

As Collins (2004:122) notes, "diverse and comparatively complex archaeological manifestations toward the end of the Late Archaic attest to the emergence of types of human conduct without precedent in Texas." Various labels including Transitional Archaic (Johnson et al. 1962; Turner and Hester 1999), Terminal Archaic (Black 1989), and Late Archaic II (Johnson and Goode 1994) have been applied to the end of the Archaic period. While the names differ, these competing schemes generally begin after Marcos points appear in Central Texas, encompass the Fairland-Ensor-Frio point style intervals, and end with the Darl point type. The succeeding Late Prehistoric period began ca. 1200 B.P. with the introduction of the bow and arrow into Central Texas. The first widespread arrow point type was Scallorn, and it is commonly associated with the Austin phase/interval, or Late Prehistoric I (Collins 2004; Johnson and Goode 1994). Bone-tempered ceramics are also indicative of the Late Prehistoric period, specifically the Toyah phase/interval, as will subsequently be discussed.

By the early part of the Late Archaic period, Central Texas was occupied by broad-spectrum foragers specializing in the resources available within specific ranges or territories. Arnn (2007:274–275) argues that the stabilization of climatic patterns during the Late Archaic allowed area-specific cultural material to emerge throughout the region. For example, the intensification in plant processing, evidenced by increased accumulation of rock oven features and burned rock middens, suggests an increasing reliance on a resource that is essentially fixed on the landscape (Arnn 2007:277).

Late Archaic groups did not exist in isolation, and the eventual spread of most Late Archaic point styles, particularly the later style types, as well as exotic materials such as marine shell and perhaps religious ideas throughout the state suggests their participating in a "vast web of social relations" (Arnn 2007:277). Decorated bone ornaments, Gulf whelk shells, and atlatl weights of exotic stone are among the new types of materials to appear during the Late Archaic (Johnson and Goode 1994). Exotic materials are recovered from domestic contexts as well as burials suggesting they were a pervasive component in the life of Late Archaic peoples (Arnn 2007:277).

The end of the Archaic, then, was an interesting time in Central Texas; one that we are still struggling to understand. Arnn (2007:278–279) argues "that the Late Archaic Period may be viewed as a precursor (in terms of technology, subsistence, and settlement practices) to similar technologies and practices observed during the Late Prehistoric." Framing the research within that context, one of continuity rather than change, may be a useful approach for investigating the transition from the Archaic to the Late Prehistoric. As is discussed elsewhere, Johnson and Goode (1994:40) characterize the termination of the Late Archaic as the most difficult and complex of all the period boundaries, noting that it may have ended either 400 years later with the Toyah phase or even 400 years earlier, when small dart points types like Darl appeared.

As noted above, the end of the Archaic period chronologically is marked by the appearance of a variety of small, side- and corner-notched dart point types including Fairland, Frio, Ensor, Ellis, and Edgewood (Turner and Hester 1999). Johnson and Goode (1994:37) point to social interaction with the eastern United States as a possible source for these new point types. These projectiles may have been part of a package of new cultural items related to the spreading of Eastern religious ideas as far as the Edwards Plateau—these included the exotic items noted above such as marine shells and atlatl weights (Johnson and Goode 1994:37).

An important cultural trait of the Late Archaic is the appearance of formal cemeteries off the Edwards Plateau—on the plateau sinkholes continued to be used as repositories for the dead. Cemeteries, where many of the previously mentioned exotic items have been found, suggest that groups were tied to specific territories. Cemeteries are more common in the early Late Prehistoric, and many individuals buried in them show clear evidence of violent deaths (Johnson and Goode 1994:40). Prewitt (1982:Table 4) provides an exhaustive, if somewhat dated, list of cemeteries and burials in eastern Central Texas, and notes many incidences of Scallorn arrow points either with a skeleton or clearly imbedded in the skeleton. The Loeve-Fox site (41WM230) contained an Austin phase cemetery where warfare was "suggested by the direct association of Scallorn arrow points with fatal positions in several skeletons" (Prewitt 1982:12).

LATE PREHISTORIC PERIOD

Introduction of the bow and arrow and, later, ceramics into Central Texas, marked the Late Prehistoric period. Population densities dropped considerably from their Late Archaic peak (Prewitt 1985:217). Subsistence strategies did not differ greatly from the preceding period, although bison again became an important economic resource during the late part of the Late Prehistoric period (Prewitt 1981:74). Use of rock and earth ovens for plant food processing and the subsequent development of burned rock middens continued throughout the Late Prehistoric period (Black et al. 1997; Kleinbach et al. 1995:795). Horticulture came into play very late in the region but was of minor importance to overall subsistence strategies (Collins 2004:122).

In Central Texas, the Late Prehistoric period generally is associated with the Austin and Toyah phases (Jelks 1962; Prewitt 1981:82–84). Austin and Toyah phase horizon markers and Scallorn-Edwards and Perdiz arrow points, respectively, are distributed across most of the state. Violence and conflict often marked introduction of Scallorn and Edwards arrow points into Central Texas—many excavated burials contain these point tips in contexts indicating they were the cause of death (Prewitt 1981:83). Subsistence strategies and technologies (other than arrow points) did not change much from the preceding Late Archaic period. Prewitt's (1981) use of the term "Neoarchaic" recognizes this continuity. In fact, Johnson and Goode (1994:39–40) and Collins (2004:122) state that the break between the Austin and Toyah phases could easily and appropriately represent the break between the Late Archaic and the Late Prehistoric.

HISTORIC PERIOD

In the early Historic period (A.D. 1630 to present), the period of European contact and settlement in Texas, the general Austin area was inhabited by several aboriginal groups including the Jumano, Tonkawa, Lipan Apache and Comanche (see Newcomb 2002 for detailed discussions of central Texas aboriginal groups). The first Europeans into the area were probably Spanish missionaries who established three missions at nearby Barton Springs in 1730 (Webb 1952). The Spanish mission period in this area was of short duration and failed to colonize or even tame the area south of the Colorado River and north of Onion Creek. An aboriginal presence thus continued in the Austin area into the 1860s.

After Mexico gained independence from Spain, the newly formed county used a policy of land grants to attract Anglos from the United States to help inhabit the sparsely populated northern regions of Mexico. During the 1820s, Stephen F. Austin obtained grants from the Mexican government to settle hundreds of families along the lower Brazos and Colorado Rivers (Webb 1952). This colony, known as the "Old Three Hundred Colony," was successful in pushing the European settlement frontier further west into the Central Texas region. Prior to the Texas Revolution, most of the "Old Three Hundred Colony" settlement was focused south of Bastrop and the old La Bahia Road (Webb 1952).

During the Texas Revolution with Mexico, the area continued to be inhabited only by aboriginal Native Americans. After the war, a growing Texan population led many settlers to move northwards in search of open, profitable land to plant crops and raise cattle. This wave of migration spurned new conflicts with the native groups living in the area, culminating in the Battle of Brushy Creek, near what is today the town of Taylor, in February of 1839. This battle, between the Comanche and the Texas Rangers, resulted in numerous deaths and eventually resulted in the removal of the Native American presence in the area.

After the battle, the nearby town of Waterloo, on the banks of the Colorado River, was renamed Austin and designated the seat of government for the Republic of Texas in 1839 (Webb 1952)**.** Williamson County, located north of the new capital of Austin, was organized shortly afterward in 1848 as the population in the area grew**.** The county was named in honor of Robert M. Williamson, an area leader and a veteran of the Battle of San Jacinto.

The county quickly grew in population and economic prosperity as the rich soils made agriculture one of the top industries in the area. Accompanying the increases in population and commerce was the rapid adoption of slave labor. In 1850, two years after the founding of the county, the slave population in Williamson County totaled 127. By 1864, less than 15 years later, the slave count had multiplied almost ten-fold, with an enslaved population of 1,074 (Campbell 1989:266). Following the Civil War, many of the planters turned to cattle to regain their ante-bellum prosperity.

Texas University, later named Southwestern University, was founded in Georgetown in 1873. This was the first successful Methodist College in Texas and it brought several new facets to the county population. The county remained dedicated primarily to agriculture and cattle production through the first half of the twentieth century. As the modern era and new technology developed, Williamson County began to see major changes in its configuration. Due to its proximity to Austin, the county quickly became home to numerous large high-tech industries. This rapid influx of people and industries to the area continues to be the hallmark of the southern half of the county today, as the northern half continues to rely on agribusiness.

METHODS

BACKGROUND AND HISTORIC MAP REVIEW

SWCA performed a cultural resources background review to determine if the proposed APE has been previously surveyed for cultural resources or if any archaeological sites have been recorded within or adjacent to the APE. To conduct this review, an SWCA archaeologist reviewed portions of the *Liberty Hill, Texas* (3097-323) USGS 7.5-minute topographic quadrangle map on the THC Texas Archeological Sites Atlas (Atlas) (THC 2016 and 2017). This source provided information on the nature and location of previously conducted cultural resources investigations, previously recorded cultural resource sites, locations of National Register of Historic Places (NRHP) districts and properties, sites designated as State Antiquities Landmarks (SALs), Official Texas Historical Markers, Recorded Texas Historic Landmarks, cemeteries, and local neighborhood surveys. SWCA examined maps and aerial photography available on the Texas Department of Transportation (TxDOT) Historic Overlay, USGS TopoView, and

HistoricAerials.com to identify the presence of potentially historic-age structures within the APE and develop an idea of land development over time.

ARCHAEOLOGICAL SURVEY

SWCA's investigations consisted of an intensive pedestrian survey with subsurface investigations within the direct APE. Archaeologists examined the ground surface and any exposures for cultural resources. Subsurface investigations consisted of systematic shovel test excavations. For a linear corridor survey, THC survey standards minimally require that for every 100 feet (30 m) of survey corridor width, 16 shovel tests need to be excavated every mile of corridor length. For a project of this size (i.e., 4,500 feet [1372 m]), the shovel test investigations would require between 13 and 14 shovel tests. To document the existing conditions and level of disturbance, SWCA archaeologists photographed the portions of the project area where shovel testing was precluded, due to extensive modifications such as the existing ROW, residential development, and associated infrastructure along the roadways.

SWCA archaeologists employ both metric (centimeters and meters) and English units of measurement (inches and feet) when conducting investigations within the project area. In compliance with archaeological standard practices, investigations such as shovel tests, auger probes, and backhoe trenches are recorded using metric units. Prehistoric archaeological resources, such as camp sites, features, and artifacts, are also recorded using metric units, whereas historic resources, such as farmsteads and associated historic features, are recorded using English units; no conversions for these measurements are provided.

SWCA primarily utilized systematic shovel testing throughout the project area. The amount of shovel tests decreased depending on the level of previous disturbances and the nature of the soils. SWCA did not conduct shovel testing in areas where impervious substrates (i.e., asphalt, concrete, compact gravel, and/or bedrock) were present, within 16 feet (5 m) of any paved/graveled road edges, within 16 feet (5 m) of any identified/marked buried utility markers, or where evidence of extensive ground surface disturbance was observed. Shovel tests were excavated in approximately 20-centimeter (cm) arbitrary levels to a maximum depth of 1 m below ground surface unless soil characteristics or bedrock precluded reaching that depth.

Archaeologists screened the matrix through ¼-inch mesh. The location of each shovel test was plotted using a hand-held sub-meter accurate Global Positioning System (GPS) receiver and was recorded on appropriate project forms in SWCA's field tablets. SWCA conducted a non-collection survey. Artifacts, had any been encountered, would have been tabulated, analyzed, and documented in the field, but not collected. Following the review and acceptance of the final cultural resources report, all records and photographs will be curated with the Center for Archaeological Records at The University of Texas at San Antonio, per requirements of the ACT in accordance with the CTA guidelines.

RESULTS

BACKGROUND REVIEW

The background literature review determined that no previously conducted cultural resources investigations and no previously recorded archaeological sites are recorded within the APE. One cultural resources testing project and eight previously recorded archaeological sites are located within a 1-mile (1.6-kilometer [km]) radius of the project area (Figure 4). Three of these sites have also been designated as SALs. The review of maps on the TxDOT Historic Overlay, USGS TopoView (USGS 2016), and Historic Maps (2016) revealed one possible historic-age structure adjacent to the current APE (Foster et al. 2006).

In 2008, archaeologists from Mercyhurst Archaeological Institute conducted NRHP testing of a historic farmstead (site 41WM1077) under TAP No. 4519 (THC 2016). Site 41WM1077, also known as the Henry S. Whitehead Site, was designated as an SAL in 2003 and is located 0.8-mile (1.3-km) northeast of the project area within the Indian Mound Ranch property (Table 1). The founder of the ranch, Henry S. Whitehead and his family, lived at the farmstead beginning in 1873. The site consists of remnants of the house and walkway, as well as a hand-dug cistern, fireplace foundations, and rock walls that contained livestock. The results of the 2008 testing are not yet available on Atlas.

Five additional sites recorded by archaeological stewards are located within a 1-mile (1.6-km) radius of the project area (see Table 1). Two of these sites (41WM142 and 41WM1088) have been designated as SALs and are located within Indian Mound Ranch. Site 41WM142 is a multi-component burned rock midden with Archaic and Late Prehistoric components and site 41WM1088 contains a Middle Archaic burned rock midden and ca. 1935 ranch house lived in by Allye Bell Whitehead Becker, granddaughter of Henry Whitehead (THC 2016). The remaining three sites (41WM687, 41WM1090, and 41WM1153) are prehistoric burned rock middens and/or open prehistoric campsites (THC 2016; see Table 1). In 2016, archaeologists from ACI Consulting recorded two additional sites (41WM1357 and 41WM1358) within a 1-mile (1.6-km) radius of the project area under TAP No. 7793 for the River Ranch County Park Project for Williamson County (see Table 1). Site 41WM1357 consists of three rockwalls constructed for farming and ranching purposes likely created early- to mid-twentieth century (THC 2017). Two of the rockwalls are within the 1-mile (1.6-km) radius while the third wall and TARL point for the site are just beyond. Site 41WM1358 is a mid-twentieth century historic farmstead including two houses and multiple outbuildings (THC 2017).

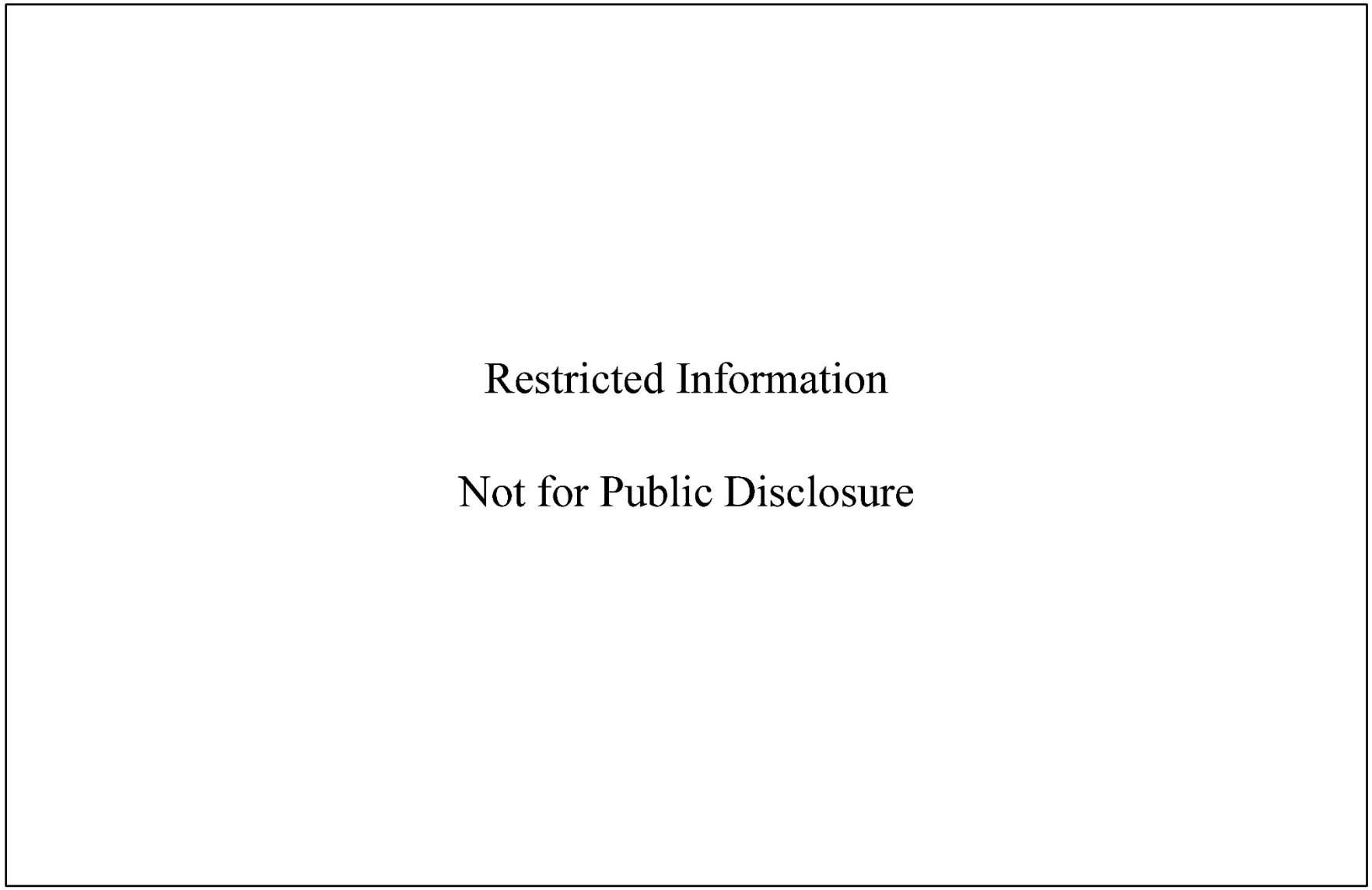

Figure 4. Project area, aerial overview with previously recorded archaeological sites within 1-mile of the APE.

Table 1. Previously Recorded Archaeological Sites within 1-Mile Radius of the APE

Trinomial	Resource Type	Temporal Affiliation	Location	SAL/NRHP Eligibility	Recommendations	Comments
41WM142	Burned rock midden	Archaic to Late Prehistoric	0.38-mile northeast of APE	Eligible Designated as SAL 5/15/2003	None stated	Site reported as severely potholed; located on Indian Mound Ranch
41WM687	Open campsite	Unknown prehistoric	0.92-mile southwest of APE	Undetermined	Additional survey	Only surveyed 1-2 acres of 165-acre ranch, site may extend into unsurveyed areas
41WM1077	Historic farmstead	ca. 1873	0.71-mile north of APE	Eligible Designated as SAL 10/17/2003	None reported	Farmstead of Henry S. Whitehead and family on Indian Mound Ranch
41WM1088	Burned rock midden; Historic farmstead	Middle Archaic; ca. 1935	0.75-mile northeast of APE	Eligible Designated as SAL 2/10/2005	None reported	Burned rock midden adjacent to ranch house of Allye Bell Whitehead Becker, granddaughter of original founder of Indian Mound Ranch
41WM1090	Burned rock midden	Middle Archaic	0.33-mile E of APE	Ineligible	Preservation of site	Site reported as severely potholed; located on Indian Mound Ranch
41WM1153	Burned earth oven	Unknown prehistoric	0.64-mile northeast of APE	Ineligible	Excavation	Site form states site will be completely destroyed by a planned quarry
41WM1357	Historic farmstead rockwalls	Early to mid-twentieth century	0.77-mile northwest of APE	Ineligible	None reported	Site consists of three rock walls for ranching and farming purposes.
41WM1358	Historic farmstead	Mid-twentieth century	0.78-mile northwest of APE	Ineligible	None reported	Site consist of two houses, 11 outbuildings, fencing, and artifact scatter.

HISTORIC MAP REVIEW

The review of the maps from TxDOT Historic Overlay and USGS TopoView revealed one potentially historic-age structure adjacent to the project area. A structure is depicted on the 1962 USGS Liberty Hill Quadrangle map in the southeastern quadrant of the Bagdad Road and CR 278 intersection at the eastern end of the project area (Foster et al. 2006; USGS 2016). None of the earlier maps reviewed depicted structure locations, so the date of construction is unknown. Two more recent structures are depicted along the eastern side of Bagdad Road at the northern and southern ends of the project area on the 1976 photo-revised version of the 1962 USGS Liberty Hill Quadrangle map (USGS 2016).

SWCA reviewed aerial and topographic maps dated from 1962 to 2012 on Historic Aerials. Similarly, one potentially historic-age structure is depicted adjacent to the currently proposed project area on the 1962 aerial and 1966 topographic maps (Historic Aerials 2016). On the 1962 to 1996 maps, the project area appears to have been used for a mixture of ranching and agricultural activities with disturbances from land clearing and the construction of the existing Bagdad Road and CR 278 roadways. By 2004, a small residential neighborhood, located south of the project area had been constructed (Historic Aerials 2016).

ARCHAEOLOGICAL SURVEY

On June 22, 2017, SWCA conducted cultural resources investigations of the approximately 13.8-acre (5.6-ha) Bagdad Road at CR 278 Improvements project area (Figure 5). The investigations included extensive visual inspection with photographic documentation and intensive pedestrian survey with shovel testing systematically performed throughout the APE.

Visual inspection of the project area revealed significant surface and subsurface disturbances and impacts to the APE along and immediately adjacent to the existing county roads. Previous and current impacts to the area include clearing and grading activities, construction of existing roads and driveways, associated infrastructure installation (i.e. culverts, aprons, ditches), impervious cover, gravel filled areas, residential development, and overhead and buried utility installations including phone and fiber optic lines (Figures 6–11). One historic-age structure was observed just outside the APE within the southeast quadrant of the intersection (Figure 12). As previously mentioned, this structure was identified during the historic map review and appears on the 1962 USGS Liberty Hill Quadrangle map.

The undeveloped portion of the project area is slated for the CR 278 extension new "Park Road" construction west-southwest of the intersection of the two county roads. This area is within a rocky upland setting with short to medium grasses and mixed hardwoods (Figure 13). Ground surface visibility was approximately 40 percent and revealed exposed limestone bedrock, cobbles, and gravels along the ground surface (Figure 14). Previous impacts within the undeveloped portion include erosion, clearing, two-track roads, and fence lines. Surface examination of the APE discovered no prehistoric or historic cultural material within the APE.

Subsurface examination involved shovel testing in settings with the potential to contain buried cultural materials dependent upon variables such as previous disturbances and the nature of the soils. SWCA excavated a total of 15 shovel tests (MCC01–MCC08 and TN01–TN07) all of which were negative for cultural materials (see Figure 5; Table 2). The shovel tests were mainly excavated within the undeveloped portions of the project area. Shovel tests exhibited shallow brown silty clay containing 10 to 20 percent gravels and cobbles atop of bedrock. Shovel tests only extended to a maximum of approximately 25 cm below surface and terminated at bedrock. These excavations exceeded the THC's standards for projects of this size.

STANDING STRUCTURE

Located on the southeast corner of the intersection of Bagdad Road and CR 278, the standing structure is a wood frame structure, probably a barn, in ruinous condition (see Figure 12). Historic aerials show a structure in this location starting in 1941, so the date of construction is circa 1940 (Figure 15; Banks 2017). The building is clad with board and batten siding, sections of which are missing. The roof appears to be metal, most likely gable form and some of the roof is missing. There is a small addition with a metal gable roof. The foundation is obscured, likely dirt or slab. While historic age, the structure lacks integrity and is recommended NOT ELIGIBLE for the NRHP.

SUMMARY AND RECOMMENDATIONS

On behalf of LAN and Williamson County, SWCA conducted an intensive cultural resources survey of the proposed Bagdad Road at CR 278 Improvements Project in western Williamson County, Texas. The work was conducted as part of the sponsor's compliance with the TAP No. 8044.

Investigations included a background and historic map review, and an intensive pedestrian survey with shovel testing of the proposed APE. The background review determined that no previously conducted cultural resources investigations and no previously recorded archaeological sites are located within the APE. One cultural resources testing project and eight previously recorded archaeological sites are located within a 1-mile (1.6-km) radius of the project area. The review of maps on TxDOT Historic Overlay, USGS TopoView, and Historic Maps revealed one possible historic-age structure adjacent to the APE.

The field investigations included extensive visual inspection and intensive pedestrian survey with shovel testing throughout the APE. The investigations revealed the APE is along the existing county roads and within the undeveloped land and residential development that surrounds the roadways. The undeveloped land consists of rocky uplands with exposed limestone bedrock, cobbles, and gravels along the ground surface. Previous and current impacts to the area include clearing and grading activities, construction of existing roads and driveways, associated infrastructure installation, impervious cover, gravel filled areas, residential development, and overhead and buried utility installations particularly along and immediately adjacent to the roadways. SWCA excavated a total of 15 shovel tests within the APE, which revealed shallow soils atop of bedrock. SWCA's investigations exceeded the THC's requirements and identified no prehistoric or historic cultural materials within the APE. One historic-age standing structure was identified during the historic map review and field investigations immediately adjacent to the APE located on the southeast corner of the intersection of Bagdad Road and CR 278. An SWCA architectural historian evaluated the structure and determined that based on historic aerials the date of construction is circa 1940, but that while it is historic age it lacks integrity and is recommended as NOT ELIGIBLE for the NRHP.

In accordance with the ACT and 36 Code of Federal Regulations (CFR) 800.4, SWCA made a reasonable and good faith effort to identify cultural resources within the direct APE. As no archaeological sites were identified that may meet the criteria for designation as an SAL, as per 13 TAC 26.12, or standing structure for listing on the NRHP, according to 36 CFR 60.4, SWCA recommends that no further cultural resources investigations are warranted within the *surveyed* portions of the APE and that a determination of *No Historic Properties Affected* be granted for the proposed project.

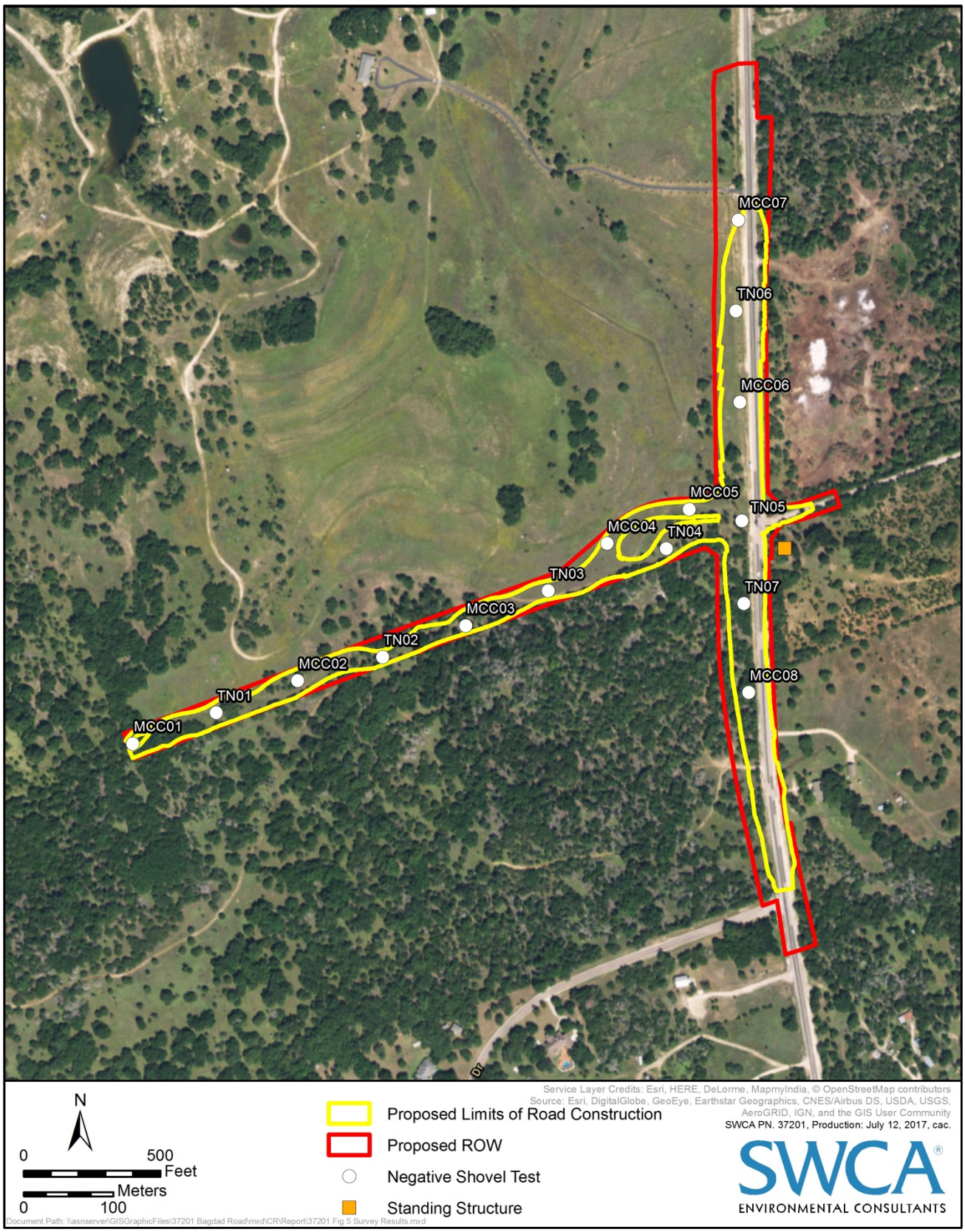

Figure 5. Project area, survey results.

Figure 6. Overview of APE from northern margin, facing south-southwest.

Figure 7. Overview of APE slated for improvements along Bagdad Road north of CR 278, facing north-northeast.

Figure 8. Overview of APE at Bagdad Road and CR 278 intersection, facing north.

Figure 9. Overview of APE slated for improvements along western margin of Bagdad Road south of CR 278, facing southwest. Note active residential development and profile with exposed bedrock.

Figure 10. Overview of APE from near southern margin, facing north-northeast.

Figure 11. Overview of APE slated for improvements toward southern margin, facing south-southeast.

Figure 12. Overview of historic-age structure just outside the APE within the southeast quadrant of the Bagdad Road and CR 278 intersection, facing south-southeast.

Figure 13. Overview of APE slated for new "River Ranch County Park Road" construction from Bagdad Road, facing west.

Figure 14. Overview of APE slated for new “River Ranch County Park Road” construction from shovel test TN03, facing west-southwest.

Figure 15. Banks aerial photograph dating to 1941 with standing structure depicted.

Table 2. Shovel Test Data

Shovel Test No.	Pos (P)/ Neg (N)	Depth	Munsell	Soil Color	Soil Texture	Inclusion Percentage	Inclusion Types	Comments / Reason for Termination
MCC01	N	0-25	10YR 3/2	Very Dark Grayish Brown	Clay Loam	0-5%	Gravels, Cobbles	No cultural material encountered.
	N	25-30	5YR 3/3	Dark Reddish Brown	Clay	–	–	No cultural material encountered. Terminated at compact clay.
MCC02	N	0-10	10YR 5/3	Brown	Silt Loam	10-20%	Gravels, Cobbles	No cultural material encountered. Terminated at bedrock.
MCC03	N	0-30	10YR 3/2	Very Dark Grayish Brown	Clay Loam	10-20%	Gravels, Cobbles	No cultural material encountered.
	N	30-35	5YR 3/3	Dark Reddish Brown	Clay	–	–	No cultural material encountered. Terminated at compact clay.
MCC04	N	0-10	10YR 5/3	Brown	Silt Loam	10-20%	Gravels, Cobbles	No cultural material encountered. Terminated at bedrock.
MCC05	N	0-10	10YR 5/3	Brown	Silt Loam	10-20%	Gravels, Cobbles	No cultural material encountered. Terminated at bedrock.
MCC06	N	0-10	10YR 5/3	Brown	Silt Loam	10-20%	Gravels, Cobbles	No cultural material encountered. Terminated at bedrock.
MCC07	N	0-10	10YR 5/3	Brown	Silt Loam	10-20%	Gravels, Cobbles	No cultural material encountered. Terminated at bedrock.
MCC08	N	0-10	10YR 3/3	Dark Brown	Silty Clay Loam	–	–	No cultural material encountered. Terminated at bedrock.
TN01	N	0-6	10YR 5/2	Grayish Brown	Silt Loam	10-20%	Calcium Carbonate, Gravels	No cultural material encountered. Terminated at bedrock.
TN02	N	0-5	10YR 2/2	Very Dark Brown	Silty Clay Loam	–	–	No cultural material encountered.
	N	5-25	5YR 3/3	Dark Reddish Brown	Silty Clay	–	–	No cultural material encountered. Terminated at compact soil.
TN03	N	0-3	10YR 5/2	Grayish Brown	Silt Loam	10-20%	Calcium Carbonate, Gravels	No cultural material encountered. Terminated at bedrock.
TN04	N	0-20	7.5YR 3/3	Dark Brown	Silty Clay Loam	1-5%	Cobbles	No cultural material encountered. Terminated at bedrock.
TN05	N	0-5	10YR 2/2	Very Dark Brown	Silty Clay Loam	–	–	No cultural material encountered.
	N	5-25	5YR 3/3	Dark Reddish Brown	Silty Clay	–	–	No cultural material encountered. Terminated at compact soil.

Shovel Test No.	Pos (P)/ Neg (N)	Depth	Munsell	Soil Color	Soil Texture	Inclusion Percentage	Inclusion Types	Comments / Reason for Termination
TN06	N	0-2	10YR 5/2	Grayish Brown	Silt Loam	10-20%	Calcium Carbonate, Gravels	No cultural material encountered. Terminated at bedrock.
TN07	N	0-25	10YR 2/2	Very Dark Brown	Silty Clay Loam	>20%	Cobbles	No cultural material encountered. Terminated at bedrock.

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