

Phase I Archaeological Resources Survey for the Green Eagle Railroad Project, Maverick County, Texas

THC Antiquities Act Archaeology Permit No. 31809



Prepared By:

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Technical Report of Findings

Final Report – January 2025

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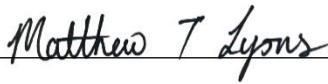
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January 2025
Final Report

Management Summary

On December 14, 2023, Green Eagle Railroad, LLC (GER), a non-carrier subsidiary of Puerto Verde Holdings (PVH), filed a petition for exemption with the Surface Transportation Board (Board) pursuant to 49 United States Code (U.S.C.) §10502 in Docket No. FD 36652. The petition requested Board authority to construct and operate approximately 1.3 miles (2.1 kilometers) of new common carrier rail line ("proposed line") in Eagle Pass and Maverick County, Texas. The proposed line would be part of an international commercial transportation corridor proposed by PVH, the Puerto Verde Global Trade Bridge project (PVGTB Project), consisting of a new border crossing for freight rail and commercial motor vehicles between Piedras Negras, Coahuila, Mexico, and Eagle Pass, Texas. In addition to the proposed line, the PVGTB Project in the United States includes a new commercial motor vehicle roadway that would cross the Rio Grande River on a new Road Bridge, separate from the Rail Bridge; a control tower; and inspection facilities. Only the proposed line requires licensing authority from the Board.

As part of the approval process, the Board's Office of Environmental Analysis (OEA) is preparing an Environmental Impact Statement (EIS) that will assess the potential environmental impacts of the proposed line and the larger PVGTB Project. OEA is also evaluating the potential impacts of the proposed line and PVGTB Project on historic properties, in accordance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108), the Section 106 implementing regulations (36 C.F.R. Part 800), and the Board's environmental regulations (49 C.F.R. Part 1105).

OEA defined the Area of Potential Effects (APE) for the proposed line and CMV Facility in accordance with 36 C.F.R. Part 800 and 49 C.F.R. § 1105.8, and in coordination with the Texas Historical Commission (THC), which is the State Historic Preservation Officer (SHPO) for Texas. The archaeological APE, hereafter referred to as the APE, covers approximately 108 acres (73.7 hectares). VHB received a Texas State Antiquities permit (Permit No. 31809) to conduct archaeological investigations and, on behalf of OEA, conducted an archaeological survey of these 108 acres (73.7 hectares) in compliance with Section 106 of the NHPA.

VHB investigated 574 shovel test locations. Of these 574 shovel tests, 416 were negative for cultural materials, 157 could not be excavated and were recorded as "No Dig," and one was positive for cultural materials. VHB revisited four previously recorded archaeological sites overlapping with the APE during this investigation: sites 41MV107, 41MV108, 41MV203, and 41MV277. Sites 41MV107 and 41MV108 consist of non-diagnostic precontact lithic and historic scatters that are situated along terraces of the Rio Grande River and Seco Creek; both sites have an National Register of Historic Places (NRHP) status of unknown under Criterion D. VHB recorded no additional cultural materials at these sites and encountered sterile silty

clay subsoils between 35 and 55 centimeters below surface, indicating that there is no potential for deeply buried archaeological deposits at these sites within the APE. VHB recommends no changes to the current NRHP eligibility status of unknown under Criterion D.

VHB investigated a total of 32 shovel test locations within and adjacent to site 41MV203. Of these, 22 were negative, one could not be excavated, and a single test was positive for cultural materials. Cultural materials were also collected from the surface at five locations at the site. Site 41MV203 has been impacted by extensive refuse dumping of construction fill soils, the majority of which contained non-local soils, gravel, and chert nodules. Soils at the site appear heavily eroded with sterile silty clay subsoils present between 5 and 80 cmbs, indicating no potential for deeply buried archaeological deposits. The assemblage of cultural materials determined to be original to the site indicates an ephemeral camp of unknown cultural affiliation. VHB recommends that the site boundaries be expanded to include the surface scatter of cultural materials recorded during this investigation. VHB recommends no change to the current NRHP eligibility status of not eligible under Criterion D; however, the portion of site 41MV203 within the APE does not contain significant data to inform information about historic precontact domestic lifeways, and modern impacts of informal refuse dumping diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV203.

VHB investigated 33 shovel test locations within the previously recorded boundaries of site 41MV277. Of these, four were negative for cultural materials and 29 were not excavated. The four excavated shovel tests indicated that this portion of site 41MV277 was a modern landfill, with deeply buried layers of modern refuse in distinct layers. At the northernmost margin of the previously recorded site boundary, an eroded washout evidenced a depth of up to 20 feet (6.1 meters) of trash deposits, with multiple distinct layers visible. No precontact or historic cultural materials were observed at during the surface reconnaissance. VHB recommends that the landfill be added as temporal component of site 41MV277. VHB recommends no change to the current NRHP eligibility status of unknown under Criterion D. The portion of site 41MV277 within the APE does not contain the potential for significant data that would provide insights into historic domestic lifeways of rural Texas, and the nature of landfill deposits diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV277.

The project APE covers 108 acres (43.7 hectares), all of which was investigated via shovel testing and pedestrian survey. Phase I archaeological survey was able to investigate subsurface conditions within approximately 3 feet (1.0 m) from the ground surface. Archaeological deposits within the alluvial floodplain adjacent to Seco Creek and the Rio Grande River within the APE could be deeply buried. There is potential for these types of

deposits to exist below multiple feet/meters of overfill, at a depth which conventional hand excavation cannot reach. Based on the current project design, construction would not extend further than 2 feet (0.6 meters) below the ground surface save for specific areas. It is recommended that once project design plans are finalized, and these specific areas are known, a plan to investigate the potential for deeply buried archaeological deposits through mechanically assisted excavation be developed in coordination with OEA, the THC, and project stakeholders. It is recommended that machine-assisted excavations to investigate the potential for deeply buried subsurface contexts in design-specific areas should be incorporated as a stipulation within the forthcoming PA.

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1.0 Introduction

On December 14, 2023, Green Eagle Railroad, LLC (GER), a non-carrier subsidiary of Puerto Verde Holdings (PVH), filed a petition for exemption with the Surface Transportation Board (Board) pursuant to 49 United States Code (U.S.C.) §10502 in Docket No. FD 36652. The petition requested Board authority to construct and operate approximately 1.3 miles (mi), or 2.1 kilometers (km), of new common carrier rail line ("proposed line") in Eagle Pass and Maverick County, Texas. The proposed line would be part of an international commercial transportation corridor proposed by PVH, the Puerto Verde Global Trade Bridge project (PVGTB Project), consisting of a new border crossing for freight rail and commercial motor vehicles between Piedras Negras, Coahuila, Mexico, and Eagle Pass, Texas. In addition to the proposed line, the PVGTB Project in the United States includes a new commercial motor vehicle roadway that would cross the Rio Grande River on a new Road Bridge, separate from the Rail Bridge; a control tower; and inspection facilities. Only the proposed line requires licensing authority from the Board.

As part of the approval process, the Board's Office of Environmental Analysis (OEA) is preparing an Environmental Impact Statement (EIS) that will assess the potential environmental impacts of the proposed Line and the larger PVGTB Project. OEA is also evaluating the potential impacts of the proposed Line and PVGTB Project on historic properties, in accordance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108), the Section 106 implementing regulations (36 C.F.R. Part 800), and the Board's environmental regulations (49 C.F.R. Part 1105).

The proposed line would be a secure, double-tracked rail corridor with no roadway/rail at-grade crossings, extending from the interchange point with the Union Pacific (UP) mainline at approximately UP milepost 31 on the Eagle Pass Subdivision near UP's Clark's Park Yard, for approximately 1.3 mi southwest to the United States/Mexico border. The proposed line would cross the Rio Grande River on the Rail Bridge. The total width of the proposed line, including the service roads, would be approximately 160 feet (ft), or 48.8 meters (m). A non-intrusive inspection (NII) facility and noise barriers would be located within the right-of-way. The proposed line would be fully fenced, monitored, and patrolled by security personnel on a service road. In addition to the proposed line, which requires Board authority, the PVGTB Project would include a new commercial motor vehicle (CMV) roadway that would cross the Rio Grande River on the Road Bridge; a control tower; and truck inspection facilities (collectively, CMV Facility). Customs and Border Protection (CBP) would operate the inspection facilities. PVH would either lease the facilities to CBP; transfer ownership of the facilities to the General Services Administration (GSA); or operate the inspection facilities as a privately owned Central Examination Station under 19 C.F.R. Part 118. A variety of commodities would move to and from Mexico over the proposed line and roadway. Trains

operating on the proposed line would consist of approximately 150 cars with two locomotives on the front end and one on the rear end, for an approximate train length of 9,300 ft (2,834.6 m). GER's purpose for constructing and operating the proposed line is to develop an economically viable solution to meet the need for border infrastructure improvements at Eagle Pass that increases safety and facilitates binational trade between the United States and Mexico. According to GER, the line and the larger PVGTB Project would resolve rail and truck congestion, reduce cross border wait times, and route rail traffic around the urban center of Eagle Pass.

The proposed line would sit atop an elevated berm of fill, rising approximately 18 to 19 ft (5.5 to 5.6 m) above the surrounding topography. It would cross United States Highway (US) 277 (Del Rio Boulevard), Barrera Street; a concrete-lined stormwater drainage channel, and Seco Creek on new bridges. In the EIS, OEA is considering two alternative alignments for the proposed line west of U.S. 277: Under the Southern Rail Alternative (Proposed Action), the proposed line would run south of Seco Creek to the Rail Bridge across the Rio Grande River. Under the Northern Rail Alternative, the proposed line would cross Seco Creek and the Rail Bridge would be located farther north than under the Southern Rail Alternative. East of U.S. 277, the alignment would be the same under both alternatives. In both alternatives, PVH would construct the CMV Facility on an agricultural field located north of the proposed line.

GER/PVH's proposed design for the proposed line and the CMV Facility would construct them atop fill. Ground disturbance, mostly from grading and compacting, is not anticipated to exceed 2 ft (0.6 m) in overall depth below the natural ground surface, except where pile footings for the bridge supports over the Rio Grande River would be constructed. The exact location or depth needed for the pile footings is not currently known; however, the depth is anticipated to exceed 3 ft (1.0 m).

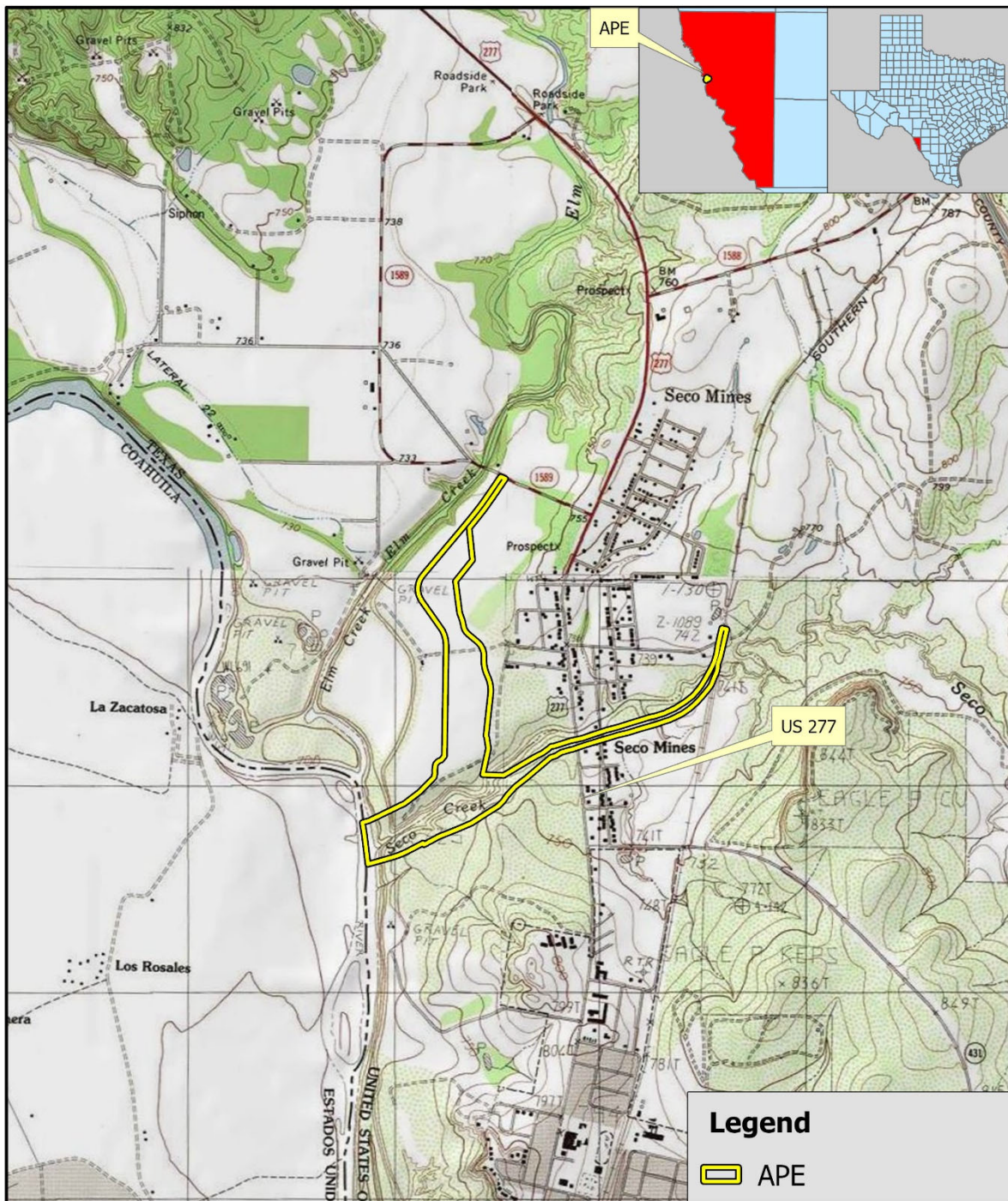
VHB, on behalf of OEA, conducted the archaeological survey documented in this report in compliance with Section 106 of the NHPA. All work was conducted by personnel qualified under the Secretary of the Interior's Professional Qualification Standards (36 C.F.R. Part 61 – Standards and Guidelines for Archaeology and Historic Preservation) and consistent with the guidelines established by the Council of Texas Archeologists as detailed in *Intensive Terrestrial Survey Guidelines*. As a requirement under the NHPA, archaeological, as well as historic, resources that may be located within a project are of potential effects must be assessed for cultural significance utilizing criteria set forth by the National Register of Historic Places (NRHP). This report addresses archaeological resources only. Historic architectural resources will be addressed in the separate report.

1.1 Project APE and Scope of Work

OEA defined the Area of Potential Effects (APE) for the proposed line and CMV Facility in accordance with 36 C.F.R. Part 800 and 49 C.F.R. § 1105.8, and in coordination with the Texas Historical Commission (THC), which is the State Historic Preservation Officer (SHPO) for Texas. The archaeological APE includes the area where ground disturbance is expected to occur as a result of constructing the proposed line under either alternative and the CMV Facility. The archaeological APE, hereafter referred to as the APE, covers approximately 108 acres (ac), or 43.7 hectares (ha), and is depicted in Figures 1 and 2.

The primary tasks involved to complete the archaeological survey were background research, field survey, artifact analysis, and technical report preparation. Background research included a review of previously conducted surveys and regional archaeological site data, and relevant local and regional histories. Data obtained during the background research phase of the investigation formed the basis of the environmental and cultural settings chapters of this report. This information also provided the necessary framework for developing the survey methods and rubric for evaluating archaeological resources identified during fieldwork. Archaeological field investigations included pedestrian survey and shovel testing. Data obtained during the field survey was compiled to present conclusions and supporting evidence sufficient in scope to enable recommendations for the future management of identified archaeological resources. VHB performed the archaeological field survey between June 26 and July 2, 2024. Archaeologist Matt Lyons led the fieldwork as Principal Investigator (a resume is provided in Appendix C), supported by Joshua Davis, Brenna Munson, Alex Skinner, and Thaddeus Smith. Field notes and artifacts recovered during archaeological investigations will be curated temporarily at VHB with permanent curation at the Center for Archaeological Studies at Texas State University.

This report is organized into five chapters, including this introduction (Chapter I). Chapter II presents the environmental context. Chapter III presents the cultural background context. Chapter IV presents the survey background and research context. Chapter V presents the methods employed for the survey. Chapter VI presents the results of the survey. Chapter VI concludes with a survey evaluation and recommendations for future work. Following the references cited, Appendix A provides a catalog of artifacts collected during the survey; and Appendix B contains the Principal Investigator's resume.



Puerto Verde Global Trade Bridge

Project Location

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0 1
Kilometers

0 1
Miles



Figure 1. The APE Depicted on USGS Topographic Quadrangles (USGS 1974a; USGS 1974b; USGS 1983a; USGS 1983b).

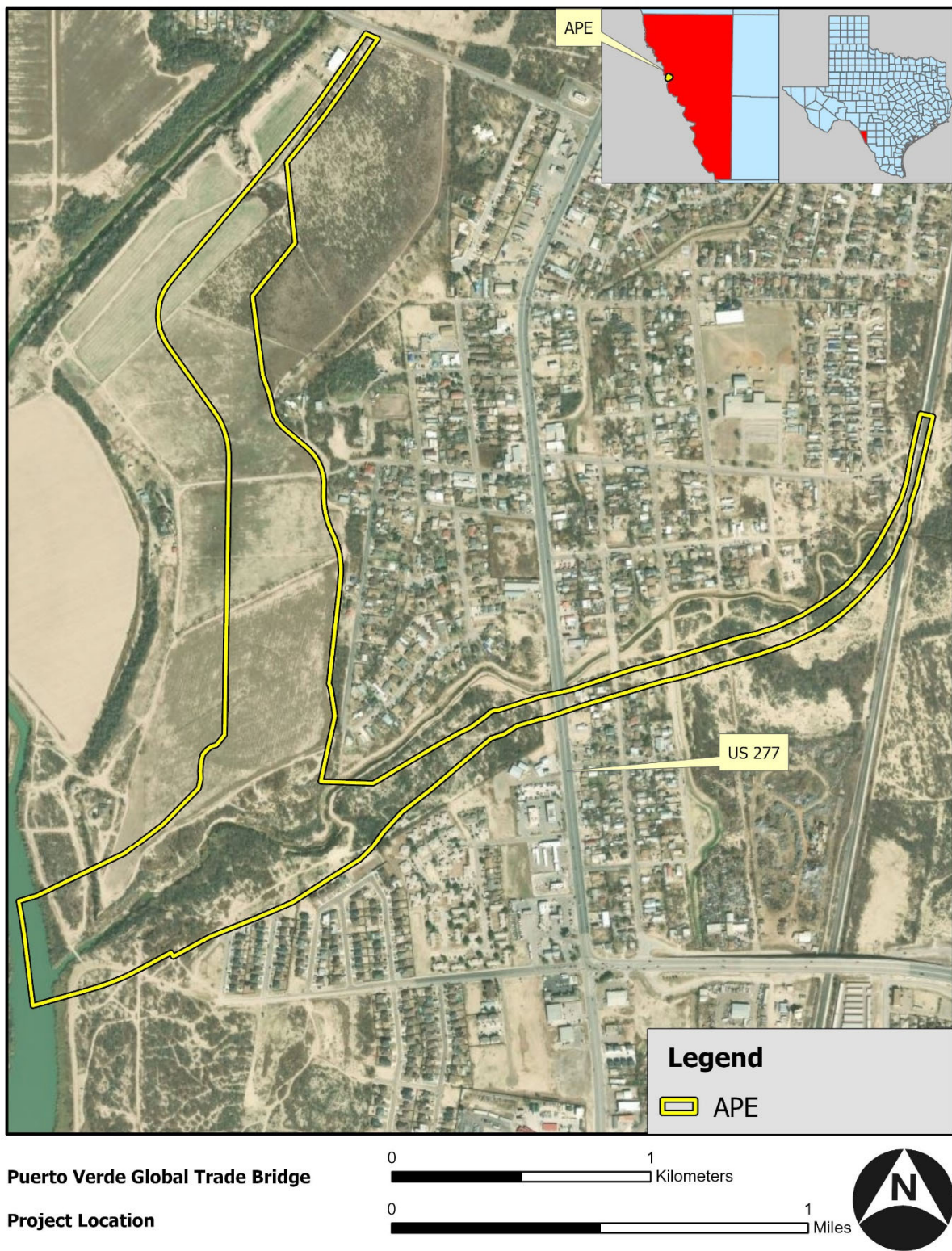


Figure 2. The APE Depicted on Aerial Photography.

2.0. Environmental Context

This chapter provides a discussion of the effective environment of the APE. The effective environment is defined as the physical environment (physiography, soils, and climate) as well as those biotic components (flora and fauna) that may have influenced precontact and historic peoples land usage in the area.

2.1 Physiography

Maverick County is located within the Southern Texas Plains physiographic province. The Southern Texas Plains extends north and south within the southwest portion of Texas (Griffith et al. 2004). The province is bordered by the Gulf Coastal Plain to the south, the Edwards Plateau province to the north, and the East Central Plains to the east. Specifically, the APE is located within the Rio Grande River Floodplain and Terraces district. This district is formed by the Rio Grande River basin, which drains northwest to southeast. Landforms are characterized by the flat floodplain of the Rio Grande River and elevated landforms along the Rio Grande Rift, through which the river flows. Slopes along the terraces can be steep where erosion has cut through Holocene and Pleistocene alluvium and terrace deposits.

The APE is immediately drained by Seco Creek and Elm Creek, located near the southern and northern parts of the APE, respectively. The Rio Grande River borders the southwestern boundary of the APE. Both Seco Creek and Elm Creek drain southeast into the Rio Grande River. The APE north of Seco Creek consists of generally flat upland terrace farm soils, which steeply slope down to creek and river drainages. The portion of the APE bisected by Seco Creek contains steep bluffs and slopes on either flank of the waterway.

2.2 Soils in the APE

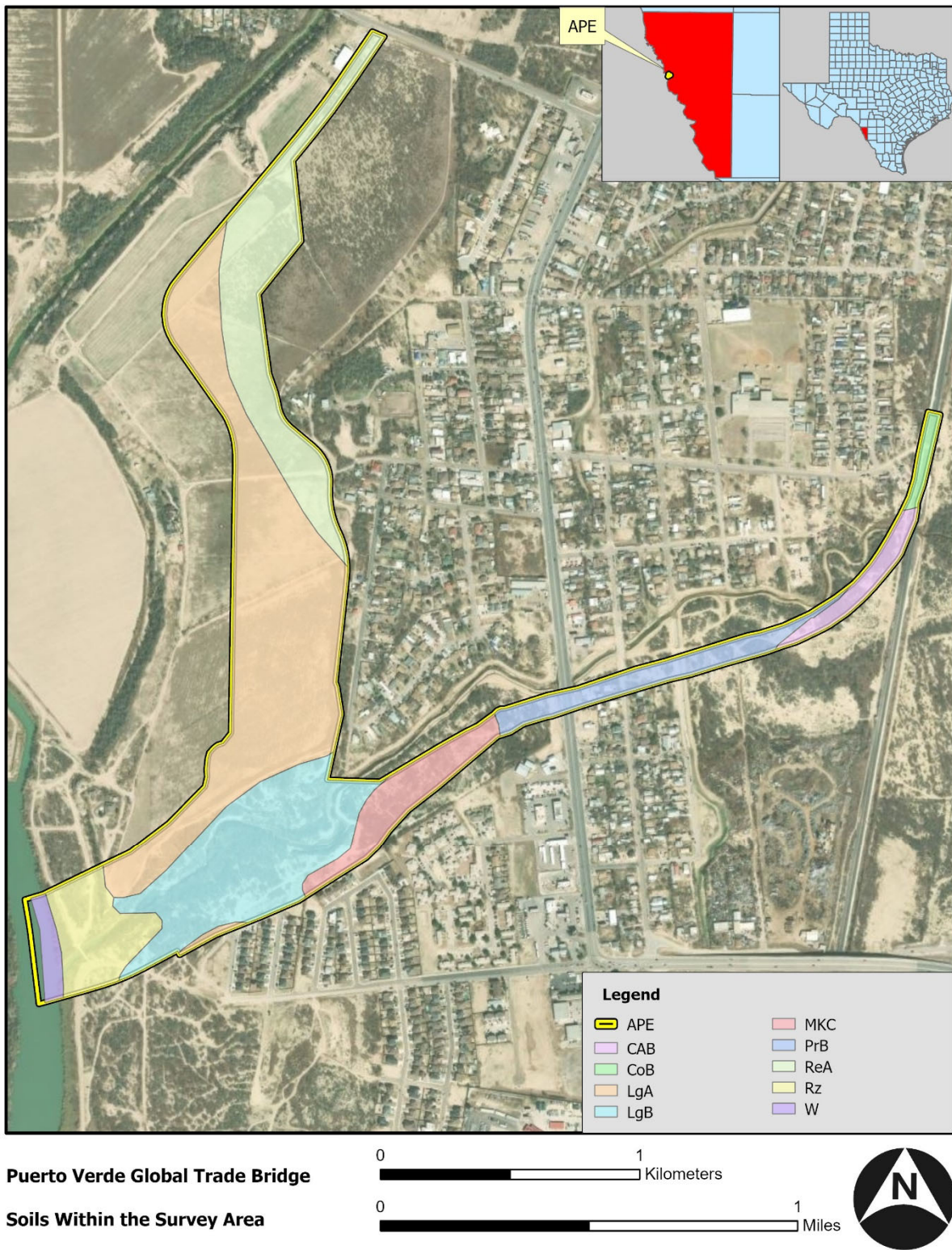
Seven soil series are located within the APE (USDA 2024; Table 1; Figure 3). Lagloria series sandy loams comprise approximately 63 ac, or 69 percent, of the APE. These soils are characterized by well-drained fine sandy loams formed from silty calcareous alluvial deposits. Typical soil profiles consist of fine sandy loams up to a meter in depth atop silty clay loam and silty clay. The Reynosa series consists of well-drained silty clay loams formed from alluvial deposits that extend up to two meters in depth; they comprise approximately 18 ac, or 17 percent, of the APE. The remaining soil series account for minor portions of the APE, each covering less than 10 acres.

Table 1. Soil Types Located Within the APE.

Unit Symbol	Unit Name	Drainage	Acres in APE	Percent of APE
LgA	Lagloria very fine sandy loam, 0 to 1 percent slopes	Well Drained	41.0	38.1
LgB	Lagloria very fine sandy loam, 1 to 3 percent slopes	Well Drained	22.1	20.5
ReA	Reynosa silty clay loam, 0 to 1 percent slopes	Well Drained	17.8	16.6
Rz	Rio Grande and Zalla soils, frequently flooded	Well Drained	7.6	7.1
MKC	Maverick association, undulating	Well Drained	6.6	6.1
PrB	Pryor clay loam, 1 to 3 percent slopes	Well Drained	6.0	5.6
CAB	Catarina clay, association, 0 to 5 percent slopes	Moderately Well Drained	3.0	2.7
CoB	Copita sandy clay loam, 1 to 3 percent slopes	Well Drained	1.1	1.0
W	Water	n/a	1.8	1.6
Total			107.7	100%

2.3 Flora and Fauna

The Southern Texas Plains have been modified from their natural flora by historic pasturing and ranching practices. What was once rolling grassland plains is now populated by thorny brush species, such as acacia, huisache, ceniza, mesquite, and blackbrush. Yuccas and prickly pear cactus are common throughout the region in arid upland soils. In wetter lowland soils, black mimosa, black willow, common and giant reed species are present.



The Southern Texas Plains supports diverse species of mammals, birds, fish, reptiles, and amphibians. Likely, a wider variety of fauna was available for exploitation during the precontact and early historic habitation of this area. Common modern fauna includes white-tailed deer, boar, jackrabbits, javelina, caracara, Texas tortoise, indigo snake, groove-billed anis, pygmy owl, and burrowing toad. Less common mammals include the jaguarundi, ocelot, and white-nosed coati (TPWD 2024). Fish found in creeks and rivers include bluegill, black crappie, largemouth bass, catfish, yellow sucker, gar, and minnows. Several varieties of snakes are present, including the corn snake, indigo snake, Texas longnose snake, and diamondback rattlesnake.

2.4 Regional Pleistocene and Holocene Environment

Palaeoclimatological research provides data on the precontact environment of the APE. The Pleistocene-Holocene transition was marked by a climatic episode known as the Younger Dryas (10800-9700 B.C.), a reversal of general warming trends and a return to glacial-like conditions. The Younger Dryas was presumably caused by a freshwater influx into the North Atlantic or Arctic Ocean (Broecker 2006; Broecker and Denton 2012; Broecker et al. 1988; Tarasov and Peltier 2005). In the Southeast of the United States, a shift in vegetation occurred to species adapted to cooler, moister conditions, including alder, beech, and white pine (Hussey 1993; LaMoreaux et al. 2009; Meeks and Anderson 2012; Watts 1975; Williams et al. 2004). During each glacial stadial of the Late Quaternary, including the Younger Dryas, riverine dunes formed along drainages. These riverine dunes line the north and east sides of many southeast-trending streams and are likely the result of highly variable river discharge during glacial intervals. Flooding restricted vegetation near river channels, resulting in large areas of exposed sand subject to eolian mobilization during dry, windy seasons. During the late Pleistocene, more than 30 genera of mammals went extinct across the continent. In the Southeast, this included large mammals such as mammoths and mastodons (Haynes 2009).

During much of the last 10,000 years, a somewhat xeric forest probably covered much of the Texas (Sheehan et al. 1985; Wharton 1989). As climate continued to warm, increased moisture favored the northward advance of the oak-hickory forest. By the mid- Holocene, the oak-hickory forest was gradually being replaced by pine- dominated woodlands. From 4,000 years Before Present (BP) to the present, the upland vegetation of the Southeast was characterized by a thinning of the deciduous forests. Hickory and gums were generally less important, with alder and ragweed increasing in representation in the palynological record (Delcourt and Delcourt 1979; Sheehan et al. 1985). This forest thinning suggests an increase in human related land activities (i.e., timbering, farming). Similarly, the importance and overall increase in pine species in the forest during this time would have depended on several factors, including fire, land clearing, and soil erosion (Plummer 1975; Sheldon 1983).

As American Indians and Euroamericans began to modify their environment, native species spread into new areas. Immigrant species introduced by migrating populations spread with the development of agriculture. Floristic diversity probably became more widespread and more uniform as native habitats were changed to cultivated ones.

2.5 Modern Environmental Setting and Current Land Use

The APE is characterized by both developed and undeveloped swaths of land. The easternmost portions are situated within a graded and developed neighborhood of single family housing, while most of the APE west of U.S. 277 consists of cultivated crop fields that, at the time of survey, were fallow (Figure 4). Numerous dirt and gravel access roads are present within the APE. Undeveloped land is present in the stream valleys along Seco Creek and Elm Creek. Portions of the APE bordering Seco Creek appear to have been used as an open-air refuse area for road fill, construction debris, and other architectural waste.



Figure 4. Overview of Modern Environment in the APE, Showing Fallow Crop Fields and Mesquite Brush.

3.0 Cultural Context

This chapter summarizes the precontact and historic cultural context of the Southern Texas Plains Region, focusing (when feasible) on the Rio Grande Valley and Terraces physiographic province in Maverick County. Cultural history prior to European contact in this region of Texas consists of three broad periods: the Paleoindian, Archaic, and Late Precontact periods. Each is individually defined by the presence of artifacts, features, burial practices, and settlement patterns that exhibit common characteristics reflective of the era.

3.1 Pre-Clovis (pre-10000 B.C.)

The earliest human occupations in North America roughly coincide with the end of the Late Pleistocene and early onset of the Holocene (Maggard and Stackelbeck 2008). Early radio-carbon dates at the Monte Verde Site in Southern Chile puts the known human occupation of the Americas to at least 11000 B.C. (Dillehay 1989). Human migration to the southern extents of South America has led some archaeologist to speculate that an initial entry into North America may have occurred around 15000 B.C. Occupations prior to this time are a matter of some debate among archaeologists, though it is generally accepted that significant advances in human adaptation corresponds roughly with the end of the Pleistocene epoch and the beginning of the warmer Holocene. During this time, lithic tools may have consisted of large, unfluted, lanceolate blades such as those found at Meadowcroft rock shelter in western Pennsylvania. These types of points were identified within strata exhibiting relative radio-carbon dates of 10800 to 9300 B.C. (Adovasio et al. 1980).

3.2 Paleoindian Period (circa [ca.]10000 – 8000 B.C.)

The first well-documented inhabitants of North America are understood to have been relatively mobile, with a subsistence strategy based on migratory (and now extinct) large animals such as mastodons, although they are known to have relied on plant and smaller animal food resources as well. Settlements are thought to have included small temporary camps and less common base camps, occupied by loosely organized bands. Paleoindians selected high quality lithic materials for tools and key diagnostics of this period are fluted and unfluted lanceolate projectile points/knives (PP/K). Formal flake tools such as endscrapers, graters, retouched blades, and burins, as well as unifacial and bifacial knives, are also associated with the Paleoindian period.

The Early Paleoindian period is dominated by the Clovis culture. The Clovis culture is primarily known through the distinctive large, fluted lanceolate projectile points that have been found at various archaeological sites in North America. Over the course of the Paleoindian period, these large Clovis point forms underwent a general reduction in size, with true fluting being

replaced by basal thinning. The large size of Clovis points is believed to have been a necessity of hunting large megafauna such as mammoth. Given the open nature of the landscape of the Texas Plains Region, no Clovis points have been found in association with preserved megafauna remains and points are often found as surface presentations with unclear preservation contexts (Hester 2004).

The later Paleoindian period appears to include both the Dalton and Folsom cultures in Texas (Wyckoff and Bartlett 1995). Dalton forms are typically broad, thin, triangular bifaces with deeply concave bases and shallow side notches that are similar in shape to a fish tail (Coe 1964; Tankersley 1996). Folsom PP/Ks are often characterized by a very large and wide flute that can extend almost the full width of the blade. The diversification of point forms and other lithic technologies of the later Paleoindian period suggests that cultural preferences and distinction were becoming well established. At the Devil's Mouth Site in Val Verde County, Texas, a collection of Paleoindian points displayed variation in Dalton and Folsom types. Of these, stemmed varieties indicated hafting technology that suggest usage as projectiles for smaller game species like deer rather than large megafauna, or as a hafted knife blade (Bousman et al. 2004).

Paleoindian settlement patterns are a topic of much debate because no evidence of structures or long-term camps has been recorded in the region. Several models of Paleoindian settlement patterns exist, each with a different focus driving the pattern. Some researchers (e.g., Gardner 1983) think that access to high-quality lithic raw materials was the basis of Paleoindian settlement. Other researchers (e.g., Anderson and Faught 1998) believe Paleoindians exploited specific areas. Some researchers (e.g., Kelly and Todd 1988) think Paleoindians were nomadic, following the movements of large game species. Wyckoff and Bartlett (1995) theorize that the difference between the Dalton and Folsom PP/K forms was indicative of their respective settlement adaptations, with the larger Folsom PP/Ks being more suitable to hunting large bison in the western grasslands of the state and the more refined Dalton more suitable to hunting deer in the eastern woodlands.

3.3 Archaic Period (8000 B.C. – 800 A.D.)

The Archaic Period exhibits an increase in the density and horizontal dispersal of archaeological remains across the landscape. It is characterized by a reliance on both animals and wild plant resources, which became increasingly stabilized and broad-based over time. Archaic peoples are presumed to have still been highly mobile, making use of seasonally available resources in different areas of the United States. Group size gradually increased during this period, culminating in more diverse social groups in the Late Archaic.

The technology of the Archaic peoples appears to have become progressively more diverse and complex than that of Paleoindian peoples. Over the course of the Archaic Period, for example, increasing numbers of artifact and tool types appear, such as groundstone woodworking and plant processing implements, carved and polished stone bowls, atlatl weights, and stone pipes and beads (Griffin 1967; Jennings 1975). Regional differentiation in PP/K and other artifact styles also occur, suggesting the emergence and elaboration of local cultural traditions. This cultural variability is thought to be partially related to localized differences in environment and subsistence resources, and to an increasing population, with a concomitant circumscription of group territories and mobility (Ford 1974).

In its most common expression, the Archaic Period is generally viewed as one in which the predominantly big-game hunting of the Paleoindian period was replaced by a more generalized or diffuse hunting and gathering way of life (Griffin 1967; Cleland 1976). The Archaic was a relatively long and successful period of foraging adaptation, with subsistence based on hunting, fishing, and the collection of wild plant resources. Due to its length, in Texas, the Archaic Period is generally divided into three phases: Early (6000-2500 B.C.), Middle (2500-500 B.C.), and Late (500 B.C. – 800 A.D.). It is important to note that these dates are general span classifications to facilitate discussion and are often and specifically debated by archaeologists.

Early Archaic Period (6000-2500 B.C.) - During the Early Archaic Period, the vegetation matrix of the United States consisting of mixed coniferous forest was replaced by mixed hardwood communities dominated by oak, elm, and hickory with an understory of shade-tolerant herbaceous plants (Kay 1982). A modern faunal assemblage was in place following the extinction of the Pleistocene megafauna (Meltzer 1999). Social organization and settlement patterns in the Early Archaic Period likely followed the Band-Macroband settlement model, resulting in nomadic to seminomadic band-sized units of about 50 to 100 people. The Early Archaic PP/K styling is typified by the Corner-Notched tradition, named for the shapes of the PP/K used to recognize and date these occupations. Basal-notched PP/K forms co-occur with corner-notched forms towards the later portion of the Early Archaic (Hester 2004). These new projectile forms were markedly smaller and more refined than those of the preceding period and are thought to reflect the megafauna extinction and a shift to smaller game subsistence as well as the procurement and utilization of more plants and grains.

The Early Archaic Period in the Southern Plains Region of Texas manifests mostly in the form of open campsites, which represent temporary or seasonal occupations of a locale where Early Archaic hunter-gatherers could exploit natural resources. Burned rock features, quarries, and point caches are common representations of an Early Archaic site in the region (Collins

2004). These sites are frequently recorded along the Balcones Escarpment, the westernmost point of which is in Maverick County.

Middle Archaic Period (2500-500 B.C.) - During the Middle Archaic Period, the cool, dryer conditions of the Early Holocene gave way to the warmer, moist climate of the mid-Holocene Hypsithermal interval. The Middle Archaic saw a continuation of Early Archaic practices and utilization of a variety of terrestrial flora and faunal resources as well as aquatic resources, depending on seasonal availability. Likewise, settlement patterns during the Middle Archaic still followed the same small, specialized camp/large base camp dichotomy. It is hypothesized that groups of 25 to 50 individuals moved frequently about the landscape, maintaining few standing social obligations with other groups in order to maximize mobility and flexibility (O'Brien 1980).

Archaeologically, the transition from the Early Archaic to the Middle Archaic is characterized by the appearance of stemmed, rather than notched, PP/Ks, and the appearance of groundstone tools, including atlatl weights, hand axes, and grinding implements. The latter types of tools are a clear indication that foraging and utilizing plant resources became more important in that period. A study of cultural materials from several sites indicates a Middle Archaic cultural horizon identified as the Calf Creek complex extended from the Ozark Plateau in Oklahoma, Arkansas, and Missouri, across the plains (Wyckoff and Bartlett 1995). The Middle Archaic Calf Creek complex overlaps the Early Archaic and is considered the product of a distinct culture, rather than elements of other assemblages (Neal and Drass 1998). Calf Creek assemblages in Texas include thinly bladed PP/K forms that may have been used to hunt bison, which still existed in the region at the time (Collins 2004). Large concentrations of burned rock features, like hearths and ovens, indicate more substantial occupation of campsite locales.

Late Archaic Period (500 B.C. – 1200 A.D.) - The Late Archaic Period in the Southern Texas Plains Region was a time of considerable population growth, regional adaptation, and increase in inter-regional exchange of raw materials (Walthall et al. 1982). Reliance on riverine resources was a feature of this period, and settlement centered along river terraces, floodplains, and hilly areas in close proximity to floodplains (Hester 2004). Exploitation of mast species like acacia and oak were observed at the Choke Canyon site in McMullen County, Texas, indicating a more diverse range of floral subsistence. The diversity of aquatic and floral resources that were exploited drove the advancement of PP/K and lithic toolkit technologies (Early and Sabo 1990).

Late Archaic PP/Ks include stemmed or notched styles, and lithic toolkits include a wider range of specialized tools, including various scrapers, drills, gouges, choppers, and grinding/nutting stones. This diverse lithic toolkit reflects the increasingly diverse range of

floral and faunal resources exploited by people of the Late Archaic Period, including rodents, turtles, fish, shellfish, deer, and small woodland game (Hester 2004). Unifacial scrapers, awls, drills, and graters suggest hide processing and woodworking, while metates, or grinding stones, reflect the exploitation of wild mast and bean species as part of the Late Archaic diet. Late Archaic PP/K traditions are marked by a transition from stemmed styles in the early Late Archaic to diverse notched styles, particular basal and corner notched types, as the period progresses. These types typically decrease in size from the early to later portions of the Late Archaic and represent a shift in hunting, subsistence practices, and an increase in trade and social interaction with other cultural groups throughout the region. The Late Archaic lifeways in the South Central Plains of Texas never developed into the socio-political complexes that define the Woodland and Mississippian periods in the central and southeastern United States.

3.4 Late Prehistoric Period (A.D. 800-1519)

The early parts of the Late Prehistoric period in the Southern Plains Region are more of a continuation of the Late Archaic tradition in terms of resource exploitation and inter-regional trade. The introduction of the bow and arrow circa 500 A.D. shifted PP/K styles away from larger atlatl or dart technologies into strictly small-form, triangular notched projectile points that were hafted to arrow shafts. The introduction of the Toyah cultural horizon into this region, spreading south from the central plains and then west from central Texas, brought a widespread shift in cultural material technology (Collins 2004). The eponymous Toyah PP/K style consists of small, triangular arrow points with side notches for hafting. Large, thin bifacial tools, unifacial scrapers, and prismatic blade types accompany the Toyah PP/Ks in the lithic toolkit of the Late Prehistoric Period; these points are associated with the exploitation of bison, which had recently returned to the region.

Pottery was first introduced into the region circa A.D. 1200 during the Late Prehistoric Period. Bone-tempered pottery, amorphously grouped as part of the Leon Plain tradition, first appears in the region and was introduced via trade or social interaction with groups situated in Central Texas. Vessel forms take the shape of bowls or straight-sided jars (Hester and Hill, Jr. 1974). Although a ceramic tradition was established for the region, ceramics as a whole are not commonly found in sites in the Southern Plains Region and represented a marginal technology amongst Late Prehistoric peoples of the area. Traditional lifeways in the region would persist until the arrival of Europeans circa 1519 A.D.

3.5 Spanish Texas (A.D. 1519-1820)

The first Europeans to set foot in modern day Texas were Spanish conquistadors seeking to expand the footprint of Spain in the Americas. Previous conquests of Caribbean Islands, South America, and Central America prompted expeditions into the American Southeast. The

earliest entrada into Texas came as part of the ill-fated expedition of Panfilo de Narvaez in 1528, which resulted in the death of almost all of the 400 participants. Sailing along the Gulf Coast in crudely made boats after an overland march through Florida resulted in significant casualties. A series of storms scattered the remnants of the expedition near the mouth of the Mississippi River. The second-in-command, Cabeza de Vaca, and approximately 40 others, were stranded on an island outside of Galveston, Texas.

After narrowly avoiding succumbing to a deadly illness that spread among the survivors, De Vaca spent four years traveling along the Texas coastal plain. A novelty amongst the native peoples of Texas, he traded goods like conch shells and red ochre in exchange for faith healer services, prayers, and blessings (Chipman and Joseph 2010:31). In an attempt to reach Spanish colonial outposts in modern-day Mexico, De Vaca traveled west towards the Guadalupe River, where he met three additional survivors of the Narvaez Expedition. The four were enslaved by a native group named the Mariames in 1534. For eighteen months, the Spanish would travel with the Mariames throughout south Texas before being able to depart for Spanish outposts in Mexico. They passed south of present-day Laredo, Texas and followed the Rio Grande River northwards toward El Paso, traveled through the American southwest and then southwards into Mexico towards the Gulf of California. In 1536, they reconnected with their countrymen. De Vaca chronicled his travels in his memoirs, published later that year. His writings present a detailed ethnohistory of Texas natives that includes indigenous place names, tribal names, traditions, and customs.

Subsequent entradas into Texas by Spanish conquistadors were driven by rumors of wealth relayed by De Vaca after his journey (Chipman and Joseph 2010: 40). An expedition by Hernando De Soto in 1539 that began in Florida briefly entered east Texas before turning back towards the Mississippi River and back to Mexico. In 1540, Hernando de Alvarado led a small detachment from Francisco Coronado's expedition in New Mexico and entered the northern Texas Panhandle on his way towards the Great Plains. The failure of these expeditions, both from high casualties in conflict with native groups and the lack of promised wealth to plunder, discouraged future Spanish conquistadors from venturing into Texas.

For the next century, Spanish colonial governors, military forces, ranchers, miners, and clergymen focused on expanding their territorial footprint in Mexico, which steadily grew north towards the Rio Grande River (Chipman and Joseph 2010: 44). The Spanish occupation of present-day New Mexico in 1598 resulted in occasional forays into west and north Texas via a ford of the Rio Grande River at modern-day El Paso. A Pueblo Indian revolt against the Spanish at Sante Fe and its surrounding settlements in 1680 forced Spanish occupiers out of the region, pushing them south into Texas. They established a community at El Paso as a base for reconquering New Mexico, countering French attempts to found colonies along the Gulf Coast, and serving as the furthest outpost of Colonial Spain in North America.

The Spanish ventured east into Texas, mostly as forays to assert Spanish control against the encroachment of French traders and colonists from present-day Louisiana (Chipman and Joseph 2010: 60). By 1726, Spain had constructed four fortified brick and wood fortresses, or *presidios*, between present-day San Antonio and Nacogdoches to repel French forces and occupancy claims in the region. The Catholic Church established missions in the areas around these *presidios* in an attempt to convert native peoples to Christianity. San Antonio became the provincial capital of Spanish Texas. Guarded by a *presidio*, positioned within a fertile floodplain for settlements, and centrally located between Spanish holdings in Mexico and French Louisiana, it remained the seat of Spanish power in the region for the next century.

Ongoing conflict with native groups like the Comanche and Apache bands who would raid settlements, missions, and ranches, spurred the Spanish to continually develop and fortify the interior of Spanish Texas (Chipman and Joseph 2010: 148). Three additional *presidios* had been constructed in central and north-central Spanish Texas by 1760, as more Europeans relocated to develop ranches and farms. Catholic missionaries had established a wide band of missions throughout the state in their attempt to Christianize the native populations of Texas, which was met with increasing resistance as Spain moved north into Texas. Spain's alliance with France during the French and Indian War in 1762 led later that same year to the transfer to Spain of French Louisiana, which the Spanish renamed "Luisiana."

Although Spain had now complete control of the North American continent west of the Mississippi River, the planned establishment of a prospering Spanish Texas was in difficulty. As the long-standing conflict with France had been resolved by the acquisition of Luisiana, *presidios* fell into disrepair from a lack of upkeep, endemic corruption by commanders, and a century of persistent conflict with native groups unwilling to tolerate Spanish colonization. The Spanish Empire viewed the English and Russian claims on the eastern and western coasts of North America, respectively, as a greater threat than conflicts with native groups within Texas, resulting in inadequate military support for the *presidio* network and their affiliated settlements and missions. Persistent raids by the Apache and Comanche resulted in thousands of deaths of Spanish colonists in the latter half of the eighteenth century. Additional conflicts on the European mainland between the French Republic and Spain in 1795 resulted in the Treaty of Aranjuez in 1801, which restored Luisiana back to French control, further constricting the territory and governance of Spanish Texas.

By 1803, fewer than 3,000 Spanish nationals lived in Spanish Texas and only 2 *presidios* remained (Chipman and Joseph 2010: 230). Revolutions in Spain percolated into the Americas and nationalist movements to establish Mexican independence began in the early nineteenth century. Independence uprisings led by Miguel Hidalgo y Costilla and Ignacio Allende in 1810 began a decade-long revolutionary civil war that resulted in the formation of an independent

Mexican state in 1821. Spanish Texas became part of the new nation of Mexico, ending 300 years of Spanish claim on the region.

3.6 Historic Texas (A.D. 1820 – Present)

Anglo-American settlement in the area of Maverick County began in 1834. It was first noted by Dr. John Charles Beals, who sighted an American hunter and his family near present-day Eagle Pass while on his way to settle in Mexico. After the Texas Revolution, the area was the site of many underground trade operations due to its location on the Rio Grande River, the border between Mexico and Texas. Settlement ramped up after the Mexican-American War. In 1848, Captain John A. Veatch and his militia set up a camp and observation post, which Captain Veatch called “Camp Eagle Pass” (Ochoa 2024). Camp Eagle Pass remained a terminus and landmark for frontiersman, trappers, and traders after the hostilities concluded. It was renamed Fort Duncan in 1849. The California Gold Rush brought an influx of travelers to Fort Duncan, which eventually resulted in the establishment of a settlement called California Camp. The town of Eagle Pass as it exists today was laid out in 1850 by banker John Twohig, who established the town just two miles from Fort Duncan (Ochoa 2024). The area around Fort Duncan and Eagle pass continued to grow and in 1851, a post office and stage line to San Antonio were established, solidifying the area as an enduring community (City of Eagle Pass Economic Development 2024).

Alongside burgeoning trade operations in future Maverick County, ranching began to grow greatly around 1850. One prominent rancher and speculator, William Leslie Cazneau, began to ranch in what would be northern Maverick County. Cazneau’s wife, Jane Cazneau, was a noted author and journalist who wrote under the pseudonym Cora Montgomery (Ochoa 2024). Cora Montgomery published an account of her time at Eagle Pass in 1852 entitled “*The Eagle Pass; or Life on the Border*”. Montgomery’s work provides a citizen’s view into day-to-day life on a ranch in future Maverick County and in the fledgling town of Eagle Pass. She describes Eagle Pass in the following terms: “...Eagle Pass, with only its one rude edifice, and its tented encampment, where the future Fort Duncan was to arise...fair and healthy as is its site, and full of promise as are its position and prospects...” (Montgomery 1852).

Fort Duncan’s existence paved the way for one of the first commercial businesses in Maverick County, when Friedrich Wilhelm Carl Groos, a banker, formed a freight company and obtained a contract with the U.S. Army. The company, F. Groos and Company, worked to haul supplies for the Army at Fort Duncan (York 2024). Groos employed members of seventy Mexican families at F. Groos and Company, allowing the families to emigrate from Mexico to Maverick County. One of the families, the San MIGUELS, later established the first large-scale ranch in Maverick County on Elm Creek in 1853. It was the first ranch of its kind in the area, specializing in the capture and branding of cattle, sheep, and horses (Ochoa 2024). The San

Miguel ranch became not only a physical landmark for travelers in the area, it also ushered in the practice of ranching, as discharged soldiers from Fort Duncan and those left behind by the California Gold Rush picked up the occupation. Among those who made a foray into the world of ranching was Jesse Sumpter, a former sergeant discharged from Fort Duncan, who settled in Eagle Pass in 1852. Sumpter opened a saloon in Eagle Pass in 1854 and later a cattle ranch. With his military expertise, Sumpter often acted as deputy sheriff of Eagle Pass where his job was to accompany prisoners to San Antonio. He was eventually appointed the first Sheriff of Maverick County after its creation (Pingenot 2024).

Maverick County was officially established in 1856, using land from neighboring Kinney County. The county was named after Samuel Maverick, a lawyer, speculator, rancher, and one time mayor of San Antonio. Maverick was one of the largest investors in land in the area at the time of the county's creation. In the years following, Maverick County was impacted by the Civil War. Fort Duncan was taken over by the Confederacy and Eagle Pass was made into a trade depot for The Military Board of Texas, focusing on the transportation of cotton during wartime (Vivian 2024). Friederich Groos pivoted his successful F. Groos and Company's focus to the trade of cotton and established a successful cotton yard and press by 1864 (Ochoa 2024).

In the years following the Civil War, Eagle Pass saw a downturn and entered an era marked by illicit activity. Violent raids by native peoples, smuggling operations, and gambling became characteristic of the town. Maverick County remained an area focused on ranching and trade. A telegraph line was completed in 1875 and a courthouse was erected in 1885 (Ochoa 2024). Groups of formerly enslaved persons utilized Eagle Pass as a means to cross into Mexico with hopes of settling there. Around 1894, one such group of about 125 formerly enslaved African-Americans arrived in Eagle Pass to cross into Mexico, in an effort to plant and raise cotton there. At that time, the area was struck by a smallpox epidemic and at least 26 members of the group succumbed to the illness. These victims were buried in a mass grave near Seco Mines, where the Elm Creek meets the Rio Grande River. This area is located outside of the APE of this project (Find a Grave 2014).

In the decade between 1875 and 1885, the population and the number of ranches in Maverick County grew substantially. By 1900, the average farm size had reached historic heights. The farming and ranching boom gave rise to a need for large-scale irrigation. To address this need, rancher Patrick W. Thompson formed the Eagle Pass Irrigation Company. The company worked to complete canals until it ran out of funds. The project was given new life in 1926 when Captain W. A. Fitch and his son, Maverick County Judge W. O. Fitch, began to promote the work Thompson had completed decades before. The pair were awarded the bonds and permits necessary and by 1932 the canals went into operation, allowing the Quemado Valley to be cultivated for the first time. The canals continued to grow through the decades and, by

the 1940s, 34,500 acres of land were benefiting from irrigation from the Maverick County Irrigation Canal (Pingenot 2024).

Along with ranching and farming, coal was an important part of Maverick County's development. Coal mining began before the county was officially established, as soldier at Fort Duncan mined ore for gunpowder. Mining operations grew at the turn of the century, with the establishment of the Southern Pacific Railroad. The Eagle Pass Coal and Coke Company supplied fuel for the railroad and was prominent enough to prompt the development of Dolchburg, now the town of Seco Mines, which housed 90 workers. The mines were in operation until 1925 (Texas Historical Sites Atlas 1975). Throughout the early to mid-twentieth century, Maverick County grew and was reliant mostly on agriculture and ranching.

4.0 Background Research

Prior to performing fieldwork, VHB conducted background research to construct a history of archaeological investigations in the area. VHB consulted the Texas Archaeological Sites Atlas was consulted. Background research also included examination of all archaeological site forms and previous undertakings conducted within a 1-km radius of the APE. This research revealed that 10 previously recorded archaeological sites are within a 1-km radius of the APE, four of which intersect the APE (Table 2 and Figure 5). Additionally, 14 previous archaeological resource surveys have been conducted within 1-km of the APE, four of which intersect with the APE.

4.1 Previous Archaeological Sites and Surveys

Available information on past survey methodologies is limited, as the Texas Archaeological Site Atlas does not host archaeological survey reports. According to reviewed site forms, surface pedestrian surveys within and near the current APE were conducted in in the 1970s, 1990, and 1995. Methodologies employed in the 1976, 1977, and 1979 U.S. Environmental Protection Agency (EPA) surveys are not available; but based on the site forms for the sites recorded in 1976, a surface survey methodology seems likely. Additional archaeological surveys were conducted in 1994, 1995, and 1999; three sites (41MV120, 41MV203, and 41MV277) were recorded during those surveys, only one of which (41MV203) is within the present APE. Two additional surveys in 2001 and 2002 are included in the Texas Archaeological Site Atlas, but no sites are recorded with those dates within 1 km of the present APE and the survey reports are unavailable. The 2001 survey is likely related to the 1999 survey for the construction of road JTF-6.

Table 2. Previously Recorded Sites within 1 km of the APE.

Site Number	Site Type	Cultural Affiliation	Current NRHP Eligibility	Distance From Project APE (Meters [m])
41MV57	Lithic Scatter	Unknown Precontact	Unknown	
41MV58	Lithic quarry, Domestic	Unknown Precontact	No Recommendation	
41MV67	Lithic Scatter	Unknown Precontact; Archaic period	Unknown	
41MV68	Lithic Scatter	Unknown Precontact; Archaic period	Unknown	
41MV107	Lithic Scatter; Historic Refuse	Unknown Precontact; early 20 th century	Unknown	

Site Number	Site Type	Cultural Affiliation	Current NRHP Eligibility	Distance From Project APE (Meters [m])
41MV108	Lithic Scatter	Unknown Precontact	Unknown	
41MV109	Lithic Scatter; Historic domestic; Historic mine	Archaic period, Late Precontact period, 19 th -20 th century	Recommended Eligible	
41MV120	Lithic Scatter	Unknown Precontact	Recommended Ineligible	
41MV203	Lithic Scatter	Unknown Precontact	Recommended Ineligible	
41MV277	Lithic Scatter	Unknown Precontact	Unknown	

Four archaeological sites were recorded south of the project area during EPA surveys prior to the 1990s.

Site 41MV67 was recorded in 1979.

The site contains lithic debitage, as well as bifaces, ground stone, and shellfish remains. The site form reports that although the northern portion of the site has been heavily disturbed, the southern portion warrants avoidance to protect undisturbed deposits—which the archaeologists hypothesized as up to a meter deep. Site 41MV67 was not evaluated for the NRHP and its eligibility is unknown.

41MV68 is an extensive precontact site

Two stemmed bifaces were surface collected from the site, but much of it had been disturbed when it was recorded in 1979. The only recommendation for further work at the site was for additional surface collection before future disturbances destroyed the site. Site 41MV68 was not evaluated for the NRHP and its eligibility is unknown.

Site 41MV107 is a multicomponent site with unknown precontact association and twentieth century historic refuse

According to the archaeological site form, no subsurface testing was conducted at the site and the area has been subjected

to significant agricultural disturbances, [REDACTED]

[REDACTED] The site was not evaluated for the NRHP under Criterion D and its eligibility is unknown. [REDACTED]

Site 41MV108 is located [REDACTED]

[REDACTED] Surface collections at the site yielded flake debris and a ground stone fragment. Agricultural activities impacted archaeological contexts at the site, but the surveyors assumed that there may be deeper, undisturbed soil deposits that may contain in-situ precontact assemblages. Site 41MV108 was not evaluated for the NRHP under Criterion D and its eligibility is unknown, [REDACTED]

Site 41MV109 is located [REDACTED]. It is a large site with occupations spanning the Archaic period through the post-contact period (Hubbard 1990c). Approximately 20 hearth features were recorded eroding from various depths, as well as historic mine shafts and structural remains. This floodplain site was heavily collected by locals and shows extensive damage from residential development. Site 41MV109 is the only site within 1 km of the APE that was recommended eligible for the NRHP; avoidance was suggested for already identified features and archaeological testing was recommended if impacts to features are unavoidable.

A survey for the proposed widening of road [REDACTED] identified site 41MV120, [REDACTED] of the project area (Ward 1995). The methodology and extent of the testing at 41MV120 are not known, as the survey report is unavailable, but the site form indicates that non-diagnostic lithic debitage, tools, and burned rock were observed. Site 41MV120 was recommended not eligible for the NRHP under Criterion D and no further work was recommended.

In 1994, site 41MV203 was recorded during a surface survey [REDACTED]. The site measures approximately 6 acres and is located [REDACTED]. A scatter of non-diagnostic lithic debitage and tools were found at the site, which was recorded as a precontact quarry area. Site 41MV203 was recommended not eligible for the NRHP due to heavy disturbance and a lack of diagnostic artifacts. No further work for the surveyed portion of the site was recommended but the site form notes that intact deposits may be present outside of the recorded site boundaries.

Site 41MV277, a precontact lithic site of unknown cultural affiliation, was recorded in a 1999 archaeological survey for the proposed construction of road [REDACTED]

[REDACTED] No shovel testing or artifact collection was performed at site 41MV277 and estimates of the site's dimensions were limited to the five-meter-long pedestrian survey observations. The observed artifacts were mostly late-stage lithic reduction debris and lithic cores. No NRHP evaluation was made for site 41MV277 and its NRHP eligibility is unknown, but machine trenching was recommended at the site to determine the depth and extent of precontact archaeological contexts (Greaves 1999).

5.0 Methods

The primary objectives of the survey were to identify any previously unrecorded archaeological sites within the APE, assess their integrity, and evaluate those sites through the application of NRHP criteria. Ancillary objectives included the identification of any previously recorded archaeological sites located both within the APE and a 1-km radius of the APE, and the compilation of all relevant cultural information pertaining to the APE's surroundings. Tasks performed to accomplish these objectives included background investigations, field survey, and the application of the NRHP eligibility criteria. Recovered artifacts were subjected to laboratory analysis. Methods employed for each of these tasks are described below.

5.1 Background Research

Background research was conducted in order to reconstruct the history of occupation and land use within the APE. The purpose of this initial effort was to identify many previously recorded archaeological resources which may have been located within the APE. In addition, background research included an examination of all archaeological site forms and previous archaeological undertakings conducted within a 1-km radius of the APE. All relevant cultural studies and historic studies pertaining to the APE and the immediate area were consulted. Compiled bibliographies of all relevant previous surveys were consulted and references procured for historical context information.

5.2 Field Methods

Fieldwork was conducted through two primary methods: 1) surface inspection and 2) shovel testing of the project APE where possible. In general, shovel tests were excavated at 30-m intervals spaced 30 m apart. Shovel testing was not conducted in areas that were flooded, paved, developed, within active railroad right-of-way, or on hillside slopes greater than 20 degrees. Shovel tests measured 30 centimeters (cm) in diameter and were excavated at least 80 cmbs or at least 10 cm into sterile subsoil. Shovel test pits were spaced along transects and excavated by natural soil horizons. All excavated soils were sifted using 6.4-millimeter (¼-inch) mesh for uniform artifact recovery. Standardized data for each shovel test were collected on forms and in notebooks; information recorded consisted of depth, Munsell soil color for each soil stratum, and the number and type of each artifact encountered, if applicable. Once excavated, the walls of each shovel test were inspected for artifacts, features, and other indications of an archaeological site. All excavated shovel tests were backfilled upon completion.

Artifacts were collected in 0.3-millimeter plastic bags, which were labeled with provenience information, including either the state or field site number, as appropriate; shovel test number; stratum number; and depth from which artifacts were recovered. Sketch maps were made of areas and shovel test transects, as needed. Representative photographs of the project APE were taken to document the general topography, vegetation, and environmental condition of the APE. Upon recovery of cultural materials, the find was assigned a sequential bag number. Positive shovel tests were further investigated by the excavation of additional shovel tests at 15-m intervals in every cardinal direction using a grid pattern until two negative shovel tests at close interval were encountered.

For the purposes of the survey, an archaeological site is a concentration of artifacts, ecofacts, or modifications to the landscape that are associated with past human activity and retain their context. An archaeological site must contain artifacts or features at least 50 years old, and meet any of the following descriptive criteria:

1. An area yielding three or more artifacts from the same broad cultural period (i.e., historic or prehistoric) on the surface within a 30-m radius;
2. A shovel test that produces one artifact and at least one surface artifact from the same broad cultural period within a 20-m radius from that shovel test;
3. An area with visible or historically recorded cultural features (e.g., shell midden, cemetery, rockshelter, chimney fall, brick walls, piers, earthwork, etc.).

Locations with two or fewer artifacts found within a 30-meter radius and not containing features or ruins are classified as Isolated Finds (IF's). Isolated finds are, by definition, not considered eligible for listing in the NRHP. For cases where an isolated find is unique, and potentially may be considered eligible for inclusion in the NRHP, it should be defined as a site. Deposits of cultural artifacts that have no integrity, such as road fill, stream gravels, or other situations where artifacts clearly are re-deposited, also should be considered isolated finds.

5.3 Laboratory Methods and Artifact Curation

Upon field survey completion, artifacts were transported to the VHB laboratory located in Tucker, Georgia. Artifact bags were checked against bag lists created in the field to confirm receipt of all excavated/recovered material. Artifacts were washed, sorted, and divided by class/type and assigned a catalog number. Artifacts were placed in resealable polyethylene bags with catalog tags and bag information enclosed. Artifact bags were placed in archival stable acid-free boxes.

Analysis of the artifacts focused on determining specific cultural and temporal affiliations. Precontact artifacts were initially sorted into categories based on material (i.e., lithics, ceramics, and other). Lithic analysis focused on assigning typology based on Cambron and Hulse (1986) and Justice (1987). Debitage analysis followed Bradbury and Carr (1995). Raw material identification followed Skrivan and King (1983).

All provenience and catalog information was compiled in an Excel database. Diagnostic artifacts were labeled using a two-coat method (i.e., the “sandwich technique”) using small, acid-free paper labels, permanent black ink, and Acryloid B-72 lacquer. All artifacts were placed in resealable polyethylene bags with enclosed provenience information printed on acid-free paper tags. Artifact bags were placed in archival stable acid-free boxes. All field notes, photographs, and other information produced throughout the course of this survey are being temporarily stored at the Atlanta facilities of VHB. Following finalization of the report, related materials will be submitted to the curation facilities at the Center for Archaeological Studies at Texas State University. This facility meets the standards defined in 36 C.F.R. Part 79, Curation of Federally-Owned and Administered Collections; Final Rule.

5.4 National Register of Historic Places Evaluation Criteria

The data obtained from the survey was evaluated based on the NRHP criteria for eligibility. These criteria are specified in the Department of the Interior Regulations, 36 C.F.R. Part 60.4, Criteria for Evaluation. According to Regulation 36 C.F.R. Part 60.4, cultural resources can be determined eligible if they:

- A. Are associated with events that have made a significant contribution to the broad pattern of history;
- B. Are associated with the lives of persons significant in the past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction, or;
- D. Have yielded, or are likely to yield, information important to prehistory or history.

Any particular cultural resource may be eligible under one or more of the above criteria. Criteria A, B, and C, however, are most commonly applied to buildings, structures, districts, or non-archaeological sites (e.g., historic landscapes). Though many cultural resources or properties eligible under Criteria A, B, and C may have archaeological deposits, individual archaeological sites are most frequently evaluated and considered eligible specifically under Criterion D. The NRHP evaluation criteria are employed for any historic properties (including archaeological sites) that are 50 years of age or older. Therefore, any resource that has a

demonstrated age of at least 50 years may be evaluated. More recent historic properties may be eligible if they demonstrate exceptional significance (Sherfy and Luce n.d.).

In addition to the above criteria, the NRHP also stipulates that to be eligible, a property, or archaeological site, must possess integrity of location, design, setting, materials, workmanship, feeling, and association. According to the National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, integrity is defined as the resource's ability to convey its significance (Andrus and Shrimpton 1990). For a resource to retain sufficient historic integrity, it must possess several, and usually most, of the following seven aspects:

1. Location – The place where the historic property was constructed of the place where the historic event occurred.
2. Design – The combination of elements that create the form, plan, space, structure, and style of a property.
3. Setting – The physical environment of a historic property. Setting includes elements such as topographic features, open space, viewshed, landscape, vegetation, and artificial features.
4. Materials – The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship – The physical evidence of the labor and skill of a particular culture or people during any given period in history.
6. Feeling – A property's expression of the aesthetic or historic sense of a particular period of time.
7. Association – The direct link between an important historic event or person and a historic property. Under Criterion D, it is measured in the strength of association between data and important research questions.

Integrity is considered relative to whatever significance the archaeological site can still adequately convey. While it is possible to apply the above aspects of integrity to archaeological sites, there are no universally applied standards. Sites must be evaluated within their respective historic contexts.

6.0 Results of Phase I Archaeological Survey

VHB was able to investigate the entirety of the 108-ac APE via shovel testing and pedestrian survey. During the course of survey work, 566 transect shovel tests and eight delineation shovel tests were investigated (Figures 6-9). Of these 574 shovel tests, 416 were negative for cultural materials, 157 could not be excavated and were recorded as "No Dig," and one was positive for cultural materials. No Dig locations consisted of areas with standing or running water, developed areas, active rail lines, slopes of greater than 20 degrees, bluff edges overlooking creek beds, or hazardous landfill and refuse dump areas. Vegetation throughout the APE consisted of fallow crop fields with no cover crop, dense stands of scrub brush with acacia, prickly pear, mesquite, and huisache, and densely wooded ravines down to creek beds. Most of the APE is situated within upland terrace locations that contain shallow topsoil; approximately 5.9 ac of the APE is located within the Rio Grande River alluvial floodplain. The survey identified no new archaeological sites. The survey revisited previously recorded sites 41MV107, 41MV108, 41MV203, and 41MV277 within the APE. The results of archaeological survey at these sites are detailed below.

6.1 Site 41MV107 - Revisit

Site 41MV107 is a non-diagnostic precontact lithic and historic scatter observed during a surface reconnaissance [REDACTED]

[REDACTED] The previously recorded site boundaries measure approximately 1.5 km northeast-southwest by 200 m east-west. Although a surface reconnaissance identified only a few artifacts at a single location, the entire landform was determined by previous investigation to be a site based on its potential to contain additional cultural deposits.

[REDACTED] Within the APE, VHB investigated 19 short-interval shovel test locations within the boundaries of site 41MV107 (Figure 10). All locations were negative for cultural materials. Soils at the site consisted of two strata. Stratum I, a pale brown (10YR 6/3) silty loam, extends between the surface and 55 centimeters below surface (cmbs). Stratum II, a sterile subsoil of light gray (10YR 7/1) silty clay, is present between 35 and 55 cmbs. [REDACTED] During the survey, surface visibility was greater than 50 percent.

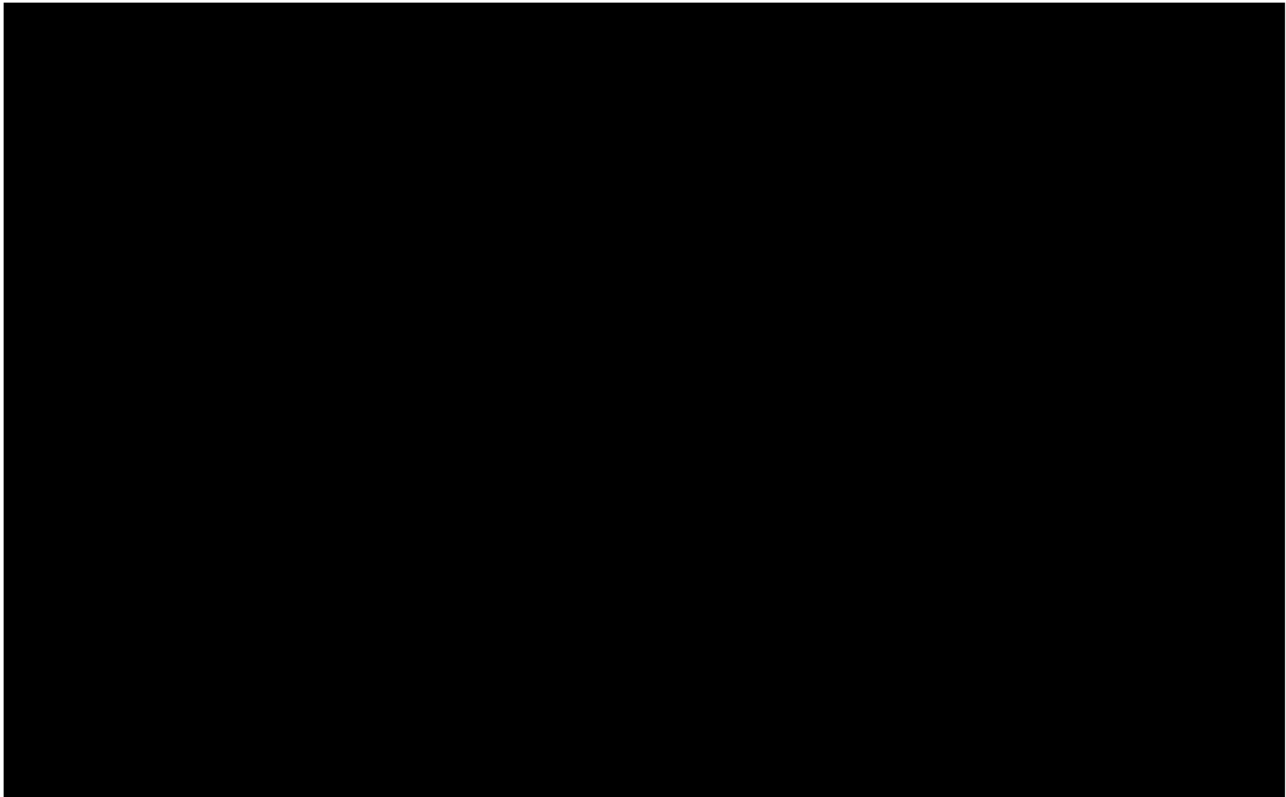


Figure 11. Overview of Site 41MV107, from ST E3225N1340 Facing North.

No cultural materials were observed in either surface or subsurface contexts at the site within the boundaries of the APE. Previous investigations at the site were limited to surface reconnaissance. Soil profiles observed during this survey indicate that the site does not contain the potential for deeply buried archaeological contexts within the APE as no alluvial deposits were observed and silty clay subsoils were recorded between 35 and 55 cmbs. As no cultural materials were recovered during this survey, VHB does not offer any new NRHP eligibility recommendations for the site, and it should continue to be considered unknown under Criterion D. The portion of the site revisited within the APE lacks integrity and significant data potential under Criterion D of the NRHP; therefore, development of the APE would have no effect to significant or eligible archaeological deposits as these areas of the site would not contribute to the overall eligibility of site 41MV107. No further work at site 41MV107 within the APE is recommended.

6.2 Site 41MV108 - Revisit

Site 41MV108 is a non-diagnostic precontact lithic scatter originally recorded during a surface reconnaissance [REDACTED]

[REDACTED] The previously recorded site boundaries measure approximately 850 m northeast-southwest by 200 m east-west. [REDACTED]

[REDACTED] During the site's initial recording, very few

artifacts were recovered and only at a single location. [REDACTED]

[REDACTED] The portion of site 41MV108 within the APE covers approximately 18.5 acres [REDACTED]

Within the APE, VHB investigated 83 short-interval shovel test locations during the revisit to site 41MV108 (Figure 12). Of this total, 55 were able to be excavated, none of which contained cultural materials or potential evidence for the presence of features. Soils at the site consisted of two strata. Stratum I, a pale brown (10YR 6/3) silty loam, extends between the surface and 55 cmbs. Stratum II, a light gray (10YR 7/1) silty clay, is present between 35 and 55 cmbs. Vegetation at the site consists of [REDACTED]. No cultural materials were observed in either surface or subsurface contexts at the site. The other 28 of the 83 shovel test locations were not excavated due to environmental conditions that prevented subsurface investigation. These conditions included standing water, steep ravine slopes, and informal refuse dump piles (Figure 14).

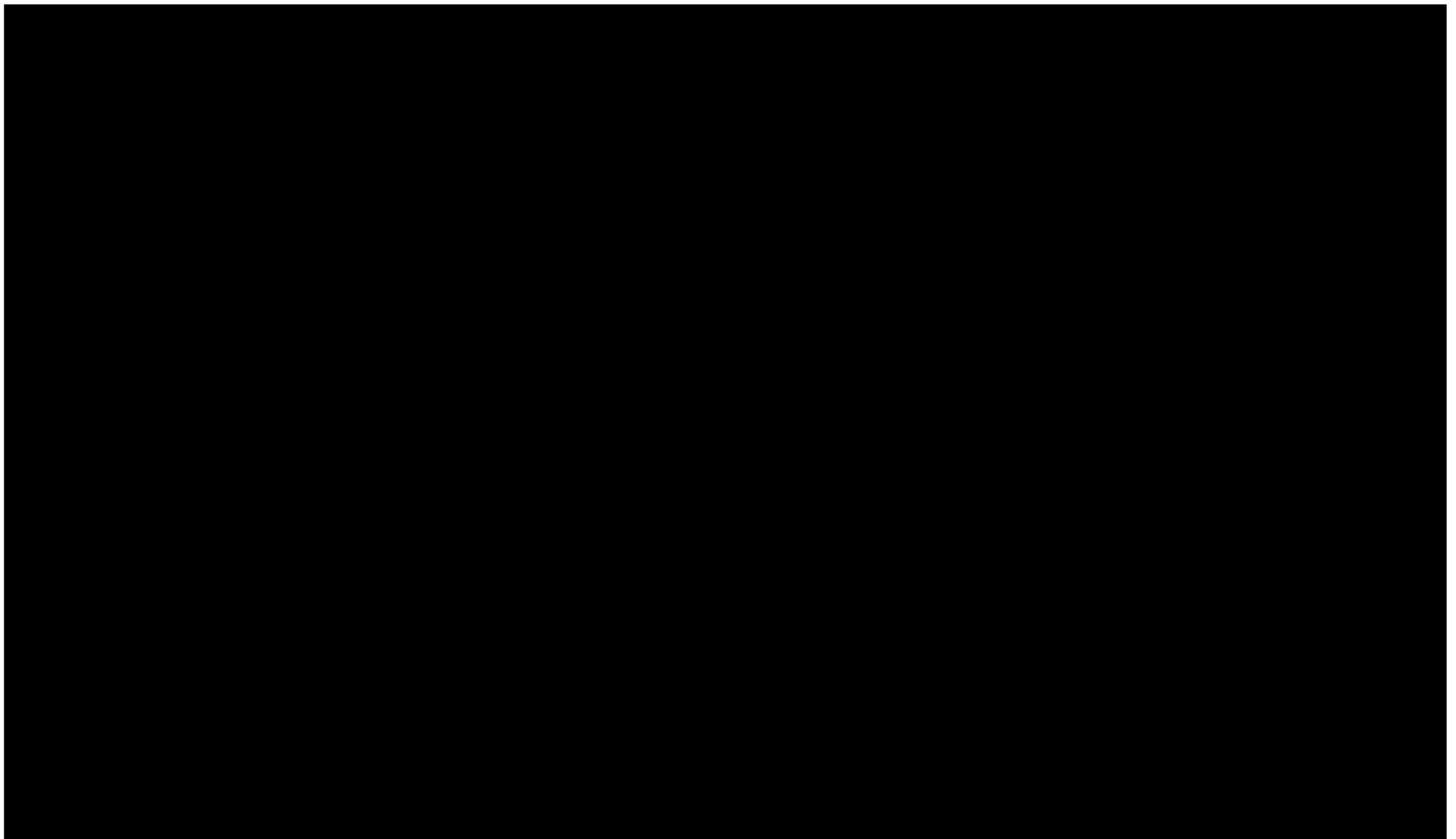
Previous investigations at the site were limited to surface reconnaissance. Soil profiles observed during this survey indicate that the site does not contain the potential for deeply buried archaeological contexts within the APE as no alluvial deposits were observed and silty clay subsoils were recorded between 35 and 55 cmbs. As no cultural materials were recovered during this survey, VHB does not offer any new NRHP eligibility recommendations, and the site should continue to be considered unknown under Criterion D. The portion of the site revisited within the APE lacks integrity and significant data potential under Criterion D of the NRHP; therefore, development of the APE would have no effect to significant or eligible archaeological deposits as these areas of the site would not contribute to the overall eligibility of site 41MV108. No further work at site 41MV108 within the APE is recommended.

6.3 Site 41MV203 - Revisit

Site 41MV203 was originally recorded by surface reconnaissance as a non-diagnostic lithic quarry site [REDACTED]. A Phase I archaeological survey [REDACTED] recorded a dense scatter of precontact lithic tools, tested cobbles, flake debitage, and informal tools across a six-acre survey tract. The site boundaries, which measure approximately 200 m north-south by 200 m east-west, were determined based on the extent of the landform rather than the observed extent of cultural materials.



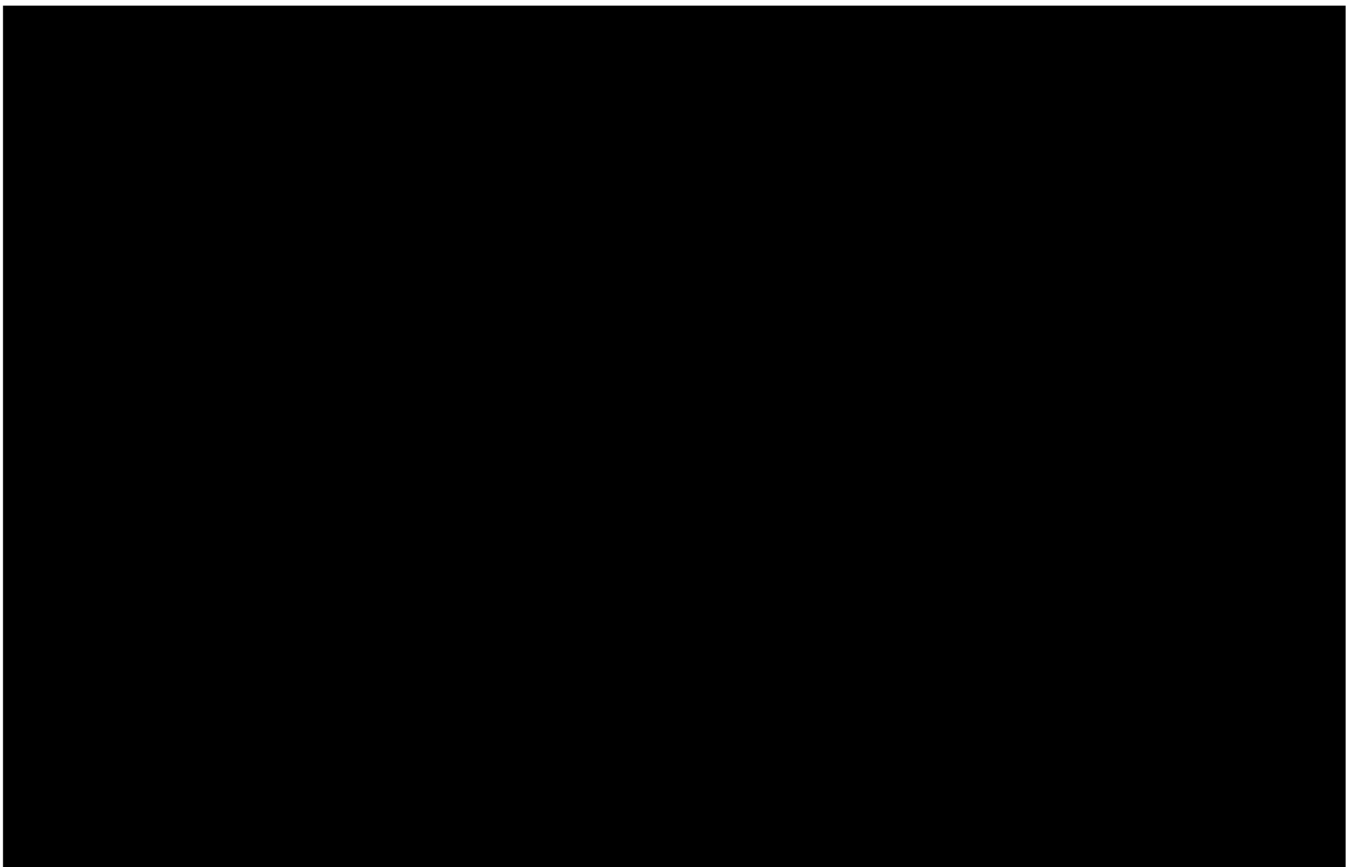
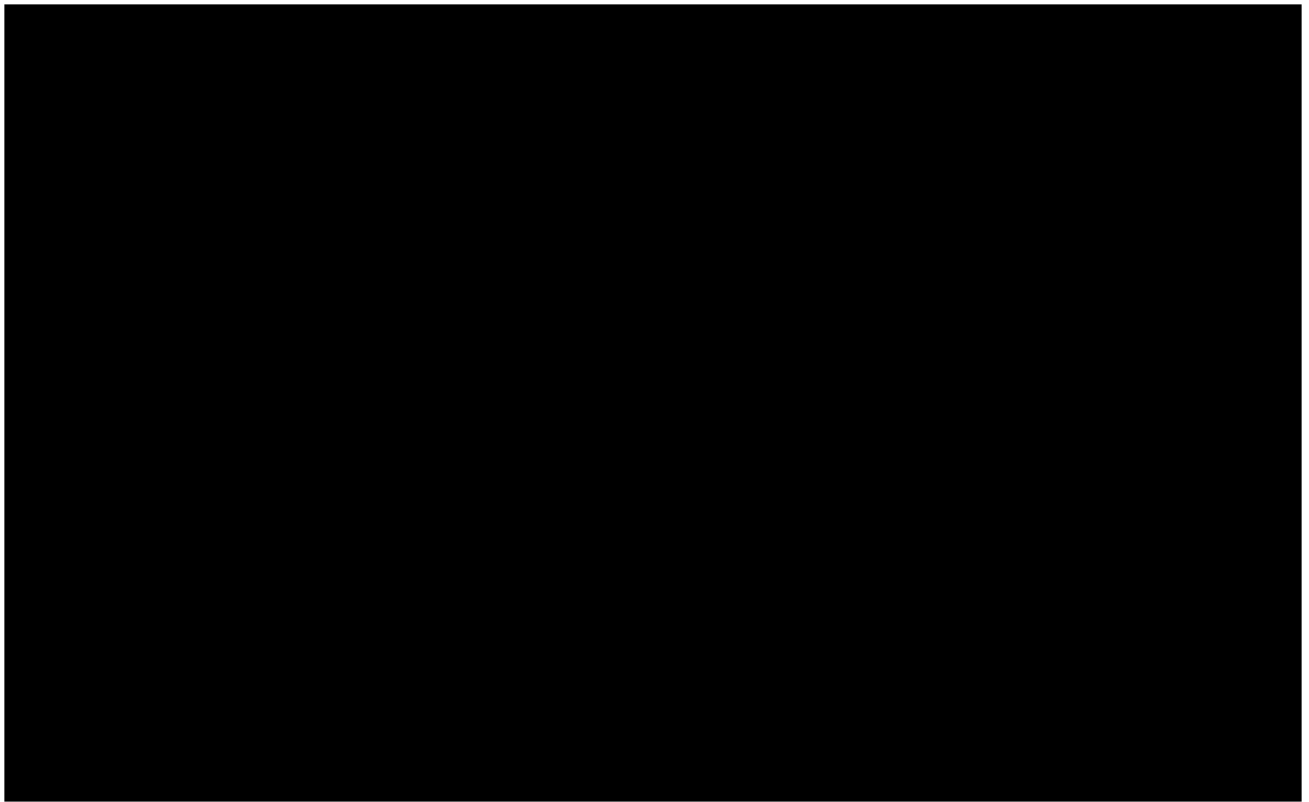
Figure 14. General Environment at Site 41MV108, From ST E3195N1260 Facing South.



No cultural materials were collected during the initial recording and it was noted that the site was heavily disturbed [REDACTED]. The portion of site 41MV203 located within the APE totals approximately 0.6 acres.

VHB investigated 24 short-interval shovel test locations within and adjacent to site 41MV203 (Figure 15). Of these, 22 were negative for cultural materials, one could not be excavated due to steep slopes; and one was positive for cultural materials. Eight additional tests were conducted at 15 m intervals around the single positive shovel test to delineate the extent of subsurface archaeological contexts. All eight tests were negative for cultural materials. A typical shovel test profile at site 41MV203 consists of two strata. Stratum I is a light brownish gray (10YR 6/2) silty clay loam between the surface and 80 cmbs; in many portions of the site, Stratum I was as shallow as 5 cmbs, with greater depths noted at the base of eroded slopes. Cultural materials were recovered from the first 5 cm of Stratum I at Shovel Test E3580N1250, which was situated near [REDACTED]. These materials were determined to be original to the site, not redeposited refuse material. Stratum II, a gray (10YR 6/1) silty clay, is present between 10 and 80 cmbs and was sterile for cultural materials. VHB recorded additional precontact lithic materials located on the surface of site 41MV203 in five locations (see Figure 15). Determining in-situ lithic materials at the site was complicated by the extensive refuse dumping at the site, the majority of which contained non-local fill soils, gravel, and chert nodules (Figure 16). Machine-cracked chert was present throughout these piles and erosion has spread much of these materials around the surface of site 41MV203.

An assemblage of cultural materials recovered from site 41MV203, consisting of debitage, bifacial tools, and informal utilized flake tools, was collected from contexts away from refuse dump areas. These materials were presumed to be from an original context. The assemblage recovered from site 41MV203 is depicted in Figure 17 and includes bifacially worked tools (n=4), a unifacial scraper (n=1), a utilized flake (n=1), and flakes with a multi-faceted platform (n=2). None of the lithics are diagnostic of a known Precontact time period. The materials suggest a domestic site, where formal and informal tools are used to process resources such as animal hides and flora. Recovered debitage consists of small flakes with multiple platform facets that indicate waste flakes late in the lithic production process. No lithic outcrops, naturally exposed chert nodules, or tested lithic cobbles were identified within the APE. Additionally, no large single-platform flakes or specimens with chert cortex were identified, suggesting that no lithic quarrying was taking place in this part of the site. The lithic assemblage recovered during the investigation suggests that this portion of site 41MV203 represents an ephemeral camp of unknown cultural affiliation which concurs with the assessment of the site during its original recording (Turpin 1994).



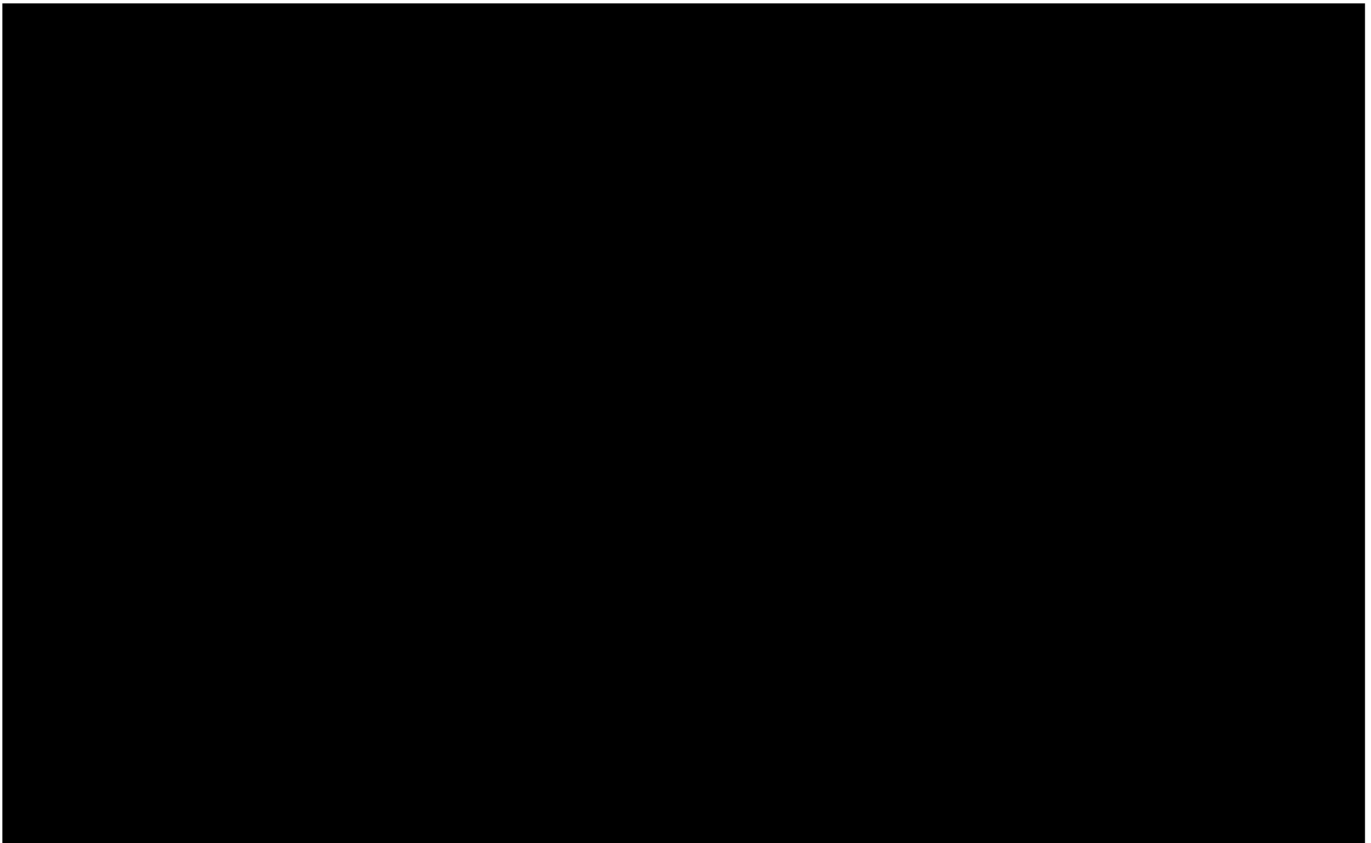
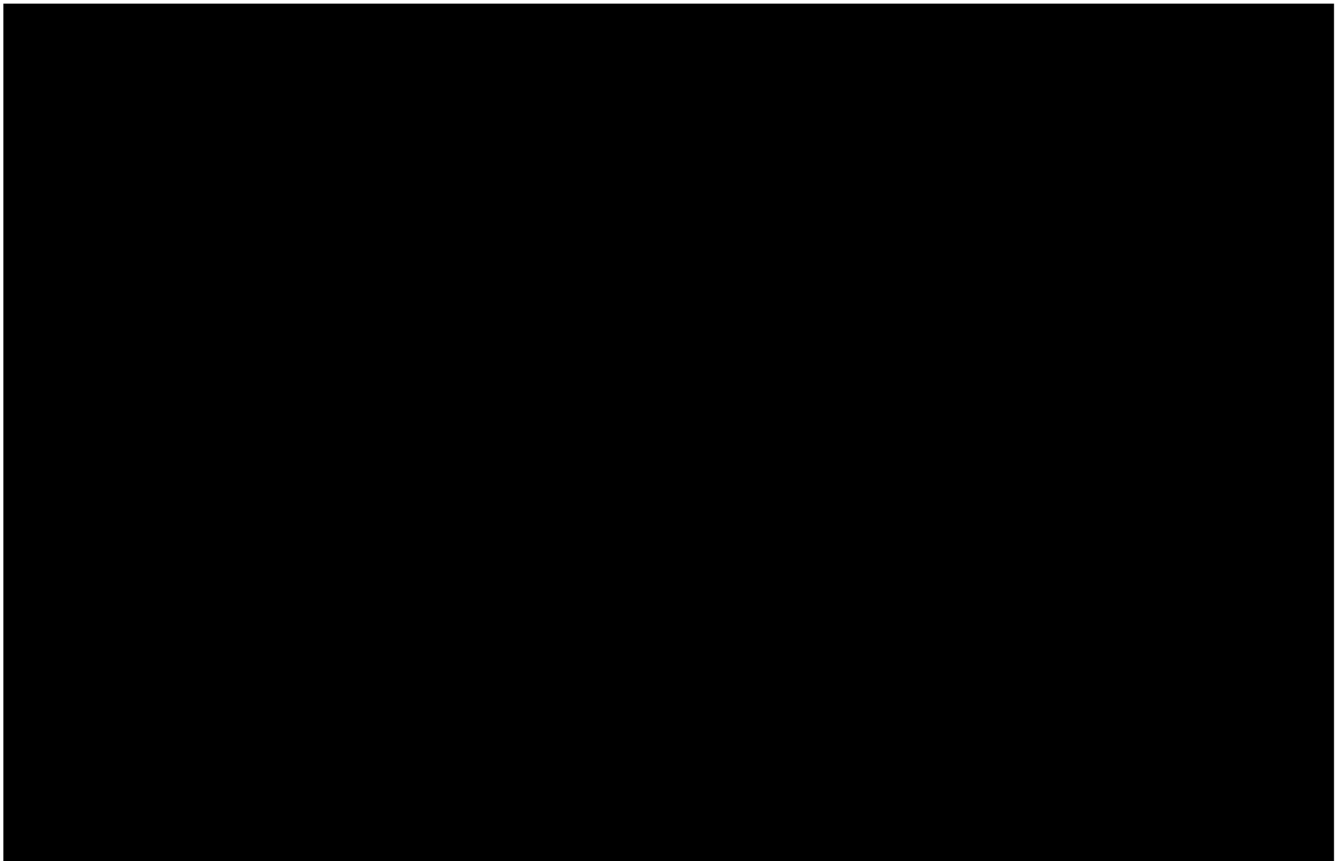
The revisit of site 41MV203 during the present survey indicates that the site has been heavily impacted [REDACTED]. Precontact lithic materials were recovered from surface contexts and indicate an ephemeral camp of unknown cultural affiliation; this confirms the original assessment for site 41MV203. Soils observed during this survey indicate that the site does not contain the potential for deeply buried archaeological contexts within the APE as no alluvial deposits were recorded and silty clay subsoils were recorded between 5 and 80 cmbs VHB recommends that the site boundaries be expanded to include the surface scatter of cultural materials recorded during this investigation. VHB recommends no change to the current NRHP eligibility status of not eligible under Criterion D. Additionally, the portion of site 41MV203 within the APE does not contain significant data regarding precontact lifeways, and modern impacts of informal refuse dumping diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV203.

6.4 Site 41MV277 - Revisit

Site 41MV277 was originally recorded during a surface reconnaissance [REDACTED]

[REDACTED] he previously recorded site boundaries measure approximately 220 m northwest-southeast by 160 m northeast-southwest. No cultural materials were collected during the initial recording and it was noted that the site was disturbed by heavy machinery use and informal refuse dumping. Site 41MV277 was presumed to have deeply buried deposits related to alluvial sedimentation. Additional work, including test unit excavation and machine trenching, was recommended to determine the depth, extent, and potential for significant archaeological deposits. The portion of site 41MV203 located within the APE covers approximately 1.8 acres.

Within the APE, VHB investigated 33 short-interval shovel test locations within the previously recorded boundaries of site 41MV277 (Figure 18). Of these, four were negative for cultural materials and 29 were not excavated. The four excavated shovel tests indicated that the portion of site 41MV277 was a modern landfill, with deeply buried layers of modern refuse in distinct layers. At the northernmost margin of the previously recorded site boundary, an eroded washout evidenced a depth of up to 20 feet of refuse deposits, with multiple distinct layers visible (Figures 19 and 20). An array of modern waste, including domestic goods, architectural materials, and tires, were observed on the surface and within excavated shovel tests.



Observed cultural materials at the surface did not appear to be older than 50 years. Investigations at the base of eroded areas at the site were not performed due to safety concerns. Shovel testing was terminated if it would be insufficient to reach the natural ground surface and landfill soils posed a safety risk to field personnel.

Visual inspection of the area within and around site 41MV277 showed that the landfill was extensive, with varying depths observed in multiple eroded areas. In addition to the observed fill areas at the site, surface disturbances [REDACTED] were observed throughout site 41MV277. The observed extent of the landfill disturbances goes from the known boundaries of site 41MV277 [REDACTED] measuring approximately 275 m northeast-southwest by 120m northwest-southeast. No precontact or historic cultural materials were observed during surface reconnaissance. The visible extent of the landfill was delineated and shovel testing at its margins revealed shallow natural soils, suggesting that this area was either highly eroded or had been used as a borrow pit for soils prior to the deposit of modern refuse.

The revisit of site 41MV277 during the current survey indicates that the site has been heavily impacted by modern usage and development. No materials related to the originally recorded precontact component were identified and the portion of the site within the APE consists only of modern landfill deposits. VHB recommends that the landfill be added as a historic component of site 41MV277, as it is a cultural modification of the landscape that likely qualifies as a historic property. The site boundaries should be extended to the observed extent of the landfill. VHB recommends no change to the current NRHP eligibility of unknown under Criterion D. The portion of site 41MV277 within the APE lacks integrity and significant data potential for providing insights into historic lifeways of rural Texas. The landfill deposits diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV277.

7.0 Summary of Findings

VHB surveyed 100% of the 108-ac APE, investigating 574 shovel test locations. Of these 574 shovel tests, 416 were negative for cultural materials, 157 could not be excavated and were recorded as “No Dig,” and one was positive for cultural materials. The majority of the APE is situated along upland terrace areas east of the Rio Grande River and its associated alluvial floodplain. A minor portion of the APE measuring approximately 5.9 ac is situated within the floodplain (Figure 21); tests in this location were prematurely terminated due to impassable gravel layers and have the potential for deeply buried Holocene or Pleistocene archaeological deposits.

VHB revisited four previously recorded archaeological sites during the investigation: sites 41MV107, 41MV108, 41MV203, and 41MV277. Sites 41MV107 and 41MV108 consist of non-diagnostic precontact lithic and historic artifact scatters recorded during surface reconnaissance surveys [REDACTED] both sites have an NRHP status of unknown under Criterion D. VHB recorded no additional cultural materials within these sites and encountered sterile silty clay subsoils between 35 and 55 cmbs; additionally, no potential for deeply buried archaeological deposits are present within the APE. VHB recommends no changes to their current NRHP eligibility status of unknown under Criterion D.

VHB investigated a total of 32 shovel test locations within and adjacent to site 41MV203. Of these, 31 were negative, one could not be excavated, and one was positive for cultural materials. Subsurface testing indicates that the portion of the site within the APE does not contain the potential for deeply buried deposits and sterile silty clays were encountered between 5 and 80 cmbs. Cultural materials were collected from the surface at five locations at the site. Site 41MV203 has been impacted by extensive refuse dumping of construction fill soils, the majority of which contained non-local soils, gravel, and chert nodules. Machine-cracked chert was present throughout these piles and erosion has spread much of these materials around the surface of site 41MV203. The assemblage of cultural materials determined to be original to the site indicates an ephemeral camp of unknown cultural affiliation. VHB recommends that the site boundaries be expanded to include the surface scatter of cultural materials recorded during this investigation. VHB recommends no change to the current NRHP eligibility status of not eligible under Criterion D. The portion of site 41MV203 within the APE does not contain significant data about historic precontact domestic lifeways, and modern impacts of informal refuse dumping diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV203.

VHB investigated 33 shovel test locations within the previously recorded boundaries of site 41MV277. Of these, four were negative for cultural materials and 29 were not excavated. The

four excavated shovel tests indicated that this portion of site 41MV277 was a modern landfill, with deeply buried layers of modern refuse. [REDACTED]

[REDACTED] No precontact or historic cultural materials were observed during the surface reconnaissance. The visible extent of the landfill was delineated and shovel testing outside of the observed extent revealed shallow natural soils, suggesting that this area was either highly eroded or had been used as a borrow pit for soils prior to the deposit of modern refuse. VHB recommends that the landfill be added as a cultural component of site 41MV277 and that the site boundaries be extended to the observed extent of the landfill. VHB recommends no change to the current NRHP eligibility status of unknown under Criterion D. The portion of site 41MV277 within the APE does not have any potential for significant data that would provide insights into historic domestic lifeways of rural Texas, and the nature of landfill deposits diminish the integrity of both association and materials at the site. No further work is recommended for site 41MV277.

Phase I archaeological survey was able to investigate subsurface conditions within approximately 3 feet (1.0 m) from the ground surface. Archaeological deposits within the alluvial floodplain [REDACTED] within the APE could be deeply buried (see Figure 21). There is potential for these types of deposits to exist below multiple feet/meters of overfill, at a depth which conventional hand excavation cannot reach. Based on the current project design, construction would not extend further than 2 feet (0.6 meters) below the ground surface save for specific areas. It is recommended that once project design plans are finalized, and these specific areas are known, a plan to investigate deeply buried archaeological deposits through mechanically assisted excavation be developed in coordination with OEA and THC.

References Cited

- Adovasio, J. M., Gunn, J. D., Donahue, J., Stuckenrath, R., Guilday, J., Lord, K., & Volman, K. 1980. Meadowcroft Rockshelter — Retrospect 1977: Part 2. *North American Archaeologist*, 1(2), 99-137.
- Anderson, David G., and Michael K. Faught. 1995. The Distribution of Fluted Paleoindian Projectile Points. *Archaeology of Eastern North America* 26:163-187.
- Andrus, Patrick W., and Rebecca H. Shrimpton. 1990. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. U.S. Department of the Interior, National Park Service, Interagency Resources Division, Washington, D.C.
- Bousman, C. Britt, Barry W. Baker and Anne C. Kerr. 2004. Paleoindian Archeology in Texas. In *The Prehistory of Texas*, edited by Timothy K. Pertula, pp. 15-102. Texas A&M University Press, College Station, Texas.
- Bradbury, Andrew P., and Philip J. Carr. 1995. Flake Typologies and Alternative Approaches: An Experimental Assessment. *Lithic Technology* 20(2):100-115.
- Cambron, James W., and David C. Hulse. 1986. *Handbook of Alabama Archaeology, Part I Point Types*. 2nd Edition, 3rd Printing. Alabama Archaeological Society, Huntsville, Alabama.
- Chipman, Donald E. and Harriet Denise Joseph. 2010. *Spanish Texas: 1519-1821, Revised Edition*. University of Texas Press, Austin, Texas.
- Cleland, Charles E. 1976. The Focal-Diffuse Model: An Evolutionary Perspective on the Prehistoric Cultural Adaptations of the Eastern United States. *Mid-Continental Journal of Archaeology* 1:59-76.
- Coe, Joffre L. 1964. The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society* 54(5).
- Collins, Michael B. 2004. Archeology in Central Texas. In *The Prehistory of Texas*, edited by Timothy K. Pertula, pp. 101-126. Texas A&M University Press, College Station, Texas.
- Delcourt, Paul A., and Hazel R. Delcourt. 1979. Late Pleistocene and Holocene Distributional History of the Deciduous Forest in the Southeastern United States. *Veroffentlichungen des Geobotanischen Institutes der ETH* 68:79-107.

Dillehay, Tom. 1989. Monte Verde: A Late Pleistocene Settlement in Chile, Volume I: Paleoenvironment and Site Context. Smithsonian Institution Press, Washington, D.C.

Early, Ann M., and George Sabo III. 1990. Previous Archeological Investigations. In *Human Adaptation in the Ozark and Ouachita Mountains*, by George Sabo III, Ann M. Early, Jerome C. Rose, Barbara A. Burnett, Louis Vogele, Jr., and James P. Harcourt, pp. 15-33. Research Series No. 31. Arkansas Archeological Survey, Fayetteville.

Find A Grave. 2024. African American Cemetery. Electronic Document, <https://www.findagrave.com/cemetery/2548718/african-american-cemetery>. Accessed August 16, 2024.

Ford, Richard I. 1974. Northeastern Archaeology: Past and Future Directions. *Annual Review of Anthropology* 1:385- 413.

Fox, D.E. 1979. *Site 41MV67*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Gardner, William M. 1983. Late Arrowheads and Broken Pottery: Traces of Indians in the Shenandoah Valley. Thunderbird Publications: Manassas Virginia.

Greaves, Russell D. 1999. *Site 41MV277*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Griffin, James B. 1967. Eastern North America Archaeology: A Summary. *Science* 156:175-191.

Griffith, G.E., S.A. Bryce, J.M. Omernick, J.A. Comstock, A.C. Rogers, B. Harrison, S.L. Hatch, and D Bezanson. 2004. *Ecoregions of Texas*. United States Geological Survey. Reston, Virginia.

Hester, Thomas R. 2004. The Prehistory of South Texas. In *The Prehistory of Texas*, edited by Timothy K. Pertula, pp. 127-154. Texas A&M University Press, College Station, Texas.

Hester, T. R., and T.C Hill Jr. 1975. Some Aspects of Late Prehistoric and Protohistoric Archaeology in Southern Texas. *Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State*, 1975(1), 13.

Hubbard, R. 1990a. *Site 41MV107*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Hubbard, R. 1990b. *Site 41MV108*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Hubbard, R. 1990c. *Site 41MV109*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Justice, Noel D. 1987. Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States. Indiana University Press, Bloomington & Indianapolis.

Maggard, Greg L. and Kary L. Stackelbeck. 2008. Paleoindian Period. In *The Archaeology of Kentucky: an Update, Vol. 1*, edited by David Pollack, pp. 73-192. Kentucky Heritage Council, State Historic Preservation Comprehensive Plan Report No. 3, Frankfort, Kentucky

Montgomery, Cora. 1852. *Eagle Pass: Or Life on the Border*. George Putnam & Company, Harvard, Massachusetts.

Neal, William L. and Richard R. Drass. 1998. Middle Holocene Archeology in Northeastern Oklahoma. *Oklahoma Anthropological Society Bulletin* XLVII:39-66.

O'Brien, Michael J., and W. Raymond Wood. 1998. *The Prehistory of Missouri*. University of Missouri Press, Columbia, Missouri.

Ruben E. Ochoa. 2024. Maverick County. Electronic Document, <https://www.tshaonline.org/handbook/entries/maverick-county>. accessed August 15, 2024

Pingenot, Ben E. 2024. Sumpter, Jesse. Electronic Document <https://www.tshaonline.org/handbook/entries/sumpter-jesse>. Accessed August 16, 2024.

Plummer, Gayther L. 1975. Eighteenth Century Forests in Georgia. *Bulletin of the Georgia Academy of Science* 33:1-19.

Sheehan, Mark C., Donald R. Whitehead, and Stephen T. Jackson. 1985. *Late Quaternary Environmental History of the Richard B. Russell Multiple Resource Area*. Submitted to the US Army Corps of Engineers, Savannah District

Sheldon, Elizabeth S. 1983. Vegetational History of the Wallace Reservoir. *Early Georgia* 11(1-2):19-31.

Sherfy, Marcella, and W. Ray Luce. n.d. National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties that Have Achieved Significance in the Last Fifty Years. US Department of the Interior, National Park Service, Interagency Resources Division, Washington, D.C.

Skrivan, Robert D., and Van D. King. 1983. Lithic Raw Materials. In *The Archaeology of the Emmett O'Neal Site (22Ts954) in the Bay Springs Lake Segment of the Tennessee-Tombigbee Waterway, Tishomingo County, Mississippi*, by Lawrence S. Alexander, pp. 94-107. Report of Investigations No. 37. Office of Archaeological Research, The University of Alabama, Tuscaloosa.

Texas Historical Sites Atlas. 2024. Eagle Pass Coal Mines Historical Marker. Electronic Document, <https://atlas.thc.state.tx.us/Details/5323001327>. Accessed August 15, 2024.

Texas Parks and Wildlife Division (TPWD). 2024. South Texas Plains. Electronic Document, <https://tpwd.texas.gov/education/resources/texas-naturalists/regions/south-texas-plains>. Accessed August 10, 2024.

Turpin, Jeff. 1994. *Site 41MV203*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Tankersley, Kenneth B. 1996 Ice Age Hunters and Gatherers. In *Kentucky Archaeology*, edited by R. Barry Lewis, pp. 21-38. The University Press of Kentucky.

United States Department of Agriculture (USDA). 2024. Web Soil Survey. Electronic Document, <https://websoilsurvey.nrcs.usda.gov/app/>. Accessed August 10, 2024.

United States Geological Survey (USGS). 1974a *Quemado SE, Texas*. Topographic quadrangle, 1:24,000. Washington, DC

USGS. 1974b *Deadmans Hill, Texas*. Topographic quadrangle, 1:24,000. Washington, DC

USGS. 1983a *Eagle Pass West, Texas*. Topographic quadrangle, 1:24,000. Washington, DC

USGS. 1983b *Eagle Pass East, Texas*. Topographic quadrangle, 1:24,000. Washington, DC

Vivian, Julia L. 2024. Military Board of Texas. Electronic Document, <https://www.tshaonline.org/handbook/entries/military-board-of-texas>. Accessed August 15, 2024.

Ward, Christine. 1995. *Site 41MV120*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Wharton, Charles H. 1989. *The Natural Environments of Georgia*. Georgia Geological Survey, Environmental Protection Division, Georgia Department of Natural Resources, Atlanta, Georgia.

Whitsett, Hayden. 1976a. *Site 41MV57*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Whitsett, Hayden. 1976b. *Site 41MV58*. Archeological Site Form. Texas Archeological Sites Atlas, Austin, Texas.

Wyckoff, Don G., and R. Bartlett. 1995. Living on the Edge: Late Pleistocene-Early Holocene Cultural Interaction along the Southeastern Woodland Plains Border. In *Native American Interactions*, edited by Michael S. Nassaney and K. E. Sassaman, pp. 27-72. University of Tennessee Press, Knoxville.

York, Miriam. 2024. Groos, Friedrich Wilhelm Carl. Electronic Document, <https://www.tshaonline.org/handbook/entries/groos-friedrich-wilhelm-carl>. Accessed August 16, 2024.

Appendix A: Artifact Catalog

Appendix B: Resume of the Principal Investigator

Matt Lyons, RPA

Archaeologist

Education

MA, Anthropology, University of Florida, 2018

BA, Anthropology, University of Georgia, 2012

Registrations/Certifications

Register of Professional Archaeologists, 01/2024

First Aid, CPR, and AED Certified

Affiliations/Memberships

Register of Professional Archaeologists

Southeastern Archaeological Conference

Society for Georgia Archaeology (Vice President)

Georgia Council of Professional Archaeologists (Secretary)

VHB Office

Atlanta, GA

As an Archaeologist in VHB's Atlanta office, Matt is experienced in conducting Section 106 and Section 110 archaeological compliance, including: Phase I, II, and III archaeological survey and investigations, National Register of Historic Places eligibility assessments, and artifact analysis. His research specialties include lithic analysis, predictive modeling, and statistical analysis. He is responsible for proposal writing, archaeological fieldwork and analysis, and report writing. Matt has worked throughout the United States, including projects in Alabama, Arkansas, Florida, Georgia, Illinois, Iowa, Louisiana, Maryland, Missouri, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia, and Washington, DC. Matt has provided cultural resource services to Georgia Department of Transportation, Florida Department of Transportation, the Tennessee Valley Authority (TVA), Duke Energy, U.S. Army Corps of Engineers (USACE), the National Forest Service (NFS), the National Park Service (NPS), the Argonne National Laboratory, and several military installations.

12 years of professional experience

GDOT, Phase I and II Report for Proposed Chevis Road Improvements, PI No. 00017975, Chatham County, GA

Principal Investigator

GDOT is proposing redevelopment along approximately 4.6 miles of County Road 76/Chevis Road in Chatham County, Georgia. Matt served as Principal Investigator for this redevelopment project. In this role, he was responsible for background research, site assessment for NRHP inclusion, and report writing. Seven newly identified archaeological resources were identified and assessed during this project.

Washington Metropolitan Area Transit Authority (WMATA), Bladensburg Bus Garage Reconstruction, Washington, DC

Principal Investigator

WMATA is proposing to rebuild and modernize their Bladensburg Bus Garage in Washington, DC to modernize repair and storage facilities. Matt served as Project Archaeologist for the monitoring and recording of unanticipated discoveries uncovered during the development. In this role, Matt monitored construction, provided NRHP documentation and assessments of the historic Fleischmann's Yeast Factory (51NE061) and other historic infrastructure features, and prepared a technical report regarding the discovery, history, and eligibility of the site.

US Army Corps of Engineers, Boat Basin Park, Decatur County, GA

Archaeologist

Matt served as Lead Archaeologist for Phase II archaeological investigations of two National Register of Historic Places eligible archaeological sites located with USACE-owned lands along the Flint River in South Georgia. He oversaw all fieldwork and reporting efforts, including background research, site revisit delineations and test unit investigations, artifact analysis, NRHP evaluation and assessment, and investigations



reporting. The project contained a intact pre-contact shell midden; fieldwork efforts indicated that the site post-dated shell midden habitations in the region and is a unique outlier in the known history of the lower Flint River, it was recommended for avoidance or mitigation.

Argonne National Laboratory, Phase I and II Survey of MacDill Air Force Base, Tampa, Florida

Archaeologist

Matt served as Lead Archaeologist for Phase I and II archaeological investigations of lands owned by MacDill Air Force Base. He oversaw all fieldwork and reporting efforts, including background research, site revisit delineations and test unit investigations, artifact analysis, NRHP evaluation and assessment, and investigations reporting. The project surveyed four previously recorded Archaic sites and shell middens and additional Phase I testing of 800 acres of previously unsurveyed portions of the base. Fieldwork efforts indicated that two of the Archaic sites subjected to Phase II testing represented expansive Middle and Late habitation sites that were unique in their preservation; they were recommended for avoidance or mitigation.

Tennessee Valley Authority, Phase I Survey of the Optimist Solar Farm, Starkville, Mississippi

Archaeologist

Matt served as Lead Archaeologist for Phase survey of over 2,000 acres for the proposed Optimist Solar Farm in Clay County, Mississippi. He oversaw all fieldwork and reporting efforts, including background research, site identification and recording, NRHP evaluation and assessment, and investigations reporting. The project identified 25 previously unrecorded archaeological sites, many of which were early-20th century tenant houses. Fieldwork was catered towards the location and identification of early-19th century Choctaw residences that preceded their expulsion under terms of the Indian Removal Act of 1830.

GDOT, Phase II Archaeological Testing for the CR 4/Story Road Bridge Over North Branch Swift Creek, PI No. 0016571, Crisp County, GA

Principal Investigator

Matt served as the Lead Archaeologist on this low impact bridge replacement survey. He led Phase II fieldwork to investigate a Middle to Late Archaic site that included GPR survey, Phase II unit excavations, and NHRP assessments. Additional tasks included background research, laboratory analysis, report writing and managerial coordination with agency specialists.

Phase III Archaeological Data Recovery at the Chief Vann House, Chatham County, GA

Archaeologist

Matt assisted with the Phase III data recovery of the Chief Vann House, an NRHP-listed structure and grounds of one of the leaders of the Cherokee Nation prior to their expulsion under terms of the Indian Removal Act of 1830. He led fieldwork in portions of the site subject to roadway expansion, recovering a variety of 19th-century cultural materials related to the agricultural industry of the estate; additionally, he assisted in final reporting and NRHP eligibility assessments.