

***AN ARCHAEOLOGICAL SURVEY FOR THE  
GREENHOUSE ROAD PROJECT  
IN WESTERN HARRIS COUNTY TEXAS***

***Antiquities Permit 4685***



***By  
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***Brazos Valley Research Associates  
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AN ARCHAEOLOGICAL SURVEY FOR THE GREENHOUSE ROAD PROJECT  
IN WESTERN HARRIS COUNTY, TEXAS

Brazos Valley Research Associates

Project Number 07-16

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## **ABSTRACT**

Brazos Valley Research Associates (BVRA) performed an archaeological survey along a one-mile segment of the Greenhouse Road lane addition in western Harris County, Texas for Harris County on October 3, 2007. William E. Moore was the Principal Investigator, and Phil Bishop was the Project Archaeologist. This study was carried out under Texas Antiquities Committee Permit Number 4685 issued by the Texas Historical Commission (THC), Archeology Division. The project area was investigated using the pedestrian survey method supported by shovel testing. In all, the project area consisted of three acres. No archaeological sites were found, and no artifacts were collected. The area was found to be very disturbed prior to the visit by BVRA. Copies of the final report are housed at the THC, the Texas Archeological Research Laboratory (TARL), and BVRA.

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## INTRODUCTION

Harris County proposes to add two additional lanes to Greenhouse Road and a bridge on the west side of the road where it crosses Dinner Creek in western Harris County, Texas (Figure 1). The proposed construction is designed to link Greenhouse Road to other roads in the area. This network of roads is visible in an aerial (Figure 2). The footprint of the proposed construction site is approximately one mile long, and the width of the new lanes, curbs, and bridge will be 25 feet in width. This totals three acres. The road construction will affect the subsurface to a depth not greater than 36 inches. In addition, at least 1000 feet of storm sewers will be installed. These sewers will parallel the road, be placed in a footprint of 24" wide, and affect the subsurface to a depth of five feet. The entire project area is located within Harris County and is depicted on the 7.5' USGS topographic map Addicks (2295-342), which was drafted in 1970 and photorevised in 1980 (Figure 3). Harris County is the agency permitting this project, and Deborah M. Vaughn, P.E. is the agency representative. This project falls under the purview of the THC, since Harris County is a political subdivision of the State of Texas. An archaeological assessment of the Area of Potential Effect (APE) was required by the THC. Since Harris County is a public entity, a permit from the THC was required, and Antiquities Permit 4685 was issued to BVRA by this agency.

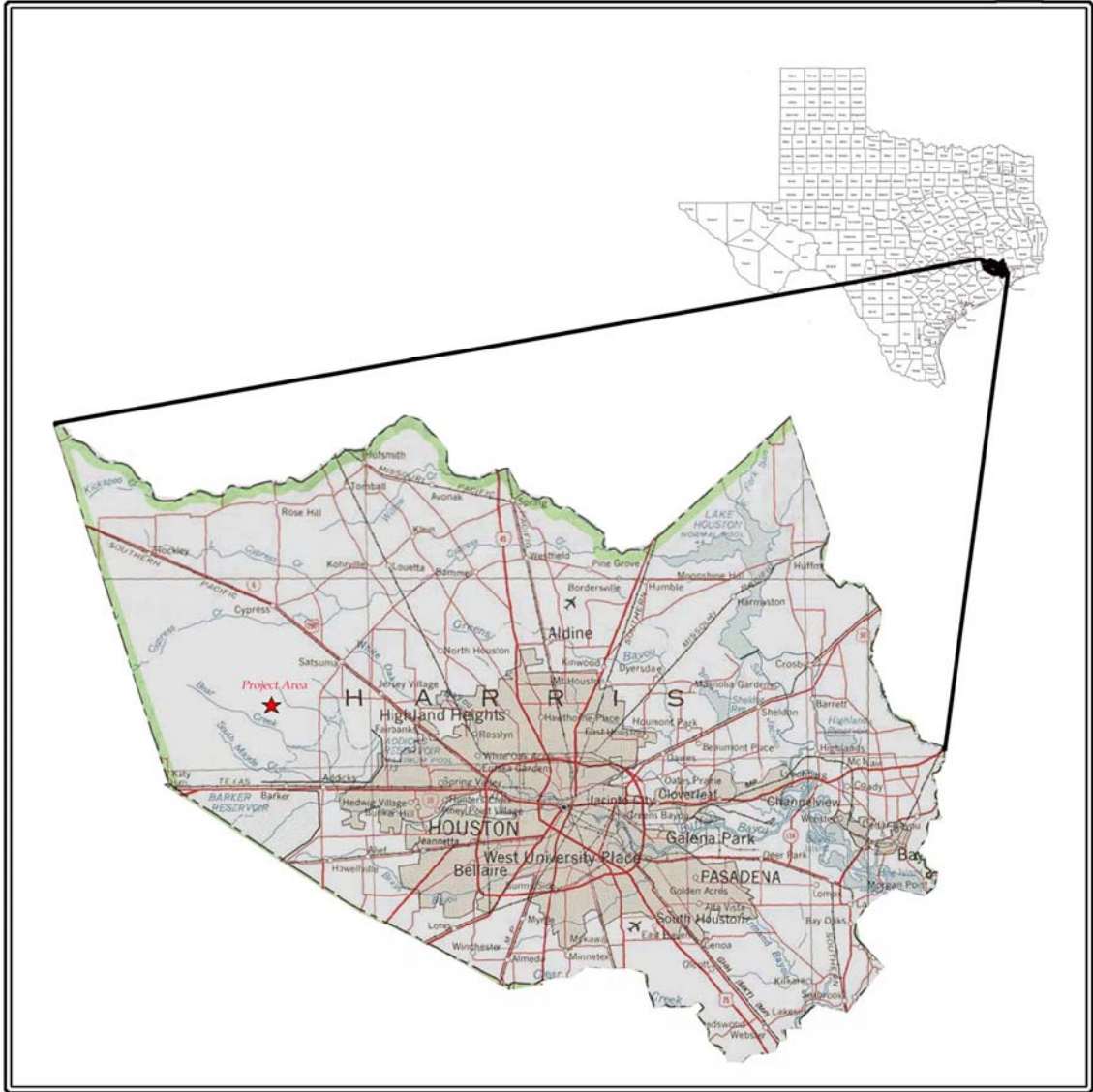


Figure 1. General Location



Greenhouse Road Survey



Figure 2. Aerial Photograph of Project Area



USGS Addicks, Tx.  
 Quadrangle 2295-342

Greenhouse Road Survey

0 50 100 200 Meters



■ Shovel Test

— Project Area

Figure 3. Project Area and Shovel Tests



## ENVIRONMENTAL SETTING

The current project area is located in the Western Gulf Coastal Plain Physiographic Region as defined by Fenneman (1938:100-102). This region is described as a relatively flat plain underlain by strata that dip Gulfward. These strata are composed of fluvial, fluvial-deltaic, and shallow marine sediments that become thicker Gulfward (Fisher et al. 1972). The project area is also located in the West Gulf Coastal Plain geomorphic unit (Hunt 1974; Walker and Coleman 1987) in which the formations dip Gulfward at less than two degrees and crop out in Gulf-parallel bands. The surface geologic units in the project area are Pleistocene and Holocene in age. This project area is located in northwestern Harris County west of the City of Houston and northwest of Addicks Reservoir. It consists of a one-mile segment of Greenhouse Road, which crosses Dinner Creek to the north of its junction with Langham Creek, a tributary of Buffalo Bayou that drains into the San Jacinto River. At the crossing of Greenhouse Road, the creek had been channelized (Figure 4). The orange flagging and wooden stakes mark the right-of-way. The Dinner Creek crossing is depicted in the Harris County soil survey by Wheeler (1976) on Sheet 65 as being in Katy fine sandy loam (Kf) soils. This is a nearly level soil found in broad areas on the coastal prairie. The areas are generally high on the landscape and surround small depressions. The surface is plane to slightly convex with slopes averaging about 0.3 percent. The surface layer is friable, medium acid, dark grayish-brown fine sandy loam about 10 inches thick. The layer below that is friable, medium acid, brown fine sandy loam that extends to a depth of about 28 inches. Below the second layer is very firm, slightly acid clay loam mottled with gray, red, strong brown, and yellowish-brown. This layer extends to a depth of more than 65 inches. This soil is somewhat poorly drained and has a perched water table above the clay loam layer for short periods in cool months and in periods of excess rainfall. Surface runoff is slow to very slow, internal drainage is slow, and permeability is very slow. The available water capacity is high.



Figure 4. View of Channelized Bank of Dinner Creek

## ARCHAEOLOGICAL BACKGROUND

According to *Prehistoric Archeological Sites in Texas: A Statistical Overview* (Biesaart et al. 1985:Figure 15), the project area is located in the Southeast Texas Cultural-Geographic Region of Texas. In 1985, according to the overview, there were 1630 recorded sites in the region, making it fifth in the state. Harris County was the first in the region with 300 recorded sites. All ages were represented from Paleo-Indian (n=5), Archaic (n=87), and Late Prehistoric (n=116). Twenty-four sites were eligible for listing in the National Register of Historic Places are listed in the Register, and 15 sites had been designated as a State Archeological Landmark. Since 1985, however, the number of recorded sites has greatly increased, and more than 1030 sites were on file at TARL as of October 5, 2007 (TARL site files). This increase is due in large part to the continued development in Harris County and work by the Harris County Flood Control District.

The Houston Archeological Society has played a large part in locating and identifying new sites in Harris County as well as conducting testing and excavation projects. One of the more active members of the society is Leland W. Patterson who has written numerous articles relating to the archaeology of Harris County. Some of his more notable works include "Technological Changes in Harris County" (Patterson 1976), "A Review of the Prehistory of the Upper Texas Coast (Patterson 1979), "Prehistoric Settlement and Technological Patterns in Southeast Texas" (Patterson 1983). A bibliography of Southeast Texas was compiled by William E. Moore (1989). Other major references for this part of the state include a scholarly book by Lawrence E. Aten (1983), Newcomb (1961), Story et al. (1990), and Suhm et al. (1954).

The earliest major investigation in the region surrounding the project area was Wheat's (1953) survey of the Addicks Basin, located as part of the River Basin Survey program. A number of sites were excavated and the Galveston Bay Focus was established on the basis of data recovered from these excavations (Suhm et al. 1954). The Archaic materials from these sites were later assigned to the LaHarpe Aspect as defined by LeRoy Johnson, Jr. (1962). Recent construction in the area has been the catalyst for archaeological investigations. Much of this work has been performed by Texas A&M University (Ensor 1984, 1987; Ensor et al. 1983), Moore Archeological Consulting (Moore 1986, 1987; Moore and Sanchez 1992), and Espey, Huston & Associates, Inc. (Espey, Huston & Associates, Inc. 1987; Voellinger 1983; Voellinger et al. 1987), and Prewitt and Associates, Inc. (Fields et al. 1983, 1986; Howard and Freeman 1983).

At the time of this survey there were no archaeological sites recorded in the project area, and the Archeological Sites Atlas depicts two previous surveys involving Dinner Creek. The closest survey to the project area is a large area on the north side of Dinner Creek less than one mile east of the project area. This is the project area for a detention basin that was investigated by Moore Archeological Consulting (Moore and Sanchez 1992). They examined 98 acres on the north side of the creek and found no sites. Shovel testing revealed sandy loam to a depth of 30 cm. This was followed by sandy clay loam to 70 cm and very dense clay at 85 cm. To the east, they examined a 40-acre tract for a detention basin on Langham Creek. This resulted in the identification of site 41HR729, which is described in their report as a Late Prehistoric ceramic and lithic scatter buried beneath at least 20 cm of dredged fill. At least 60% of the site was estimated to be intact, and further work was recommended. To the north and west of the project area a linear survey is depicted on the Atlas. This survey found no sites at the crossing of Dinner Creek. There is no information on the Archeological Sites Atlas for this survey.

## CULTURE SEQUENCE

Despite more than a half century of work in developing a culture sequence for Southeast Texas, considerable debate still exists over the arrangement of chronological sequences (Meyers 1997:14). Ensor (1991:5-6) believes this lack of consensus stems largely from the nomenclature and application of projectile point typologies as well as a dearth of securely stratified sites in the region. The region lacks extensive sites with unmixed archaeological components. All of the peoples of Southeast Texas appear to have been nomadic and subsisted through hunting and gathering (Shafer 1974; Patterson 1995). Agriculture was never practiced on the Upper Texas Coast, unlike the Caddoan culture area of Northeast Texas.

The earliest cultures in Southeast Texas are referred to as Paleo-Indians, and they occupied the area circa 10,000 B.C. to 8000 B.C. In Southeast Texas this period is not well defined. *Clovis* points have been found on the surface of some sites; however, no examples have been recovered from sites with secured stratigraphic deposits. Hester (1980) suggests that large-scale environmental changes during the Late Holocene period are responsible for the dearth of Paleo-Indian sites in Southeast Texas. He states that these sites, if not destroyed, may lie offshore on the continental shelf or deeply buried in the floodplains of major waterways. According to the statistical overview by Biesart et al. (1985), there were five recorded Paleo-Indian sites in Harris County in 1985, but this source does not list site numbers.

The Archaic period in Southeast Texas is generally defined as that time between the extinction of the Pleistocene megafauna and the introduction of ceramics. The Early and Middle Archaic periods were characterized by increased climatic aridity and the expansion of prairie habitats (Aten 1983:153). Population densities in the region appear to have been low and may have even decreased from Paleo-Indian times. This probably stemmed from a reduction in available food resources due to the less productive climate. Although sites from the Early and Middle Archaic periods have been documented along the Upper Texas Coast, they are rare, and this time period is poorly defined. According to the statistical overview by Biesart et al. (1985), there were three recorded Early Archaic sites and five recorded Middle Archaic sites in Harris County in 1985, but this source does not list site numbers.

The occurrence of several environmental issues and cultural phenomena during the Late Archaic period distinguishes it from what is known of the earlier periods in Southeast Texas (Meyers 1997:16). According to Patterson (1995), the climate stabilized to its essentially modern state during the Late Archaic. He believes that food resources were more available and more abundant. Because of this, population densities increased, and this is evidenced by the proliferation of Late Archaic sites in the region. According to the statistical overview by Biesaat et al. (1985), there were 28 recorded Late Archaic sites in Harris County in 1985, but this source does not list site numbers. Forty-nine sites are listed as General Archaic.

The Late Prehistoric period is the last period of Southeast Texas prehistory is generally defined as that time between the introduction of ceramics and the bow and arrow and contact by Europeans. This period is characterized by a continued growth in population levels from the Late Archaic period and then a decline in population towards the end of the Late Prehistoric period. Patterson (1995:246) suggests that “over-population, perhaps aggravated by climatic deterioration” may have been partly responsible. According to the statistical overview by Biesaat et al. (1985), there were 116 recorded Late Prehistoric sites in Harris County, but this source does not list site numbers.

Proto-historic and historic Indian sites are largely under-documented due to the lack of non-European diagnostic artifacts for such sites (Meyers 1997:17). Historic Indian sites are typically identified based on the presence of European trade goods such as gunflints and beads. According to Patterson (1995:249), European influence did not disrupt aboriginal habitation of the Upper Texas Coast until after 1700. During the 18<sup>th</sup> and 19<sup>th</sup> centuries, however, the local Indian populations declined due to disease, establishment of missions, and the fur trade. Historic Indian groups known to inhabit the area were the Karankawa on the coast and the Akokisa in inland areas on the Trinity River and in the area of Galveston and Trinity bays (Swanton 1946). There are no known historic Indian sites in Harris County.

## **METHODS**

### **Background Research**

Before entering the field, a background investigation was conducted. Site records at TARL were checked for previously recorded sites in the project area and vicinity. In addition, site reports documenting work in the region were examined for information concerning archaeological surveys and other work relevant to the project area, and Roger G. Moore was interviewed regarding his previous work along Dinner Creek and western Harris County.

### **Field Survey**

The fieldwork was accomplished using the pedestrian survey method supported by shovel testing within the highway right-of-way. The proposed construction will take place on the west side of Greenhouse Road, and it is this area that was examined (Figure 5). Surface visibility was very poor due to a thick cover of grass. The area was found to be very disturbed, and only four shovel tests were excavated. The soil from the shovel tests was screened using ¼ inch hardware cloth, and a shovel test log (Appendix I) was maintained. Four shovel tests were excavated (Figure 3). In addition, the project was documented by field notes and images taken with a digital camera. A hand-held GPS was used to document survey locations.



Figure 5. Project Area Looking South



## RESULTS AND CONCLUSIONS

This field survey examined the entire three acres and found no evidence of an archaeological site. The four shovel tests were dug to depths of 30 and 40 centimeters through disturbed soil. Soils in the project area consisted of clay loam, sandy clay loam, and leached wet sand. The north side of the creek was found to have been channelized, and one of the proposed storm drains had been installed (Figure 6). The survey was performed in accordance with the Minimum Survey Standards as published by the Texas Historical Commission, Archeology Division.



Figure 6. Storm Drain in Project Area

## **RECOMMENDATIONS**

No archaeological sites were found within the APE. It is recommended that construction be allowed to proceed as planned. Should evidence of an archaeological site be encountered during construction, all work in the area of the find must cease until the THC can evaluate the situation. Also, if additional construction not evaluated during this investigation is planned, the THC must be notified as additional survey by a professional archaeologist may be warranted.

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APPENDIX I  
SHOVEL TEST LOG

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Test	Depth	Soil	Results	Comments
01	40 cm*	clay loam	negative	disturbed
02	40 cm	sandy clay loam	negative	disturbed
03	30 cm	leached wet sand	negative	disturbed
04	30 cm	leached wet sand	negative	disturbed

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\* below ground surface