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A Cultural Resources Survey of the Trail Village Housing Development Project, Brownsville, Texas

John E. Keller and Linda R.S. Keller

Texas Antiquities Permit # 9214

Southern Archaeological Consultants, Inc.
Report of Investigations 1/2020
The City of Brownsville, Texas is planning to construct a new Housing development and associated infrastructure behind the Paseo Plaza Apartments in Brownsville, Texas. This location is a grassed 4.85 acre parcel west of Paredes Line Road (FM 1847) and between the present apartment complex, a drainage canal, and the City of Brownsville’s Hike and Bike Trail. The bike trail was formerly a Missouri Pacific railway line. The area has been heavily urbanized and the immediate project location has been mechanically landscaped to facilitate drainage. Prior to urbanization this area was intensive farmed and the aerial photographs provided by USDA, Soil Conservation Service (Williams, Thompson, and Jacobs 1977) indicate it was devoted primarily to citrus orchards and/or irrigated row crops. Both of these uses require extensive landscape modification, deep plowing, and land leveling practices. As a result, this parcel has been deeply disturbed to a depth of at least 4 feet and well below the 1 foot Area of Potential Effect.

A pedestrian survey with limited shovel testing was carried out and this confirmed that the area had been deeply disturbed. In addition, a layer of construction fill has already been added. This construction layer is primarily a compact clay with numerous modern trash inclusions such as plastic, concrete, and gravels. Beneath this construction fill layer are the native soils, which are extremely compact clays that have been disturbed by plowing. These lower levels are devoid of cultural materials and have not even been penetrated by roots of root hairs.

No prehistoric or historic cultural materials were present and no further work is recommended.
The City of Brownsville, Texas is planning to construct a new Housing development and associated infrastructure behind the Paseo Plaza Apartments in Brownsville, Texas. This location is a grassed 4.85 acre parcel west of Paredes Line Road (FM 1847) and between the present apartment complex, a drainage canal, and the City of Brownsville’s Hike and Bike Trail. The bike trail was formerly a Missouri Pacific railway line. The area has been heavily urbanized and the immediate project location has been mechanically landscaped to facilitate drainage. Prior to urbanization this area was intensive farmed and the aerial photographs provided by USDA, Soil Conservation Service (Williams, Thompson, and Jacobs 1977) indicate it was devoted primarily to citrus orchards and/or irrigated row crops. Both of these uses require extensive landscape modification, deep plowing, and land leveling practices. As a result, this parcel has been deeply disturbed to a depth of at least 4 feet and well below the 1 foot Area of Potential Effect.

This project is funded by the Department of Housing and Urban Development and is, therefore, subject to the Section 106 requirements of the National Historic Preservation Act of 1966. A Texas Historical Commission Antiquities Permit is also required. The Texas Historical Commission has assigned Antiquities Permit #9214 to this project. Because this is a small scale project a detailed research design is not required and the Principal Investigator reviewed the project requirements with Texas Historical Commission personnel.

Background and Literature Search

A background and literature review was carried out at the Texas Archeological Research Laboratory, University of Texas at Austin, the Cameron County Courthouse, the Museum of South Texas, the University of Texas Rio Grande Valley- Brownsville and Texas Southmost College, the University of Texas- Rio
Figure 1: The project location as plotted (Black rectangle) on the USGS East Brownsville quadrangle map

Grande Valley-Edinburgh and the facilities of the Brownsville Historic Society. This review provided valuable information regarding the nature of ground disturbing activities and land use in this area of Cameron County. Since the involved area is within an urbanized environment with many natural and modern disturbances it was essential that the survey review the effect of potential disturbance factors. These disturbance factors agriculture, urbanization, and erosional features.
Figure 2: The project area from the north. Note the large mechanically shaped drainage structure sloping east(left) to west(right) and toward existing drainage canal.

According to Texas Archeological Site Atlas this project area has never been surveyed for cultural resources. Moreover there are no recorded prehistoric archaeological sites within a half a mile of the project area. However, the area is technically within the mapped boundaries of the Resaca de la Palma Battlefield archaeological site and it is conceivable that remains from that struggle might be present. However, discussions with Mr. Rolando Garza, archaeologist with the Palo Alto National Historic Park suggest that the discover of historic artifacts related to the Resaca de la Palma Battlefield is extremely unlikely. This is both because the project area has been extensively disturbed and also because main focus of the battle was further south.
Culture History

The culture history of the Rio Grande Valley, especially its prehistoric component, is not well understood. In large measure this circumstance is due to a basic lack of data (Prewitt 1974). Archaeological sites have been recorded and in some cases, at least, investigated but almost without exception these sites...
have been heavily disturbed cemeteries from which archaeologists have been able to extract only limited data (Black 1989).

Prehistoric populations are believed to have been the predecessors of the Cohuilecan groups encountered by the first European explorers. They are believed to have practiced a nomadic hunting and gathering way of life that stressed mobility and the exploitation of fish, shellfish, and plant products (Hester 1969). Presumably this way of life had been practiced from the time of the earliest occupations with only slight alterations occurring with the adoption of such technological innovations as the bow and arrow and the use of ceramics. As a result, the best known of the defined cultural complexes, the Brownsville complex (MacNeish 1947) appears to differ little from the preceding Archaic.

The Brownsville complex is characterized by large numbers of shell artifacts, Fresno, Matamoros, Starr and Cameron arrowpoints and known almost entirely from heavily disturbed mortuary associations. As a result, some of the assumptions about Brownsville complex culture may be unfounded and it is suspected that basic chronological relationships are badly in need of revision (Collins, Hester and Weir 1969).

Populations encountered by the first European explorers and observers were nomadic hunters-and-gatherers (Salinas 1990). The records of the first Spanish explorer, Alonso Alvarez de Pineda, suggest as many as forty brush arbor settlements (ramadas) or rancherias were present along the first sixteen miles of Rio Grande river channel (Salinas 1990:22) in 1519. Other documents suggest that the Rio Grande delta was the most densely populated area of northeastern Mexico and Southern Texas (Salinas 1990:139) if only because of the greater subsistence resources available in the area. The project area lies on the periphery of this area of higher population density, but given the limited data presently available, almost any prehistoric site would add greatly to our data base and predictive capability.

The historic period beginning with the first explorations of Pineda is better understood. Nevertheless, there has been comparatively little work done with historic materials despite the fact that some of the settlements established by Escandon on the Rio Grande River are among the earliest in what is now the United States. These settlements are generally associated with the course of the Rio Grande River and are all located well south of the project area. As a result,
the project area may have been controlled by populations in these settlements but appears to have been utilized only in a sporadic and low impact fashion (Kelly 1985).

Figure 4: Typical surface exposure

After the establishment of the Republic of Texas the area remained a Mexican holding until the conclusion of the Mexican war in 1846. Indeed the first battle of that struggle was fought at Palo Alto, near Brownsville, and the establishment of that city dates to this time period. During the American Civil War this entire area was the scene of intermittent skirmishing by combatants representing the United States, the Confederacy, the Mexican Republic and the Emperor Maximillian.

Brownsville, itself, was founded and developed after the Civil War and became a commercial and population center but the immediate project area remained relatively undeveloped. Land use was dominated by open range and cattle production. That changed in the early 20th century when intensive irrigation agriculture (Pierce 1917; Stambaugh and Stambaugh 1954) came into the Rio
Grande Valley and changed the lifestyle of Cameron County. New settlers migrated into the Rio Grande Valley and land speculation led to the creation of new farms, towns and associated infrastructure. Today Brownsville is the largest population center in the Rio Grande Valley and a major commercial center with extensive international ties.

**Investigatory Procedures**

Previous experience in Lower Rio Grande Valley suggests that shovel testing programs in such conditions are unnecessary and uninformative (Keller and Collins 1995) and projects of this nature would ordinarily utilize backhoe or excavator trenching to expose subsurface conditions and deposits. In this case,
however, trenching is impractical and unnecessary because of readily observable
disturbance and soil conditions. As a result, this survey employed a surface
inspection strategy with limited shovel testing.

The main reasons why shovel testing was believed to be unnecessary are soil
related. The dominant soil types classified within the area are Cameron silty clay
and Olmito clay (USDA Williams, Taylor, and Jacobs 1977). These are both soils
of old floodplains and river deltas and are characterized by poor permeability and
severe shrink swell coefficients. Because of these constraints deep plowing to
maintain tilth is necessary and active agricultural management is required.
Perhaps paradoxically, these soils also require good drainage to prevent ponding
and a clue to this necessity is the presence of an active drainage ditch
immediately adjacent to the project location and mechanical shaping of the
project location that has occurred. In any case, this location was certainly plowed
and was under intensive cultivation for a very long time.

An additional factor, in this case, is the restraints imposed on construction by

Figure 6: Shovel test #1 Showing depth, artificial fill and underlying
subsurface stratigraphy
severe shrink swell coefficients. For foundational stability additional fill must be added to produce a more stable surface. Some of this material has already been added during the construction of the adjacent apartment complex and test drilling by Terracon Incorporated confirms this. Therefore, good construction practices are likely to produce an Area of Potential Effect less than 1 foot below the present surface and, thus, will still be within the previously disturbed plow zone. The Terracon Incorporated drilling logs Project #88195179 are not very usable for archaeological purposes as they describe the soils as Fat Clay Brown stiff to very stiff. However, they are quite consistent with the USDA Soil Conservation Service report and obviously reflect the same conditions.

Given these factors, this project utilized a standardized pedestrian survey with surface inspection. Excellent surface exposure (Figure 4) was present on erosional surfaces, blowouts, and the like. Not surprisingly, the results of this survey were entirely negative. The survey did observe several mechanically constructed drainage enhancements which produced shallow swales sloping toward the adjacent drainage canal. These provide further evidence of the degree of surface disturbance that is present throughout the project area.

To further clarify the nature of subsurface deposits and conditions two shovel test were excavated across the area. These provided confirmatory data regarding disturbance and the remarkably consistent subsurface conditions. The subsurface stratigraphy is virtually identical in appearance and, thus, are completely in keeping with information secured from soils data (USDA Williams, Taylor, and Jacobs 1977) and personal experience. The project area has been deeply plowed and a layer of obvious fill has been added. The underlying clay is so compact that roots and root hairs do not penetrate it.

Shovel Test #1 UTM E 651290 N2870460 (Figure:6)
0-15 centimeters 10YR 3/2 dark brown clay with 10YR5/4 mottle
Heavy compact, somewhat friable with numerous grass roots and root hairs, An obvious fill layer containing modern trash items (plastic bottles, concrete, gravels, and metal fragments
15- 55 centimeters 10YR 3/2 dark brown very compact clay, with no roots or root hairs, no evidence of organic materials or trash, somewhat blocky. Plow zone

Shovel Test #2 UTM E651370 N2870420
0-16 centimeters 10YR 3/2 dark brown clay with 10YR5/4 mottle
Heavy compact, somewhat friable with numerous grass roots and root hairs. An obvious fill layer containing modern trash items (plastic bottles, concrete, gravels, and metal fragments 16-55 centimeters 10YR 3/2 dark brown very compact clay, with no roots or root hairs, no evidence of organic materials or trash, somewhat blocky. Plow zone

Results

No significant cultural resources were discovered or recorded during this survey. A number of factors may be involved in the absence of prehistoric or historic archaeological resources. Occasionally archaeologists working in the Lower Rio Grande Valley (Day, Laufrens-Day, and Prewitt 1981) have encountered areally restricted buried paleosols in the alluvial floodplain and adjacent uplands but such occurrences are rare. Most archaeological sites recorded are at higher elevations and consist of scattered hearths or even hearth fields, quarrying, or lithic material scatters (Keller and Warren 2009). No evidence of these types of situations are present in the project vicinity.

It is possible, and even probable, that human populations with relatively primitive technologies, such as the native Cohuilecan inhabitants, might have utilized the locations like the project area on a sporadic basis. However, there is no direct evidence of this kind of activity. The limited number of prehistoric sites so far investigated in the Lower Rio Grande Valley were generally associated with very slight rises in elevation above the general level of the floodplain or with upland situations unlike the project area. These upland locations may have provided some degree of flood protection as the whole delta was subject to cyclical overflow flooding in the past (Lonard, Everitt and Judd 1991) and they are also closer to exposures of lithic resources further upstream.

If Ricklis' (1988, 1990, 1992) model of aboriginal congregation and dispersal is correct the project area would probably be considered most suitable for dispersed occupation and exploitation. Such a dispersed settlement pattern would leave little trace except at special use sites like 41Cf2, the Floyd Morris cemetery (Collins, Hester and Weir 1969; Hester 1969), which seem to suggest congregation for ceremonial reuse. Perhaps Floyd Morris does represent a sort of centralized mortuary for essentially dispersed nomads. The presence of a similar specialized occupation in the project area is not, of course, impossible but the survival of this sort of resource seems unlikely in the light of disturbance and alluvial factors.
Historic settlements did occur in the vicinity. Nevertheless, archival research suggests that these settlements were dispersed and generally a short lived phenomena until the establishment of Brownsville in the mid-19th century. This area was until recently devoted primarily to intensive agriculture but is now becoming increasingly urbanized with housing, schools, and commercial establishments.

Conclusions and Recommendations

No cultural resources were recorded and there are no previously recorded archaeological sites, prehistoric or historic, within the project area. As a result, no further work is recommended within the surveyed impact areas. There remains the possibility that deeply buried deposits of archaeological importance might be located by additional mechanical excavation. If such deposits and/or evidence are encountered, work in that vicinity should be halted, the Texas Historic Commission should be contacted, and the significance of such evidence determined by a competent archaeologist.

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