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Fort Worth Zoo Creek Drainage Improvements Project Tarrant County, Texas

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Fort Worth Zoo Creek Drainage Improvements Project Tarrant County, Texas

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ARCHAEOLOGICAL SURVEY OF THE PROPOSED

FORT WORTH ZOO CREEK DRAINAGE IMPROVEMENTS PROJECT

TARRANT COUNTY, TEXAS

USACE Project Number SWF-2017-00128
Texas Antiquities Permit Number 8179

Cody S. Davis, MA
and
Emily D. Goetschius, BA

Principal Investigator: Cody S. Davis, RPA

Submitted to:

DUNAWAY ASSOCIATES, L.P.
550 Bailey Avenue, Suite 400
Fort Worth, Texas, 76107

Submitted by:

AR CONSULTANTS, INC.
805 Business Parkway
Richardson, Texas 75081

Cultural Resources Report 2017-72
December 05, 2017

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ABSTRACT

The City of Fort Worth is proposing to construct storm drainage improvements along Zoo Creek in Tarrant County, Texas. The project area is located in the southern 10.5 acres of Forest Park in central Fort Worth. The parcel is bounded by Park Hill Drive (Dr) on the north, Sandage Avenue (Ave) on the west, McPherson Ave on the south, and McCart Ave on the east. South (S.) Forest Dr bisects the property. This project consists of the construction of a stormwater detention wall to help alleviate flooding in the area. There will be four main impact areas and portions of S. Forest Dr will be repaved. The deepest impacts will occur in the northern portion of the park where the detention wall will be built along the Park Hill Dr Bridge. The second impact area will be for the new sanitary sewer being rerouted along McCart Ave. The third is the replacement of a low water crossing culvert on S. Forest Dr near the central part of the parcel. The final impact will be for a stormwater outfall on Zoo Creek to be constructed on the south end of the park where the creek intersects McPherson Ave. A 30-meter area around all four impact areas was surveyed for a total of 1.72 acres. The purpose of this investigation was to determine if significant cultural resources are present in the proposed impact areas as part of the Section 106 process. The area had potential for both historic and prehistoric resources. Ten negative shovel tests were excavated throughout the survey areas. Two historic-age resources were recorded as archaeological sites and evaluated by an architectural historian. Site 41TR306 is a historic culvert on S. Forest Dr. This culvert will be replaced and is not recommended eligible for listing on the National Register of Historic Places or as a State Antiquities Landmark. Site 41TR307, is a park shelter over 50 meters outside the culvert's direct impact area. The structure will not be impacted, but is recommended as eligible. No other cultural resources were identified on or below the surface during the survey. Based on the results of the survey, AR Consultants, Inc. concludes that further cultural resource investigations for this project are unwarranted, and requests that the Texas Historical Commission and the U.S. Army Corps of Engineers concur with this recommendation. However, if buried cultural materials are discovered during construction, both agencies should be notified. Work should not resume until all coordination with agencies is completed. The project will be curated with the Center for Archaeological Studies at Texas State University.

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INTRODUCTION

The City of Fort Worth (City) is proposing to construct storm drainage improvements along Zoo Creek in Tarrant County, Texas (Figure 1). The project area is located in the southern 10.5 acres of Forest Park in central Fort Worth. The parcel is bounded by Park Hill Drive (Dr) on the north, Sandage Avenue (Ave) on the west, McPherson Ave on the south, and McCart Ave on the east. South (S.) Forest Dr bisects the property. This project consists of the construction of a stormwater detention wall to help alleviate flooding in the area. There will be four main impact areas (Figure 2) and portions of S. Forest Dr will be repaved. The deepest impacts will occur in the northern portion of the park where a detention wall will be built parallel to the Park Hill Dr Bridge. The second impact area will be for the new sanitary sewer being rerouted along McCart Ave. The third is the replacement of a low water crossing culvert on S. Forest Dr near the central part of the parcel. The final impact will be for a stormwater outfall on Zoo Creek to be constructed on the south end of the park where the creek intersects McPherson Ave. A 30-meter (m) area around these impacts was surveyed for the project.

Dunaway Associates, L.P. is handling the environmental permitting and design for the project, and contracted with AR Consultants, Inc. (ARC) to conduct a historical and archaeological survey of the proposed Fort Worth Zoo Creek Drainage Improvement Project. Preliminary research showed that the original Park Hill Dr Bridge was built in 1910, a year after Forest Park was dedicated. The bridge was later rebuilt by the City in 1990. The parcel on which these impacts will occur was not added to the park until 1945 (Tarrant County Deed Book [TCDB] Vol. 1724 pg. 559). The wall will be built 10 feet (ft) south of and parallel to the Park Hill bridge. The piers will be approximately 28 feet deep, however, these will occur on top of an existing sanitary sewer line that will be abandoned by the City. A new sewer line, approximately 220 meters long, will be constructed along McCart Ave to reroute the abandoned portion. The culvert on S. Forest Dr was built in the 1960s as were the retaining walls along the channel edge on the downstream (east) side of the culvert. The retaining walls will not be impacted. The culvert will be replaced with a bigger one and rip-rap will be added to the upstream (west) side to help prevent erosion. One final historic-age resource was identified as the Forest Park Shelter adjacent to the culvert. The culvert, shelter, and the bridge were evaluated by Susan Kline, MA, Architectural Historian as part of this project. This evaluation is discussed in the results, but the full report was added as Appendix A.

This report was prepared to be reviewed by the Fort Worth District of the U.S. Army Corps of Engineers (USACE) and the Texas Historical Commission (THC). The cultural resource investigation was required because the City of Fort Worth owns the property and is sponsoring the project. The project also will need a Section 404 permit from the USACE (Project Number SWF-2017-00128). Relevant federal legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969 (PL-90-190), the Clean Water Act, as amended (PL-92-500), the Rivers and Harbors Act of 1899, the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), Executive Order No. 11593 “Protection and Enhancement of the Cultural Environment,” and Protection of Historic Properties (36 CFR 800). The Texas Antiquities Code (Texas Natural Resource Code, Title 9, Chapter 191) also applies to this investigation and Texas Antiquities Permit Number

8179 was issued for the archaeological survey. The Archeology Division of the THC will review this report as the State Agency and as part of the Section 106 process.

This report is written in accordance with report guidelines used by the Archeology Division of the THC (Council of Texas Archeologists n.d.). The following report presents a brief description of the natural setting of the project area, followed by a discussion of the culture history and previous investigations within the study area. A chapter on the research design and methodology employed in the investigation is then followed by the results of the field investigation. The report concludes with recommendations followed by the references cited and an appendix.

Administrative Information:

ARC Project Number:	170906
Sponsor:	The City of Fort Worth, with Dunaway Associates, Inc. managing the permitting and design
Review Agency:	Fort Worth District of the U.S. Army Corps of Engineers and the Archeology Division of the Texas Historical Commission.
Principal Investigator:	Cody S. Davis, MA
Architectural Historian:	Susan Kline, MA
Field Dates:	October 4, 2017
Field Crew:	Emily D. Goetschius and Cody S. Davis
Field Person Days:	2
Acres Surveyed:	approximately 1.72 acres
Sites Investigated:	
Prehistoric:	none
Historic:	41TR306 (culvert) and 41TR307 (shelter)
Historic Resources:	2 (Forest Park Shelter and S. Forest Dr Culvert)
Curation:	Center for Archaeological Studies, Texas State University, San Marcos

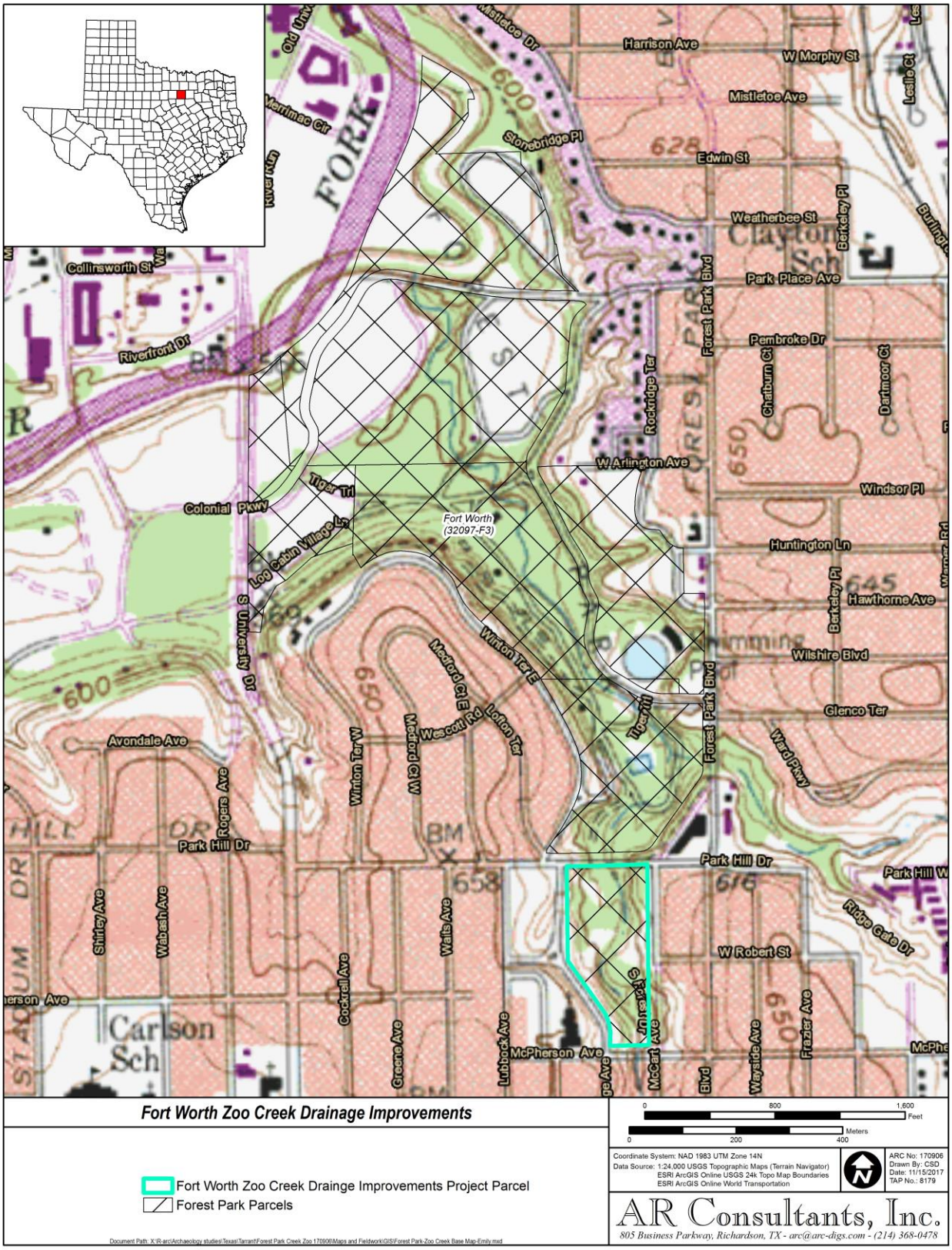

Figure 1. Fort Worth Zoo Creek Drainage Improvements Parcel shown in relation to the overall park on the 1955 (Photorevised 1981) Fort Worth, TX 7.5' USGS map.

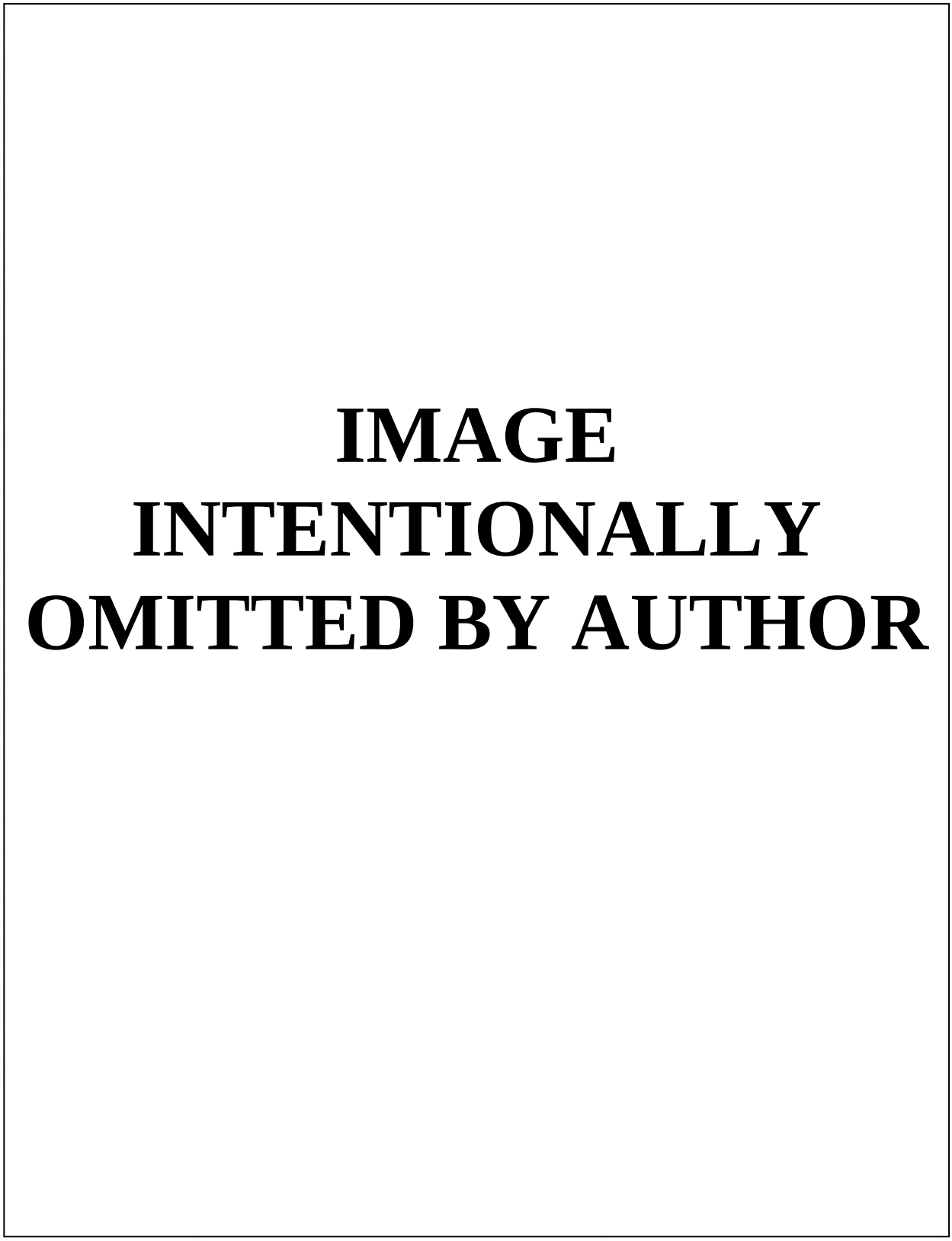

Figure 2. Impact/Survey Areas shown on a recent aerial photograph.

NATURAL ENVIRONMENT

The study area is located within the Grand Prairie ecoregion of Texas (Griffith et al. 2017:40-41), which is characterized by rolling plains underlain by Lower Cretaceous limestones with interbedded marl and clay. Vegetation in this area consists of upland tall to midgrass prairie grasses as well as elm, pecan, and hackberry trees in riparian settings. The project area is situated approximately three-quarters of a mile southeast of the Clear Fork of the Trinity River. The project parcel is bisected by a first order intermittent tributary that flows north into the river. The drainage is not named on any of the topo maps, but it is locally referred to as Zoo Creek.

The Clear Fork's floodplain consists of Holocene-aged alluvium (Bureau of Economic Geology 1988) deposits including gravel, sand, silt, silty clay, and organic matter. The geology underlying the project parcel is Lower Cretaceous-aged Fort Worth Limestone and Duck Creek Formation (Bureau of Economic Geology 1988). These formations consist primarily of limestone and clay. Soils in the project area include the Aledo-Bolar-Urban land complex to the east and west, and the Frio-Urban land complex within the central portion, running north/south along either side of S. Forest Dr (Ressel 1981: Sheet 42). The Aledo-Bolar-Urban contains a mix of approximately 20-30 percent Aledo, 15-20 percent Bolar, and 15-50 percent Urban land. Aledo and Bolar are similar in that they are both well drained, moderately permeable, and with calcium carbonate concretions that restrict plant growth. Aledo has an A horizon of 0-4 inches of dark grayish brown, gravelly clay loam over an Ak horizon of grayish brown, very gravelly clay loam. Bolar has an Ap horizon of 0-6 inches of brown clay loam over an A horizon of dark brown clay loam and a Bk1 horizon of pale brown clay loam. The Urban soils consists of disturbed areas where the soil has been altered to the extent that it is not classifiable. The Frio-Urban land complex, commonly found on floodplains, consists of 40-70 percent Frio soil with 15-40 percent Urban land. As with Aledo and Bolar, Frio soil is also well drained and moderately permeable, however, it has a deep root zone that is highly fertile. Frio has an A1 horizon of 0-8 inches of dark grayish brown silty clay, over an A2 horizon of dark grayish brown clay loam.

CULTURAL HISTORY

A prehistoric chronology, based on numerous investigations within in the upper Trinity River Basin (Peter and McGregor 1988; Prikryl 1990; Yates and Ferring 1986: Lintz et al. 2008), with an added historic period, for North Central Texas is presented below to provide the reader with a temporal framework for the culture history of the region.

Table 1. Cultural Chronology.

Period	Dates
Anglo-American Settlement	A.D. 1800 to present
Protohistoric	A.D. 1600/1700-1800
Late Prehistoric II	A.D. 1200-1600/1700
Late Prehistoric I	A.D. 700-1200
Late Archaic	1550 B.C. – A.D. 700
Middle Archaic	4050-1550 B.C.
Early Archaic	6550-4050 B.C.
Paleoindian	Pre-6550 B.C.

The Paleoindian period is characterized as having small, nomadic bands of hunter-gatherers whose primary emphasis was the exploitation of now-extinct megafauna, such as mammoth and bison. Smaller game and plant gathering likely supplemented the Paleoindian diet (Meltzer and Bever 1995:59). As such, the archaeological record for the region consists of several distinctive styles of projectile points, such as the Clovis, Plainview, and Folsom. Currently, no Clovis points have been reported in Tarrant County, but numerous others have been found in the surrounding counties (Bever and Meltzer 2007:67-70). These subsistence patterns began to change as a general drying climatic trend swept the region, leading to extinction of many of the area's large mammals toward the end of the Paleoindian period.

The Archaic period is characterized by increased alluviation of water channels and a generally wetter environment than the previous period. This change in climate resulted in modification of Native American subsistence patterns, with broad exploitation of bottomland food resources. This, in turn, resulted in clusters of seasonal settlements along large drainages, including the Trinity River and its various forks and tributaries, and a marked increase in population density. With the advent of repeated, seasonal occupation of sites along drainages came a perceived increase in territorial constrictions among different groups in the region, with several authors citing limited use of regional lithic resources as evidence (Skinner 1981; Prewitt 1983).

The Late Prehistoric period is interpreted as a drier period, with a focus on procurement of faunal resources, agriculture, and food preservation. The appearance of pottery and the bow and arrow help date artifact assemblages to this period (Shafer 1977). The Protohistoric period is characterized by Native American abandonment of north central Texas in the period around 1500/1600, with almost no archaeological evidence found in the region dating to this time (Skinner 1988).

The Historic European period saw widespread Anglo settlement of north central Texas beginning in the 1830s. This expansion often resulted in brutal conflicts between settlers and nomadic

bands of Native Americans (Garrett 1972:24). These early conflicts gave way to various Anglo strategies aimed at cohabitation, including peace treaties signed as early as 1843. Eventually, the entirety of north central Texas was settled, with numerous Anglo military installations established in the region. The earliest Anglo settlements in Tarrant County were Bird's Fort, established around 1840, and Lonesome Dove, settled in 1845. Lonesome Dove, located near present-day Grapevine, was the first permanent settlement in Tarrant County (Garrett 1972:55). Only 150 families and single pioneers took advantage of the Peters Colony land grants to settle in Tarrant County (Garrett 1972:57). Many of the families that obtained land through these grants maintained and farmed their land well into the mid-20th century.

After Texas became part of the United States in 1845, peace was short lived. The Civil War took its toll on the north central Texas population, as most of the able-bodied men left to fight for the Confederacy. Tarrant County continued to grow and prosper after the war. Fort Worth was spurred by growth of the cattle industry and the arrival of the Texas and Pacific Railway in 1876 (Hightower 2010). By 1870, it is estimated that 300,000 head of cattle had been driven through Fort Worth and the primary industry throughout Tarrant County was agricultural into the 20th century. This industry was replaced by manufacturing soon after the Great Depression. Defense factories built near Grand Prairie for the development of goods for World War II attracted those seeking work. From the 1940s onward, many factories in Tarrant County continued to produce a wide variety of products, including airplanes, helicopters, mobile homes, electronics, and plastics. The development of DFW International Airport, and increased manufacturing and industrialization in the communities of Arlington, Euless, and Fort Worth, in the 1970s led to a rapid rise in the population of the surrounding communities.

Previous Investigations

Review of the Texas Archeological Sites Atlas (TASA) revealed several previously recorded cultural resources and investigations within a one-mile radius of the project area (TASA 2017). Three archaeological surveys have been conducted within this search area. These include surveys conducted for the City of Fort Worth in 1991 and 2011, and a survey conducted for the Fort Worth Transportation Authority in 2013. The 1991 survey was conducted in response to a proposal to construct a parking lot and included design features such as sidewalks and outflow pipes (Edwards 1991). The intent of the study was to investigate the impact of construction on site 41TR119, a prehistoric short-term occupational site containing stratified archaeological deposits to a depth of two meters below ground surface. The site includes one or two possible hearths that have been eroded from the stream bank, burned rock concentrated in two small areas, burned bone, chert flakes, and mussel shell. Eight backhoe trenches, two test units, and nine shovel tests were excavated and the cut banks of Zoo Creek visually inspected, revealing significant archaeological deposits. It was ultimately determined that site 41TR119 would not be impacted by the project, however active preservation was recommended, as the area is heavily eroded and a popular picnic area within Forest Park. The 2011 survey consisted of archaeological monitoring during the excavation of a bore pit as part of a sewer improvements project (Young 2013). No cultural materials were discovered. The 2013 survey was conducted in response to a proposed passenger rail line (Hartsfield et al. 2013). Systematic pedestrian survey and shovel testing were conducted and revealed three historic archaeological sites, two of which are within search area. Site 41TR261 is an early 20th century neighborhood and site 41TR262 is an early to mid-20th century factory/warehouse. Neither of these sites, nor the third (41TR260, an

early 20th century house located outside of the current project area) identified during the survey, are eligible for National Register of Historical Places (NRHP) recommendation or State Antiquities Landmarks (SAL) designation.

Two historic districts are located within one-mile of the project area. These are the Fairmount/Southside Historic District, consisting of a 360-acre middle-class residential area developed between 1890 and 1938 (Emrich 1989), and Elizabeth Boulevard Historic District, which consists of a 26-acre district containing 44 single family dwellings constructed as early as 1911. This district represents Fort Worth's oldest restricted residential subdivision (Roark 1979). Additionally, three NRHP properties are within the search radius. The Thomas and Marjorie Shaw House is approximately a quarter of a mile northwest from the project area and is a Monterey style dwelling with Spanish Colonial Revival details (Singleton 1995). The house was constructed in 1927 and is documented as one of the earliest properties in the Park Hill Addition. The Roy A. and Gladys Westbrook House is approximately half a mile northwest from the project area and is a 1928 Tudor Revival house featuring a sunken garden, terraces, a historic inground swimming pool and tennis court (Kline 2008). The Rogers-O'Daniel house is located approximately a half mile northeast of the project area and was constructed in 1901 as a Queen Anne-style country house. It was significantly altered in 1925 by Senator Wilbert Lee O'Daniel to a brick American Foursquare style house (Babitch 1984).

In addition to the TASA search, historic maps and aerial photographs of the project area were reviewed. These include 1894, 1955, 1968, 1972, 1981, and 1995 Fort Worth, TX 7.5' USGS maps, the 1919 Greater Fort Worth City Map by C. H. Rogers, the 1920 Soil map of Tarrant County, the 1930 Fort Worth Chamber of Commerce Map of Fort Worth, and the 1936 and 1958 General Highway Maps of Tarrant County. The 1919 Roger's Map shows Forest Park extending to the north side of Forest Dr (Park Hill Dr) and that the project parcel was developed as a neighborhood (Figure 3). However, this map appears to show different names for the roads on the south side of the park, even though they largely match the current layout of the neighborhood. The more accurately drawn 1920 soil shows that a park area was established and that the project parcel was undeveloped along the tributary, now referred to as Zoo Creek. The 1930 Chamber of Commerce map shows a similar layout as the 1919 map, with the project area being part of the neighborhood and not a green space. The road names now match the current ones. The project parcel is first shown as a southern extension of Forest Park on the 1955 USGS map. A road is shown on the 1955 USGS map following the west side of the creek through the parcel. This road was shown on the subsequent 1968 and 1972 maps; however, no road was shown on the 1981 map. The 1952 and 1953 USGS aerials show the two-track road depicted on the topo maps on the west side of the creek (Figure 4). The aerials demonstrate that the project area is surrounded by dense urban development. Then sometime between 1995 and 2001, Google Earth imagery shows that 5-6 structures were built along S. Forest Dr just on the south side of the Park Hill Dr Bridge. In 2002, all but one of the buildings had been removed and by 2003 the last building had been removed. Additionally, the 2001 aerial shows that there was a secondary access road coming off Sandage Ave, likely used when Zoo Creek was flooded and Forest Dr was under water. It appears that by 2005, use of this road was discontinued and large concrete blocks were placed in the path to prevent access. The property has largely remained the same since 2005. The park shelter was not present on the 1956 aerial but was present on the 1963.

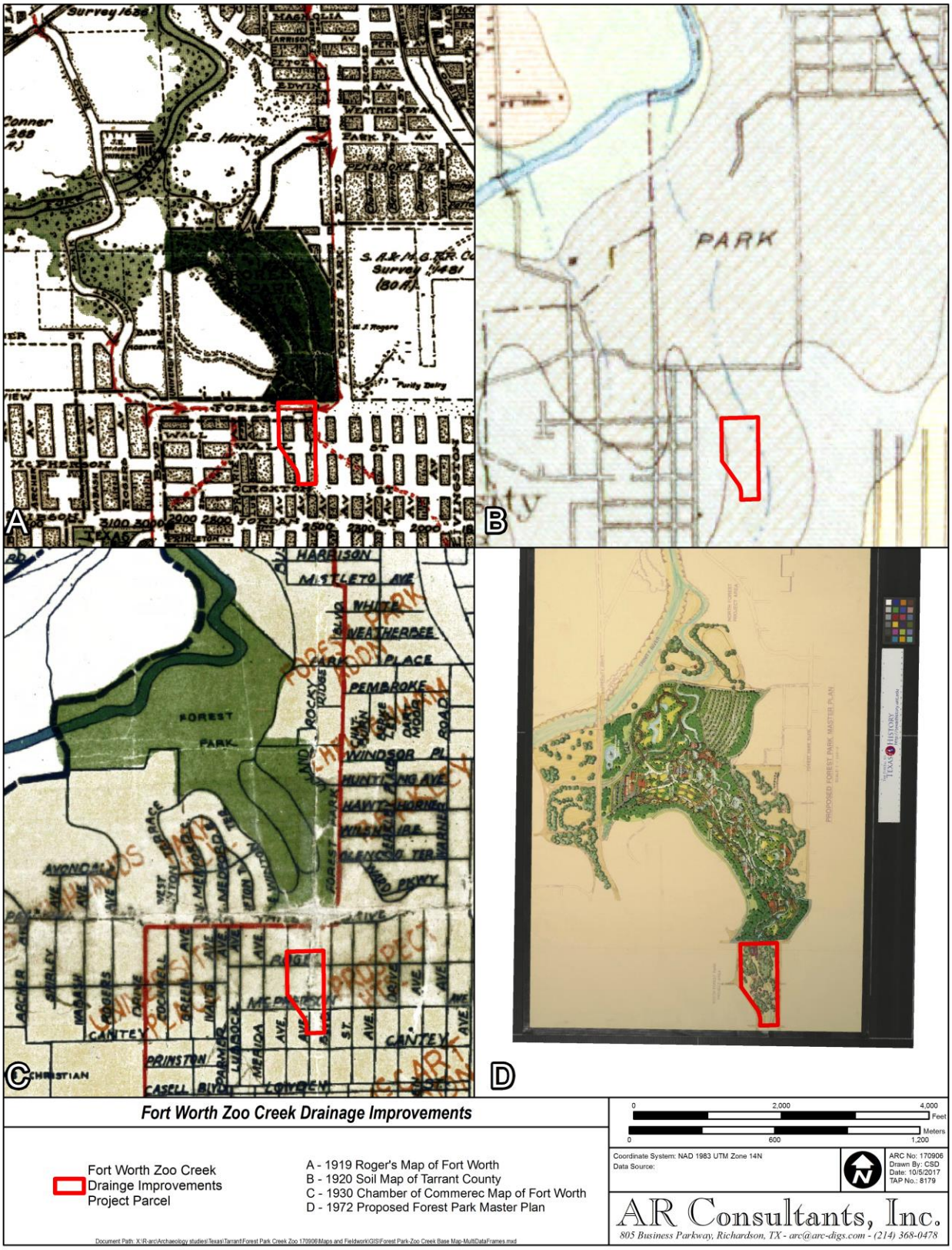

Figure 3. Historic Map Comparison.

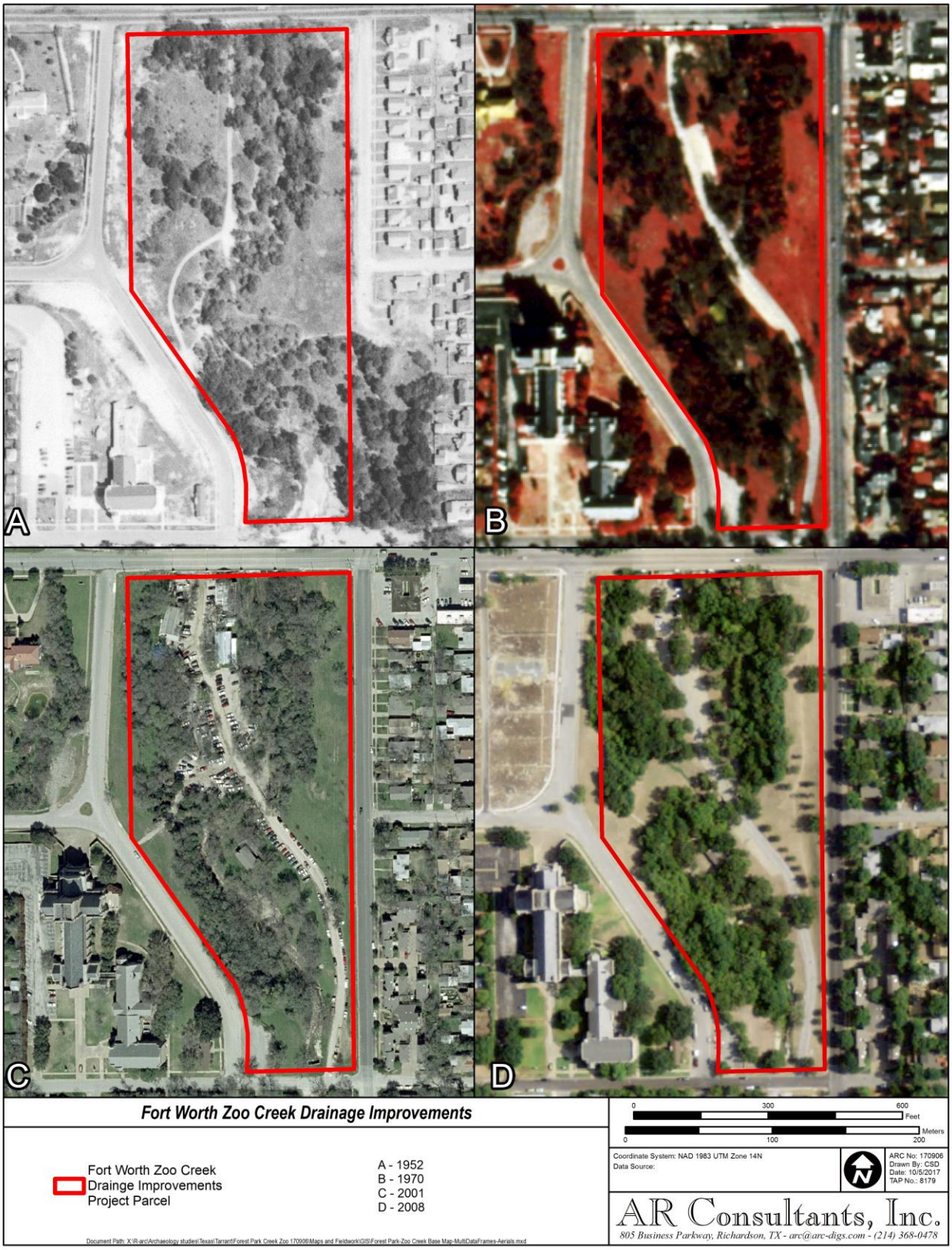

Figure 4. Historic Aerial Comparison.

RESEARCH DESIGN AND METHODOLOGY

Research Design

Based on the research conducted prior to survey, two hypotheses were developed. First, it was hypothesized that there was potential for encountering prehistoric sites, as a prehistoric site is located downstream from the project area on the Clear Fork of the Trinity River. However, given the project parcel's headwater location in the uplands, this potential is low to moderate. Prehistoric sites in this region are typically located directly adjacent to significant drainages, which would allow for access to water and food resources. Therefore, there is very limited potential for encountering temporary-use sites in this specific setting. These would likely be ephemeral and exposed on the degrading surface. Additionally, prehistoric sites recorded in this setting are typically not well preserved due to the degrading environment and fact that the area has been heavily developed since the mid-1800s.

The second hypothesis stated that there was potential for encountering historic sites. No structures were ever shown within the parcel on any of the historic aerials or maps reviewed. However, the area surrounding the parcel has been occupied heavily since the late 1800s and early 1900s. While historic maps and aerials demonstrate that structures are not likely to be found, historic trash scatters and features such as foundations and trash may be present within the survey areas, in addition to the bridge and culvert.

Methodology

Survey was conducted in accordance with the standards set forth by the THC (n.d.). The field personnel walked the pipeline route and detention wall impact area along a 15 m transect as well as thoroughly inspected the culvert and outfall areas. Shovel tests (STs) averaged 30 cm in diameter. All sandy and loamy soils were screened through ¼" wire mesh screens. The clay fill was inspected visually and broken into smaller chunks in order to determine if cultural materials were present. ST soil matrices were described on the basis of composition, texture, and color. The Munsell Soil Color Chart (2009) was used to identify soil colors. The field crew made notes about the ground exposure, drainages, soil types, and disturbed areas where subsoil was exposed. Photographs were taken during the survey using a 16-megapixel digital camera. ST locations were marked with a handheld Garmin GPSmap64st receiver.

RESULTS

This chapter is divided into two sections. The first describes the study area's setting along with results of the pedestrian survey. Conclusions derived from the survey close the chapter. While shovel tests are described generally within the survey results, they are detailed in Table 2 included at the end of the survey results section.

Survey Results

As mentioned previously, S. Forest Dr extends N/S through the study area. The road provides access to the park, and dead ends at an employee entrance to the zoo beneath Park Hill Dr Bridge. Parking is available along the northern portion of the road (Figure 5). During the survey, the area was active with zoo employees, FedEx deliveries, and a few residents utilizing the park for birdwatching and dog walking. Vegetation consisted of manicured lawn with wooded areas of elm and oak trees along the creek and the perimeter of the park. At the time of the survey, the weather was overcast and humid, with a temperature of approximately 80ºF. In the past 24 hours, it rained throughout the Metroplex, but not in the study area. Much of the study area has been disturbed along the sloping landscape from utility and road construction, and the previously standing structures seen on the 2001 aerials. At present, the only structure remaining is a stone picnic pavilion in the western portion, just south of the creek. This structure did not appear on the aerials until 2001. A few additional picnic tables and barbecue grills are scattered throughout the park parcel.

Figure 5. Looking north towards Park Hill Dr Bridge and parking lot for zoo employees.

The Detention Wall survey area follows the existing sewer line and had good ground visibility (greater than 30%) during the survey. Both the western and eastern ends were very steep and have been impacted by the sewer line as well as bridge construction (Figure 6). The existing sewer line is exposed in the Zoo Creek channel, where the creek crosses under the Park Hill Bridge (Figure 7). The Sewer Line survey area was situated on the highest elevations in the northeast and consisted of steep slopes and short grasses (Figure 8). The Culvert Replacement survey area was generally level (Figure 9) and the culvert was recorded as site 41TR306. The Forest Park Shelter, adjacent to the culvert was recorded as site 41TR307 (Figure 10). The Stormwater Outfall survey area had been extensively impacted by culvert and road construction projects (Figure 11) and had steep slopes (Figure 12).

Figure 6. Looking west along Detention Wall Survey area from ST2 towards ST1.

Figure 7. Exposed sewer line in Zoo Creek under Park Hill Bridge.

Figure 8. Sewer Line survey area looking south along McCart Ave.

Figure 9. Overview of the Culvert Replacement survey area, ST11 and site 41TR306. View is to the southeast.

Figure 10. Looking south to the Forest Park Shelter (41TR307) from Zoo Creek.

Figure 11. Looking at Zoo Creek north of the modern culvert on McPherson Ave. View is to the southeast.

Figure 12. Looking at Zoo Creek channel with exposed bedrock and steep slopes. View is to the southeast.

Survey began in the northwestern corner of the project area (Figure 13) and continued as indicated on the shovel test map (Figure 14). A total of sixteen shovel tests were planned and plotted, however, only nine were excavated due to shallow/exposed bedrock, slopes greater than 20 percent (Figure 15), and previous disturbances. Most shovel tests encountered bedrock 20 to

55 cm below the surface (Figure 16). ST1 and 2 had construction fill associated with the existing sewer line that will be abandoned, while ST5-8, and 10 had brown gravely loam resting on the bedrock. ST14 yielded comparable results with bedrock at 20-cm and displaying very dark grayish brown gravely loam. ST11 was the deepest, revealing brown sandy soil to a depth of 55-cm. ST8 was the only shovel test displaying a color change, with a 35-cm layer of dark grayish brown clay loam overtop a 10-cm layer of very dark grayish brown clay loam. No prehistoric or historic cultural resources were recovered in any of the STs.

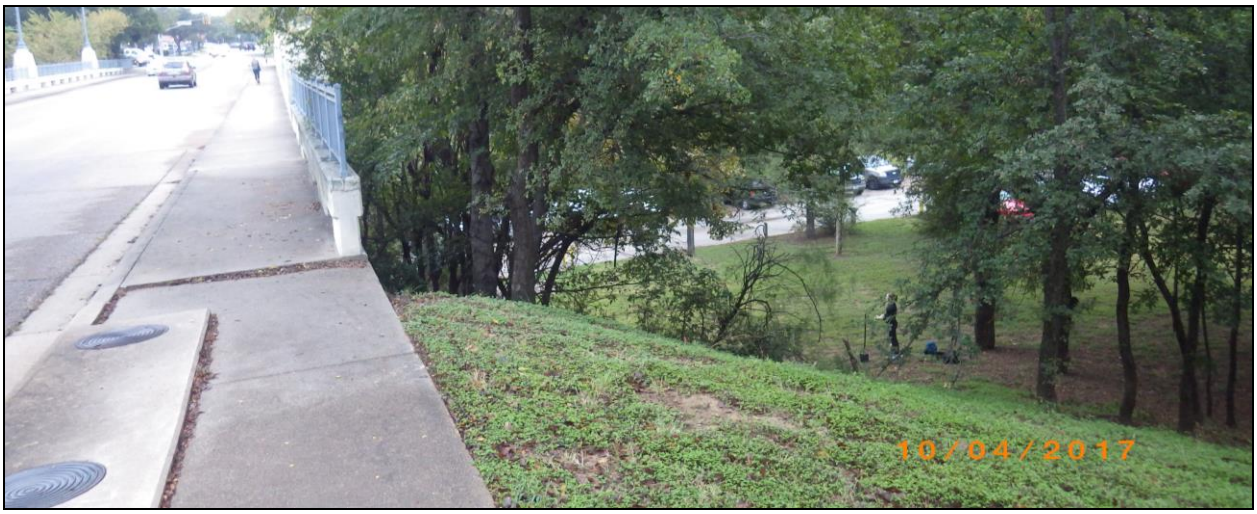

Figure 13. Looking towards ST1 and the Park Hill Bridge from sidewalk along Park Hill Dr.

During the initial phases of the project, it was thought that the bridge on Park Hill Dr was built in 1910, however, after additional research and information provided by a local informant, it was determined that the City had to rebuild the bridge in 1989, and it was completed in 1990. Therefore, the bridge is not eligible to be an archaeological site or historic-age resource (Appendix A). Two sites, 41TR306 and 41TR307, were recorded with historic-age resources built in the mid-20th century. 41TR306 is the culvert on S. Forest Dr and was built between 1956-1963 and was probably repaired in 1969 (Figure 17). In addition to the culvert, there are retaining walls along the creek banks that extend downstream for 30 to 40 m (Figure 18). These walls will not be removed as part of the project, only the culvert will be replaced in order to allow a larger water capacity through the area (Figure 19). Based on the Architectural Historian report (Appendix A) and the documentation done as part of this survey, site 41TR306 is not eligible for inclusion on the NRHP under criterion A, B, C, or D or as a SAL. The second site, the Forest Park Shelter, which is approximately 25 m outside of the Culvert Replacement Survey Area was recorded as site 41TR307. The structure will not be impacted by the project, but evaluation of the structure demonstrates it could be eligible for listing on the NRHP under criteria A and C (Appendix A).

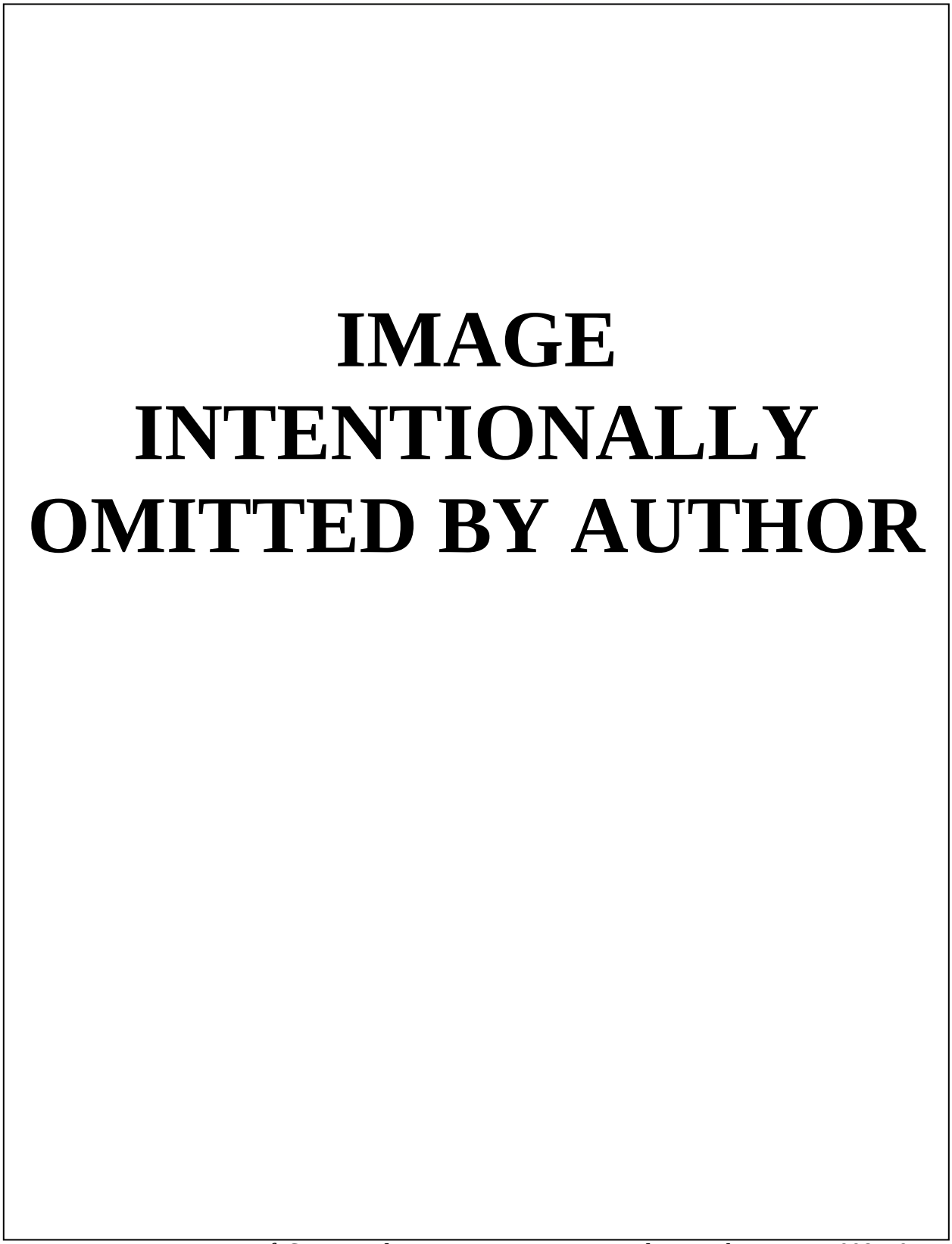

Figure 14. Locations of STs in relation to survey areas and sites shown on 2009 50 cm resolution LiDAR and 5' contours (TNRIS 2017).

Figure 15. ST4 location on east bank of Zoo Creek in existing sewer easement. View to the west.

Figure 16. Bedrock exposed at the bottom of ST7.

Figure 17. Date inscribed in the mortar on the culvert (41TR306).

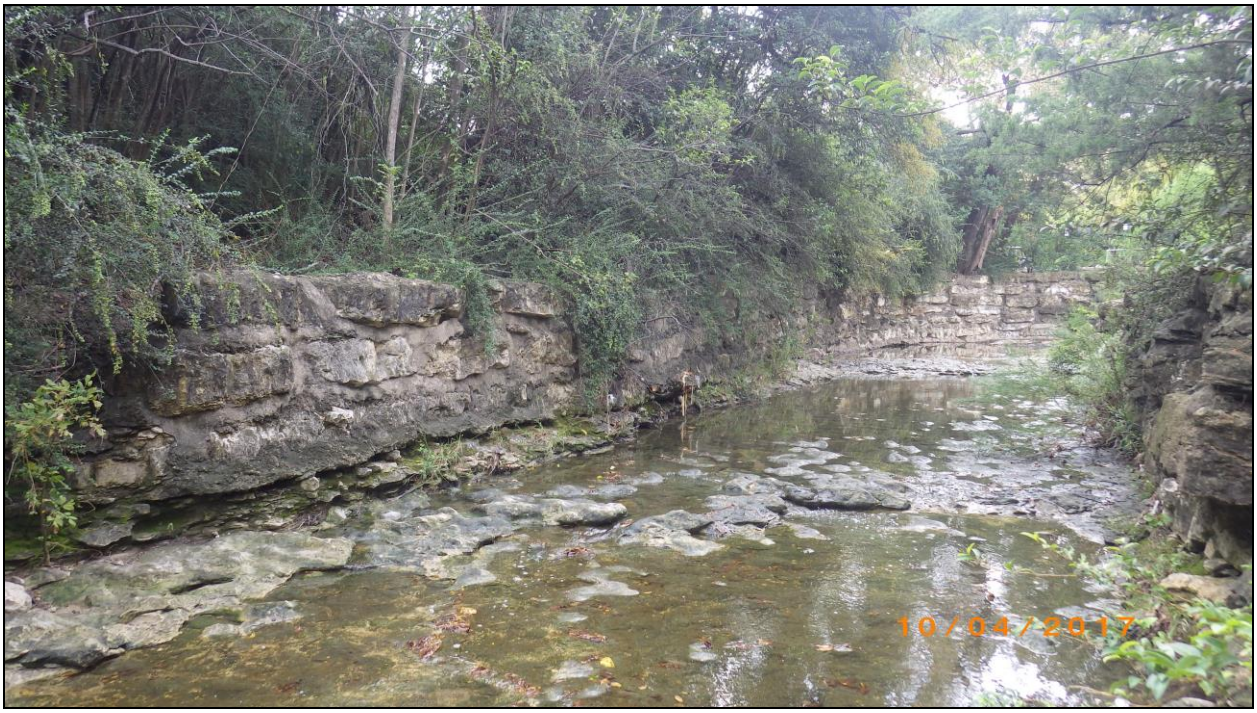

Figure 18. Retaining walls on the downstream (east side) of culvert (41TR306). View is to the southwest.

Figure 19. Close-up of where culvert and retaining walls meet. Only the culvert portion will be replaced (41TR306).

Table 2. Shovel Test Descriptions.

ST#	Depth (cm)	Description	Comments/ Artifacts
1	0-30	Brown (10YR 4/3) gravely clay loam & construction fill	Negative/ In existing sewer line easement
2	0-30	Brown (10YR 4/3) gravely clay loam & construction fill	Negative/ In existing sewer line easement
3	Unable to excavate due to slope greater than 30% and bedrock noted on surface		
4	Unable to excavate due to slope greater than 30% and bedrock noted on surface		
5	0-20 20+	Brown (10YR 4/3) gravely clay loam Bedrock	Negative
6	0-20 20+	Brown (10YR 4/3) gravely clay loam Bedrock	Negative
7	0-20 20+	Brown (10YR 4/3) gravely clay loam Bedrock	Negative
8	0-35 36-45 45+	Dark grayish brown (10YR 4/2) gravely clay loam Very dark grayish brown (10YR 3/2) gravely clay loam Bedrock	Negative
9	Unable to excavate due to slope greater than 30%		
10	0-20 20+	Brown (10YR 4/3) gravely clay loam Bedrock	Negative
11	0-55 55+	Brown (10YR 4/3) sandy clay loam Bedrock	Negative
12	Unable to excavate due to bedrock at surface		

ST#	Depth (cm)	Description	Comments/ Artifacts
13	Unable to excavate due to slope greater than 30%		
14	0-20 20+	Very dark grayish brown (10YR 3/2) gravely clay loam Bedrock	Negative
15	Unable to excavate due to bedrock at surface		
16	Disturbed by or during culvert and road construction		

Conclusions

No artifacts were recovered in any of the STs, however, two historic-age resources were recorded as archaeological sites during the survey of Fort Worth Zoo Creek Drainage Improvements Project. The culvert on S. Forest Dr was recorded as 41TR306 and was recommended as ineligible for listing on the NRHP because it is a minor landscape feature. A nearby park shelter was recorded as 41TR307. This structure was recommended as eligible for listing on the NRHP but is outside the impact areas and will not be affected by the project. Overall, the survey results are generally in keeping with the predictions put forth in this report's research design. Though it was predicted in the Research Design that prehistoric sites might be found in the project area given its proximity to Zoo Creek, none were identified during the survey. Additionally, there was potential for other historic sites like trash scatters associated with home or farmsteads, however, none were found and both historic sites are related to the park.

RECOMMENDATIONS

The purpose of this investigation was to determine if significant cultural resources are present in the proposed Fort Worth Zoo Creek Drainage Improvements project area in Tarrant County, Texas. Site 41TR306 is the remains of a historic culvert on S. Forest Dr. This culvert will be replaced and is not recommended eligible for NRHP or SAL listing. Site 41TR307, is a park shelter just outside the impact areas. The structure will not be impacted, but is recommended as eligible for listing on the NRHP and as an SAL. No other cultural resources were identified on or below the surface during the survey. Based on the results of the survey, ARC concludes that further cultural resource investigations for this project are unwarranted, and requests that the THC and USACE concur with this recommendation. However, if buried cultural materials are discovered during construction, the Archeology Division of the THC and the Fort Worth District of the USACE should be notified.

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APPENDIX A

Architectural Historian Report on Historic-Age Resources

Survey of Non-Archeological Historic Resources Along Zoo Creek in Forest Park

Fort Worth, Tarrant County, Texas

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December 2017

Management Summary

The City of Fort Worth is proposing to construct storm drainage improvements in Forest Park along Zoo Creek in Tarrant County, Texas. The project area is located on a 10.5-acre parcel that comprises the southernmost section of the park. The tract is bounded by Park Hill Drive on the north, McCart Avenue on the east, McPherson Avenue on the south, and Sandage Avenue on the west. South Forest Drive, a north-south asphalt-topped road, bisects the property. The proposed project calls for the construction of a storm water detention wall to help alleviate flooding in the area. This will necessitate the repaving of a portion of South Forest Drive. The project will have the deepest impact in the northern section of the parcel in the vicinity of the Park Hill Drive Bridge. In addition, the low water crossing (referred to as the Forest Drive/Zoo Creek Culvert in this report) located in the central portion of the park will be replaced.

Dunaway Associates, L.P. is undertaking the environmental permitting and design for the project and contracted with AR Consultants to conduct a historical and architectural survey of the proposed Fort Worth Zoo Creek Drainage Improvement Project. AR Consultants subcontracted with Susan Allen Kline, an architectural historian, to conduct a historic and architectural survey of historic resources that might be impacted by the proposed project. Three resources were identified: the Park Hill Drive Bridge, located at the north end of the study area; the Forest Drive/Zoo Creek Culvert, located near the center of the project area; and the Forest Park Shelter, located approximately 70 feet southwest of the culvert. The architectural historian's investigations revealed that the Park Hill Drive Bridge was completed in 1990 and thus is not a historic resource. The Forest Drive/Zoo Creek Culvert was constructed between 1956 and 1963 and the Forest Park Shelter was constructed between 1956 and 1958. As a result, these two resources are considered historic-age resources. Through a site visit and review of primary and secondary sources, the architectural historian evaluated their eligibility for the National Register of Historic Places and designation as State Archeological Landmark.

This report was prepared to be reviewed by the Fort Worth District of the U.S. Army Corps of Engineers (USACE) and the Texas Historical Commission (THC). The cultural resources investigation is required because the City of Fort Worth owns the property and is sponsoring the project. The project will also need a Section 404 permit from the USACE. Relevant federal legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969 (PL-90-190), the Clean Water Act, as amended (PL-92-500), the Rivers and Harbors Act of 1899, the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), Executive Order No. 11593 "Protection and Enhancement of the Cultural Environment," and Protection of Historic Properties (36 CFR 800). The Texas Antiquities Code (Texas Natural Resource Code, Title 9, Chapter 191) also applies to this investigation and Texas Antiquities Permit Number 8179 was issued for the archeological survey (see separate report). The History Programs Division of the THC will review this report as the State Agency and as part of the Section 106 process.

The following report presents the methodology used in evaluating the three identified resources and descriptions of the project area and the evaluated resources followed by historic contexts for the Park Hill Drive Bridge, Forest Park, and the evolution of shelter design in Fort Worth public parks to the early 1960s. The report concludes with recommendations and the cited references.

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Introduction

The City of Fort Worth is proposing to construct storm drainage improvements in Forest Park along Zoo Creek in Tarrant County, Texas. The project area is located on a 10.5-acre parcel that comprises the southernmost section of the park. The tract is bounded by Park Hill Drive on the north, McCart Avenue on the east, McPherson Avenue on the south, and Sandage Avenue on the west. South Forest Drive, a north-south asphalt-topped road, bisects the property. The proposed project calls for the construction of a storm water detention wall to help alleviate flooding in the area. This will necessitate the repaving of a portion of the road. The project will have the deepest impact in the northern section of the parcel in the vicinity of the Park Hill Drive Bridge. In addition, the low water crossing (referred to as the Forest Drive/Zoo Creek Culvert in this report) located in the central portion of the park will be replaced.

Dunaway Associates, L.P. is undertaking the environmental permitting and design for the project and contracted with AR Consultants to conduct a historical and architectural survey of the proposed Fort Worth Zoo Creek Drainage Improvement Project. AR Consultants subcontracted with Susan Allen Kline, an architectural historian, to conduct a historic and architectural survey of historic resources that might be impacted by the proposed project. Three resources were identified: the Park Hill Drive Bridge (Resource 1), located at the north end of the study area; the Forest Drive/Zoo Creek Culvert (41TR306) (Resource 2), located near the center of the project area; and the Forest Park Shelter (41TR307) (Resource 3), located approximately 70 feet southwest of the culvert. The architectural historian's investigations revealed that the Park Hill Drive Bridge was completed in 1990 and thus is not a historic resource. The Forest Drive/Zoo Creek Culvert was constructed between 1956 and 1963 and the Forest Park Shelter was constructed between 1956 and 1958. As a result, these two resources are considered historic-age resources. Through a site visit, review of primary and secondary sources, and the subsequent creation of pertinent historic contexts, the architectural historian evaluated their eligibility for the National Register of Historic Places and designation as State Archeological Landmarks.

Methodology

Prior to undertaking this project, the architectural historian had done extensive research on the Fort Worth park system and authored a popular history of Fort Worth parks that was published in 2010 in collaboration with the Fort Worth Parks and Community Services Department (now named the Fort Worth Parks and Recreation Department). In 2014, she prepared an expanded history of the parks for internal use within the department This previous research aided in the identification of the limited primary sources and pertinent secondary sources to be reviewed in order to evaluate the historic and architectural significance of the non-archeological historic resources in the survey area, namely the Park Hill Drive Bridge, the Forest Drive/Zoo Creek Culvert (41TR306), and the Forest Park Shelter (41TR307). Research for this report began on November 22, 2017. Before visiting the project site, research was conducted in the *Fort Worth Star-Telegram* to confirm that the present Park Hill Drive Bridge was constructed in 1989-1990. It replaced a concrete and steel bridge at that site that was constructed in 1910. A check of aerial photographs confirmed that the Forest Park Shelter was constructed between 1956 and 1963. The architectural historian visited the site on November 25, 2017 to photo-document and evaluate the integrity of the bridge, shelter, and culvert. Following the site visit, additional research was

conducted in newspapers, historic aerial photographs, and secondary sources in an attempt to further narrow the construction dates of the shelter and the culvert. On November 30, 2017, the architectural historian reviewed records of the Fort Worth Park and Recreation Department at the department's office in Fort Worth. A review of the Minutes of the Board of Park Commissioners from 1944 to 1969 failed to uncover information on the two structures. No construction plans or drawings were available to review and no definitive information was found to verify the date of construction of the culvert. Historic contexts were created for the Park Hill Drive Bridge and Forest Park. A historic and architectural context for the Forest Park Shelter was created by reviewing the history of Forest Park as well as the evolution of park shelter design in Fort Worth within that context. Footnotes within the historic contexts and the cited references at the end of the report provide more detailed information on primary and secondary sources that were consulted.

This report is divided into two chapters. The first provides a description of the setting and the survey of the individual resources (Park Hill Drive Bridge, Forest Drive/Zoo Creek Culvert, and Forest Park Shelter) as well as an evaluation of the National Register-eligibility of the resources. The second chapter contains historic contexts for the bridge, Forest Park, and the evolution of park shelter design in Fort Worth and concludes with a summary recommendation regarding the National Register eligibility of the surveyed resources.

CHAPTER ONE: DESCRIPTION AND SURVEY RESULTS

Description of Study Area

The study area for the proposed Storm Drainage Improvements in Forest Park along Zoo Creek comprises approximately 10.5 acres in the southernmost section of Forest Park, one of the largest center city parks in Fort Worth. The parcel is approximately three-quarters of a mile southeast of the Clear Fork of the Trinity River. It is bounded by Park Hill Drive on the north, McCart Avenue on the east, McPherson Avenue on the south, and Sandage Avenue on the west. Residential neighborhoods to the east and south of the park are experiencing rapid redevelopment with high density multi-family units and new single family houses. Immediately to the west perched on a hill overlooking the park is the campus of the Late Gothic Revival St. Stephen Presbyterian Church. Bordering the tract to the north is the Park Hill Drive Bridge and just beyond it is the Fort Worth Zoo. Although the zoo is technically a part of Forest Park, it and the bordering Park Hill Drive effectively sever this south parcel from the rest of the park

Although the original acquisition for Forest Park occurred in 1909, this segment was acquired in 1945. Previously, it was part of the plat of the Frisco Railroad Addition, a residential addition south of the park. Its terrain made it difficult to develop for residential use and thus it was sold for park purposes. Within this terrain is a small unnamed creek that is locally referred to as Zoo Creek. It flows north into the Clear Fork. The creek is located in a narrow flood plain with land on either side of it rising to the adjacent streets. Rock outcroppings are exposed along its banks. Beginning at McPherson Avenue, the creek is located on the west side of the park. Midway through the park, it swings to the east. Bisecting the park is South Forest Drive, a narrow north-south asphalt road that begins at McPherson Avenue and extends north where it runs beneath the Park Hill Bridge and on to the Fort Worth Zoo. At the point where the road crosses Zoo Creek is a stone culvert that it one of the evaluated resources in this report (referred to as Forest Drive/Zoo Creek Culvert, Resource 2, 41TR306), Flanking the road immediately south of the Park Hill Drive Bridge (Resource 1) are parking areas used by zoo employees. Another parking lot is located south of the stone culvert on the west side of South Forest Drive. This parking lot is for the benefit of park patrons using the Forest Park Shelter (Resource 3, 41TR307), another resource that is evaluated in this study.

Dispersed through the site are clusters of mature trees, particularly around the Forest Park Shelter, along the creek and the west side of South Forest Drive north of the stone culvert. .

Evaluation of Identified Resources

1. Name of Resource: Park Hill Drive Bridge
Date of construction: 1989-1990
Bridge type: Reinforced concrete beam bridge
Designer: James R. Wooten, A.I.A., John J. Burgess, Jr., P.E., and G. Lee Sorrell, III, P.E.
Builder: Brown S. Blakney, Inc., General Contractor

Completed in 1990, the Park Hill Drive Bridge replaced another bridge constructed in 1910. The current reinforced concrete bridge is 234 feet long and 44 feet wide. It carries Park Hill Drive over a ravine and Zoo Creek in Forest Park. It lies between McCart Avenue on the east and Sandage Street to the west. Approaches consisting of a simple metal railing atop concrete retaining walls are located on the north sides of Park Hill Drive. The deck of the bridge is paved with concrete. Six-foot wide sidewalks run along the north and south sides of the roadbed. The edges of the bridge are delineated by a metal balustrade atop concrete guard rails. Each side of the bridge has four decorative lamp posts atop Art Deco-inspired concrete pilasters that extended down the sides of the bridge. At the center of each side of the bridge is a large triangular concrete panel. In its center are granite panels containing the names of the Tarrant County Commissioners in office when the original bridge was constructed in 1910 as well as the name of that bridge's builder. Also on the granite panels are the names of the mayor and city council members, city manager, and director of public works when the 1990 bridge was constructed as well as the bridge designers and the general contractor. Features such as the name panels and the design of the guardrails were pattern on decorative details of the 1910 bridge.

The bridge abutments are faced with concrete panels formed to resembled irregular-coursed rough-faced stone. Next to the abutments are irregular coursed stone terraces meant to control erosion. The bridge's prestressed concrete beams are exposed beneath the structure and are supported by reinforced concrete piers. Arched concrete facades between the previously mentioned pilasters give the bridge the appearance of three arched spans.

Alterations: Unknown

The bridge is recommended not eligible for the National Register of Historic Places or designation as a State Antiquities Landmark because it is less than 50 years old.

Figure 1: View of the Park Hill Drive Bridge looking east from Sandage Avenue.

Figure 2: View of north side of bridge from the east end. Looking east/northwest.

Figure 3: View of south side of bridge from embankment. Looking northeast.

2. Name of Resource: Forest Drive/Zoo Creek Culvert 41TR306
Date of Construction: unknown (c. 1956-1963?)
Resource type: Landscape: culvert Architectural Style: Rustic
Designer: Unknown
Builder: Unknown

The Forest Drive/Zoo Creek Culvert is located in the southernmost section of Forest Park in Fort Worth, Texas. The approximately 10.5-acre parcel is bounded by Park Hill Drive on the north, McCart Avenue on the east, McPherson Avenue on the south, and Sandage Avenue on the west. The culvert carries Zoo Creek beneath South Forest Drive, a narrow north-south asphalt road that runs north from McPherson Avenue to beneath the Park Hill Drive Bridge and on to the Fort Worth Zoo. The culvert is approximately 480 feet south of the Park Hill Drive Bridge, approximately 200 feet west of McCart Avenue, and approximately 75 feet northeast of the Forest Park Shelter (41TR207).

The east and west faces of the culvert are faced with large slabs of irregular coursed stone. At the center of the culvert are two large concrete culvert pipes. The south pipe has a larger diameter than the north pipe. At the top of the culvert's walls are upright stones that resemble battlements. These border South Forest Drive and serve as barriers to keep vehicle from driving off the road into the creek bed. There is no evidence that there were guard rails attached to the upright stones.

The creek's banks on the east side of the culvert are lined with large slabs of irregular coursed stones similar to those used on the faces of the culvert.

Methodology for dating the culvert: A search of the Minutes of the Meetings of the Board of Park Commissioner and other park records did not provided conclusive information on the culvert's date of construction. Minutes from 1947 referenced the construction of a reinforced concrete culvert in Forest Park although the exact location was not given. By examining aerial photos of the park, a general time frame of c. 1956 to 1963 was selected. The 1956 aerial showed a dense cluster of trees in the general area of the culvert. The 1963 aerial revealed that the trees had been thinned and the course of the creek was much more defined than in the earlier aerial. It is reasonable to conclude that the culvert may have been constructed around the same time as the Forest Park Shelter (c. 1956-1958). Although there is a date of 1969 in a patch of concrete on top of the east side of the culvert, park personnel believe that the date was added during repairs to the culvert at that time.[1]

Alterations: As mentioned, it was likely that the culvert was repaired with concrete in 1969. Differences in the color of stone around the culvert pipes on the east face suggest that there may have been repairs in that general area, too.

Recommendation: Because the culvert is a minor feature, it is recommended not eligible for listing in the National Register of Historic Places or designation as a State Antiquities Landmark.

[1] Bryan Lynnes, Senior Landscape Architect, Fort Worth Parks and Recreation Department, conversation with Susan Allen Kline, November 30, 2017.

Figure 4: View north up South Forest Drive as it crosses the Forest Drive/Zoo Creek Culvert.

Figure 5: West side of culvert. Looking east/northeast.

Figure 6: East side of culvert. Looking south.

Figure 7: View of stone-lined creek banks from on top of the culvert. Looking east.

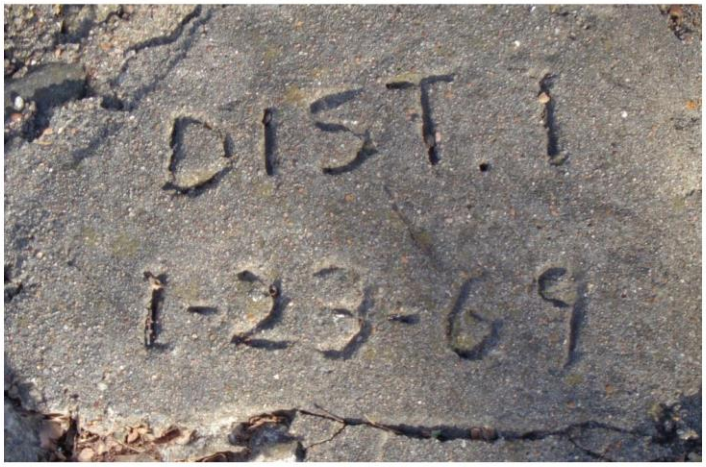

Figure 8: Concrete patch near the south end of the east edge of the culvert dated 1-23-69.

3. Name of Resource: Forest Park Shelter 41TR307
Date of Construction: c. 1956-1958
Building type: Recreation: Park shelter Architectural Style: Rustic
Designer: Unknown
Builder: Unknown

The Forest Park Shelter sits on an approximately 10.5-acre site that comprises the southernmost section of Forest Park in Fort Worth, Texas. The parcel is bounded by Park Hill Drive on the north, McCart Avenue on the east, McPherson Avenue on the south, and Sandage Avenue on the west. It is below the grades of these streets and beneath a canopy of trees. These factors along with the looming silhouette of St. Stephen Presbyterian Church above it to the west give it a picturesque setting when viewed from the east. Dividing the parcel is South Forest Drive, a narrow asphalt street that runs north from McPherson Avenue to beneath the Park Hill Drive Bridge and on to the Fort Worth Zoo. Zoo Creek flows behind the west side of the shelter and curves to the east where it flows through the Forest Drive/Zoo Creek Culvert (41TR306) north of the shelter.

The stone shelter is sited at a slight angle with a northeast orientation toward South Forest Drive. It has a side gabled roof and wide overhanging eaves with exposed rafter tails. The roof is sheathed with composition shingles and its trusses are exposed beneath it. The shelter is open on the west and east sides. Narrow metal columns support the roof; four on the east side and three on west. The north elevation is partially enclosed by a massive fireplace sheathed with uncoursed rough-faced field stone with wide mortar joints. Its firebox is faced with Acme brick. The gable end adjacent (to the left) of the fireplace wall is covered with horizontal tongue-and-groove boards. The south elevation is enclosed by a wall sheathed with uncoursed rough-faced fieldstone. Attached to the south wall is a lower side-gabled extension that is also sheathed with uncoursed rough-faced fieldstone. This extension contains two restrooms (one each on the east and west elevations) and a storage room on the south elevation. These rooms have been sealed by wood panels. The gable end of the extension has a wood vent beneath the peak of the gable. The extension and the off-center placement of the fireplace on the north end give the shelter an asymmetrical arrangement and Modern appearance.

The ground underneath and around the east and west edges of the shelter is paved with concrete. At the northeast corner of the pavement is an L-shaped bench covered with the same stone as the shelter. The bench's seat is made of concrete. The bench likely dates to the same construction era as the shelter.

A more recent concrete sidewalk extends from the east side of the shelter's floor to a concrete parking lot along South Forest Drive. Other landscape features include clumps of nandina along the north and south elevations.

Alterations: A 1977 photo suggests that the structure originally had a wood shingle roof. The roof is now sheathed with composition shingles. Access to the restrooms and storage room is blocked by wood panels over door frames. Beams supporting the roof trusses may have been replaced or repaired. Evidence of mortar patches and graffiti abatement can be found on stone

walls. These alterations do not detract from the architectural or historic significance of the shelter and are to be expected in an open building exposed to the elements.

The shelter and its associated bench are recommended eligible for listing in the National Register of Historic Places under Criterion A at the local level of significance in the Area of Entertainment/Recreation for its association with the Fort Worth Park Department's attempt to provide recreational facilities during an era of rapid growth following World War II. It is also recommended eligible under Criterion C at the local level as an excellent example of the Rustic style as applied to a post-World War II shelter and for its association with the evolution of shelter design in Fort Worth's public parks. The period of significance is c. 1956 to 1958, the time frame in which it was constructed. Designation as a State Antiquities Landmark is also recommended.

Figure 9: East and north elevations of the Forest Park Shelter and stone bench. Looking southwest.

Figure 10: South and east elevations of the Forest Park Shelter and stone bench. Looking northwest.

Figure 11: West and south elevations of the Forest Park Shelter. Looking northeast.

Figure 12: Stone fireplace and exposed roof trusses. Looking northwest.

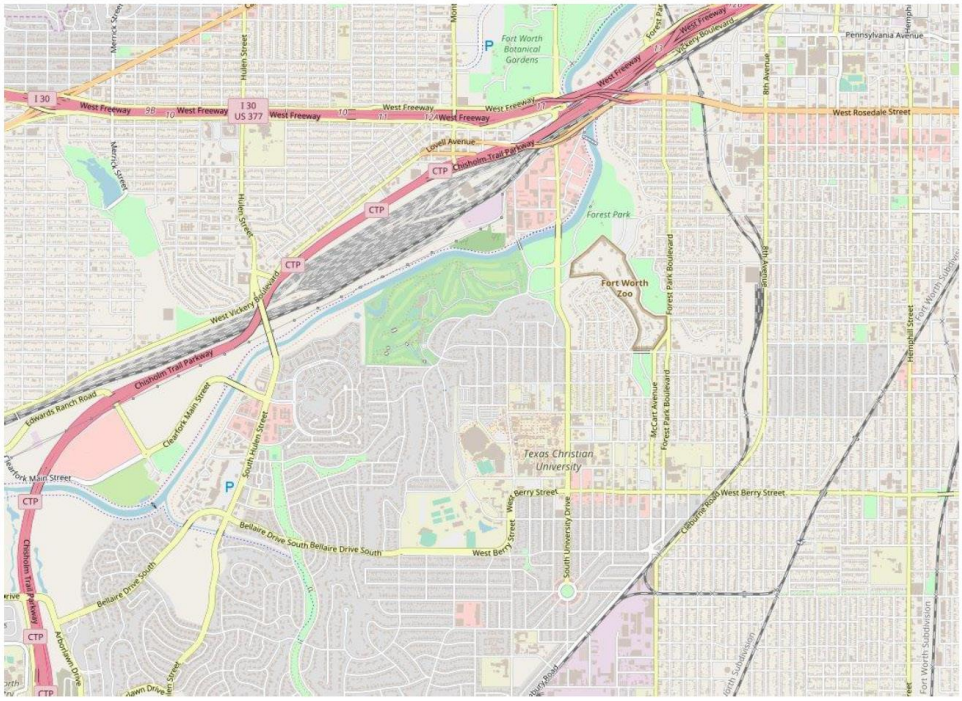

Figure 13: Context map for Forest Park. The study area is immediately south of the Fort Worth Zoo. Retrieved from http://openstreetmap.org, accessed December 5, 2017. N↑

IMAGE INTENTIONALLY OMITTED BY AUTHOR

IMAGE INTENTIONALLY OMITTED BY AUTHOR

National Register of Historic Places Evaluation Guidance

The National Register of Historic Places is the nation's official list of properties deemed worthy of preservation because of their historical or architectural significance. This significance can be at the national, state, or local level. The National Register is a federal program that is administered in the state by the Texas Historical Commission in coordination with the National Park Service. In general, buildings, districts, sites, structures and objects are eligible for this designation if they are at least 50 years old (with rare exceptions) and meet established criteria. The criteria (36 CFR Part 60.4 [a-d]) for evaluating properties for inclusion in the National Register are codified under the authority of the National Historic Preservation Act of 1966, as amended.

Criteria for Evaluation

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of significant persons in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded or may be likely to yield, information important in history or prehistory.

Criteria Considerations

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties *will qualify* if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b. A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

c. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life; or

d. A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

g. A property achieving significance within the past 50 years if it is of exceptional importance.

The Criteria as Applied to the Historic Resources in Forest Park

Each of the three historic resources in the study area were individually evaluated for their eligibility for listing in the National Register based on the four criteria. A resource only needs to meet one of the four criteria to meet the eligibility requirements. The ability to meet the criteria was based on the historic contexts that were developed for this report. In addition, all seven aspects of integrity need not be present as long as the resource retains an overall sense of a past time and place.

The Park Hill Drive Bridge was completed in 1990. As such, it fails to meet the criteria because it is less than 50 years. It has not achieved significance within the past 50 years to be considered of exceptional importance.

The Forest Drive/Zoo Creek Culvert (41TR306) is likely more than 50 years old and appears to possess integrity of location, design, setting, materials, workmanship, feeling, and association. However, no significant historic events or people associated with the culvert have been identified in order to meet Criteria A or B. The quality of its workmanship or design are not significant for it to be considered eligible under Criterion C. Criterion D does not apply because it has not and is not likely to reveal information important to history or prehistory. Archaeological investigations were conducted in the vicinity of the culvert as part of the archaeological survey of the proposed Fort Worth Zoo Creek Drainage Improvements Project. They revealed no information of importance to history or prehistory that would qualify for listing in the National Register. See the survey report *Archaeological Survey of the Proposed Fort Worth Zoo Creek Drainage Improvements Project* (2017).

The Forest Park Shelter (41TR307) is more than 50 years old and appears to retain integrity of location, design, setting, materials, workmanship, feeling, and association. The shelter is recommended eligible under Criterion A at the local level of significance in the Area of Entertainment/Recreation for its association with the Fort Worth Park Department's attempt to

provide recreational facilities during an era of rapid growth following World War II. No significant historic people associated with the shelter have been identified. Should further investigation reveal that it was designed by a significant architect, craftsperson, or builder, Criterion C would apply, not Criterion B. Elements of its design make it an excellent local example of the Rustic style as applied to a park shelter based on a review of other park shelters constructed in the early post-World War II era (1945-1963). It is also significant at the local level and for its association with the evolution of shelter design in Fort Worth's public parks. Thus the Forest Park Shelter is also recommended eligible for listing in the National Register under Criterion C. Criterion D does not apply because it has not and is not likely to reveal information important to history or prehistory. The period of significance would be c. 1956 to 1958, the time frame in which it was constructed.

RECOMMENDATIONS

The purpose of this report was to determine the historic or architectural significance of resources within the proposed Fort Worth Zoo Creek Drainage Improvements Project area. The Park Hill Drive Bridge (Resource 1) is a concrete bridge completed in 1990. It is less than 50 years old and is not recommended eligible for the National Register of Historic Places or designation as a State Antiquities Landmark. The Forest Drive/Zoo Creek Culvert (41TR306) (Resource 2) is recommended not eligible for listing in the National Register or designation as a State Antiquities Landmark because it is a minor landscape feature and does not meet any of the four criteria necessary for eligibility. The Forest Park Shelter (41TR307) (Resource 3) was constructed between 1956 and 1958. It is recommended eligible for listing in the National Register of Historic Places at the local level of significance under Criterion A in the Area of Entertainment/Recreation for its association with the Fort Worth Park Department's attempts to provide adequate leisure and recreation facilities during a period of rapid growth. It is also eligible for listing at the local level under Criterion C for its architectural significance as an excellent example of an early post-World War II Rustic style park shelter and for the evolution of shelter design in Fort Worth. The period of significance would be c. 1956 to 1958, the time frame in which it was constructed. It is also recommended that the shelter be designated a State Antiquities Landmark.

CHAPTER TWO: HISTORIC CONTEXTS

History of the Park Hill Drive Bridge

When Forest Park was created in 1909, it was in a remote location southwest of Fort Worth proper that had little residential development. In 1910, the trustees of Texas Christian University, then located in Waco, accepted an offer of 50 acres and $200,000 from the citizens of Fort Worth to relocate the university there following the destruction of the school's main building by fire. The selected tract was south of Forest Park. The construction of the college spurred adjacent residential growth. Access to the area was facilitated when Tarrant County constructed a reinforced concrete bridge over a gully south of Forest Park in 1910. The street on which the bridge was located was initially referred to as a highway, then later Forest Park Drive, and finally Park Hill Drive. The bridge remained in use for more than 70 years. Structural issues necessitated the addition of steel and concrete reinforcement in 1953.[2]

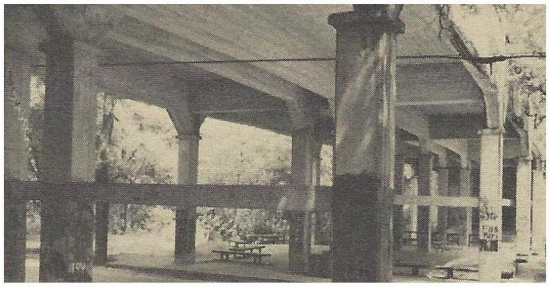

Figure 16: View beneath the 1910 Park Hill Drive Bridge, c. 1980s.

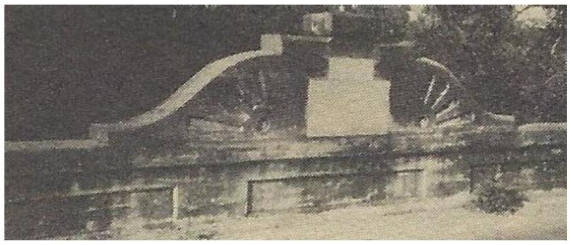

Figure 17: Decorative details on the 1910 Park Hill Bridge, c. 1980s. Both images from *Tarrant County Historic Resources Survey: Phase III Fort Worth's Southside* (Fort Worth, Texas: Historic Preservation Council for Tarrant County, 1986), p. 120.

[2] [Carol Roark, ed.], *Tarrant County Historic Resources Survey: Fort Worth Upper North, Northeast, East, Far South, and Far West* (Fort Worth, Texas: Historic Preservation Council for Tarrant County, 1989), p. 244; [Carol Roark, ed.], *Tarrant County Historic Resources Survey: Phase III Fort Worth's Southside* (Fort Worth, Texas: Historic Preservation Council for Tarrant County, 1986), p. 120.

The 1910 bridge was closed in 1986 because of its deteriorated condition. The Texas Historical Commission determined that the bridge was "'borderline' historical," meaning that it was not eligible for the National Register of Historic Places and approved its demolition if photographed for purposes of documentation before it was demolished." The desire of area residents and city officials to have a bridge design that was complimentary to its surroundings resulted in the creation of a Consultants Selection Committee. The committee, which included neighborhood representation, selected an architectural engineering firm to design it. Because the city did not have the funds to replace the bridge, it relied on the Federal Bridge Replacement and Rehabilitation program to pay 80 % of the estimated one million dollar construction costs, considerably more than the original estimated costs. Delays were incurred as a result of having to meet federal environmental and design standards such as the need for two six-foot sidewalks instead of the one sidewalk that was included in the original plans. This resulted in an increase of the width of the bridge from 36 to 44 feet.[3] Actual work on the bridge did not start until September 1989. Four years after the old bridge was closed, the 234-foot new bridge opened to traffic on April 5, 1990.[4]

Early History of Fort Worth and the Development of Forest Park

Camp Worth, later renamed Fort Worth, was established in 1849 when the U.S. Army created a military outpost on the north central Texas frontier on a bluff above the confluence of the Clear and West Forks of the Trinity River. The army abandoned the fort in 1853 and moved west with the expanding frontier. Merchants who had settled around the post quickly occupied the vacant buildings for their own use.[5]

In 1873, the city of Fort Worth was incorporated. Following the arrival of the Texas & Pacific Railway in 1876, its future seemed secured, although periods of financial insecurity occurred throughout the remainder of the 19th century. By 1900, the city had a population of 23,000 residents and was served by nine railroad lines. With this transportation network, Fort Worth developed into a major industrial and livestock center in north Texas.[6]

In the late 19th century, city leaders and residents came to the realization that Fort Worth was in desperate need of public parks for recreational and aesthetic purposes. Hyde Park, a small tract of land in the Central Business District had been donated to the city in 1873 but it was hardly adequate for much more than a small gathering place. In 1892, the city acquired land to the west of downtown that straddled the Clear Fork. The parcel on the east side of the river was dedicated for the city's waterworks and that parcel on the west side was set aside for park purposes. Even prior to its acquisition, what became City Park, renamed Trinity Park in 1910, had been a

[3] Hollace Weiner, "Profits detour around a bridge in suspension," *Fort Worth Star-Telegram*, November 6, 1988.
[4] Louisa Gipson, "Long wait for work to start on Forest Park bridge ends," *Fort Worth Star-Telegram*, September 14, 1989 and James Vincent Brady, "Troubled waters bridged at last," *Fort Worth Star-Telegram*, April 5, 1990.
[5] *Handbook of Texas Online*, "Fort Worth," accessed December 25, 2016, http://www.tshaoline.org/handbook/online/articles/qbf54.
[6] Carol Roark, *Fort Worth Central Business District: Tarrant County Historic Resources Survey* (Fort Worth, Texas: Historic Preservation Council for Tarrant County, 1991), p. 5.

popular spot for picnics and other outings. The park would be greatly expanded over the next several decades.[7]

With the assistance of women's groups, the Park League was formed in 1908. This organization advocated for the creation of more public parks and a master plan to guide their development. The league secured the services of renowned park planner George E. Kessler to make an initial visit to the city in November 1908. In December, Kessler was officially hired by the city commission to develop a park master plan for which he was paid $1,500. The bluffs and rivers that once had been a defensive asset for the military became the key organizing principle in Kessler's proposed comprehensive system of connecting parks and boulevards. Kessler also recommended the formation of a park board. This was accomplished in 1909.[8]

Kessler's plan included specific recommendations for the acquisition of park land. Among his selected sites was a remote 70-acre parcel located southwest of Fort Worth's Central Business District and south of Trinity Park. Located outside of the city limits, Kessler selected this site because of its scenic qualities. The tract was among several large parcels that were acquired by the Board of Park Commissioners in 1909. The park was located in the valley of a creek tributary of the Clear Fork of the Trinity River and included a wooded hillside. Appropriately, it was named Forest Park. However, at the time of its acquisition, the park contained few level areas that were conducive for recreational pursuits. Still, it became a popular destination for Fort Worth residents. Access to the park was facilitated with the completion of the streetcar line to Texas Christian University in 1911.[9]

Today, Forest Park is best known as the location of the Fort Worth Zoo, originally called Forest Park Zoo. The Board of Park Commissioners made the decision to locate a zoo in the park in late 1910 or early 1911 against Kessler's wishes. He feared that the creation and maintenance of a zoo would drain precious resources from the expansion and improvement of the city's nascent park system. Easily acquired and mostly donated animals such as deer, goats, and pheasants were among the zoo's first residents.[10] As the zoo's population expanded, so did its physical presence at the base of the bluff that marked the southern boundary of Forest Park. Although park consultant S. Herbert Hare later recommended that the zoo be moved to a location where its growth would not be impeded, it remained in Forest Park.[11]

Expansion of the park to the north in the 1920s included large areas of level land in the valley of the Clear Fork that were suitable for athletic fields and general recreational use. Expansion to the west included the acquisition of Bobo Woods, a large parcel dotted with native trees that is now the location of Log Cabin Village. In its 1930 park master plan for the city, Hare & Hare called the enlarged park "a most valuable addition to the complete [park] system."[12]

[7] Susan Allen Kline and the Fort Worth Parks and Community Services Department, *Fort Worth Parks* (Charleston, South Carolina: Arcadia Publishing Company, 2010), p. 10.
[8] Ibid, p. 9.
[9] Susan Allen Kline, "A History of Fort Worth Parks," (unpublished manuscript prepared for the Fort Worth Parks and Community Services Department, 2014), pp. 180-81.
[10] Ibid, p. 112.
[11] Hare & Hare, Landscape Architects and City Planners, *A Comprehensive Park System for Fort Worth: Report to the Board of Park Commissioners* (1930), p. 18.
[12] Ibid, pp. 17-18.

The park was expanded again in 1945 with the acquisition of eleven acres to the north and approximately eleven acres at the south end. That latter parcel was composed of nearly all of four blocks of the Frisco Railroad Addition bounded on the north by what is now Park Hill Drive, the east by McCart Avenue, the south by McPherson Avenue, and the west by Sandage Avenue. Its location in a ravine made it difficult to develop for residential use. It was purchased for $300 an acre from Elizabeth Ryan, the widow of John C. Ryan who had developed the Frisco Railroad Addition and several other neighborhoods in Fort Worth. It was on this parcel that the Forest Park Shelter and the Forest Drive/Zoo Creek Culvert were later constructed.[13]

By the time Hare & Hare completed its 1957 park master plan for Fort Worth, Forest Park was the city's fourth largest park. The plan described it as "another park in the valley of the Clear Fork of the Trinity River, preserving the woodland and natural scenery in both the bottom lands and adjacent hillsides. The Zoo and Aquarium [the latter completed in 1954] are the principal attractions, but there is a large swimming pool and provision for picnic areas, shelter buildings, ball diamonds, archery, etc."[14]

Today, Forest Park contains approximately 182 acres, including acreage for the zoo. Historic resources within it are limited. Stone stairs built in 1915 by Henry Gandillon, the city's chief gardener, provided an important point of entry for visitors arriving at park's east side by streetcar or from the adjacent neighborhoods. They are in poor condition. North of the stairs is a low stone wall at the top of the bluff that was likely meant to mark a scenic overlook. The wall's construction date has not been determined and any scenic view is now obscured by overgrown vegetation. Further north of the stairs are two landmarks towers that mark the east entrance to the park from Forest Park Boulevard and Park Place. They were constructed in 1917-1918 and were restored in 2009-2010. The zoo received numerous improvements constructed by the WPA. Their status is unknown. The 1922 swimming pool at the foot of the previously mentioned stairs was replaced by another pool in the same location in the mid-1960s and was rehabilitated in 2013. An adjacent one-story stone bathhouse was also constructed in the mid-1960s. Log Cabin Village, located on the park's west side has numerous 19th-century log structures that were moved to the park in the mid-20th century.[15] All of these resources are outside of the project area that is the subject of this report.

[13] Deed Records, Volume 1724, Pages 558-60, Tarrant County Clerk's Office, Fort Worth, Texas; Minutes of the Meetings of the Board of Park Commissioner, June 5, 1946.

[14] Hare & Hare, City Planners—Landscape Architects, *A Master Plan of Park and Recreation Areas for Fort Worth, Texas* (1957), p. 13. By using the phrase "shelter buildings," the report may have been referring to the shelter in south Forest Park and perhaps a building at the zoo. The referenced swimming pool was replaced by another pool at the same site in the mid-1960s. The ball diamonds and archery range were on the north side of the park but are no longer extant.

[15] Kline, "A History of Fort Worth Parks," pp. 180-83.

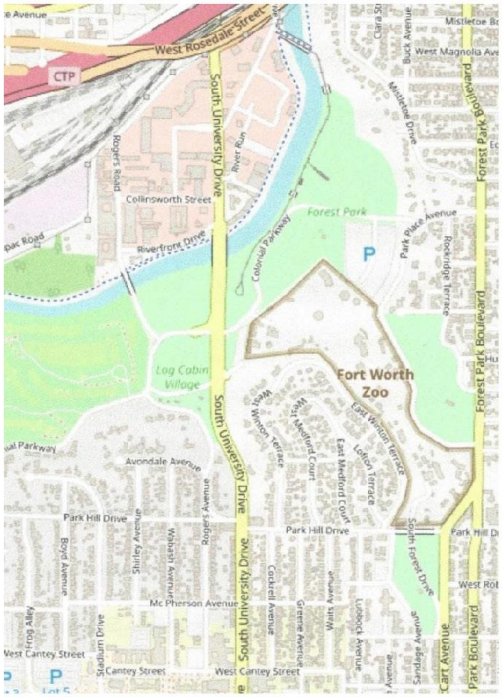

Figure 18: Current map of Forest Park, Fort Worth, Texas, including the Fort Worth Zoo. Study area is south of the zoo. The green area to the left (west) of Log Cabin Village is Colonial Country Club which is not part of the park. Map retrieved from http://openstreetmap.org on December 2, 2017. N↑

Fort Worth Park Shelters Before 1945

Prior to the passage of a bond issue in 1925, the Fort Worth Board of Park Commissioners had concentrated its efforts on park acquisition instead of park improvements. Early park shelters and band pavilions tended to be modest wood-framed buildings. Such structures were built in Trinity, Forest, and Sycamore Parks (the latter two acquired in 1909), among other parks. None of them survive.[16]

After Hare & Hare was hired as the park board's consultant in 1925, several parks received improvements such as shelters. The Inspiration Point area of Lake Worth received at least three shelters, outdoor ovens, and picnic tables in late 1926-early 1927. Only one shelter survives. Designed by E. W. Van Slyke & Associates and constructed by Thomas S. Byrne, the Inspiration Point Shelter had a hipped roof supported by uncoursed rough-faced native stone columns. At the center was a fireplace with a chimney that pierced the roof. Around the shelter was a stone terrace that overlooked the Lake Worth dam. The Inspiration Point Shelter was listed in the

[16] The Sycamore Park (originally called Glenwood Park) band shelter appears in a 1911 photograph in the book *Fort Worth Parks* (Arcadia Publishing, 2010), p. 17.

National Register of Historic Places in 2014 for its association with the development of recreational facilities at Lake Worth and as a good example of pre-Depression-era Rustic style architecture in Fort Worth's parks.[17]

Figure 19: Inspiration Point Shelter, Lake Worth, Fort Worth, Texas, late 1920s-early 1930s Photo by R. C. Morrison. Courtesy Lance and Kathy Morrison, McKinney Texas.

As Hare & Hare worked on an update of Fort Worth's park master plan between 1925 and 1930, the firm developed specific improvement plans for at least 17 parks. For parks that served nearby residential areas, a combination shelter and outdoor theater was a commonly proposed feature. Incorporated into the shelter were storage areas and adjacent restroom that could also be used as dressing rooms. These rooms flanked a stage, such as those at the Hillside and Trinity park shelters, or could be found beneath the building as at Trail Drivers Park. The Hillside park shelter was built in the late 1920s and the Trinity and Trail Drivers park shelters were built in the mid-1930s by the WPA. They could be constructed of brick or Palo Pinto sandstone, had a symmetrical arrangement, and typically had hipped roofs. Some had arched openings for windows, vents, and entrances which added a formality to their design. Fort Worth's combination shelters were featured in the journal *Playground* in 1928 and the book *The New Play Areas: Their Design and Equipment* in 1938.[18]

[17] Arthur Weinman, ALA, "Inspiration Point Shelter House, Fort Worth, Tarrant County, Texas," National Register of Historic Places Registration Form, NRIS #14000105." A newspaper article from January 1927 said that the features were designed by Hare & Hare and plans for one of the demolished shelters can be found in the Hare & Hare Collection (K0206), University of Missouri-Kansas City. If Hare & Hare did not design the shelters, the firm was likely involved in their siting along Inspiration Point. See "Inspiration Point Made More Inspiring," *Fort Worth Record-Telegram*, January 14, 1927.

[18] For individual park plans see Hare & Hare, "A Comprehensive Park System for Fort Worth, Texas: A Report to the Board of Park Commissioners." 1930; "A New Type of Shelter House," *Playground* 22 (No. 4, July 1928): 249-50, and George D. Butler, *The New Play Areas: Their Design and Equipment* (New York: A. S. Barnes and Company, 1938), p. 134.

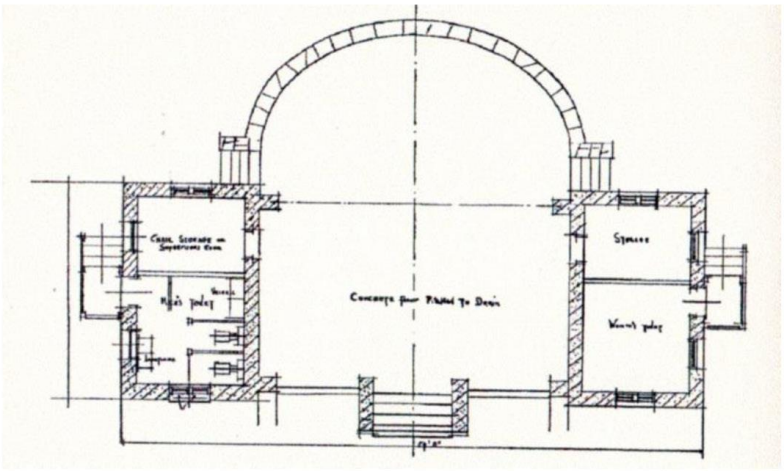

Figure 20: Hillside Park shelter floor plan, designed by Hare & Hare, and featured in the book *The New Play Areas: Their Design and Equipment* (1938), p. 134. This shelter is not extant.

Figure 21: Trinity Park shelter, designed by Hare & Hare and constructed by the WPA in 1937. Photograph c. 1938 from the National Archives and Records Administration, Record Group 69, available at *Texas and the WPA*, https://www.flickr.com, accessed September 18, 2016.

However, it should be noted that Rustic style park shelters continued to be constructed in Fort Worth's parks during the Depression. In 1933, three shelters were constructed in the Fort Worth Botanic Garden. Designed by Hare & Hare and built by workers employed by the Reconstruction Finance Corporation's Relief Committee in Tarrant County, the shelters were constructed of irregular-coursed rough-faced Palo Pinto sandstone and had hipped roofs. The Civilian Conservation Corps built four shelters at Lake Worth in 1935. A shelter constructed in the Broadview area was based on a Hare & Hare design. It and a shelter at Mosque Point (likely designed by the National Park Service--NPS) were constructed of limestone quarried in the area. The stone for both shelters was cut in rectangular blocks giving it a dressed appearance. Two smaller shelters were designed by the NPS with their limestone walls and columns, although

coursed, presenting a rubble appearance. All were designed with side-gabled roofs.[19] All are extant, although the two smaller shelters and the Broadview shelter are in extremely poor condition. The Mosque Point shelter is in good condition but it now has a hipped roof.

Post-World War II Park Shelters in Fort Worth, 1945-1963[20]

Few park improvements were made during World War II. In 1945, Fort Worth residents approved a bond proposal containing $700,000 for park purposes. These funds were used for the acquisition of more park land and improvements. Providing adequate park space and facilities became a matter of necessity in light of Fort Worth's rapid growth in the post-war era. Its population increased 57% from 177,662 in 1940 to 278,788 in 1950. By 1960, it had increased to 356,268 residents.

Perhaps as a reflection of limited resources as well as changing architectural trends, the design of park shelters became simplified in the post-war era. In addition, there was less need for stages and outdoor theaters as the Recreation Department constructed community centers across the city.[21] Evidence suggests that the shelters of the 1950s were designed by local architects, not Hare & Hare. In 1953, park department employees constructed a stone shelter at Oakland Lake Park (acquired in 1927) in far eastern Fort Worth that was designed by Robert P. Woltz, Jr., a Fort Worth architect whose work mostly reflected Modernist and not Period Revival styles.[22] Woltz's design for the shelter showed the influence of the Texas Regionalist with its side gabled roof and stone fireplaces incorporated into each gable end as if mimicking a dogtrot cabin. In addition to uncoursed rough-cut stone columns, simple metal poles also were used to support the roof and as railings between the columns. The shelter is sited next to a stone terrace constructed in the 1930s by the WPA and overlooks Oakland Lake. This shelter is still in use.

[19] See Kline and Fort Worth Parks and Community Services Department, *Fort Worth Parks*, pp. 40-42, and 45-47.
[20] This time frame was selected because the park and recreation departments were combined into one department in 1964.
[21] For a discussion of the new recreation centers, see Chapter 4 "Post War Boom: 1946-1963" in *Fort Worth Parks*, pp. 61-80.
[22] For a discussion of Woltz's work, see Susan Allen Kline, "Texas Garden Clubs, Inc. Headquarters, Fort Worth, Tarrant County, Texas," National Register of Historic Places Registration Form, NRIS #11000136.

Figure 22: Oakland Lake Park shelter. Designed by Robert P. Woltz, Jr. and constructed by park department employees in 1953.

Between 1956 and 1958, a Rustic style shelter was constructed in south Forest Park on land that was acquired in 1945.[23] The use of uncoursed rough-faced limestone was appropriate considering the shelter's siting near a creek and the scenic qualities of the park. In addition to the use of uncoursed stone, the shelter shared some qualities with the Oakland Lake Park shelter such as its side-gabled form and the use of metal columns to support the roof. However, the Forest Park example only had one fireplace (placed off-center on the north gable end). The placement of the lower gabled extension containing restrooms and a storage room on the south end also differed from the Oakland Lake Park Shelter. These features gave the shelter an asymmetrical arrangement like many houses of the era.

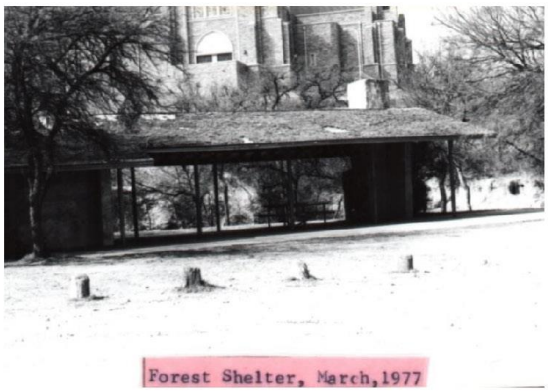

Figure 23: Forest Park Shelter, March 1977, looking west. Courtesy Fort Worth Park and Recreation Department.

[23] The construction date was determined by the use of aerial photographs via www.historicaerials.com and information from the *Fort Worth Star-Telegram*. The shelter does not appear in an aerial from 1956 but it does appear in one from 1963. The earliest reference in the *Fort Worth Star-Telegram* of the use of the shelter by a group appeared on June 23, 1958. This time frame also corresponds with the construction of the shelter at Ralph Bunche Park.

Ralph Bunche Park, located adjacent to the recently developed African American neighborhood of Carver Heights, was acquired in 1954. The 50-acre park consisted of flat land with native mesquite trees. Work on $25,000 of park improvements, including the construction of a stone shelter very similar to the one in south Forest Park began in early 1957. Partial funding for the project came from the proceeds from the selling of Rotary Park on the west side of the Central Business District. This shelter was demolished with the encroachment of the adjacent school grounds into the park.[24]

Figure 24: Bunche Park Shelter, March 1977. Since demolished. Courtesy Fort Worth Park and Recreation Department.

Around 1960, a shelter was constructed in Village Creek Park (acquired in 1959) that was very similar to the shelter at Oakland Lake Park with the exception that it was constructed of brick and only had one gable end fireplace. The other gable end housed the restrooms. This shelter is extant. Because of the use of brick, it lacks the picturesque qualities of the shelters at Oakland Lake Park, Bunche Park, and Forest Park.[25]

[24] "$25,000 Being Spent on Ralph Bunche Park." *Fort Worth Star-Telegram*, January 20, 1957.
[25] "Park for Village Creek Dedicated at Ceremony," *Fort Worth Star-Telegram*, February 22, 1959.

Summary Recommendations

The Forest Park Shelter (41TR307) (Resource 3) is recommended eligible for listing in the National Register of Historic Places at the local level under Criterion A in the Area of Entertainment/Recreation at the local level of significance for its association with the efforts of the Fort Worth Park Department to provide adequate leisure and recreational facilities for its citizens during the early post-World War II era. It is also recommended eligible under Criterion C for its significance as an excellent local example of a Rustic style park shelter constructed in Fort Worth during the early post-World War II era. The use of uncoursed rough-faced stone and exposed rafter tails contributes to its Rustic appearance. Its asymmetrical arrangement and use of metal columns supporting the roof give its appearance a Modern twist. The scenic quality of the shelter's siting within a ravine underneath a canopy of trees also contributes to its picturesque appearance. The period of significance would be c. 1956 to 1958, the time frame in which it was constructed. It is also recommended that the shelter be designated a State Antiquities Landmark.

The other two surveyed resources, the Park Hill Drive Bridge (Resource 1) and the Forest Drive/Zoo Creek Culvert (41TR306) (Resource 2) are recommended not eligible for the National Register. The bridge lacks historic significance because it is less than 50 years old. The Forest Drive/Zoo Creek Culvert is recommended not eligible for listing because it lacks historic or architectural significance.

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