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Volume 2018 Article 142

2018

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Cultural Resources Survey for the Eden Road Realignment Project, City of Arlington, Tarrant County, Texas

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CULTURAL RESOURCES REPORT

Cultural Resources Survey for the Eden Road Realignment Project,
City of Arlington, Tarrant County, Texas

Prepared for:
Texas Historical Commission
Texas Antiquities Permit #8398

On Behalf of:

The City of Arlington

&

Wier and Associates, Inc.

August 2018

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Cultural Resources Survey for the Eden Road Realignment Project, City of Arlington, Tarrant County, Texas

by

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Cultural Resources Report
August 2018

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ABSTRACT

This report documents the substantive findings and management recommendations of a cultural resources survey conducted by Integrated Environmental Solutions, LLC (IES) for the Eden Road Realignment Project in the City of Arlington, Tarrant County, Texas. As the City of Arlington is a political entity of the State of Texas, it is required to comply with the Antiquities Code of Texas (ACT). In addition, as the project will require a Section 404 of the Clean Water Act (CWA) Nationwide Permit (NWP) from the U.S. Army Corps of Engineers (USACE), portions of the project are subject to the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended. All work conformed to 36 Code of Federal Regulations (CFR) Part 800, and 13 Texas Administrative Code (TAC) 26, which outline the regulations for implementing Section 106 of the NHPA and the ACT, respectively. The goal of the survey was to locate, identify, and assess any cultural resources, which include standing historic-age buildings/structures and archeological sites that could be adversely affected by the proposed development, and to evaluate such resources for their potential eligibility for listing as a State Antiquities Landmark (SAL) or eligibility for listing in the National Register of Historic Places (NRHP).

The cultural resources survey was conducted by Project Archeologist Thomas Chapman and Staff Archeologist Alexandra Younger on 08 May 2018 under Texas Antiquities Permit No. 8398. The Area of Potential Effects (APE), located at the intersection of Eden Road and Curry Road, encompasses approximately 24.7 acres. During the IES survey, no archeological sites were documented within the APE. No further work is warranted. However, if any cultural resources, other than those documented within this report, are encountered during construction, the operators should stop construction activities and immediately contact the project environmental representative to initiate coordination with the USACE and THC prior to resuming any construction activities.

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CHAPTER 1: PROJECT DESCRIPTION

This report presents the results of a cultural resources inventory survey conducted by Integrated Environmental Solutions, LLC (IES), under subcontract to Wier and Associates, Inc., (Wier) for the proposed Eden Road Realignment Project in the City of Arlington, Tarrant County, Texas. A brief description of the proposed project area or Area of Potential Effects (APE), environmental and historical contexts, field and analytical methods, results of the investigations, and recommendations are provided in this document. Prepared in accordance with the Council of Texas Archeologists (CTA 2002) guidelines, this report satisfies the cultural resources requirements of the proposed project.

1.1 Introduction

As the cultural resources consultant to Wier, on behalf of the City of Arlington, IES performed an intensive cultural resources survey for the Eden Road Realignment Project. As the City of Arlington is a political subdivision of the State of Texas, it is required to comply with the Antiquities Code of Texas (ACT). In addition, the project will require a Section 404 of the Clean Water Act (CWA) Nationwide Permit (NWP) from the U.S. Army Corps of Engineers (USACE). The purpose of these investigations was to conduct an inventory of cultural resources (as defined by Code of Federal Regulations, Title 36, Section 800.4 [36 CFR 800.4]) present within the proposed project area and to evaluate identified resources for their eligibility for inclusion in the National Register of Historic Places (NRHP), as per Section 106 (36 CFR 800) of the National Historic Preservation Act (NHPA) of 1966, as amended. Therefore, all work conformed to 36 CFR 800, and 13 Texas Administrative Code (TAC) 26, which outline the regulations for implementing Section 106 of the NHPA and the ACT, respectively. The cultural resources survey was conducted under Texas Antiquities Permit No. 8398.

1.2 Area of Potential Effects

1.2.1 *Direct APE*

The APE encompasses an approximately 24.7-acre (ac) area and extends approximately 1.3 mile (mi) along Eden Road and Curry Road from U.S. Highway (US) 287 to the intersection of Curry Road and Westfield Court (**Figures 1.1** and **1.2**). Engineering designs call for the realignment and widening of Eden Road and Curry Road. Through the undertaking, the current 20-foot-wide roadways will be widened and realigned into a single 38-foot-wide road with paralleling pedestrian pathways. The southern pedestrian pathway will consist of a 5-foot-wide concrete walkway that will be offset 6 feet (ft) from the proposed road. The northern pedestrian pathway will be a 12-foot-wide concrete pedestrian and cycling trail that will parallel the road approximately 6 ft to the north. The most significant improvement will occur at the east end of Eden Road where it intersects with Curry Road. The new proposed roadway will be realigned approximately 215 ft north to create a direct connection to Curry Road. The new intersection of Eden Road and Curry Road will feature one of three proposed traffic circles; the other traffic circles will be located along Curry Road at Ledbetter Road and Calendar Road.

The proposed project will require grading and drainage improvements throughout the APE, as well as the replacement of three reinforced-concrete box culverts. The western culvert will be located approximately 285 ft east of the US 287 frontage road. The two eastern culverts will be west of the intersection of Curry Road and Ridge Estates Court and will connect to a channelized section of an unnamed tributary of Sublett Creek. Storm drains and concrete block rip-rap will be installed adjacent to each culvert. A proposed storm sewer near the westernmost traffic circle will empty into a rip-rap-lined channel that will drain into the adjacent Sublett Creek. A retaining wall will be constructed in an east-to-west orientation between the culvert locations and will, at maximum, reach 10 ft above ground surface. The retaining wall will support the pedestrian and cycling trail at a higher elevation above the grade of Eden Road.

Figure 1.1
General Location Map

County: Tarrant
State: Texas
Date map created: 5/14/2018
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5 Streetmap
IES Project Ref: 04.006.040

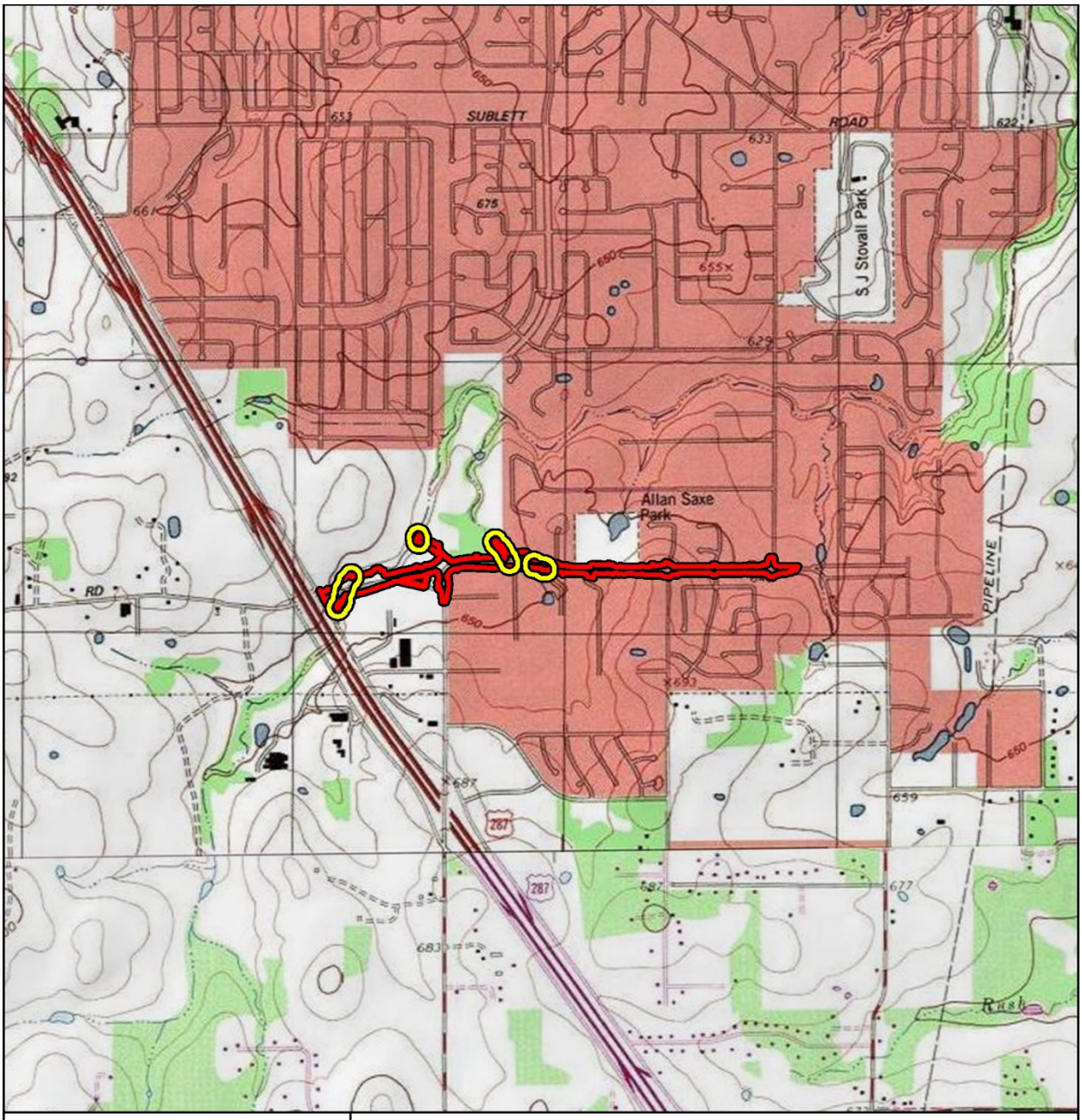

Figure 1.2
Topographic Setting

County: Tarrant
State: Texas
Date map created: 6/25/2018
Source: USGS Topographic Map
Kennedale (1981) 7.5-minute Quad
IES Project Ref: 04.006.040

Vertical impacts within the APE will primarily be restricted to the ground surface; however, deeper subsurface disturbances will occur in association with the installation of rip-rap and the retaining wall, which will reach approximately 3 to 4 ft below surface.

1.2.2 *Indirect APE*

As the project will require federal permitting from the USACE, an assessment of the indirect effects will be required within USACE jurisdiction to satisfy Section 106 of the NHPA requirements. Final designs of the project indicate that above-ground elements will be typical for multi-lane roadway. To account for these above-ground elements, a 100-foot-wide indirect effects APE was assessed surrounding the direct effects APE within USACE jurisdictional areas.

1.3 Administrative Information

Sponsor(s): City of Arlington

Review Agency(ies): THC, USACE

Principal Investigator: Christopher Goodmaster, MA, RPA

IES Project Number: 04.006.040

Days of Field Work: 08 May 2018

Area Surveyed: 24.7 ac

Sites Recommended Eligible for NRHP under 36 CFR 60.4: None

Sites Recommended Eligible for SAL under 13 TAC 26: None

Sites Recommended Not Eligible for NRHP under 36 CFR 60.4: None

Sites Recommended Not Eligible for SAL under 13 TAC 26: None

Curation Facility: No artifacts were collected. Field notes will be temporarily curated at IES and permanently curated at the Texas Archeological Research Laboratory (TARL).

CHAPTER 2: ENVIRONMENTAL BACKGROUND

2.1 Environmental Setting

2.1.1 *Climate*

Tarrant County is located within North-Central Texas. This region features a humid subtropical climate with an annual rainfall average ranging from approximately 35 to 40 inches (in). Most precipitation occurs as rain between April and May, with July and August being the two driest months of the year. This subtropical region tends to have a relatively mild year-round temperature with occasional exceedingly hot and cold snaps (Estaville and Earl 2008).

2.1.2 *Topographic Setting*

The Kennedale 7.5-minute USGS topographic quadrangle map illustrates the APE located in a gently sloping upland setting that is comprised of low hills dissected by Sublett Creek and an unnamed tributary of Sublett Creek (see **Figure 1.2**). The headwaters of Sublett Creek are located 1.83 mi southeast of the APE and flow in a general southwest-to-northeast direction across the northwestern corner of the APE. The unnamed tributary of Sublett Creek begins approximately 0.08 mi south of the APE and flows across the APE near the intersection of Curry Road and a private road west of Winthrop Drive. The confluence of Sublett Creek and the unnamed tributary of Sublett Creek occurs approximately 0.35 mi north of the APE and eventually converge with Rush Creek to the east.

2.1.3 *Geology and Soils*

The APE lies within the Eastern Cross Timbers ecoregion. The Eastern Cross Timbers region was historically characterized by a narrow strip of timbered, low hills that are orientated along a north-to-south axis from Tishomingo, Oklahoma to Waco, Texas (Ferring 1994; McGowen et al. 1987). This region contains numerous hills that were once heavily wooded with oak, walnut, blackjack, and hickory growing within the deep, sandy soils (Hill 1901). Early pioneers referred to the region as the Monte Grande (Grand Forest) and later the Lower Timbers. However, due to urban expansion, agricultural development, and other modern activities, the natural vegetation has become highly fragmented, and only a few large tracts of undisturbed woodlands remain today (TPWD 2018).

The APE is underlain by the Cretaceous-age Woodbine (Kwb) geological formation (**Figure 2.1**). The Woodbine Formation is primarily sandstone and contains a small percentage of siltstone, mudstone, and clay (McGowen et al. 1987; USGS 2018). Weathering of the Woodbine Formation has resulted in the formation of soils with a sandy epipedon within the Cross Timbers ecoregion.

As illustrated by the *Soil Survey of Tarrant County, Texas*, there are six mapped soil units within the APE (Ressel 1981; **Table 2.1**; **Figure 2.2**). Approximately 87.9 percent of the APE contains soils typical of upland settings within the Eastern Cross Timbers. The remaining 12.1 percent of the soils within the APE pertains to the frequently flooded soils along Sublett Creek. Soil data was viewed from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (Web Soil Survey 2018).

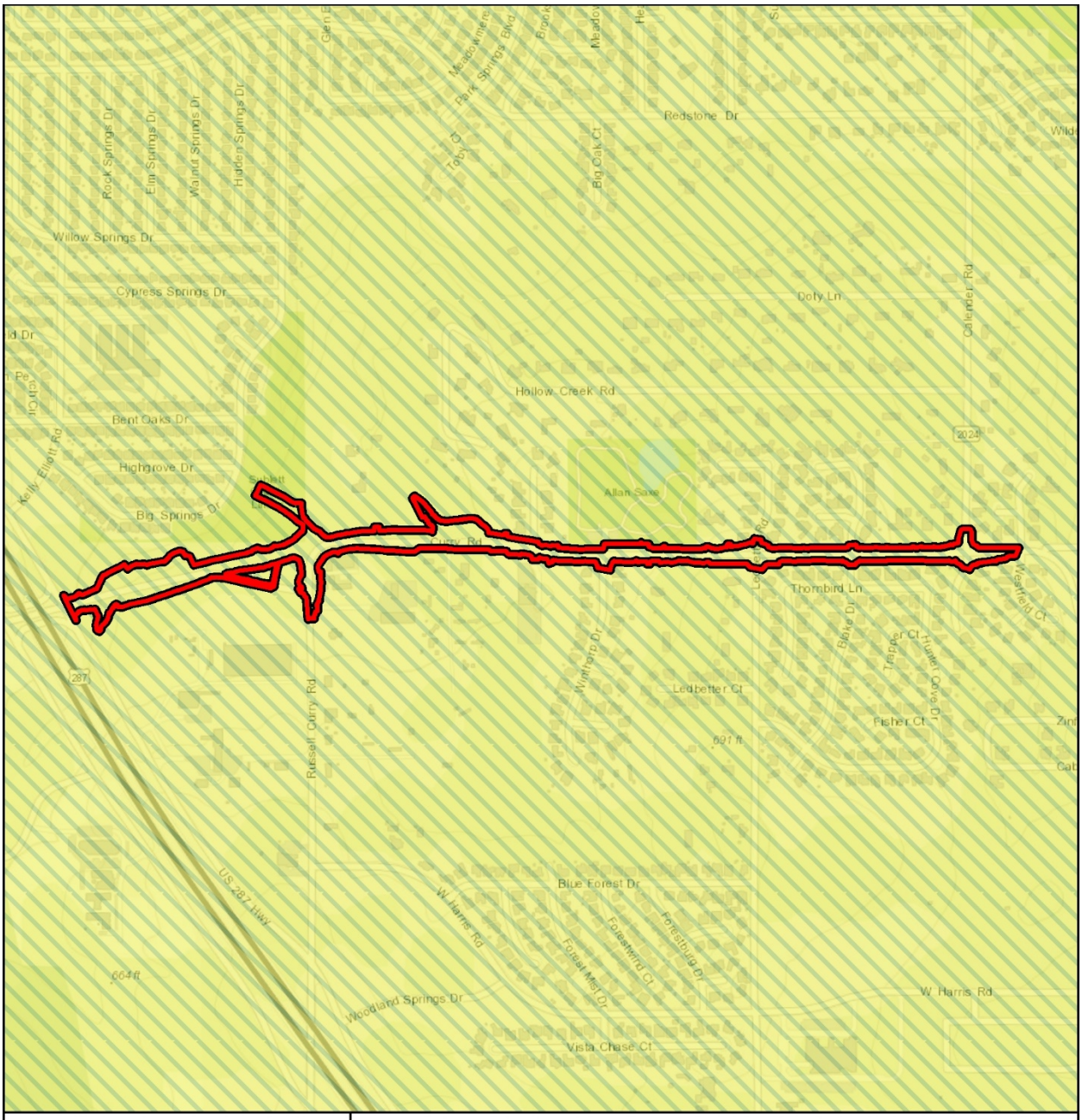

Figure 2.1
Geologic Setting

County: Tarrant
State: Texas
Date map created: 5/14/2018
Source: TNRIS Geologic Atlas of Texas; Dallas Sheet
IES Project Ref: 04.006.040

Area of Potential Effects - Direct

Geologic Formation

Kwb - Woodbine Formation

N

1 inch = 1,000 feet

0 1,000 2,000 ft

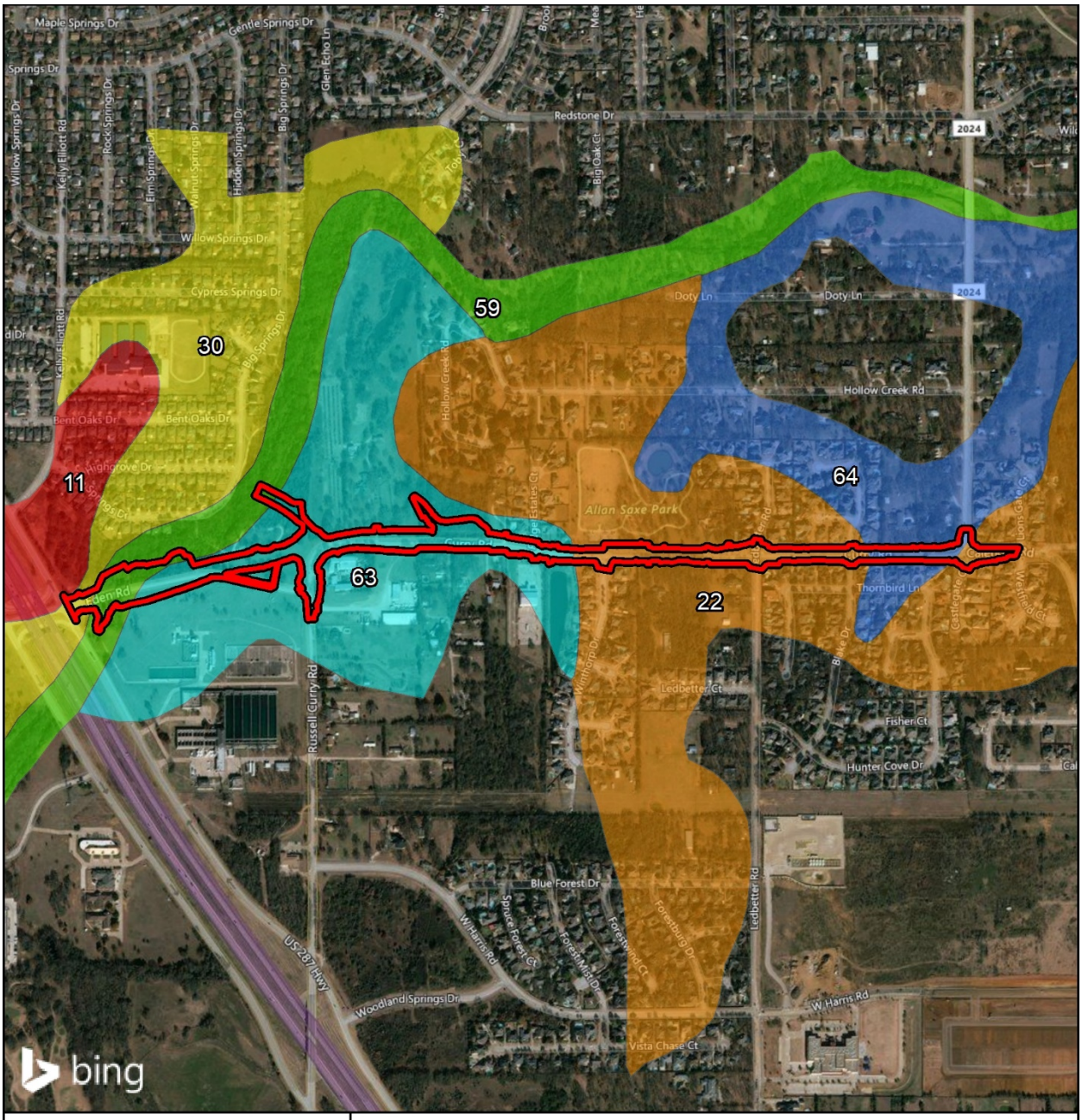

Figure 2.2
Soil Map Units Located Within and Adjacent to the APE

County: Tarrant
State: Texas
Date map created: 5/14/2018
Source: 2007 USDA
NRCS Digital Soils Database
IES Project Ref: 04.006.040

Area of Potential Effects - Direct

Soil Description

- 11 - Birome fine sandy loam, 1 to 5 percent slopes
- 22 - Crosstell fine sandy loam, 3 to 6 percent slopes
- 30 - Gasil fine sandy loam, 3 to 8 percent slopes
- 59 - Pulexas fine sandy loam, frequently flooded
- 63 - Rader fine sandy loam, 0 to 3 percent slopes
- 64 - Rader-Urban land complex, 0 to 3 percent slopes

N

1 inch = 1,000 feet

0 500 1,000 ft

Table 2.1: Soil Map Units Located within and Adjacent to the APE

Soil Map Unit Description	Percentage of the APE
11 – Birome fine sandy loam, 1 to 5 percent slopes - This component is described as fine sandy loam weathered from sandstone located on ridges. Depth to a root restrictive layer or bedrock is 20 to 40 in. The natural drainage class is well drained.	<0.1
22 - Crosstell fine sandy loam, 3 to 8 percent slopes - This component is described as fine sandy loam located on ridges. Depth to a root restrictive layer or bedrock is 40 to 60 in. The natural drainage class is moderately well drained.	27.0
30 – Gasil fine sandy loam 3 to 8 percent slopes - This component is described as fine sandy loam weathered from sandstone located on ridges. Depth to a root restrictive layer or bedrock is greater than 80 in. The natural drainage class is well drained.	2.1
59 – Pulexas fine sandy loam, frequently flooded – This component is described as fine sandy loam derived from loamy alluvium located in floodplains. Depth to a root restrictive layer or bedrock is greater than 80 in. The natural drainage class is well drained.	12.1
63 – Rader fine sandy loam, 0 to 3 percent slopes - This component is described as fine sandy loam located on stream terraces. Depth to a root restrictive layer or bedrock is more than 80 in. The natural drainage class is moderately well drained.	51.9
64 – Rader-Urban land complex, 0 to 3 percent slopes - This component is described as fine sandy loam located on stream terraces. Depth to a root restrictive layer or bedrock is more than 80 in. The natural drainage class is moderately well drained.	6.9

CHAPTER 3: CULTURAL BACKGROUND

3.1 Previous Investigations

A file search within the Texas Archeological Sites Atlas (TASA) and the Texas Historic Sites Atlas (THSA) maintained by the THC indicated there are no previously recorded archeological sites, National Register properties, historical markers, or cemeteries within the APE (TASA 2018, THSA 2018). The TASA database identified three previously conducted archeological surveys and three previously recorded archeological sites located within 1 mi (~1.6 kilometers [km]) of the APE (TASA 2018; **Tables 3.1** and **3.2**; **Figure 3.1**).

Table 3.1: Previously Conducted Archeological Surveys within 1 Mi of the APE

Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
Environmental Protection Agency / Trinity River Authority	n/a	Texas Department of Water Resources	1976	Area	0.8 mile northeast of APE
City of Arlington	1181	Geo-Marine, Inc.	1992	Area	0.9 mile northeast of APE
City of Arlington	1738	Geo-Marine, Inc.	1996	Area	0.35 mile southwest of APE and 0.8 mile southwest of APE

Table 3.2: Previously Recorded Archeological Sites within 1 Mi of the APE

Site Trinomial	Time Period	Site Type	Site Size	Depth Extent	Cultural Materials	Topographic Setting	Reference
41TR12	Prehistoric	Lithic scatter	No data	No data	Debitage	Upland	Whitsett 1976
41TR14	Prehistoric	Lithic scatter	30 x 30 m	10 to 15 cm	Debitage and dart point (Middle/Late Archaic)	Terrace	Whitsett 1976
41TR159	Historic	Tenant house/gin	525 x 200 ft	20 cm	Window glass, clear and manganese bottle glass, stoneware, cut nail	Upland	Hunt 1996

3.2 Cultural Resources Potential

In addition to the TASA review, several additional sources were referenced to determine the general potential for encountering cultural resources within the APE. These sources included the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (Dallas Sheet), USGS topographic maps, the NRCS digital soil database for Tarrant County, the Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM) for Tarrant County, the National Archives and Records Administration's (NARA) 1940 Census Enumeration District Maps for Tarrant County, the Texas Historic Overlay (THO) georeferenced maps, and both past and current aerial photography.

3.2.1 *Disturbance Analysis*

During the background review, it was determined that ground-disturbing activities have transpired within the APE related to past land use and suburban development. Historical aerial photographs indicate that the properties within and adjacent to the APE were used primarily for agricultural or ranching purposes as early as 1953, and presumably during the late 19th and early 20th centuries as well. Although mostly cleared of vegetation, the western portion of the APE contained small areas of riparian forest along the banks of each tributary. Trees and shrubs were removed from these areas in the 1950s and 1960s, but the areas were subsequently left unmaintained and eventually revegetated in secondary growth.

Land use within the APE changed in the 1990s when residential and commercial developments were built north and south of the APE. In 1990, a pipeline was installed through the APE near the intersection of Eden Road and Curry Road. In the early 1990s, the westernmost tributary was channelized, and many trees and dense understory had been removed south of Eden Road. Between 2001 and 2005, a 30-in-diameter water pipeline was installed north of Eden Road from US 287 to Curry Road. Sublett Creek Linear Park was constructed in 2011 north of the intersection of Eden Road and Curry Road. The southern limits of the park lie within the APE. The eastern portion of the APE, along Curry Road, has been heavily modified as a result of the development of several residential subdivisions. On each side of Curry Road, approximately 40 to 60 ft of cleared right-of-way (ROW) containing stormwater drainage channels and electric transmission lines border the road with the exception a few properties that limit the ROW width to approximately 10 ft.

3.2.2 *Prehistoric Resource Potential*

The TxDOT PALM for Tarrant County indicates a portion of the APE, extending approximately 0.5 mi from US 287 to Ridge Estates Court, features a moderate to high potential for containing shallow and deeply-buried cultural materials within a reasonable context. The remainder of the APE features a low to negligible potential for containing shallow and deeply-buried cultural deposits. However, ground-disturbing activities have disturbed the majority of the western portion of the APE and subsequently lowered the potential for encountering intact cultural deposits. Despite past disturbances, a few isolated areas of moderate to high potential remain within the undisturbed riparian corridor located along Sublett Creek and the unnamed tributary of Sublett Creek.

Due to variable likelihood for encountering cultural resources within the APE, this survey consisted of project-specific investigations to target high probability areas (HPA) within the APE. To develop HPA for prehistoric archeological sites, areas containing moderate and high potential identified within the TxDOT PALM were selected within the APE. To define the historic-period HPA, structure locations identified within georeferenced historical maps and aerial photographs were buffered to include a 1-ac area surrounding each identified historic-age structural feature. Final HPA limits were determined by combining the historic and prehistoric HPA and comparing the initial probability data to current land use, locations of previous disturbances, and prior archeological survey limits. For example, areas identified as high potential within the TxDOT PALM, but located within previously disturbed or developed settings, were not considered within the final HPA limits. The 4.3-ac HPA identified for this survey is represented in **Figure 3.2**. The HPA boundary does not denote the specific limits of intensive survey but was expanded and contracted depending on field observations during the survey. Areas outside designated HPA or otherwise displaying high levels of previous ground disturbance were inspected by pedestrian survey and review of aerial photography.

3.2.3 *Historic-Period Resource Potential*

Historic-period resources within North-Central Texas are primarily related to farmsteads, houses, and associated outbuildings and structures that date from the mid-19th to the mid-20th centuries. Typically, these types of resources are located along old roadways, but can be located along railroads, creeks, and open pastures. Although determining the presence of the earliest of these buildings and structures is problematic, thorough and accurate maps depicting these features were widely available post-1895.

Historical maps indicate the project area was void of historic-period resources as early as 1893. According to historical maps, Eden Road and Curry Road were constructed between 1894 and 1920 and have maintained the same general alignment to the present. Although historical aerial photographs and topographic maps illustrate no buildings or structures directly within the APE, historical maps depict several structures located adjacent to the APE. However, the former locations of these historic-period structures have been disturbed by modern construction and development. As such, there is a low potential for encountering historic-period cultural resources within the APE.

3.2.4 *Indirect APE*

Historical and modern aerial photography illustrate there are no historic-aged standing buildings or structures present within the indirect APE.

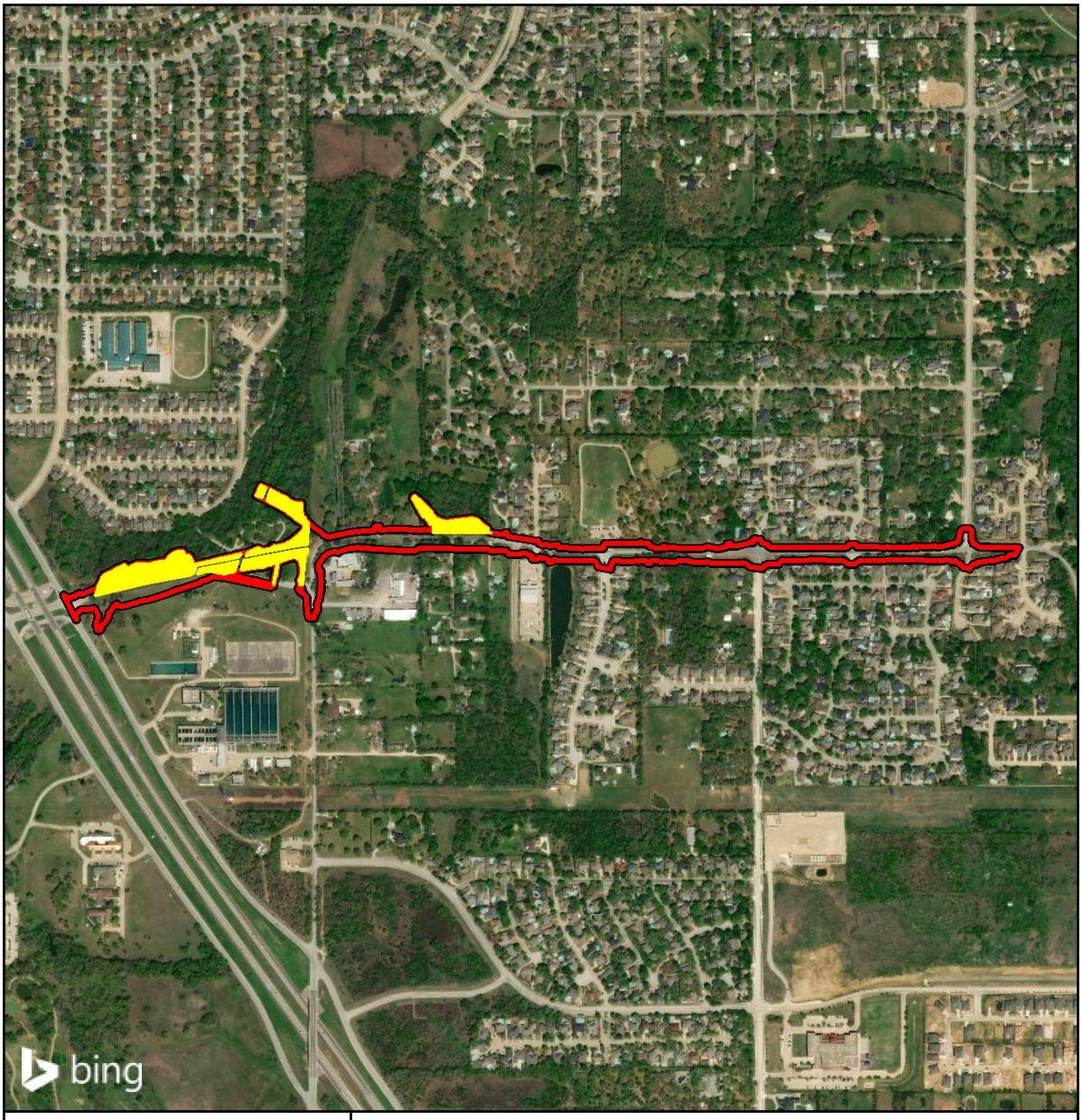

Figure 3.2
High Probability Area Map

County: Tarrant
State: Texas
Date map created: 6/15/2018
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.006.040

CHAPTER 4: METHODOLOGY

The methods utilized during this survey meet the minimum archeological survey standards requirements for field investigations recommended by the CTA (CTA 1996, 2001) and approved by the THC. Prior to field work, the IES staff conducted historical and archeological records reviews to determine previously recorded resources within the APE and within a 1-mi (1.6-km) radius of the APE (see **Section 3.1**). Additionally, IES staff reviewed ecological, geological, and soils data, as well as historical and modern topographic maps and aerial photography of the APE. The archeological inventory survey for the Eden Road Realignment Project was conducted on 14 May 2018.

4.1 Field Methods

The 100-percent intensive pedestrian survey consisted of careful examination of the ground surface and existing subsurface exposures for evidence of archeological sites within the APE. The pedestrian survey consisted of a multiple transect scheme that spanned previously undisturbed portions of the APE, with a focus on areas determined during the background review to contain a high probability for the occurrence of cultural resources. Areas within the APE that displayed high levels of disturbance were photographed to document the lack of potential for intact archeological deposits. Other documentation methods included narrative notes, maps, and shovel test records.

4.1.1 *Shovel Testing*

In areas with potential for the preservation of buried archeological materials, shovel tests were excavated to depths of 80 centimeters (cm) or to the extent of Holocene soil deposits, whichever was encountered first. Each shovel test was 30 cm in diameter and was hand excavated in natural stratigraphic levels not exceeding 20 cm in thickness. Excavated soil was screened using 0.25-in hardware mesh to facilitate the recovery of buried cultural material. If the clay content was high and could not be efficiently screened, material was troweled through by hand and inspected for cultural materials. In addition, the physical properties of each soil stratum were recorded. All shovel test locations and other survey data were recorded and plotted using a Trimble GeoXT handheld global positioning system (GPS) receiver. Based on CTA survey standards, an APE of 1.3 mi in length would require the excavation of 20 shovel tests (16 shovel tests excavated per mile) during the pedestrian survey. However, the number of shovel tests excavated during this survey varied from the standard amount due to the presence of an unnamed tributary channel, steep channel banks, erosional features, existing park infrastructure, and previous disturbances from residential development and buried utility infrastructure.

4.2 Curation

Records, files, field notes, forms, and other documentation are included in the curation package. All field-generated documents are temporarily curated at the IES office and permanently curated at TARL. These documents and photographs were organized and catalogued according to TARL curation standards.

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CHAPTER 5: RESULTS

During this survey, the direct APE was subjected to reconnaissance survey transects and a systematic intensive survey. Pedestrian reconnaissance was conducted across portions of the APE to confirm the extent of prior ground disturbances and assess the likelihood of encountering cultural resources. Ground surface visibility was highly variable and irregular across the APE, ranging from 30 to 100 percent. Intensive survey with systematic shovel test sampling in staggered intervals was conducted across portions of the APE with the potential to contain archeological resources. During this survey, no cultural resources were encountered. A survey photograph location map and general APE photographs are presented in **Appendix A**.

5.1 Archeological Survey

5.1.1 *Survey Observations*

During the background review conducted for this project, it appeared that the portions of the APE west of Ridge Estates Court had avoided significant previous ground-disturbing activities, and these portions of the APE had retained a reasonable context. The majority of the overall APE occupies the existing ROW of Eden and Curry roads (**Appendix A, Photographs 1** through **20**). The existing roadways are paralleled by drainage ditches and well-maintained grass cover. Commercial and residential developments line Curry Road. The western 0.5 mile of the APE expands beyond the existing ROW to include open and wooded undeveloped land (**Appendix A, Photographs 21** through **40**). A sewer line was constructed through this portion of the APE, and a trail system associated with the adjacent Sublett Creek Linear Park was constructed adjacent to the northern boundary of the APE (**Appendix A, Photographs 32** through **37**).

5.1.2 *Pedestrian Survey and Shovel Testing*

The pedestrian survey was conducted with semi-systematic intensive shovel testing conducted in 50-m to 100-m (164-ft to 328-ft) intervals along previously undisturbed portions of the APE with a high probability of containing cultural resources. Precise shovel test placement along the APE was largely controlled by the presence of an unnamed tributary channel, steep channel banks, erosional features, existing park infrastructure, buried utilities, and residential and commercial development. Shovel tests were conducted along one general transect located north of Eden and Curry Road. During the survey, 16 shovel tests were excavated throughout the APE (**Figure 5.1**). No shovel tests were excavated within the developed portion of the APE between Ridge Estates Court and Lionsgate Court due to previous surface modifications and the presence of buried utilities.

Soils exposed in shovel tests across the APE generally consisted of a thick (typically 20 to 70 cm in thickness) dark yellowish brown fine sandy loam (10YR 4/4) surface layer overlying brown (10YR 4/3) fine sandy clay. Surface soils typically extended to depths of approximately 80 cm or less and mantled a sandy clay subsoil. No artifacts or cultural deposits were encountered in any of the shovel tests excavated within the APE.

Figure 5.1
Shovel Test Location Map

County: Tarrant
State: Texas
Date map created: 5/14/2018
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.006.040

Area of Potential Effects - Direct
High Probability Area
Negative Shovel Test

N

0 1,000 2,000 ft
0 300 600 m

5.2 Deeply Buried Archeological Site Assessment

Through field observations along the APE and a review of the existing archeological record in the vicinity, it was determined that the APE possessed a negligible potential for preserving deeply buried cultural deposits. No deeply buried prehistoric archeological sites have been previously documented within the direct or indirect APE. The few prehistoric archeological sites documented within the vicinity of the APE (e.g., 41TR12, 41TR14, and 41TR159) have been documented as relatively shallow sites in uplands. This assessment was further validated through field observations, which noted no defined floodplain along Sublett Creek or the unnamed tributary of Sublett Creek. As such, it was determined that deep sampling via mechanical trenching was not required within the APE.

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CHAPTER 6: SUMMARY AND RECOMMENDATIONS

During this cultural resources survey, the entire 24.7-ac APE was systematically and intensively investigated through pedestrian survey augmented by the excavation of 16 shovel tests within areas containing the potential for archeological deposits.

No cultural resources were documented within the APE. It is the recommendation of IES that the THC concur with our findings and that no additional investigations are warranted for the proposed expansion and realignment of Eden and Curry roads within the APE. However, if any cultural resources are encountered during construction, the operators should immediately cease construction activities in those areas. The project cultural resources consultant should then be contacted to initiate further consultation with the USACE and THC prior to resuming construction activities.

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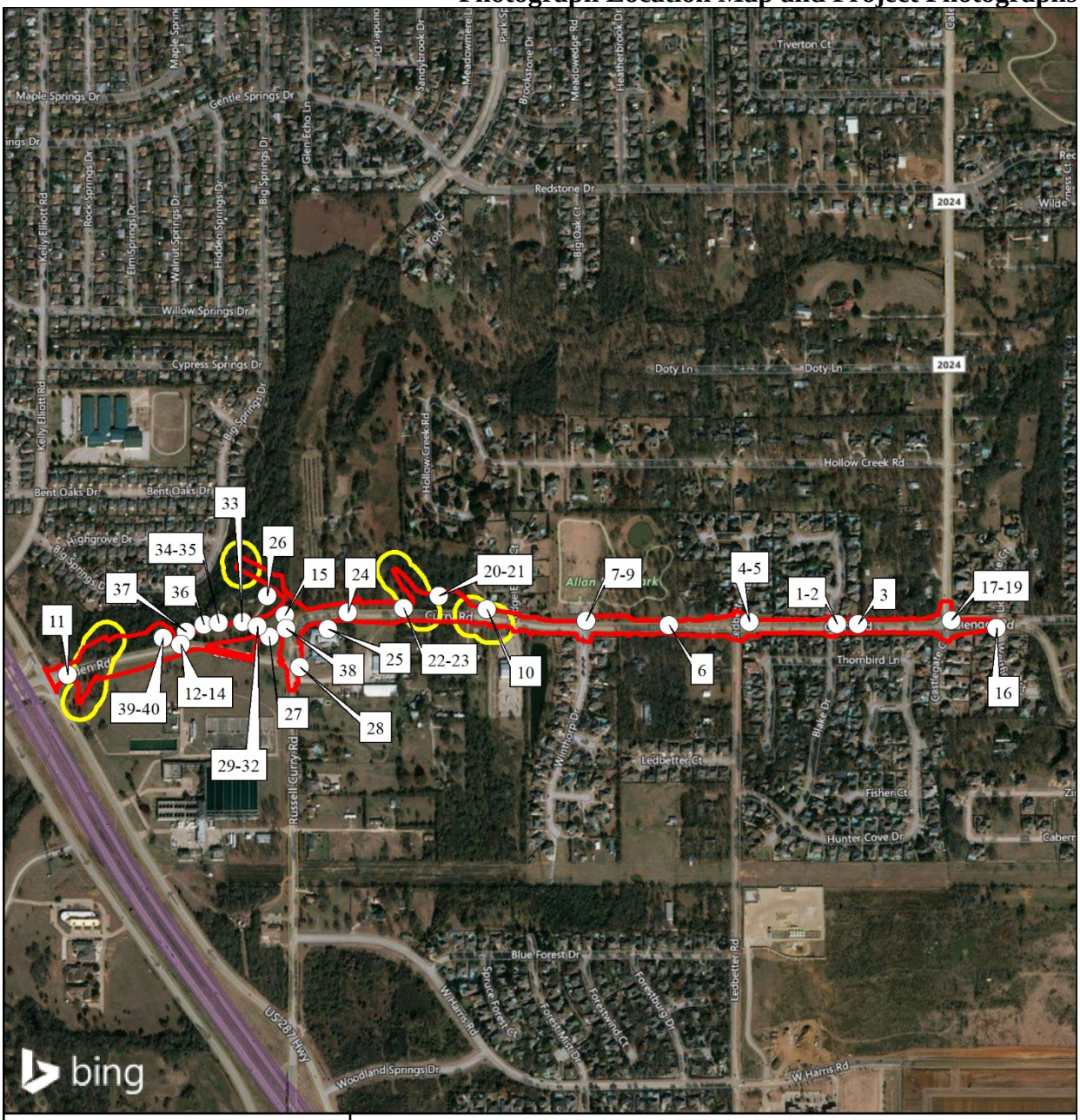
APPENDIX A
Photograph Location Map and Project Photographs



Attachment B
Photograph Location Map

County: Tarrant
State: Texas
Date map created: 5/24/2018
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.006.040

Area of Potential Effects - Direct
Area of Potential Effects - Indirect
Photograph Location

N

1 inch = 1,000 feet
0 1,000 2,000 ft

Photograph 1

Photograph 2

Photograph 3

Photograph 4

Photograph 5

Photograph 6

Photograph 7

Photograph 8

Photograph 9

Photograph 10

Photograph 11

Photograph 12

Photograph 13

Photograph 14

Photograph 15

Photograph 16

Photograph 17

Photograph 18

Photograph 19

Photograph 20

Photograph 21

Photograph 22

Photograph 23

Photograph 24

Photograph 25

Photograph 26

Photograph 27

Photograph 28

Photograph 29

Photograph 30

Photograph 31

Photograph 32

Photograph 33

Photograph 34

Photograph 35

Photograph 36

Photograph 37

Photograph 38

Photograph 39

Photograph 40