



14 January 2016

Mr. Joseph Murphey
U.S. Army Corps of Engineers
819 Taylor Street, Room 3A12
Fort Worth, TX 76102

RE: Cultural Resources Survey and Mitigation of Adverse Effects for a USACE Section 408 Request for the Left Bank Development, City of Fort Worth, Tarrant County, Texas

Mr. Murphey,

INTRODUCTION

On behalf of Centergy West 7th LP (Centergy), Integrated Environmental Solutions, LLC. (IES) conducted a cultural resources survey to assist Centergy in obtaining permission from the U.S. Army Corps of Engineers (USACE) Southwest Division Fort Worth District (SWF) to alter an approximate 1,240-foot (ft) (378-meter [m]) portion of the Trinity River Flood Control System (TRFCS) for the Left Bank Development (LBD) west of the Clear Fork Trinity River (CFTR) between West 7th Street and Dakota Street in the City of Fort Worth, Tarrant County, Texas (**Attachment A, Figure 1**). The proposed undertaking will consist of the placement of earthen fill and a retaining wall on the backside of a TRFCS levee, which will link the levee to a mixed-use facility. As the TRFCS levee is a completed federal public works project, the project will require a Section 14 of the Rivers and Harbors Act of 1899 evaluation (33 U.S. Code [USC] 408) known as a Section 408 Request by the USACE, and would be subject to the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended.

PERTINENT REGULATIONS

Section 106 of the National Historic Preservation Act

The NHPA (16 USC 470), specifically Section 106 of the NHPA (16 USC 470(f)) requires the State Historic Preservation Officer (SHPO), an official appointed in each State or territory, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the National Register of Historic Place (NRHP), or eligible for such listing. Per 36 Code of Federal Regulations (CFR) Part 800, the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers.

AREA OF POTENTIAL EFFECTS

To satisfy Section 106 requirements, the Area of Potential Effects (APE) was comprised of both direct and indirect to assess physical impacts within the APE and potential visual impacts to surrounding cultural resources.

Direct APE

The direct APE encompassed a 1,240-ft (37-m) long portion of the TRFCS levee west of the CFTR totaling 2.9 acres. Although exact design plans have not been developed for the entire direct APE, the first phase of construction will have impacts that extend both below and above the ground surface. Vertical impacts within the direct APE are primarily related to the installation of a retaining wall to approximately 32 feet below the current ground surface (**Attachment B**). Subsequent phases of construction within the direct APE will be for similar purposes and of similar design as the first phase.

Indirect APE

Designs for the first phase of construction illustrate that the TRFCS levee will be linked to a multi-storied mixed-use facility that will rise slightly above 100 feet in elevation. As subsequent phases of construction will have very similar impacts designed to attach the TRFCS levee to new facilities within the LBD, a 550-foot indirect APE was applied surrounding the proposed direct APE. This distance was assumed as the greatest distance any adverse visual impacts could occur for a three-story building within the landscape.

Integrated Environmental Solutions, LLC. | 610 Elm Street, Suite 300
McKinney, Texas 75069 | www.intenvsol.com

Telephone: 972.562.7672

Facsimile: 972.562.7673

METHODOLOGY

Methods used to identify newly-discovered and/or previously documented cultural resources within the APE include a detailed background review and reconnaissance level survey. During the background review, a variety of literature and online sources were referenced to determine the overall potential for encountering cultural resources within the project area. These sources include the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (GAT) (Dallas Sheet), the U.S. Geological Survey (USGS) topographic map, the Potential Archaeological Liability Mapping (PALM), the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil database for Tarrant County, the National Archives and Records Administration's 1940 Census Enumeration District Map of Tarrant County, georeferenced historical maps, the *Below the Bluff: Urban Development at the Confluence of the West Fork and Clear Fork of the Trinity River 1849-1965 – Expanded Edition*, Sanborn Fire Insurance Maps, and both past and current aerial photography. Additionally, a file search of the Texas Archeological Sites Atlas (TASA) and Texas Historic Sites Atlas (THSA) databases was performed for the proposed location and surrounding areas. This review was performed by Kevin Stone on 14 December 2015. .

Prior to field investigations, all data gathered from referenced materials was consolidated to provide an indication as to what type of cultural resources would most likely be encountered. Due to the developed setting of the direct APE, the potential for encountering significant prehistoric resources was determined to be nonexistent. On the other hand, two historic-aged features were identified within the background review that would need to be assessed for potential adverse effects. The reconnaissance level survey was conducted by Kevin Stone and Anne Gibson on 15 December 2015. In the field, each identified historic-aged property was visited and briefly documented, primarily through photography.

NATIONAL REGISTER EVALUATION CRITERIA

When evaluated within its historic context, a cultural resource property must be shown to be significant for one or more of the four criteria for evaluation (A, B, C, or D) (36 CFR 60.4 [a-d]). These criteria pertain to cultural resource properties, which include districts, sites, buildings, structures, objects:

- A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B) that are association with the lives of persons significant 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 prehistory or history.

In general, cultural resources that could be eligible for listing are greater than 50 years in age. Through the background research, it was determined that the most likely Criteria a property within the APE would be eligible for listing under would be Criterion A, B, or C.

NATIONAL REGISTER INTEGRITY REQUIREMENTS

Overall, the property must also retain the defining features and characteristics that were present during the property's period of significance to be considered eligible for listing in the NRHP. The NRHP defines the seven aspects of integrity as; location, setting, design, materials, workmanship, feeling, and association.

Resources in the APE that may be considered eligible under Criterion A or B are those associated with events or broad patterns in history or persons affiliated with those activities. Although it is necessary to consider the architectural and physical integrity for resources evaluated under Criterion A or B, attributes of historical integrity will be more highly valued for these criteria. Thus, the most important aspects of integrity for evaluating resources under these criteria are location, feeling, and association.

Properties eligible for the NRHP under Criterion C derive significance from the physical qualities of their design, construction, and/or craftsmanship, which includes elements like engineering or architecture. A property significant under Criterion C is one that clearly represents a noteworthy example of a defined property type, dates from a period of significance or one or more historic context(s), and exhibits the character-defining features of its property type. Therefore, a property must retain a high degree of physical integrity, as well as having a relation to the historic context.

BACKGROUND INFROMATION

Topography, Soils, and Geology

The USGS Haltom City 7.5-Minute Quadrangle map illustrates that the APE is located west of a channelized portion of the CFTR (USGS 1955) (**Attachment A, Figure 2**). Historically, the CFTR meandered along the west side of downtown Fort Worth. The natural setting was completely altered from 1952 and 1956 when the CFRT was channelized and a levee associated with the TRFCS levee was constructed along the CFTR's natural terrace and within the current APE.

As shown by the *Soil Survey of Tarrant County, Texas*, the APE contains one mapped soil consisting of Frio-Urban land complex, occasionally flooded. This soil is characterized by well drained, silty clay soils located on floodplains derived from mixed source of loamy, Holocene-aged alluvium (Ressel 1981, Web Soil Survey 2015) (**Attachment A, Figure 3**). The Quaternary-aged alluvial soils in this area are underlain by the undivided Cretaceous-aged Washita group comprised of Pawpaw Formation, Weno Limestone, Denton Clay, Fort Worth Limestone, and Duck Creek Formation (McGowen et al. 1966). The Washita group is comprised of alternating beds of limestone and marl, with sandy matrices nearer the top (Baker 1960).

TASA and TSHA Review

According to the TASA and TSHA records there are no archeological sites, listed National Register properties, State Antiquities Landmarks, Official Texas Historical Markers, Recorded Texas Historic Landmarks, historic cemetery markers, and 1936 Centennial Markers located within the proposed APE. However, through coordination with the USACE there is one property that is eligible for listing on the NRHP. This property pertains to the TRFCS levee, which is detailed below and within **Attachment E**. The TASA records also indicated three archeological sites and seven previously conducted archeological surveys within one-mile of the direct APE and are summarized in **Tables 1 and 2** (TASA 2015, TSHA 2015).

Table 1: Archeological Sites within One-Mile of the Direct APE

Site	Time Period	Site Type	Site Size (m)	Depth Extent (cm)	Cultural Materials	Topographic Setting	Reference
41TR211	Historic	Structural remnants, debris scatter	185 x 46	0-250	Brick walls, basement walls, construction debris, bone	Stream terrace/Bluff	Craver 2005
41TR287	Historic	Occupation	280 x 95	0-30	Construction and household debris	Stream terrace	Feit and Sitters 2015
41TR289	Prehistoric	Occupation	240 x 100	190-245	Charcoal, Fire-cracked rock, mussel shell	Stream terrace	Feit and Sitters 2015

Table 2: Previous Archeological Surveys Conducted within One-Mile of the Direct APE

Agency	ACT* Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
Federal Highway Administration	-	Unknown	1991	Linear	0.72-mile northwest
Federal Highway Administration	-	Unknown	1993	Linear	0.93-mile southeast
City of Fort Worth	1665	Unknown	1997	Linear	0.77-mile north
USACE	-	Unknown	1998	Area	0.72-mile southwest
City of Fort Worth/Environmental Protection Agency	5493	URS	2010	Linear	0.87-mile southwest
USACE/Trinity River Vision Authority	6381	AmaTerra	2012	Area	0.26-mile north
Federal Transit Administration	4775	URS	2013	Linear	0.80-mile southeast

*ACT=Antiquities Code of Texas

Archeological Resource Potential

The prehistoric archeology of the West Fork Trinity River (WFTR) and its major tributaries, including the CFTR, are poorly documented. Although Paleoindian and Archaic stage sites have been noted from several locations within the watershed, information is limited due to the lack of archeological sites containing reliable integrity. Small, temporary sites in the intermittent secondary streams have been noted; however, they were general in nature and tended to be either special-activity sites or temporary camps (Lynott 1977). According to the PALM, the APE is located at the transitional zone between high potential for shallow and deeply buried deposits, within the CFTR floodway, to areas adjacent to the floodway containing negligible or low potential. However, due to the amount of terraforming within the CFTR floodway, the potential for shallowly buried cultural deposits is likely much lower.

Referenced historical aerial photographs illustrate the APE contained numerous historical buildings and structures, which dated to as early as 1952. However, historical USDA (1920), USGS (1894), the Sam's Street Map of Tarrant County (1895) depict very sparse historical occupation within the APE prior to the 1920s. Through time, the majority of the properties associated with the historical settlement within the APE were demolished with the most recent building and structures being demolished from 2008 to 2014.

Architectural Resource Potential

Through historical aerial photographs and coordination with the USACE, two historic-aged properties were identified within the APE. One property was located within the southern portion of the indirect APE and pertained to a commercial building constructed between 1956 and 1963. The second property was located across the entire length of the direct APE and pertained to a portion of the TRFCS levee.

The history of the TRFCS was thoroughly researched and documented within the report titled *Below the Bluff: Urban Development at the Confluence of the West Fork and Clear Fork of the Trinity River 1849-1965 – Expanded Edition*. The report was conducted as part of the Central City project and served as the Environmental Impact Statement produced on behalf of the USACE, Tarrant Regional Water District (TRWD), the City of Fort Worth, and Tarrant County for the project. Excerpts from this report detailing the historic overview of the TRFCS are included within **Attachment E**.

RESULTS

Archeological Survey

During the survey, the widespread manufactured environment, identified during the background review, was visually verified. Observations identified that the majority of the APE is located within the footprint of the TRFCS levee with only a small portion extending outside the levee footprint. The portion of the APE outside the levee footprint have been affected by historical and modern demolition, construction, and earth works projects, which have significantly reduced the potential for containing intact subsurface deposits. Evidence for this reduced potential include data obtained from the Reed Engineering Group geotechnical bore profiles, which indicate fill deposits along the levee that are up to 10 feet below the current surface and aerial imagery that illustrates a number of large-scale construction projects have occurred within and adjacent to the direct APE. Based on these observations, it was determined that the direct APE contains a negligible potential for shallow and low potential for deeply buried deposits and did not warrant subsurface investigations.

Architectural Survey

During the survey, the existing conditions of each of the previously identified historic-period building/structures were assessed. The survey transpired between the 2100 block of West 7th Street and the 2100 block of Dakota Street. One historic-aged structure was identified during the survey within the direct APE, which pertained to the TRFCS, and one historic-aged building was identified within the indirect APE (**Attachment A, Figure 4**).

Direct APE

The footprint of the direct APE was primarily comprised of the sloping, grass-covered surface of a levee pertaining to the TRFCS, which is a historic-aged structure. The property's design characteristics are summarized in **Table 3**. For complete Historic American Building Survey (HABS) equivalent architectural documentation see **Attachment D**. Remaining portions of the APE were located within the footprint of previously demolished buildings and lots that had been recently modified for commercial development.

Indirect APE

The limits of the indirect APE were field verified to ensure that no properties outside this distance could be adversely affected (**Attachment C**). Through the indirect APE survey, one historic-aged property was identified. The property's design characteristics are summarized below in **Table 4** and deed chain of title records are within **Table 5**. The vast majority of the indirect APE was located within areas under construction or within the active CFTR floodway. There were several modern commercial buildings within the indirect APE; however, these structures were not assessed for potential NRHP eligibility as there was low potential any of these properties had achieved historical importance since their construction (36 CFR 60.4[g]).

ADVERSE EFFECTS ASSESSMENT

A previously conducted historic resource survey conducted for the Central City Segment of the Trinity River Vision Master Plan identified a variety of historic-aged buildings and structures along the CFTR and WFTR. Through the study, it was determined that the TRFCS was eligible for listing on the NRHP under Criteria A and C as it was instrumental in promoting the growth and welfare of Fort Worth and was "comprised of a historic landscape that is of significance in the area of engineering, where the landscape and its use reflect the practical application of scientific principles to control natural forces" (Prior et al. 2009). The integrity of the TRFCS levee, within the APE, has not changed much since its 2009 documentation.

Per 36 CFR 800.5(a)(1) any impacts that transform character defining elements for NRHP inclusion and subsequently diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association would be considered an adverse effect. The essential character-defining feature of the TRFCS levee is that it is a trapezoidal cross section of earthen material designed solely to retain and direct floodwaters. The undertaking involves infilling the space between the levee and a

new structure, creating a new terrace atop the levee and altering its basic form. While this enhances the recreational uses of the historic floodway and allows greater access, it diminishes the ability of the levee to convey its significance by altering the integrity of the original design. The undertaking transforms the levee beyond its original design to solely function as a levee. Diminishing the integrity of character-defining feature of a resource is an adverse effect.

Table 3: Standing Structures within the Direct APE


Property Identification Number	Property Location/Address	Construction Date/Architectural Elements	National Register Status	Photograph of Resource
1	Between the 2100 block of West 7 th Street and the 2100 block of Dakota Street west of the CFTR	c. 1952-1956, part of TRFCS, elements consisted of grass covered earthen levee	Eligible	

Table 4: Standing Structures within the Indirect APE


Property Identification Number	Property Location/Address	Construction Date/Architectural Elements	National Register Status	Photograph of Resource
2	2100 West 7 th Street	c. 1960, single story commercial building, load bearing masonry, flat roof, brick veneer, symmetrical and asymmetrical windows, split colonnade	Not Eligible	

Table 5: 2100 West 7th Street Chain of Title

Date	Grantor	Grantee	Book	Page
11/22/1961	Williams & Wagner Construction Co. Inc.	Belco Development Co.	3633	371
4/23/1965	Union Realty Co.	Belz Investment Co.	4070	43
5/27/1981	Belz Investment Co., Union Realty Co.	Trinity Park	7125	1538
6/21/2000	Trinity Park	Blair Wagner LP	14649	234

SUMMARY

Archeological

During the background research of the direct APE, soils were identified that could potentially contain deeply buried cultural deposits. However, the long history of urban development with significant surface and subsurface disturbances has drastically affected the natural setting. For this reason, it was determined there was a negligible potential for encountering significant archeological resources within the direct APE.

Architectural

Through our research and consultation, we have determined that two historic-aged properties were identified within the APE.

Direct APE

- 1) **Property 1 (TRFCS)** – The portion of the TRFCS levee within APE was constructed between 1952 and 1956 and was comprised of a grass covered levee. The TRFCS was the first undertaking of the USACE SWF to control the floodwaters of the WFTR and CFTR, which, in turn, had a significant effect on the growth and safety of Fort Worth and its design and construction are characteristic of the period. Past research and SHPO consultation determined the TRFCS is eligible for listing on the NRHP under Criteria A and C.

Indirect APE

- 1) **Property 2 (2100 West 7th Street)** – The property lacked distinctive characteristics of a significant architectural style and was not associated with events that have made a significant contribution to the broad patterns of our history or with the lives of persons significant in our past. As such, the property was not considered eligible for listing under Criteria A, B, or C.

ACTIONS TO AVOID, MINIMIZE, OR MITIGATE ADVERSE EFFECTS

Through the coordination with the USACE, it was determined that the APE contained one eligible property that would be adversely affected by the proposed undertaking. To resolve these adverse effects, a Memorandum of Agreement (MOA) between the USACE and SHPO was drafted that outlined a plan that would cover agreed-upon measures to proportionately mitigate the impacts to the TRFCS levee within the APE. Since the history of the TRFCS has been researched and documented at length, through prior projects, the appropriate level of mitigation for the LBD Section 408 Request was determined to consist of providing high-resolution images of the portion of the TRFCS levee within the APE prior to construction. In response, a variety of images were obtained illustrating the pre-construction conditions of the TRFCS from both the ground and bird's-eye perspectives. These images are attached within the subsequent **Attachment C**.

If you have questions, please contact me by phone at 972-562-7672 or via email at kstone@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC



Kevin Stone, MA, RPA

Cultural Resources Principal Investigator

REFERENCES

Baker, E.T.

1960 *Geology and Ground-Water Resources of Grayson County, Texas*. Texas Board of Water Engineers. Austin, Texas.

Lynott, Mark

1977 *A Regional Model for Archaeological Research in North-Central Texas*. Dissertation, Southern Methodist University, ProQuest, UMI Dissertations Publishing.

McGowen, J.H., T.F. Hentz, D.E. Owen, M.K. Pieper, C.A. Shelby, and V.E. Barnes

1966 *Geologic Atlas of Texas: Dallas Sheet*. Bureau of Economic Geology. University of Texas at Austin.

Ressel, Dennis

1981 *Soil Survey of Tarrant County, Texas*. USDA, Soil Conservation Service in cooperation with Texas Agricultural Experiment Station.

Texas Archeological Site Atlas (TASA)

2015 *Texas Archeological Sites Atlas*. s.v. "Haltom City" <http://nueces.thc.state.tx.us/> (accessed December 2015).

U.S. Geological Survey (USGS)

1955 Topographic Haltom City 7.5' Quadrangle

Web Soil Survey

2015 U.S. Department of Agriculture - National Resources Conservation Service,
<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (accessed December 2015).

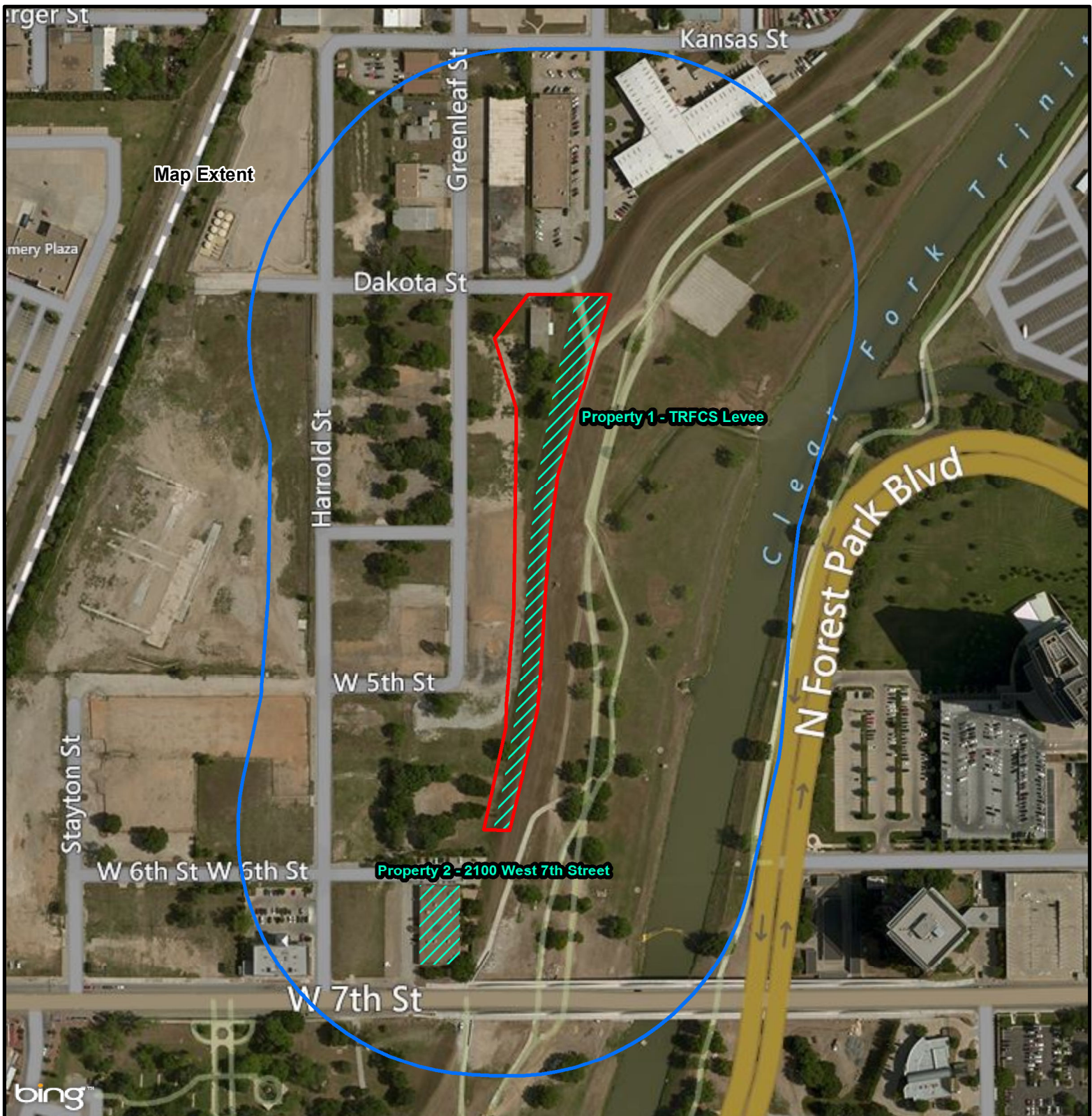


Figure 4
Property Identification Map

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect
- Identified Cultural Resource



County: Tarrant
State: Texas
Date map created: 12/16/2015
Source: ESRI 10 Streetmap
North America

1 inch = 300 feet
0 300 600 900 Feet

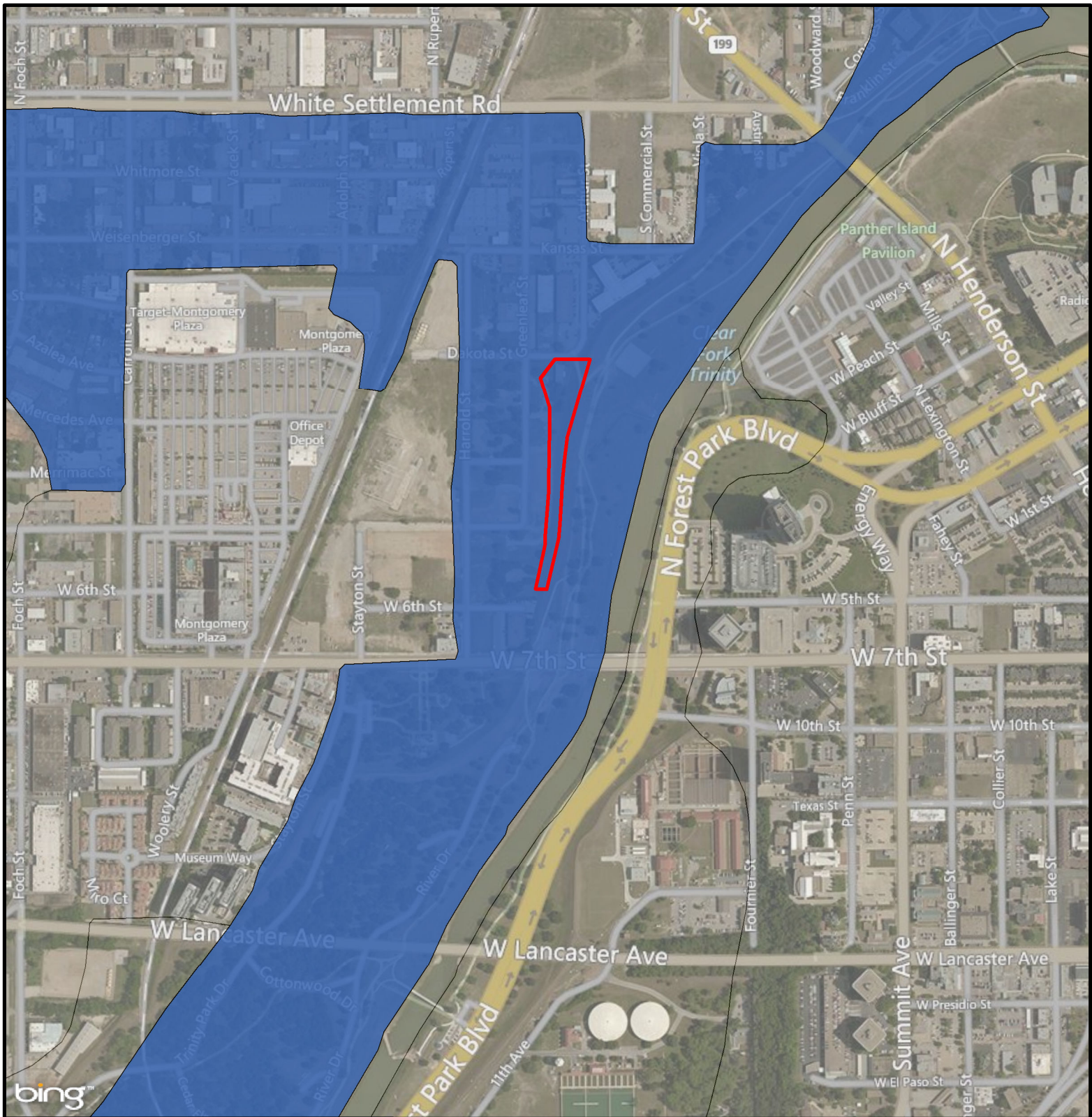


Figure 3
Soils Map

County: Tarrant
State: Texas
Date map created: 12/16/2015
Source: 2012 USDA FSA TOP
Aerial Photography; 2007 USDA
NRCS Digital Soils Database

Area of Potential Effects - Direct

Soil Description

- Frio-Urban land complex, occasionally flooded
- Other values



1 inch = 700 feet

0 700 1,400 2,100
Feet

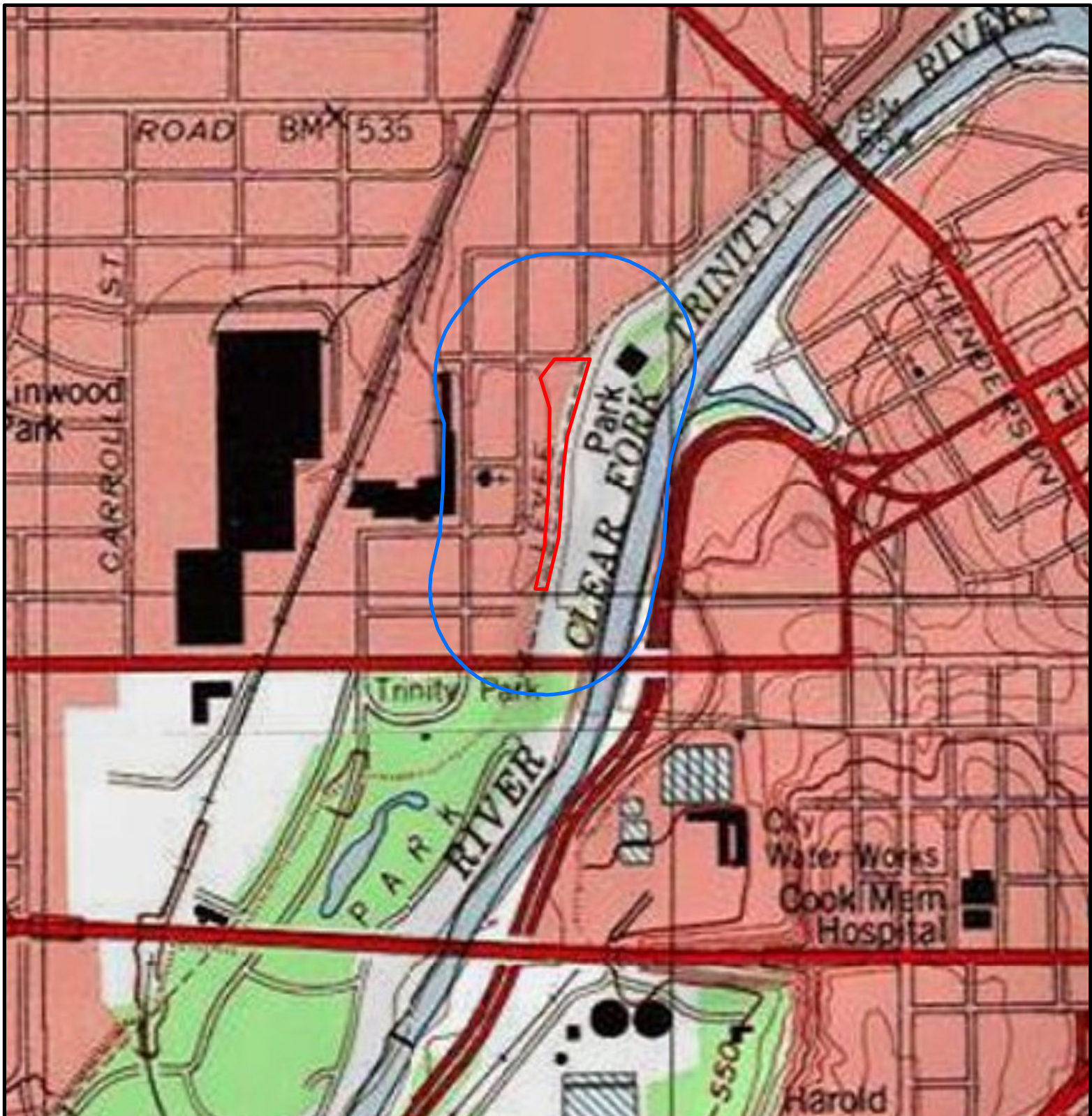


Figure 2
United States Geological Survey
Topographic Map

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect



County: Tarrant
State: Texas
Date map created: 12/16/2015
Source: USGS Topographic Map
Haltom City 7.5' Quadrangle

1 inch = 700 feet
0 700 1,400 2,100 Feet

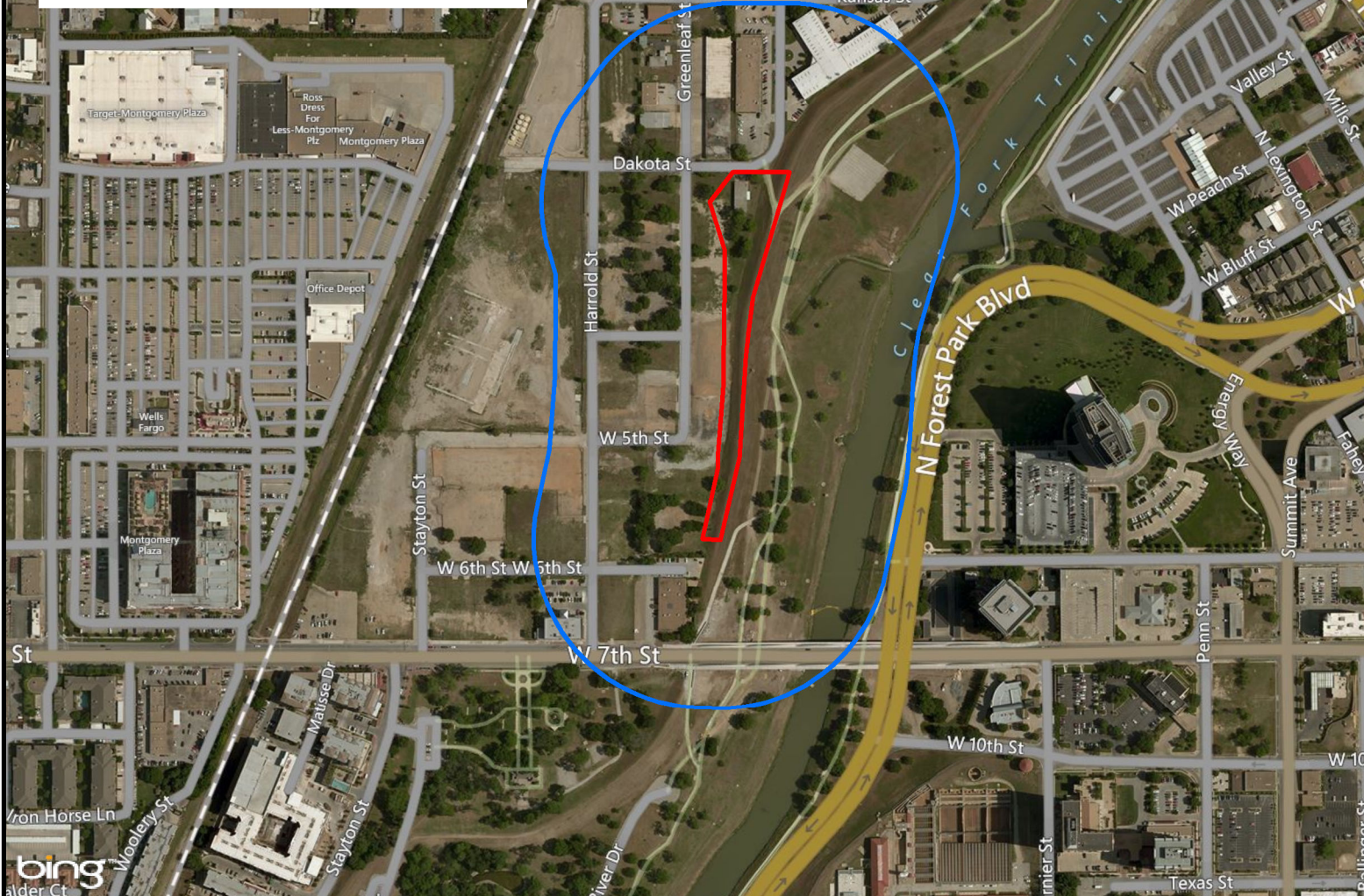
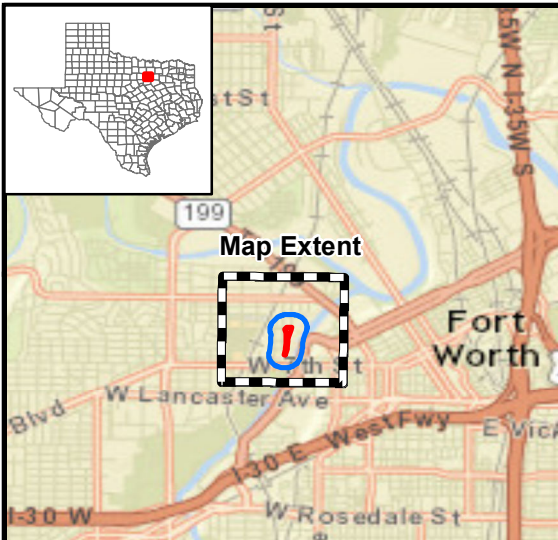


Figure 1
General Location Map

County: Tarrant
State: Texas
Date map created: 12/16/2015
Source: ESRI 10 Streetmap
North America

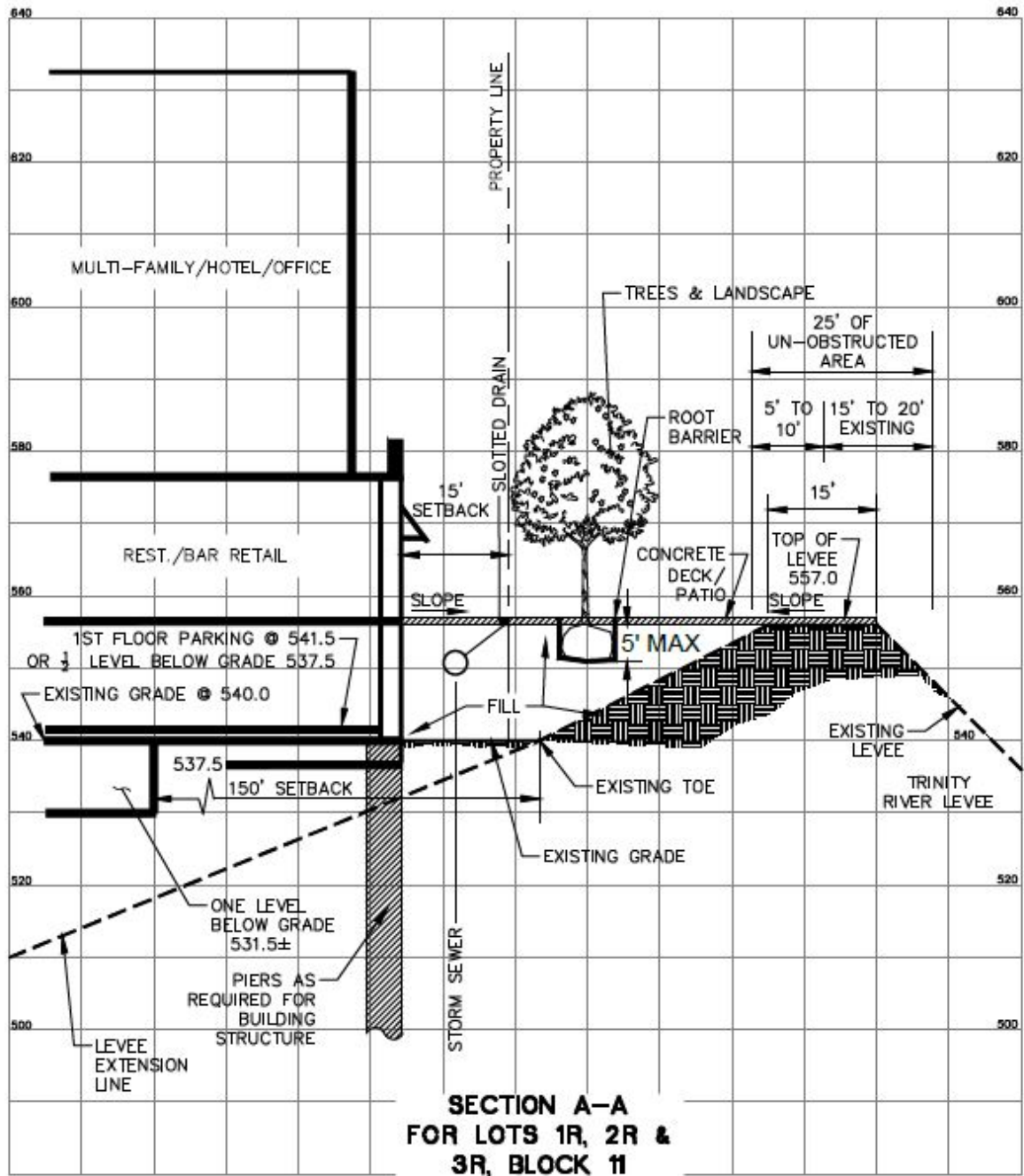
- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect



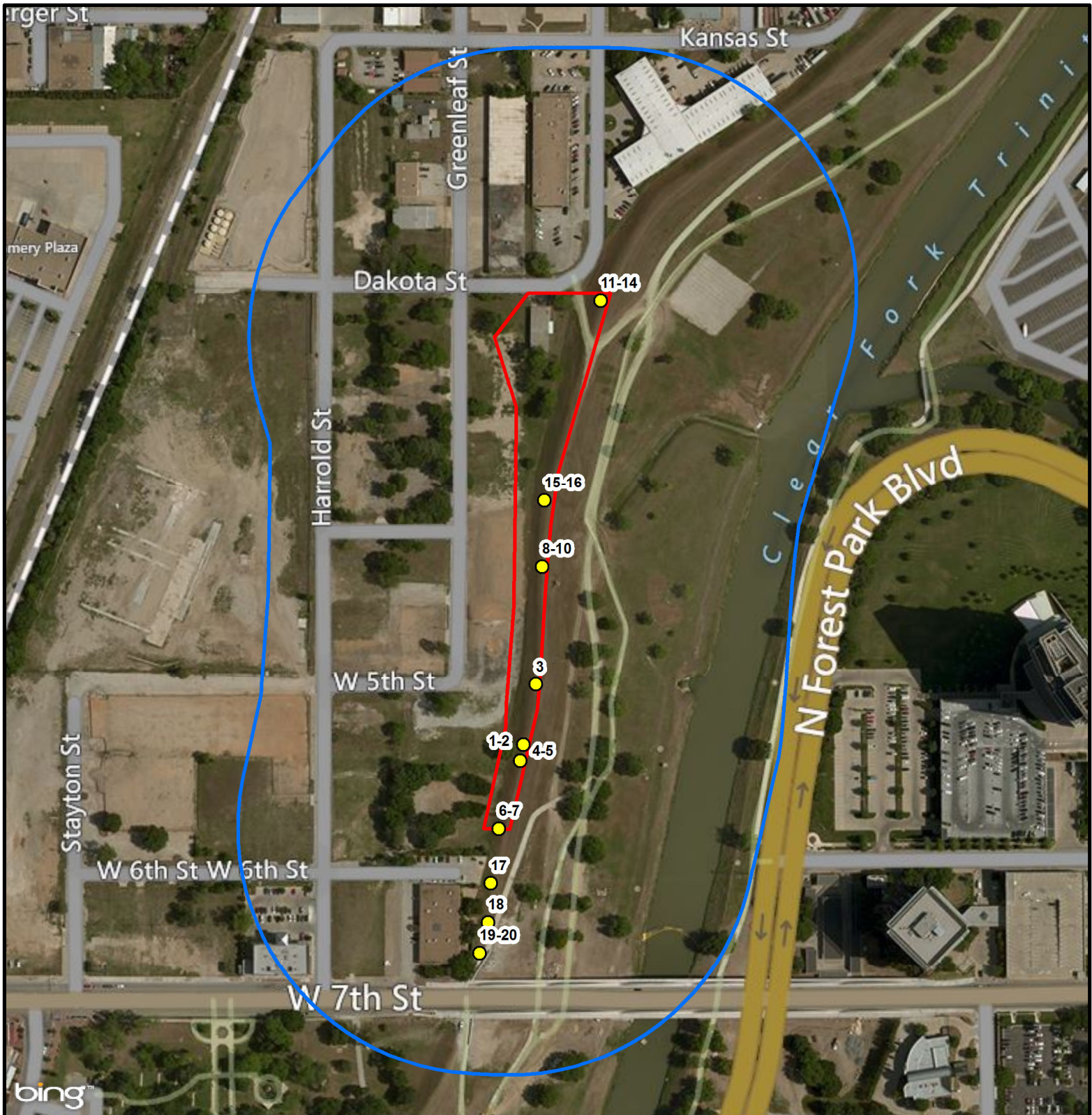
1 inch = 550 feet

0 550 1,100 1,650 Feet

A scale bar with markings for 0, 550, 1,100, and 1,650 feet.



Photograph Location Map and High Resolution Photography



Photograph Location Map

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



County: Tarrant
 State: Texas
 Date map created: 12/16/2015
 Source: (c) 2009 Microsoft Corporation
 and its data suppliers

1 inch = 300 feet

0 300 600 900 Feet