Archeological Background Study

Project Name: Mykawa Road Expansion Project

Highway: Mykawa Road from Beltway 8 Frontage Road to Farm to Market (FM) 518 (Broadway)

District(s): Houston

County(s): Brazoria and Harris Counties

CSJ Number(s): 0912-31-319 and 0912-72-564

Author and Affiliation: Jason M. Whitaker, Raba Kistner, Inc.

Report Completion Date: July 20, 2020

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Introduction

This project may require compliance both with Section 106 of the National Historic Preservation Act and with the Texas Antiquities Code. The purpose of this document is to identify risks for archeological historic properties within the project's area of potential effects (APE). The document also considers whether any cemeteries may extend into the APE, requiring compliance with the state Health and Safety Code.

The following sections list the results of review of readily-available information for the APE's setting and adjacent areas. The report also evaluates adjacent areas (a buffer zone; see Recommendations Section for definition of the buffer zone). The buffer zone is evaluated in case a subsequent design change expands the APE. This report concludes with separate recommendations regarding project effects and the need for additional work within shallow deposits less than three feet in depth and within Holocene-age deposits of three feet or greater depth, if such deep deposits are present.

This background study is (check one):	☒ the initial study for this project
	☐ a continuation of previous investigations due to design changes or other reasons Identify previous investigation(s):.

Area of Potential Effects

TxDOT is proposing improvements to a section of Mykawa Road between Belt 8 and FM 518 (Broadway Street) in Pearland, Brazoria and Harris Counties, Texas. Improvements to Mykawa Road include: reconstruction and widening of the existing section of Mykawa Road to include two 12-foot travel lanes in each direction with a 16-foot divided median, a 10 foot shared use path on the west side of the roadway for the entire length of the project area, storm water drainage and detention ponds, landscaping, street lighting, modification to three traffic signals as well as various public utilities. The Area of Potential Effects (APE) for archeological resources is defined as the footprint of the proposed project to the maximum depth of impacts. The APE will cover a distances of approximately 2.6 miles (4.1 kilometers [km]) within a 100-foot (39.4 meters [m]) right-of-way for roadway improvements, one detention pond located immediately northeast of the intersection of Mykawa and McHard Roads, and two detention ponds located south of Clear Creek at its intersection with Mykawa Road. Depths of impacts for the proposed project range between 5 and 25 feet (1.5 and 7.6 m) below surface.

See Attachment 1 for a map of the APE, based on the project information attached as Attachment 2.

Information Source Checklist

(check each source of information that was consulted by the professional archeologist in preparing this background study—the number and type of sources are at the professional archeologist's discretion)

☒	Labelled USGS 7.5' topographic quadrangle project location map (or equivalent if a 7.5' quadrangle is unavailable) is attached and includes an inset map that depicts the county within Texas where the project occurs. **Attachment 1**
☒	Predictive Archeological Liability Map (PALM) is attached if available *(consult TxDOT's Environmental Compliance Toolkit).* **Attachment 3**
☐	Geologic Atlas of Texas map is attached *(PALM may be substituted for the GAT map, if it's available).*
☒	Soils map is attached *(PALM may be substituted for the soils map, if it's available).* **Attachment 4**
☒	FEMA flood hazard map is attached. **Attachment 5**
☐	National Wetlands Inventory map is attached
☒	Texas Archeological Sites Atlas map is attached, depicting any sites within one kilometer of the APE or additional APE. **Attachment 6**
☒	Historic topographic map is attached. **Attachment 7**
☐	Historic soils map is attached.
☐	Historic road map is attached.
☐	As-built plans for roadway are attached.
☐	Other map of historic information is attached.
	Specify Map: <Enter details>
☐	Aerial images are attached.
☐	Project area photographs are attached.

Analysis of Project Setting

▪ **Previously-Identified Archeological Sites**	
☒	No archeological sites have been identified within the APE or within 150 feet of the APE
☐	Archeological sites have been identified within the APE or within 150 feet of the APE
	See Attachment 6
▪ **Previously–Identified Cemeteries**	
☐	No known cemetery sites occur within the APE or within 150 feet of the APE.
☒	Cemeteries occur within the APE or within 150 feet of the APE.
	South Park Cemetery (BO-C164) is located approximately 135-feet east of the APE and approximately 0.65 mile (1.05 kilometers [km]) southeast of Belt 8 (see Attachment 6). The cemetery is large, consisting of three sections. The largest section is located on the west side of North Main Street identified as South Park Cemetery and two smaller sections are located on the east side of North Main Street, identified as Resurrection Garden and Garden of Angels (Find a Grave 2020). Based on the cemeteries' website it is believed to have been established in 1936 and is still in use today (South Park Funeral Home and Cemetery 2020; Find a Grave 2020). Search of records of the interments, identified the earliest internment dates to 1891 with an additional 81 individuals listed as have been interred between 1898 and 1936. It is not known if the internments are within their original locations or were relocated into the cemetery at a later date. The earliest depiction of the cemetery, on the 1955 *Pearland (2995-421), Texas*. U.S. Geological Survey 7.5-minute topographic quadrangle map (see Attachment 7), shows the boundary of the cemetery approximately 611-feet east of the APE. Additionally, a 1920 topographic map shows that the Gulf Colorado and Santa Fe (Atchison Topeka and Santa Fe) Railroad and Houston and Pearland Road (Mykawa Road) has already been constructed and was in existence prior to 1920. Based on the cemetery boundaries depicted on the 1955 topographic map and the existence of the Houston and Pearland Road (Mykawa Road) and the Gulf Colorado and Santa Fe (Atchison Topeka and Santa Fe) Railroad, prior to 1920, it is assumed that the all interments are located within the current boundaries of the cemetery. Additionally, the proposed undertaking in this area will occur within existing right-of-way (ROW) of Mykawa Road, immediately adjacent to the railroad ROW. As such, it is anticipated that the proposed undertaking would not impact the cemetery.
▪ **Holocene-Age Deposits**	

☒	No Holocene-age deposits occur within or adjacent to the APE.
☐	Holocene-age deposits occur within or adjacent to the APE.
	The underlying geology of the project area is mapped as the Late Pleistocene-age Beaumont Formation (Qbc) (Bureau of Economic Geology 1981). Soils within the APE are predominantly clay and are mapped as Lake Charles clay, 0 to 1 percent slopes; Bernard clay loam, 0-1 percent slopes; Bernard-Edna Complex 0-1 percent slopes; Bernard-Urban complex; and Lake Charles-Urban land complex (**see Attachment 4**). With the exception of urban land, all the soil series mapped within the project area are formed from clayey fluviomarine deposits derived from igneous, metamorphic, and sedimentary rock (Natural Resources Conservation Service [NRCS] 2020).
▪ **Historically-Reliable Water Sources**	
☐	No historically-reliable water sources occur within 500 feet of the APE.
☒	Historically-reliable water sources occur within 500 feet of the APE, or this question can't be answered confidently.
	Clear Creek intersects with the APE approximately 0.24 mile (0.39 km) south of Beltway 8 (**see Attachments 1 and 5**).
▪ **Wetlands and Frequently-Flooded Areas**	
☒	The APE and adjacent areas contain wetlands or frequently-flooded areas.
☐	The APE and adjacent areas do not contain wetlands or frequently-flooded areas, or this question cannot be answered confidently.
	According to the National Wetlands Inventory, no wetlands are mapped within the APE (National Wetlands Inventory 2020). The northern portion of the APE, however, crosses through the 100-year floodplain at Clear Creek (**Attachment 5**).
▪ **Preferred Landforms for Occupation**	
☐	The Atlas map or other information shows that the APE does not contain landforms on which human settlement or occupation typically occurred.
☒	The Atlas map or other information shows that the APE does contain landforms on which human settlement or occupation typically occurred, or this issue was not resolved with the available information.
	Reference to the Texas Archeological Sites Atlas (Atlas) shows that in similar settings along Clear Creek, archeological sites have mostly been recorded along the banks near meanders

	and associated floodplain (Texas Historical Commission [THC] 2020; McGuff and Cox 1973). Within these settings, archeological sites have been found in association with St Charles and Bernard Series soils are typically located in the sandy deposits of pimple mounds. Sites during a 1973 survey of Clear Creek for the USACE identified prehistoric deposits on pimple mounds within meanders of Clear Creek near Friendswood (McGuff and Cox 1973). Archeological Sites 41HR192 and 41HR84 represent pimple mound groups that contained debitage, ceramics, and possibly an atlatl and slate pendant. Subsequent surveys conducted by Prewitt & Associates (PAI) of Spring Creek in 1991 and 2007 identified additional deposits in pimple mounds (e.g Norment and Kibler 2007). A 2012 survey by Moore Archaeological Consultants (MAC) identified five shallowly-buried flakes along a meander of Clear Creek in the vicinity of the project area. MAC archeologists hypothesized that the deposit had been impacted by channelization efforts along the creek. Reference to aerial photographs from both 1944 and 1953 shows possible pimple mounds approximately 450 meters south of Clear Creek, in the area of the APE around Hickory Slough, and the area associated with the final 400 meters of the APE. By 1965, however, these features are largely absent from aerial imagery due to both residential and agricultural development. The northern and southern areas where possible pimple mounds were identified on aerial imagery had been increasingly developed for residential purposes. Aerial images from 1978 to present shows that the pimple mounds have been removed by residential and commercial development. The central section of the APE around Hickory Slough appears to have been less impacted by residential and commercial development, but has undergone modification for agricultural purposes. This area of the APE has been given a Potential Archeological Liability Map (PALM) score of 2a, which recommends surface survey of mounds only (**Attachment 3**) (Abbot 2001). The pimple mounds seen in the 1944 and 1953 aerial images, however, do not appear in later images and were likely removed through both residential and agricultural development. Thus, it is unlikely that pimple mounds are still in existence in the zone of the APE scored as 2a. Additionally, a cluster of farmhouse complexes located to the south of Hickory Slough seen in the 1944, 1965, and 1978 aerial photographs, were razed between 1978 and 2012. Overall, the deposits along the APE have been impacted by grading activities associated with residential development, storm water run-off systems, installation of utilities, and the construction of Mykawa Road. It is unlikely, therefore, that any pimple mounds or historic structures would still be in existence within the confines of the APE.
▪ **Prior Disturbances**	
Settings that are favorable for human occupation have been subject to the following previous disturbances *(check all that apply).*	
☒	Previous road construction and maintenance.
☒	Installations of utilities.

☒	Modern land use practices like plowing, grade modifications, brush clearing, and tree removal,
☒	Industrial, commercial, urban and/or suburban development
☐	Erosion and scouring by natural causes.
☒	Other (identify)
	Channelization of waterways
☐	NO PRIOR DISTURBANCES OR UNKNOWN (do not check any foregoing disturbances)
▪ **Previous Archeological Surveys**	
☒	The majority of the settings with high potential for archeological sites within or adjacent to the APE have been previously surveyed.
	Based on current conditions of the APE and documented impacts of the area, the only area along the APE that would have a high potential for archaeological sites is located in the area of the APE that is intersected by Clear Creek. Several archaeological surveys conducted from 1973 to 2012 have sufficiently covered the area within the APE.
☐	The majority of the settings with high potential for archeological sites within or adjacent to the APE have not been previously surveyed.
Conclusions	
▪ **Results of Previous Investigations**	
☒	Previous surveys have covered a sufficient proportion of the APE or adjacent areas to conclude that the APE and adjacent areas are unlikely to contain archeological sites or cemeteries.
☐	Previous surveys have not covered a sufficient proportion of the APE or adjacent areas to draw inferences regarding the presence of archeological sites and cemeteries, or previous surveys show that archeological sites and/or cemeteries are present within the APE.
▪ **APE Integrity (Prehistoric Sites)**	
The APE contains no deposits with sufficient integrity that prehistoric archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply):*	

☒	Location
☐	Design
☐	Materials
☒	Association
☐	Other (*identify*)
	The 1944 aerial photo indicates that the APE extending between W. Orange and FM 518 (Broadway) was an agricultural field. In 1965, residential structures were constructed adjacent to the APE, along with storm water drainage. This section of Mykawa Road is shown on the 1989 aerial. It is likely that the wide drainage easement along the western side of Mykawa Road, along with residential development, has been subject to grading, as well as disturbed by the instillation of utilities and roadway. It is unlikely that shallowly buried subsurface deposits remain intact along the entirety of the APE.
☐	THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*
▪ **APE Integrity (Historic-Age Sites)**	
The APE contains no deposits with sufficient integrity that historic-age archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply)*:	
☒	Location
☐	Design
☒	Materials
☒	Association
☐	Other (*identify*)
	The 1944 aerial photograph shows farmstead complexes along Mykawa Road. However, by 1965 several of these farmsteads had been razed to accommodate residential and commercial development. A cluster of farmhouse complexes located to the south of Hickory Slough seen in the 1944, 1965, and 1978 aerial photographs, were razed between 1978 and 2012. The deposits along the APE have been impacted by grading activities associated

	with residential development, storm water run-off systems, instillation of utilities and the construction of Mykawa Road.
☐	THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*
▪ **Results of Historic Map Research (Historic Age Sites)**	
☒	Historic map research shows that historic-era archeological deposits are not likely to occur within or adjacent to the APE
☐	Historic map research shows that historic-era archeological deposits could occur within or adjacent to the APE; this research was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.
▪ **Results of Map Research (Cemeteries)**	
☒	Map research shows that cemeteries are not likely to occur within or adjacent to the APE.
☐	Map research shows that cemeteries could occur within or adjacent to the APE, or this research was inconclusive.
▪ **Results of Landform Study**	
☐	The APE and adjacent areas occur in a setting that was not conducive to human occupation and activity
☒	The APE and adjacent areas occur in a setting that was conducive to human occupation and activity; research on this issue was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.

Recommendations

▪ **Shallow Deposits** *Evaluate the potential for shallow deposits (Holocene-age deposits less than three-feet in depth) within the APE to contain archeological historic properties and cemeteries. Make appropriate recommendations regarding the need for further work, including the need for shovel test pits, auger probes, or other methods for evaluating shallow deposits.*	
	A review of aerial imagery of the APE from 1944 to present shows increasing levels of development through time, such as residential and commercial development, road construction, and the installation of various utilities. Reference to the PALM map for the project area shows that the majority of the APE has a PALM Score of 4 (No survey

	recommended). A smaller section near the center of the APE has a PALM Score of 2a, which recommends surface survey of mounds only (see Attachment 3). However, due to human impacts to the APE, it is unlikely that above ground resources would be intact on the surface.

- **Deep Deposits**

Evaluation of deep deposits (Holocene-age deposits of three feet or greater depth) may or may not be necessary, depending on the nature of the sediments within the APE and the depth of proposed impacts. If Holocene-age deposits extend to three feet or more within the APE and would be impacted by the project, make appropriate recommendations regarding the need for further work. If no deep, Holocene-age deposits occur within the APE note that they are absent and indicate that no additional work in needed. If the deep Holocene deposits are present but the project either would not affect them or they have been too extensively disturbed to hold intact archeological deposits, provide an appropriate justification that no additional work is needed.

	Reference to the PALM shows that the APE has scores of 2a and 4. The majority of the APE is classified as Score 4 (No survey recommended), whereas the remainder is scored as 2a, which recommends that deep reconnaissance should not be conducted within those areas (see Attachment 3). Furthermore, disturbances in most areas of the APE, such as roadway, residential and commercial development, and construction of drainages and utilities make it unlikely that deep deposits would be intact within the APE.

- **Recommendations Summary (select only one check box)**

☒ No further study needed	☐ Survey of entire APE	☐ Variable, see attached figure

- **Results Valid Within**

The purpose of considering adjacent areas is to define, when possible, a buffer zone around the APE to which findings of no effect and recommendations for no further work can be extended. No additional investigation should be necessary if a subsequent design change expands the APE into the buffer zone. In some cases, however, no buffer zone may be reasonably defined for the project or portions of the project as expansion of the APE may warrant survey. In such cases, check the middle box and indicate that the results are valid within zero feet of the APE.

☒ 50 feet of APE	☐ <00> feet of APE	☐ Variable, see attached figure

- **The Definition and Evaluation of this Horizontal Buffer Zone is Based on One or More of the Following Considerations**

☒	The integrity of the areas within and adjacent to the setting is affected by prior development.
☒	Previous investigations show that archeological materials are unlikely to exist in this area.
☐	Adjacent areas have potential to preserve archeological sites with good integrity.
☐	Other (specify)

Findings of no effect to archeological historic properties and/or State Antiquities Landmarks and recommendations for no further work apply to all areas within the horizontal buffer zone, as specified in the previous section. Any design change within this study area would not require further action or review beyond those actions recommended in this study. Design changes that either extend beyond the buffer zone or result in potential impacts deeper than the impacts considered in this report would require additional review. Note that no buffer zone may be defined for some projects, based on local conditions.	

References Cited

Abbott, J. T.

2001 Houston Area Geoarcheology: *A Framework for Archeological Investigation, Interpertation, and Cultural Resource Management in the Houston Highway District.* Texas Department of Transportation, Environmental Affairs Division, Archeological Studies Division. Report 27.

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2020 "*South Park Cemetery*". https://www.findagrave.com/cemetery/260683/south-park-cemetery. Accessed July 17, 220

McGuff, P.R. and W. Cox

1973 *A Survey of the Archeological and Historical Resources of Areas to be Affected by the Clear Creek Flood Control Project, Texas*. Report No. 28, Texas Archeological Survey, The University of Texas at Austin.

Natural Resources Conservation Service (NRCS)

2020 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. *Web Soil Survey of Bexar County*. Available at http://websoilsurvey.nrcs.usda.gov/. Accessed June 23, 2020.

National Wetlands Inventory

2020 Wetlands Mapper, National Wetlands Inventory, U.S. Fish & Wildlife Service. https://www.fws.gov/wetlands/data/mapper.html. Accessed June 22, 2020.

Norment, A.R. and K.W. Kibler

2007 *Archeological Reconnaissance and Survey for the Clear Creek Flood Damage Reduction Project, Brazoria and Harris Counties, Texas.* Technical Reports No. 78. Prewitt and Associates, Austin, Texas.

Texas Historical Commission (THC)

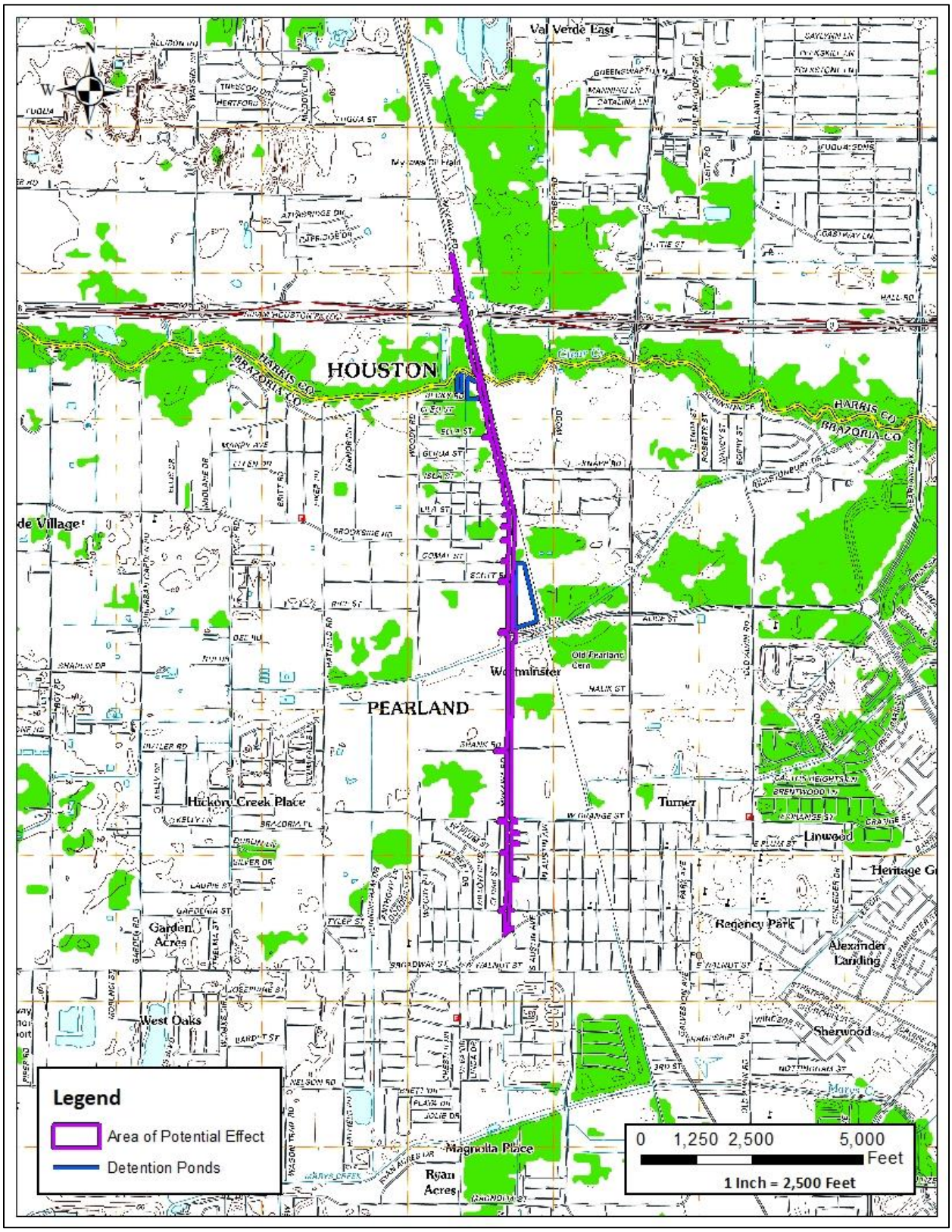
2020 Texas Archeological Sites Atlas. http://nueces.thc.state.tx.us/. Accessed June 22, 2020.

South Park Funeral Home and Cemetery

2020 South Park Funeral Home and Cemetery. https://www.southparkfunerals.com/. Accessed July 17, 2020.

Attachments

- **Attachment 1 – Map showing the Area of Potential Effects and detention pond locations.**



- **Attachment 2–Project information on ECOS.**

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- WPD Section I - Project Definition
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- WPD Section III - Project Work Plan
- WPD Section IV - Findings

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Project Definition

Project Name: 091272564-Mykawa Road Widening SL 8 to FM 518

CSJ: 0912 - 72 - 564

Anticipated Environmental Classification: CE

Type: (D)-List

Criterion: Open-Ended D

Is this an FHWA project that normally requires an EIS per 23 CFR 771.115(a)?

Project Association(s)

Auto Associate CSJ from DCIS

Manually Associate CSJ:

CSJ	DCIS Funding	DCIS Number	Env Classification	DCIS Classification	Main or Associate	Doc Tracked In	Actions
CSJ:091231319	Federal,Local	STP ( )MM	CE-D-Open-Ended D	WNF	Main	Main	

DCIS Project Funding and Location

Funding

DCIS Funding Type: ☑ Federal ☐ State ☑ Local ☐ Private

Location

DCIS Project Number: STP ( )MM
Highway: CS
District: HOUSTON
County: HARRIS
Project Limit -- From: MYKAWA ROAD, BRAZORIA COUNTY LINE
Project Limit -- To: BW 8
Begin Latitude: + 29 . 60047871
Begin Longitude: - 95 . 2985537
End Latitude: + 29 . 59653245
End Longitude: - 95 . 29740045

DCIS & P6 Letting Dates

DCIS District: 09/21
DCIS Approved:
DCIS Actual:
P6 Ready To Let:
P6 Proposed Letting:

DCIS Project Description

Type of Work:

Layman's Description: WIDEN ROAD - ADD LANES

DCIS Project Classification: WNF - WIDEN NON-FREEWAY
Design Standard: 4R - New Location and Reconstruction
Roadway Functional Classification: 4 - Minor arterial road or street

Jurisdiction

No — Does the project cross a state boundary, or require a new Presidential Permit or modification of an existing Presidential Permit?

Who is the lead agency responsible for the approval of the entire project?

☑ FHWA - Assigned to TxDOT ☐ TxDOT - No Federal Funding ☐ FHWA - Not Assigned to TxDOT

Local Government — Who is the project sponsor as defined by 43 TAC 2.7?

Yes — Is a local government's or a private developer's own staff or consultant preparing the CE documentation, EA or EIS?

Yes — Does the project require any federal permit, license, or approval?

☑ USACE ☐ IBWC ☐ USCG ☐ NPS ☐ IAJR ☐ Other

No — Does the project occur, in part or in total, on federal or tribal lands?

Environmental Clearance Project Description

Project Area

Typical Depth of Impacts:	5	(Feet)	Maximum Depth of Impacts:	25	(Feet)
New ROW Required:	22	(Acres)			
New Perm. Easement Required:	0	(Acres)	New Temp. Easement Required:	0	(Acres)

Project Description

Describe Limits of All Activities: Spell

The project will extend for a total of 2.89 miles along Mykawa Road from FM 518 to the State Loop 8 westbound frontage road. The existing right-of-way (ROW) varies between 60 and 100 feet wide and will be widened to a consistent 100-foot ROW. Approximately 25 acres of new ROW will be acquired to accommodate the additional ROW with and proposed detention.

Describe Project Setting: Spell

The project area is generally suburban and commercial. Major traffic generators within the project area include commercial business in the City of Pearland, trucking companies on Mykawa Road, and neighborhoods adjacent to Mykawa Road.

The general vegetation composition in the project area consists of scrub shrub in the northern portion of the project area and grasses and ornamental plants typically use in landscaping in the residential portions of the project area. Primary land use in the area includes residential and commercial.

The project crosses Clear Creek and Hickory Slough.

Describe Existing Facility: Spell

The existing facility is a two-lane undivided roadway with open roadside ditches between the State Loop 8 frontage road and Orange Street. Between Orange Street and FM 518, Mykawa Road is a four-lane undivided roadway with a single open road side ditch. No medians, sidewalks, or shoulders are located within the Mykawa Road project area. Bridges are located over Clear Creek and Hickory Slough. Signalized intersections are located at the following intersections: FM 518, Orange Street, and McHard Road.

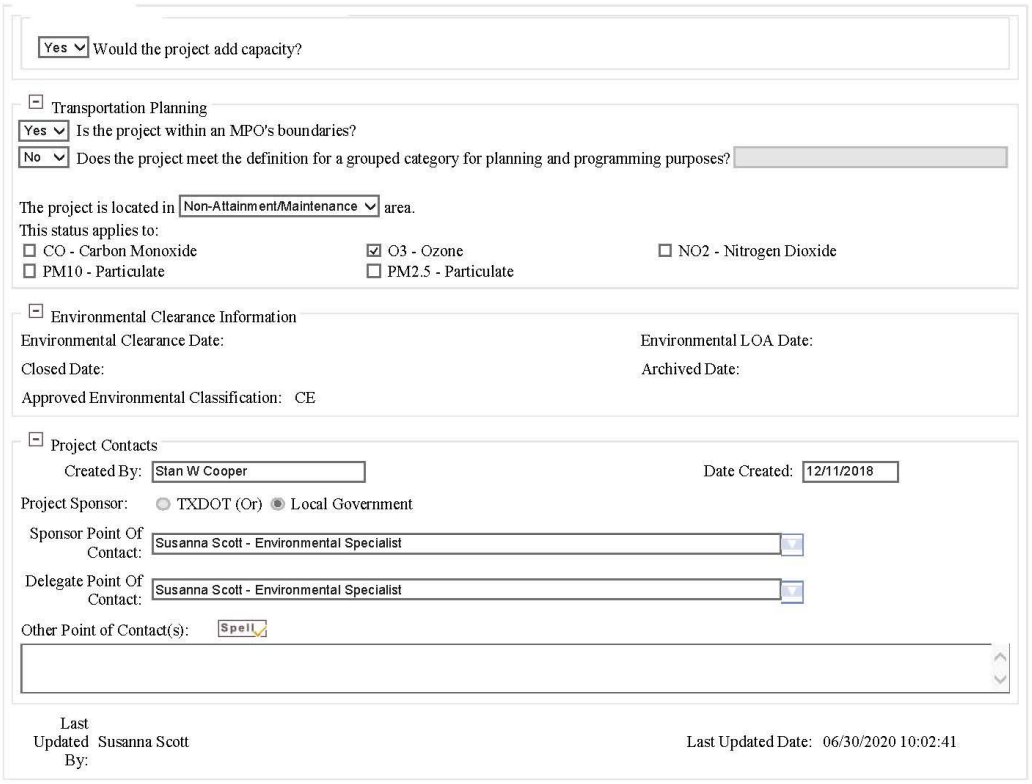
The ROW on the existing facility varies between 60- and 100-feet wide. the ROW for Mykawa Road is 80-feet between FM 518 and Cherry Street; 100-feet between Cherry Street and Comal Street; 80-feet between Comal Street and Katy Street; 60-feet between Katy Street and Clear Creek; 72-feet between Clear Creek and the eastbound State Loop 8 frontage road; and 60 feet between the State Loop 8 frontage road and the northern project terminus.

Describe Proposed Facility: Spell

The proposed facility would include a four-lane roadway with two 12-foot travel lanes in each direction and 10-foot wide shoulders within a 100-foot ROW. A 14-foot wide flush median will be located between Cherry Street and Orange Street, and a 16-foot wide raised median would be constructed throughout the remainder of the project.

A 10-foot shared-use path is proposed on the west side the roadway for the entire length of the project. A 6-foot sidewalk is proposed on the east side from FM 518 to McHard Road. Curb and gutter drainage is proposed for the entire length of the project.

The project would also include detention, landscaping, street lighting, modifications to three traffic signals, as warranted, as well as modifications to various public utilities and possible private utility relocation



Yes Would the project add capacity?

Transportation Planning

Yes Is the project within an MPO's boundaries?

No Does the project meet the definition for a grouped category for planning and programming purposes?

The project is located in Non-Attainment/Maintenance area.

This status applies to:

- ☐ CO - Carbon Monoxide
- ☑ O3 - Ozone
- ☐ NO2 - Nitrogen Dioxide
- ☐ PM10 - Particulate
- ☐ PM2.5 - Particulate

Environmental Clearance Information

Environmental Clearance Date:

Environmental LOA Date:

Closed Date:

Archived Date:

Approved Environmental Classification: CE

Project Contacts

Created By: Stan W Cooper

Date Created: 12/11/2018

Project Sponsor: ○ TXDOT (Or) ◉ Local Government

Sponsor Point Of Contact: Susanna Scott - Environmental Specialist

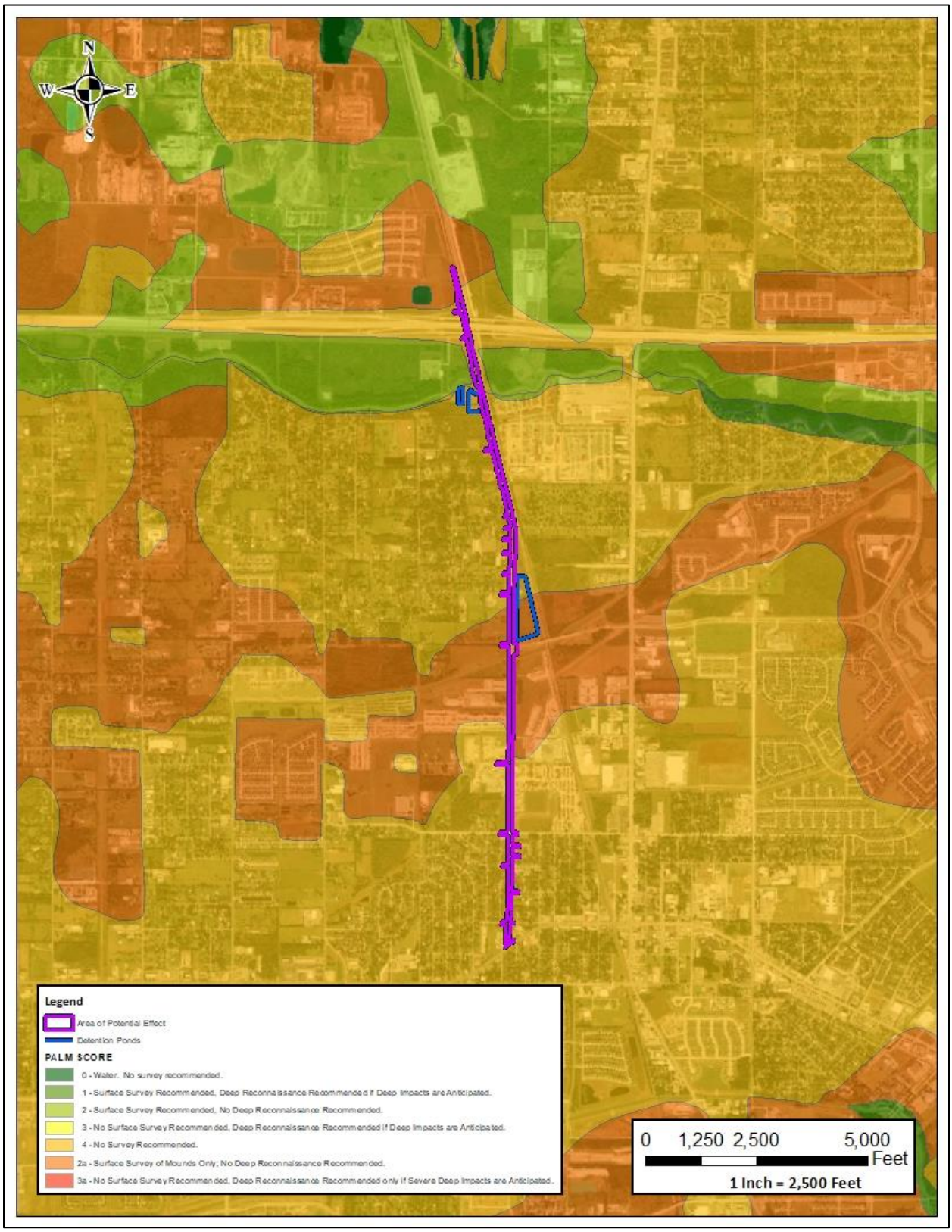
Delegate Point Of Contact: Susanna Scott - Environmental Specialist

Other Point of Contact(s): Spell

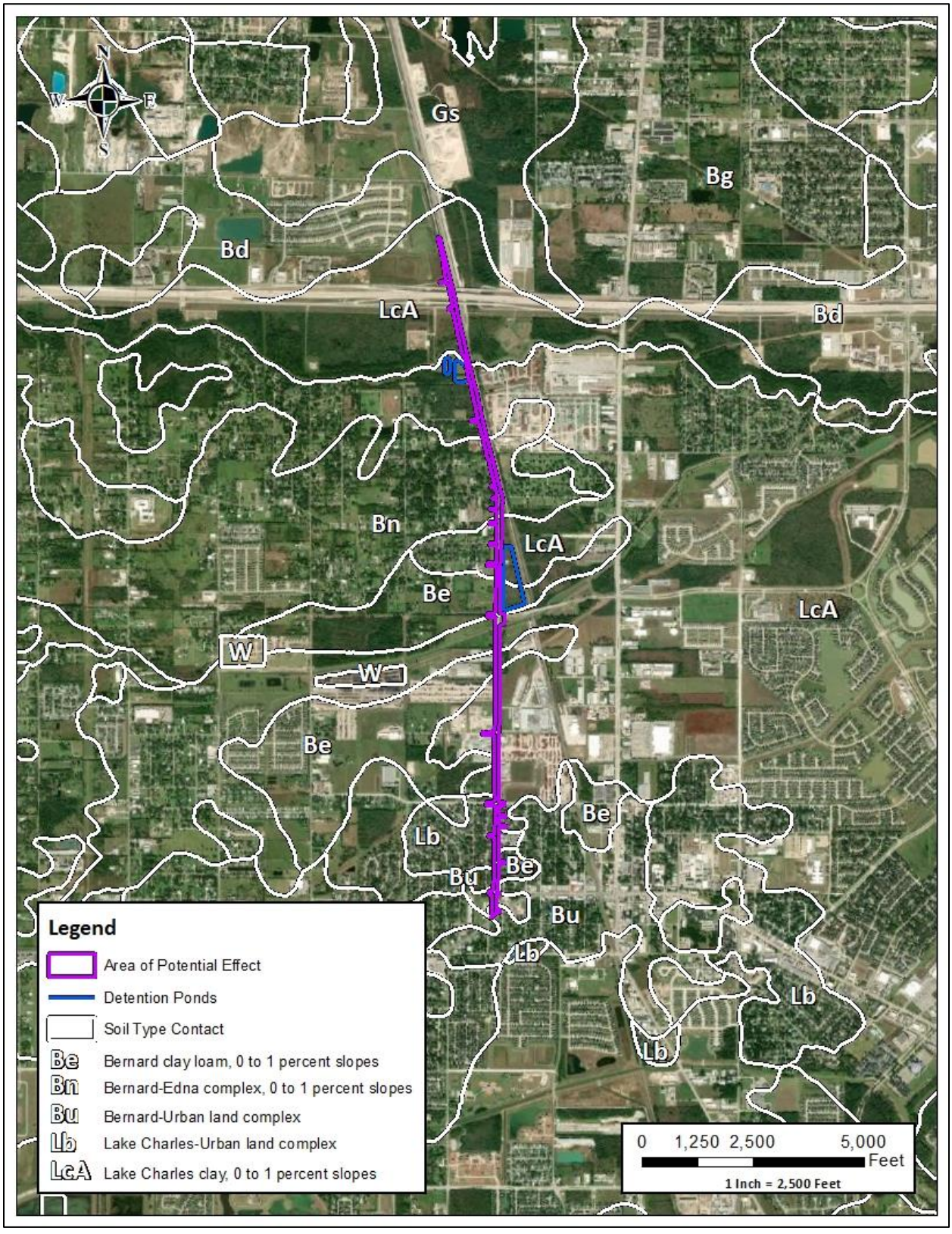
Last Updated By: Susanna Scott

Last Updated Date: 06/30/2020 10:02:41

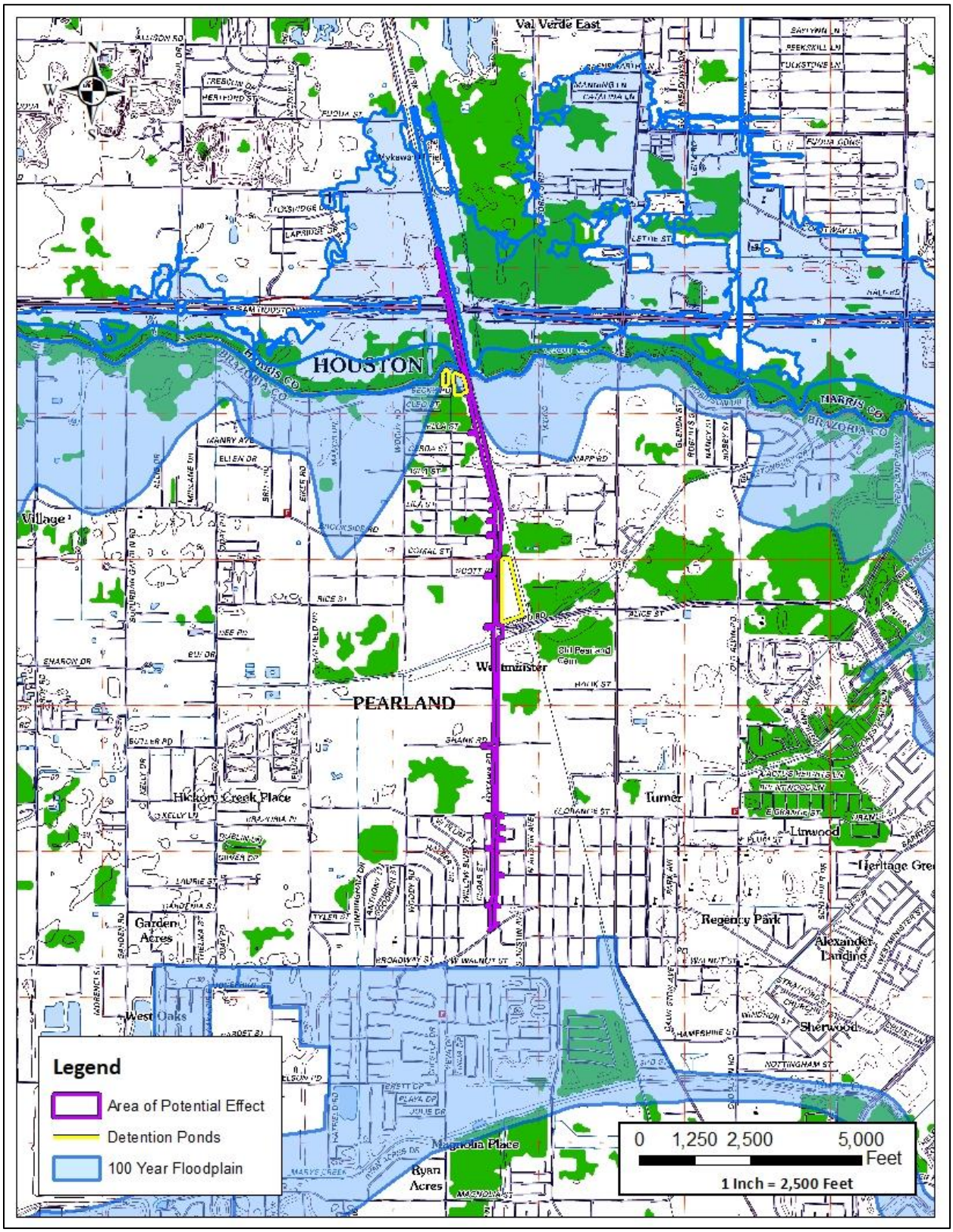
- **Attachment 3 – Area of Potential Effects depicted on the Potential Archeological Liability Map.**



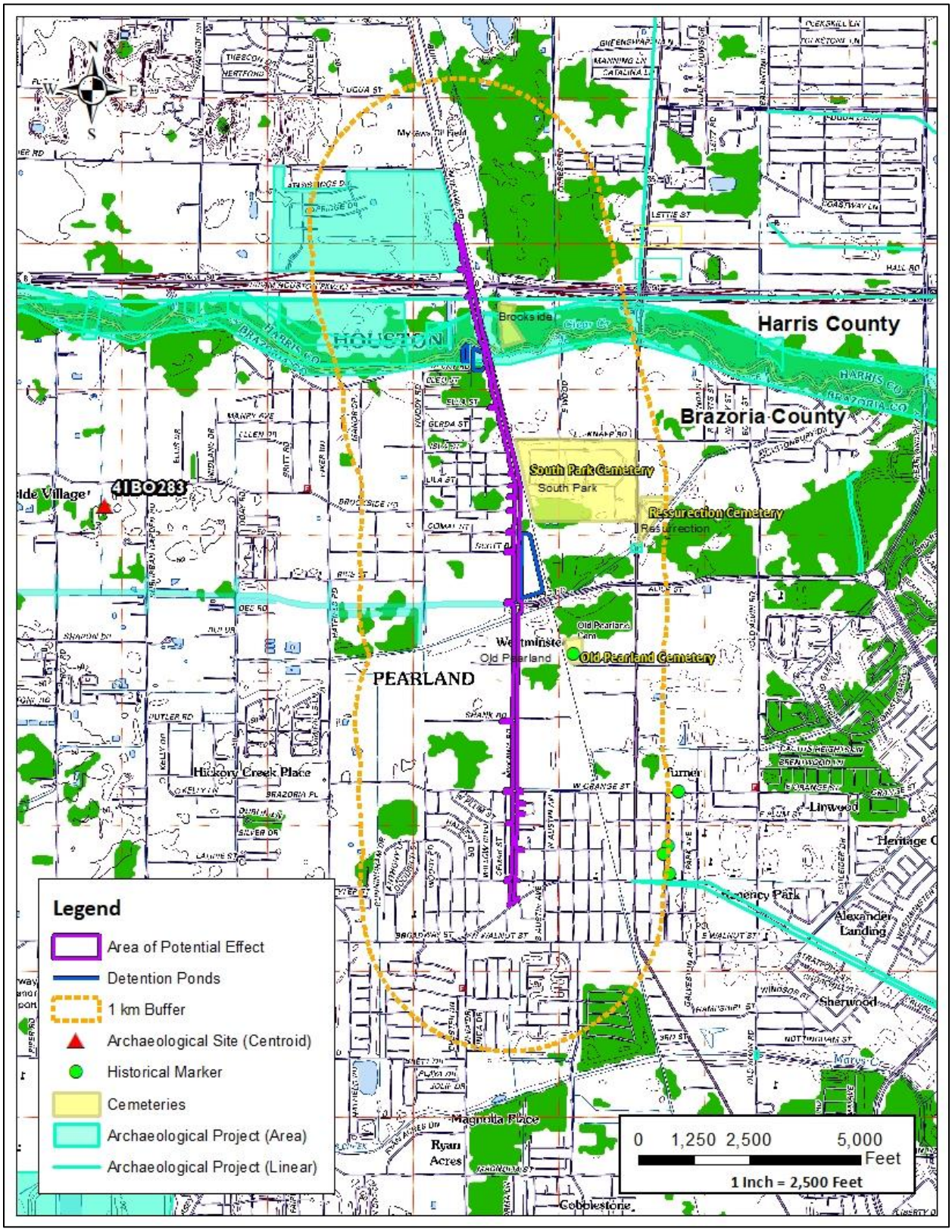
- **Attachment 4 – Soils mapped within the Area of Potential Effects.**



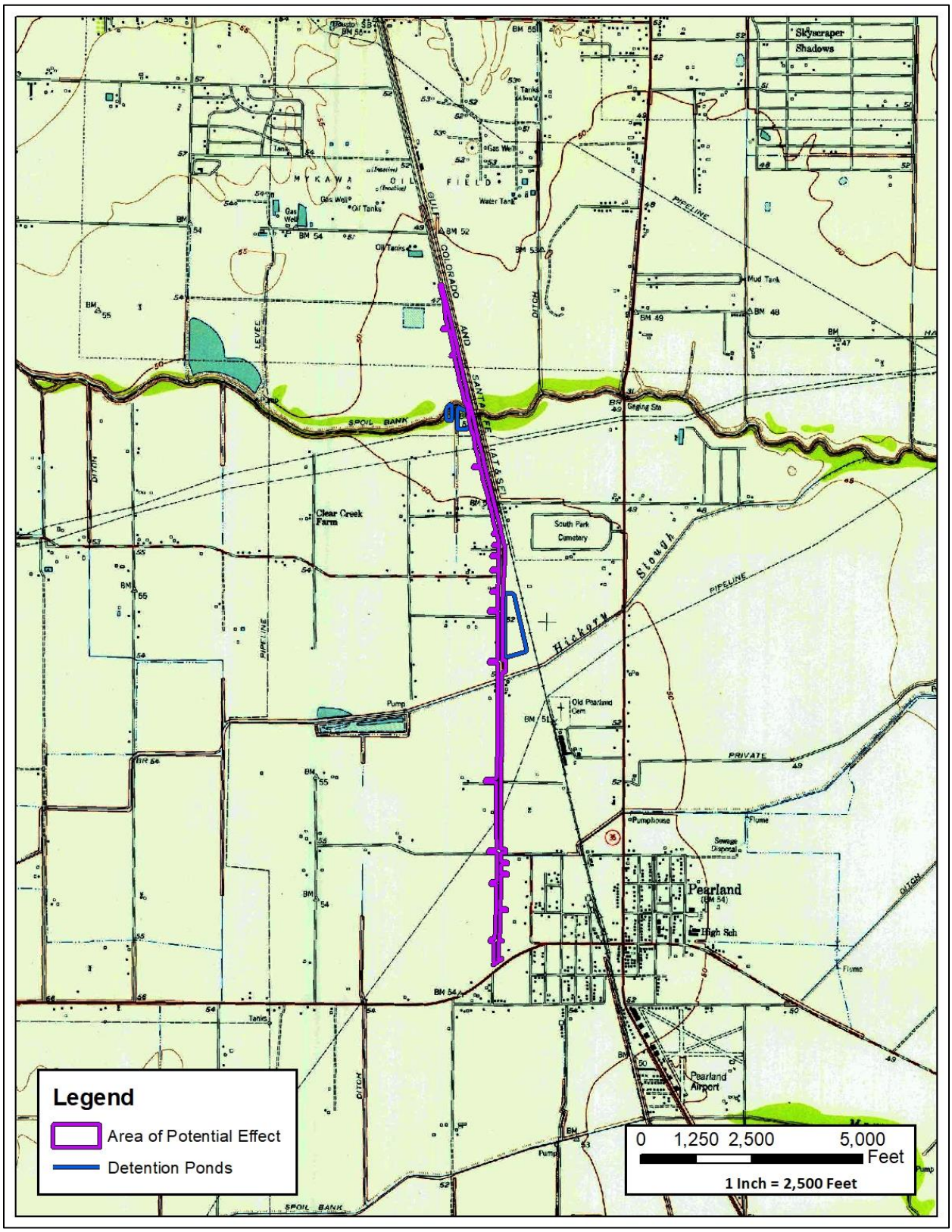
- **Attachment 5 – Area of Potential Effects depicted on the FEMA 100-year floodplain map.**



- **Attachment 6 – Previously recorded cultural resources within 1-kilometer of the Area of Potential Effects.**



- **Attachment 7. 1955 *Pearland (2995-421), Texas*. U.S. Geological Survey 7.5-minute topographic quadrangle map.**



This report was written on behalf of the Texas Department of Transportation by:

RABA KISTNER

12821 W. Golden Lane
San Antonio, Texas 78249
www.rkci.com