



Wetland Delineation Report

10/69 Interchanges Project, Beaumont

Project limits: Existing I-10 from Walden Road (County Road 131) to 7th Street and

Existing US 69 from Fannett Road (State Highway 124) to 11th Street

CSJs: 0028-13-135 & 0739-02-140

Jefferson County, Texas

August 2019

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

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1.0 INTRODUCTION

Ecosystem Planning and Restoration, LLC (EPR) performed an evaluation to determine if any Waters of the United States (WOUS), including wetlands, were located within an approximate 438-acre proposed project area surrounding Interstate Highway (I) 10 and United States Highway (US) 69, in Jefferson County, Texas. Field visits were conducted in May, June, and July 2019 as further access became available to perform a wetland delineation in accordance with the *1987 Corps of Engineers Wetland Delineation Manual* (Technical Report Y-87-1 or *1987 Manual*) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Gulf Coast Supplement)*. This wetland delineation was performed as an existing condition wetland delineation for preliminary planning purposes of a proposed reconfiguration and expanding of I-10 and US 69 where they converge in the city of Beaumont, Texas in Jefferson County. The findings of the wetland delineation performed on the project area are summarized in **Section 6.0** of this document.

2.0 PROJECT DESCRIPTION

2.1 EXISTING FACILITY DESCRIPTION

The project area is located in Jefferson County, Texas. A map depicting the location of the project area is included as **Appendix A, Figure 1**. The project limits follow existing I-10 from Walden Road (County Road 131) to 7th Street and existing US 69 from Fannett Road (State Highway 124) to 11th Street. I-10 through the City of Beaumont, Texas converges with US 69 at the Eastex Interchange on the north end of the city and diverges from US 69 at the Cardinal Interchange on the southern end of the city. Currently, I-10 through this area consists of four main lanes from 7th Street to near Harrison Avenue, eight lanes from near Harrison Avenue to Stagg Drive, six main lanes from Stagg Drive to Washington Boulevard, and four main lanes from Washington Boulevard to Walden Road. A concrete median barrier separates the eastbound and westbound travel lanes. There are one-way two-lane frontage roads on both sides of I-10 for the length of the project except across Hillebrandt Bayou near the Cardinal Interchange and at the UPRR near Hollywood Avenue. The shoulders on the main lanes are variable in width throughout the limits of the project. There are various entrance and exit ramps throughout the limits, and there are direct connectors between I-10 and US 69 at both interchanges. Currently some direct connectors are two-lane, but some are only one-lane. The existing facility is crossed by the Maury Meyers Bridge, which passes over I-10 near Liberty/Laurel Avenue and restricts the vertical clearance of I-10 traffic at this location.

The project area includes existing right of way (ROW) of I-10 and US 69. The project area consists of both maintained and unmaintained ROW. Residential, commercial and undeveloped land uses are present immediately adjacent to the project area. Existing ROW at the Eastex interchange varies from approximately 250 feet to 350 feet. Existing ROW at the Cardinal interchange varies from approximately 290 feet to 450 feet. Site Photographs are included in **Appendix B**.

2.2 PROPOSED FACILITY DESCRIPTION

The project area is located in Jefferson County, Texas. A map depicting the location of the project area is included as **Appendix A, Figure 1**. The approximate 5-mile project would widen the existing I-10 from Walden Road (County Road 131) to 7th Street and existing US 69 from Fannett Road (State Highway 124) to 11th Street. Between the Cardinal Drive and Eastex Freeway interchanges, the roadway would be widened in each direction from four lanes to five lanes. The roadway approaches to the Cardinal Drive and Eastex Freeway interchanges on I-10 and US 69 would be widened in each direction from two lanes to three lanes. The project also includes new frontage roads for continuity throughout the limits, relocating I-10 ramps, and constructing two-lane direct connectors in each direction where I-10 and US 69 converge within the project limits. In addition, the project includes changes to the Maury Meyers Bridge (Liberty/Laurel Overpass) to address a height constraint for freight movements and includes upgrading drainage infrastructure to current design standards.

Approximately 11 acres of additional ROW is anticipated as part of the proposed project, including potential easements or ROW for drainage. This project is addressing an existing roadway facility, no new location or new alignment is anticipated. The proposed project is anticipated to be ready to let as a design-build project.

3.0 METHODOLOGY

The *1987 Manual* states that wetlands must possess three essential characteristics. Under normal circumstances, these characteristics include the presence of:

- Hydrophytic vegetation;
- Hydric soils; and
- Wetland hydrology.

A wetland delineation within the project area was completed in accordance with the *1987 Manual* and the *Gulf Coast Supplement*. The wetland delineation of the site consisted of identifying WOUS, including wetlands, within the project area. A survey was conducted to identify indicators of hydrophytic vegetation, hydric soils, and wetland hydrology in the project area to determine the presence (or absence) of wetland characteristics. The “Onsite Determination Method” as described in the *1987 Manual* was used for this delineation.

Because of the linear nature of the project area, transects were not necessary for observation points. Data was collected at each change in vegetation community and recorded on Wetland Determination Data Forms – Atlantic and Gulf Coastal Plain Region. Data forms are included in **Appendix C** and data points are shown on **Appendix A, Figure 2**. A table showing GPS Survey data is included as **Appendix D**. Species of vegetation were identified and categorized according to indicator status, as per the *National Wetland Plant List 2016*, and cross-referenced with the

proposed *National Wetland Plant List 2018* update, at representative locations throughout the project area.

Soil samples were taken from roughly the upper 0-18 inches of the soil surface for a comparison with mapping units from the published Natural Resources Conservation Service (NRCS), *Web Soil Survey of Jefferson County, Texas*.

Soils occurring throughout the project area were characterized according to the following parameters:

- Matrix color (hue, value, and chroma);
- Redox features (color, type, location);
- Texture (sand, silt, clay, etc.); and
- Hydric soil indicators.

Matrix and redox feature colors were assessed using a *Munsell Soil Color Chart*. This soil matrix information was also used to determine the presence or absence of hydric soil indicators.

The presence or absence of hydrologic indicators (i.e., drainage patterns, drift deposits, etc.) was noted within the project area with special attention given to any areas which exhibit indicators of hydrophytic vegetation and hydric soils. Hydric soil determinations were made based on field indicators and the methodology described in the *1987 Manual* and the *Gulf Coast Supplement*.

Additionally, the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map, the NRCS soil data, the United States Geological Survey (USGS), and Light Detection and Ranging (LIDAR) were reviewed and discussed in the sections below.

4.0 WETLAND DATA

The following is a summary of the primary data collection and field evaluation conducted May 15-16, 2019, June 11-12, 2019, and July 19, 2019.

4.1 SITE VEGETATION

Wetland determination data forms detailing the specific types of vegetation located in each of the delineated areas, as well as at upland data points, are presented in **Appendix C**. Vegetation throughout project area consists primarily of well maintained, regularly mowed, herbaceous roadside vegetation. Additionally, vegetation within the project area includes small forested areas along the edge of the ROW and within the roadway medians. The Eastex Freeway Interchange in the northern portion of the project area includes landscaping comprised of Crepe-myrtle (*Lagerstroemia indica*), Red-maple (*Acer rubrum*), Southern wax-myrtle (*Myrica cerifera*), and Pampas grass (*Cortaderia selloana*).

4.2 SITE SOILS

The soil map units identified within the project area using the NRCS, *Web Soil Survey of Jefferson County, Texas (2019)* are shown in **Table 1**. Soil map units are identified on individual data sheets. A map depicting the soil map units within the site is included in **Appendix A as Figure 3**.

Table 1: Site Soils

Map Unit	Percent of Project Area	Drainage Class	Hydric Soil
Beaumont clay, 0 to 1 percent slopes	0.0	Poorly drained	Yes
Beaumont-Urban land complex, 0 to 1 percent slopes	0.0	Poorly Drained	Yes
Labelle clay loam, 0 to 1 percent slopes	0.6	Somewhat poorly drained	No
Labelle-Urban land complex, 0 to 1 percent slopes	0.0	Somewhat poorly drained	No
League clay, 0 to 1 percent slopes	1.1	Somewhat poorly drained	No
League clay, 0 to 1 percent slopes, rarely flooded	0.8	Somewhat poorly drained	No
Morey loam, 0 to 1 percent slopes	0.4	Somewhat poorly drained	No
Morey-Urban land complex, 0 to 1 percent slopes	0.3	Somewhat poorly drained	No
Urban Land	96.3	N/A	N/A
Water	0.0	N/A	N/A

4.3 SITE HYDROLOGY

The project area is located largely in an area of low-lying flat land with areas of natural and modified drainage. Shallow roadside drainage ditches are present throughout the project area. The project area contains channelized streams, streams with culverts, and concrete lined streams. Surface water flow in and around the project area is generally from northwest to southeast, within the Sabine Lake Watershed (8-digit Hydrologic Unit Code 12040201). Two named water bodies, Hillebrandt Bayou and the Port Arthur Canal, flow through the project area. A topographic map of the project area is included in **Appendix A as Figure 4**.

4.4 WETLAND HYDROLOGY

Factors that influence the moisture content or wetness of an area typically include:

- Position on the landscape (topography);
- Precipitation;
- Drainage;
- Sheet flow;

- Permeability; and
- Vegetative cover.

Such factors are reflected on the wetland data forms for this project area along with specific wetland hydrology indicators. Primary indicators for hydrology include surface water or saturation of the soil, watermarks, drift deposits, sediment deposits, or the presence of oxidized rhizospheres on living roots. Secondary hydrology indicators in wetlands include surface soil cracks, sparsely vegetated concave surface, drainage patterns, and crayfish burrows. Areas exhibiting the potential for wetland hydrological conditions were ground-truthed during this investigation.

5.0 SUPPORTING DATA

5.1 TOPOGRAPHY

The USGS Beaumont West and Beaumont East, Texas 7.5-minute topographic quadrangle maps (topo maps) were reviewed to assess the surface topography within the project area. The city of Beaumont is generally located in a low laying area, elevation within the project area runs slightly downslope to the southeast within the Hillebrandt Bayou drainage area. Hillebrandt Bayou, Port Arthur Canal, and unnamed tributaries to Hillebrandt Bayou are depicted on the topographic maps as crossing the project area. Additionally, wetlands are indicated adjacent to the Southern portion of the project area. The Beaumont West and Beaumont East topographic maps are included in **Appendix A as Figure 4**.

5.2 AERIAL PHOTOGRAPHY

Aerial photography was reviewed as part of this investigation to assess the land use changes in this area during a 79-year period (1938-2017). The 1938 aerial photograph depicts the majority of the land use in the proposed project area, and area immediately adjacent to it, as agricultural and forested. Additionally, the 1938 photograph shows residential and commercial development in the city of Beaumont to the east of the project area and oil and gas activities to the west of the project area. Between 1938 and 1970 residential and commercial development increased west of the proposed project. Additionally, the I-10 corridor was constructed between 1938 and 1970. Commercial development adjacent to and east of the project area has continued to increase from 1970 to present. Commercial development along Walden Road in the southern portion of the project area increased between 1989 and 1995. Current land use adjacent to the southern portion of the proposed project is commercial, agricultural, and forested. Photos demonstrating land use conditions in 1938, 1970, 1989, 1995, and 2017 are shown in **Appendix A, as Figure 10**. Potential drainage areas and WOUS, including wetland areas, were evaluated using color infrared imagery (Digital Ortho Quarter Quads [DOQQ]) dated 2009 and 2016, prior to the initiation of the field delineation. DOQQ's projected to a 0.5-meter resolution, are included in **Appendix A as Figure 5**. The 2017 aerial photo was used as the base map for the wetland delineation map included in **Appendix A as Figure 2**.

5.3 FLOODPLAINS

The Federal Emergency Management Agency (FEMA) digital flood insurance rate map data for Jefferson County (panels 4854570035C, 4854570020C, and 4854570040D, effective on 08/06/2002) were reviewed to determine what portions of the project were located within floodplains. Small portions of the project area directly adjacent to Hillebrandt Bayou are located within the 100-year floodplain. Additionally, the majority of the southern portion of the project area around the Cardinal Drive Intersection is located within the 500-year floodplain. The remainder of the project area is outside of the floodplain. A map of the site and the flood hazard boundaries are included in **Appendix A as Figure 6**.

5.4 NATIONAL WETLANDS INVENTORY

The USFWS NWI Map was reviewed as a desktop analysis for preliminary investigation of potential wetlands for the project area. A review of the NWI Maps indicated that two Freshwater Forested/Shrub wetlands and 11 Riverine wetlands are potentially located within the project area. Additionally, one Palustrine Farmed wetland is potentially located adjacent to the project area. A field visit is needed to confirm NWI data. **Appendix A, Figure 7** includes the NWI data.

5.5 LIDAR DATA

LIDAR is a remote sensing system used to collect topographic data. This data is collected with aircraft-mounted lasers capable of recording elevation measurements at a rate of 2,000 to 5,000 pulses per second and have a vertical precision of 15 centimeters (6 inches).

False color images such as LIDAR serve as an effective means for visualizing data. The term "false color" refers to the fact that these images are not photographs. They are digital images in which each image pixel represents a data point that is colored according to its value. LIDAR data show surface elevations on the project area. **Appendix A, Figure 8** displays two-dimensional elevations of the project area.

The LIDAR map complements the USGS topographic map. The LIDAR map indicates the topography within the project area runs slightly downslope to the southeast in the Hillebrandt Bayou drainage area.

5.6 RAINFALL TOTALS

According to AccuWeather.com (AccuWeather) for Texas preliminary climatological data, 1.55 inches of rainfall were recorded in Beaumont, Texas in the month prior to the May 2019 field investigations (April 2019). According to AccuWeather, this total equates to 1.26 inches below normal rainfall for this period. Although below normal rainfall was recorded the month prior to the field investigation, the project area was within normal conditions. Additionally, 2.02 inches of rainfall were recorded in the month prior to June 2019 field investigations (May 2019). According to AccuWeather, this total equates to 3.15 inches below normal rainfall for this period. 4.04 inches of rainfall was recorded in Beaumont in the three months prior to the May 2019 delineation effort (February 2019, March 2019, and April 2019), which is 6.62 inches below

normal rainfall for this three-month period. Short-term mild drought, as indicated by the data, would not have an effect on hydric soil indicators or vegetation in the tree and sapling layers, characteristics used to delineate wetlands in the field. Hydric soil conditions remain observable in times of mild drought and hydrophytic vegetation can persist through periods of drier conditions. **Table 2** illustrates the recorded and normal rainfall amounts for the months preceding fieldwork.

Table 2: Monthly Recorded Rainfall for Beaumont, Texas

Month	Recorded Rainfall (inches)	Normal Rainfall (inches)	Difference (inches)
May 2018	0.86	5.17	-4.31
June 2018	3.35	7.89	-4.54
July 2018	1.82	5.01	-3.19
August 2018	1.06	4.99	-3.93
September 2018	6.06	5.35	+0.71
October 2018	3.39	5.42	-2.03
November 2018	2.60	4.67	-2.07
December 2018	3.14	4.91	-1.77
January 2019	3.25	4.39	-1.14
February 2019	1.58	4.02	-2.44
March 2019	0.91	3.43	-2.52
April 2019	1.55	2.81	-1.26
May 2019	2.02	5.17	-3.15
Total	31.59	63.23	-31.64

Source: AccuWeather.com

6.0 FINDINGS

Based on observations and data collected in the field, 0.72 acres of wetlands and 3,408.66 linear feet of streams were delineated within the project area. It was determined that 0.01 acres of wetlands and 3,408.66 linear feet of streams delineated within the project area would be considered potentially jurisdictional.

Wetland 1 is a small depressional Palustrine Emergent wetland (PEM) adjacent to a drainage culvert on the southeast side of I-10, south of Walden Road. A surface water connection was observed between Wetland 1 and an unnamed tributary of Hillebrandt Bayou (Stream 1), as depicted in topographic maps flowing south outside of the proposed project area. Wetland 1 is considered potentially jurisdictional.

Wetlands 2, 3, 6, and 7 are small depressional PEMs within maintained ROW of the Cardinal Drive Interchange in the southern portion of the project area. Wetland 5 is a man-made depressional PEM created adjacent to a pile of roadway waste consisting of concrete, rocks, and gravel. Wetland 5 is located within maintained ROW of the Cardinal Drive Interchange between US 69 and the southbound frontage road. Wetlands 2, 3, 5, 6, and 7 are located outside of the 100-year floodplain with no surface water connections observed. Wetlands 2, 3, 5, 6, and 7 are considered potentially non-jurisdictional.

Wetland 4 is a small depressional Palustrine Forested wetland (PFO) located within a forested section of the maintained ROW of the Cardinal Drive Interchange. Wetland 8 is a small depressional PFO within a large forested section adjacent to the project area. Wetland 8 is south of the existing US 69 eastbound frontage road, southeast of the Cardinal Drive Interchange, and approximately 330 feet northwest of Stream 11 (unnamed tributary of Hillebrandt Bayou). The forested section is located between the existing eastbound frontage roads and a berm along an unnamed tributary of Hillebrandt Bayou. During field observations, Wetland 8 did not have any surface water connections to any other potential WOUS. The nearest water (Stream 11) is a modified stream with an approximate 10-foot berm along its northern boundary. No culverts or drainage pipes were observed leading from Wetland 8. Wetlands 4 and 8 are located outside of the 100-year floodplain with no surface water connections observed. Wetlands 4 and 8 are considered potentially non-jurisdictional.

Fourteen stream features were delineated within the project area. The stream features consist of twelve unnamed tributaries of Hillebrandt Bayou (Stream 1 and Stream 4-14), Hillebrandt Bayou (Stream 2), and the Port Arthur Canal (Stream 3). The Port Arthur Canal is bordered by the Port Arthur Canal Levee to the south and the Valley Authority Canal Levee to the north. These levees are present as embankments immediately adjacent to the banks of the Port Arthur Canal to prevent overflow. The Canal is elevated and crosses above Hillebrandt Bayou and under I-10 within the project area (see Photos 2 and 3 in **Appendix B**). The location of the Levees is included in **Appendix A as Figure 9**. Sections of Stream 1, 4, and 7, and all of Streams 11-14 as they pass through the project area, are culverted. Hillebrandt Bayou flows into Taylor Bayou southeast of the project area. The Port Arthur Canal terminates at its confluence with Taylor Bayou in Port Arthur, Texas, southeast of the project area. Taylor Bayou eventually flows into the Intracoastal Waterway. All streams delineated within the project area are considered potentially jurisdictional.

Table 3: Summary of Acreages

Feature Name	Feature Type	Area (acres)	Length (linear ft)	Potential Jurisdiction
Wetland				
Wetland 1	PEM	0.01	NA	Jurisdictional
Wetland 2	PEM	0.03	NA	Non-Jurisdictional
Wetland 3	PEM	0.04	NA	Non-Jurisdictional
Wetland 4	PFO	0.12	NA	Non-Jurisdictional
Wetland 5	PEM	0.38	NA	Non-Jurisdictional
Wetland 6	PEM	0.04	NA	Non-Jurisdictional
Wetland 7	PEM	0.09	NA	Non-Jurisdictional

Feature Name	Feature Type	Area (acres)	Length (linear ft)	Potential Jurisdiction
Wetland 8	PFO	0.01	NA	Non-Jurisdictional
Streams				
Stream 1	Perennial Stream	NA	17.79	Jurisdictional
Stream 1-Culvert	Perennial Stream	NA	388.85	Jurisdictional
Stream 2	Perennial Stream	NA	528.56	Jurisdictional
Stream 3	Perennial Stream	NA	571.94	Jurisdictional
Stream 4	Perennial Stream	NA	21.51	Jurisdictional
Stream 4- Culvert	Perennial Stream	NA	170.49	Jurisdictional
Stream 5	Intermittent Stream	NA	37.09	Jurisdictional
Stream 6	Perennial Stream	NA	13.93	Jurisdictional
Stream 7	Perennial Stream	NA	8.78	Jurisdictional
Stream 7-Culvert	Perennial Stream	NA	401.22	Jurisdictional
Stream 8	Perennial Stream	NA	40.31	Jurisdictional
Stream 9	Ephemeral Stream	NA	10.65	Jurisdictional
Stream 10	Perennial Stream	NA	106.01	Jurisdictional
Stream 11-Culvert	Perennial Stream	NA	411.13	Jurisdictional
Stream 12-Culvert	Perennial Stream	NA	309.89	Jurisdictional
Stream 13-Culvert	Perennial Stream	NA	74.40	Jurisdictional
Stream 14-Culvert	Perennial Stream	NA	296.11	Jurisdictional
Total Wetlands		0.72	NA	-
Total Stream		NA	3,408.66	-
PEM = Palustrine Emergent, PFO = Palustrine Forested				
NA = Not Applicable				

The delineated boundaries of features listed in **Table 3** are depicted on **Appendix A, Figure 2** and represent the boundaries of waters and uplands. Additionally, each of the data collection points as observed during investigation are depicted on **Appendix A, Figure 2**. The delineation boundaries have been digitally overlaid onto 2017 Environmental Systems Research Institute (ESRI) one-meter resolution color aerials. Potential jurisdiction determinations were made for

each delineated feature within the project area and are presented below in **Table 4**. The determinations listed in **Table 4** represent best professional judgement and are not considered approved determinations. The U.S. Army Corps of Engineers (USACE) has ultimate authority regarding the jurisdictional status of all features within the project area.

The General Bridge Act (GBA) of 1946 and Section 9 of the Rivers and Harbors Act (RHA) of 1899 prohibit the unauthorized obstruction; including bridge construction or alteration of any navigable WOUS, unless the work has been authorized by permit from the U.S. Coast Guard. Section 10 of the RHA requires authorization from the USACE if the project involves structures or work in or over any navigable water, as defined by 33 CFR 329, and/or any obstruction or alteration of these waters.

Navigable waters in the area regulated by the Galveston USACE District are determined on a case-by-case basis by the Galveston USACE District and coordination with the USACE shall take place to determine navigability of Hillebrandt Bayou.

If Hillebrandt Bayou is determined not to be a navigable water no further coordination under Section 9 or 10 of the RHA is required. If Hillebrandt Bayou is determined to be a navigable water, coordination for Section 10 waters would occur as part of the Section 404 USACE process. If Hillebrandt Bayou is determined to be a navigable water it would likely no longer be subject to the permitting requirements imposed by the GBA or Section 9 of the RHA because it is not used, and is not susceptible to use in its natural condition or by reasonable improvement as a means to transport interstate or foreign commerce and it is nontidal; or if it is tidal, used by vessels less than 21 feet in length.

Table 4: Jurisdictional Justification Table

Feature	Latitude and Longitude	Potential Jurisdictional Determination	Class of Aquatic Resource	Jurisdictional Justification
Wetland 1	30.036108° -94.158269°	Jurisdictional	Section 404 Wetland	Surface water connection to an unnamed tributary to Hillebrandt Bayou
Wetland 2	30.048165° -94.148364°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by roadways, no observable surface water connection
Wetland 3	30.050090° -94.146410°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by roadways, no observable surface water connection
Wetland 4	30.051155° -94.144628°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by

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Feature	Latitude and Longitude	Potential Jurisdictional Determination	Class of Aquatic Resource	Jurisdictional Justification
				roadways, no observable surface water connection
Wetland 5	30.051615° -94.144219°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by roadways, no observable surface water connection
Wetland 6	30.049793° -94.144218°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by roadways, no observable surface water connection
Wetland 7	30.049833° -94.141813°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, surrounded by roadways, no observable surface water connection
Wetland 8	30.046955° -94.141068°	Non-Jurisdictional	Isolated	Outside of 100-year floodplain, separated by berm from any water connection, no observable surface water connection
Stream 1	30.037058° -94.158881°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 1 - Culvert	30.036202° -94.158245°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 2 (Hillebrandt Bayou)	30.045421° -94.149949°	Jurisdictional	Section 404	Hillebrandt Bayou
Stream 3 (Port Arthur Canal)	30.045245° -94.150138°	Jurisdictional	Section 404	Port Arthur Canal; Surface water connection and contributes flow to Taylor Bayou
Stream 4	30.045096° -94.150090°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 4 -Culvert	30.045152° -94.150297°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 5	30.047600° -94.145193°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 6	30.060553° -94.135841°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 7	30.079203° -94.136436°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 7 - Culvert	30.079214° -94.135210°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 8	30.083553° -94.136655°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 9	30.045085° -94.136615°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 10	30.055652° -94.141440°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou

Feature	Latitude and Longitude	Potential Jurisdictional Determination	Class of Aquatic Resource	Jurisdictional Justification
Stream 11 - Culvert	30.047156° -94.139335°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 12 - Culvert	30.042315° -94.129439°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 13 - Culvert	30.055754° -94.137404°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou
Stream 14 - Culvert	30.071894° -94.134282°	Jurisdictional	Section 404	Unnamed tributary to Hillebrandt Bayou

7.0 CONCLUSIONS

Ecosystem Planning and Restoration, LLC performed an evaluation to determine if any WOUS, including wetlands, were located within the project area. The project area is approximately 438-acres. A field visit was conducted in May, June, and July of 2019 as further access became available to perform a wetland delineation in accordance with the *1987 Corps of Engineers Wetland Delineation Manual* and the *Gulf Coast Supplement*. Based on observations and data collected in the field, 0.72 acres of wetlands and 3,408.66 linear feet of streams were delineated within the project area. It was determined that 0.01 acres of wetlands and 3,408.66 linear feet of streams delineated within the project area would be considered potentially jurisdictional. This document has been prepared to support the planning efforts of the proposed 10/69 Interchanges Project. No coordination has been initiated with the USACE as of the date of this report. All findings are based on actual field data and are not to be considered a jurisdictional determination. The USACE has final determination on the jurisdiction of all features identified within the project area.

8.0 REFERENCES

Accuweather.com. Accuweather, June 19, 2019. Web.

<https://www.accuweather.com/en/us/beaumont-tx/77701/may-weather/331129?monyr=5/1/2019>

Federal Emergency Management Agency, Flood Insurance Rate Map, panels 4854570035C, 4854570020C, and 4854570040D, effective 8/6/2002.

Historic Aerials by NETROnline. June 9, 2019. Web. <https://www.historicaerials.com/viewer>

Munsell Soil Color Charts. 1994 Revised Edition. MacBeth Division of Kollmorgen Instruments Corporation, New Windsor New York.

Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online WWW]. Available URL: <http://soils.usda.gov/technical/classification/osd/index.html> [Accessed June 2019]. USDA-NRCS, Lincoln, NE.

Texas Natural Resources Information System, Digital Ortho Quarter Quad, Beaumont West, Beaumont East, and Voth, 1996

U.S. Army Corps of Engineers. 1987. January 1987 Corps of Engineers Wetland Delineation Manual.

U.S. Army Corps of Engineers. 2007. May 30, 2007. Jurisdictional Determination Form Instructional Guidebook.

U.S. Army Corps of Engineers. 2010. November 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Regional Supplement.

U.S. Geologic Survey 7.5-minute series topographic maps, Beaumont West and Beaumont East, Texas, 2019.

U.S. Army Corps of Engineers. 2014. National Wetland Plant List 2016.

U.S. Army Corps of Engineers. 2019. National Wetland Plant List 2018 Update.

U.S. Fish and Wildlife Service. 2013. National Wetlands Inventory Digital Data.

USDA, NRCS. 2015. The PLANTS Database (<http://plants.usda.gov>, June 2019). National Plant Data Center, Baton Rouge, LA 87.6874-4490 USA.

Prepared on behalf of TxDOT-Beaumont District by:

ECOSYSTEM PLANNING AND RESTORATION, LLC



17575 NORTH ELDRIDGE PARKWAY, BUILDING C

TOMBALL, TEXAS 77377

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APPENDIX A: FIGURES

Figure 1: Project Location Map

Figure 2: Wetland Delineation Map

Figure 3: NRCS Soil Map

Figure 4: USGS Topographic Map

Figure 5: Historic Infrared Photographs

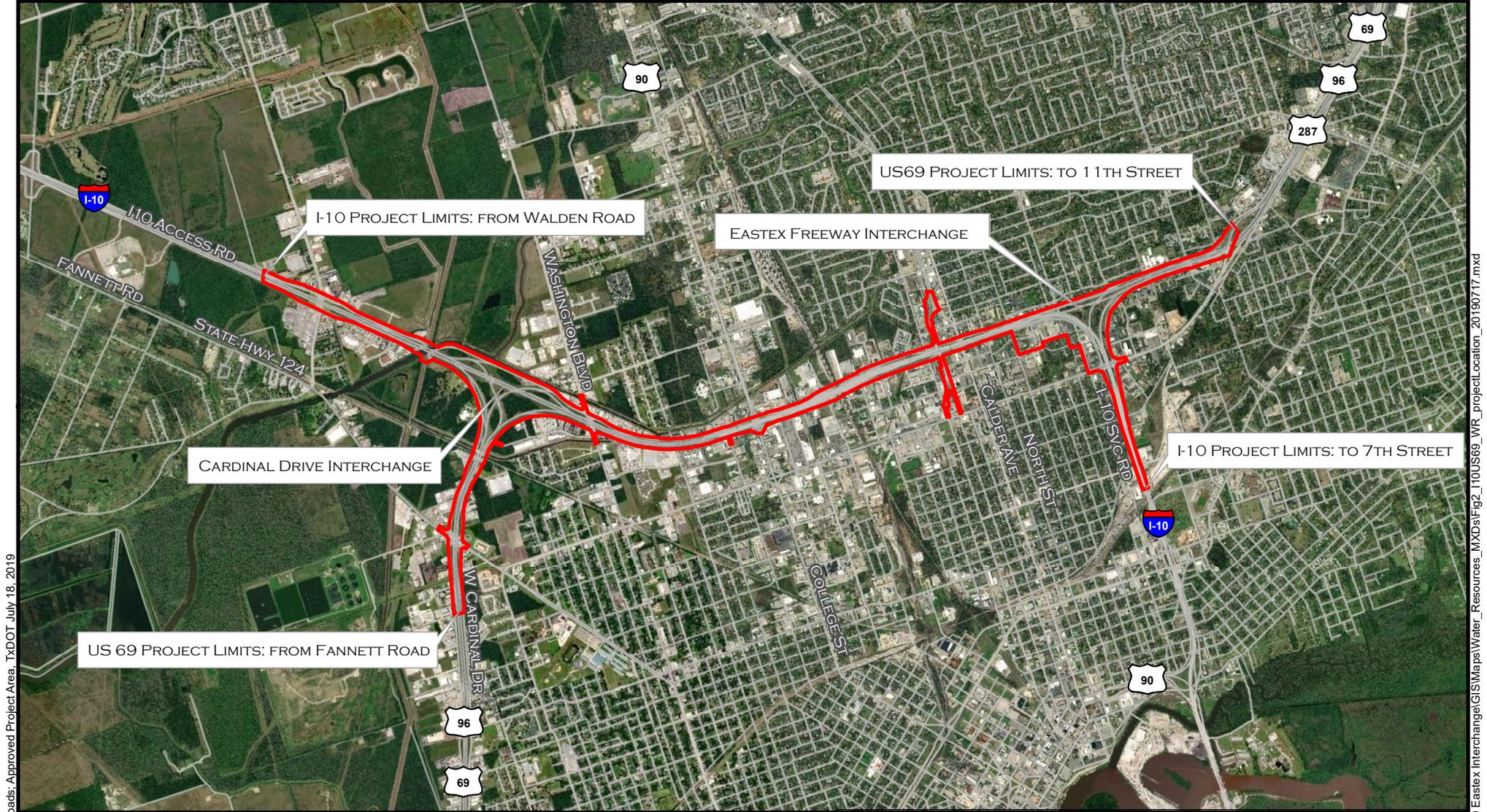
Figure 6: FEMA Floodplain Map

Figure 7: NWI Wetland Map

Figure 8: LIDAR Location Map

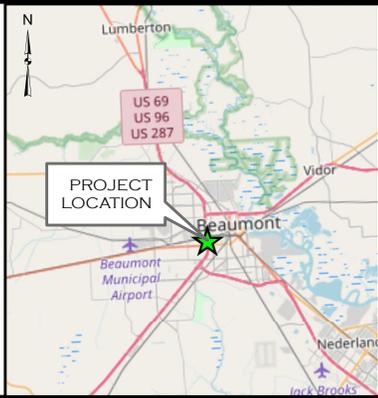
Figure 9: Levee Location Map

Figure 10: Historic Aerial Photograph Map

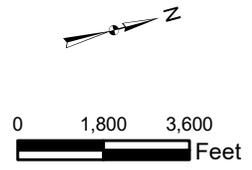


Sources: ESRI Aerial 2017; Open Street Map; TIGER Roads; Approved Project Area; TXDOT July 18, 2019

 PROJECT AREA



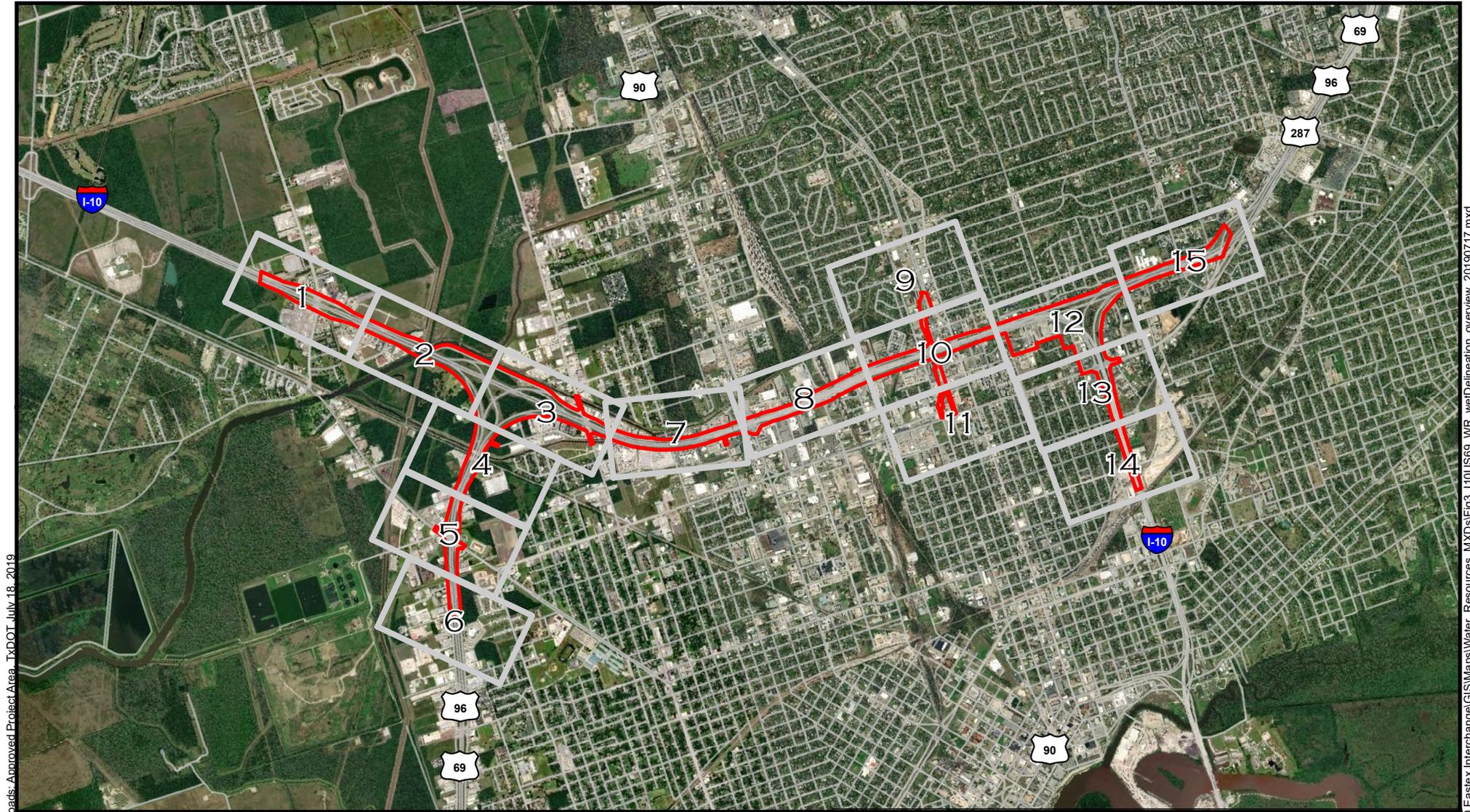
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 PROJECT LOCATION MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 1

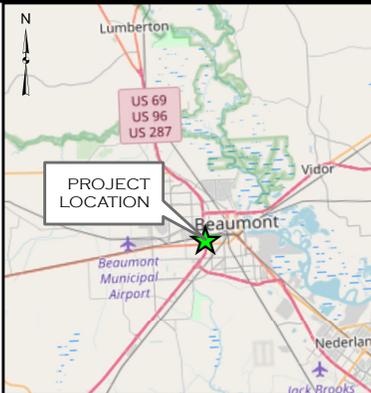
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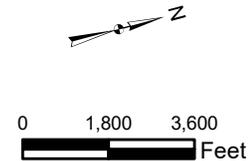
Sources: ESRI Aerial 2017; Open Street Map; TIGER Roads; Approved Project Area; TxDOT July 18, 2019

 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION OVERVIEW

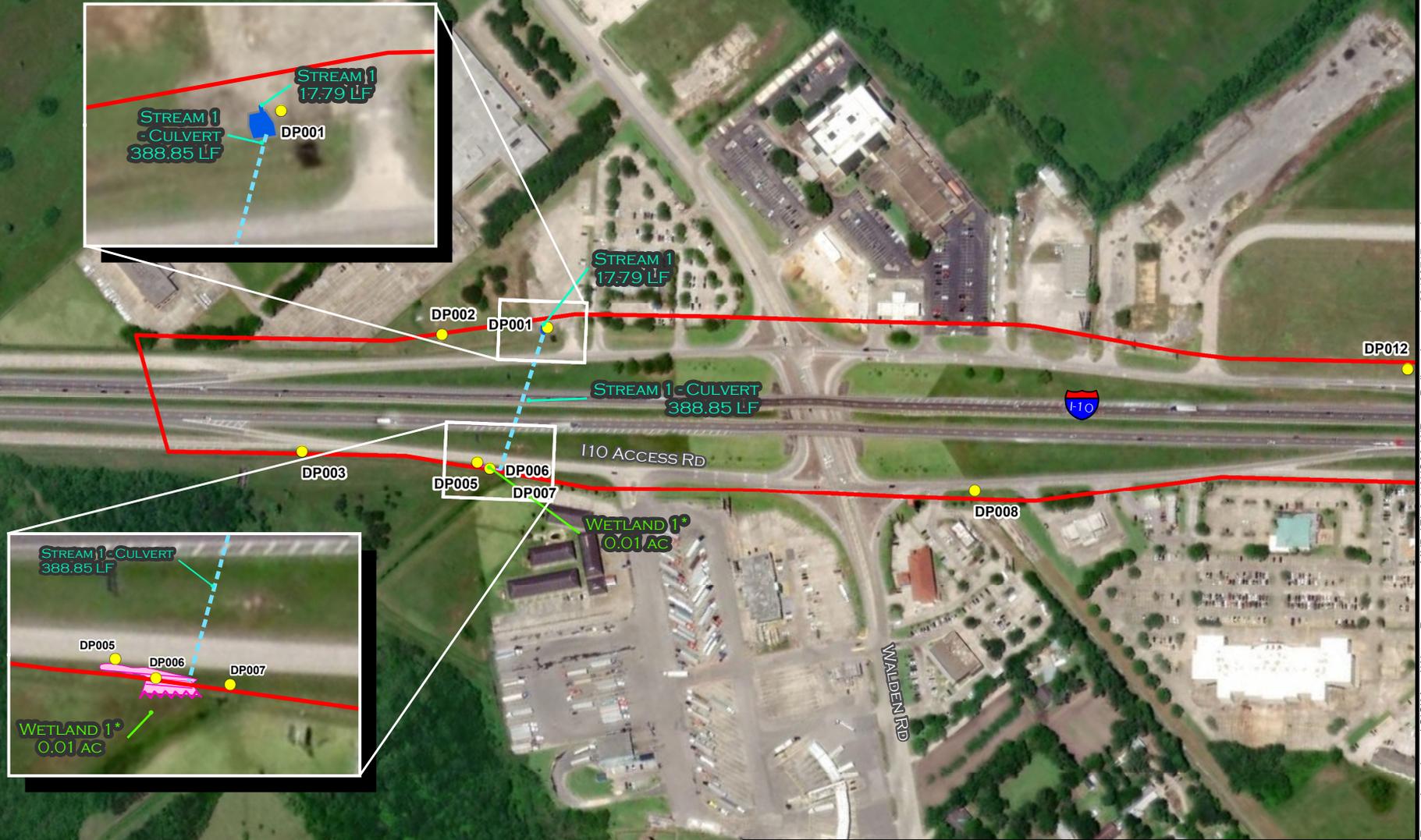
JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 2

DATE:
 JULY 2019

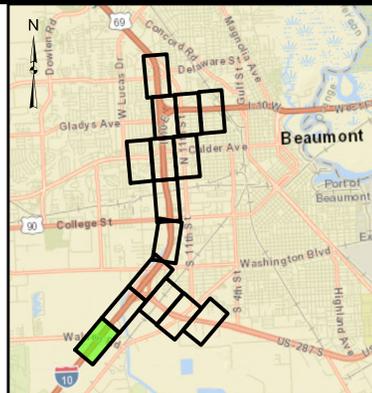
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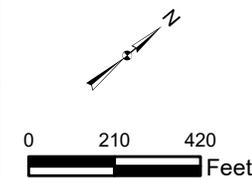
- DATA POINTS
- CULVERT
- STREAM
- PEM WETLAND
- PROJECT AREA

* Wetland continues beyond the project area

** The delineation of this project was in progress prior to the project area being finalized. DP004, DP021, DP028, DP030, DP031, and DP042 were taken outside of the revised project area and area not included in this report.

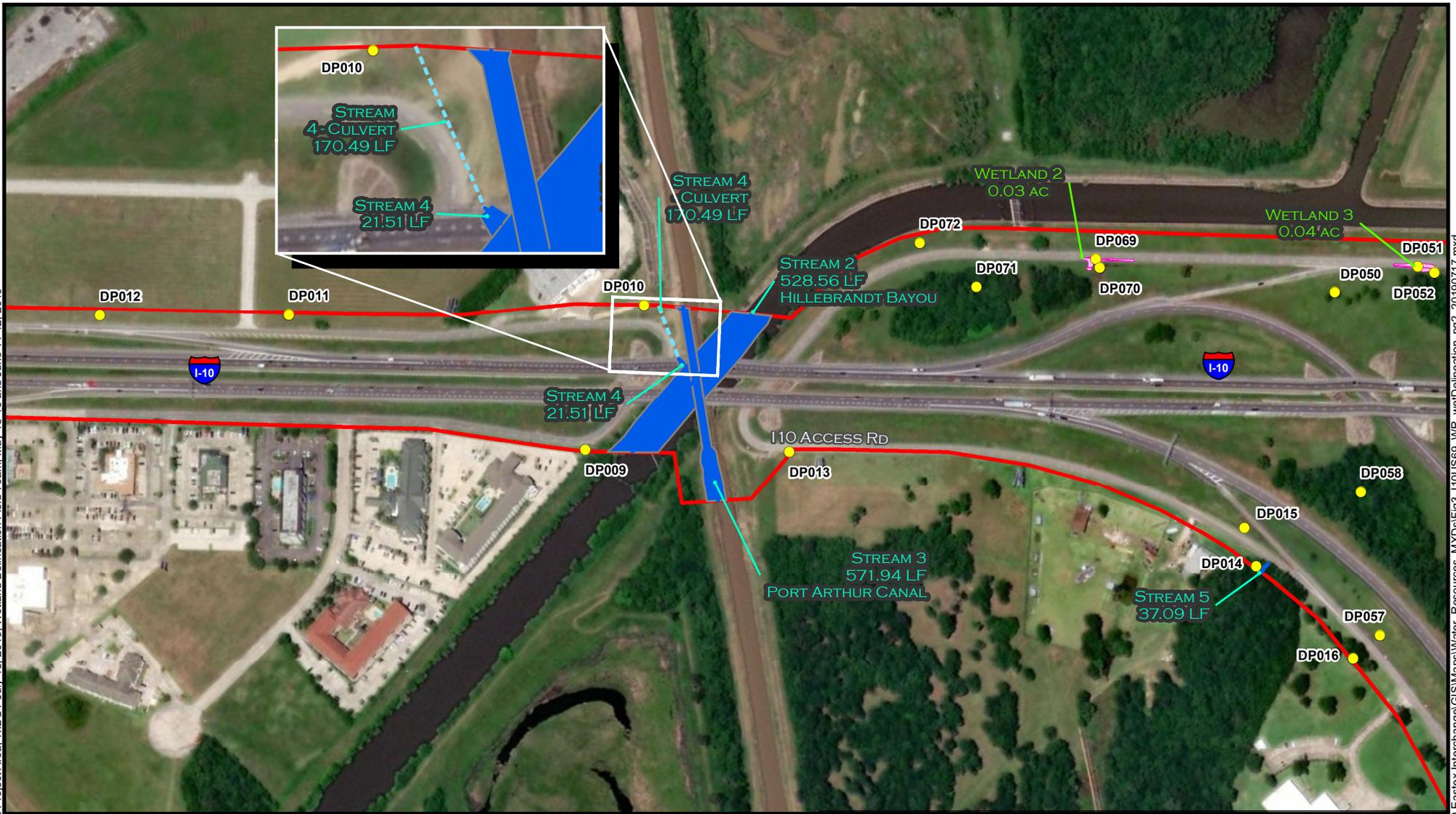


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

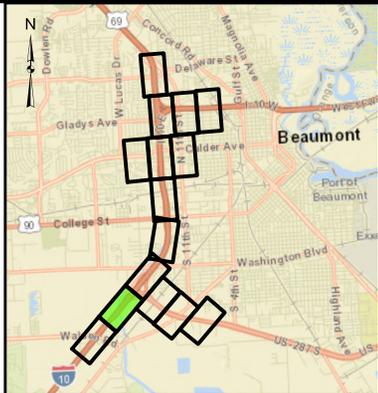


APPENDIX A
 FIGURE 2
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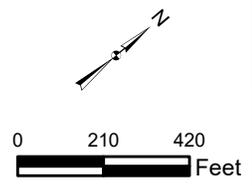
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- DATA POINTS
- CULVERT
- STREAM
- PEM WETLAND
- PROJECT AREA



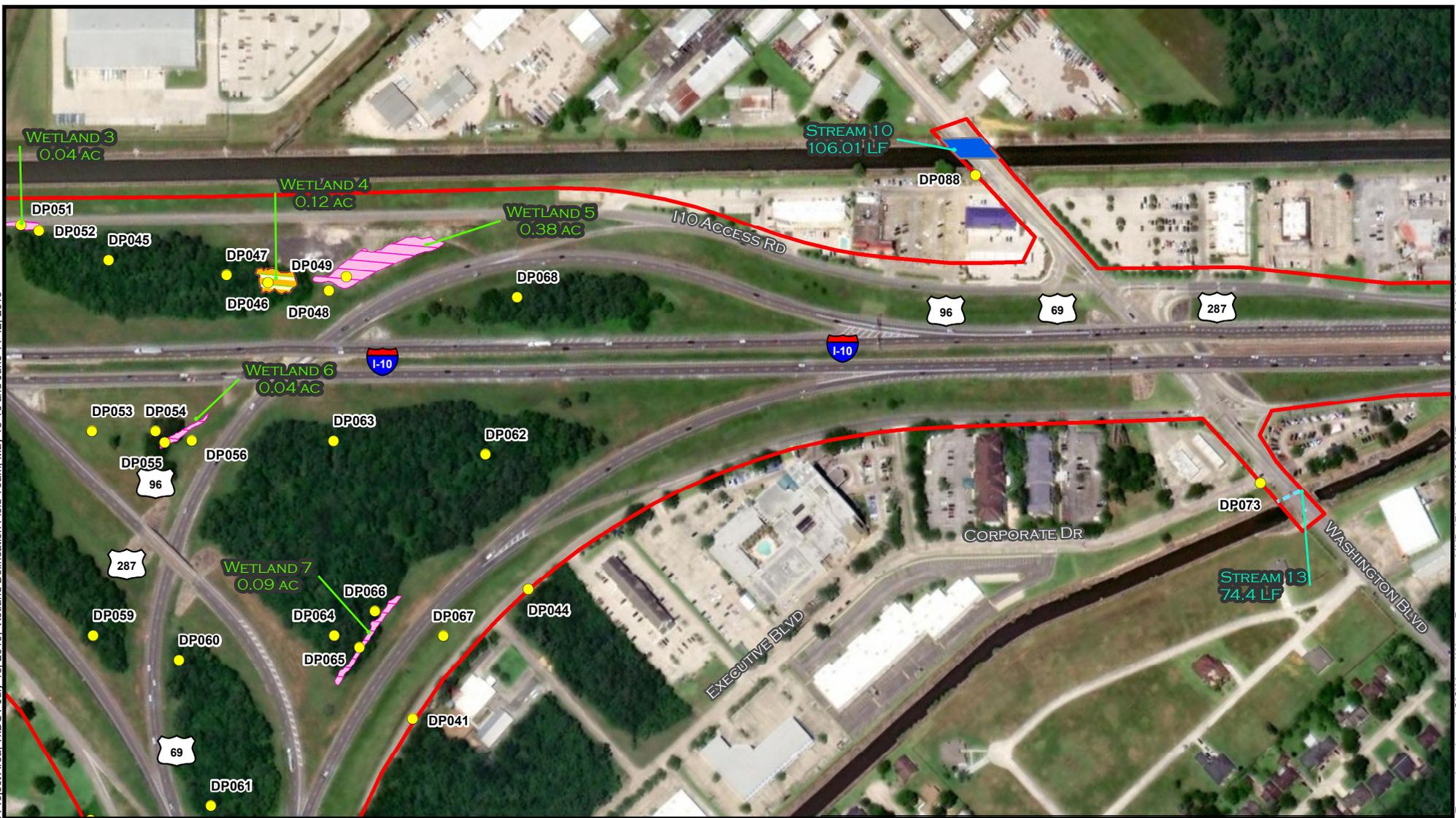
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS



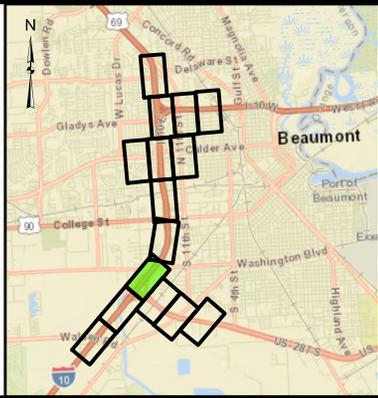
APPENDIX A
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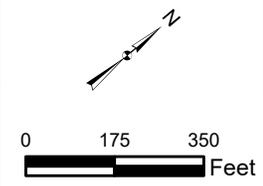
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- DATA POINTS
- CULVERT
- STREAM
- PEM WETLAND
- PFO WETLAND
- PROJECT AREA



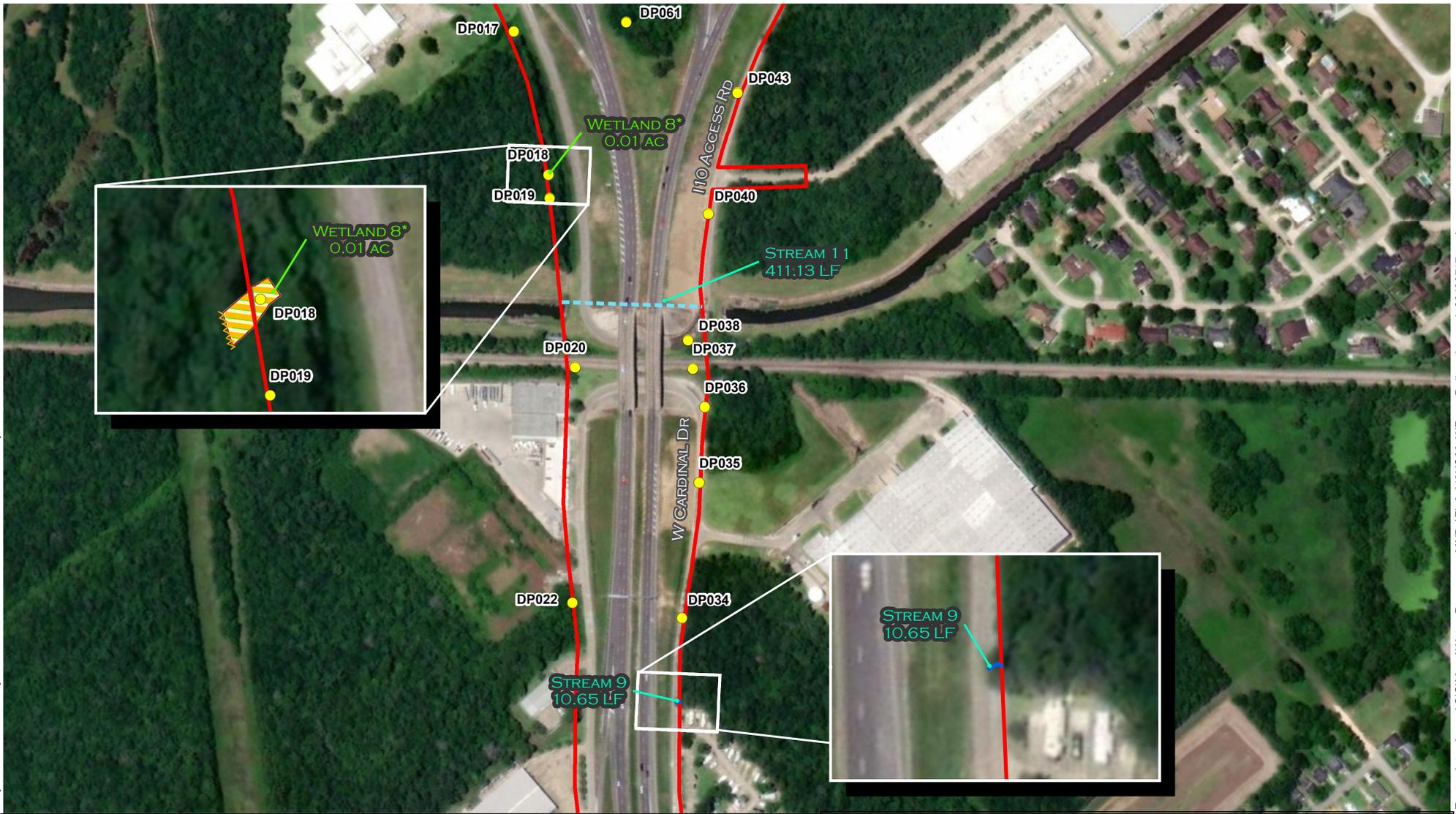
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 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS



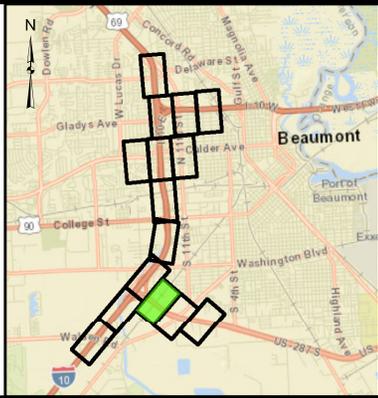
APPENDIX A
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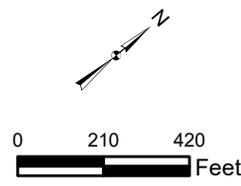
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- DATA POINTS
- CULVERT
- STREAM
- PFO WETLAND
- PROJECT AREA



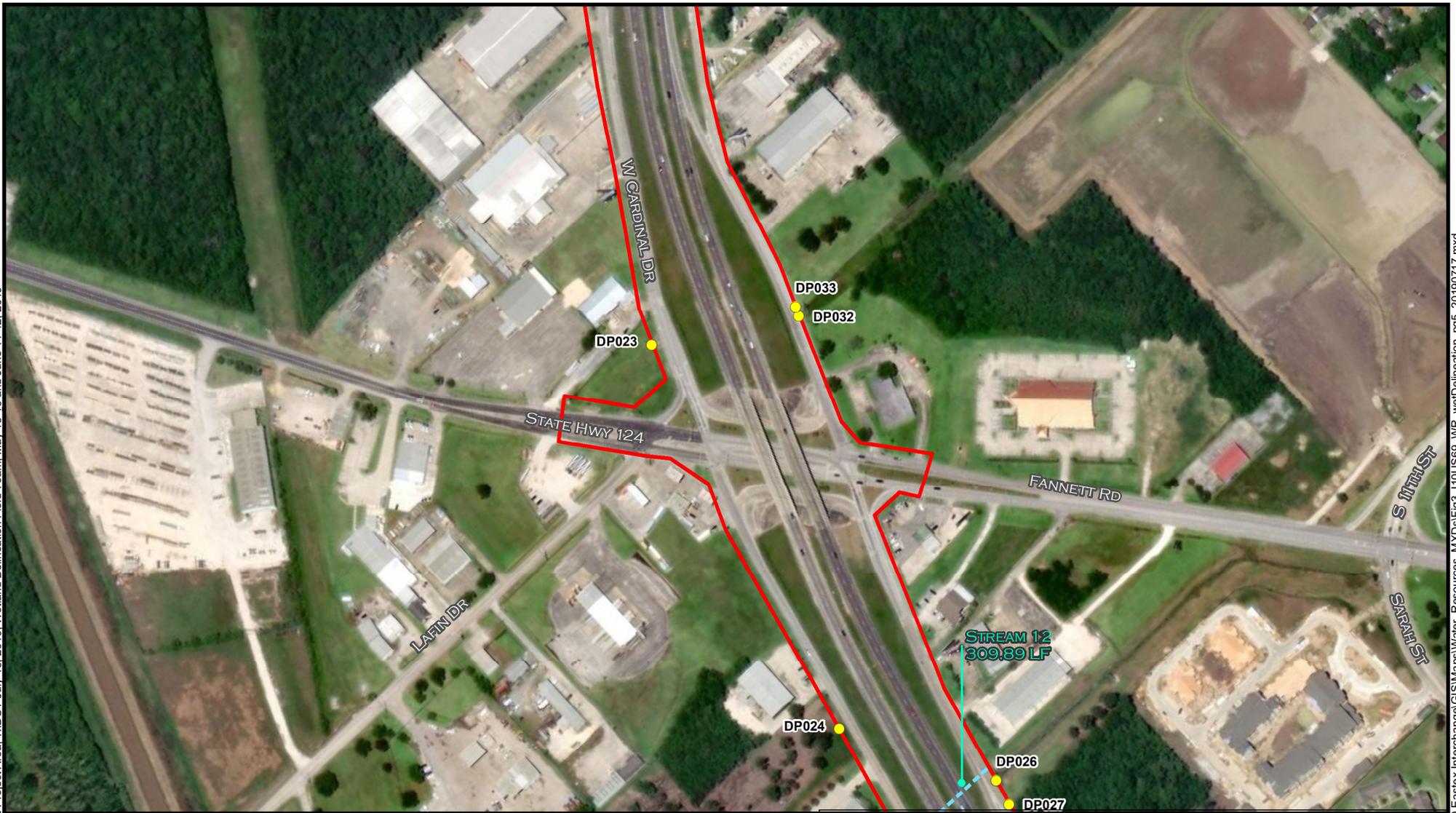
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 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS



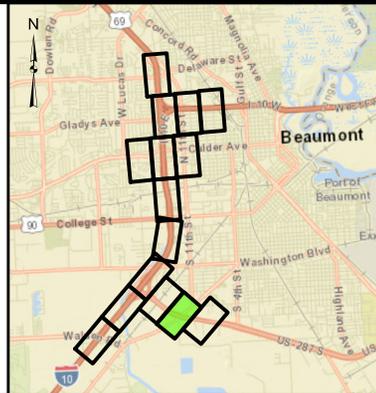
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DATE:
 JULY 2019

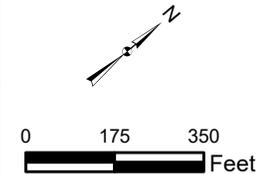
* Wetland continues beyond the project area



- DATA POINTS
- - - CULVERT
- PROJECT AREA

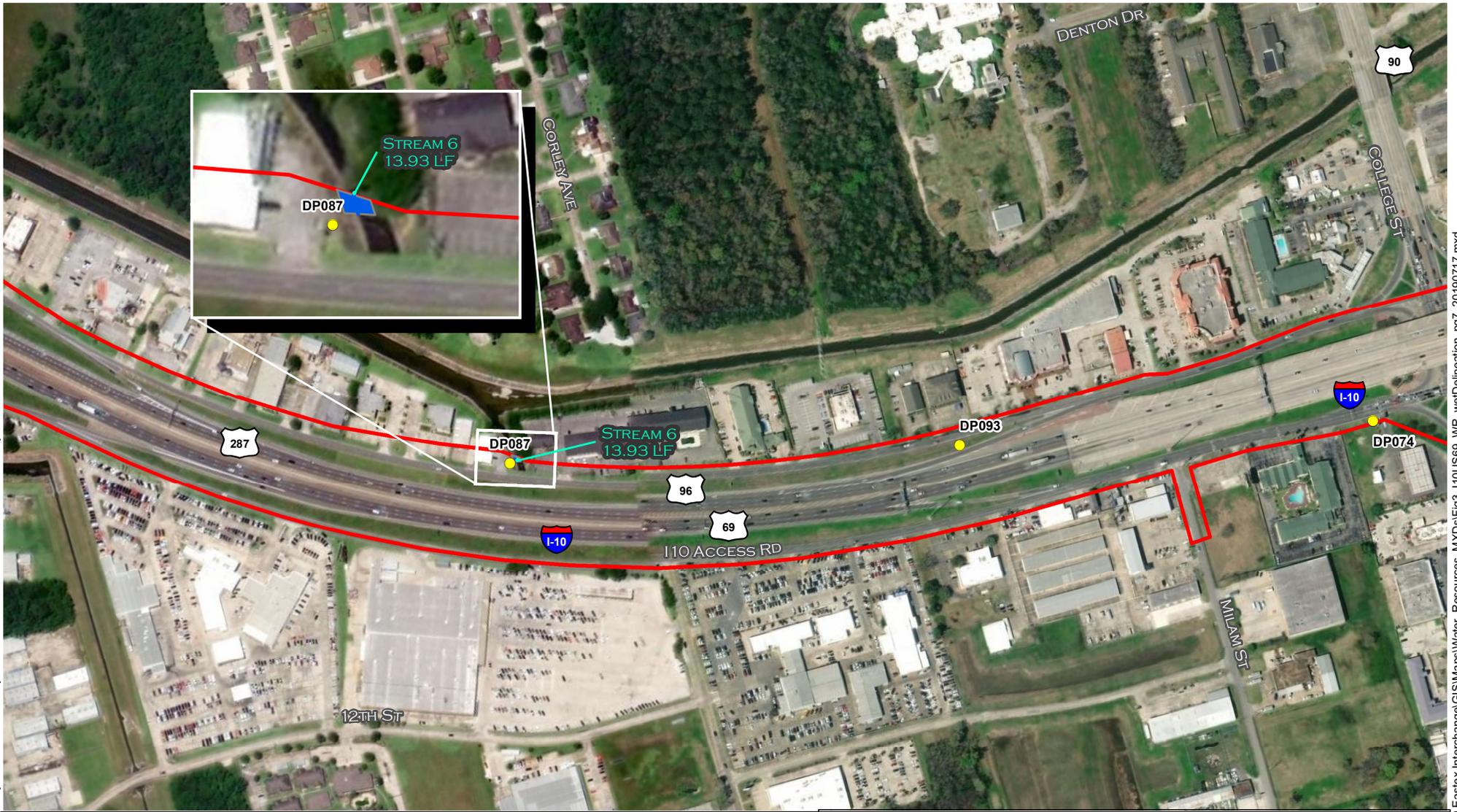


10/69 INTERCHANGES PROJECT
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 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

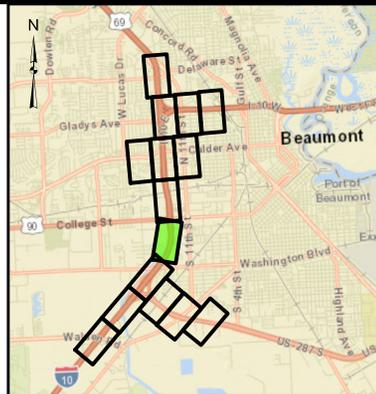


APPENDIX A
 FIGURE 2
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 JULY 2019



- DATA POINTS
- STREAM
- PROJECT AREA

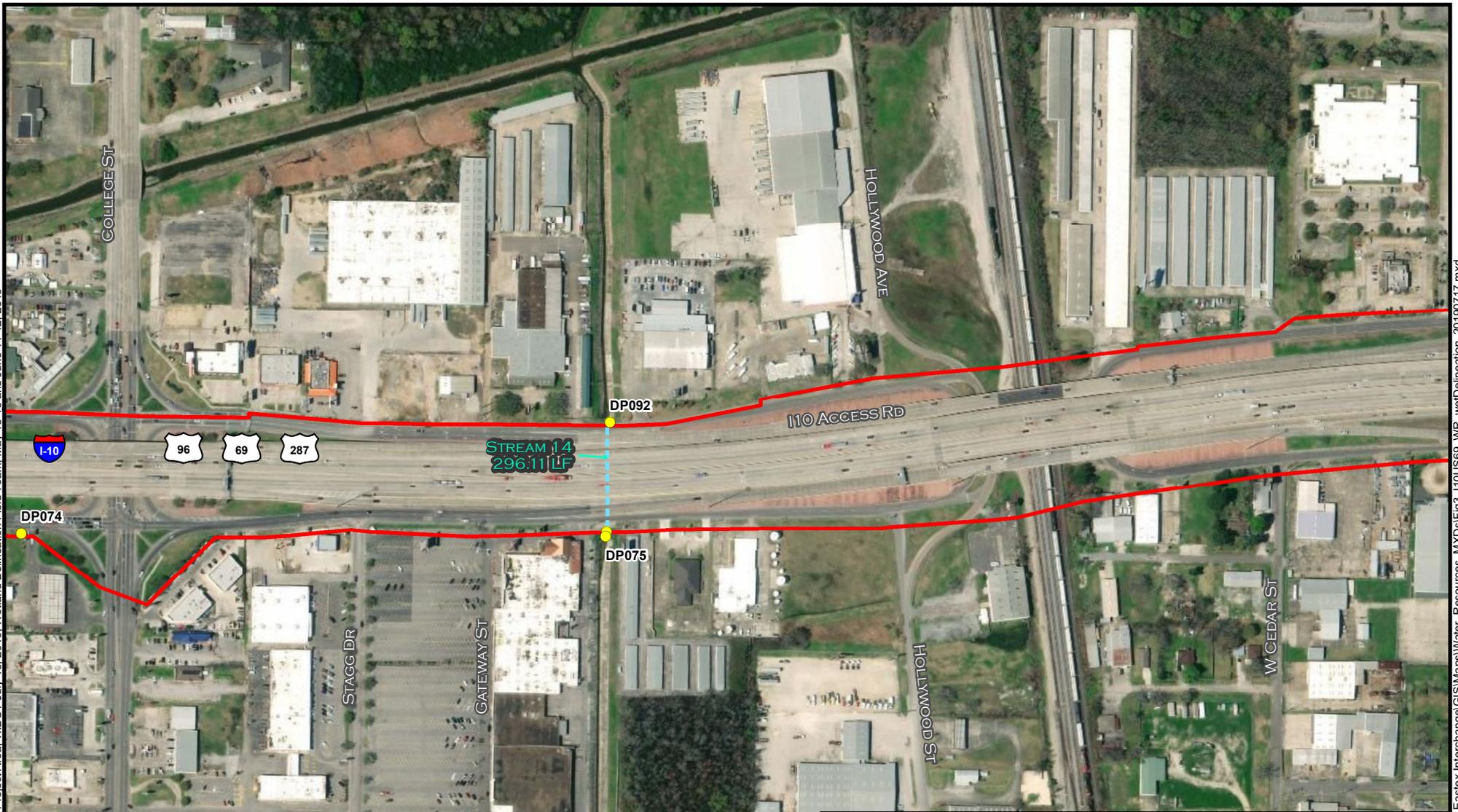


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

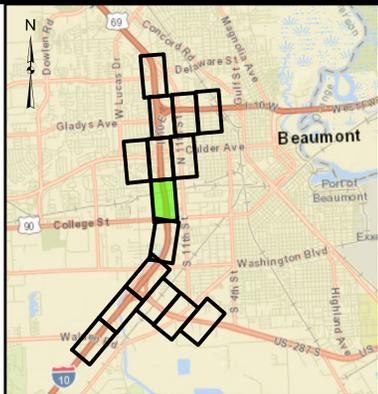


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 FIGURE 2
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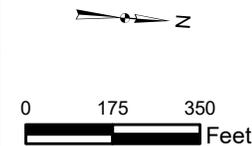
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- DATA POINTS
- CULVERT
- PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

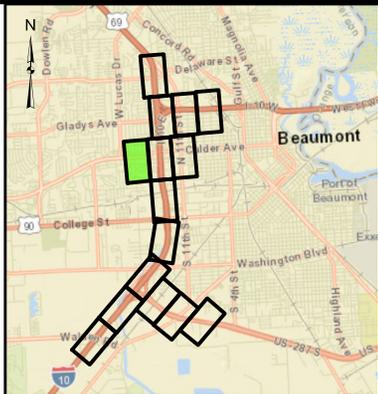


APPENDIX A
 FIGURE 2
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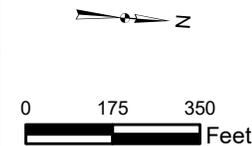
DATE:
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- DATA POINTS
- PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

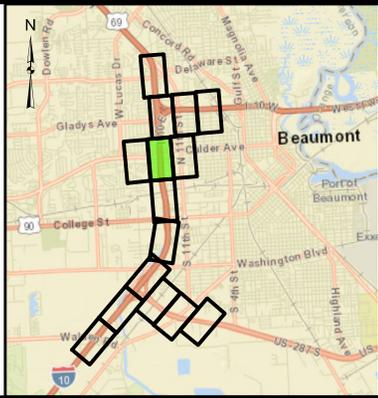


APPENDIX A
 FIGURE 2
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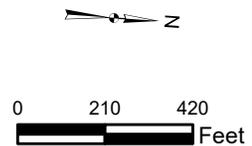
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- DATA POINTS
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- STREAM
- PROJECT AREA

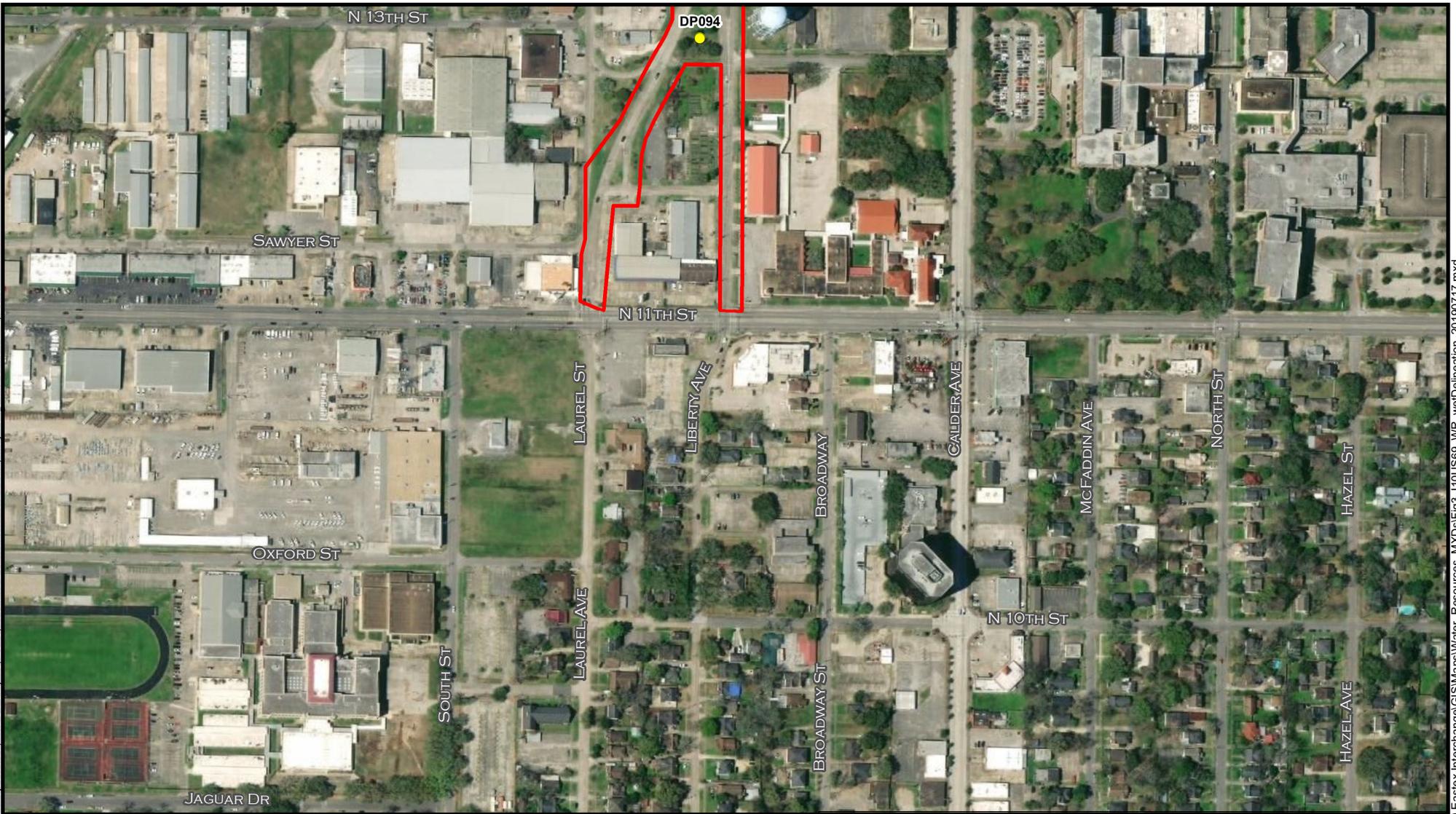


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

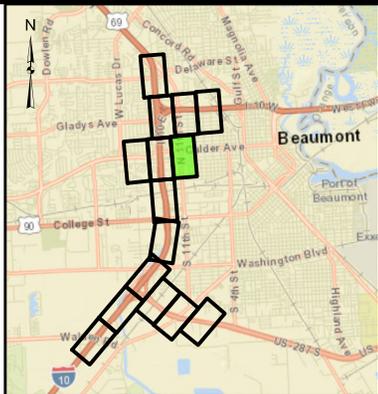


APPENDIX A
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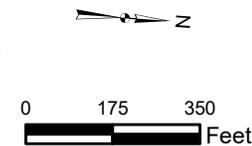
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-  DATA POINTS
-  PROJECT AREA

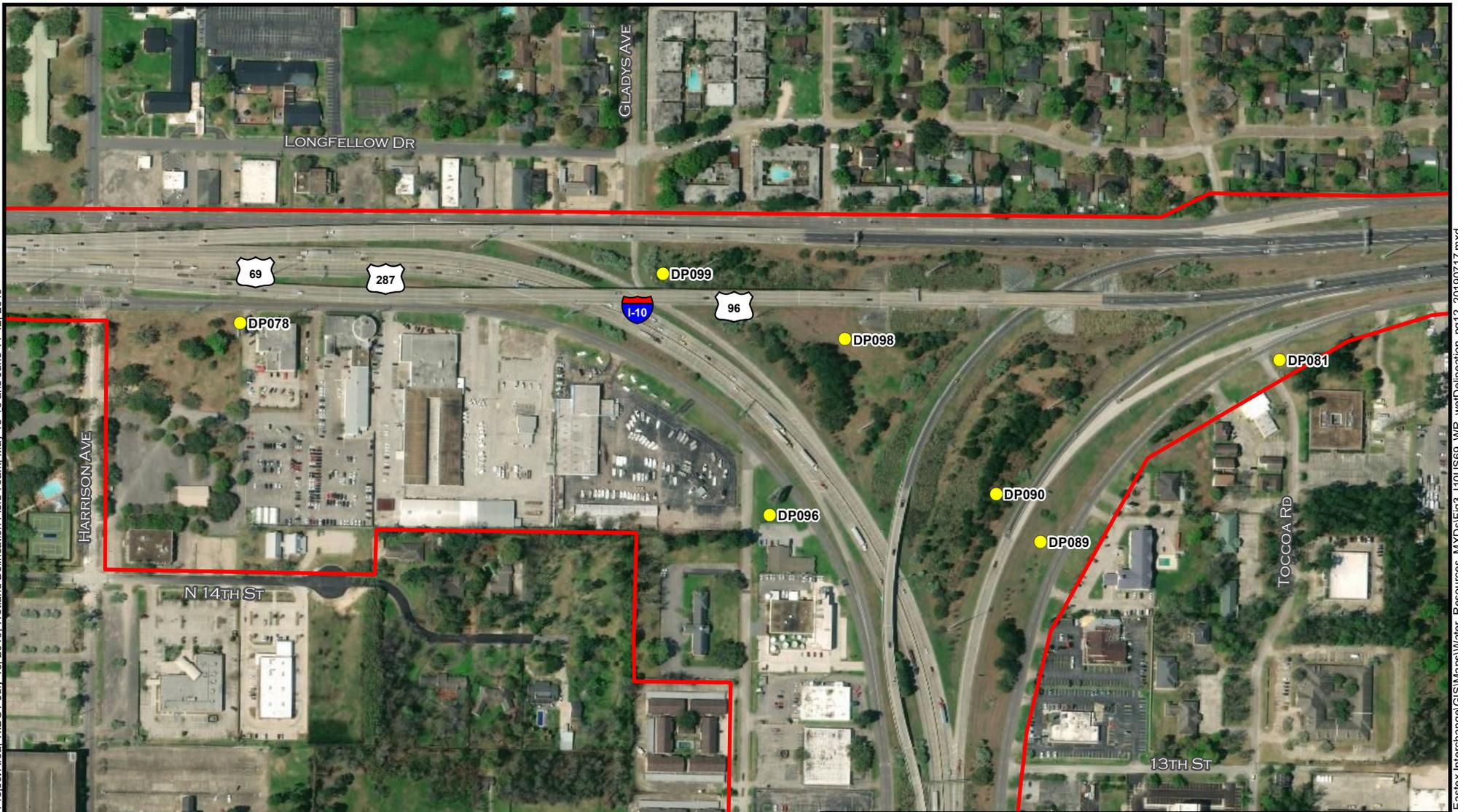


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

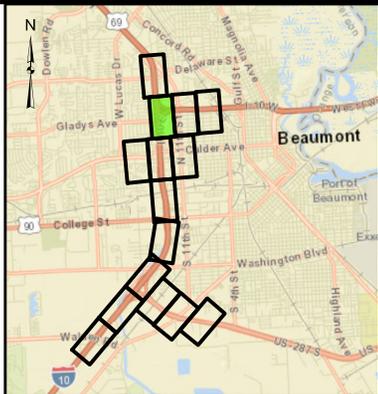


APPENDIX A
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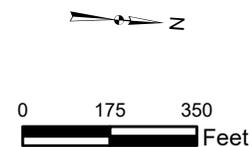
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- DATA POINTS
- PROJECT AREA

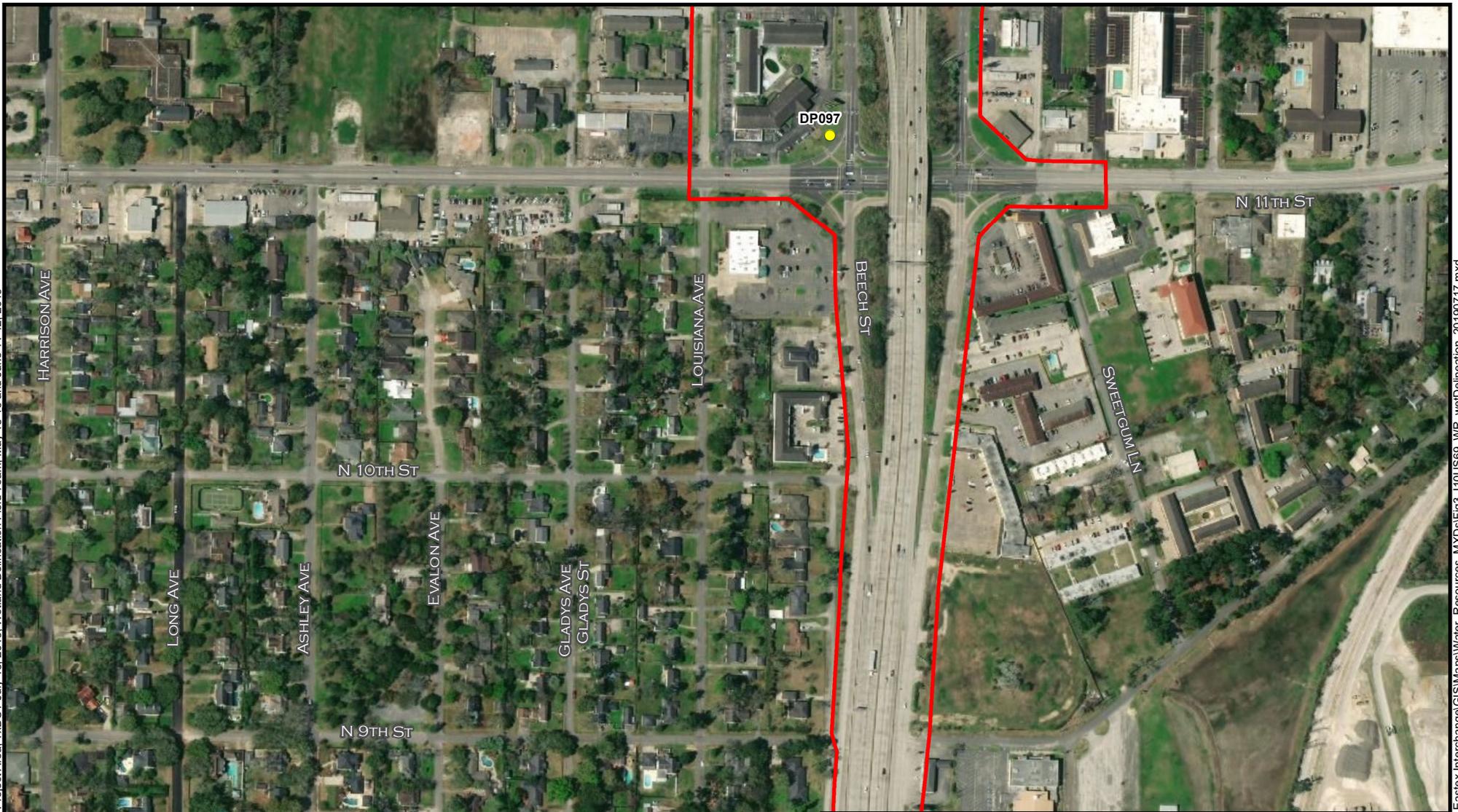


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

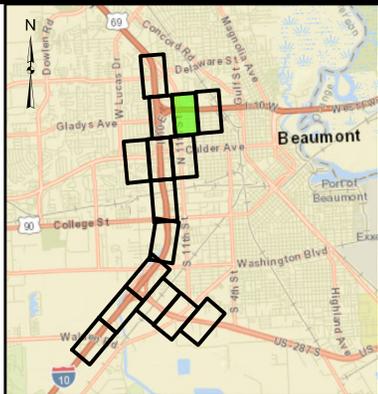


APPENDIX A
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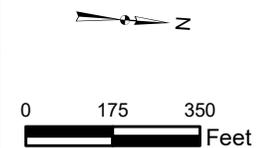
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- DATA POINTS
- PROJECT AREA

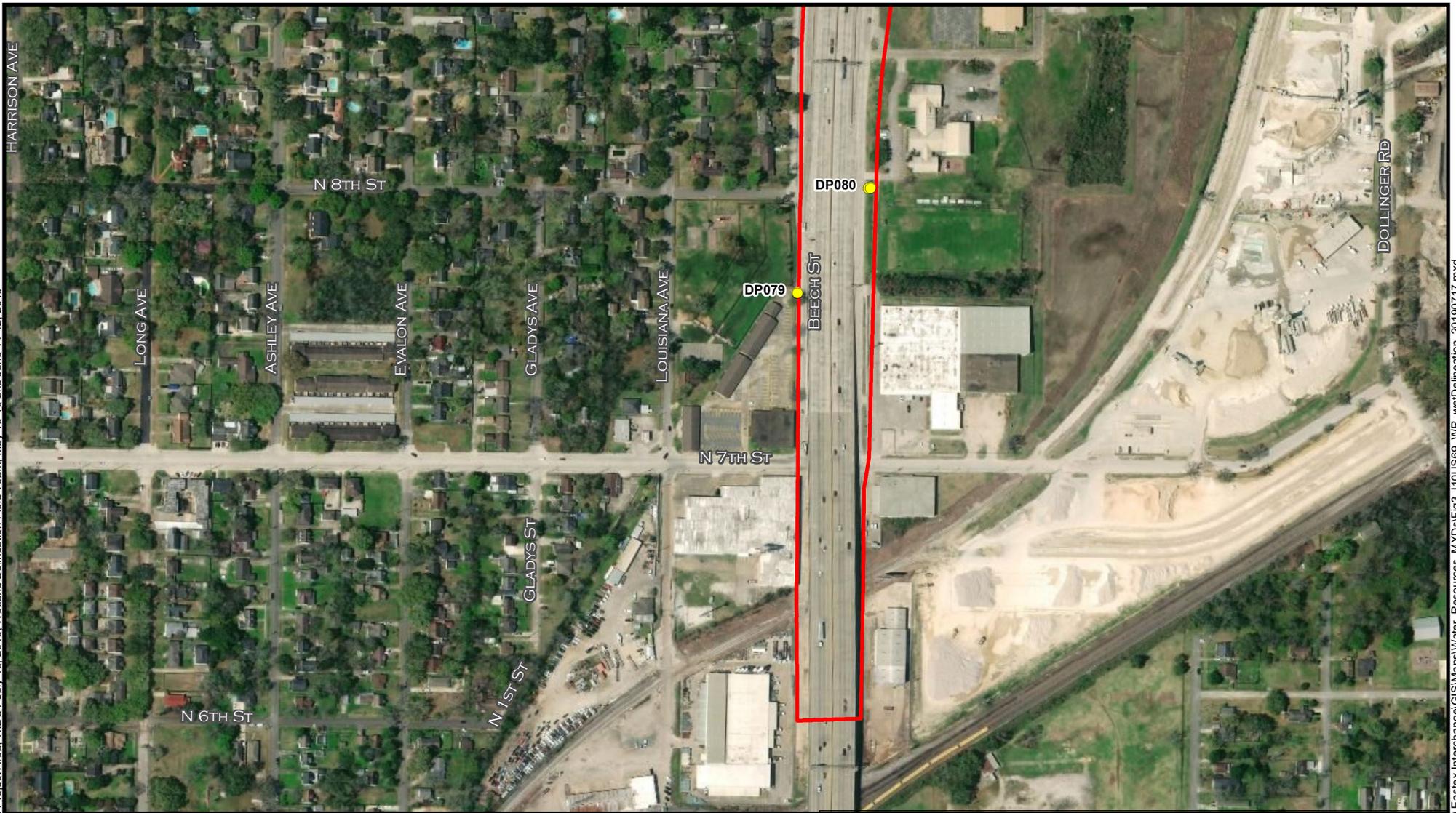


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

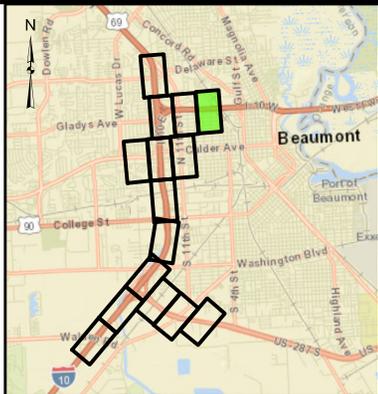


APPENDIX A
 FIGURE 2
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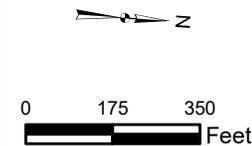
DATE:
 JULY 2019



- DATA POINTS
- PROJECT AREA



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 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS

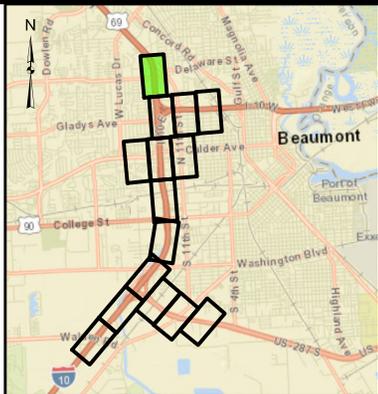


APPENDIX A
 FIGURE 2
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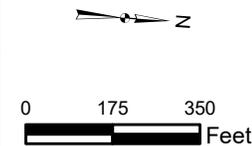
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- DATA POINTS
- PROJECT AREA

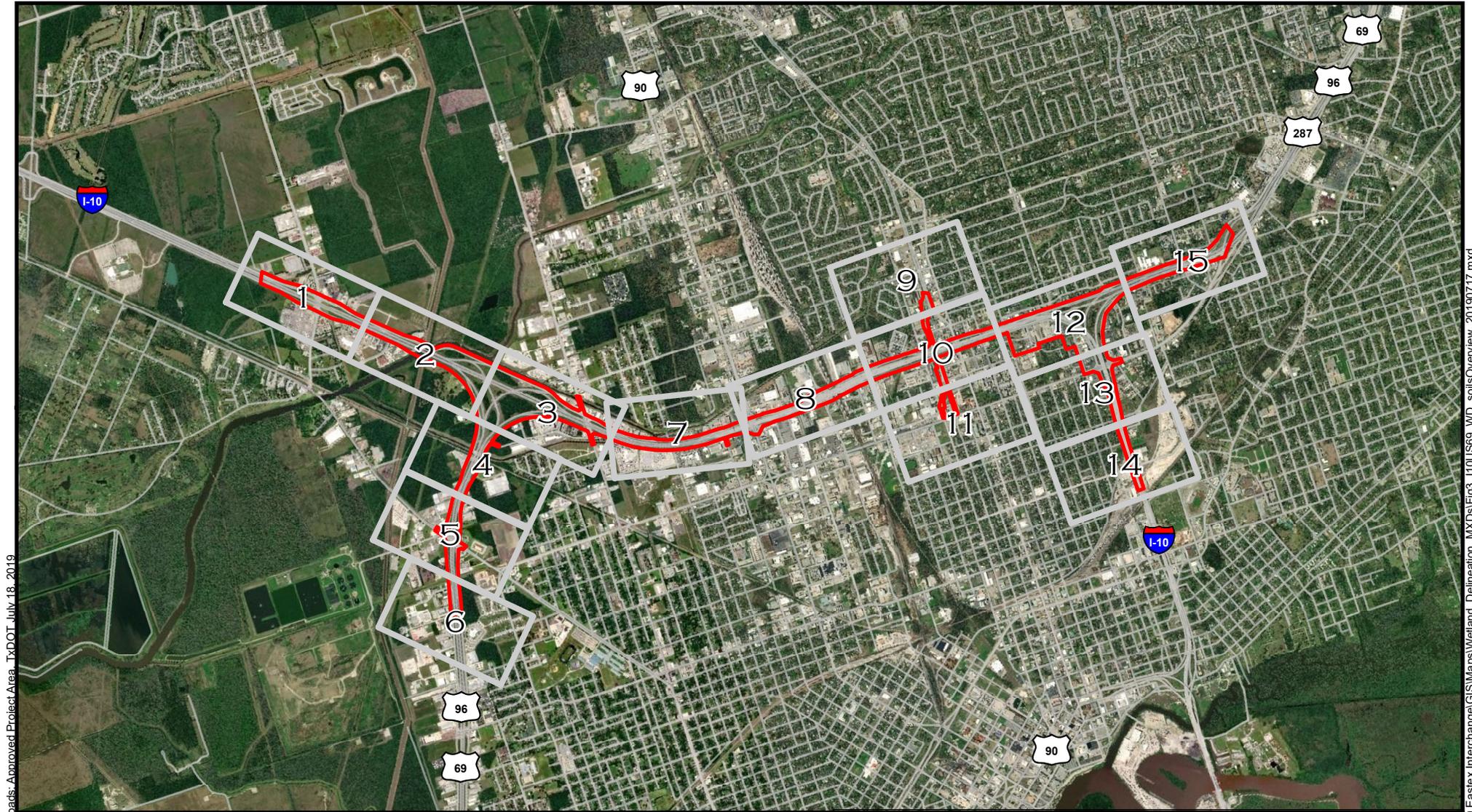


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 WETLAND DELINEATION MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 2
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DATE:
 JULY 2019

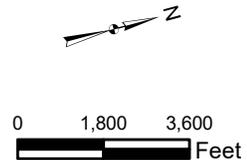


Sources: ESRI Aerial 2017; Open Street Map; TIGER Roads; Approved Project Area; TxDOT, July 18, 2019

 PROJECT AREA



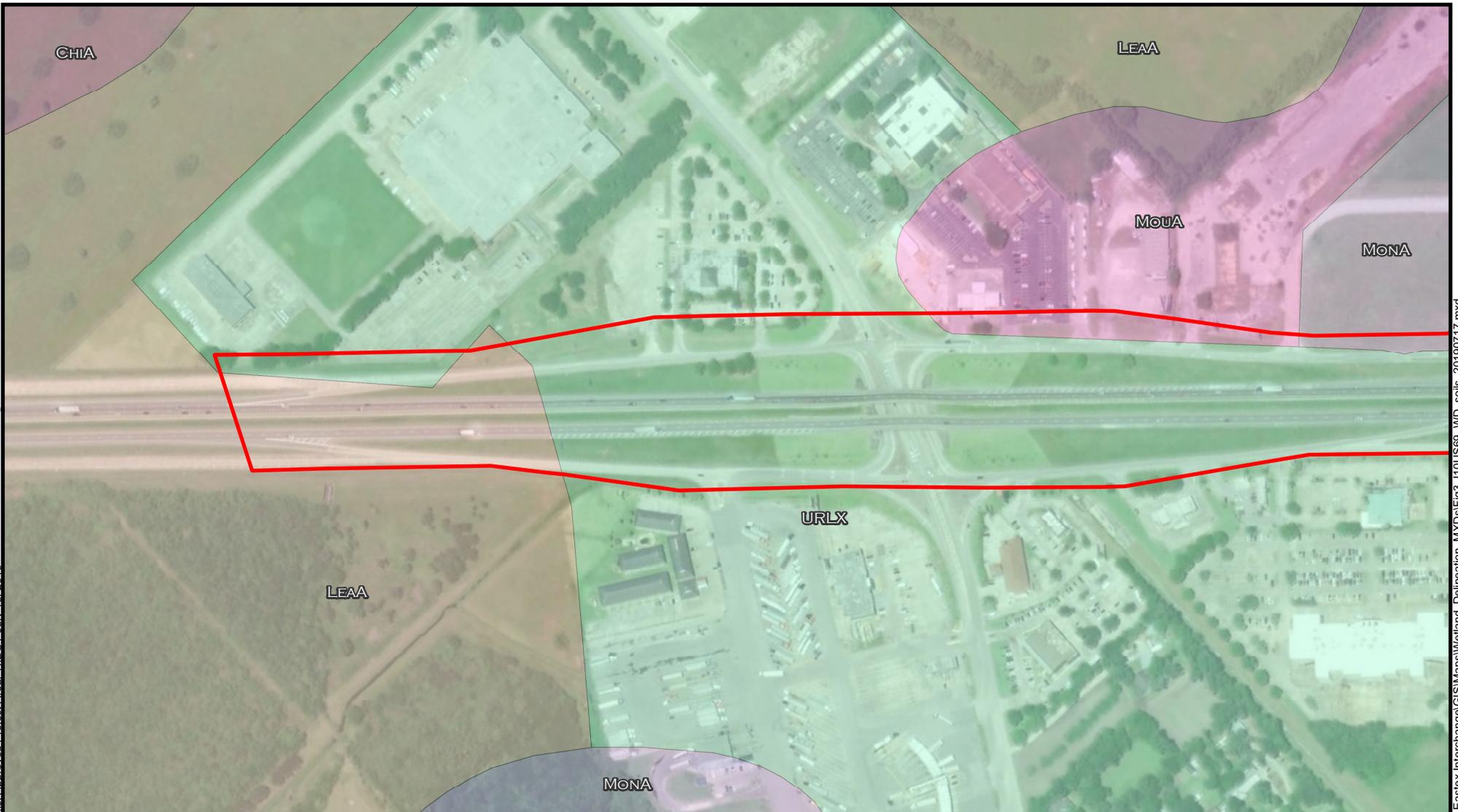
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS OVERVIEW
 JEFFERSON COUNTY, TEXAS



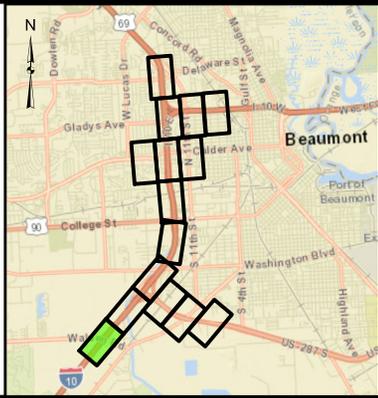
APPENDIX A
 FIGURE 3

DATE:
 JULY 2019

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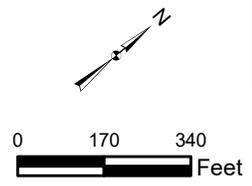


- PROJECT AREA
- CHIA - CHINA CLAY, 0 TO 1 PERCENT SLOPES
- LEAA - LEAGUE CLAY, 0 TO 1 PERCENT SLOPES
- MONA - MOREY LOAM, 0 TO 1 PERCENT SLOPES
- MOUA - MOREY-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND



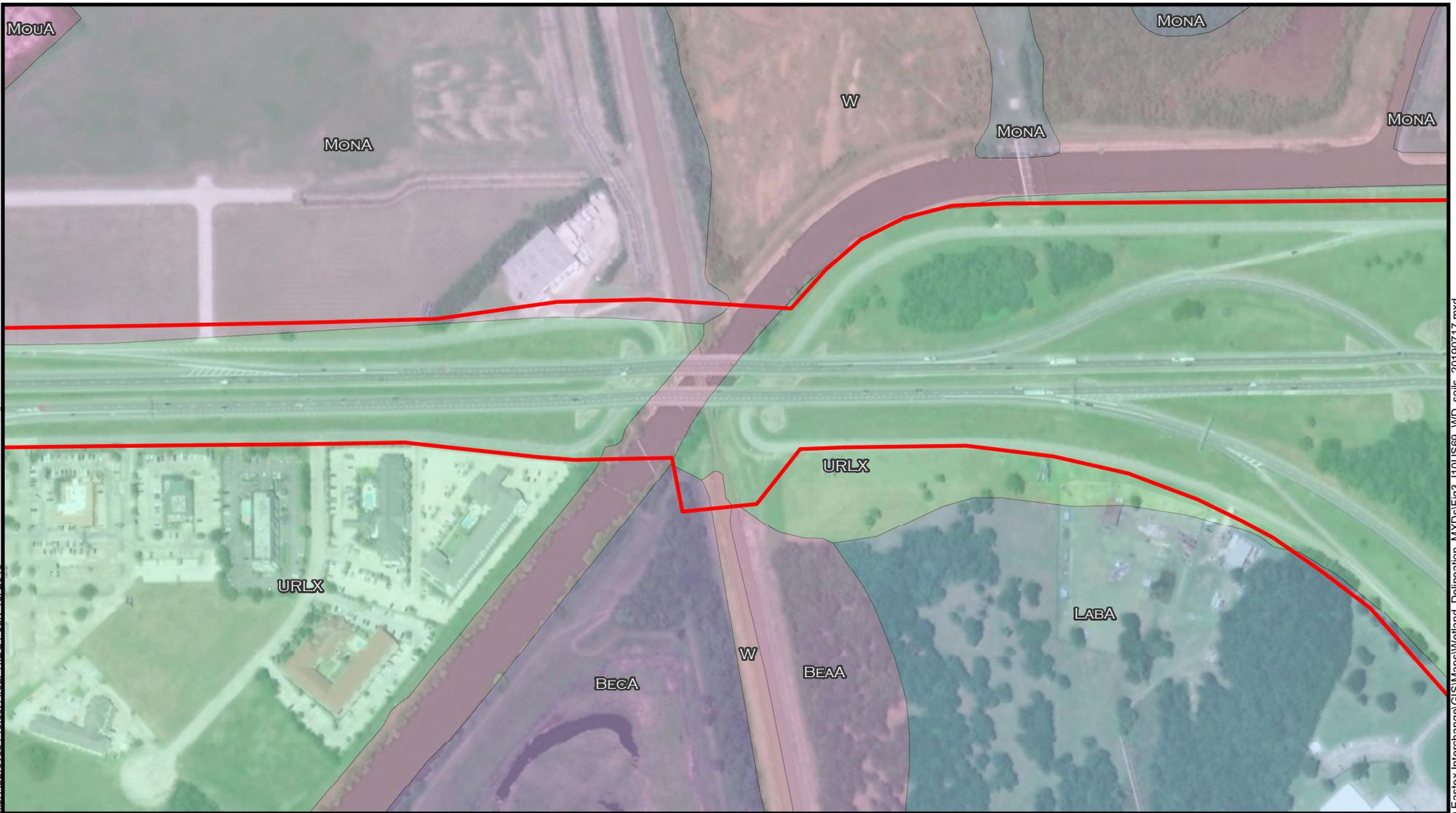
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

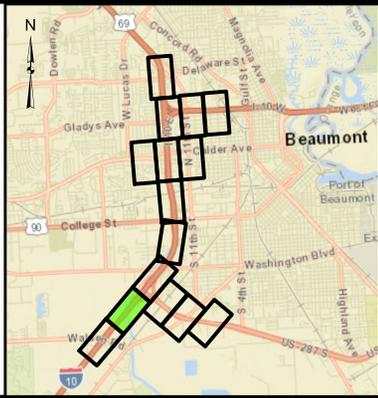


APPENDIX A
 FIGURE 3
 SHEET 1

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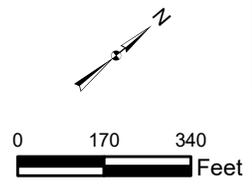


- PROJECT AREA
- BEAA - BEAUMONT CLAY, 0 TO 1 PERCENT SLOPES
- BECA - BEAUMONT-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- LABA - LABELLE CLAY LOAM, 0 TO 1 PERCENT SLOPES
- MONA - MOREY LOAM, 0 TO 1 PERCENT SLOPES
- MOUA - MOREY-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND
- W - WATER



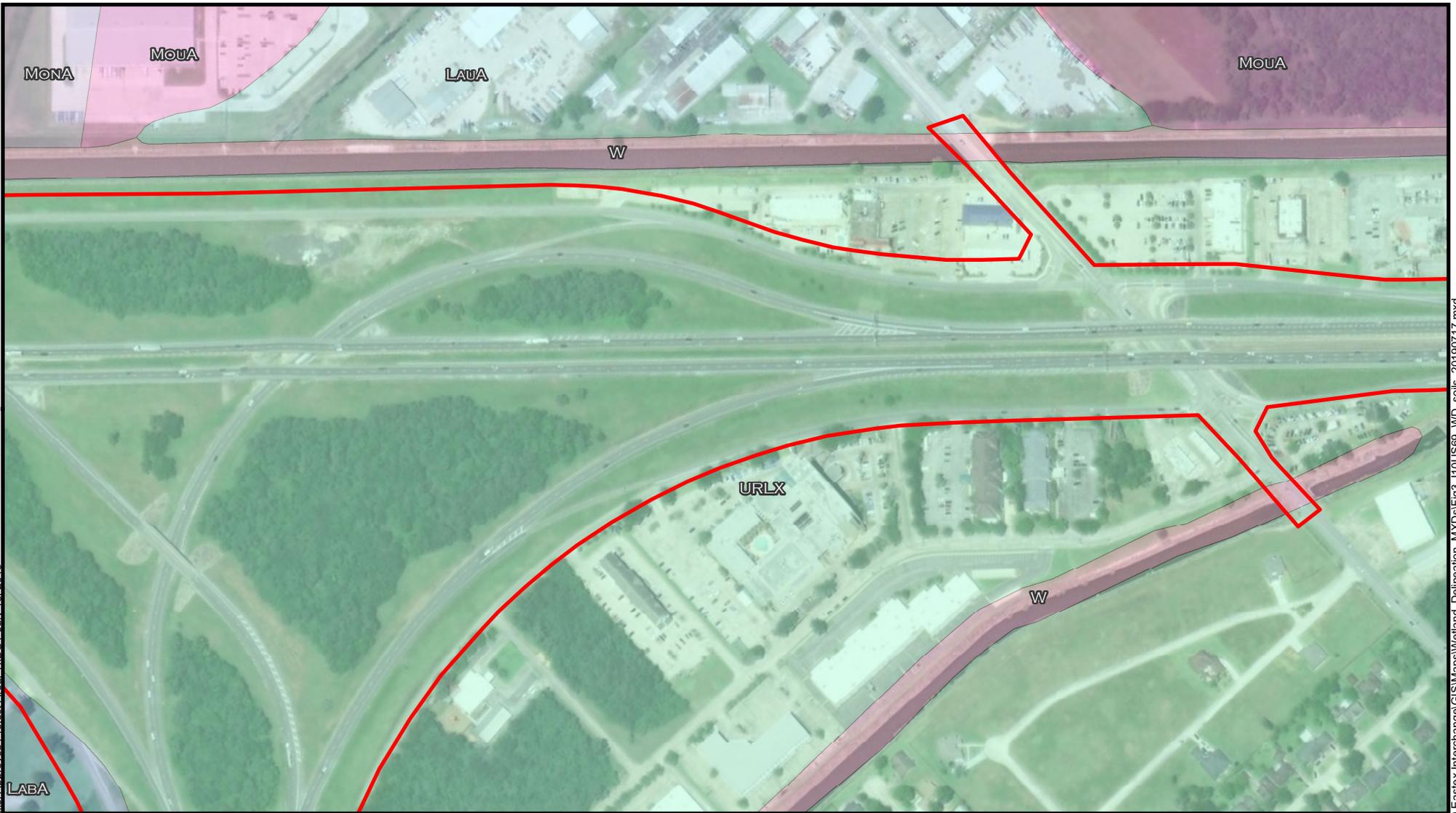
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

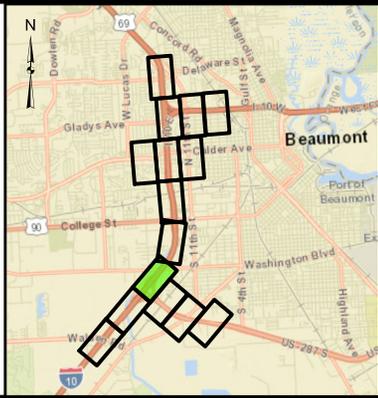


APPENDIX A
 FIGURE 3
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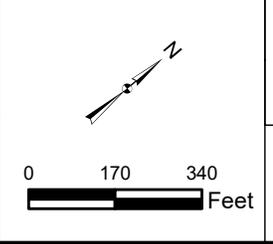
DATE:
 JULY 2019



- PROJECT AREA
- LABA - LABELLE CLAY LOAM, 0 TO 1 PERCENT SLOPES
- LAUA - LABELLE-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- MONA - MOREY LOAM, 0 TO 1 PERCENT SLOPES
- MOUA - MOREY-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND
- W - WATER

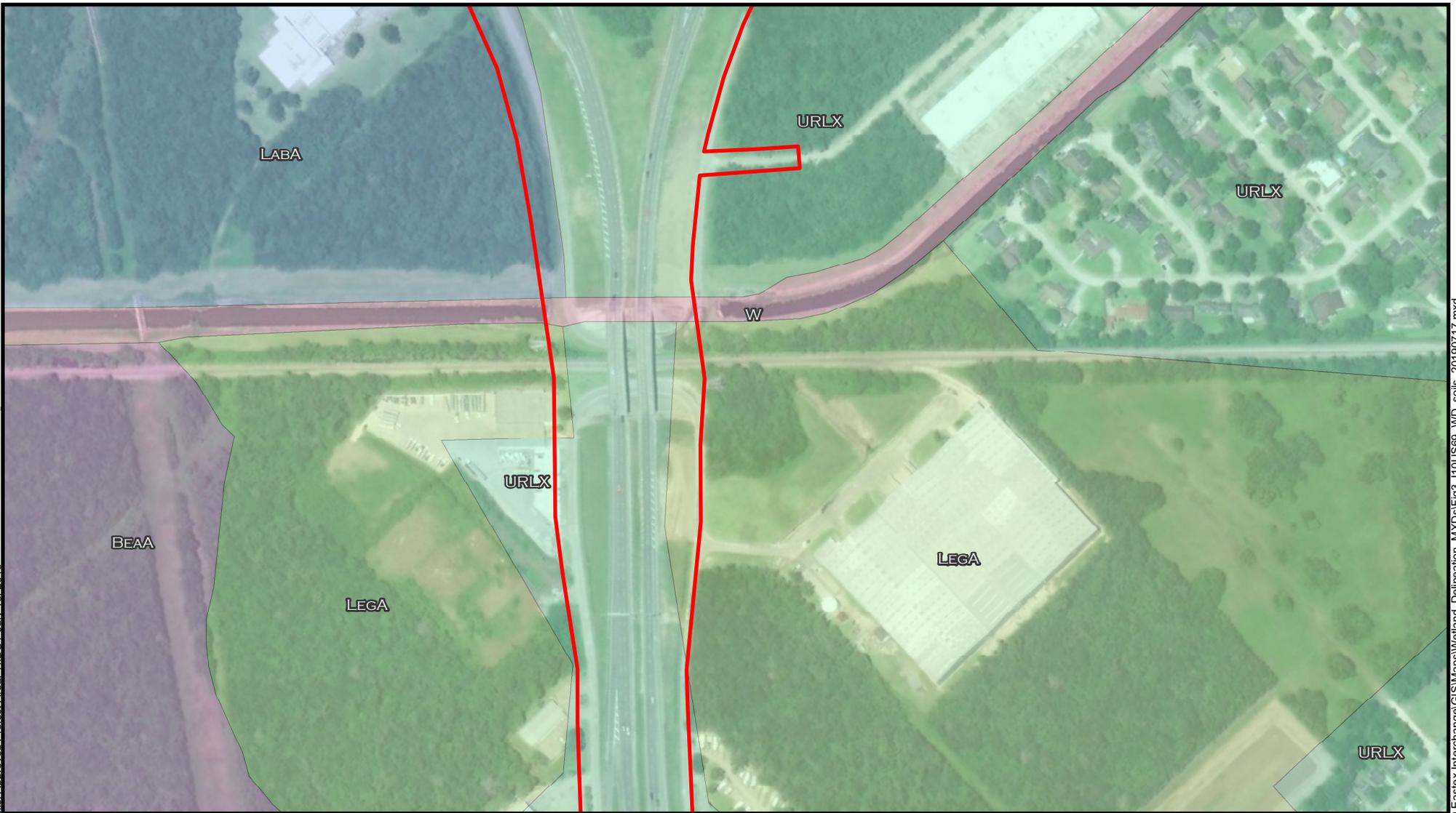


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP
 JEFFERSON COUNTY, TEXAS

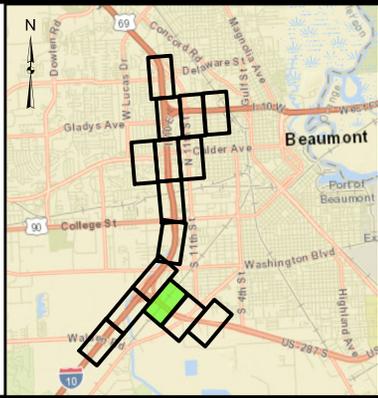


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 JULY 2019

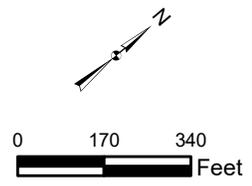


- PROJECT AREA
- BEAA - BEAUMONT CLAY, 0 TO 1 PERCENT SLOPES
- LABA - LABELLE CLAY LOAM, 0 TO 1 PERCENT SLOPES
- LEGA - LEAGUE CLAY, 0 TO 1 PERCENT SLOPES, RARELY FLOODED
- URLX - URBAN LAND
- W - WATER



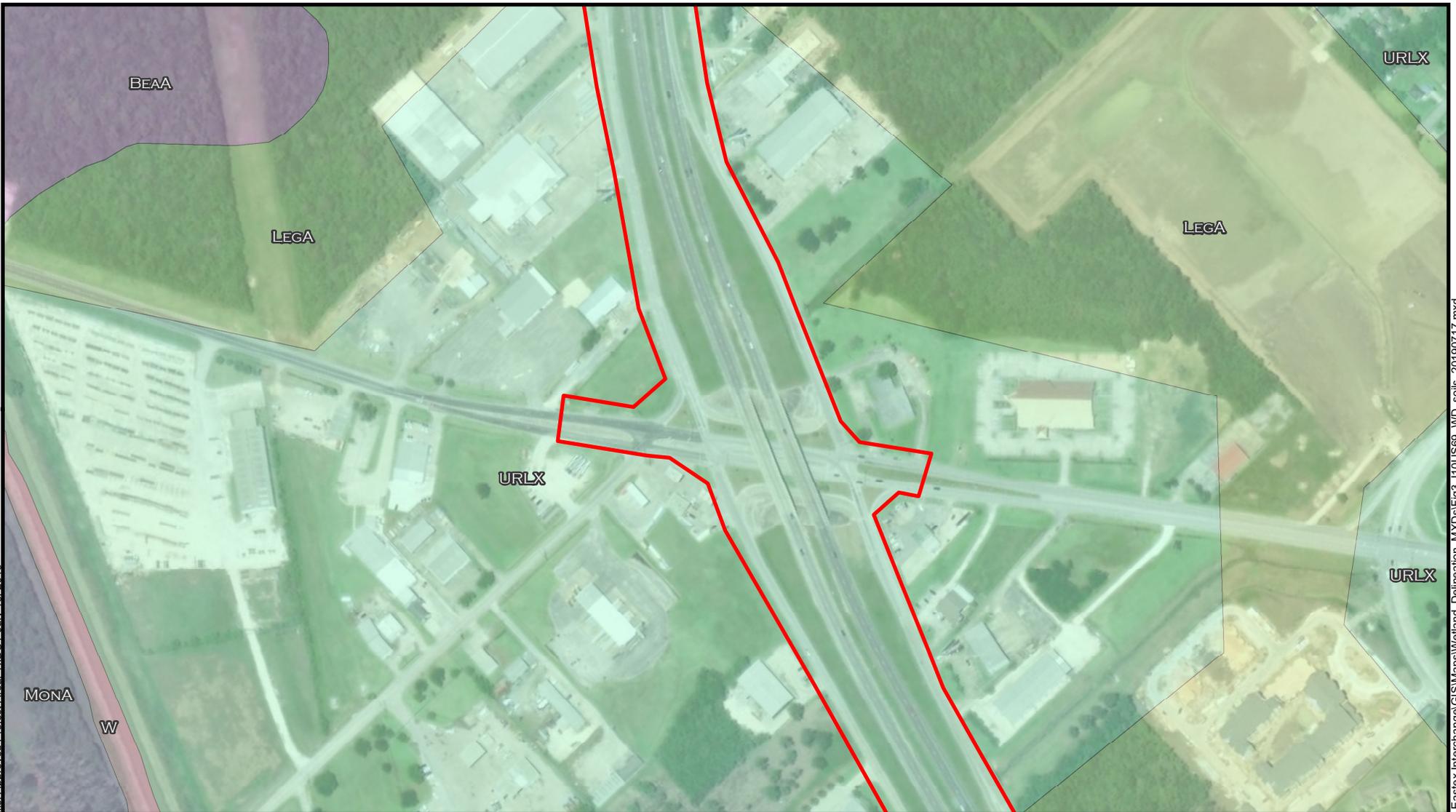
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 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

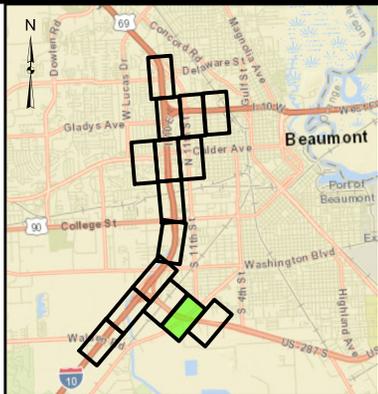


APPENDIX A
 FIGURE 3
 SHEET 4

DATE:
 JULY 2019

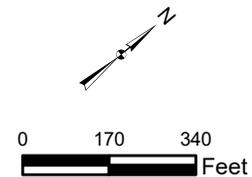


- PROJECT AREA
- BEAA - BEAUMONT CLAY, 0 TO 1 PERCENT SLOPES
- LEGA - LEAGUE CLAY, 0 TO 1 PERCENT SLOPES, RARELY FLOODED
- MONA - MOREY LOAM, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND
- W - WATER



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

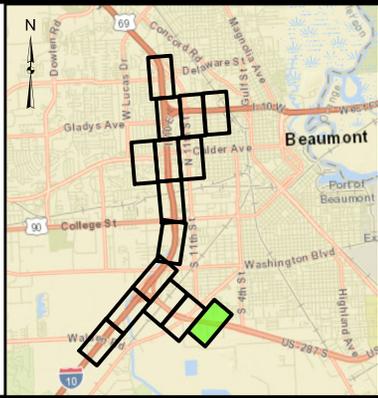


APPENDIX A
 FIGURE 3
 SHEET 5

DATE:
 JULY 2019

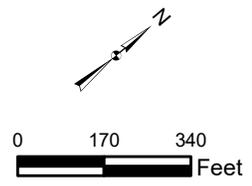


- PROJECT AREA
- LEGA - LEAGUE CLAY, 0 TO 1 PERCENT SLOPES, RARELY FLOODED
- URLX - URBAN LAND
- W - WATER



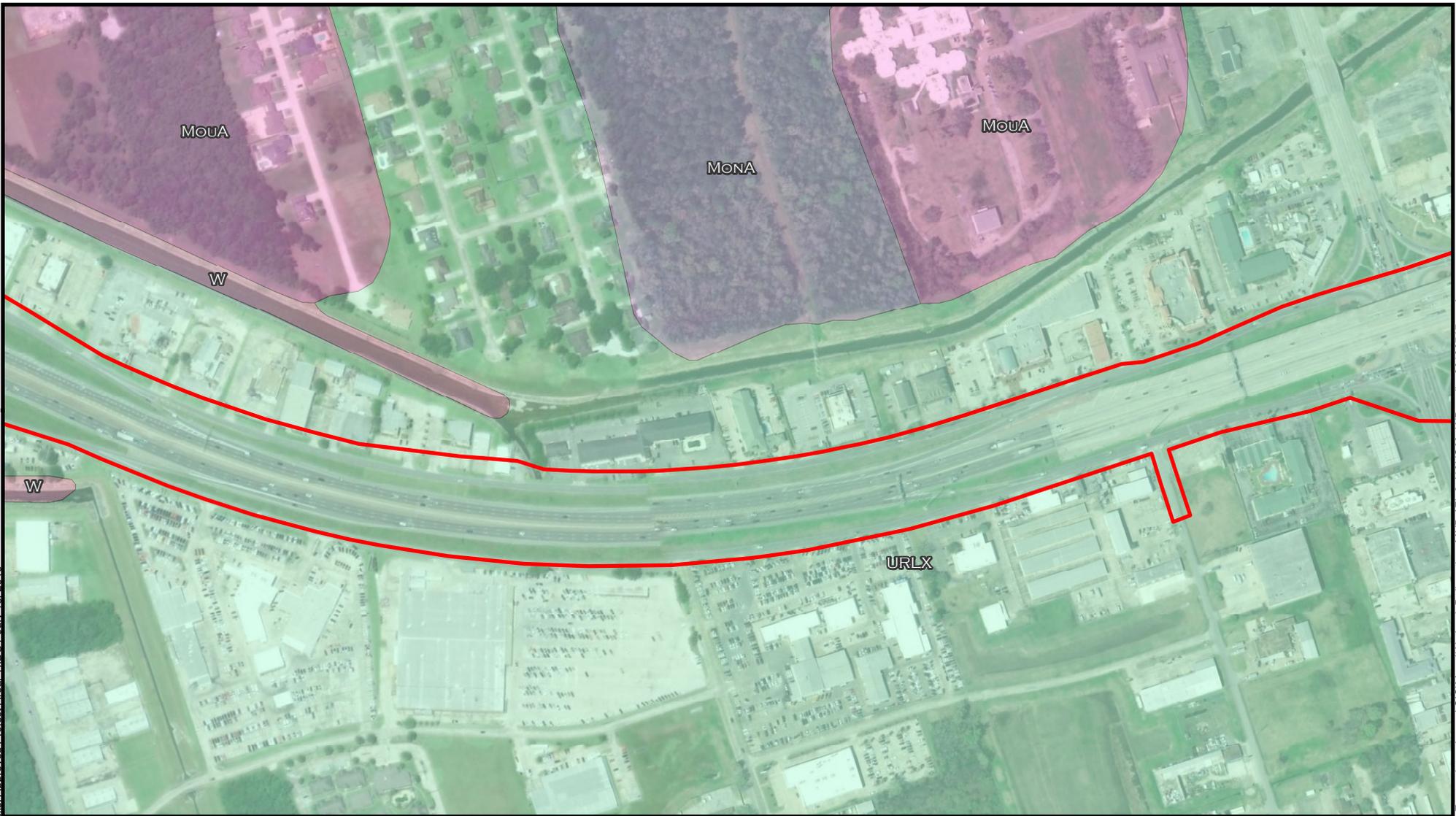
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

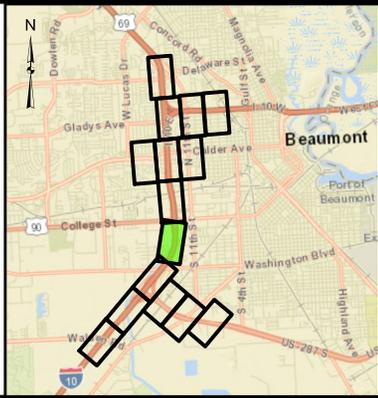


APPENDIX A
 FIGURE 3
 SHEET 6

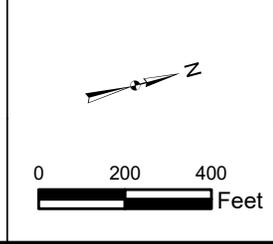
DATE:
 JULY 2019



- PROJECT AREA
- MONA - MOREY LOAM, 0 TO 1 PERCENT SLOPES
- MOUA - MOREY-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND
- W - WATER



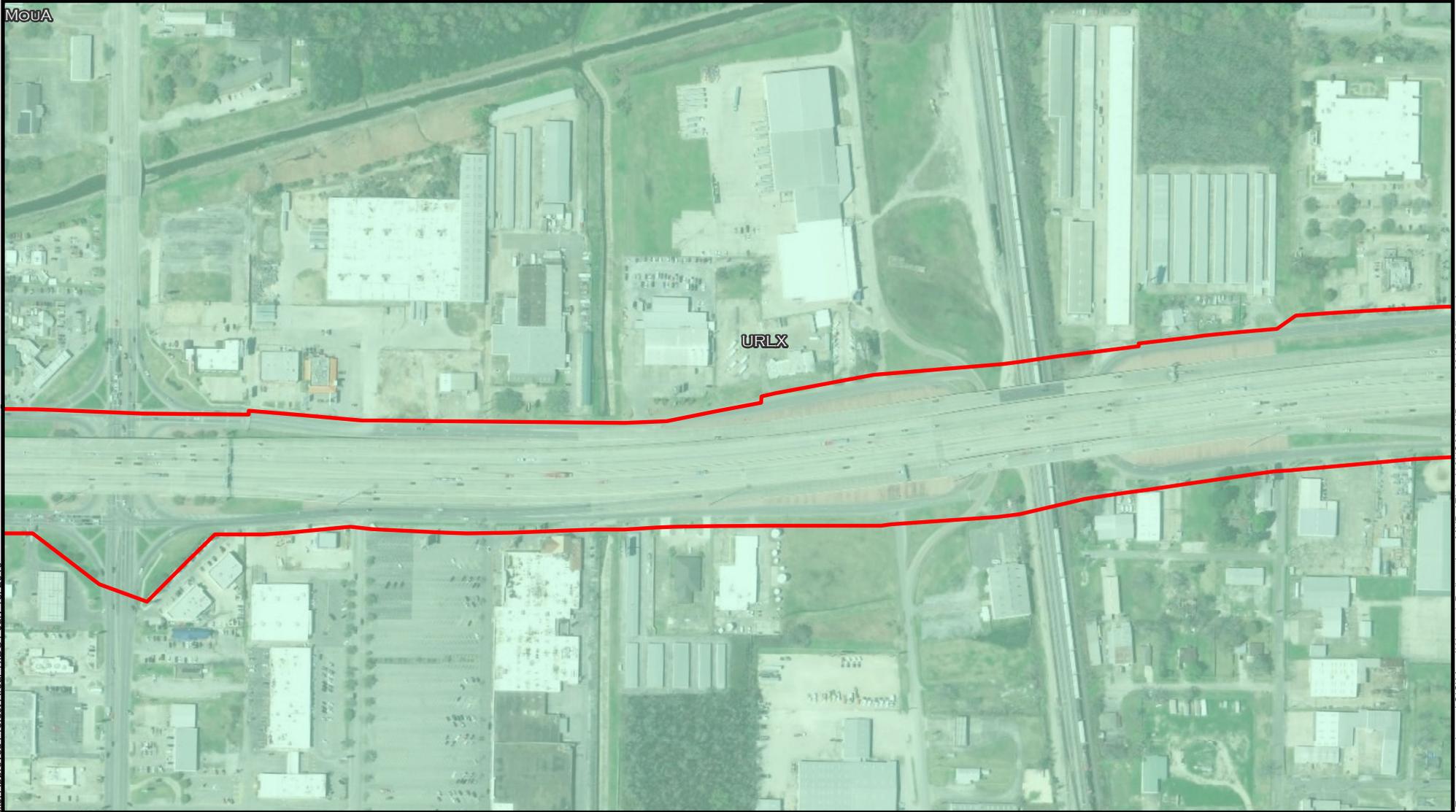
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP
 JEFFERSON COUNTY, TEXAS



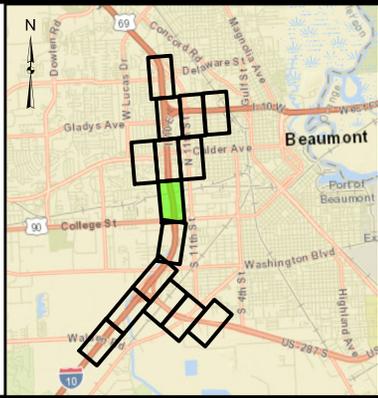
APPENDIX A
 FIGURE 3
 SHEET 7

DATE:
 JULY 2019

MOUA

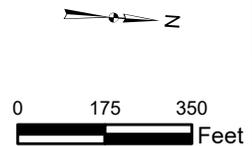


- PROJECT AREA
- MOUA - MOREY-URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
- URLX - URBAN LAND



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

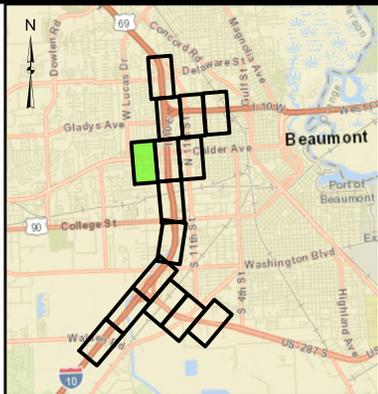


APPENDIX A
 FIGURE 3
 SHEET 8

DATE:
 JULY 2019



-  PROJECT AREA
-  URLX - URBAN LAND



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

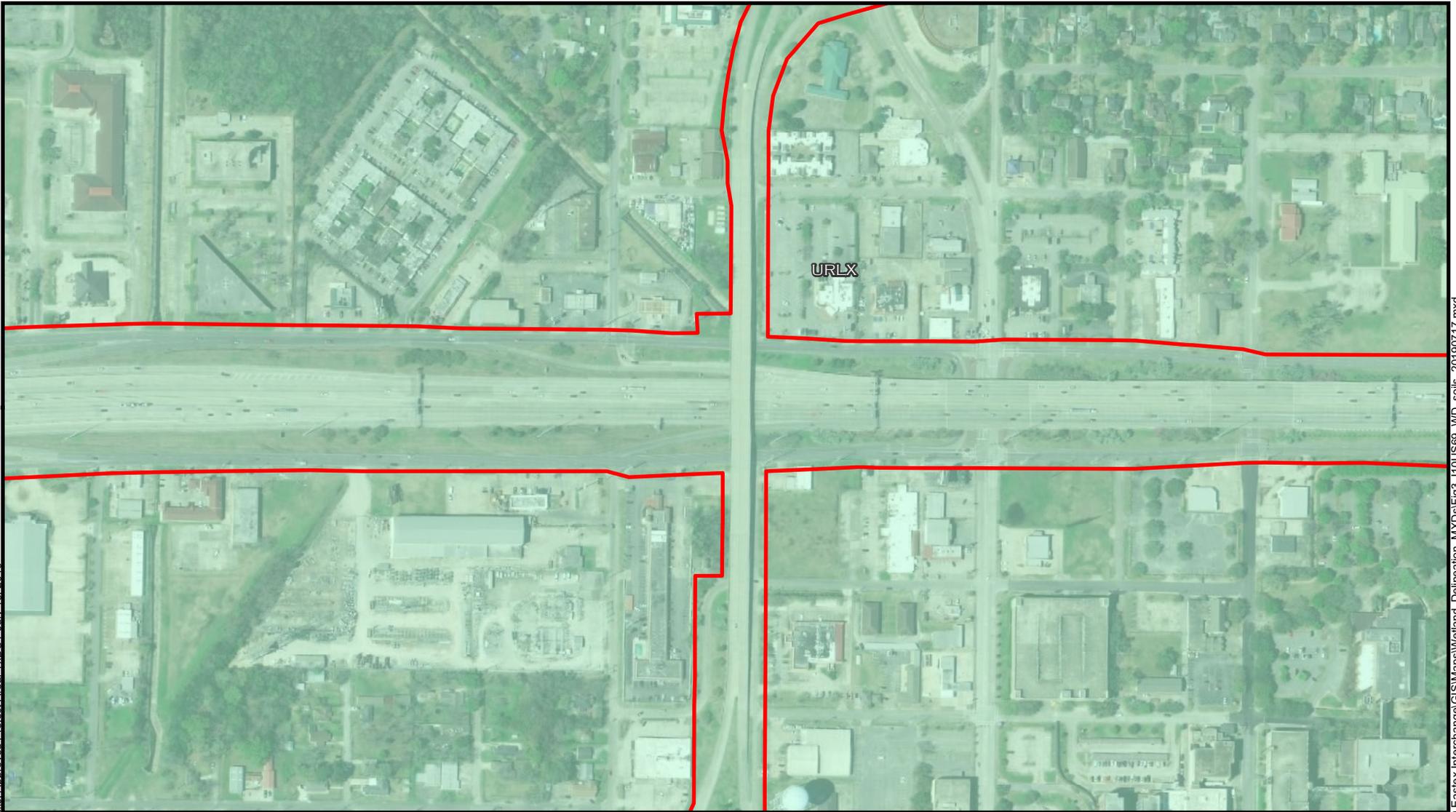
JEFFERSON COUNTY, TEXAS



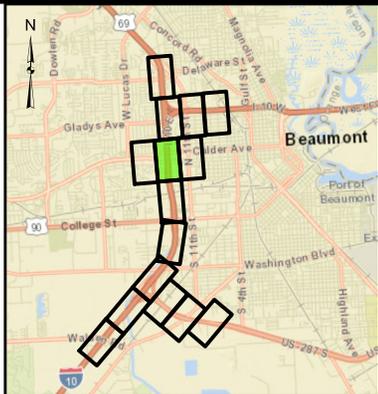
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APPENDIX A
 FIGURE 3
 SHEET 9

DATE:
 JULY 2019

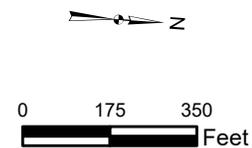


- PROJECT AREA
- URLX - URBAN LAND



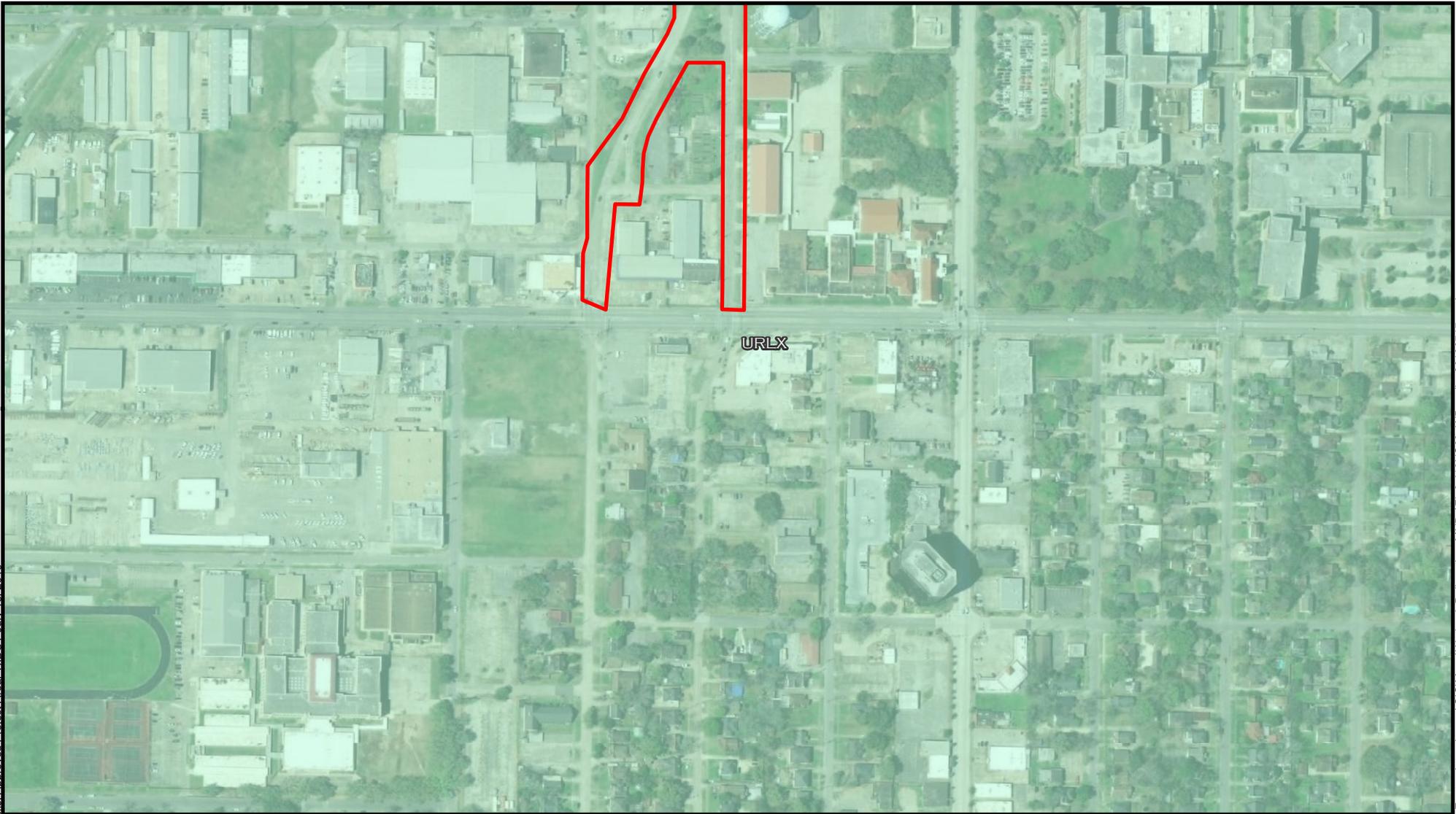
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

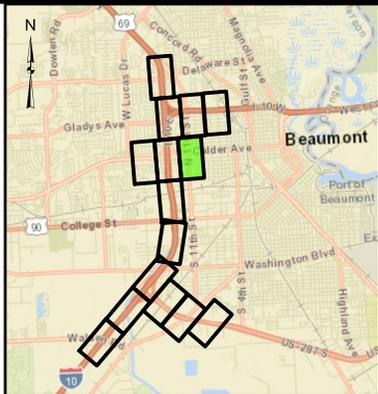


APPENDIX A
 FIGURE 3
 SHEET 10

DATE:
 JULY 2019

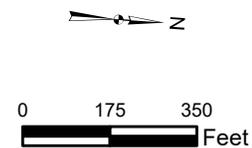


- PROJECT AREA
- URLX - URBAN LAND



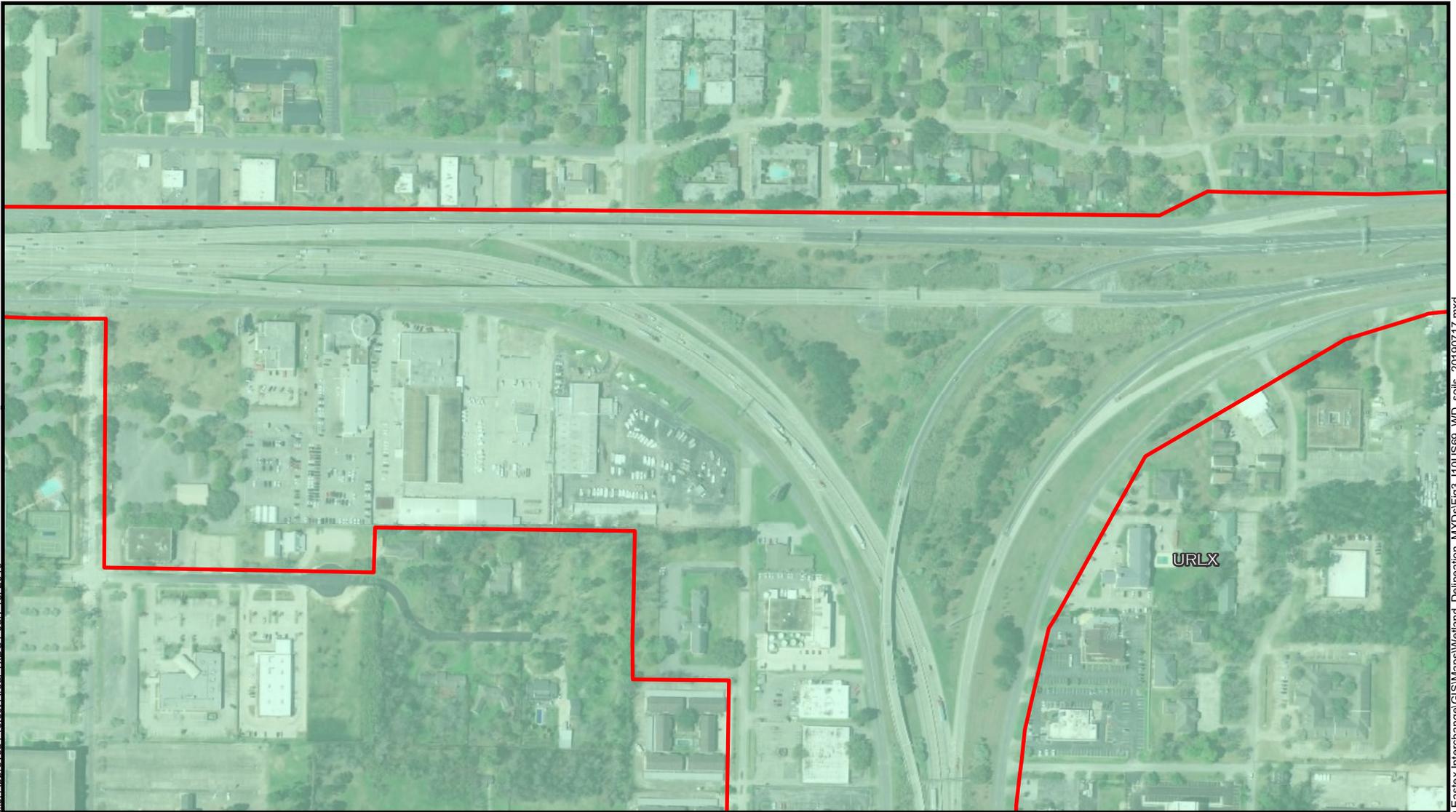
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

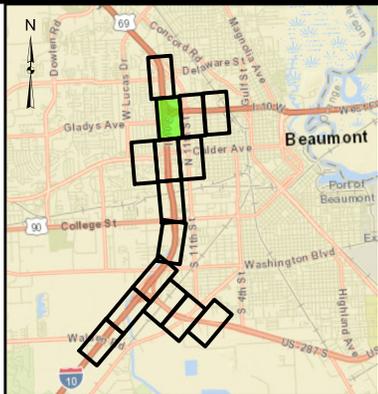


APPENDIX A
 FIGURE 3
 SHEET 11

DATE:
 JULY 2019

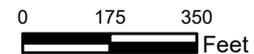


- PROJECT AREA
- URLX - URBAN LAND



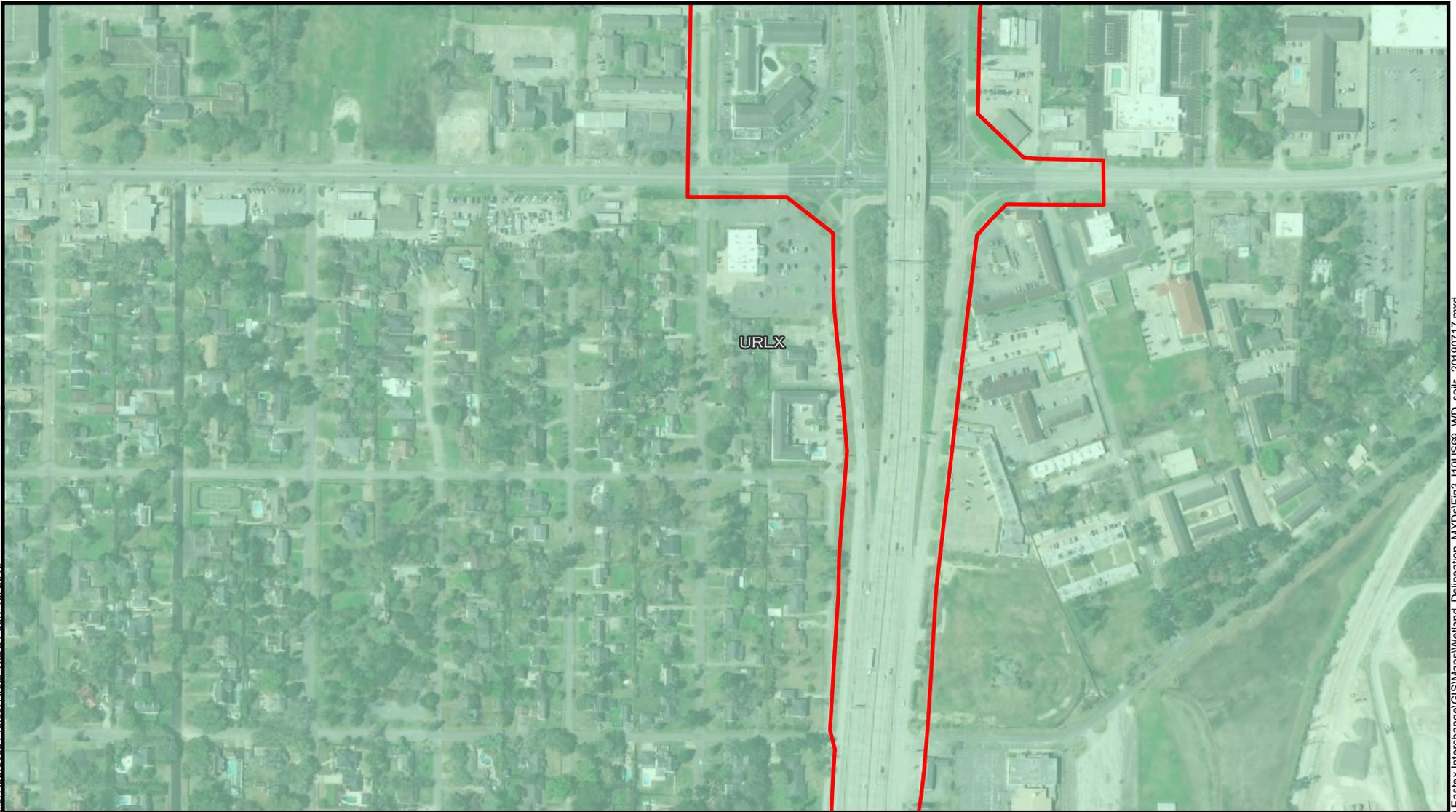
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

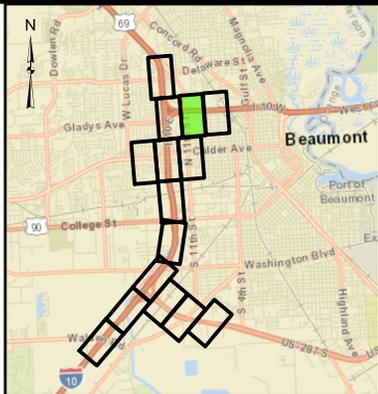


APPENDIX A
 FIGURE 3
 SHEET 12

DATE:
 JULY 2019

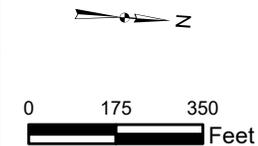


- PROJECT AREA
- URLX - URBAN LAND



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

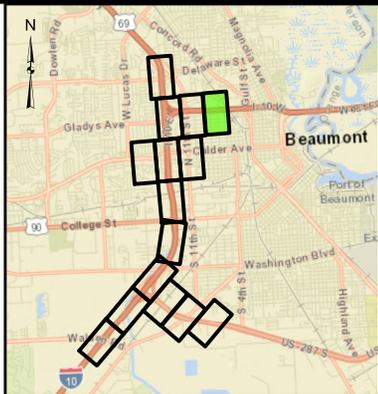


APPENDIX A
 FIGURE 3
 SHEET 13

DATE:
 JULY 2019

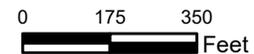


- PROJECT AREA
- URLX - URBAN LAND



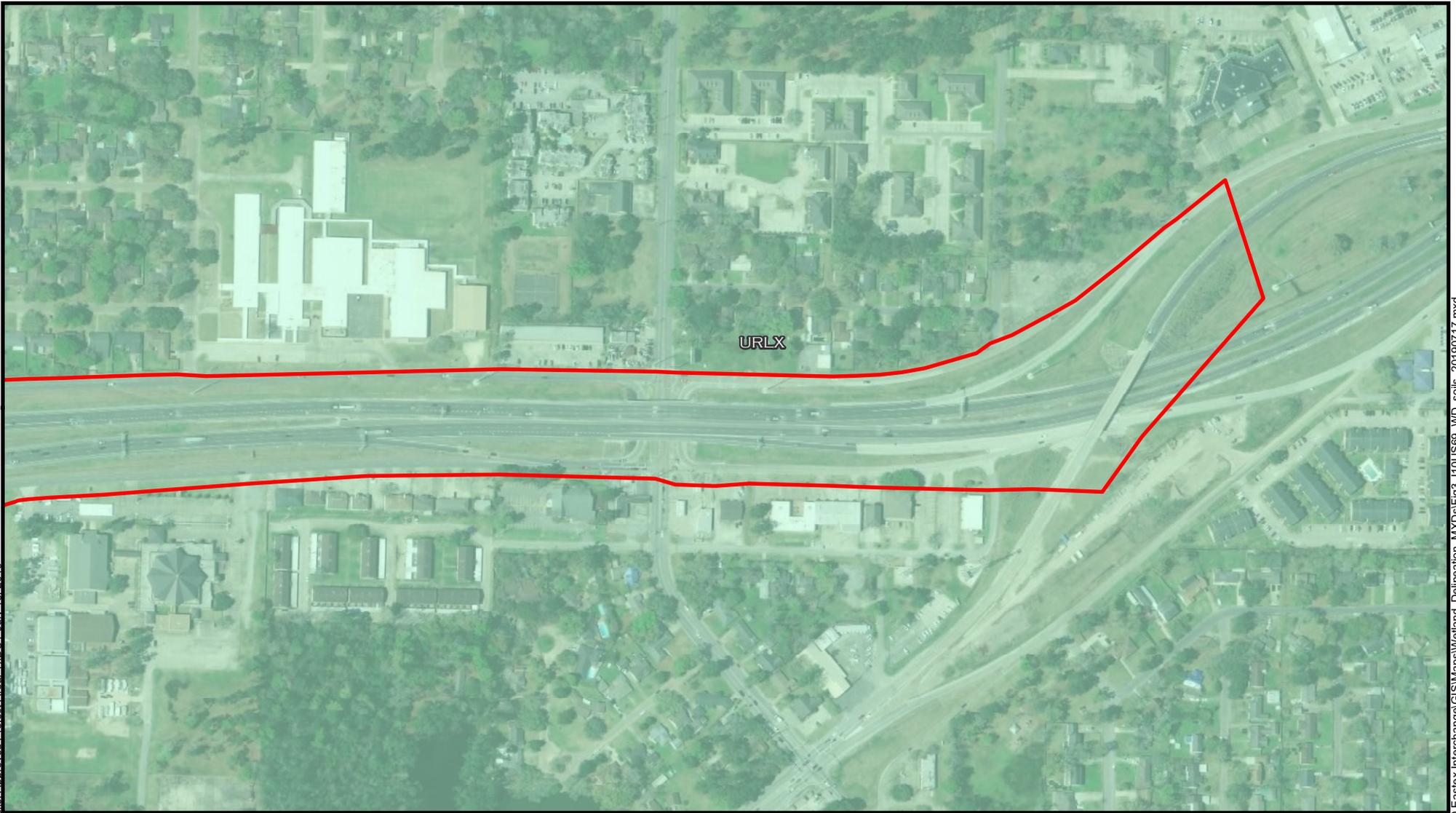
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

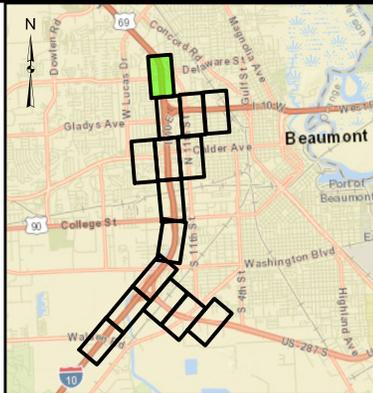


APPENDIX A
 FIGURE 3
 SHEET 14

DATE:
 JULY 2019

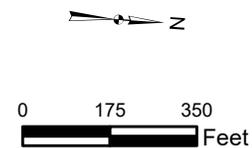


- PROJECT AREA
- URLX - URBAN LAND



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NRCS SOILS MAP

JEFFERSON COUNTY, TEXAS

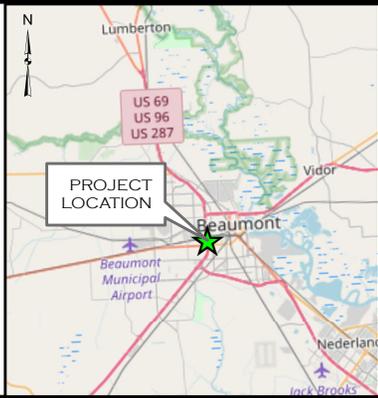


APPENDIX A
 FIGURE 3
 SHEET 15

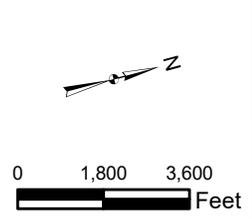
DATE:
 JULY 2019



-  1:24,000 USGS QUADRANGLE BOUNDARY
-  PROJECT AREA

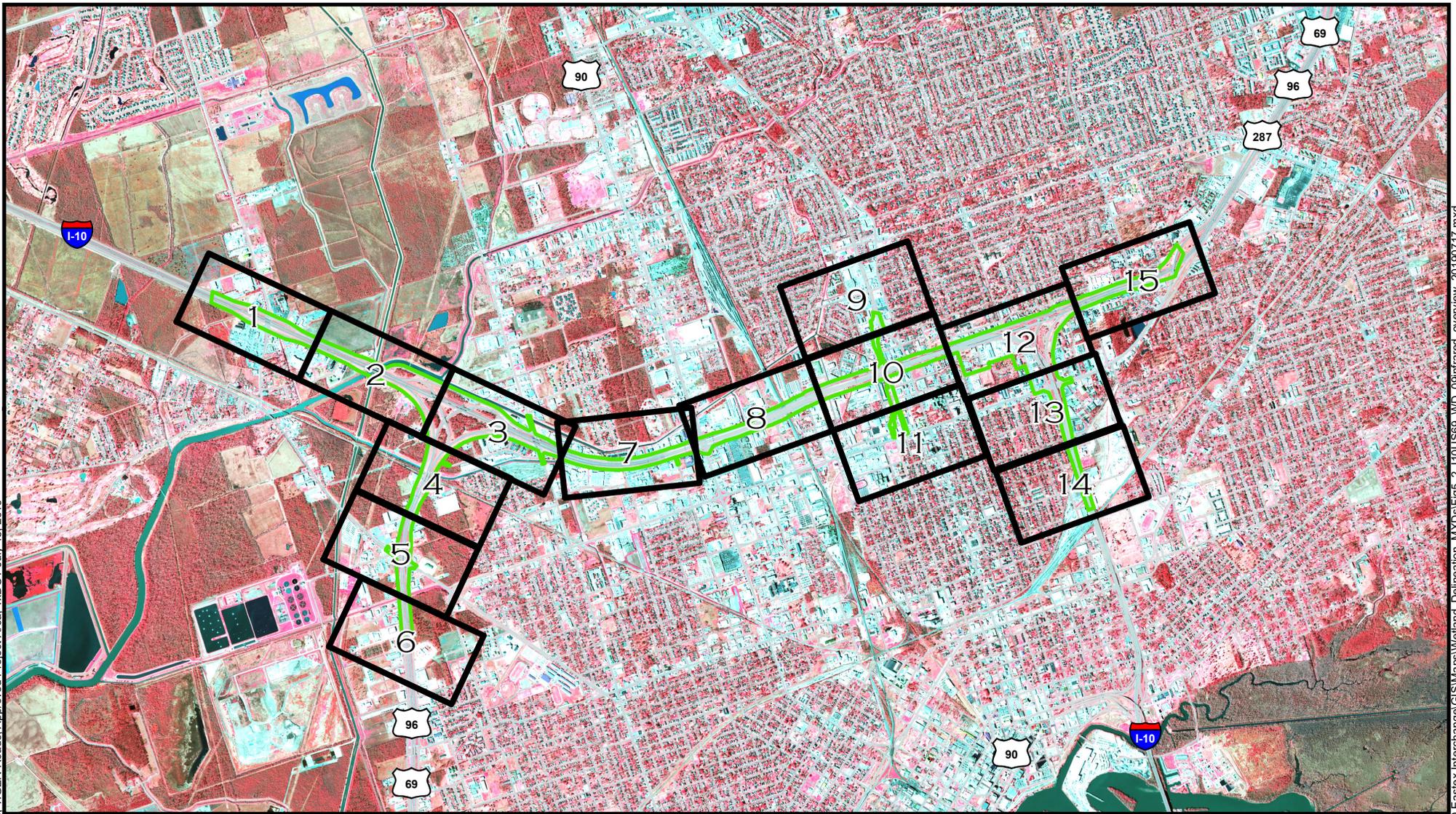


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 USGS TOPOGRAPHIC MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 4

DATE:
 JULY 2019

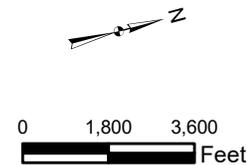


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH OVERVIEW

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1

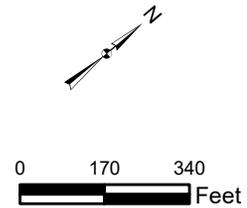
DATE:
 JULY 2019



 PROJECT AREA

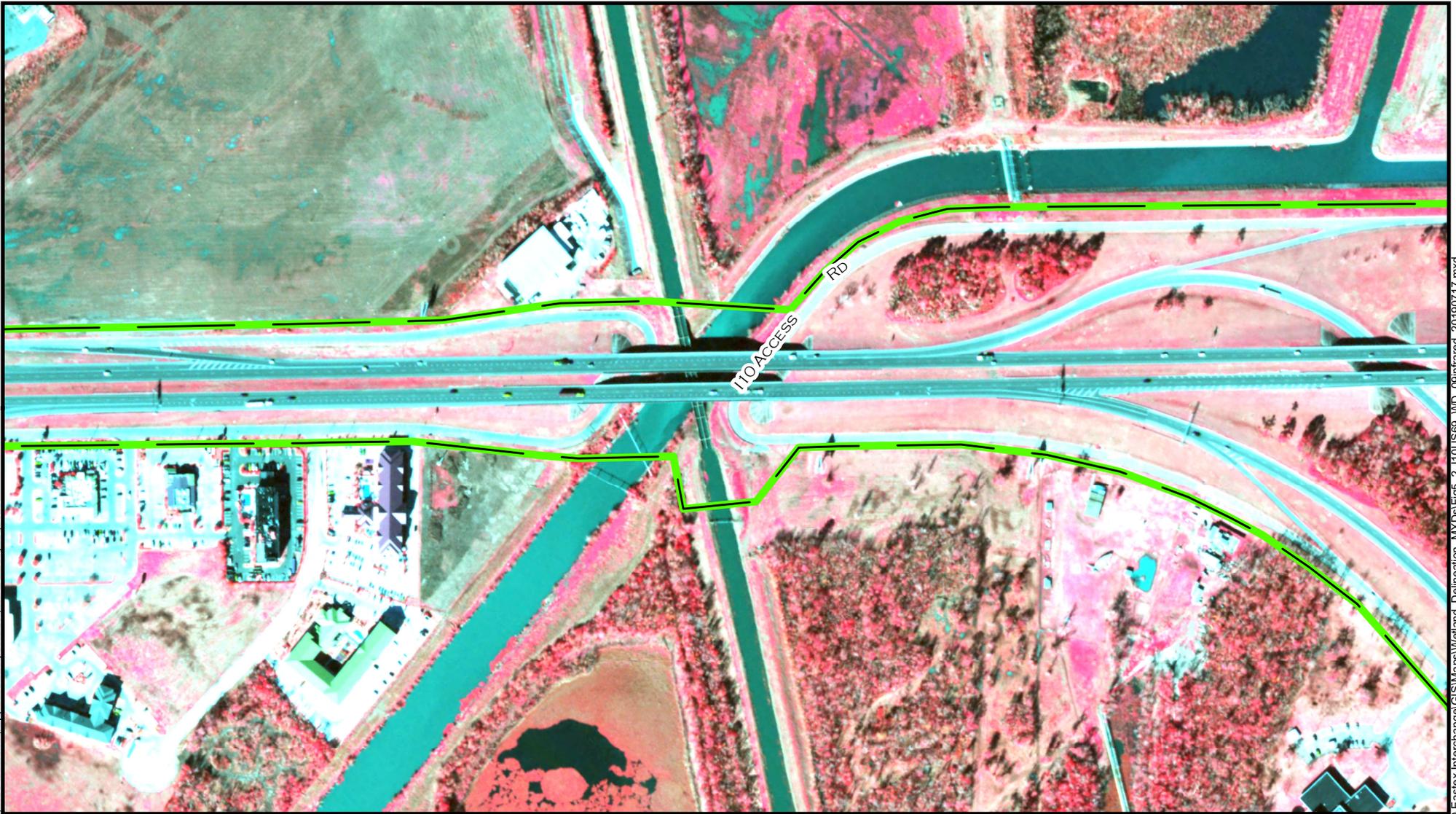


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 1

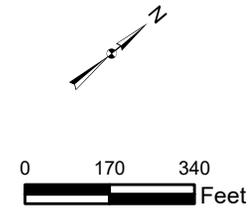
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

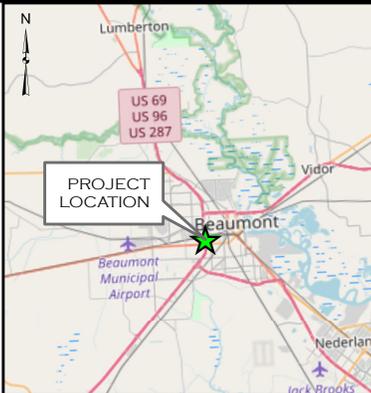


APPENDIX A
 FIGURE 5.1
 SHEET 2

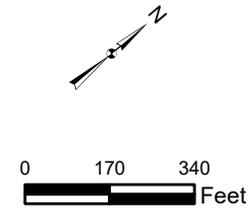
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 3

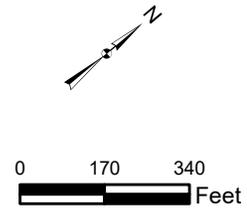
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

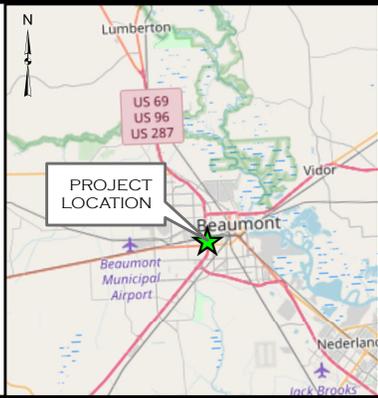


APPENDIX A
 FIGURE 5.1
 SHEET 4

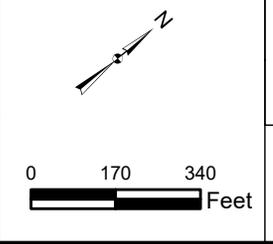
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 5

DATE:
 JULY 2019

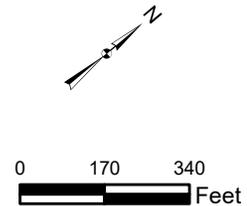


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 6

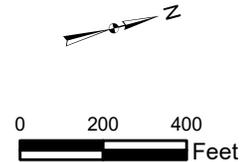
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



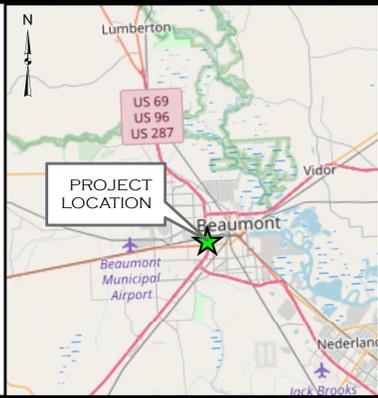
APPENDIX A
 FIGURE 5.1
 SHEET 7

DATE:
 JULY 2019

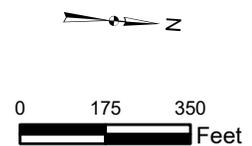
Sources: TNRIS Infrared Aerial 2009; Open Street Maps; TIGER Roads; Approved Project Area; TxDOT July 18, 2019



PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



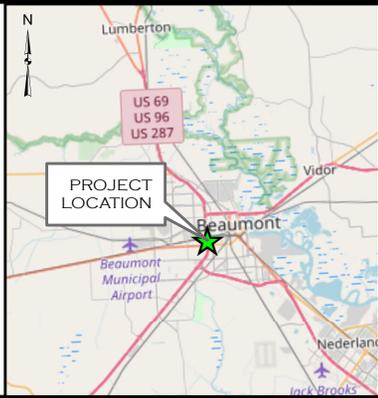
APPENDIX A
 FIGURE 5.1
 SHEET 8

DATE:
 JULY 2019

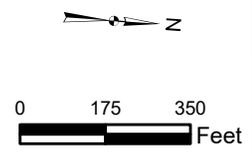
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 PROJECT AREA

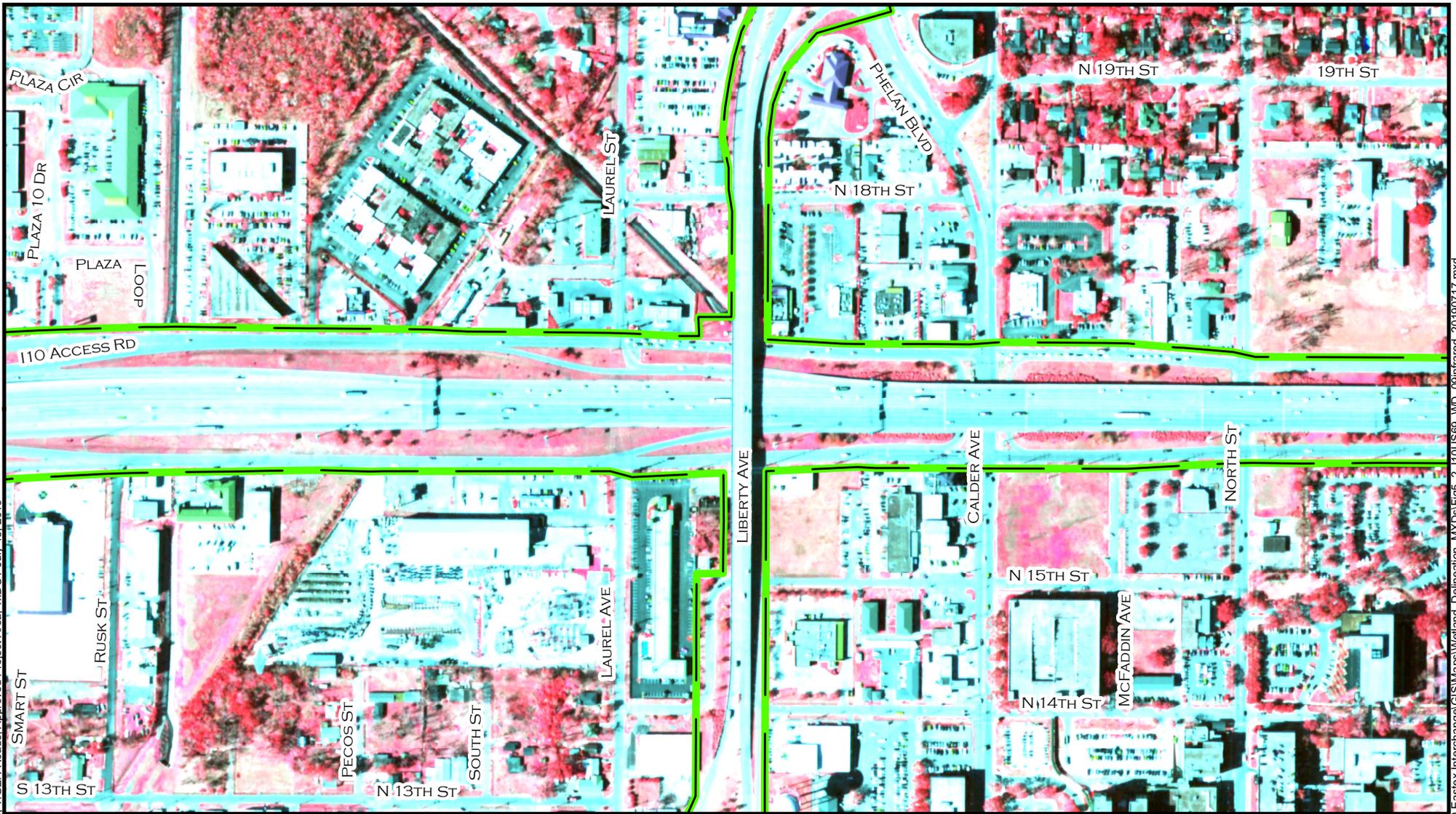


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

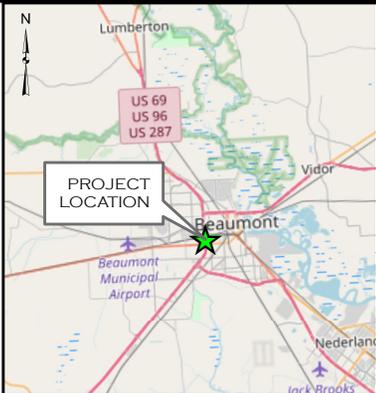


APPENDIX A
 FIGURE 5.1
 SHEET 9

DATE:
 JULY 2019

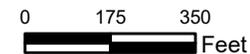


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS

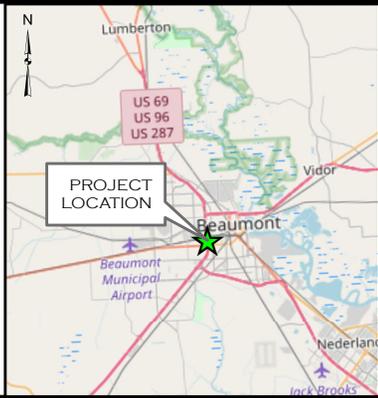


APPENDIX A
FIGURE 5.1
SHEET 10

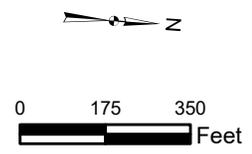
DATE:
JULY 2019



 PROJECT AREA

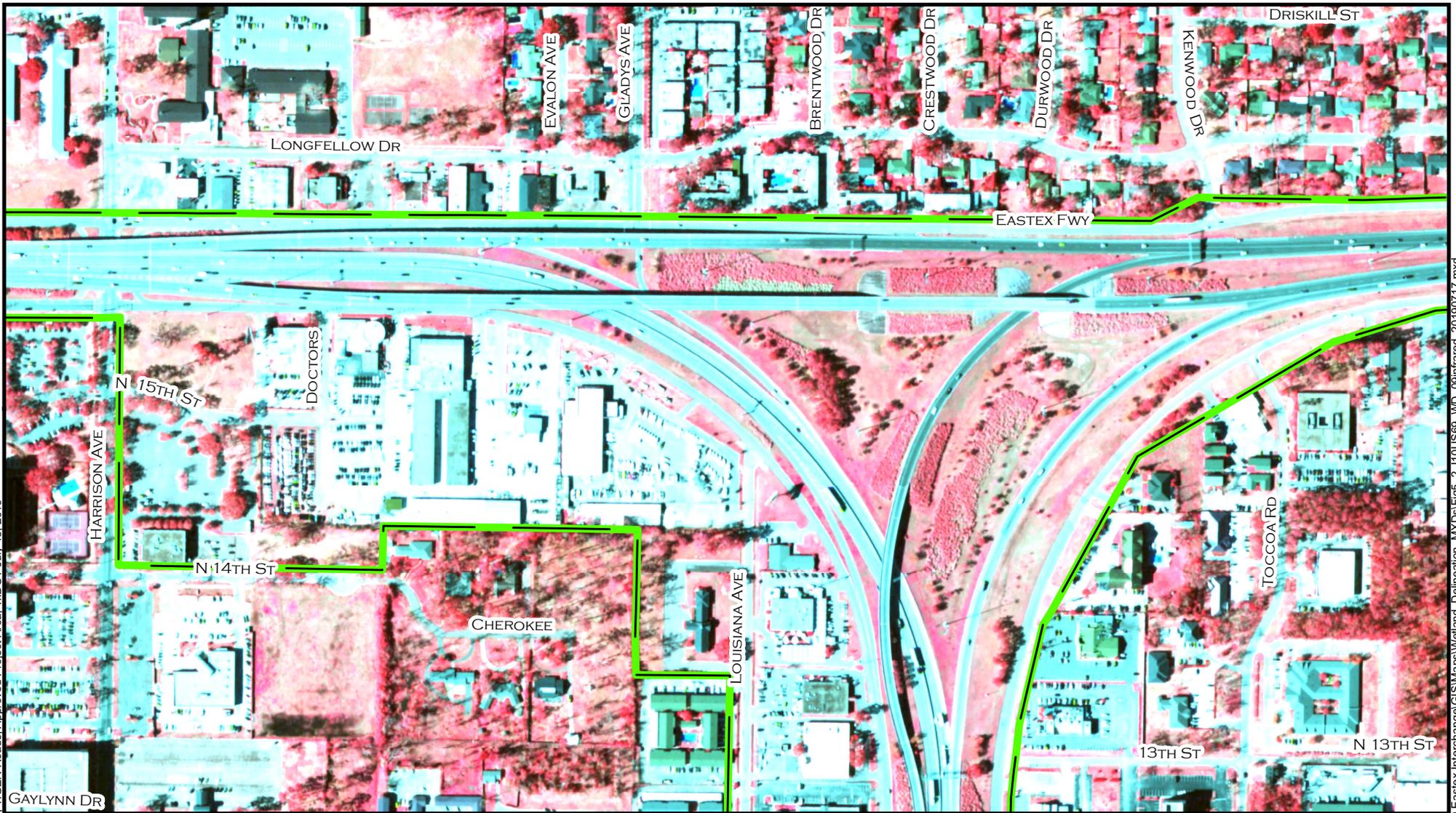


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 11

DATE:
 JULY 2019

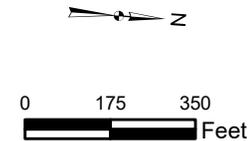


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 12

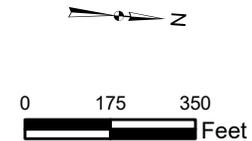
DATE:
 JULY 2019



 PROJECT AREA

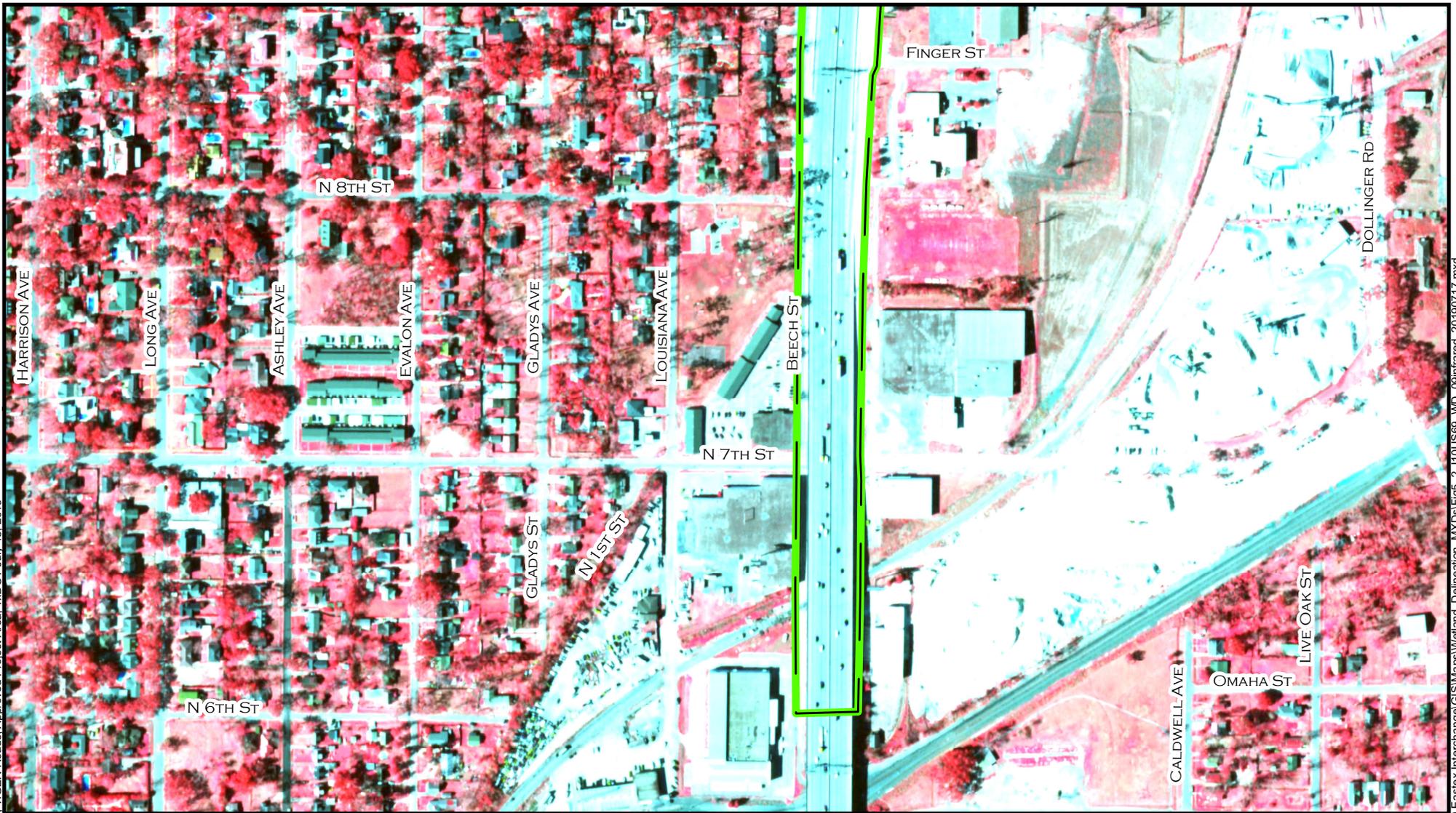


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 13

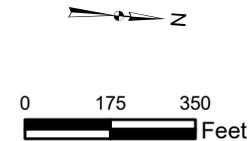
DATE:
 JULY 2019



 PROJECT AREA

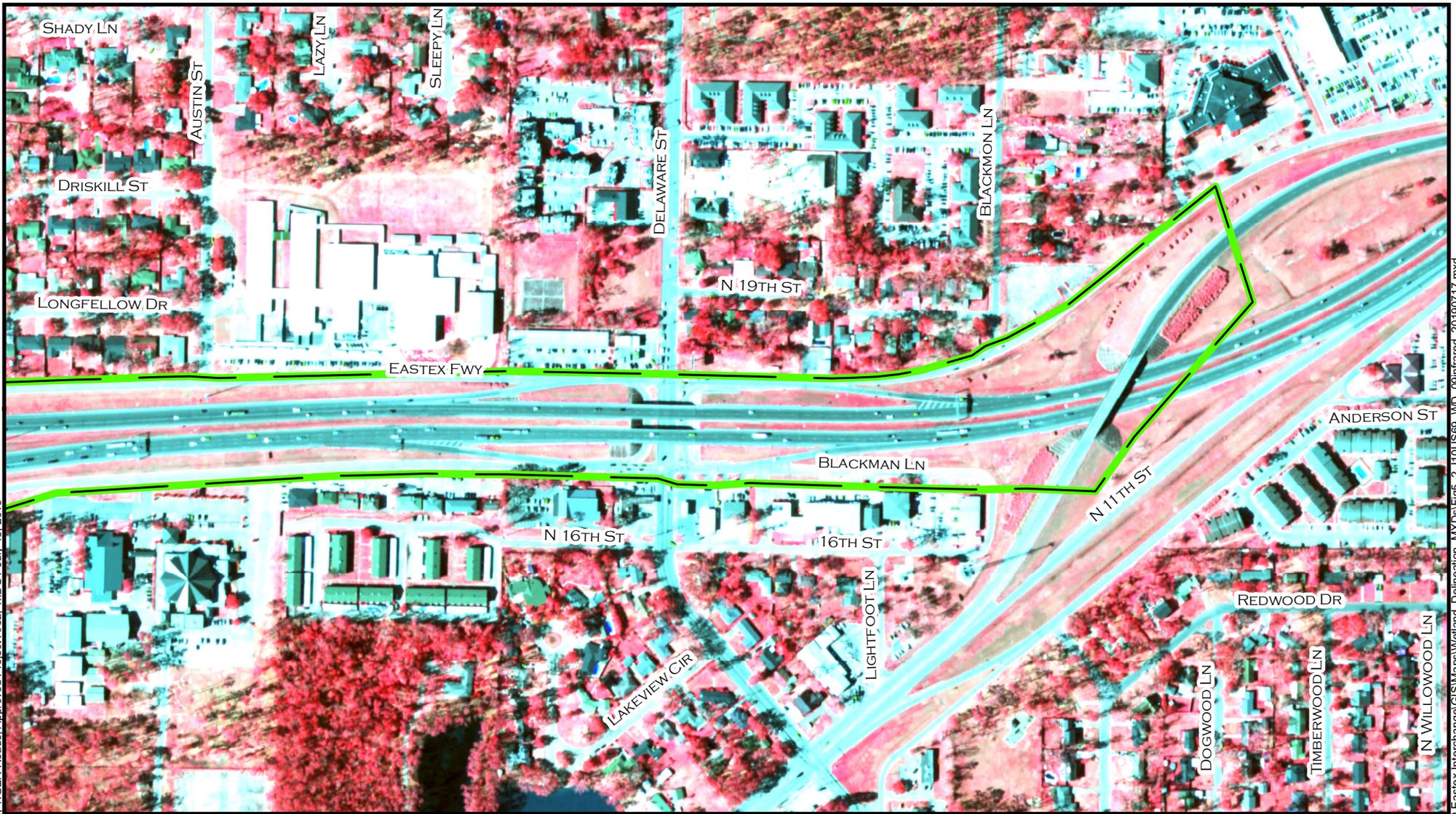


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

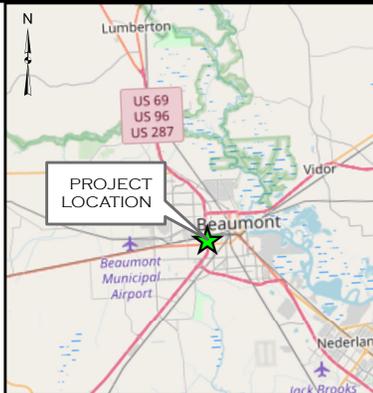


APPENDIX A
 FIGURE 5.1
 SHEET 14

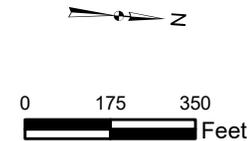
DATE:
 JULY 2019



 PROJECT AREA

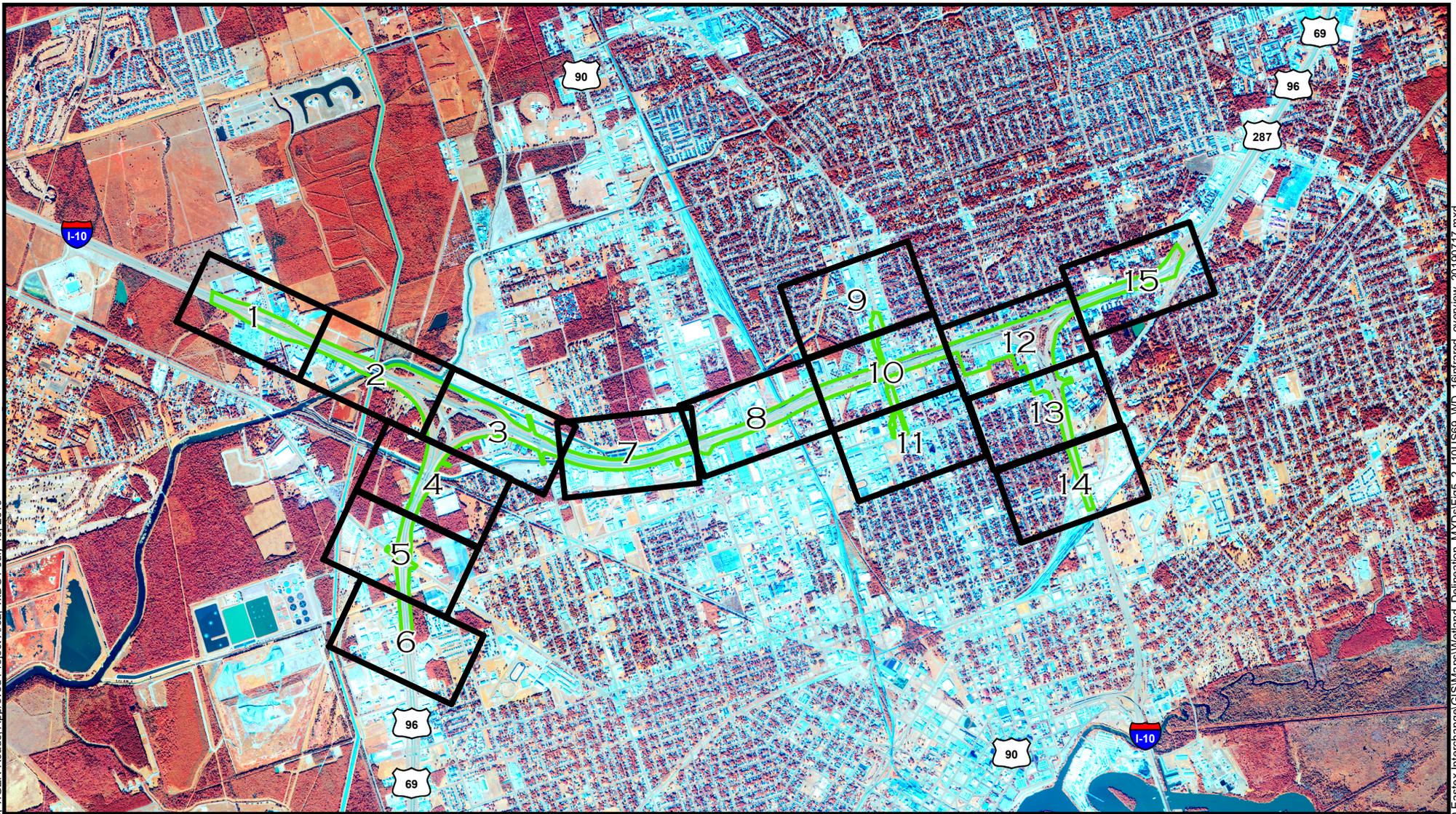


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2009 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.1
 SHEET 15

DATE:
 JULY 2019

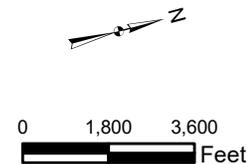


PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH OVERVIEW

JEFFERSON COUNTY, TEXAS



APPENDIX A
FIGURE 5.2

DATE:
JULY 2019

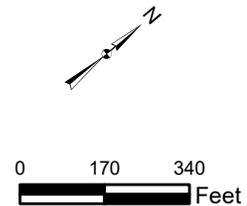


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 1

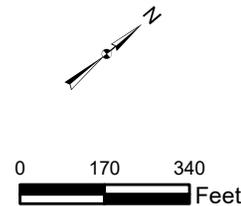
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

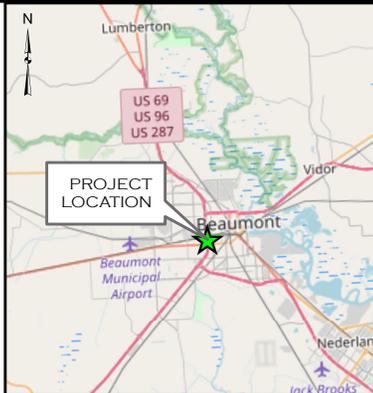


APPENDIX A
 FIGURE 5.2
 SHEET 2

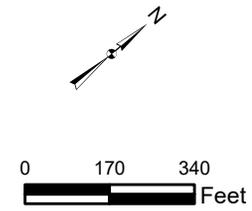
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 3

DATE:
 JULY 2019

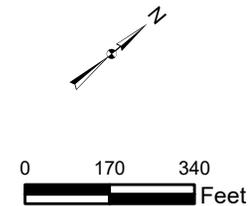


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 4

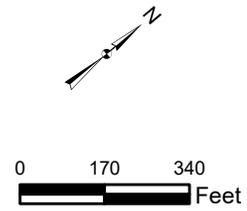
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 5

DATE:
 JULY 2019

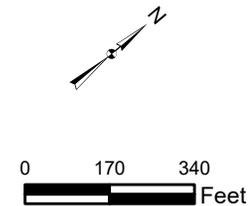


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 6

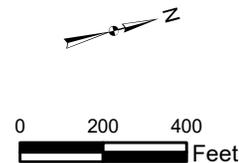
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



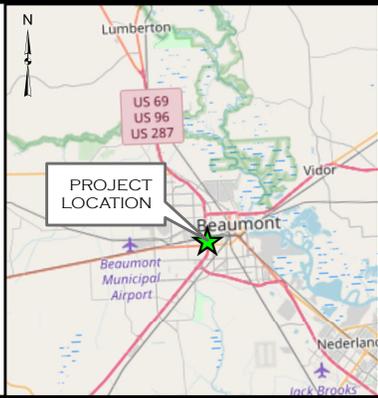
APPENDIX A
 FIGURE 5.2
 SHEET 7

DATE:
 JULY 2019

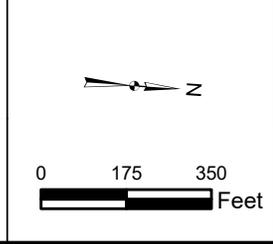
Sources: TNRIS Infrared Aerial 2016; Open Street Maps; TIGER Roads; Approved Project Area; TxDOT July 18, 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



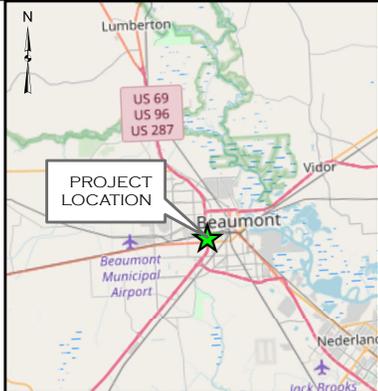
APPENDIX A
 FIGURE 5.2
 SHEET 8

DATE:
 JULY 2019

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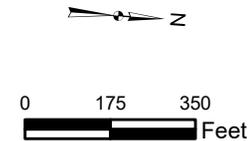


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 9

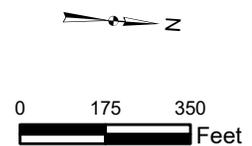
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 10

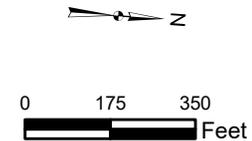
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 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 11

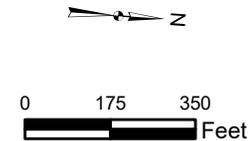
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 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 12

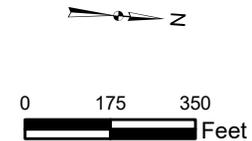
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 5.2
 SHEET 13

DATE:
 JULY 2019

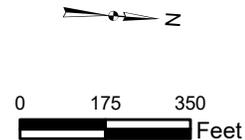


 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2016 INFRARED PHOTOGRAPH

JEFFERSON COUNTY, TEXAS

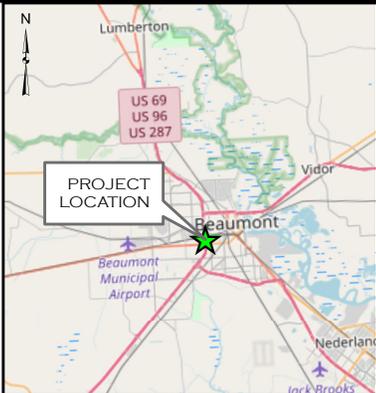


APPENDIX A
 FIGURE 5.2
 SHEET 14

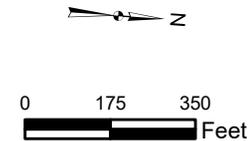
DATE:
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 PROJECT AREA

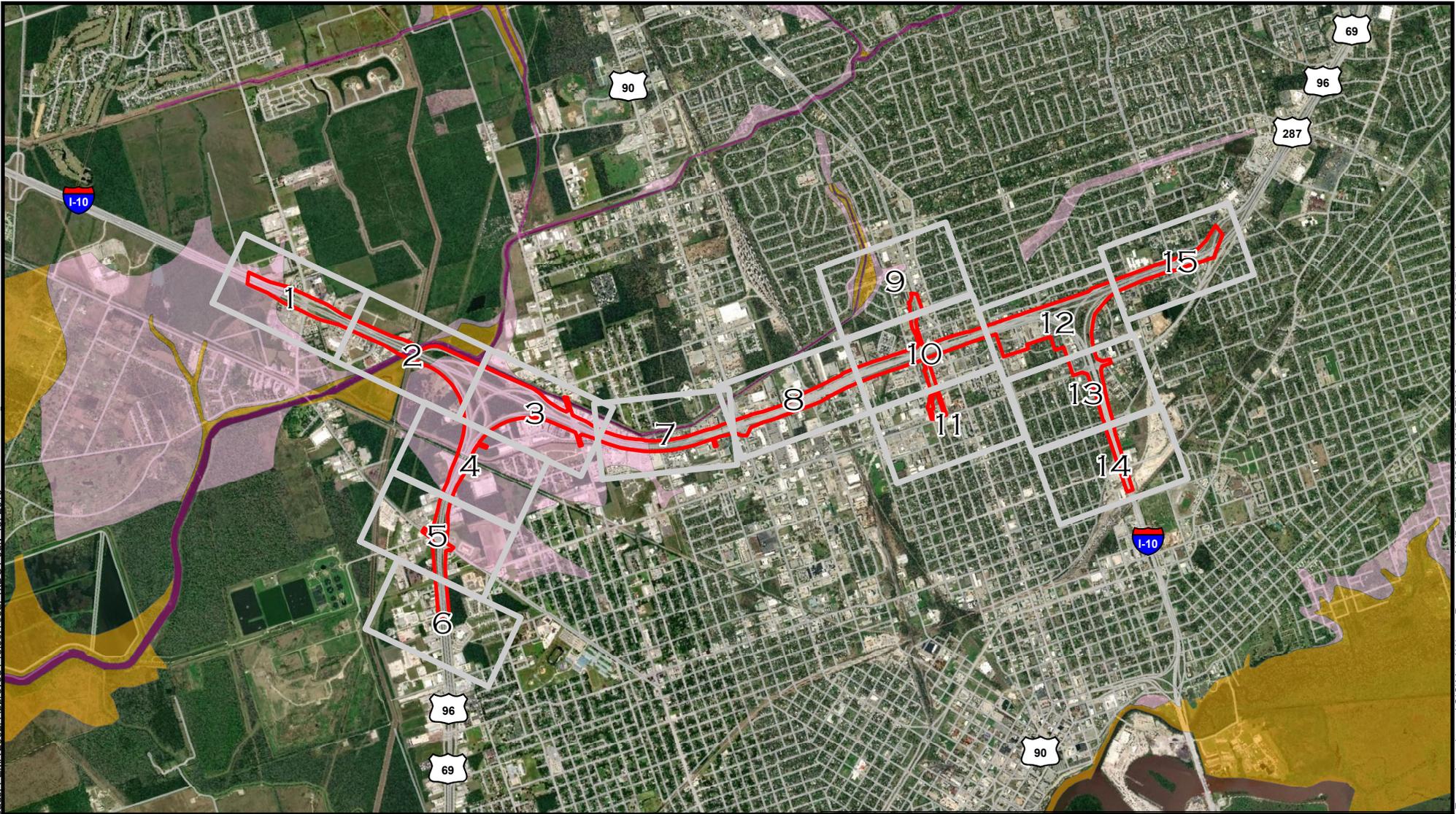


10/69 INTERCHANGES PROJECT
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 2016 INFRARED PHOTOGRAPH
 JEFFERSON COUNTY, TEXAS

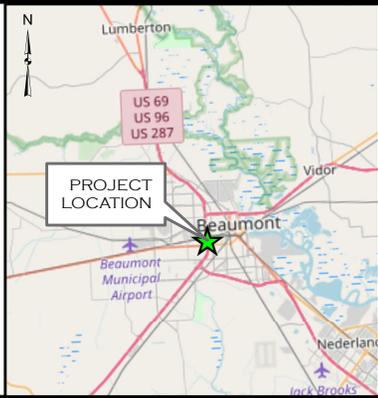


APPENDIX A
 FIGURE 5.2
 SHEET 15

DATE:
 JULY 2019

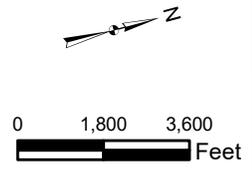


- PROJECT AREA
- FLOOD ZONE
- AE - 1% ANNUAL CHANCE FLOOD HAZARD
- X - 0.2% ANNUAL CHANCE FLOOD HAZARD
- FLOODWAY



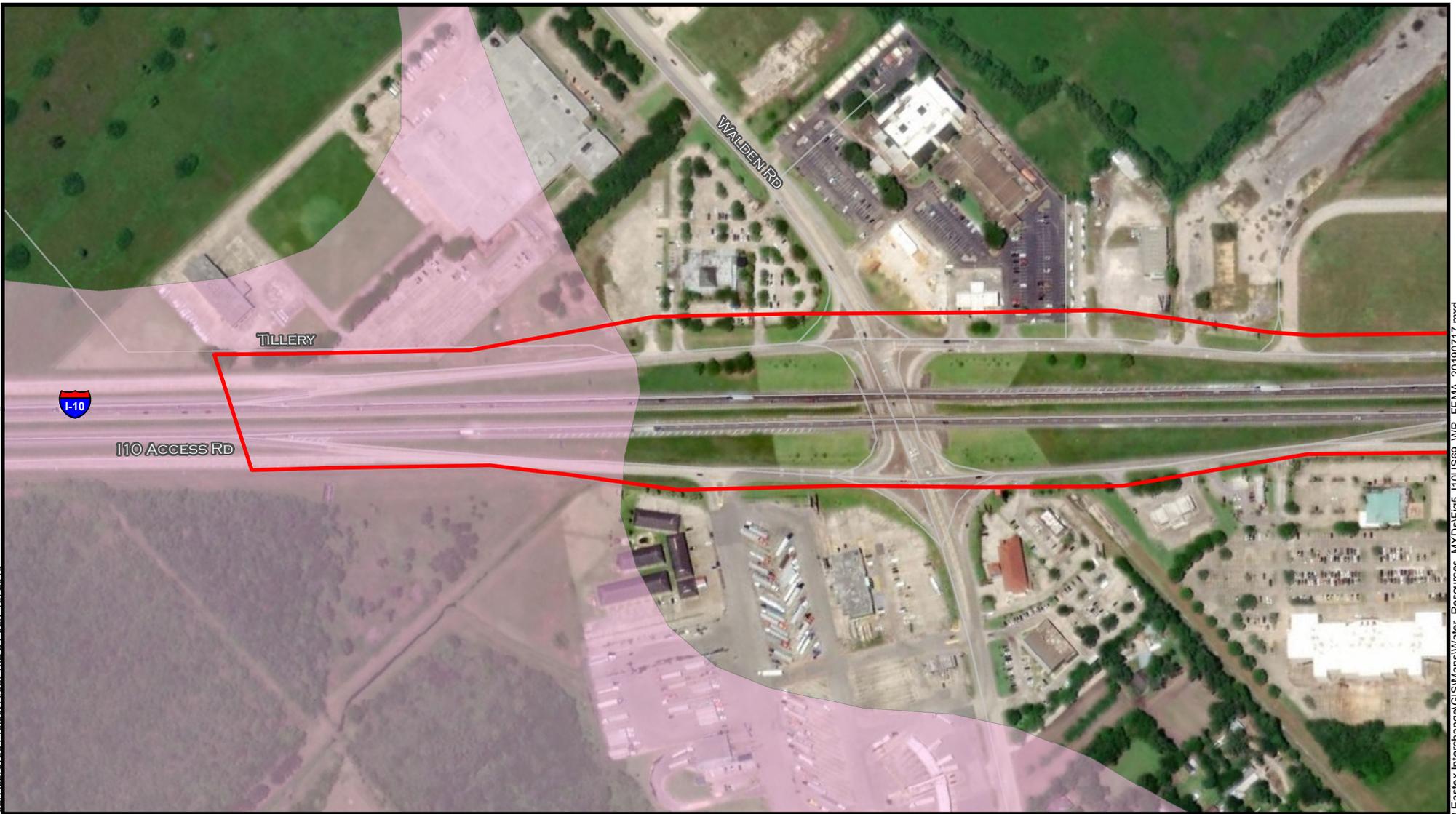
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 CSJ: 0028-13-135 & 0739-02-140
 FEMA OVERVIEW MAP

JEFFERSON COUNTY, TEXAS

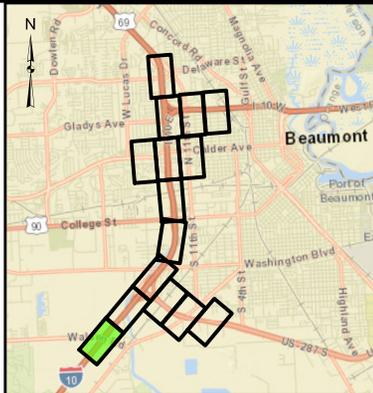


APPENDIX A
 FIGURE 6

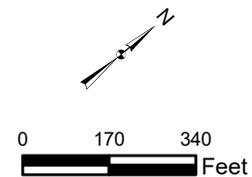
DATE:
 JULY 2019



- PROJECT AREA
- FLOOD ZONE
- X - 0.2% ANNUAL CHANCE FLOOD HAZARD

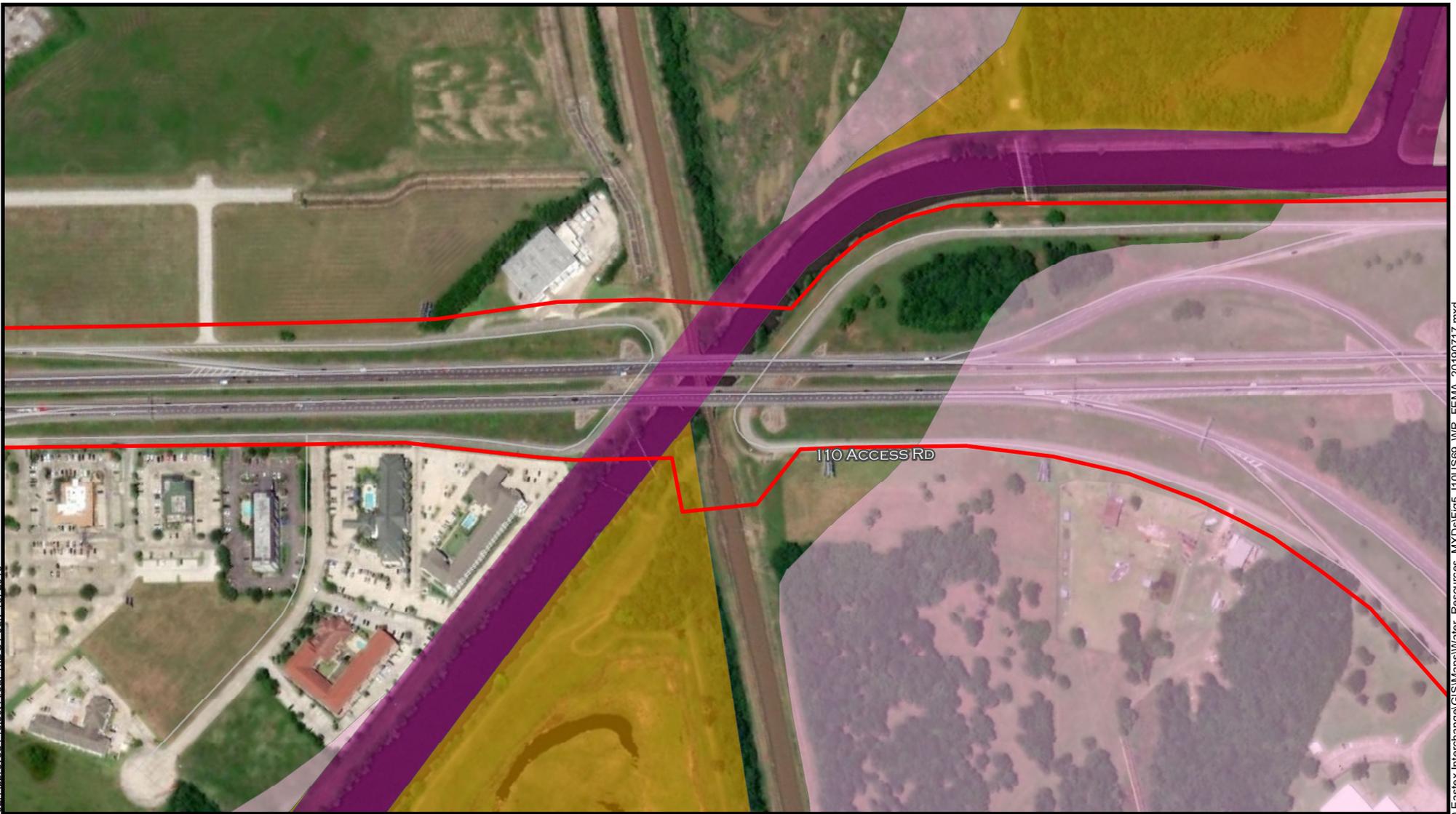


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 6
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 JULY 2019



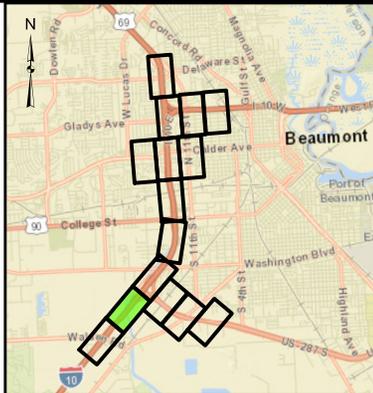
 PROJECT AREA

FLOOD ZONE

 AE - 1% ANNUAL CHANCE FLOOD HAZARD

 X - 0.2% ANNUAL CHANCE FLOOD HAZARD

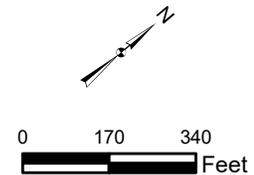
 FLOODWAY



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140

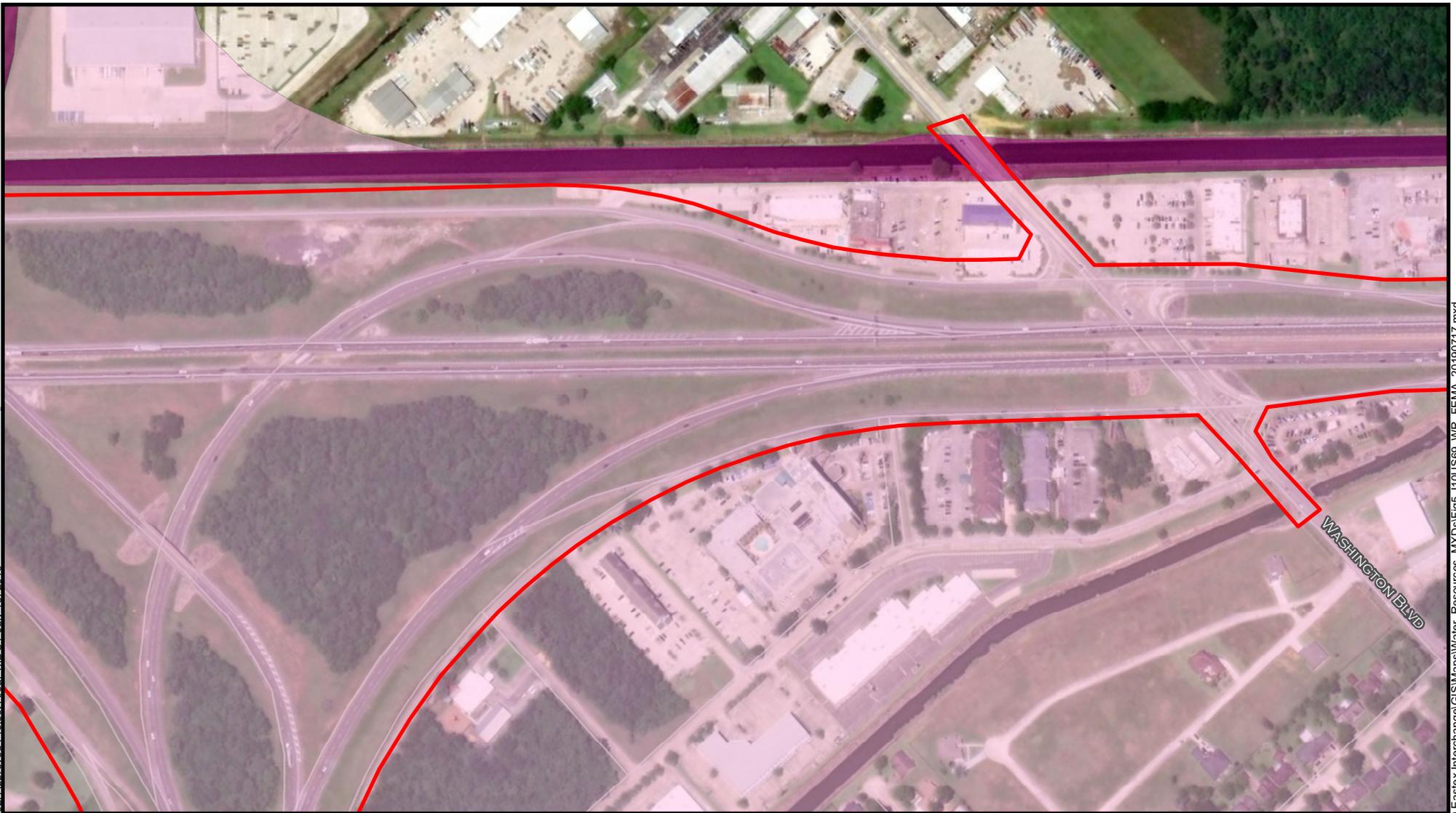
FEMA FLOODPLAIN MAP

JEFFERSON COUNTY, TEXAS

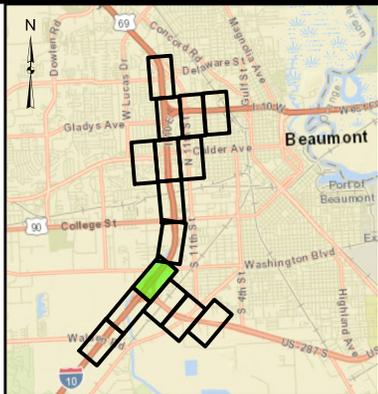


APPENDIX A
 FIGURE 6
 SHEET 2

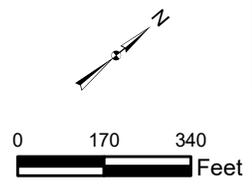
DATE:
 JULY 2019



- PROJECT AREA
- FLOOD ZONE
- X - 0.2% ANNUAL CHANCE FLOOD HAZARD
- FLOODWAY

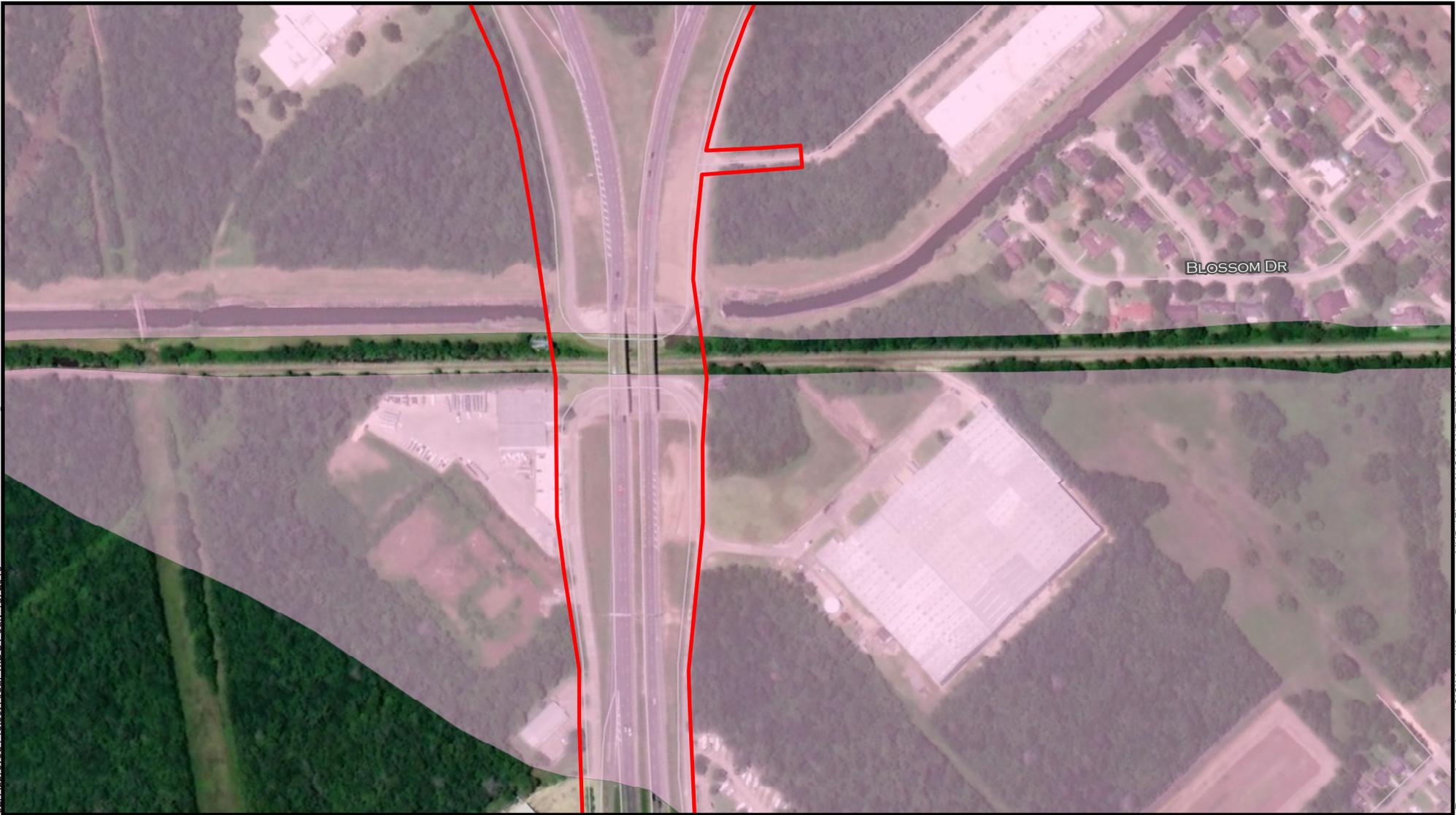


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

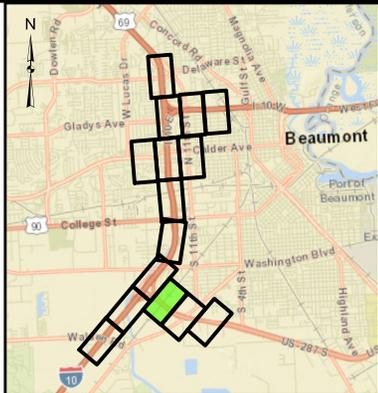


APPENDIX A
 FIGURE 6
 SHEET 3

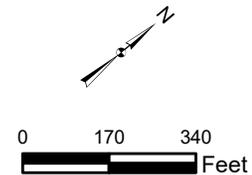
DATE:
 JULY 2019



- PROJECT AREA
- FLOOD ZONE
- X - 0.2% ANNUAL CHANCE FLOOD HAZARD

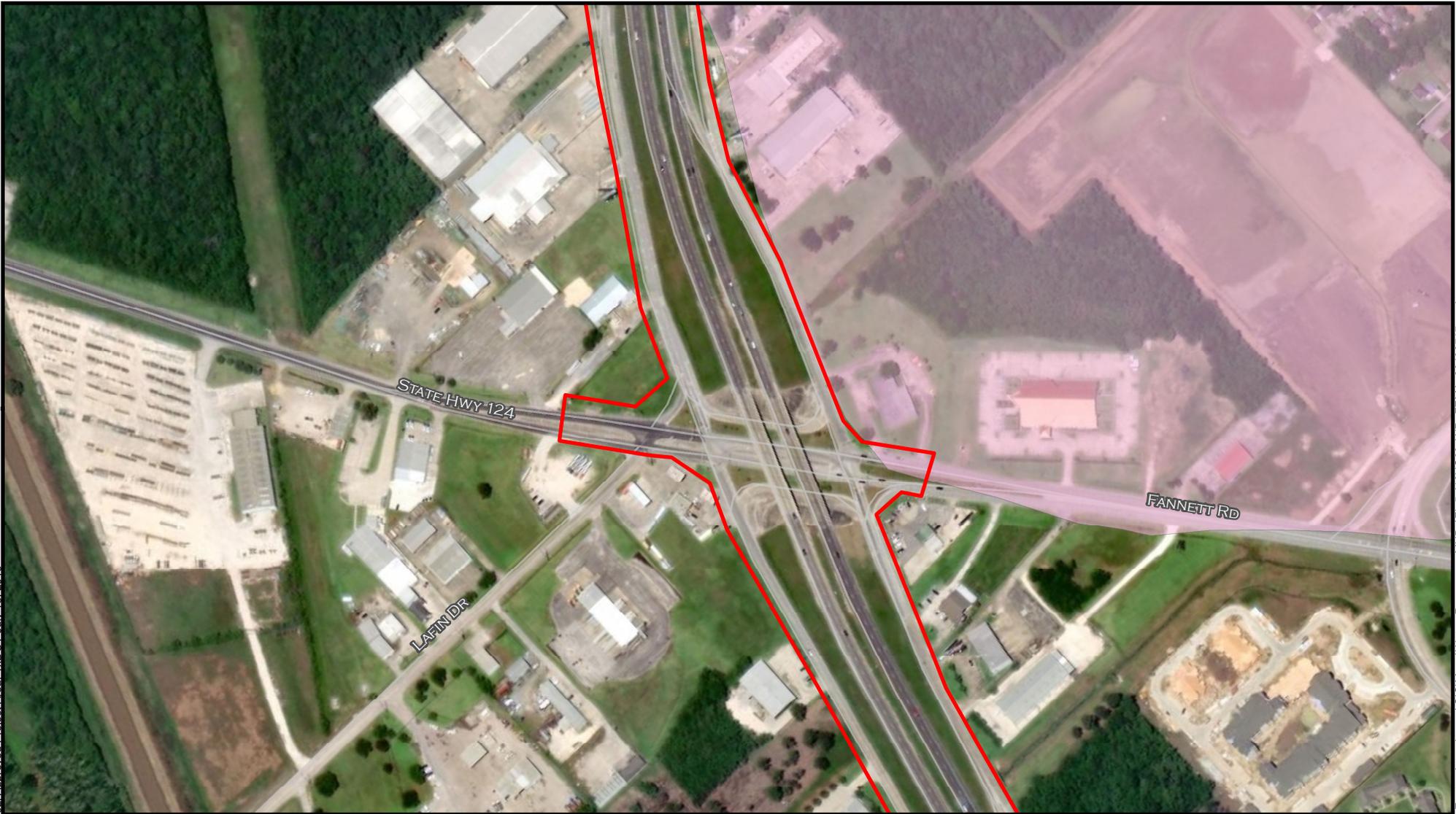


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 6
 SHEET 4

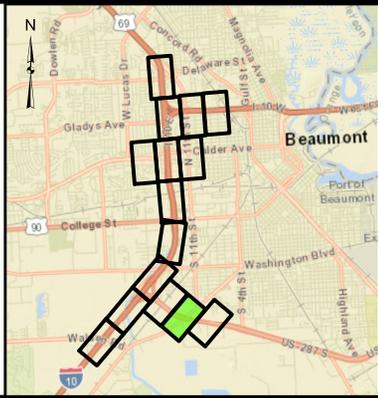
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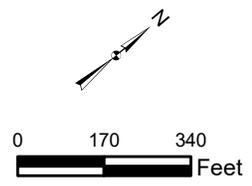
 PROJECT AREA

 FLOOD ZONE

 X - 0.2% ANNUAL CHANCE FLOOD HAZARD



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

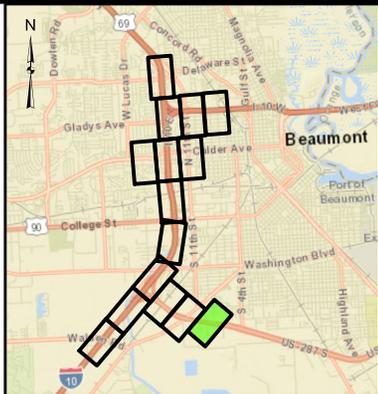


APPENDIX A
 FIGURE 6
 SHEET 5

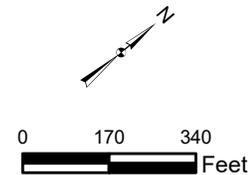
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 PROJECT AREA

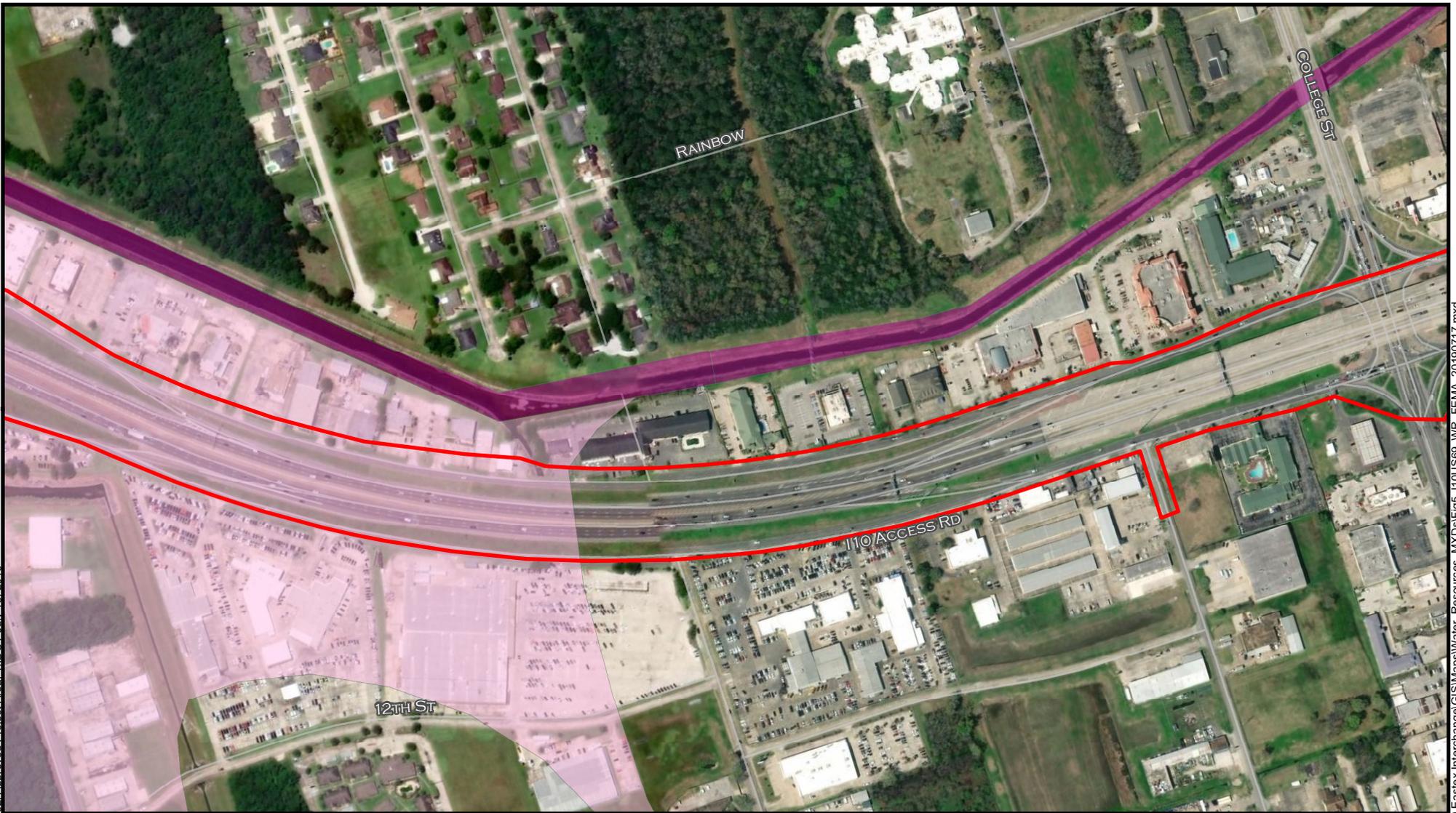


10/69 INTERCHANGES PROJECT
CSJ: 0028-13-135 & 0739-02-140
FEMA FLOODPLAIN MAP
JEFFERSON COUNTY, TEXAS

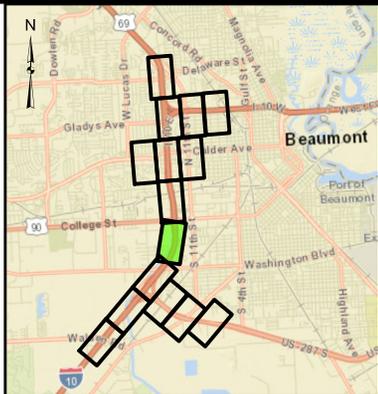


APPENDIX A
FIGURE 6
SHEET 6

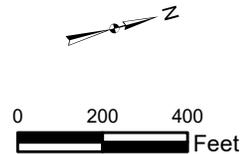
DATE:
JULY 2019



- PROJECT AREA
- FLOOD ZONE
- X - 0.2% ANNUAL CHANCE FLOOD HAZARD
- FLOODWAY

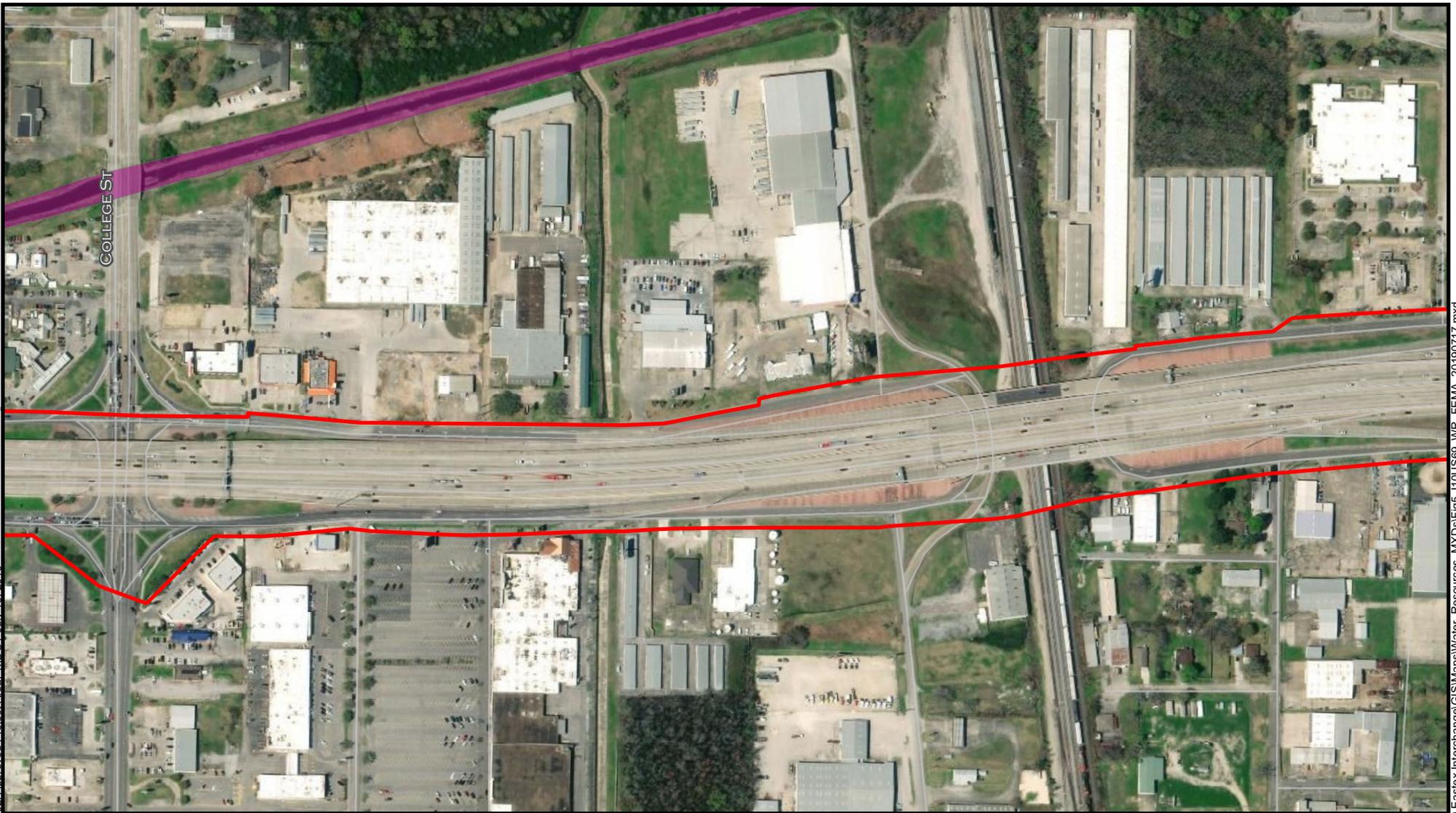


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

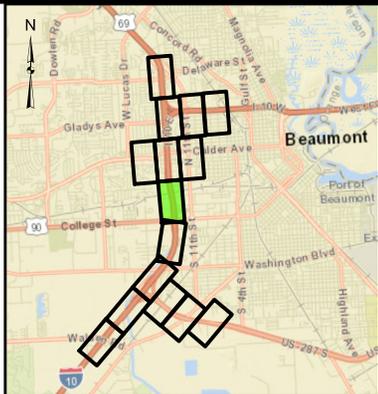


APPENDIX A
 FIGURE 6
 SHEET 7

DATE:
 JULY 2019



- PROJECT AREA
- FLOOD ZONE
- FLOODWAY

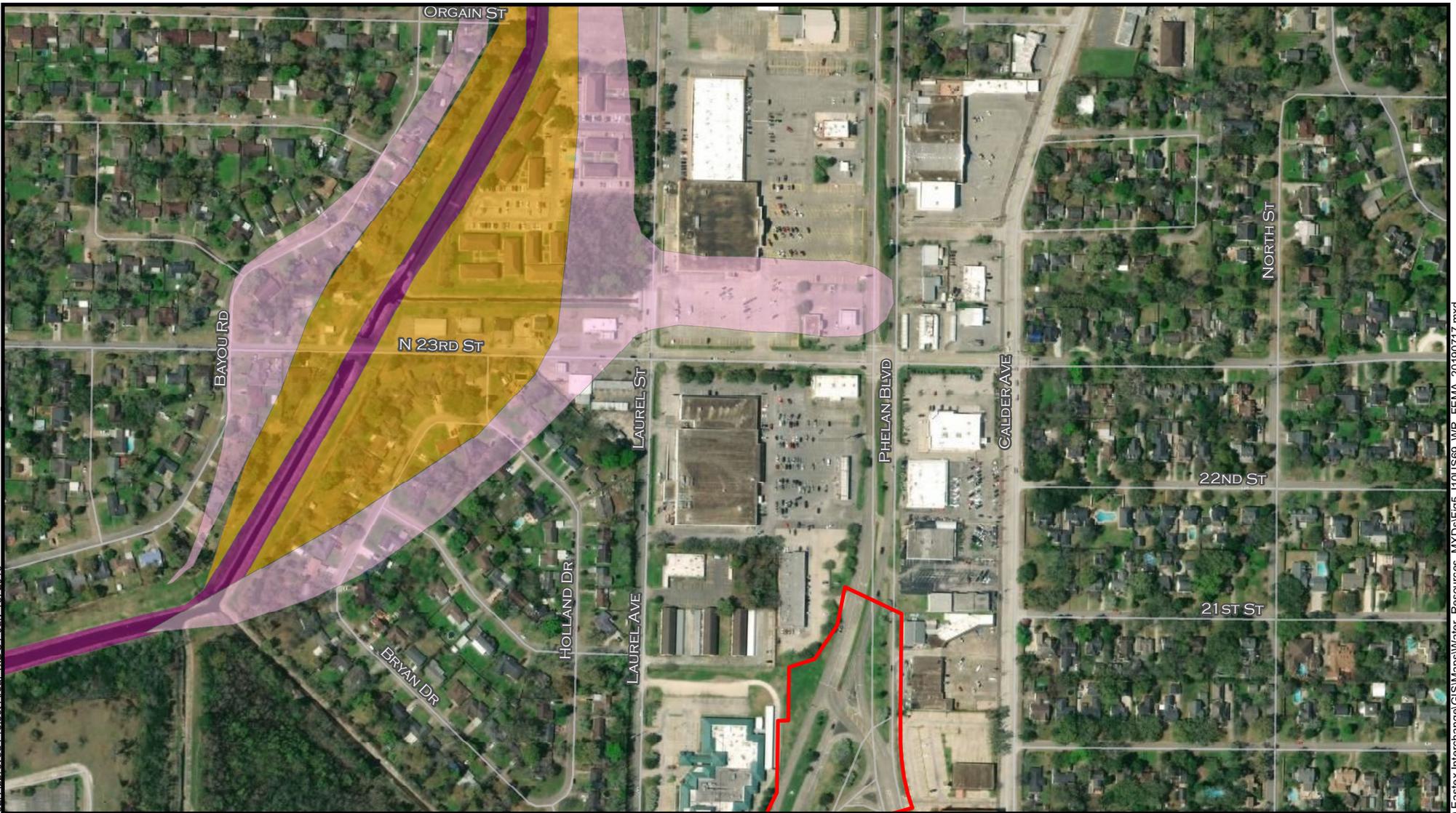


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

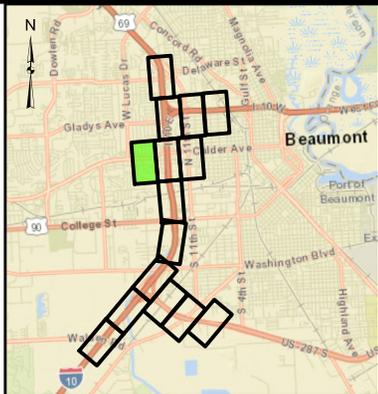


APPENDIX A
 FIGURE 6
 SHEET 8

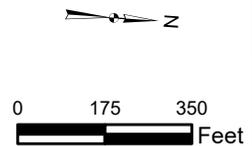
DATE:
 JULY 2019



-  PROJECT AREA
- FLOOD ZONE**
-  AE - 1% ANNUAL CHANCE FLOOD HAZARD
-  X - 0.2% ANNUAL CHANCE FLOOD HAZARD
-  FLOODWAY

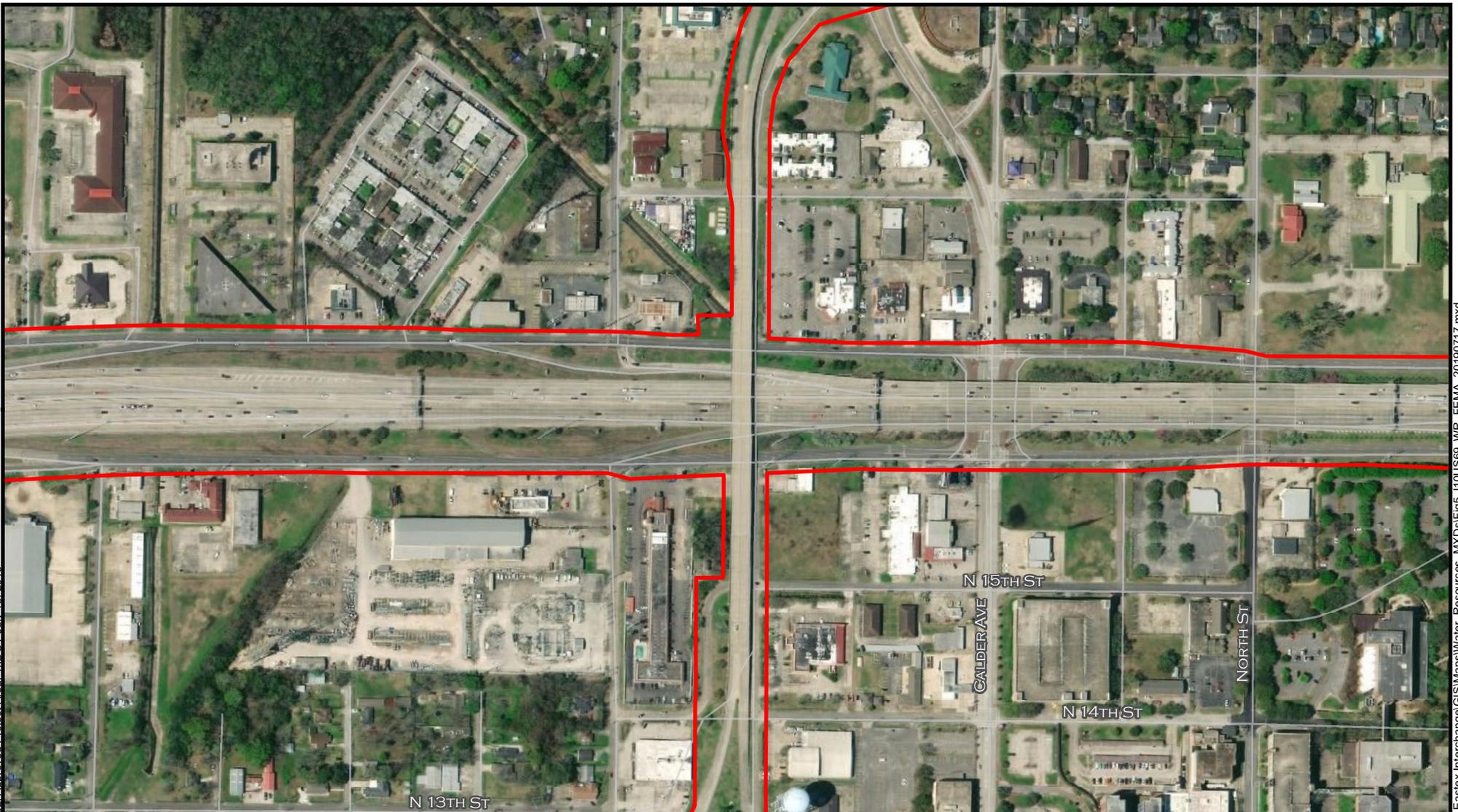


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

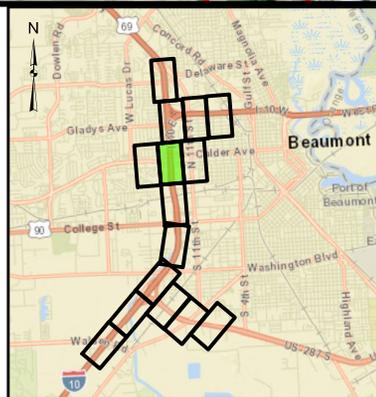


APPENDIX A
 FIGURE 6
 SHEET 9

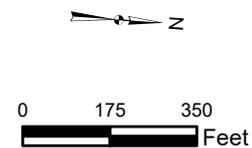
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 PROJECT AREA

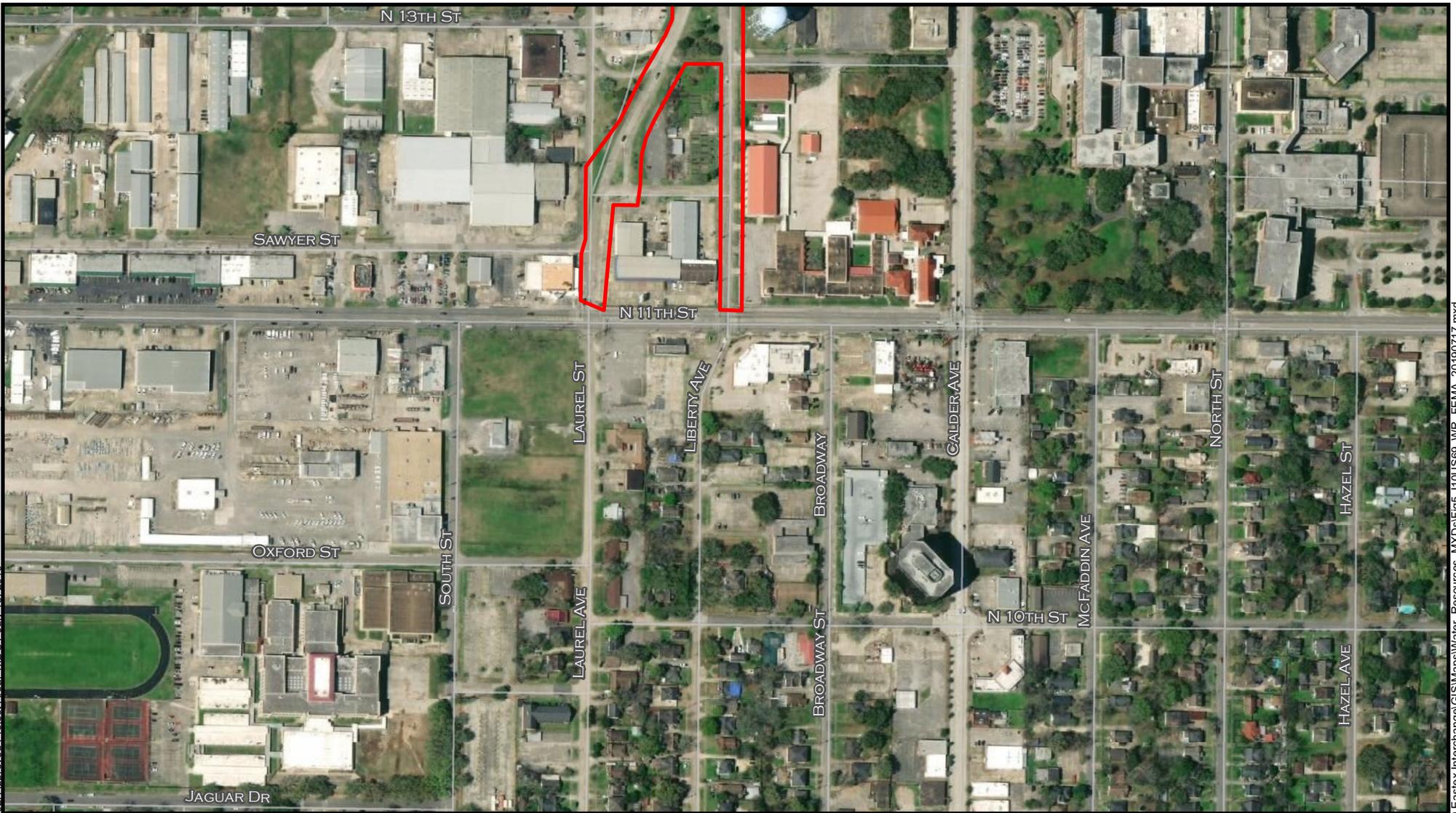


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

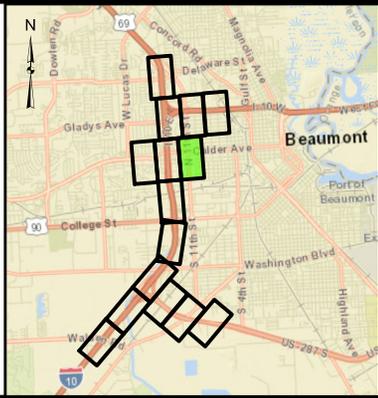


APPENDIX A
 FIGURE 6
 SHEET 10

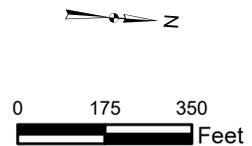
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 PROJECT AREA

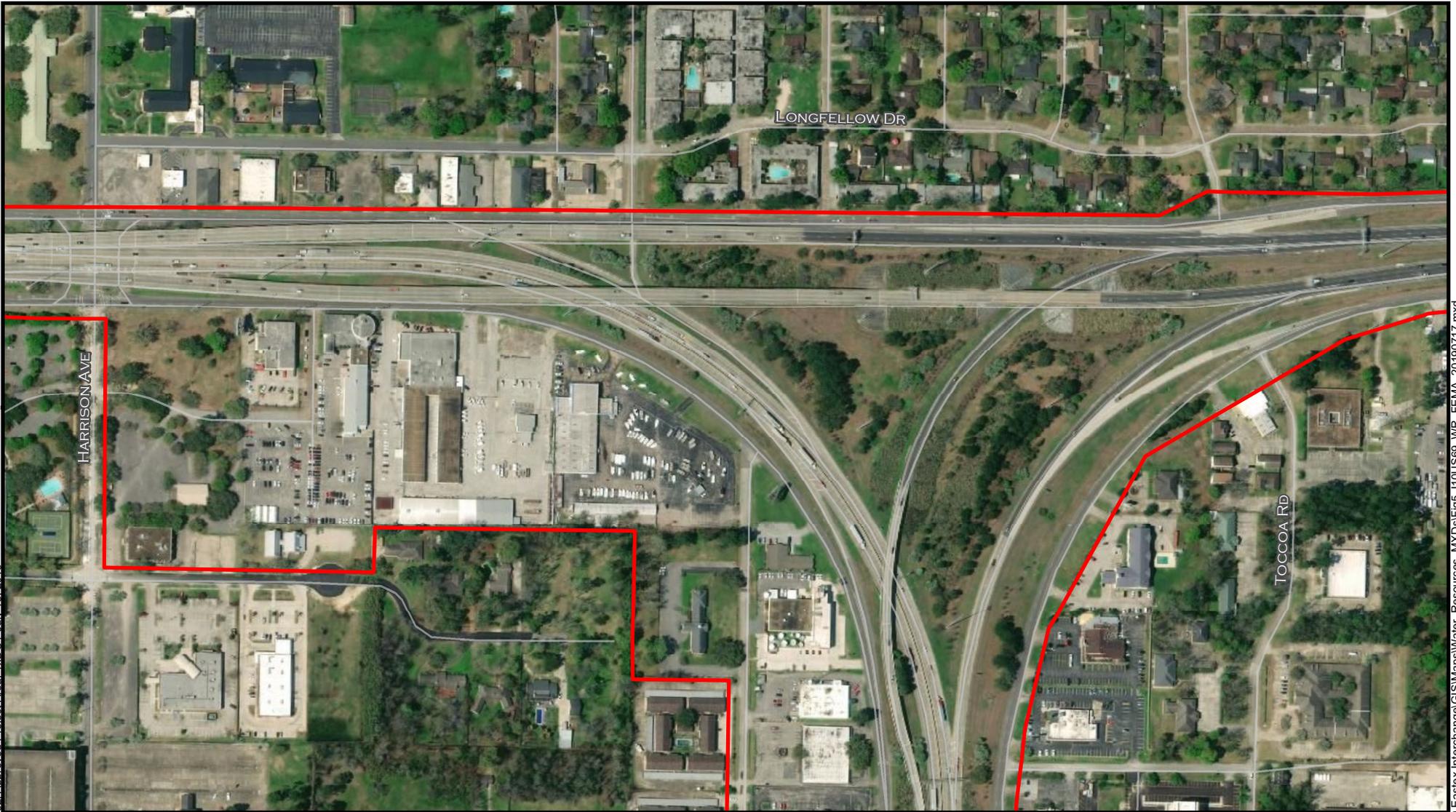


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

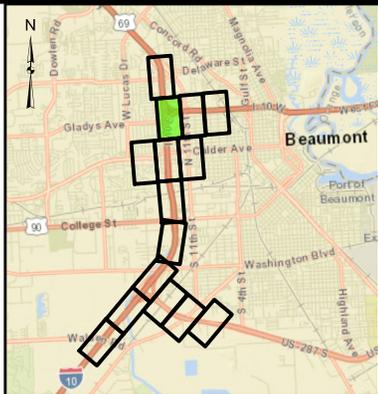


APPENDIX A
 FIGURE 6
 SHEET 11

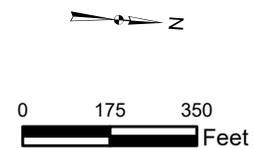
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 PROJECT AREA

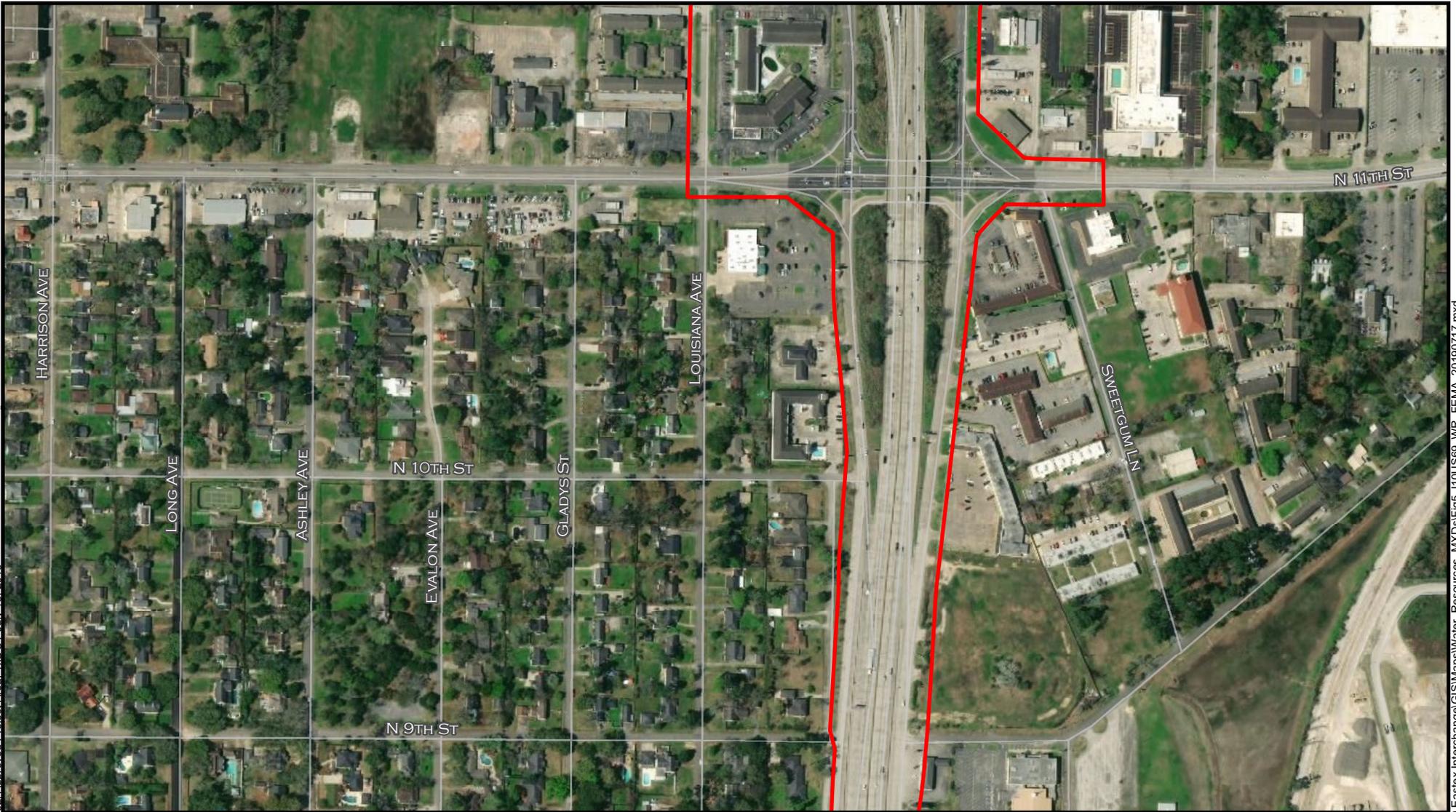


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

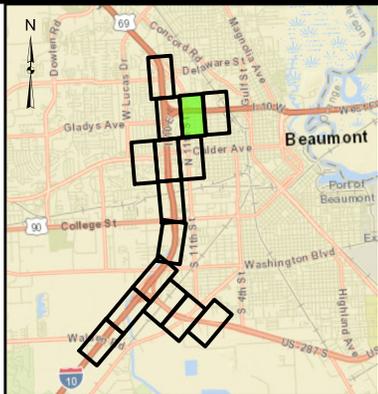


APPENDIX A
 FIGURE 6
 SHEET 12

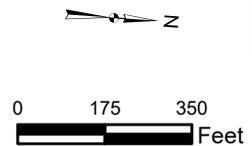
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 JULY 2019



 PROJECT AREA

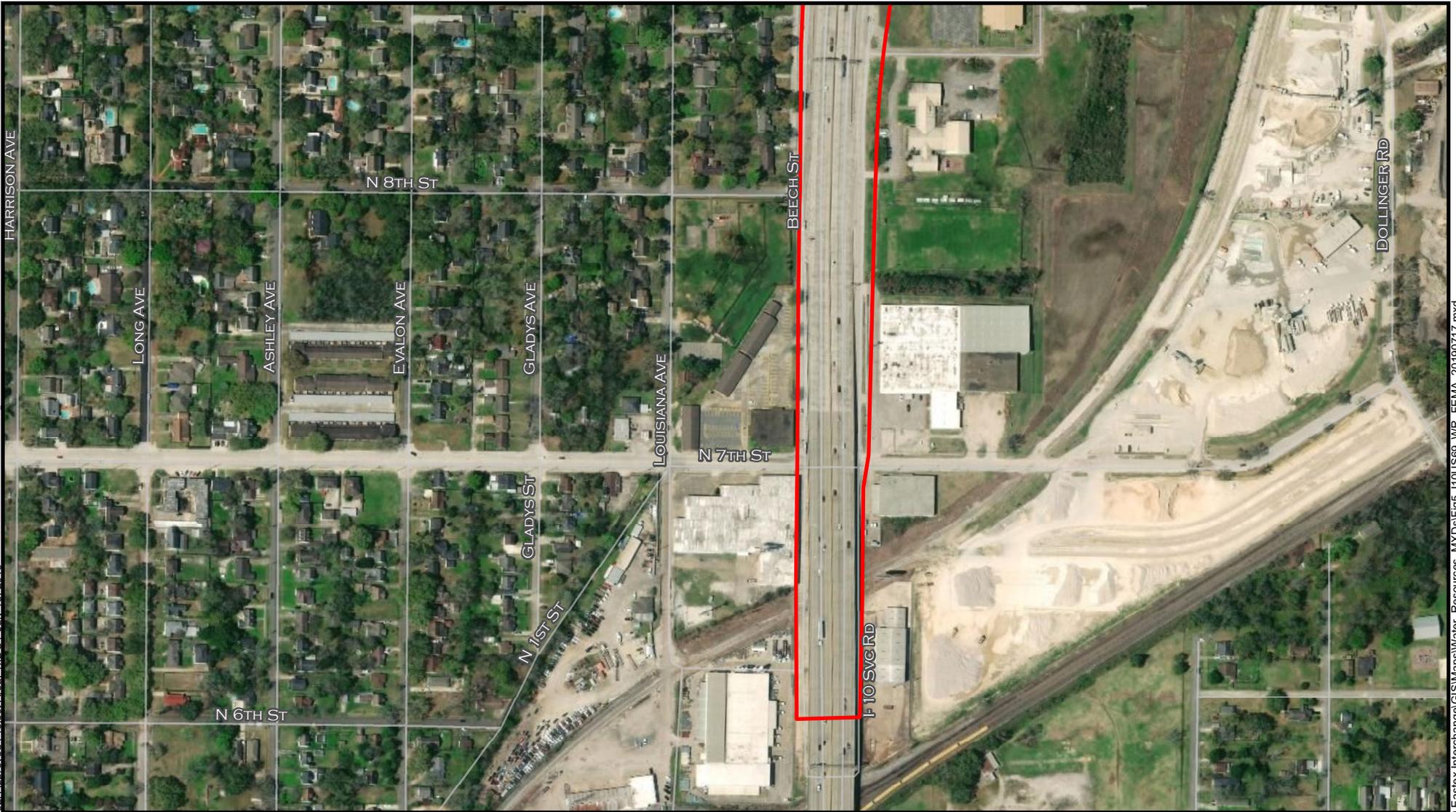


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

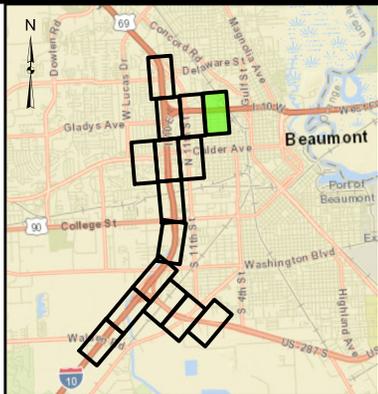


APPENDIX A
 FIGURE 6
 SHEET 13

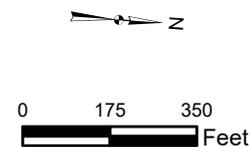
DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 FEMA FLOODPLAIN MAP
 JEFFERSON COUNTY, TEXAS

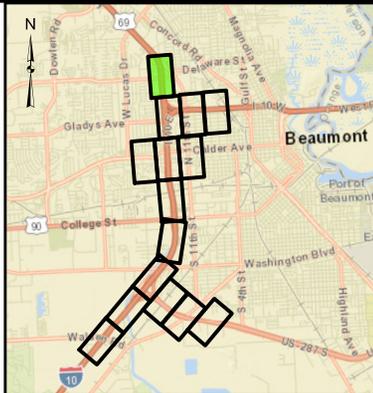


APPENDIX A
 FIGURE 6
 SHEET 14

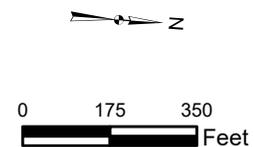
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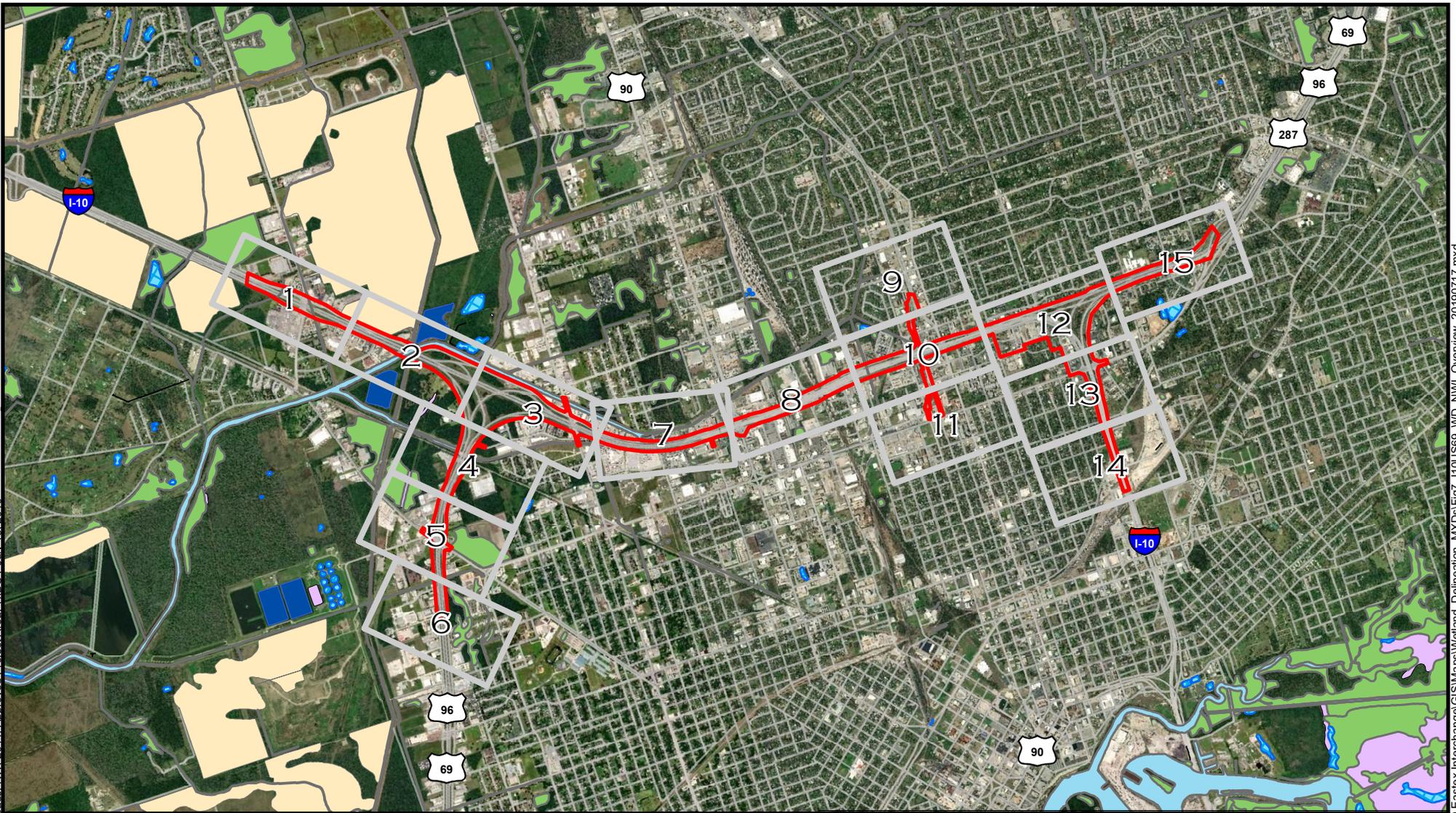


10/69 INTERCHANGES PROJECT
CSJ: 0028-13-135 & 0739-02-140
FEMA FLOODPLAIN MAP
JEFFERSON COUNTY, TEXAS



APPENDIX A
FIGURE 6
SHEET 15

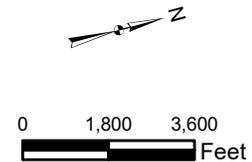
DATE:
JULY 2019



- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- LAKE
- PALUSTRINE FARMED
- RIVERINE

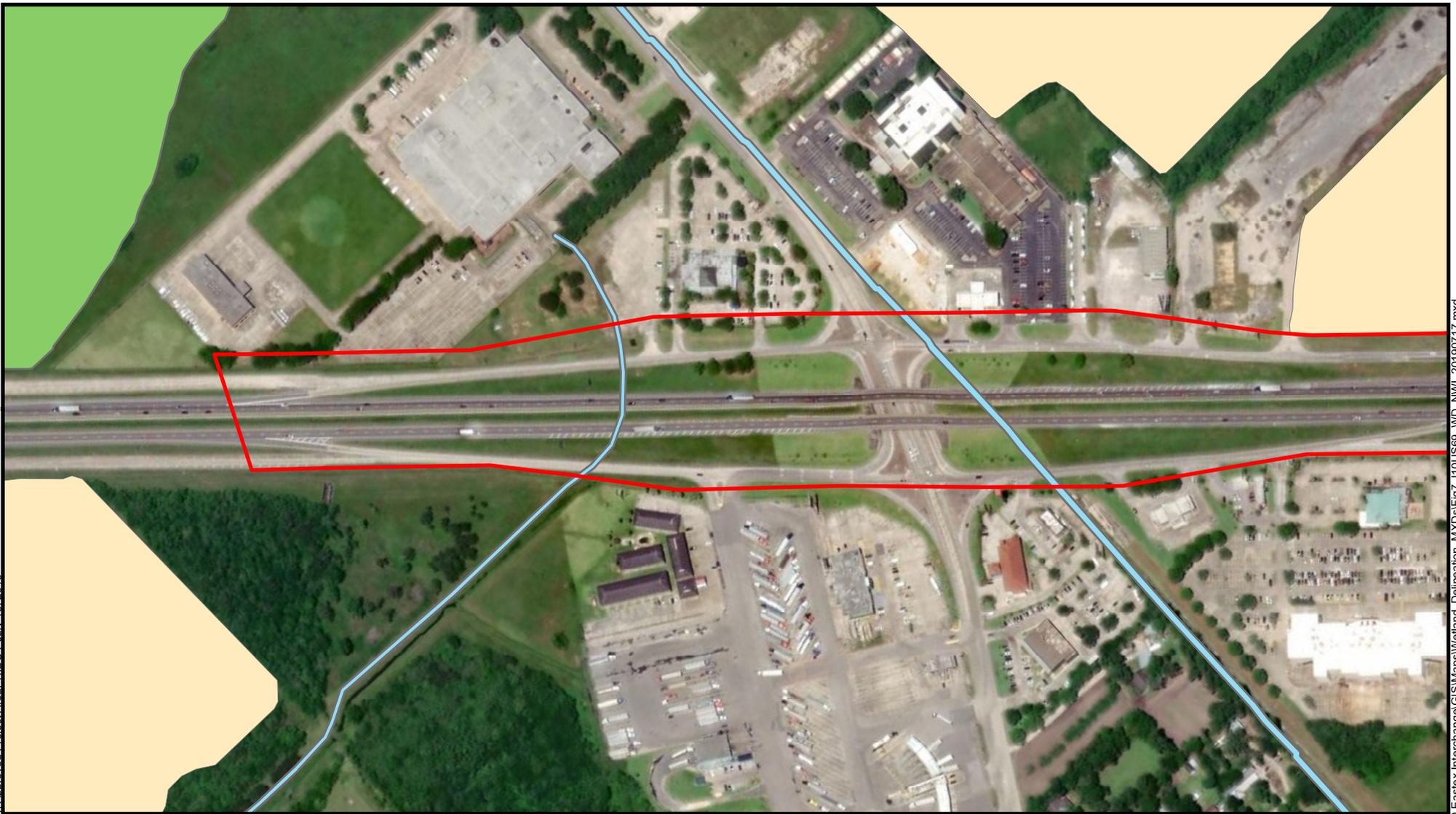


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND OVERVIEW
 JEFFERSON COUNTY, TEXAS

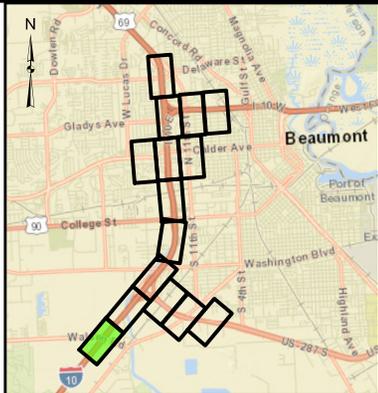


APPENDIX A
 FIGURE 7

DATE:
 JULY 2019

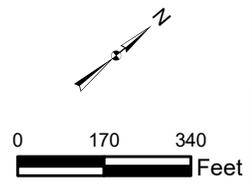


- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- PALUSTRINE FARMED
- RIVERINE



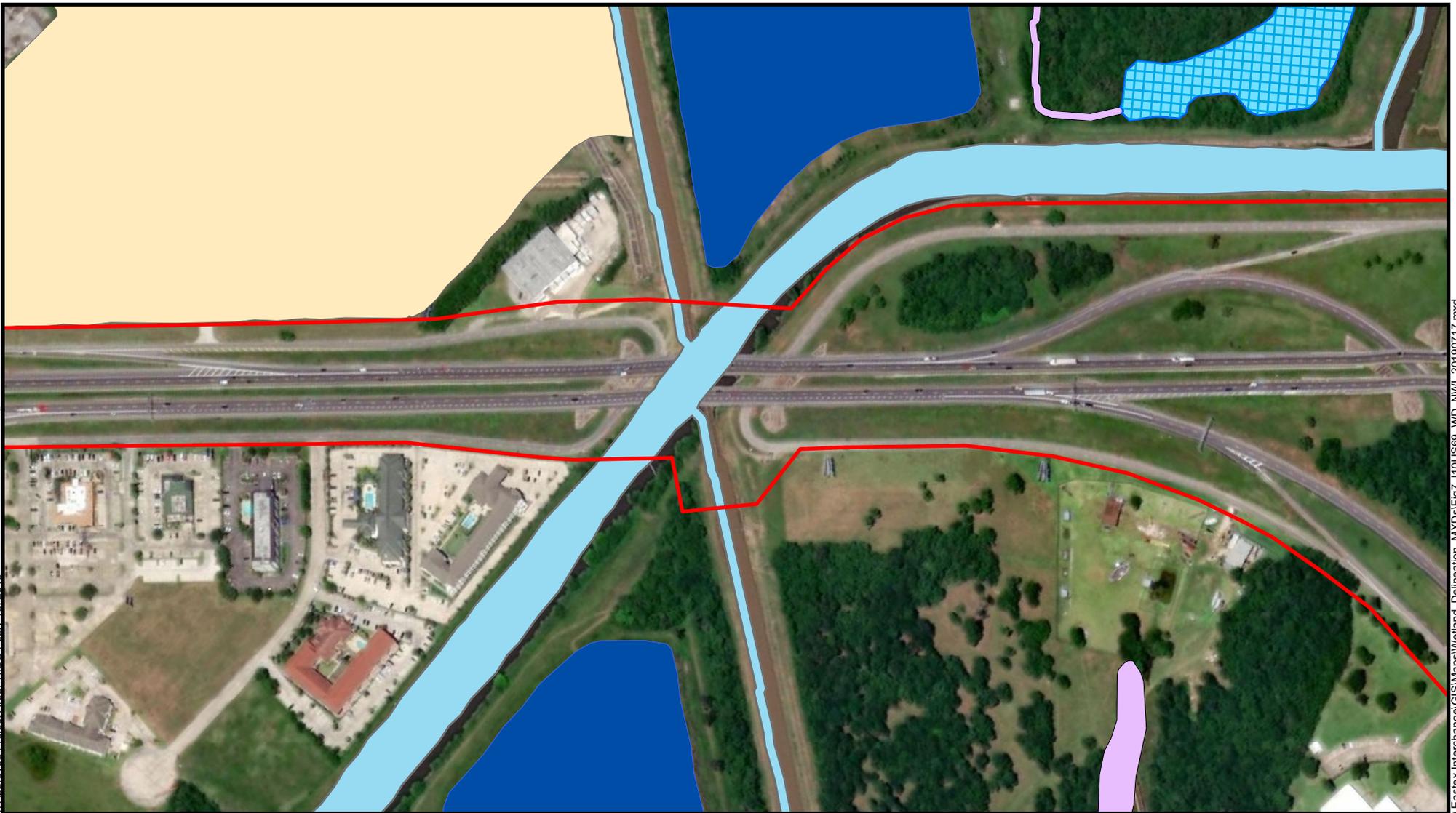
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

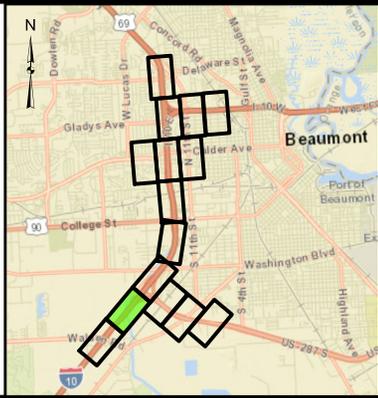


APPENDIX A
 FIGURE 7
 SHEET 1

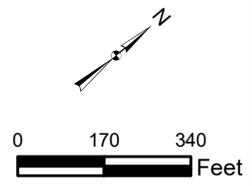
DATE:
 JULY 2019



- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER EMERGENT WETLAND
- FRESHWATER POND
- LAKE
- PALUSTRINE FARMED
- RIVERINE

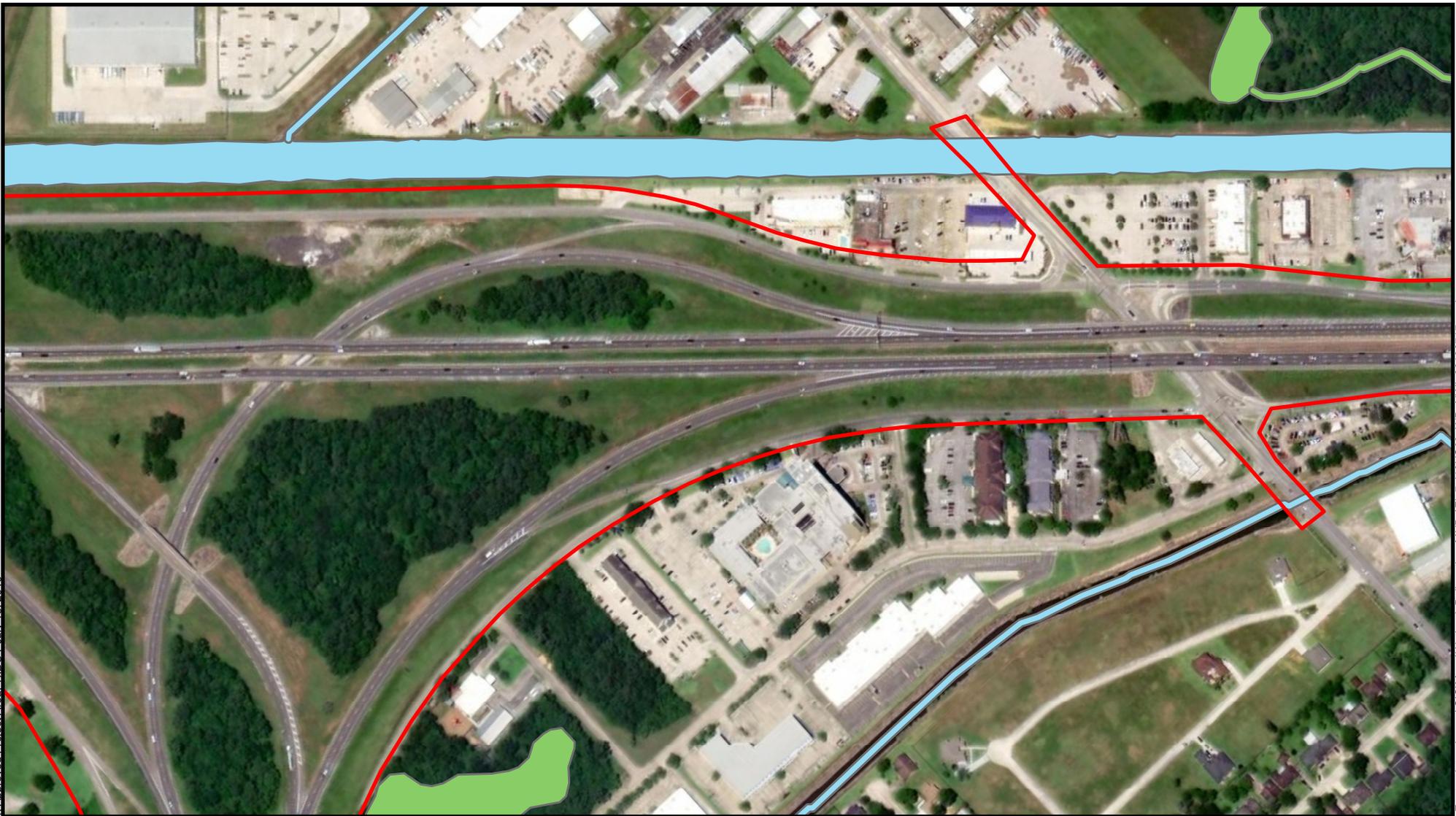


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP
 JEFFERSON COUNTY, TEXAS

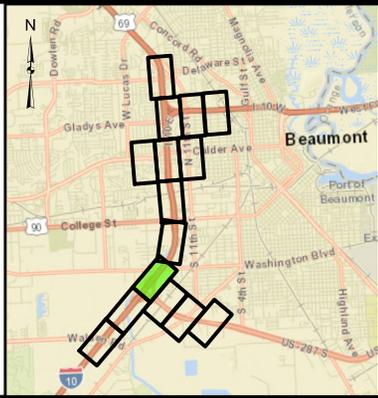


APPENDIX A
 FIGURE 7
 SHEET 2

DATE:
 JULY 2019

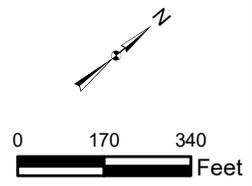


- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- RIVERINE



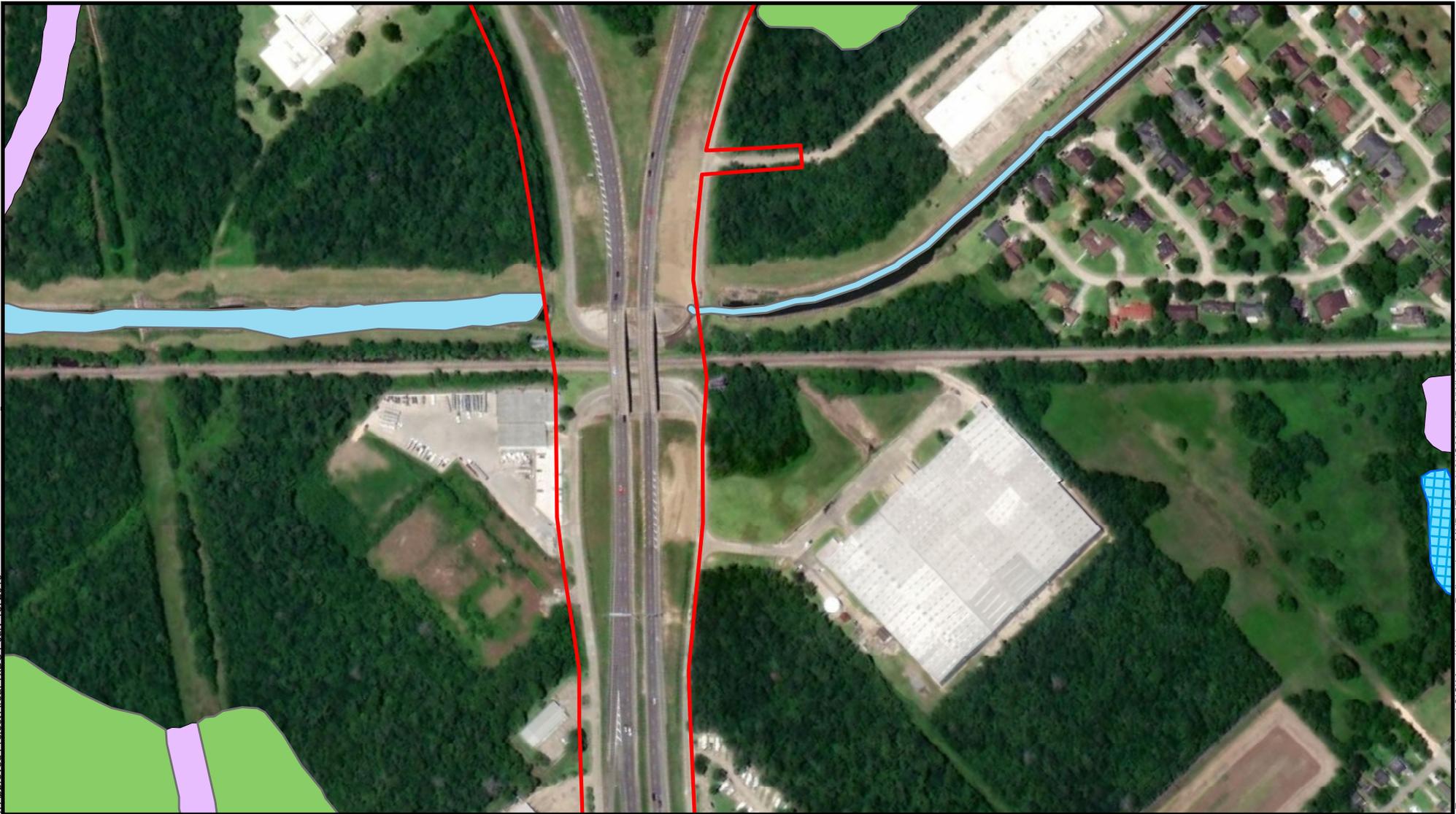
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

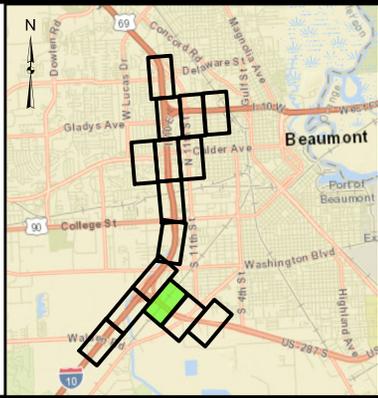


APPENDIX A
 FIGURE 7
 SHEET 3

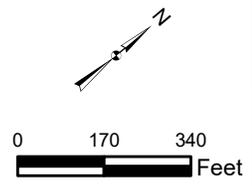
DATE:
 JULY 2019



- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE

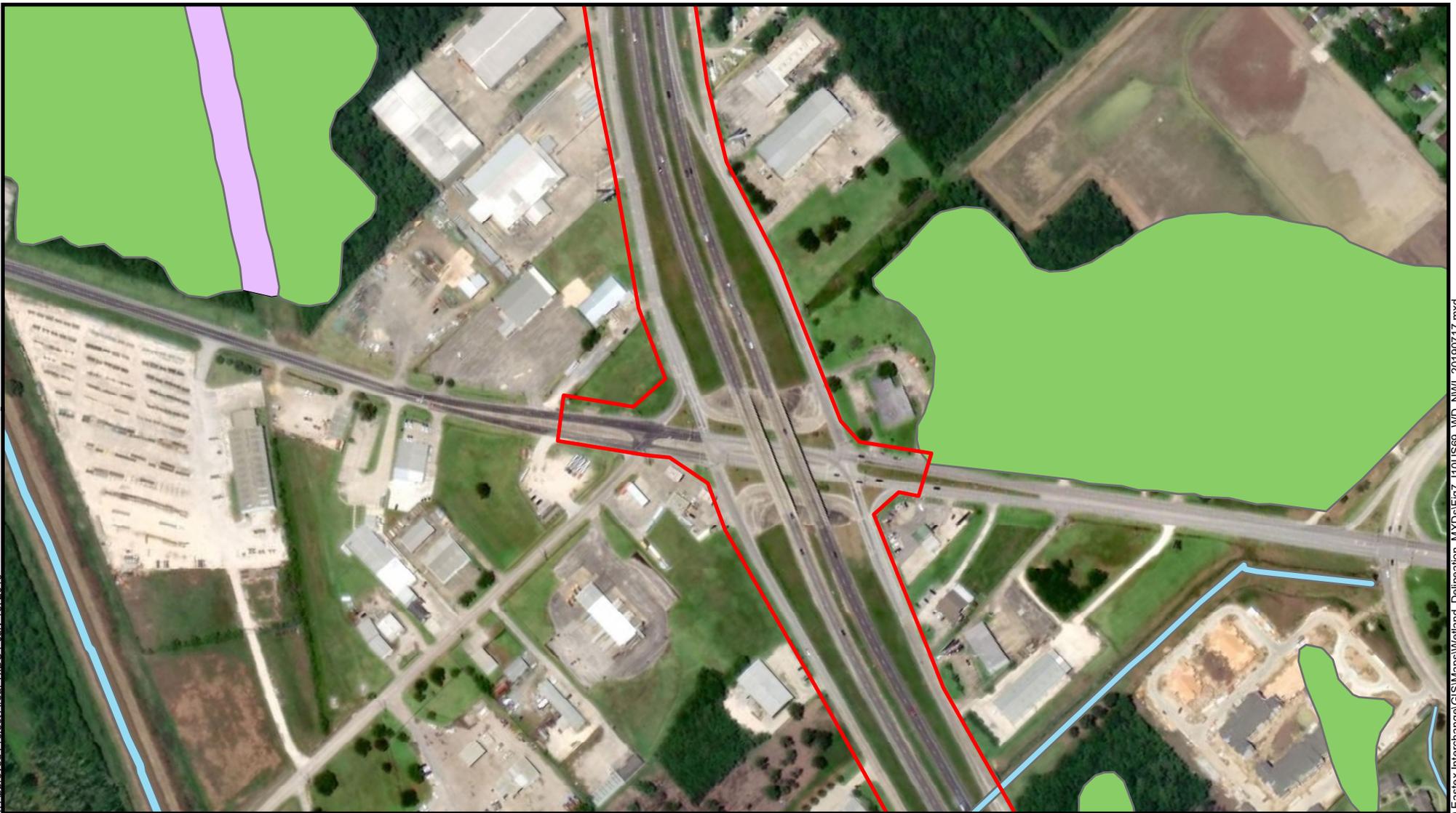


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP
 JEFFERSON COUNTY, TEXAS

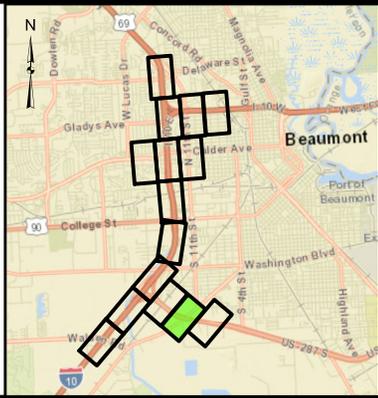


APPENDIX A
 FIGURE 7
 SHEET 4

DATE:
 JULY 2019

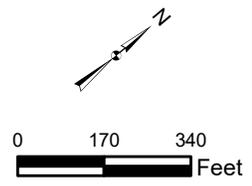


-  PROJECT AREA
- NWI WETLAND TYPE
-  FRESHWATER EMERGENT WETLAND
-  FRESHWATER FORESTED/SHRUB WETLAND
-  RIVERINE



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

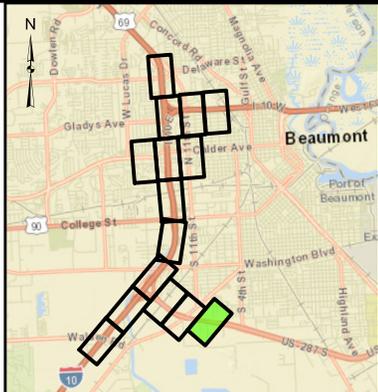


APPENDIX A
 FIGURE 7
 SHEET 5

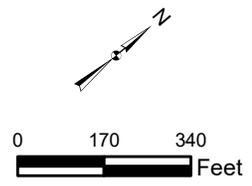
DATE:
 JULY 2019



- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- RIVERINE

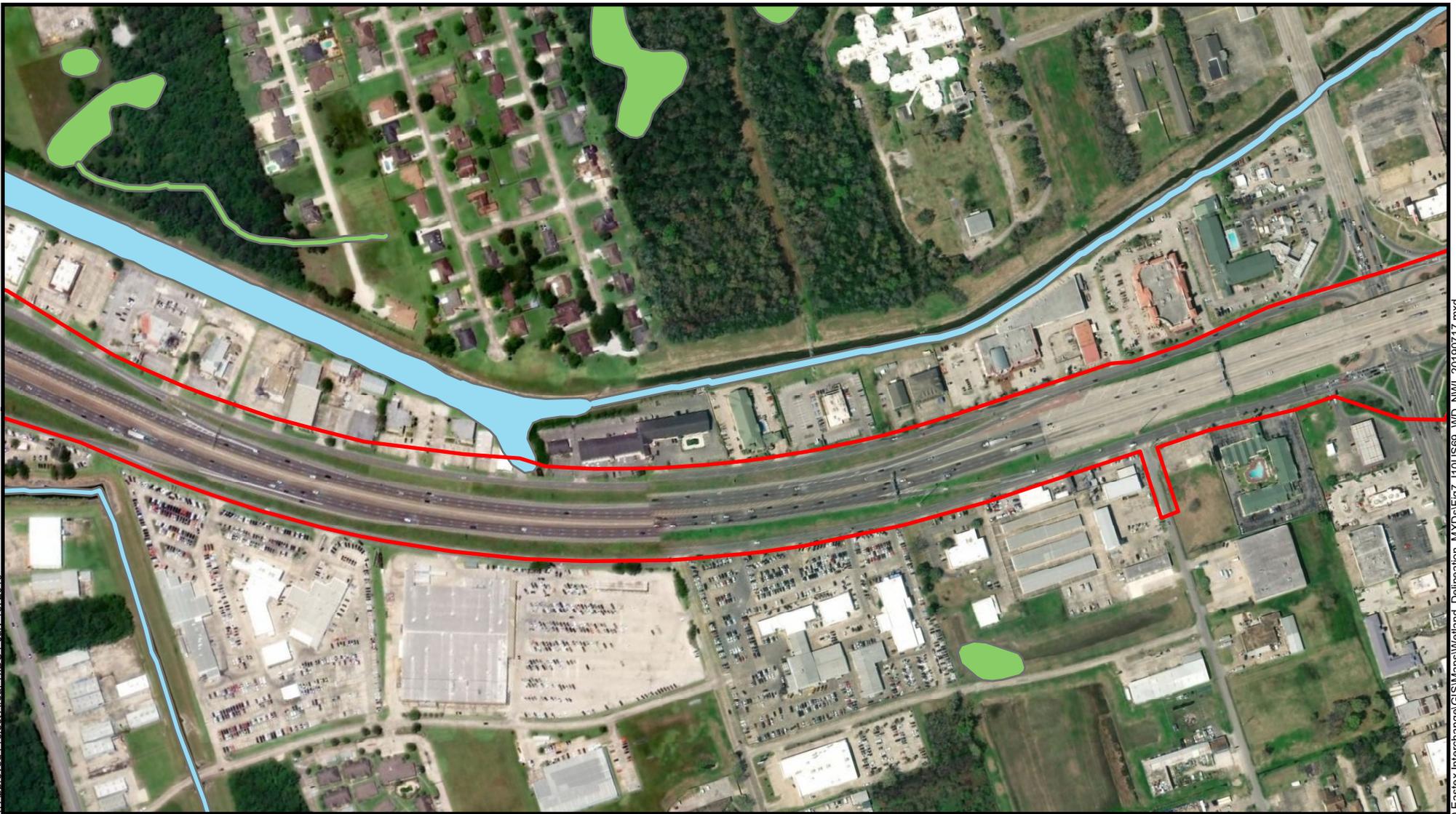


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP
 JEFFERSON COUNTY, TEXAS

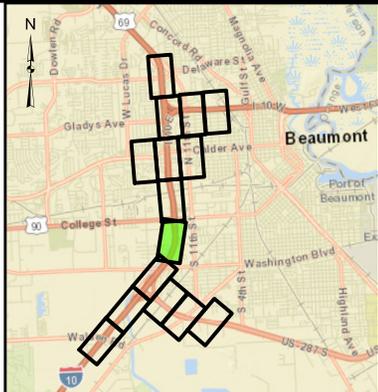


APPENDIX A
 FIGURE 7
 SHEET 6

DATE:
 JULY 2019

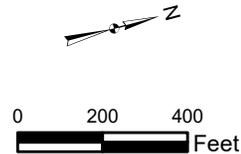


- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- RIVERINE



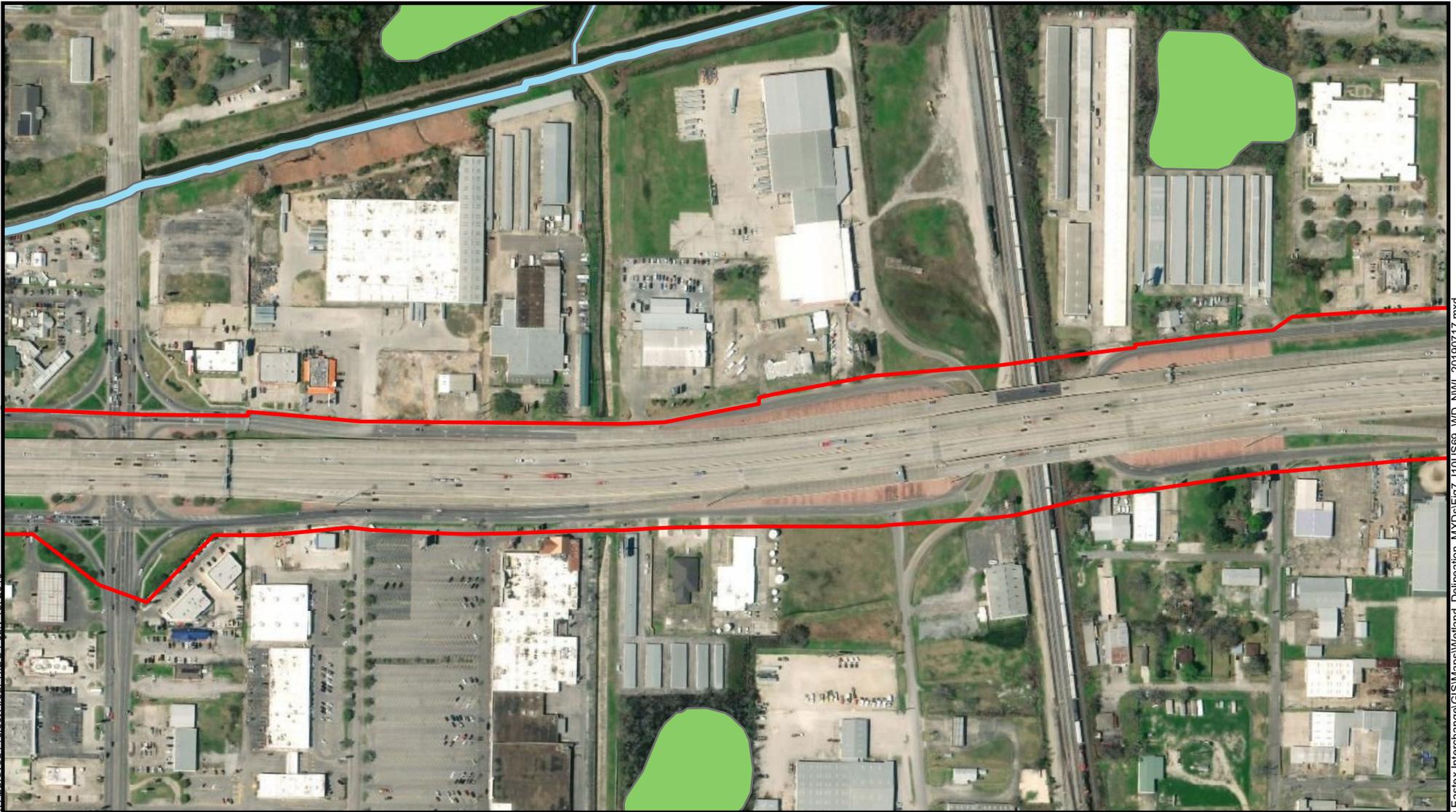
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

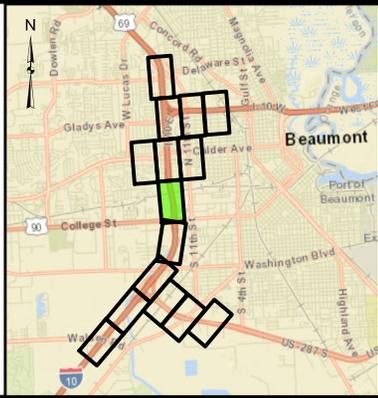


APPENDIX A
 FIGURE 7
 SHEET 7

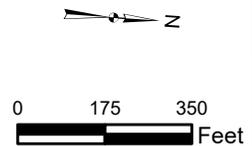
DATE:
 JULY 2019



- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- RIVERINE



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP
 JEFFERSON COUNTY, TEXAS

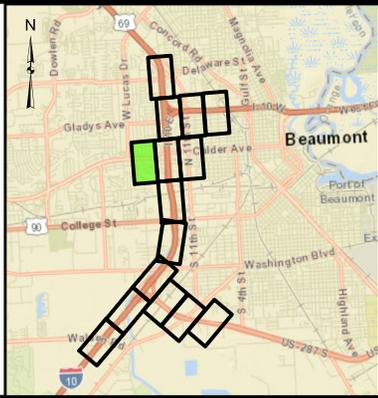


APPENDIX A
 FIGURE 7
 SHEET 8

DATE:
 JULY 2019

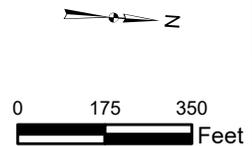


-  PROJECT AREA
-  FRESHWATER FORESTED/SHRUB WETLAND
-  FRESHWATER POND
-  RIVERINE



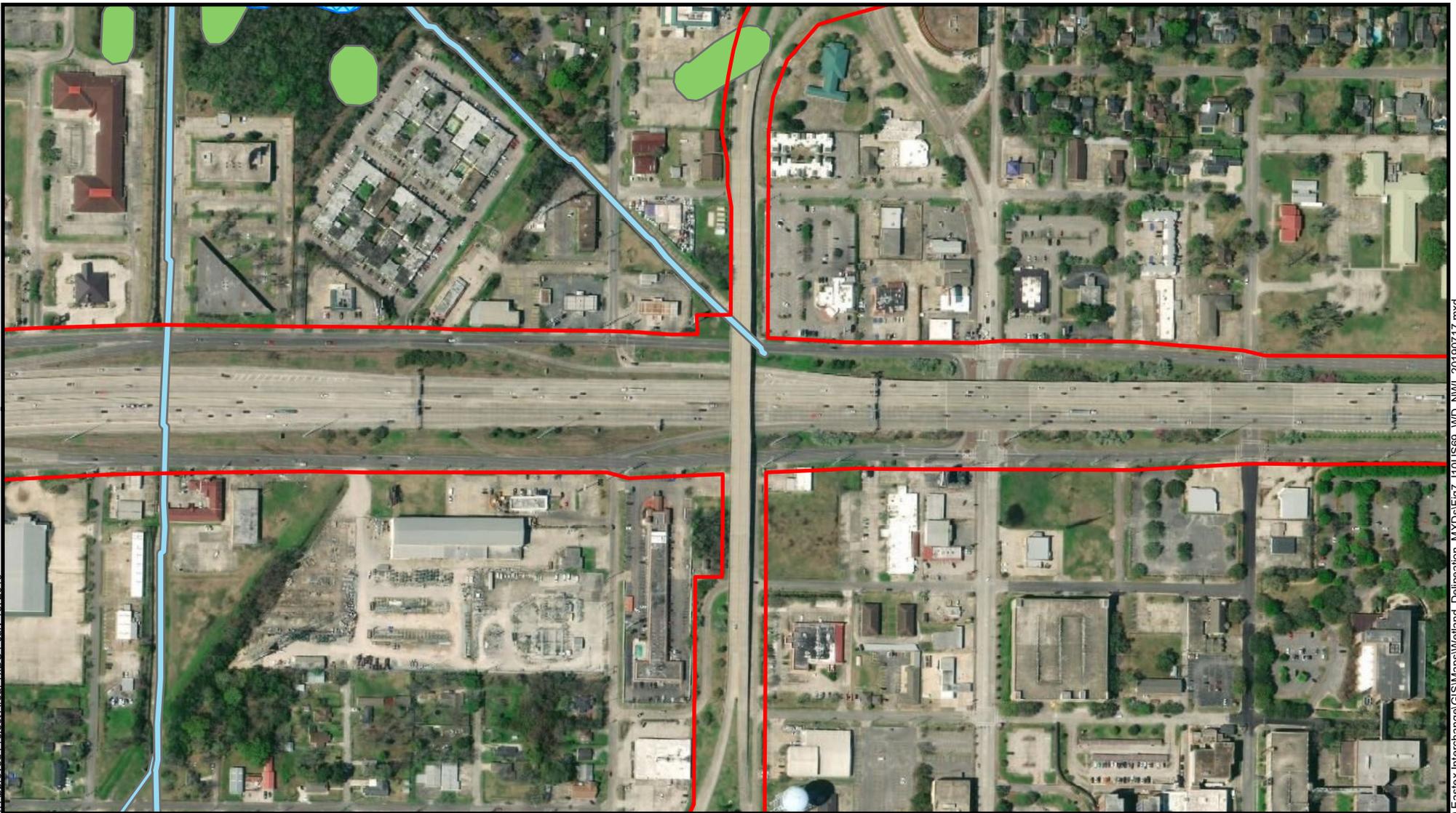
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

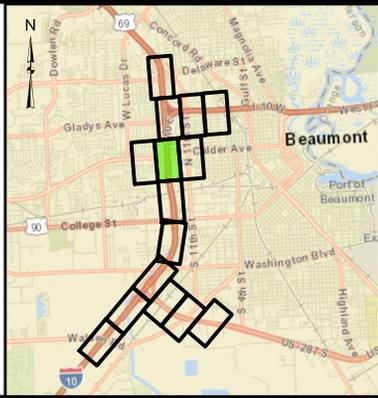


APPENDIX A
FIGURE 7
SHEET 9

DATE:
JULY 2019

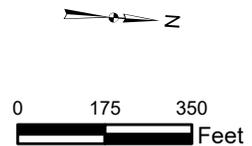


- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- RIVERINE



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

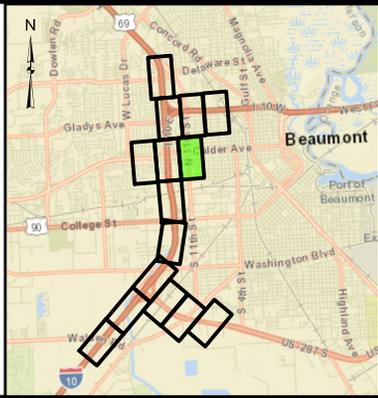


APPENDIX A
 FIGURE 7
 SHEET 10

DATE:
 JULY 2019

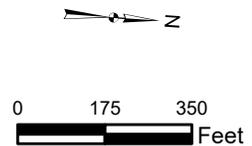


-  PROJECT AREA
-  NWI WETLAND TYPE
-  RIVERINE



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

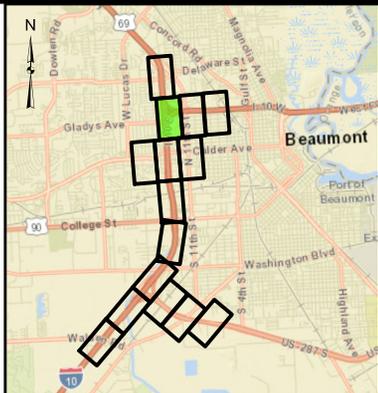


APPENDIX A
FIGURE 7
SHEET 11

DATE:
JULY 2019

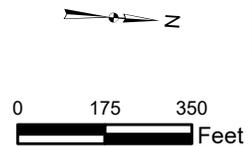


 PROJECT AREA



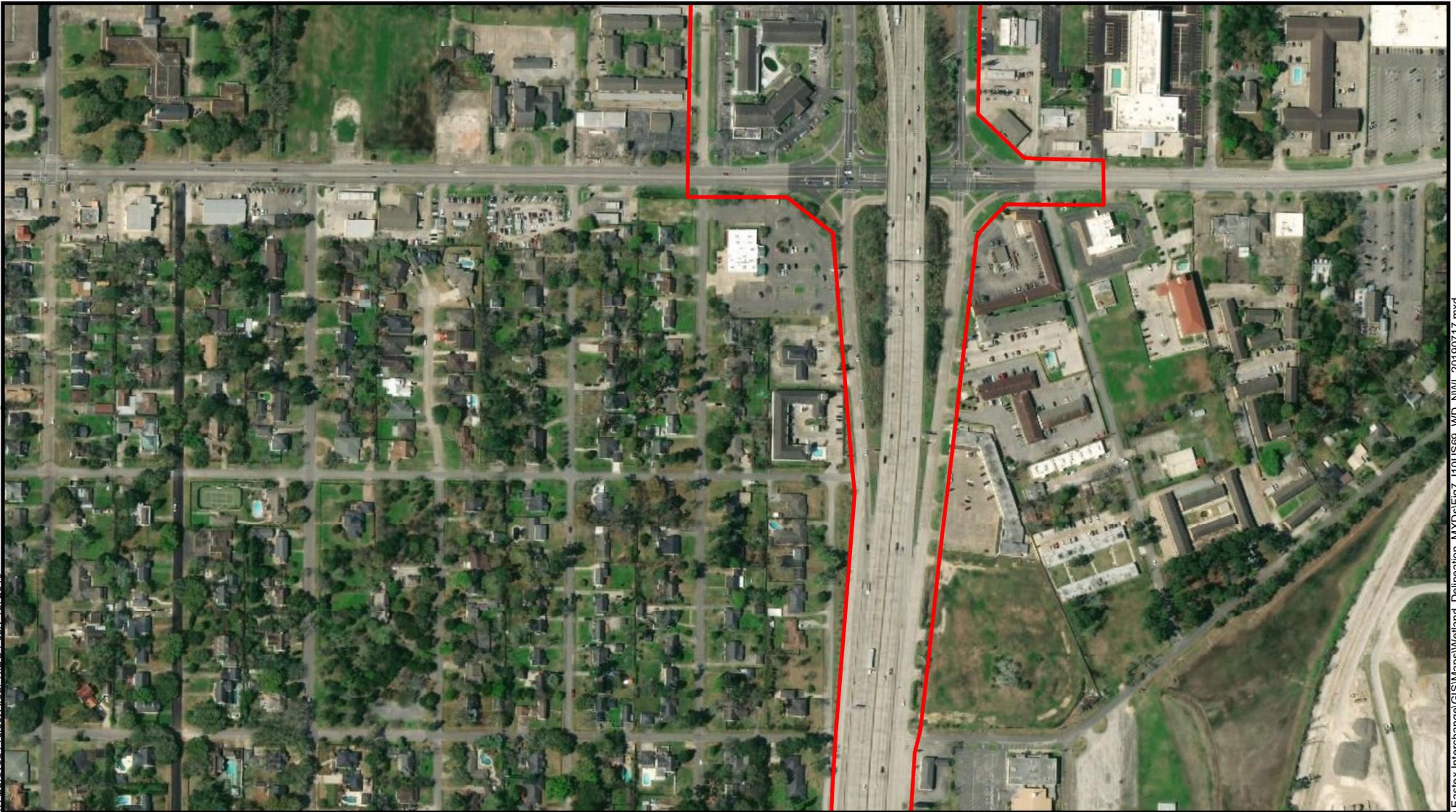
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

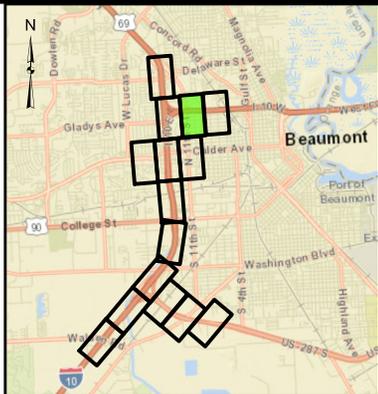


APPENDIX A
 FIGURE 7
 SHEET 12

DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
CSJ: 0028-13-135 & 0739-02-140
NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS



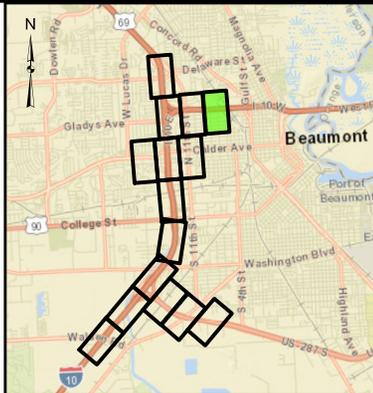
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APPENDIX A
FIGURE 7
SHEET 13

DATE:
JULY 2019

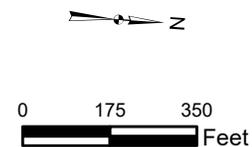


- PROJECT AREA
- NWI WETLAND TYPE
- FRESHWATER EMERGENT WETLAND



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS

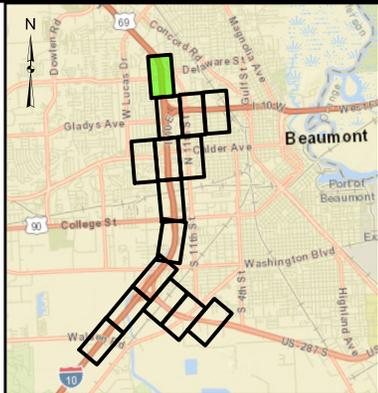


APPENDIX A
FIGURE 7
SHEET 14

DATE:
JULY 2019

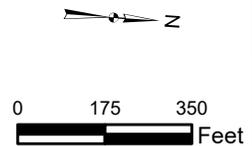


-  PROJECT AREA
-  FRESHWATER POND



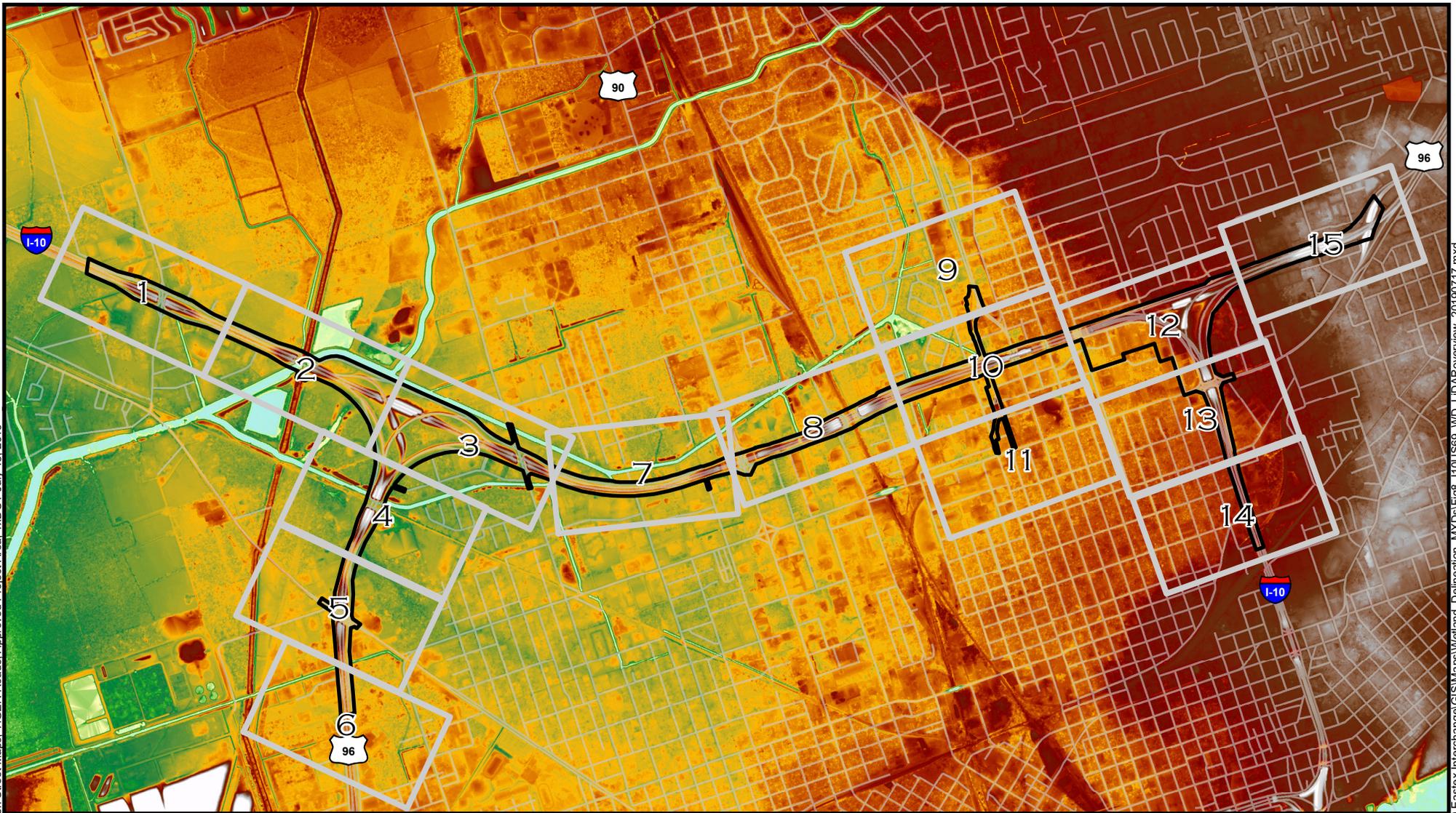
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 NWI WETLAND MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 7
 SHEET 15

DATE:
 JULY 2019

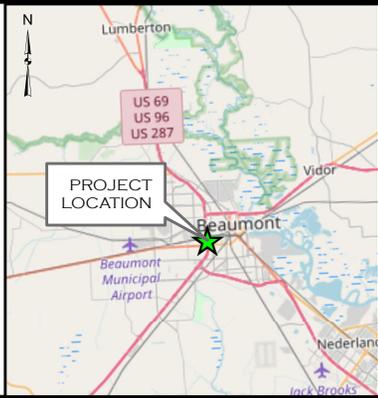


Project Area

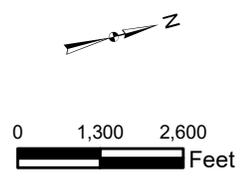
ELEVATION (FT)

— HIGH : 73.65

— LOW : -6.17

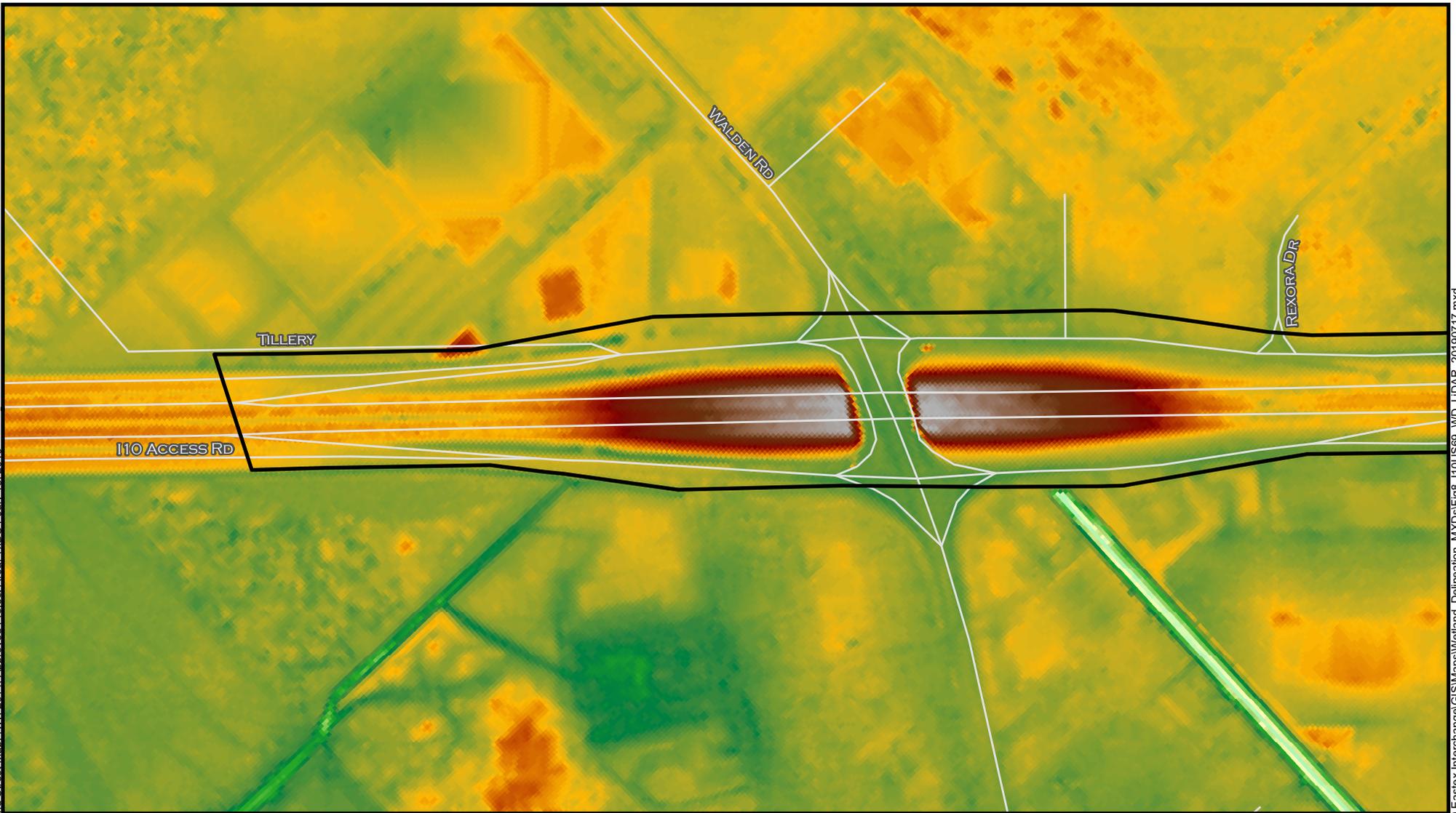


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR OVERVIEW MAP
 JEFFERSON COUNTY, TEXAS

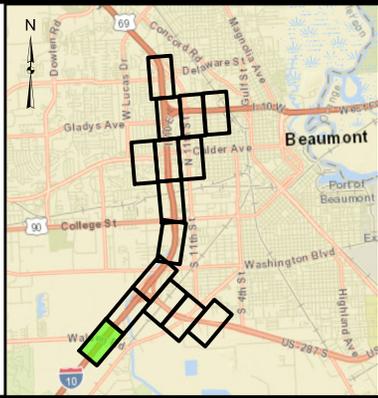


APPENDIX A
 FIGURE 8

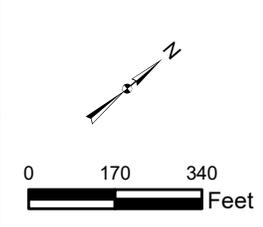
DATE:
 JULY 2019



 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17

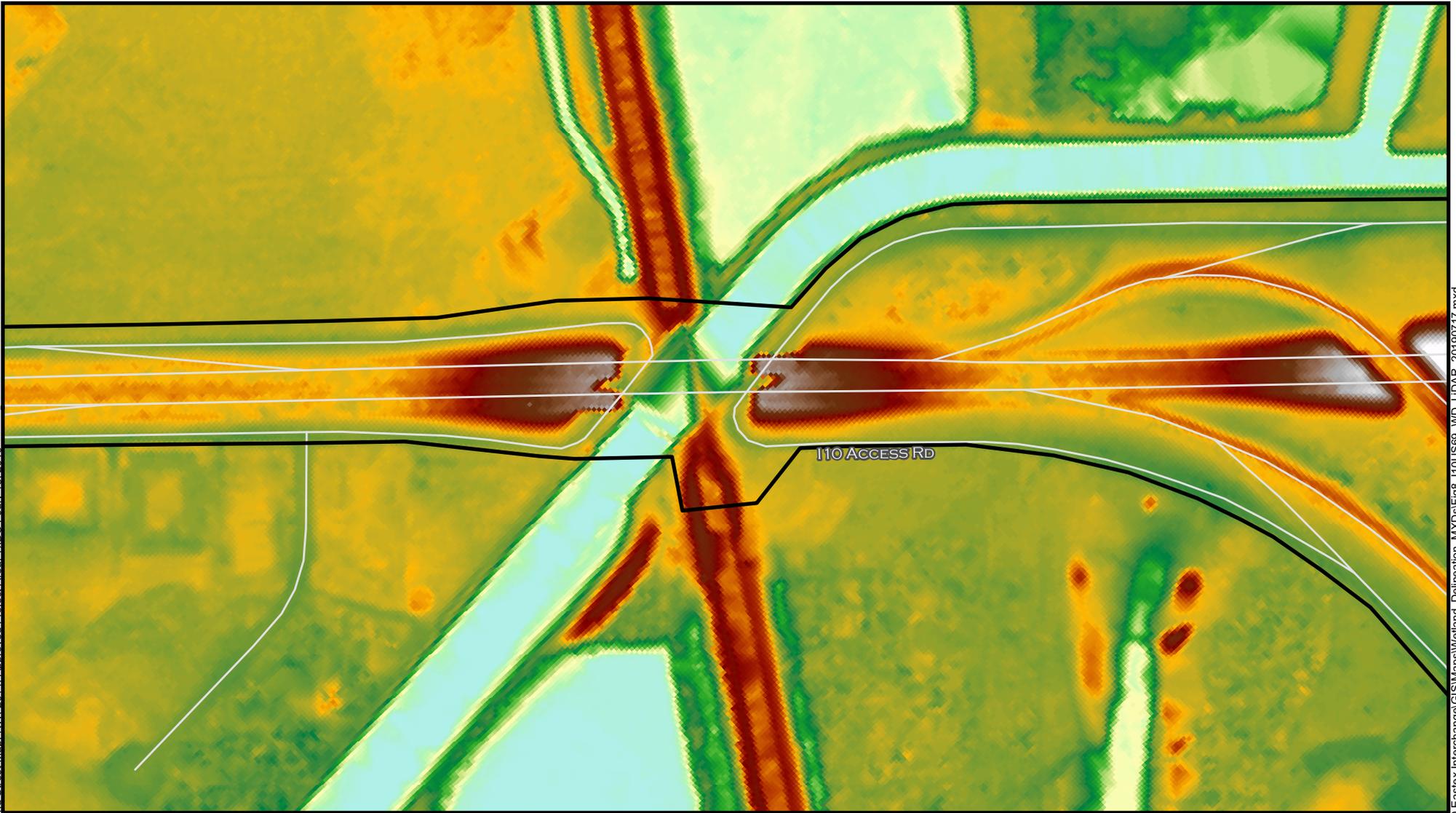


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP
 JEFFERSON COUNTY, TEXAS

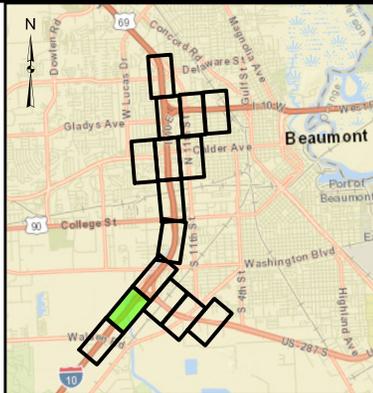


APPENDIX A
 FIGURE 8
 SHEET 1

 DATE:
 JULY 2019

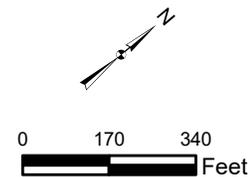


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



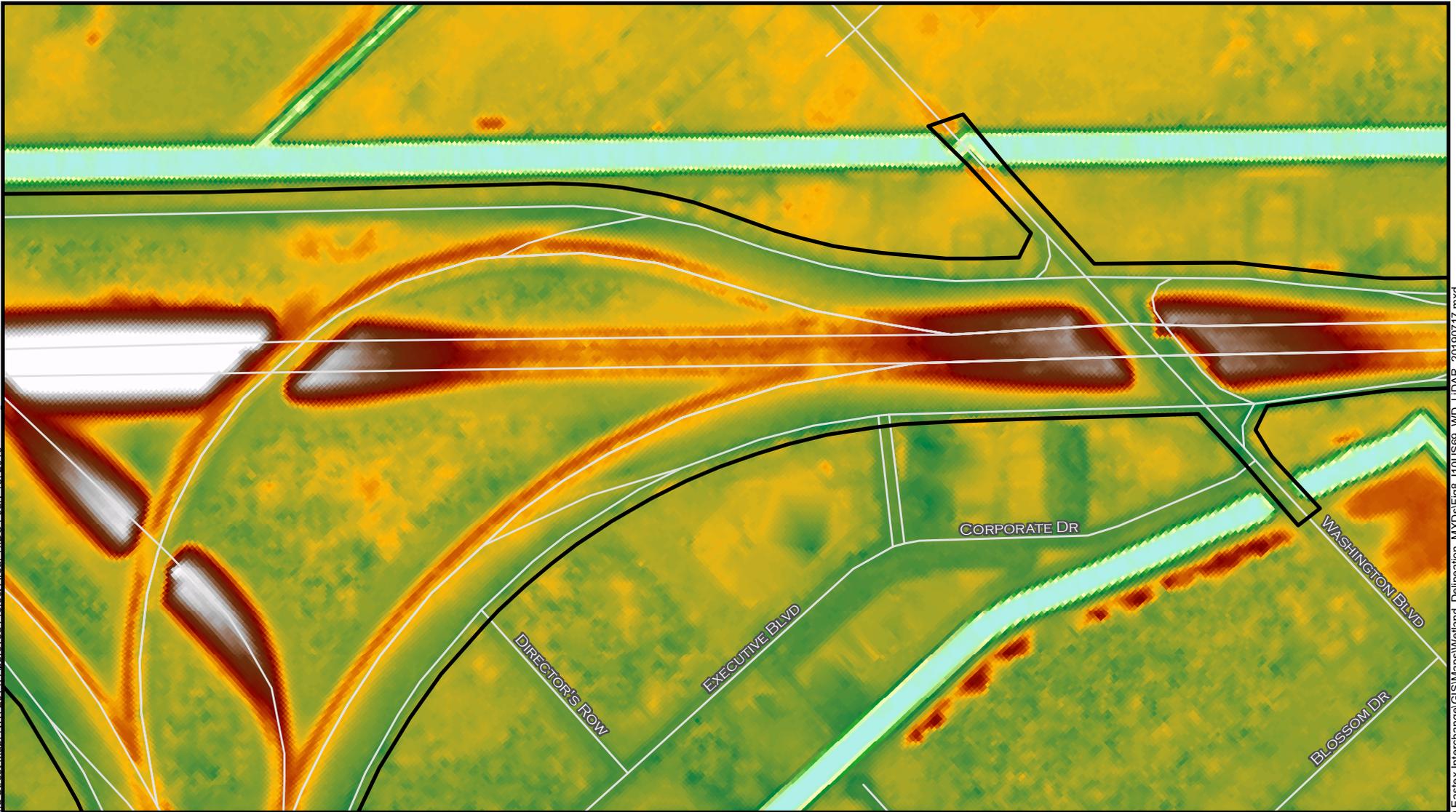
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

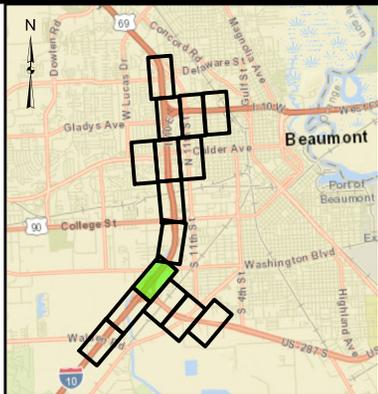


APPENDIX A
 FIGURE 8
 SHEET 2

DATE:
 JULY 2019

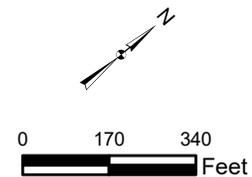


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



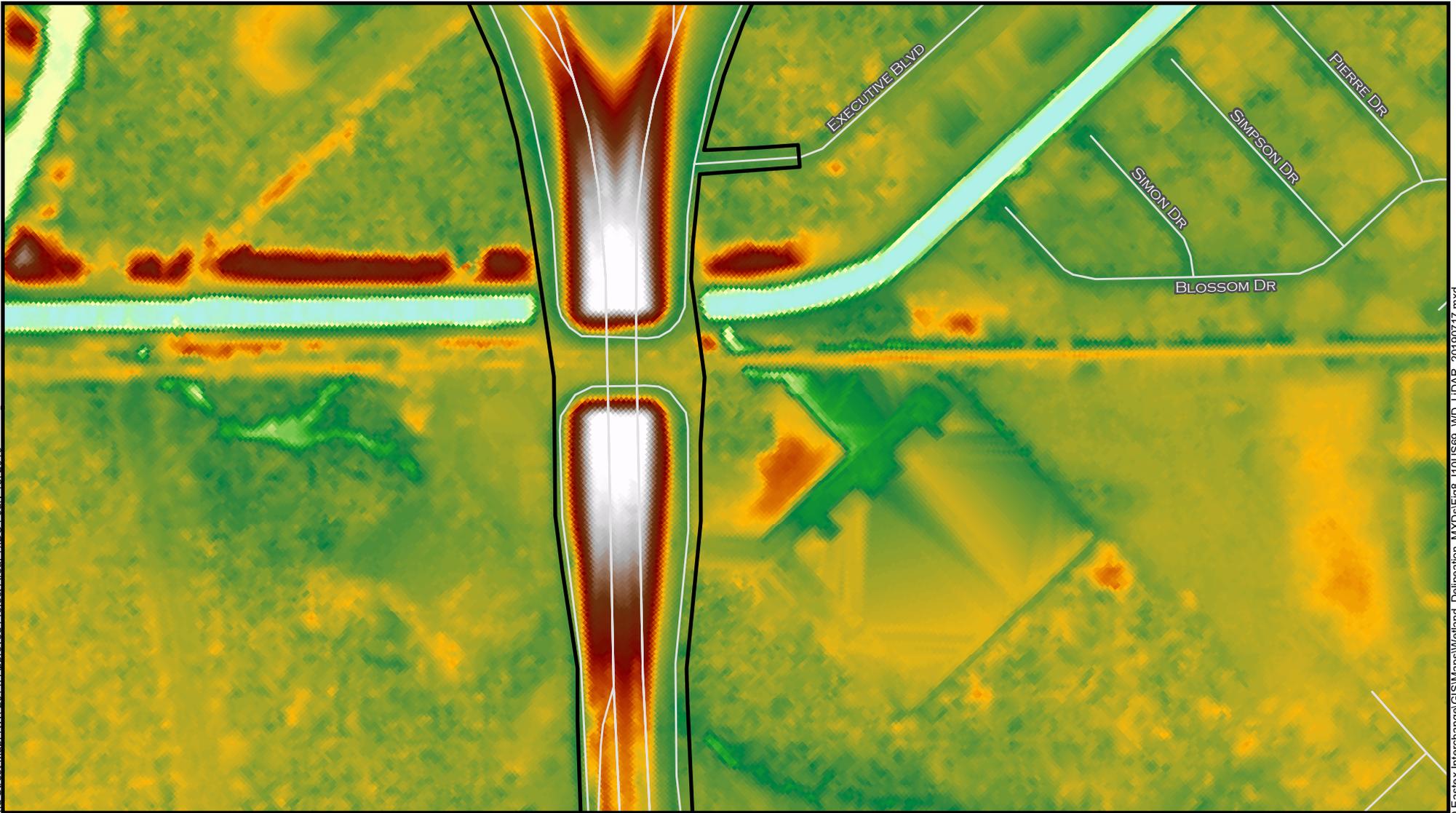
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

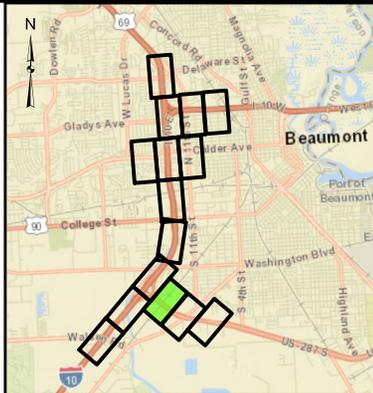


APPENDIX A
 FIGURE 8
 SHEET 3

DATE:
 JULY 2019

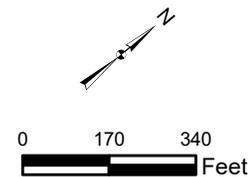


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



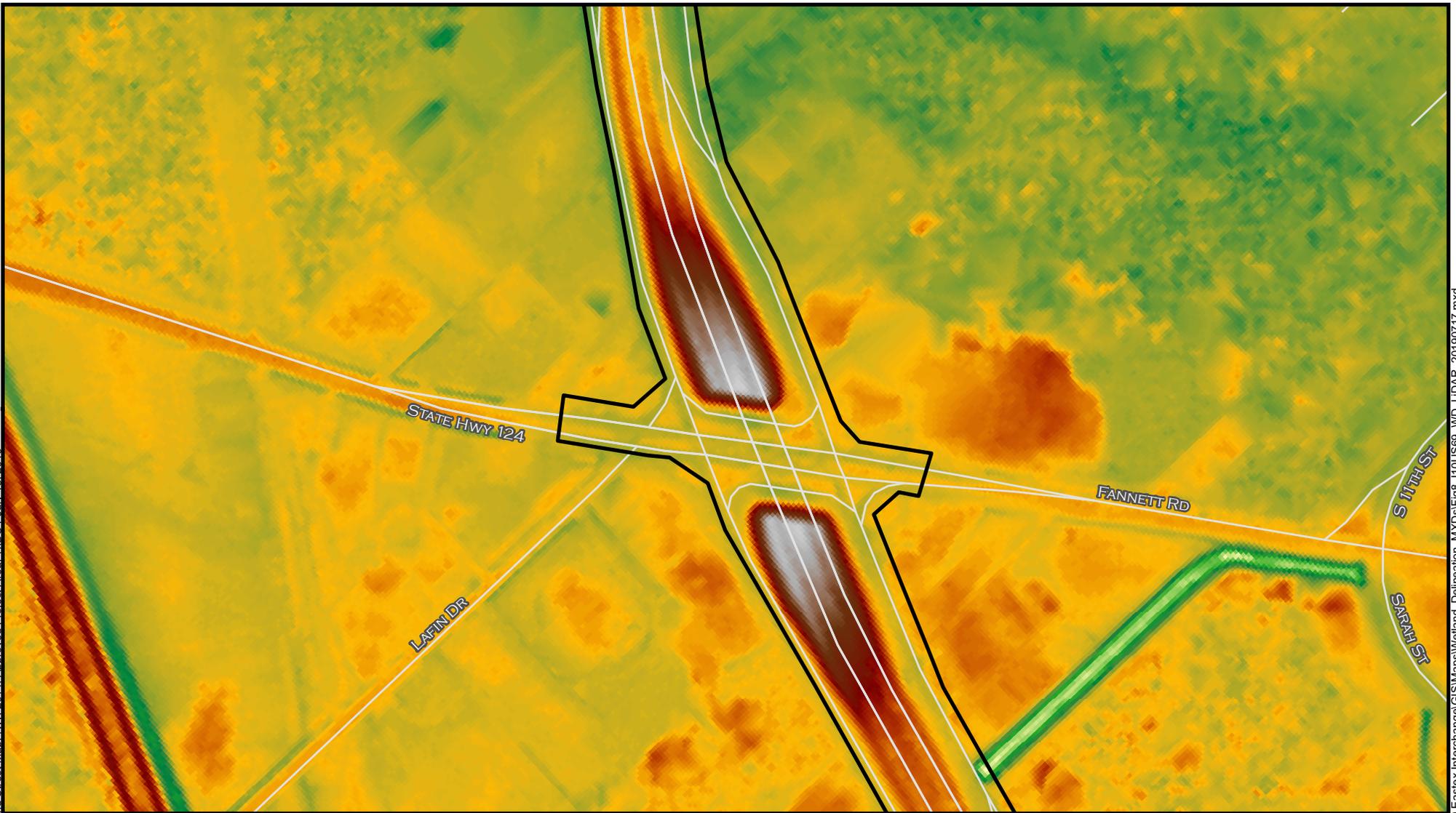
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

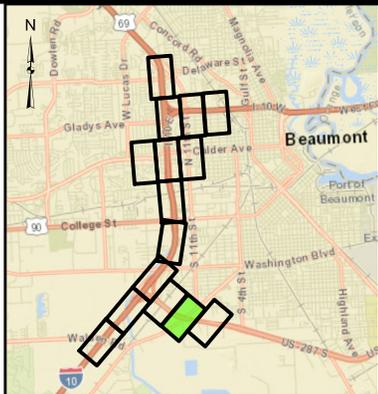


APPENDIX A
 FIGURE 8
 SHEET 4

DATE:
 JULY 2019

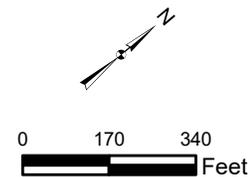


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



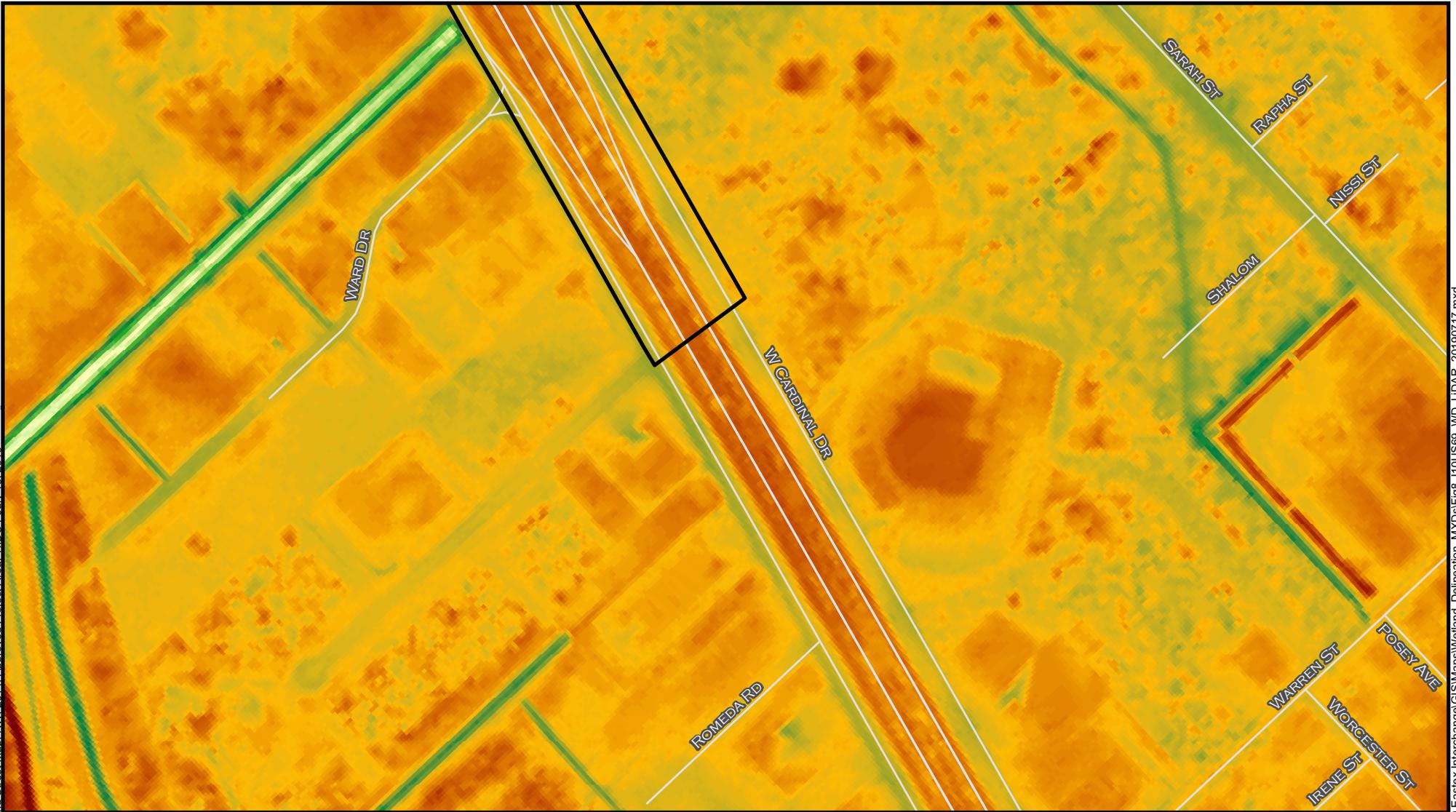
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

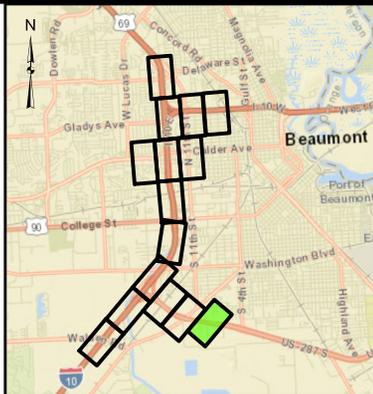


APPENDIX A
 FIGURE 8
 SHEET 5

DATE:
 JULY 2019

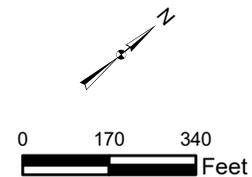


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



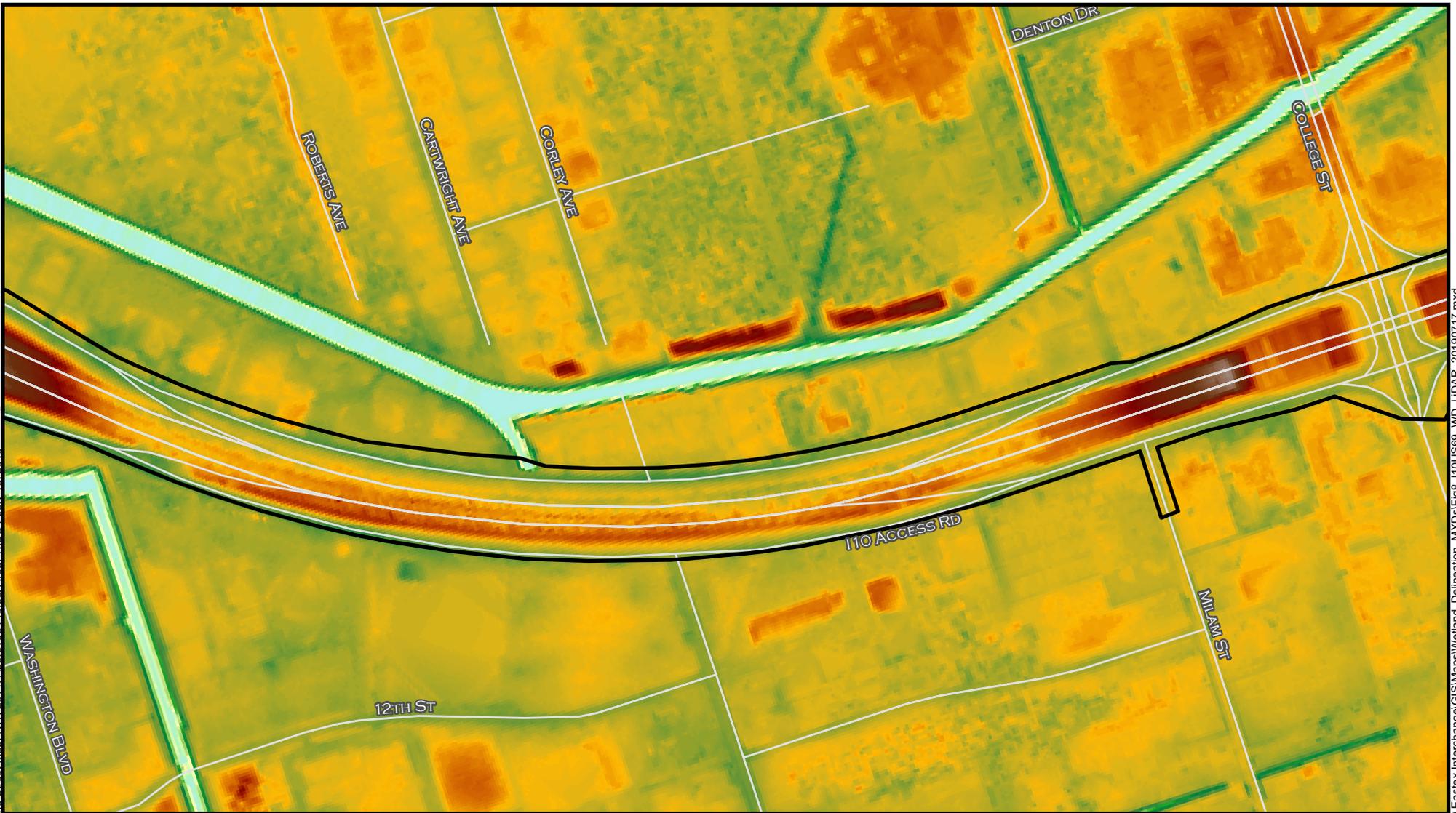
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

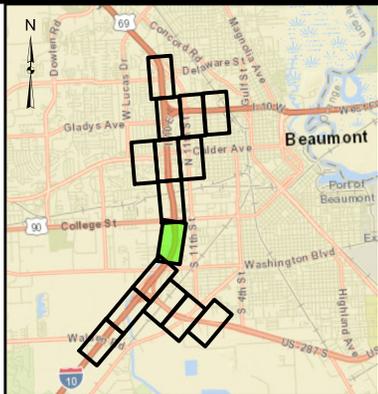


APPENDIX A
 FIGURE 8
 SHEET 6

DATE:
 JULY 2019

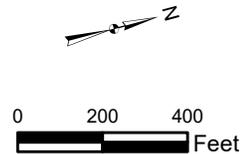


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



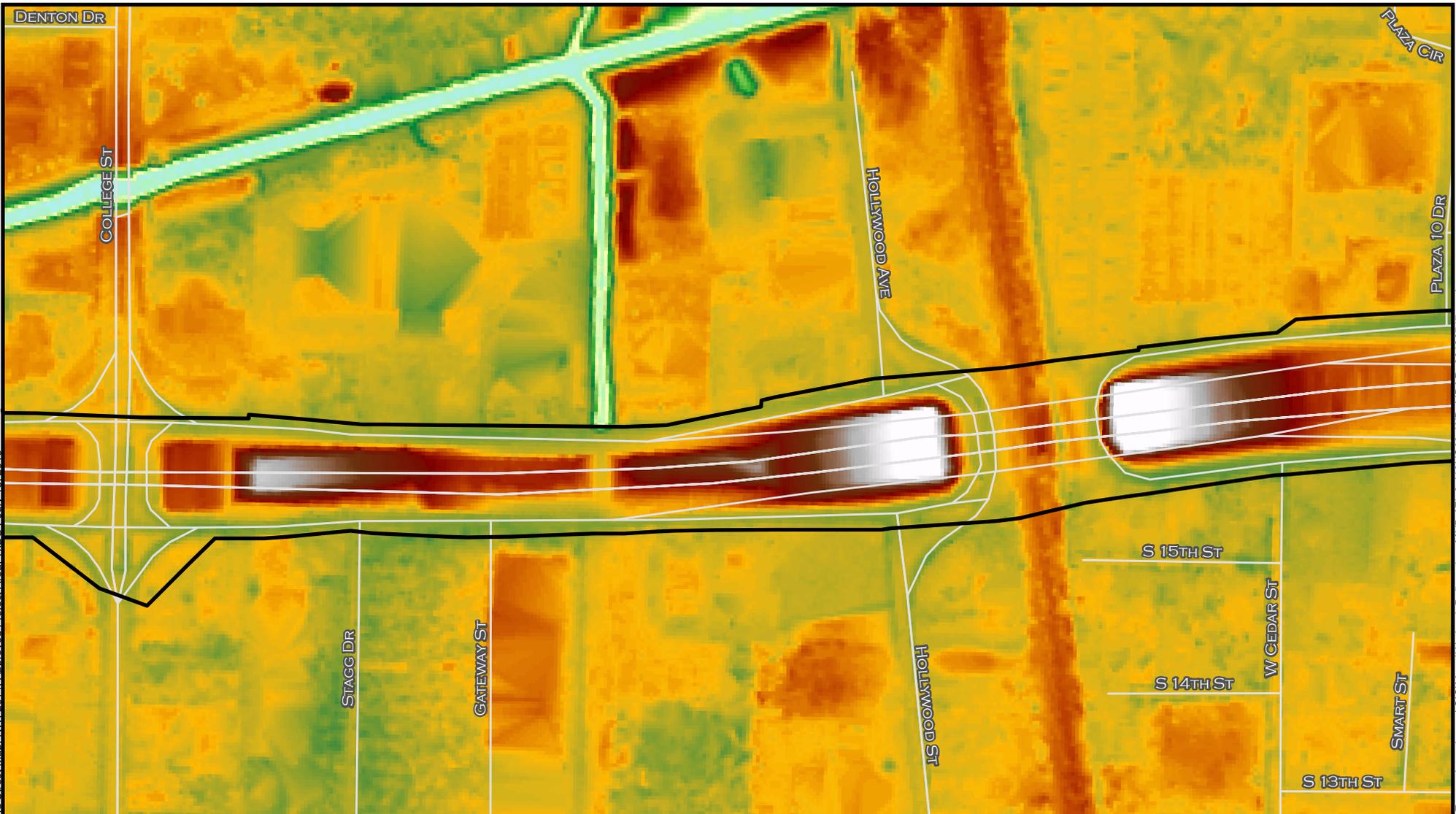
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

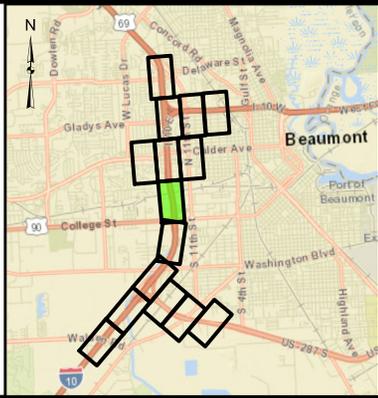


APPENDIX A
 FIGURE 8
 SHEET 7

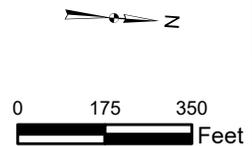
DATE:
 JULY 2019



 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17

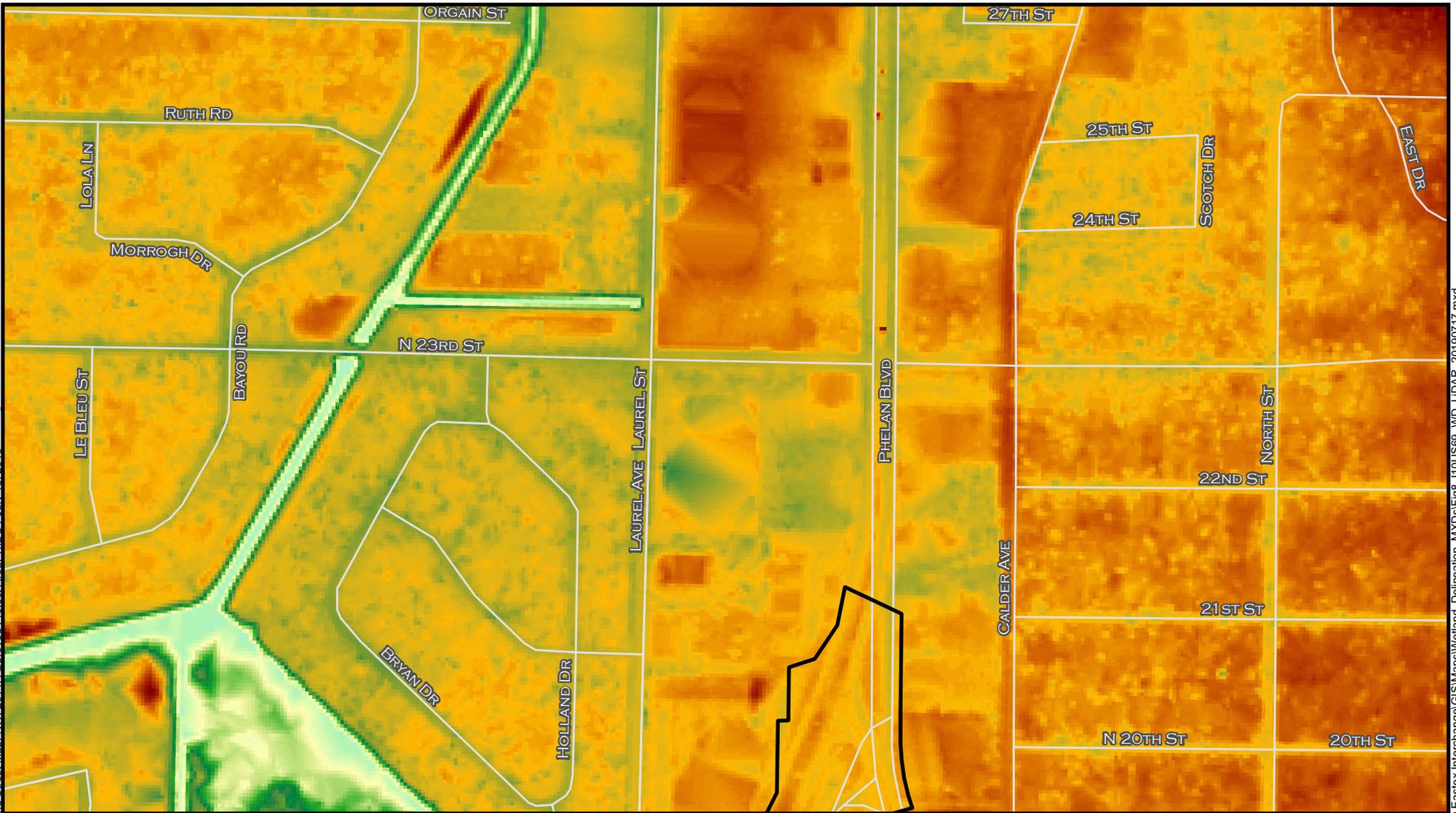


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP
 JEFFERSON COUNTY, TEXAS

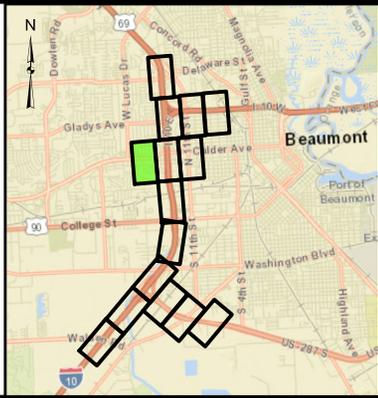


APPENDIX A
 FIGURE 8
 SHEET 8

DATE:
 JULY 2019

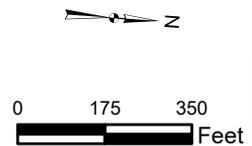


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 ELEVATION (FT)
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 LOW : -6.17



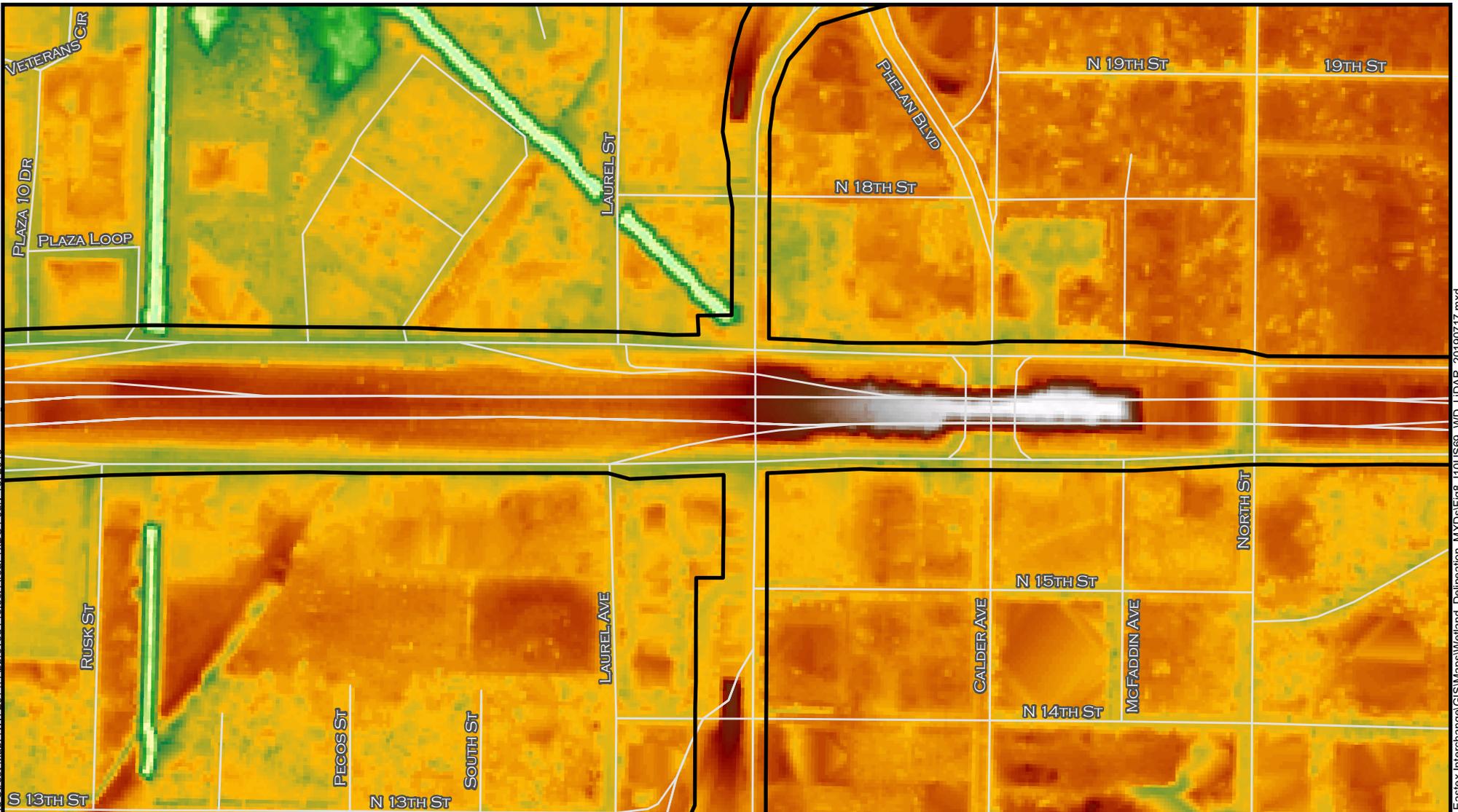
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

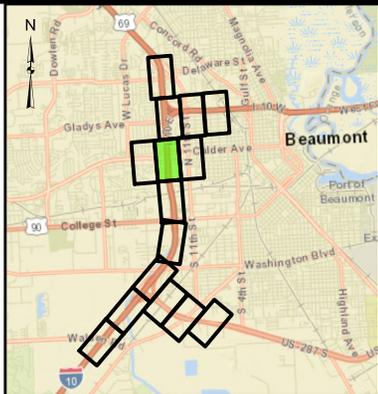


APPENDIX A
 FIGURE 8
 SHEET 9

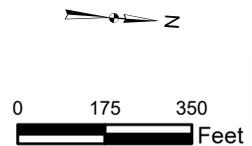
DATE:
 JULY 2019



 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17

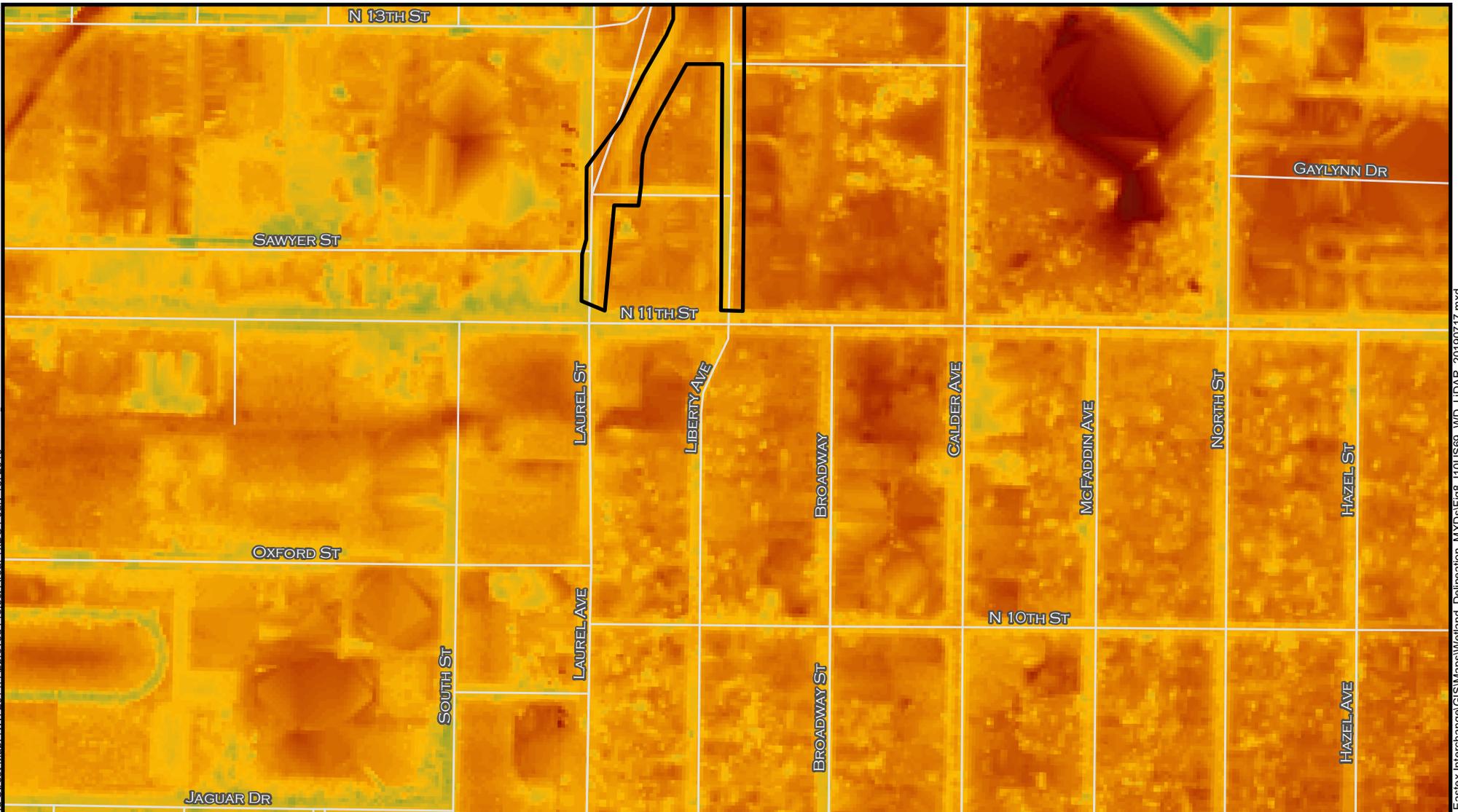


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP
 JEFFERSON COUNTY, TEXAS

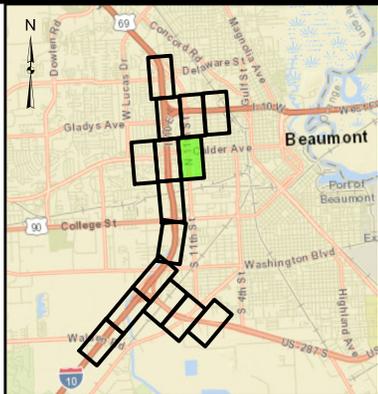


APPENDIX A
 FIGURE 8
 SHEET 10

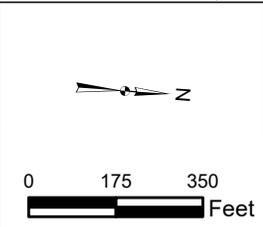
DATE:
 JULY 2019



 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17

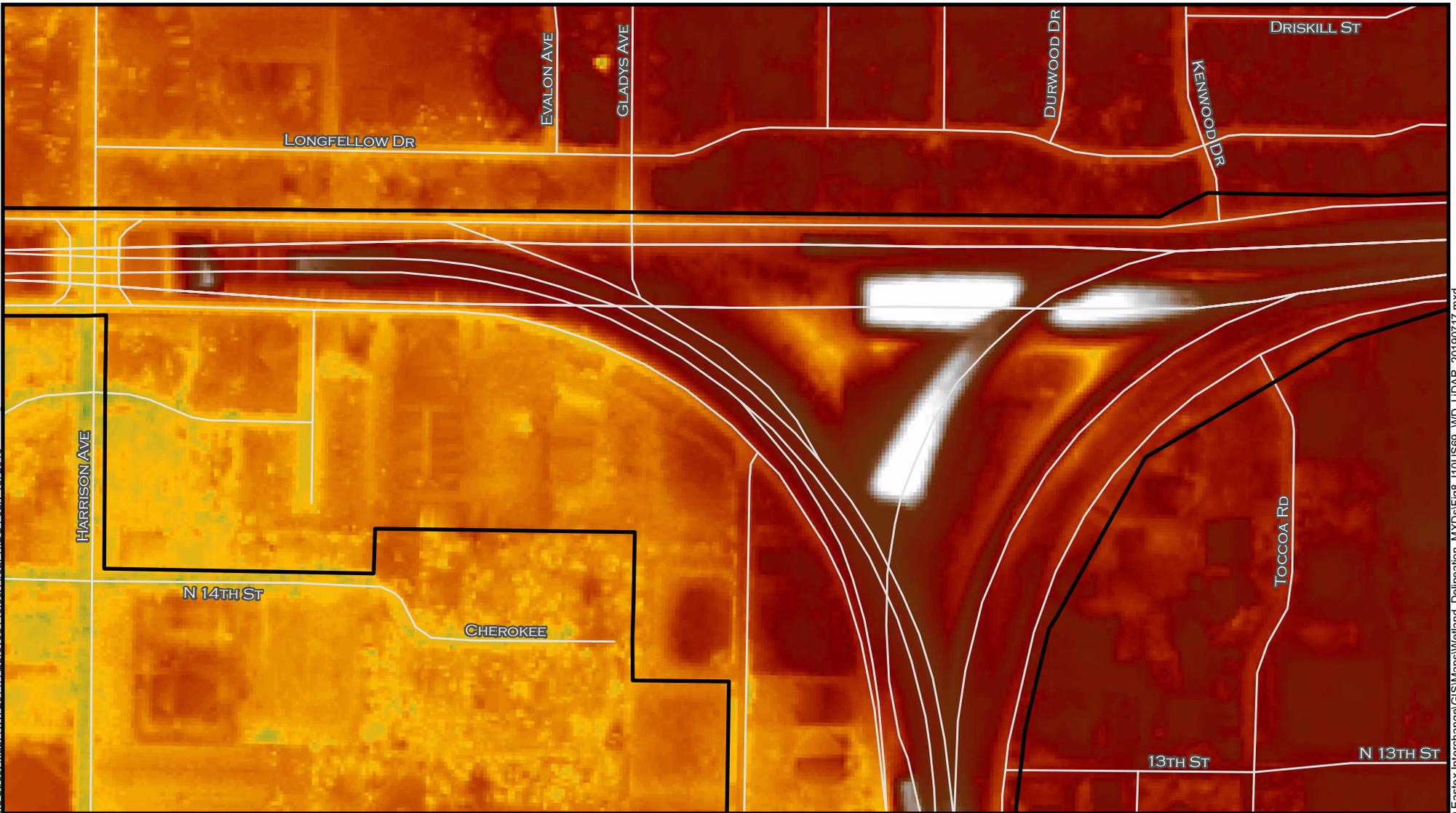


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP
 JEFFERSON COUNTY, TEXAS

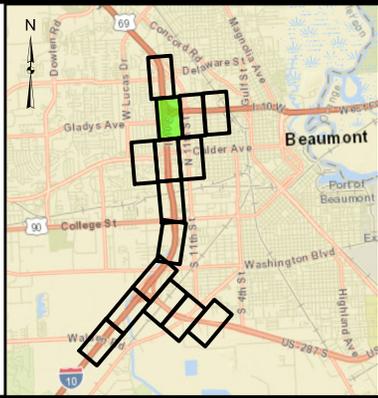


APPENDIX A
 FIGURE 8
 SHEET 11

 DATE:
 JULY 2019

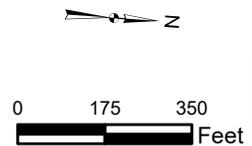


 PROJECT AREA
 ELEVATION (FT)
 HIGH : 73.65
 LOW : -6.17



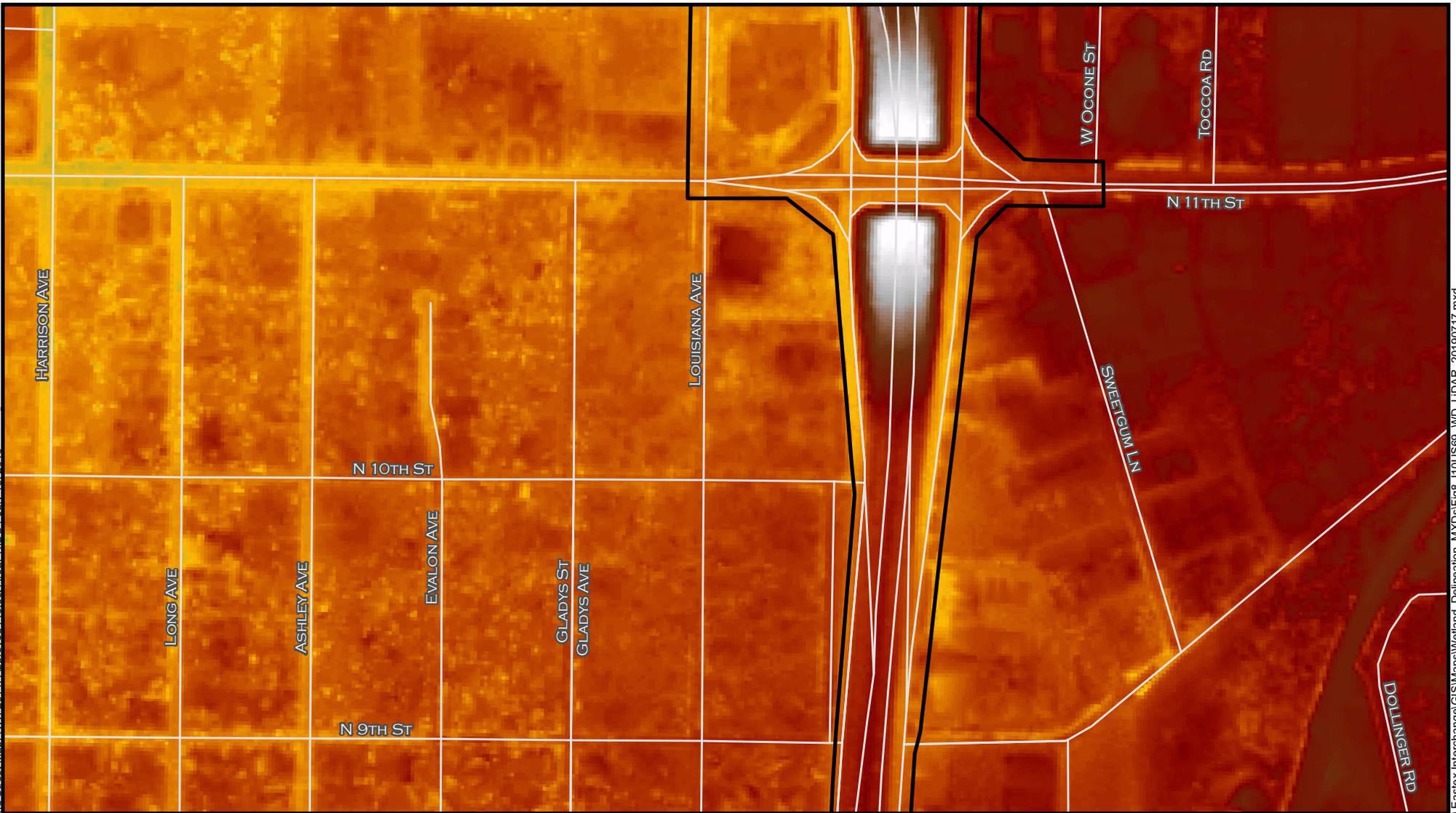
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 8
 SHEET 12

DATE:
 JULY 2019

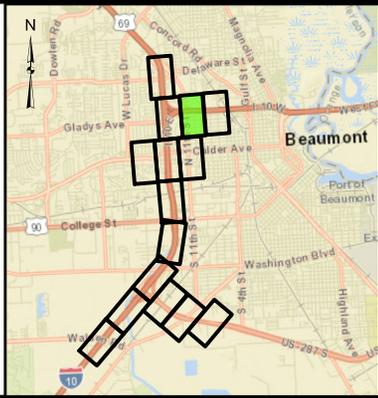


PROJECT AREA

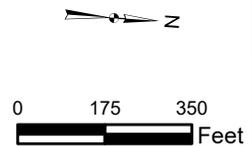
ELEVATION (FT)

High : 73.65

Low : -6.17

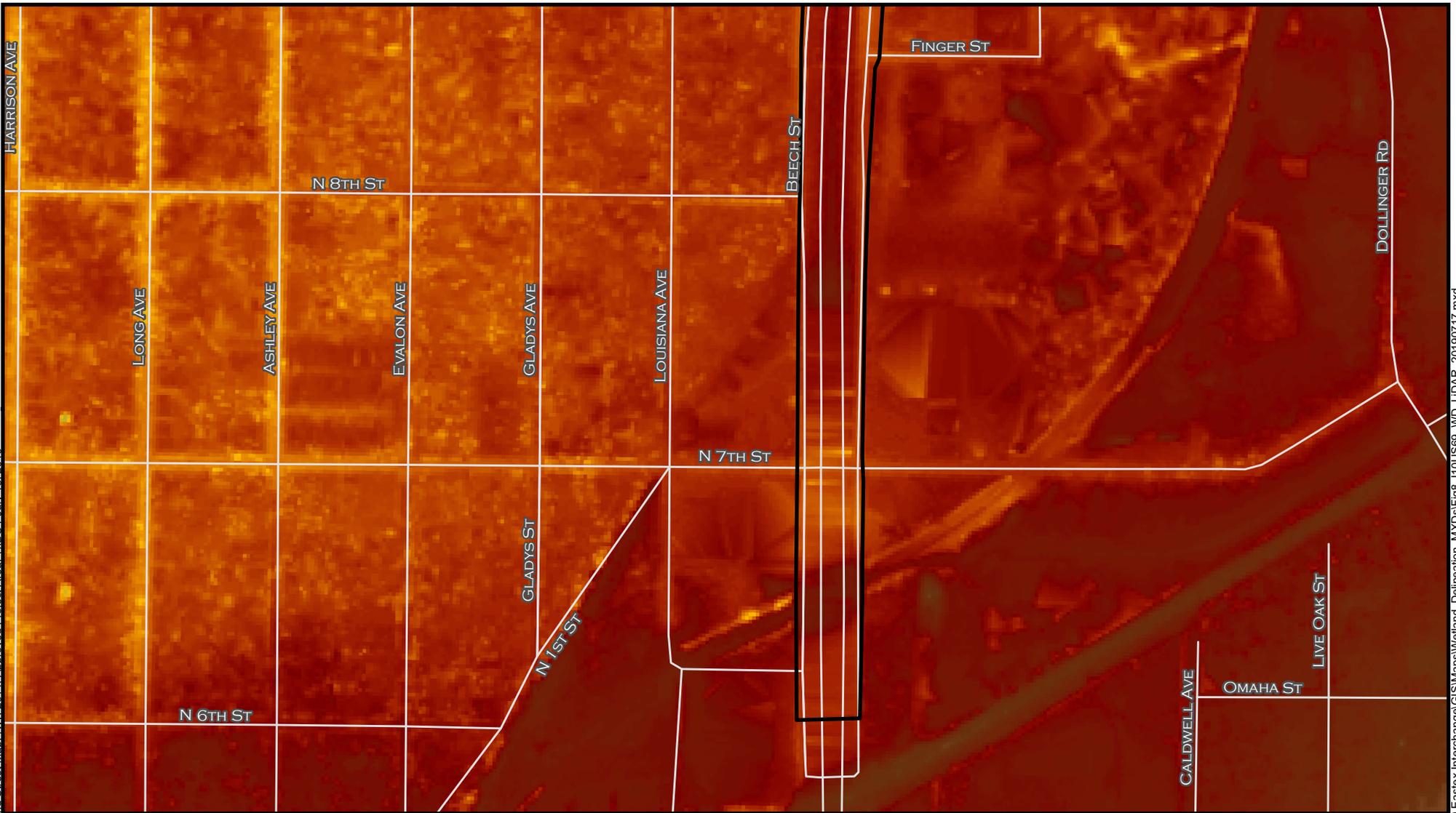


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP
 JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 8
 SHEET 13

DATE:
 JULY 2019

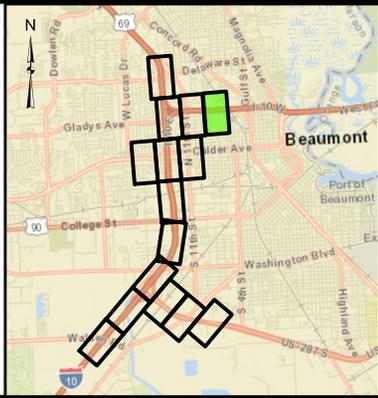


PROJECT AREA

ELEVATION (FT)

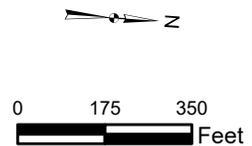
HIGH : 73.65

LOW : -6.17



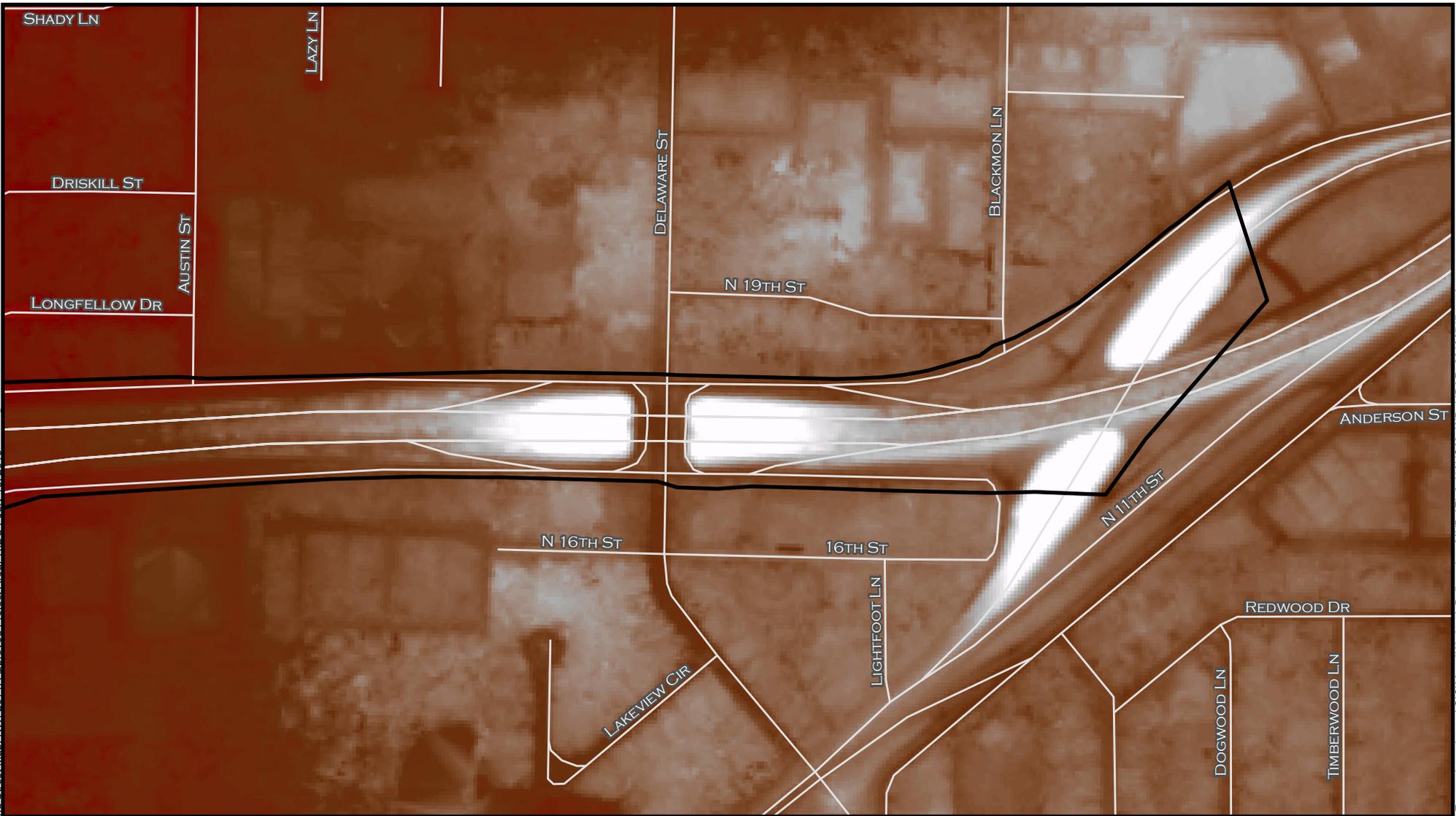
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 8
 SHEET 14

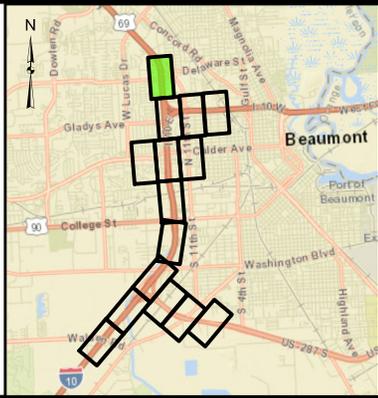
DATE:
 JULY 2019



PROJECT AREA

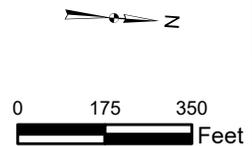
ELEVATION (FT)

- High : 73.65
- Low : -6.17



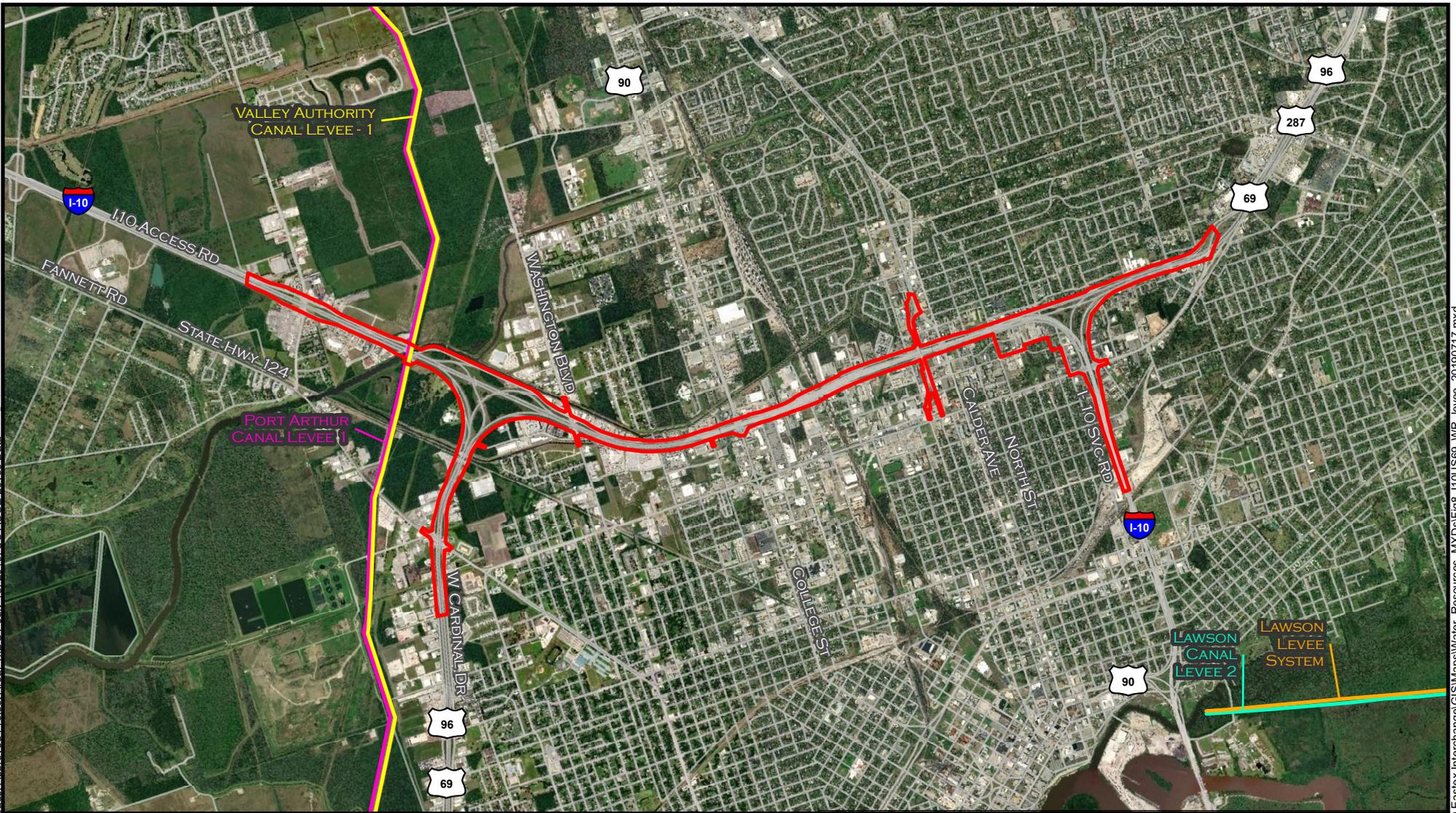
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LIDAR MAP

JEFFERSON COUNTY, TEXAS

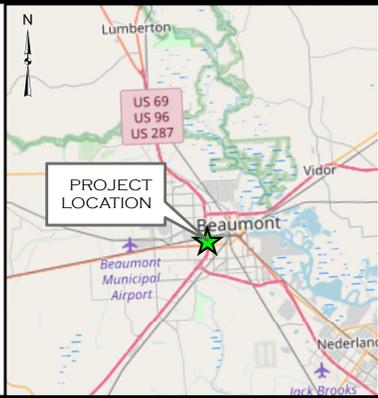


APPENDIX A
 FIGURE 8
 SHEET 15

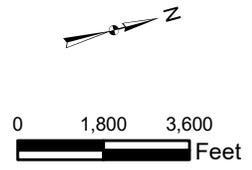
DATE:
 JULY 2019



- LAWSON CANAL LEVEL 2
- LAWSON LEVEE SYSTEM
- PORT ARTHUR CANAL LEVEL 1
- VALLEY AUTHORITY CANAL LEVEL 1
- PROJECT AREA

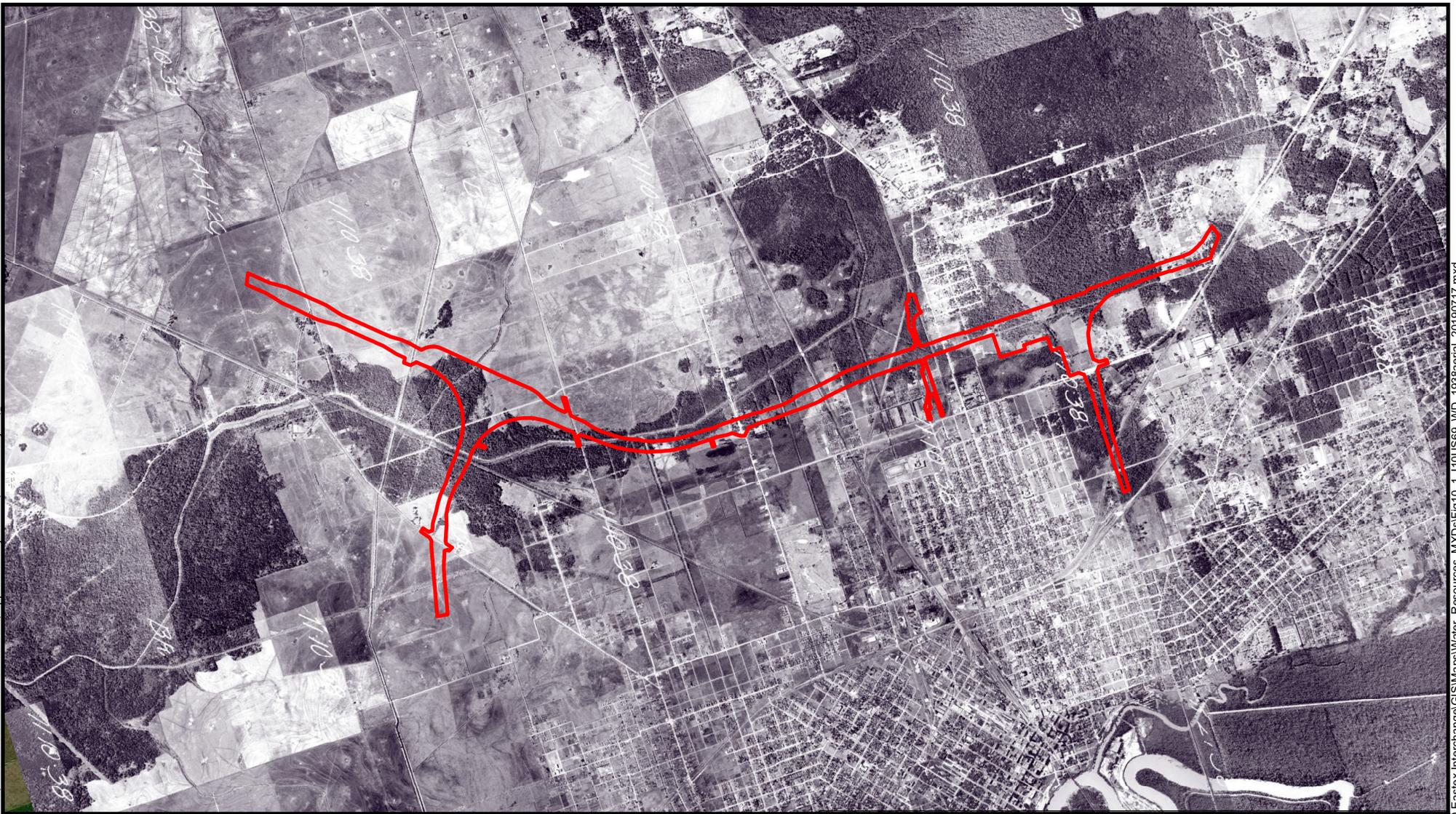


10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 LEVEE LOCATION MAP
 JEFFERSON COUNTY, TEXAS

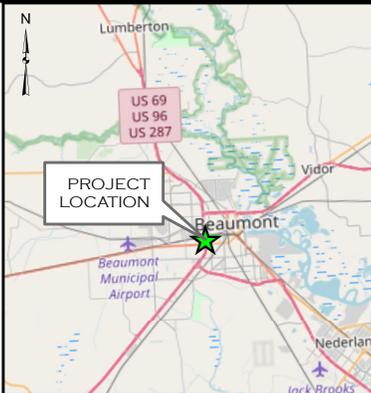


APPENDIX A
 FIGURE 9

DATE:
 JULY 2019

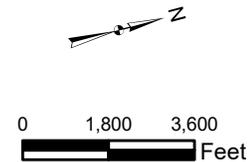


 PROJECT AREA



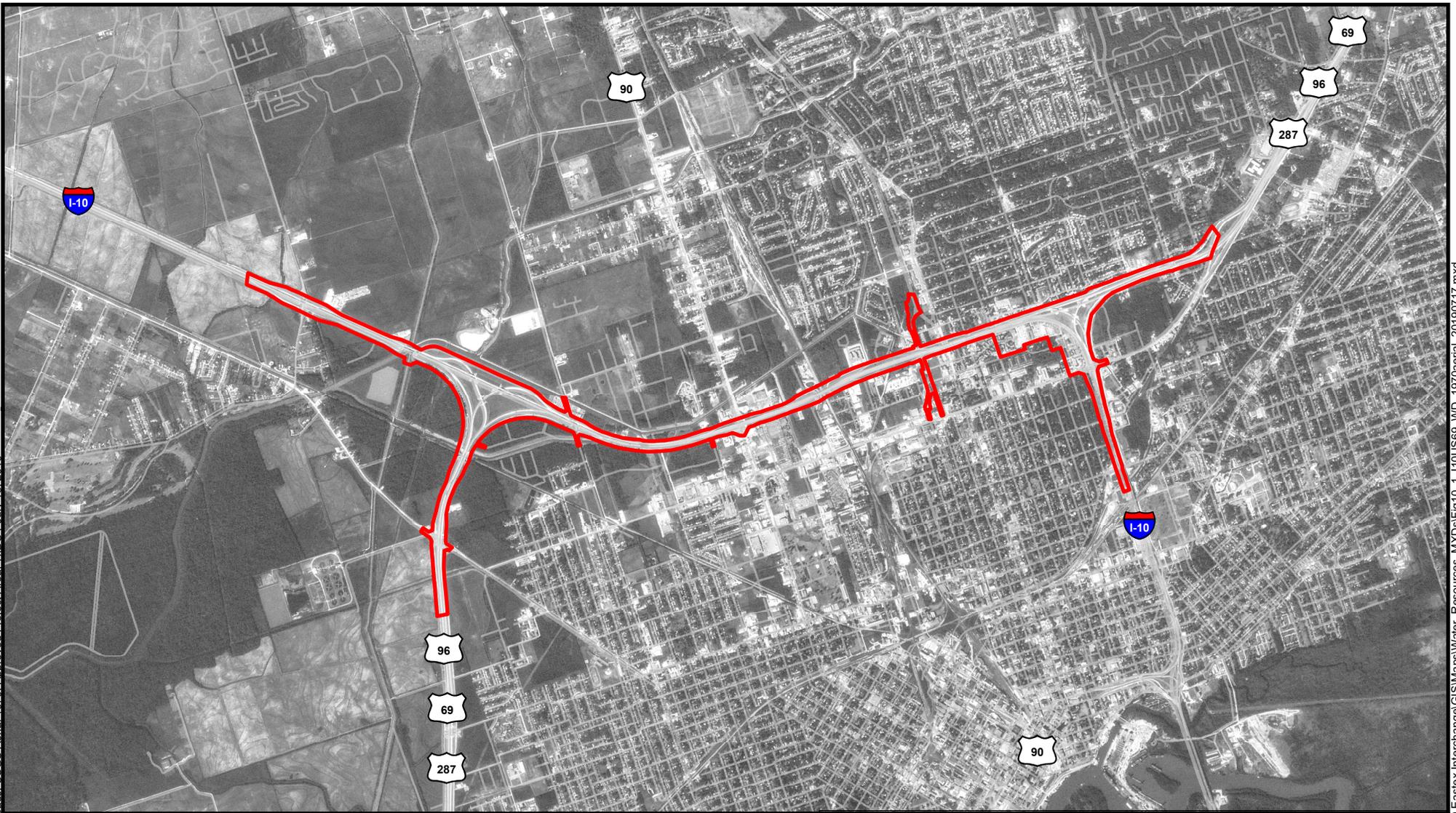
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 1938 HISTORICAL AERIAL PHOTOGRAPH MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 10.1

DATE:
 JULY 2019

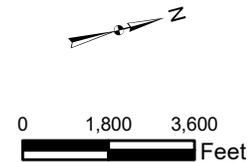


 PROJECT AREA



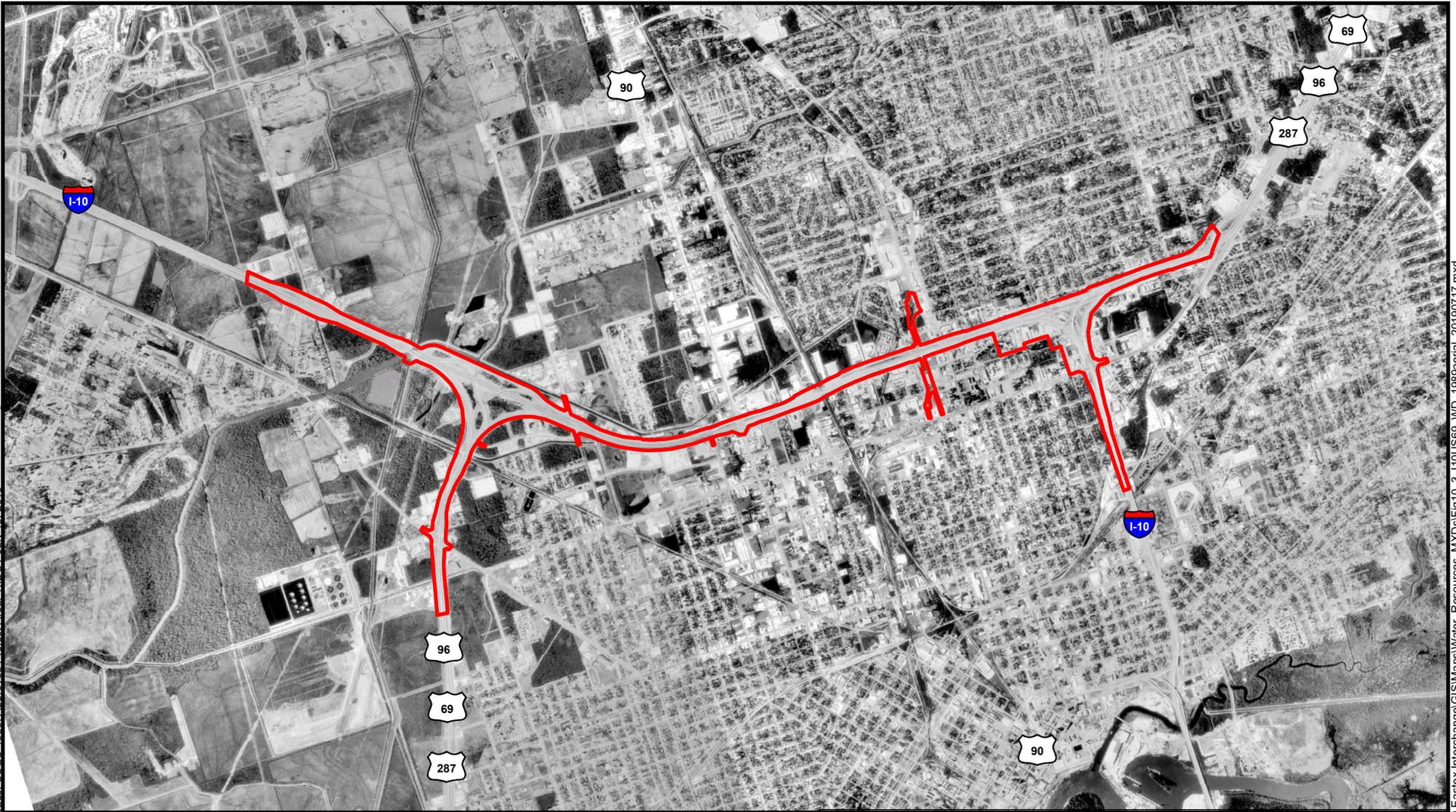
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 1970 HISTORICAL AERIAL PHOTOGRAPH MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 10.2

DATE:
 JULY 2019

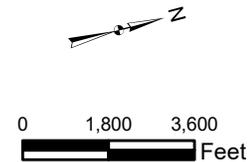


 PROJECT AREA



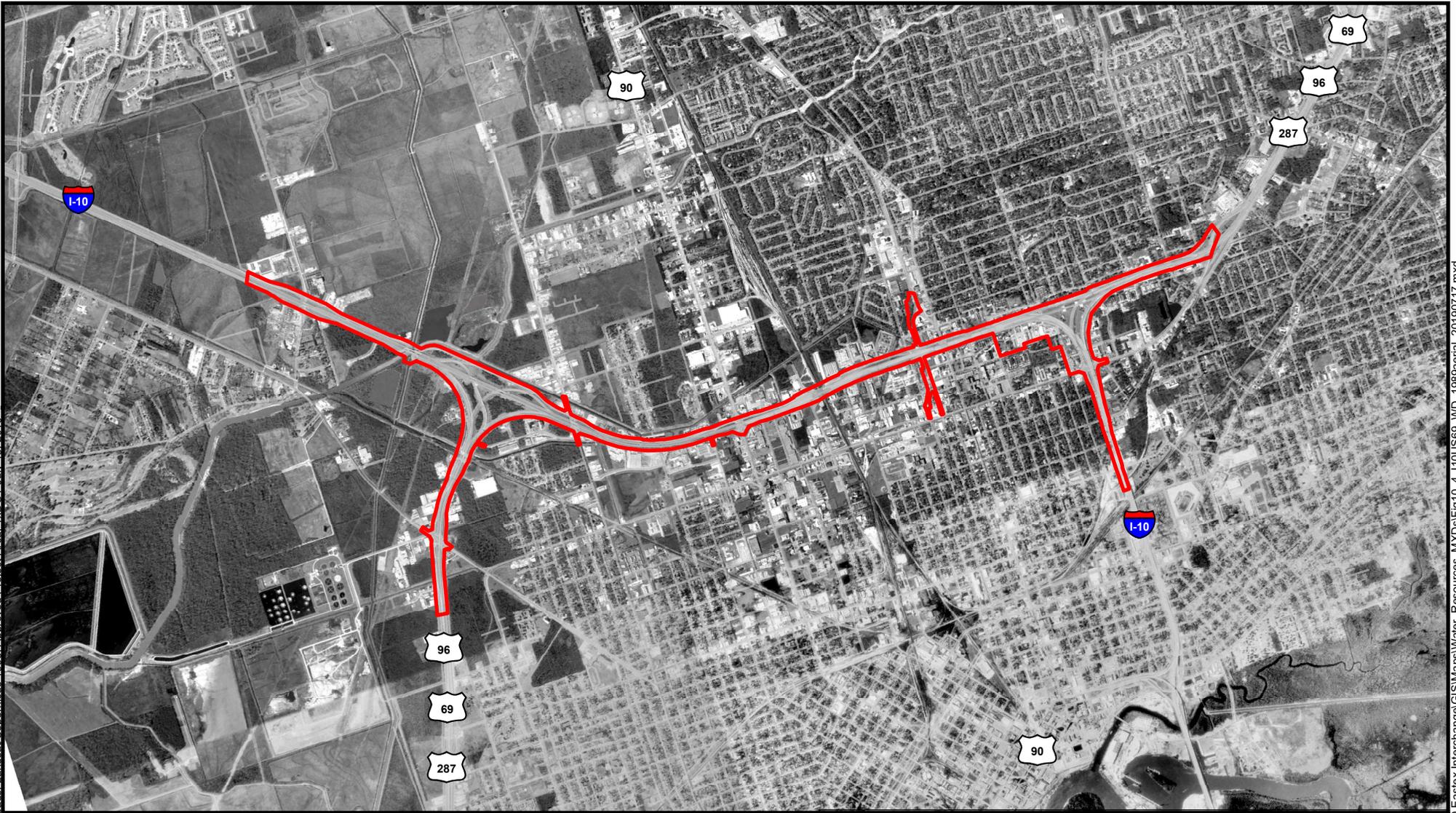
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 1989 HISTORICAL AERIAL PHOTOGRAPH MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 10.3

DATE:
 JULY 2019

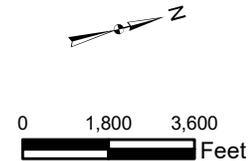


 PROJECT AREA



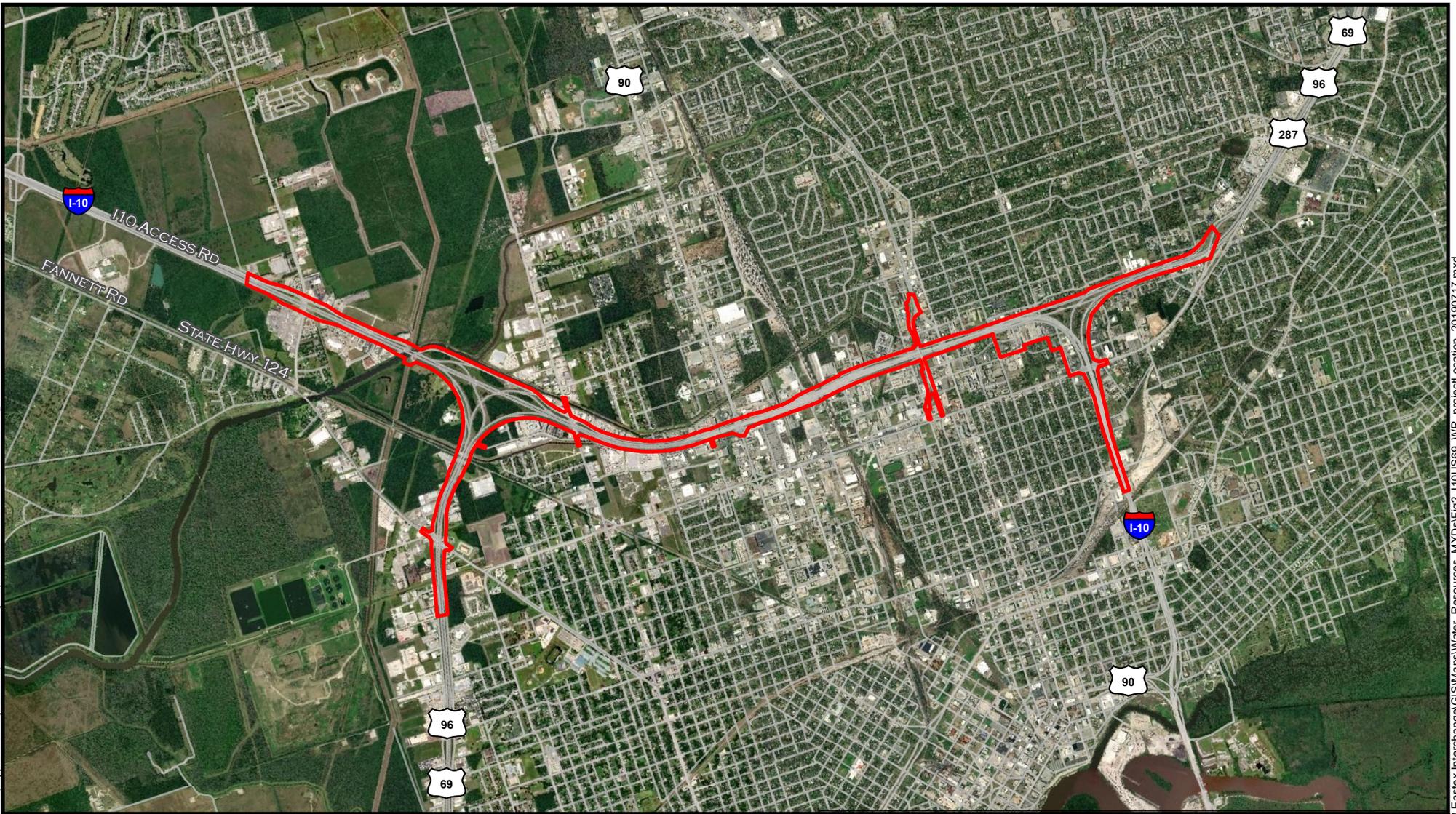
10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 1995 HISTORICAL AERIAL PHOTOGRAPH MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 10.4

DATE:
 JULY 2019



 PROJECT AREA



10/69 INTERCHANGES PROJECT
 CSJ: 0028-13-135 & 0739-02-140
 2017 HISTORIC AERIAL PHOTOGRAPH MAP

JEFFERSON COUNTY, TEXAS



APPENDIX A
 FIGURE 10.5

DATE:
 JULY 2019

**APPENDIX B:
SITE PHOTOGRAPHS**



Photo 1: Stream 1, photo facing west. Photo taken May 2019. (30.037058°, -94.158881°)



Photo 2: Stream 3 (Port Arthur Canal) crossing under I-10, photo facing east. Photo taken May 2019. (30.045245°, -94.150138°)



Photo 3: Stream 2 (Hillebrandt Bayou) crossing under Stream 3 (Port Arthur Canal). Stream 2 and 3 crossing under I-10, photo facing north. Photo taken May 2019. (30.045421°, -94.149949°)



Photo 4: Stream 4 outfall beneath existing I-10 bridge, photo facing west. Photo taken May 2019. (30.045100°, -94.150087°)



Photo 5: Stream 5, photo facing north. Photo taken May 2019. (30.047600°, -94.145193°)



Photo 6: Stream 6, photo facing east. Photo taken June 2019. (30.060553°, -94.135841°)



Photo 7: Stream 7, photo facing east. Photo taken June 2019. (30.079203° , -94.136436°)



Photo 8: Stream 8, photo facing southwest. Photo taken June 2019. (30.083553° , -94.136655°)



Photo 9: Stream 9, photo facing north. Photo taken May 2019. (30.045085°, -94.136615°)



Photo 10: Stream 10, photo facing north. Photo taken June 2019. (30.055654°, -94.141413°)



Photo 11: Stream 11, culverted through the project area, photo facing southeast. Photo taken May 2019. (30.047383°, -94.139296°)



Photo 12: Stream 12, culverted through the project area, photo facing west. Photo taken May 2019. (30.042379°, -94.129309°)



Photo 13: Stream 13, culverted through the project area, photo facing north. Photo taken June 2019. (30.055579°, -94.137679°)



Photo 14: Stream 14, culverted through the project area, photo facing east. Photo taken June 2019. (30.071888°, -94.135193°)



Photo 15: PEM Wetland 1, Data Point (DP) 006, adjacent to a culvert, photo facing southwest.
Photo taken May 2019. (30.036108°, -94.158269°)



Photo 16: PEM Wetland 2, DP069, within maintained ROW, photo facing southwest. Photo taken
June 2019. (30.048165°, -94.148364°)



Photo 17: PEM Wetland 3, DP051, within maintained ROW, photo facing southwest. Photo taken May 2019. (30.050090°, -94.146410°)



Photo 18: PFO Wetland 4, DP046, within forested section of ROW, photo facing east. Photo taken May 2019. (30.051155°, -94.144628°)



Photo 19: PEM Wetland 5, DP049, along rock and gravel piles, photo facing northwest. Photo taken May 2019. (30.051615°, -94.144219°)



Photo 20: PEM Wetland 6, DP055, within maintained ROW, photo facing north. Photo taken May 2019. (30.049793°, -94.144218°)



Photo 21: PEM Wetland 7, DP065, within maintained ROW, photo facing northwest. Photo taken June 2019. (30.049833°, -94.141813°)



Photo 22: PFO Wetland 8, DP018, within forested section of ROW, photo facing south. Photo taken May 2019. (30.046955°, -94.141068°)

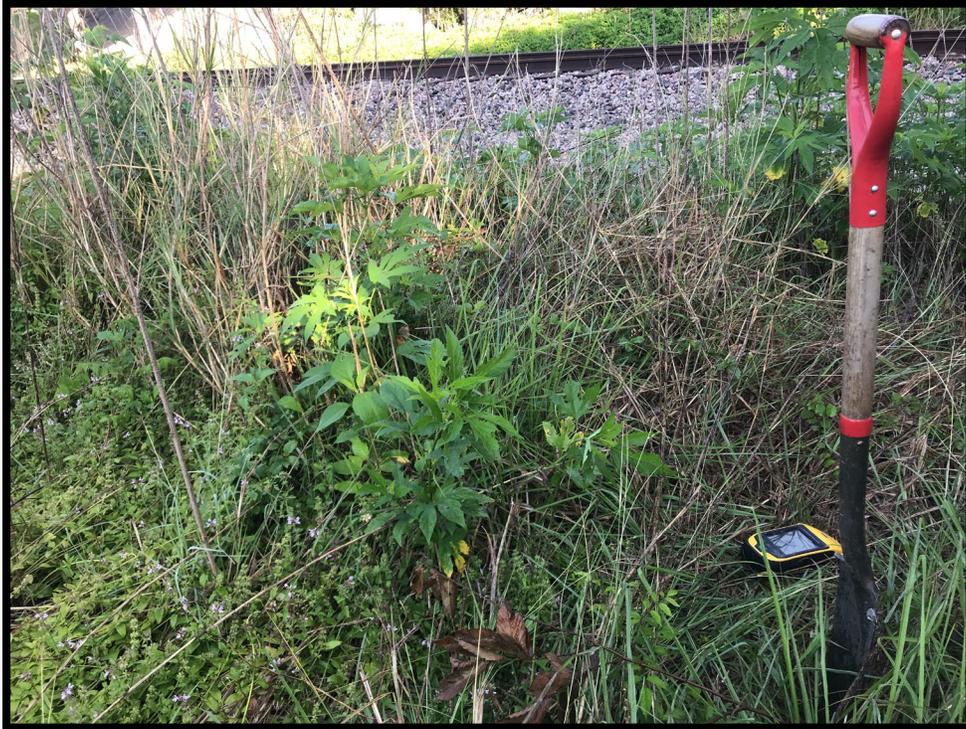


Photo 23: Photo facing railroad ballast at DP037. Photo taken May 2019. (30.046877°, -94.138856°)



Photo 24: Photo facing forested section along the edge of the project area at DP044. Photo taken May 2019. (30.051050°, -94.141212°)



Photo 25: Photo looking at urban, maintained vegetation within the project area along I-10, photo facing south at DP074. Photo taken May 2019. (30.067454°, -94.134082°)



Photo 26: Photo looking at urban, maintained vegetation and landscaped medians along I-10, photo facing north at DP097. Photo taken June 2019. (30.095460°, -94.130432°)



Photo 27: Photo looking at forested section within maintained ROW of the Cardinal Drive Interchanges. Photo taken June 2019. (30.051485° , -94.142303°)



Photo 28: Photo looking at forested section within the ROW of the Cardinal Drive Interchange at DP063. Photo taken June 2019. (30.050724° , -94.143258°)



Photo 29: Photo looking north towards maintained and landscaped median within the Eastex Freeway Interchange at DP99. Photo taken June 2019. (30.093778°, -94.136079°)



Photo 30: Additional photo of maintained and landscaped median within Eastex Freeway Interchange. Photo taken June 2019. (30.096129°, -94.135179°).

**APPENDIX C:
WETLAND DETERMINATION DATA FORMS**

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP001
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'13.59"N Long: 94° 9'31.96"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------

Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP001

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	15	No	FACU
2. <i>Phyla nodiflora</i>	55	Yes	FAC
3. <i>Ranunculus Repens</i>	15	No	FAC
4. <i>Paspalum urvillei</i>	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>300</u> (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100	None	—	—	—	Clay	Gravel Present
2-18	10YR 3/1	30	None	—	—	—	Clay	Dual Matrix
2-18	10YR 4/4	70	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP002
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Fill Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'11.31"N Long: 94° 9'33.88"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP002

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	65	Yes	FACU
2. <i>Sisyrinchium angustifolium</i>	15	No	FACW
3. <i>Taraxacum officinale</i>	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
85 = Total Cover			
50% of total cover: 42.5		20% of total cover: 17	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>85</u>	(A) <u>310</u> (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/2	100	None	—	—	—	Sandy Clay	Likely all fill dirt
1-18	7.5YR 5/8	80	None	—	—	—	Sandy Clay	Likely all fill dirt
1-18	10YR 5/3	20	None	—	—	—	Sandy Clay	Likely all fill dirt

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP003
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'6.37"N Long: 94° 9'33.77"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP003

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ambrosia psilostachya</i>	30	Yes	FAC
2. <i>Allium canadense</i>	15	No	FACU
3. <i>Verbena brasiliensis</i>	5	No	UPL
4. <i>Carex cherokeensis</i>	35	Yes	FACW
5. <i>Lolium perenne</i>	15	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
100 = Total Cover			
50% of total cover:		20% of total cover:	
50		20	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>100</u> (A)	<u>305</u> (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100	None	—	—	—	Clay Loam	
2-18	10YR 6/1	60	10YR 5/8	20	C	M	Clay	Dual Matrix
2-18	10YR 3/1	20	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP005
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'9.84"N Long: 94° 9' 30.168"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	<p>Wetland Hydrology Present? Yes <u> </u> No <u> X </u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP005

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lolium perenne</i>	40	Yes	FACU
2. <i>Paspalum urvillei</i>	35	Yes	FAC
3. <i>Sorghum halepense</i>	5	No	FACU
4. <i>Taraxacum officinale</i>	15	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>60</u>	x 4 = <u>240</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>345</u> (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100	None	—	—	—	Clay Loam	
2-18	10YR 6/1	60	10YR 5/8	20	C	M	Clay	Dual Matrix
2-18	10YR 3/1	20	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP006
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Artificial Drainage Pattern Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'9.99"N Long: 94° 9'29.77"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Riverine
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) <u>X</u> High Water Table (A2) _____ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots(C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) <u>X</u> Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) <u>X</u> Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>1"</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP006

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Sagittaria latifolia</i>	15	No	OBL
2. <i>Alternanthera philoxeroides</i>	75	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>90</u>	x 1 = <u>90</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u>	(A) <u>90</u> (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	96	10YR 5/8	4	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP007
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'10.41"N Long: 94° 9'29.25"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP007

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	60	Yes	FAC
2. <i>Paspalum Notatum</i>	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>45</u>		20% of total cover: <u>18</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100	None	—	—	—	Clay Loam	
3-18	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP008
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'19.54"N Long: 94° 9'19.63"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP008

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	98	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>98</u>	x 3 = <u>294</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>98</u> (A)	<u>294</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP009
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'38.64"N Long: 94° 9'0.14"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP009

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ulmus rubra</i>	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
2.5		1	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ligustrum japonicum</i>	25	Yes	FAC
2. <i>Ilex vomitoria</i>	30	Yes	FAC
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
27.5		11	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Solidago canadensis</i>	3	No	FACU
2. <i>Bothriochloa ischaemum</i>	20	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
= Total Cover			
50% of total cover:		20% of total cover:	
11.5		4.6	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	25	Yes	FACU
2. <i>Rubus trivialis</i>	15	Yes	FACU
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	
20		8	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>43</u>	x 4 = <u>172</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>123</u> (A)	<u>452</u> (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP010
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Levee Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'42.62"N Long: 94° 9'2.56"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Morey Loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP010

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lolium perenne</i>	70	Yes	FACU
2. <i>Bouteloua curtipendula</i>	5	No	UPL
3. <i>Paspalum notatum</i>	15	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
90 = Total Cover			
50% of total cover:		20% of total cover:	
45		18	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>90</u> (A)	<u>365</u> (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/2	92	10YR 4/6	8	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP011
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'34.65"N Long: 94° 9'9.88"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Morey Loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP011

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	70	Yes	FACU
2. <i>Diodia virginiana</i>	15	No	FACW
3. <i>Phyla nodiflora</i>	5	No	FAC
4. <i>Paspalum urvillei</i>	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>340</u> (B)

Prevalence Index = B/A = 3.58

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	98	10YR 4/4	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP012
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'30.50"N Long: 94° 9'13.90"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Morey Loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP012

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	75	Yes	FAC
2. <i>Cyperus esculentus</i>	5	No	FAC
3. <i>Sisyrinchium angustifolium</i>	3	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
83 = Total Cover			
50% of total cover: 41.5		20% of total cover: 16.6	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Rubus trivialis</i>	10	Yes	FACU
2.			
3.			
4.			
5.			
10 = Total Cover			
50% of total cover: 5		20% of total cover: 2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>3</u>	x 2 = <u>6</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>93</u>	(A) <u>286</u> (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP013
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2' 43.11"N Long: 94° 8' 55.75"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP013

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	75	Yes	FAC
2. <i>Paspalum notatum</i>	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>305</u> (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	98	10YR 5/6	2	C	M	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP014
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'51.26"N Long: 94° 8'42.91"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Labelle clay loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP014

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Quercus nigra</i>	56	Yes	FAC
2. <i>Liquidambar styraciflua</i>	20	Yes	FAC
3. <i>Ulmus americana</i>	10	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	86 = Total Cover		
50% of total cover:	43	20% of total cover:	17.2
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ulmus americana</i>	30	Yes	FAC
2. <i>Ilex vomitoria</i>	20	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	50 = Total Cover		
50% of total cover:	25	20% of total cover:	10
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
50% of total cover:	_____	20% of total cover:	_____
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
50% of total cover:	_____	20% of total cover:	_____
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Toxicodendron radicans</i>	15	Yes	FAC
2. <i>Campsis radicans</i>	10	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	25 = Total Cover		
50% of total cover:	12.5	20% of total cover:	5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>161</u>	x 3 = <u>483</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>161</u> (A)	<u>483</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	99	10YR 4/6	1	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	
	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
	<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP015
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'51.71"N Long: 94° 8'44.13"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP015

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <u>Cyperus esculentus</u>	5	No	FAC
2. <u>Stenotaphrum secundatum</u>	95	Yes	FAC
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	100 = Total Cover		
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP016
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'51.69"N Long: 94° 8'38.52"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Labelle clay loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP016

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Quercus nigra</i>	80	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
80 = Total Cover			
50% of total cover: 40		20% of total cover: 16	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	85	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
85 = Total Cover			
50% of total cover: 42.5		20% of total cover: 17	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>165</u>	x 3 = <u>495</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>165</u> (A)	<u>495</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/1	98	10YR 5/8	2	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP017
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'51.02"N Long: 94° 8'32.17"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Labelle clay loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP017

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ambrosia trifida</i>	65	Yes	FAC
2. <i>Campsis radicans</i>	15	No	FAC
3. <i>Solidago canadensis</i>	15	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>300</u> (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	95	10YR 4/6	5	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP018

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus phellos</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Acer rubrum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>45</u> = Total Cover		
	50% of total cover: <u>22.5</u>	20% of total cover: <u>9</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Triadica sebifera</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Serenoa repens</u>	<u>15</u>	<u>No</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>80</u> = Total Cover		
	50% of total cover: <u>40</u>	20% of total cover: <u>16</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Commelina erecta</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	<u>50</u> = Total Cover		
	50% of total cover: <u>25</u>	20% of total cover: <u>10</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>50</u>	x 3 = <u>150</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>175</u> (A)	<u>530</u> (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	95	10YR 5/6	5	C	M	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	
	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
	<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP019
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Microtopography Local relief (concave, convex, none): Microtopography Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'48.75"N Long: 94° 8'27.20"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Labelle clay loam, 0 to 1 percent slopes NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP019

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Quercus nigra</i>	40	Yes	FAC
2. <i>Carya glabra</i>	25	Yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	65 = Total Cover		
	50% of total cover: 32.5	20% of total cover: 13	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ilex opaca</i>	15	Yes	FAC
2. <i>Crataegus marshallii</i>	10	No	FAC
3. <i>Viburnum acerifolium</i>	5	No	FACU
4. <i>Serenoa repens</i>	40	Yes	FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	70 = Total Cover		
	50% of total cover: 35	20% of total cover: 14	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	15	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>65</u>	x 3 = <u>195</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>150</u> (A)	<u>535</u> (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/2	100	None	—	—	—	Clay Loam	
1-12	10YR 5/2	50	None	—	—	—	Clay	Dual Matrix
1-12	10YR 5/6	50	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP020
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'46.22"N Long: 94° 8'22.40"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP020

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	90	Yes	FAC
2. <i>Paspalum Notatum</i>	10	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u>	(A) <u>310</u> (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	98	10YR 5/8	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP022
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'41.73"N Long: 94° 8'16.67"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP022

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ambrosia artemisiifolia</i>	65	Yes	FACU
2. <i>Daucus carota</i>	5	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
70 = Total Cover			
50% of total cover:		20% of total cover:	
35		14	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>70</u> (A)	<u>285</u> (B)

Prevalence Index = B/A = 4.07

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	98	10YR 5/8	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP023
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2' 33.62"N Long: 94° 8' 2.526"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP023

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	75	Yes	FAC
2. <i>Paspalum notatum</i>	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>305</u> (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP024
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'30.33"N Long: 94° 7'49.96"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP024

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ampelopsis arborea</i>	35	Yes	FAC
2. <i>Lonicera japonica</i>	30	Yes	FACU
3. <i>Solidago canadensis</i>	15	No	FACU
4. <i>Rubus arvensis</i>	5	No	FAC
5. <i>Verbena brasiliensis</i>	3	No	UPL
6.			
7.			
8.			
9.			
10.			
11.			
88 = Total Cover			
50% of total cover:		20% of total cover:	
44		17.6	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>3</u>	x 5 = <u>15</u>
Column Totals: <u>88</u>	(A) <u>315</u> (B)

Prevalence Index = B/A = 3.58

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/2	70	none	—	—	—	Clay Loam	Dual Matrix
0-18	10YR 3/1	20	None	—	—	—	Clay Loam	Dual Matrix
0-18	10YR 5/6	10	None	—	—	—	Clay Loam	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP025
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'27.54"N Long: 94° 7'35.78"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP025

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP026
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'32.56"N Long: 94° 7'45.51"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP026

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	65	Yes	FAC
2. <i>Lolium perenne</i>	20	Yes	FACU
3. <i>Trifolium repens</i>	15	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>65</u>	x 3 = <u>195</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>335</u> (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP027
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'32.48"N Long: 94° 7'44.72"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP027

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Celtis laevigata</u>	<u>65</u>	<u>Yes</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>65</u> = Total Cover		
	50% of total cover: <u>32.5</u>	20% of total cover: <u>13</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Triadica sebifera</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>10</u> = Total Cover		
	50% of total cover: <u>5</u>	20% of total cover: <u>2</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Smilax bona-nox</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Ampelopsis arborea</u>	<u>75</u>	<u>Yes</u>	<u>FAC</u>
3. <u>Vitis rotundifolia</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>100</u> = Total Cover		
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>65</u>	x 2 = <u>130</u>
FAC species <u>110</u>	x 3 = <u>330</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>175</u> (A)	<u>460</u> (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 15, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP029
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'31.30"N Long: 94° 7'38.67"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP029

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Celtis laevigata</u>	15	Yes	FACW
2. <u>Triadica sebifera</u>	10	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	25 = Total Cover		
	50% of total cover: 12.5	20% of total cover: 5	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Ilex vomitoria</u>	75	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	75 = Total Cover		
	50% of total cover: 37.5	20% of total cover: 15	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Ligustrum japonicum</u>	20	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	20 = Total Cover		
	50% of total cover: 10	20% of total cover: 4	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>105</u>	x 3 = <u>315</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>345</u> (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP032
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2' 37.028"N Long: 94° 8' 0.132"N Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP032

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	99	Yes	FAC
2. <i>Mimosa strigillosa</i>	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u>	(A) <u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	75	None	—	—	—	Clay	Dual Matrix
0-18	10YR 4/3	25	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP033
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2' 37.1292"N Long: 94° 8' 0.4128"N Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP033

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Triadica sebifera</i>	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: 7.5		20% of total cover: 3	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Solidago canadensis</i>	40	Yes	FACU
2. <i>Iva annua</i>	15	No	FAC
3. <i>Vitis rotundifolia</i>	25	Yes	FAC
4. <i>Campsis radicans</i>	10	No	FAC
5. <i>Oenothera speciosa</i>	3	No	#N/A
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 46.5		20% of total cover: 18.6	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>65</u>	x 3 = <u>195</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>355</u> (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	75	None	—	—	—	Clay	Dual Matrix
0-18	10YR 4/3	25	None	—	—	—	Clay	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP034
 Investigator(s): John Williams and Sally Clark Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Microtopography Local relief (concave, convex, none): Microtopography Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'44.08"N Long: 94° 8'13.65"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP034

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus nigra</u>	<u>100</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
100 = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Serenoa repens</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Ilex vomitoria</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
25 = Total Cover			
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Carex cherokeensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
10 = Total Cover			
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Lonicera japonica</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
10 = Total Cover			
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>110</u>	x 3 = <u>330</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>450</u> (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	50	10YR 5/6	2	C	M	Clay Loam	
018	10YR 6/2	48	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP035
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'46.81"N Long: 94° 8'16.87"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP035

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	98	Yes	FAC
2. <i>Taraxacum officinale</i>	2	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 50		20% of total cover: 20	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>98</u>	x 3 = <u>294</u>
FACU species <u>2</u>	x 4 = <u>8</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>302</u> (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP036
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2' 48.3324"N Long: 94° 8' 18.636"N Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP036

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus nigra</u>	<u>65</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Celtis laevigata</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>100</u> = Total Cover		
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <u>Ligustrum japonicum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Ligustrum sinense</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>45</u> = Total Cover		
	50% of total cover: <u>22.5</u>	20% of total cover: <u>9</u>	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <u>Rubus trivialis</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Toxicodendron radicans</u>	<u>3</u>	<u>No</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>18</u> = Total Cover		
	50% of total cover: <u>9</u>	20% of total cover: <u>3.6</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>113</u>	x 3 = <u>339</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>163</u> (A)	<u>469</u> (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP037
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'48.76"N Long: 94° 8'19.88"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP037

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ambrosia artemisiifolia</i>	45	Yes	FACU
2. <i>Bothriochloa barbinodis</i>	35	Yes	FACU
3. <i>Campsis radicans</i>	5	No	FAC
4. <i>Solidago canadensis</i>	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
87 = Total Cover			
50% of total cover:		20% of total cover:	
43.5		17.4	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>82</u>	x 4 = <u>328</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>87</u> (A)	<u>343</u> (B)

Prevalence Index = B/A = 3.94

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Clay	Railroad blast present

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	
	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
	<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP038
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'49.17"N Long: 94° 8'20.69"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: League Clay, 0 to 1 percent slopes, rarely flooded NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u> </u> Surface Water (A1)</td> <td style="width: 50%; border: none;"><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><u> </u> High Water Table (A2)</td> <td style="border: none;"><u> </u> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><u> </u> Saturation (A3)</td> <td style="border: none;"><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><u> </u> Water Marks (B1)</td> <td style="border: none;"><u> </u> Oxidized Rhizospheres on Living Roots(C3)</td> </tr> <tr> <td style="border: none;"><u> </u> Sediment Deposits (B2)</td> <td style="border: none;"><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><u> </u> Drift Deposits (B3)</td> <td style="border: none;"><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><u> </u> Algal Mat or Crust (B4)</td> <td style="border: none;"><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><u> </u> Iron Deposits (B5)</td> <td style="border: none;"><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><u> </u> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots(C3)	<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Water-Stained Leaves (B9)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width: 100%; border: none;"> <tr><td style="border: none;"><u> </u> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><u> </u> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><u> </u> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><u> </u> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><u> </u> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><u> </u> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><u> </u> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><u> </u> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><u> </u> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><u> </u> FAC-Neutral Test (D5)</td></tr> <tr><td style="border: none;"><u> </u> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<u> </u> Surface Soil Cracks (B6)	<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Drainage Patterns (B10)	<u> </u> Moss Trim Lines (B16)	<u> </u> Dry-Season Water Table (C2)	<u> </u> Crayfish Burrows (C8)	<u> </u> Saturation Visible on Aerial Imagery (C9)	<u> </u> Geomorphic Position (D2)	<u> </u> Shallow Aquitard (D3)	<u> </u> FAC-Neutral Test (D5)	<u> </u> Sphagnum moss (D8) (LRR T, U)
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<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)																															
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<p>Field Observations:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Surface Water Present?</td> <td style="width: 10%;">Yes <u> </u> No <u> X </u></td> <td style="width: 10%;">Depth (inches):</td> <td style="width: 50%;"><u> N/A </u></td> </tr> <tr> <td>Water Table Present?</td> <td>Yes <u> </u> No <u> X </u></td> <td>Depth (inches):</td> <td><u> N/A </u></td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td>Yes <u> </u> No <u> X </u></td> <td>Depth (inches):</td> <td><u> N/A </u></td> </tr> </table>	Surface Water Present?	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>	Water Table Present?	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>	Saturation Present? (includes capillary fringe)	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
Surface Water Present?	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>										
Water Table Present?	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>										
Saturation Present? (includes capillary fringe)	Yes <u> </u> No <u> X </u>	Depth (inches):	<u> N/A </u>										

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP038

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Vachellia farnesiana</i>	30	Yes	FACU
2.			
3.			
4.			
5.			
6.			
30 = Total Cover			
50% of total cover: 15		20% of total cover: 6	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	30	Yes	FAC
2. <i>Cynodon dactylon</i>	35	Yes	FACU
3. <i>Lolium perenne</i>	15	No	FACU
4. <i>Solidago canadensis</i>	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
85 = Total Cover			
50% of total cover: 42.5		20% of total cover: 17	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>115</u> (A)	<u>430</u> (B)

Prevalence Index = B/A = 3.74

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	98	10YR 5/6	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP040
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Downhill Slant Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'51.94"N Long: 94° 8'23.44"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP040

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lolium perenne</i>	35	Yes	FACU
2. <i>Ambrosia artemisiifolia</i>	35	Yes	FACU
3. <i>Paspalum notatum</i>	20	Yes	FACU
4. <i>Verbena hastata</i>	5	No	FAC
5. <i>Oenothera speciosa</i>	3	No	UPL
6. <i>Solidago canadensis</i>	2	No	FACU
7.			
8.			
9.			
10.			
11.			
100 = Total Cover			
50% of total cover: 50		20% of total cover: 20	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>92</u>	x 4 = <u>368</u>
UPL species <u>3</u>	x 5 = <u>15</u>
Column Totals: <u>100</u> (A)	<u>398</u> (B)

Prevalence Index = B/A = 3.98

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP041
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'59.18"N Long: 94° 8'27.69"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (minimum of two required)
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Sparsely Vegetated Concave Surface (B8)
<u> </u> Saturation (A3)	<u> </u> Drainage Patterns (B10)
<u> </u> Water Marks (B1)	<u> </u> Moss Trim Lines (B16)
<u> </u> Sediment Deposits (B2)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Drift Deposits (B3)	<u> </u> Crayfish Burrows (C8)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Iron Deposits (B5)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Shallow Aquitard (D3)
<u> </u> Water-Stained Leaves (B9)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Aquatic Fauna (B13)	<u> </u> Sphagnum moss (D8) (LRR T, U)
<u> </u> Marl Deposits (B15) (LRR U)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots (C3)	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soils (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP041

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus phellos</u>	65	Yes	FACW
2. <u>Triadica sebifera</u>	15	No	FAC
3. <u>Quercus nigra</u>	5	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	85 = Total Cover		
	50% of total cover: <u>42.5</u>	20% of total cover: <u>17</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Triadica sebifera</u>	35	Yes	FAC
2. <u>Serenoa repens</u>	15	Yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	50 = Total Cover		
	50% of total cover: <u>25</u>	20% of total cover: <u>10</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Carex cherokeensis</u>	30	Yes	FACW
2. <u>Solidago canadensis</u>	2	No	FACU
3. <u>Cortaderia selloana</u>	10	Yes	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	42 = Total Cover		
	50% of total cover: <u>21</u>	20% of total cover: <u>8.4</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Toxicodendron radicans</u>	15	Yes	FAC
2. <u>Rubus trivialis</u>	15	Yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	30 = Total Cover		
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>42</u>	x 4 = <u>168</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>207</u> (A)	<u>568</u> (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP043
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'54.78"N Long: 94° 8'25.88"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																																
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<input type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																

<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP043

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Carex cherokeensis</i>	40	Yes	FACW
2. <i>Cyperus rotundus</i>	10	No	FAC
3. <i>Paspalum notatum</i>	25	Yes	FACU
4. <i>Iva annua</i>	5	No	FAC
5. <i>Lolium perenne</i>	15	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>285</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	95	10YR 5/8	5	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP044
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3' 3.78"N Long: 94° 8' 28.3632"N Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP044

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus phellos</u>	55	Yes	FACW
2. <u>Quercus nigra</u>	10	No	FAC
3. <u>Celtis laevigata</u>	35	Yes	FACW
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	100 = Total Cover		
	50% of total cover: <u>50</u>		20% of total cover: <u>20</u>
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Celtis laevigata</u>	15	Yes	FACW
2. <u>Serenoa repens</u>	10	Yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	25 = Total Cover		
	50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Ilex vomitoria</u>	15	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	15 = Total Cover		
	50% of total cover: <u>7.5</u>		20% of total cover: <u>3</u>
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Carex cherokeensis</u>	7	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	7 = Total Cover		
	50% of total cover: <u>3.5</u>		20% of total cover: <u>1.4</u>
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Rubus trivialis</u>	35	Yes	FACU
2. <u>Campsis radicans</u>	5	No	FAC
3. <u>Lonicera japonica</u>	20	Yes	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	60 = Total Cover		
	50% of total cover: <u>30</u>		20% of total cover: <u>12</u>

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>112</u>	x 2 = <u>224</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>207</u> (A)	<u>574</u> (B)

Prevalence Index = B/A = 2.77

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 2/1	100	None	—	—	—	Clay Loam	Dual Matrix
1-18	10YR 5/2	60	None	—	—	—	Clay Loam	Dual Matrix
1-18	10YR 5/4	40	None	—	—	—	Clay Loam	Dual Matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP045
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'1.42"N Long: 94° 8'44.47"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP045

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	35	Yes	FAC
2. <i>Celtis laevigata</i>	45	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	80 = Total Cover		
	50% of total cover: 40	20% of total cover: 16	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis laevigata</i>	40	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	40 = Total Cover		
	50% of total cover: 20	20% of total cover: 8	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ligustrum japonicum</i>	25	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	25 = Total Cover		
	50% of total cover: 12.5	20% of total cover: 5	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Parthenocissus quinquefolia</i>	50	Yes	FACU
2. <i>Rubus trivialis</i>	20	Yes	FACU
3. <i>Lonicera japonica</i>	10	No	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	80 = Total Cover		
	50% of total cover: 40	20% of total cover: 16	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>85</u>	x 2 = <u>170</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>225</u> (A)	<u>670</u> (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/1	100	None	—	—	—	Clay	
1-18	10YR 4/2	98	10YR 5/6	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP046
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'4.16"N Long: 94° 8'40.66"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots(C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) <u>X</u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP046

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ulmus americana</i>	55	Yes	FAC
2. <i>Celtis laevigata</i>	30	Yes	FACW
3. <i>Pinus taeda</i>	3	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	88 = Total Cover		
50% of total cover:	44	20% of total cover:	17.6
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis laevigata</i>	25	Yes	FACW
2. <i>Quercus nigra</i>	15	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	40 = Total Cover		
50% of total cover:	20	20% of total cover:	8
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
50% of total cover:	_____	20% of total cover:	_____
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Carex cherokeensis</i>	60	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	60 = Total Cover		
50% of total cover:	30	20% of total cover:	12
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Rubus trivialis</i>	10	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	10 = Total Cover		
50% of total cover:	5	20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>115</u>	x 2 = <u>230</u>
FAC species <u>73</u>	x 3 = <u>219</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>198</u> (A)	<u>489</u> (B)

Prevalence Index = B/A = 2.47

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/1	95	10YR 4/6	5	C	M	Clay	Sulphur Odor

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____</p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP047
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'3.48"N Long: 94° 8'41.69"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP047

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Pinus taeda</i></u>	40	Yes	FAC
2. <u><i>Celtis laevigata</i></u>	40	Yes	FACW
3. <u><i>Quercus nigra</i></u>	15	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	95 = Total Cover		
	50% of total cover: <u>47.5</u>	20% of total cover: <u>19</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <u><i>Ilex vomitoria</i></u>	30	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	30 = Total Cover		
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <u><i>Carex cherokeensis</i></u>	35	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	35 = Total Cover		
	50% of total cover: <u>17.5</u>	20% of total cover: <u>7</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <u><i>Rubus trivialis</i></u>	15	Yes	FACU
2. <u><i>Campsis radicans</i></u>	15	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	30 = Total Cover		
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>75</u>	x 2 = <u>150</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>190</u> (A)	<u>510</u> (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP048
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'5.21"N Long: 94° 8'39.22"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP048

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Cynodon dactylon</i>	35	Yes	FACU
2. <i>Lolium perenne</i>	30	Yes	FACU
3. <i>Plantago lanceolata</i>	15	No	FACU
4. <i>Paspalum dilatatum</i>	15	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>365</u> (B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	90	None	—	—	—	Clay	Likely fill
0-12	10YR 5/3	10	None	—	—	—	Sand	Pockets of sand, not redox

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	
	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
	<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP049

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Eleocharis acicularis</i>	50	Yes	OBL
2. <i>Panicum repens</i>	47	Yes	FACW
3. <i>Paspalum denticulatum</i>	3	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>53</u>	x 1 = <u>53</u>
FACW species <u>47</u>	x 2 = <u>94</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>147</u> (B)

Prevalence Index = B/A = 1.47

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	85	10YR 4/6	7	C	M	Clay	
0-12	10YR 6/2	8	None		—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP050
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'58.04"N Long: 94° 8'48.19"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots(C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) <u>X</u> Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP050

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Triadica sebifera</i>	10	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
10 = Total Cover			
50% of total cover: 5		20% of total cover: 2	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	85	Yes	FAC
2. <i>Lolium perenne</i>	15	No	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
100 = Total Cover			
50% of total cover: 50		20% of total cover: 20	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>95</u>	x 3 = <u>285</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>345</u> (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	98	10YR 5/8	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP051
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'0.32"N Long: 94° 8'47.07"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>3"</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP051

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Rhynchospora caduca</i>	35	Yes	OBL
2. <i>Eleocharis acicularis</i>	20	Yes	OBL
3. <i>Alternanthera philoxeroides</i>	10	No	OBL
4. <i>Cyperus rotundus</i>	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
70 = Total Cover			
50% of total cover:		20% of total cover:	
35		14	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>65</u>	x 1 = <u>65</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>80</u> (B)

Prevalence Index = B/A = 1.14

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	90	10YR 5/6	10	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	
	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
	<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____</p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP052
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'0.58"N Long: 94° 8'46.57"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP052

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	65	Yes	FAC
2. <i>Lolium perenne</i>	15	No	FACU
3. <i>Paspalum urvillei</i>	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
90 = Total Cover			
50% of total cover:		20% of total cover:	
45		18	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u>	(A) <u>285</u> (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	98	10YR 5/6	2	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP053
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 5-10
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'58.02"N Long: 94° 8'40.94"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP053

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <i>Stenotaphrum secundatum</i>	90	Yes	FAC
2. <i>Paspalum notatum</i>	8	No	FACU
3. <i>Diodia virginiana</i>	2	No	FACW
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	100 = Total Cover		
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>2</u>	x 2 = <u>4</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>8</u>	x 4 = <u>32</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>306</u> (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP054
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'58.02"N Long: 94° 8'40.94"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP054

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Quercus virginiana</i>	95	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	45	Yes	FAC
2. <i>Toxicodendron radicans</i>	35	Yes	FAC
3. <i>Solidago canadensis</i>	10	No	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
90 = Total Cover			
50% of total cover: 45		20% of total cover: 18	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>105</u>	x 4 = <u>420</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>185</u> (A)	<u>660</u> (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP055
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'59.26"N Long: 94° 8'39.18"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP055

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Eleocharis acicularis</i>	35	Yes	OBL
2. <i>Cyperus rotundus</i>	10	No	FAC
3. <i>Verbena brasiliensis</i>	30	Yes	UPL
4. <i>Ludwigia peploides</i>	5	No	OBL
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
80 = Total Cover			
50% of total cover: 40		20% of total cover: 16	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40</u>	x 1 = <u>40</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>80</u> (A)	<u>220</u> (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	97	10YR 5/6	3	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input checked="" type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: May 16, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP056
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'59.26"N Long: 94° 8'39.18"W Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u> </u> Surface Water (A1)</td> <td style="width: 50%; border: none;"><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><u> </u> High Water Table (A2)</td> <td style="border: none;"><u> </u> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><u> </u> Saturation (A3)</td> <td style="border: none;"><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><u> </u> Water Marks (B1)</td> <td style="border: none;"><u> </u> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><u> </u> Sediment Deposits (B2)</td> <td style="border: none;"><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><u> </u> Drift Deposits (B3)</td> <td style="border: none;"><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><u> </u> Algal Mat or Crust (B4)</td> <td style="border: none;"><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><u> </u> Iron Deposits (B5)</td> <td style="border: none;"><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><u> </u> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Water-Stained Leaves (B9)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width: 100%; border: none;"> <tr><td style="border: none;"><u> </u> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><u> </u> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><u> </u> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><u> </u> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><u> </u> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><u> </u> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><u> </u> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><u> </u> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><u> </u> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><u> </u> FAC-Neutral Test (D5)</td></tr> <tr><td style="border: none;"><u> </u> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<u> </u> Surface Soil Cracks (B6)	<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Drainage Patterns (B10)	<u> </u> Moss Trim Lines (B16)	<u> </u> Dry-Season Water Table (C2)	<u> </u> Crayfish Burrows (C8)	<u> </u> Saturation Visible on Aerial Imagery (C9)	<u> </u> Geomorphic Position (D2)	<u> </u> Shallow Aquitard (D3)	<u> </u> FAC-Neutral Test (D5)	<u> </u> Sphagnum moss (D8) (LRR T, U)
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)																															
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)																															
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)																															
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<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)																															
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)																															
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<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)																															
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<u> </u> Sphagnum moss (D8) (LRR T, U)																																

<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP056

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <i>Cynodon dactylon</i>	75	Yes	FACU
2. <i>Phyla nodiflora</i>	20	Yes	FAC
3. <i>Paspalum notatum</i>	5	No	FACU
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
100 = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP057
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'52.70" Long: 94° 8'38.53" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots(C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
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<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	<p>Wetland Hydrology Present? Yes <u> </u> No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP057

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	25	Yes	FACU
2. <i>Paspalum dilatatum</i>	30	Yes	FAC
3. <i>Stenotaphrum secundatum</i>	50	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
105 = Total Cover			
50% of total cover: 52.5		20% of total cover: 21	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>340</u> (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/1	99	10YR 5/6	1	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

1 cm Muck (A9) (LRR O)
 2 cm Muck (A10) (LRR S)
 Reduced Vertic (F18) (outside MLRA 150A,B)
 Piedmont Floodplain Soils (F19) (LRR P, S, T)
 Anomalous Bright Loamy Soils (F20) (MLRA 153B)
 Red Parent Material (TF2)
 Very Shallow Dark Surface (TF12)
 Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP058
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'54.92" Long: 94° 8'42.57" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP058

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Celtis occidentalis</i></u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>
2. <u><i>Triadica sebifera</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>
3. <u><i>Ulmus americana</i></u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>65</u> = Total Cover		
	50% of total cover: <u>32.5</u>	20% of total cover: <u>13</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Celtis occidentalis</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>10</u> = Total Cover		
	50% of total cover: <u>5</u>	20% of total cover: <u>2</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Ligustrum japonicum</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>5</u> = Total Cover		
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Sanicula canadensis</i></u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	<u>30</u> = Total Cover		
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Rubus trivialis</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. <u><i>Lonicera japonica</i></u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>45</u> = Total Cover		
	50% of total cover: <u>22.5</u>	20% of total cover: <u>9</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>130</u>	x 4 = <u>520</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>155</u> (A)	<u>595</u> (B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/1	98	10YR 5/8	2	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP059
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'54.37" Long: 94° 8'36.29" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP059

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	40	Yes	FAC
2. <i>Celtis occidentalis</i>	35	Yes	FACU
3. <i>Quercus nigra</i>	15	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	90 = Total Cover		
	50% of total cover: 45	20% of total cover: 18	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	15	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Viburnum acerifolium</i>	10	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Toxicodendron radicans</i>	10	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Parthenocissus quinquefolia</i>	10	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>65</u>	x 3 = <u>195</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>475</u> (B)

Prevalence Index = B/A = 3.52

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	99	10YR 5/8	1	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP060
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'55.62" Long: 94° 8'33.97" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP060

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Pinus taeda</i></u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>
2. <u><i>Quercus nigra</i></u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>85</u> = Total Cover		
	50% of total cover: <u>42.5</u>	20% of total cover: <u>17</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Celtis occidentalis</i></u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>50</u> = Total Cover		
	50% of total cover: <u>25</u>	20% of total cover: <u>10</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>None Observed</i></u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>None Observed</i></u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Campsis radicans</i></u>	<u>75</u>	<u>Yes</u>	<u>FAC</u>
2. <u><i>Rubus trivialis</i></u>	<u>3</u>	<u>No</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>78</u> = Total Cover		
	50% of total cover: <u>39</u>	20% of total cover: <u>15.6</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>160</u>	x 3 = <u>480</u>
FACU species <u>53</u>	x 4 = <u>212</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>213</u> (A)	<u>692</u> (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	99	10YR 5/8	1	C		Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP061
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'53.64" Long: 94° 8'30.02" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP061

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	60	Yes	FACU
2. <i>Tilia americana</i>	30	Yes	FACU
3. <i>Pinus taeda</i>	15	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	105 = Total Cover		
	50% of total cover: 52.5	20% of total cover: 21	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	25	Yes	FACU
2. <i>Quercus nigra</i>	10	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	35 = Total Cover		
	50% of total cover: 17.5	20% of total cover: 7	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ligustrum japonicum</i>	3	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	3 = Total Cover		
	50% of total cover: 1.5	20% of total cover: 0.6	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Oplismenus hirtellus</i>	5	Yes	FAC
2. <i>Carex cherokeensis</i>	15	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	20 = Total Cover		
	50% of total cover: 10	20% of total cover: 4	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Campsis radicans</i>	25	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	25 = Total Cover		
	50% of total cover: 12.5	20% of total cover: 5	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>58</u>	x 3 = <u>174</u>
FACU species <u>115</u>	x 4 = <u>460</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>188</u> (A)	<u>664</u> (B)

Prevalence Index = B/A = 3.53

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP062
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'5.35" Long: 94° 8'32.29" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP062

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	65	Yes	FACU
2. <i>Tilia americana</i>	10	No	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	75 = Total Cover		
	50% of total cover: 37.5	20% of total cover: 15	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	35	Yes	FACU
2. <i>Ligustrum japonicum</i>	15	Yes	FAC
3. <i>Juniperus virginiana</i>	5	No	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	55 = Total Cover		
	50% of total cover: 27.5	20% of total cover: 11	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ligustrum japonicum</i>	15	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Ambrosia trifida</i>	3	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	3 = Total Cover		
	50% of total cover: 1.5	20% of total cover: 0.6	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	10	Yes	FACU
2. <i>Campsis radicans</i>	_____	No	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>33</u>	x 3 = <u>99</u>
FACU species <u>125</u>	x 4 = <u>500</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>158</u> (A)	<u>599</u> (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP063
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'2.61" Long: 94° 8'35.73" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP063

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Pinus taeda</i></u>	<u>55</u>	<u>Yes</u>	<u>FAC</u>
2. <u><i>Celtis occidentalis</i></u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>95</u> = Total Cover		
	50% of total cover: <u>47.5</u>	20% of total cover: <u>19</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Quercus phellos</i></u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>15</u> = Total Cover		
	50% of total cover: <u>7.5</u>	20% of total cover: <u>3</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Ilex vomitoria</i></u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>20</u> = Total Cover		
	50% of total cover: <u>10</u>	20% of total cover: <u>4</u>	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>None Observed</i></u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u><i>Vitis rotundifolia</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
2. <u><i>Lonicera japonica</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
3. <u><i>Campsis radicans</i></u>	<u>2</u>	<u>No</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>17</u> = Total Cover		
	50% of total cover: <u>8.5</u>	20% of total cover: <u>3.4</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>82</u>	x 3 = <u>246</u>
FACU species <u>50</u>	x 4 = <u>200</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>147</u> (A)	<u>476</u> (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 5/2	97	10YR 5/6	3	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP064
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'59.12" Long: 94° 8'31.31" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP064

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Pinus taeda</u>	50	Yes	FAC
2. <u>Celtis occidentalis</u>	35	Yes	FACU
3. <u>Acer rubrum</u>	10	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	95 = Total Cover		
	50% of total cover: 47.5	20% of total cover: 19	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Ulmus americana</u>	5	Yes	FAC
2. <u>Acer rubrum</u>	3	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	8 = Total Cover		
	50% of total cover: 4	20% of total cover: 1.6	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Rubus trivialis</u>	5	Yes	FACU
2. <u>Smilax bona-nox</u>	2	Yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	7 = Total Cover		
	50% of total cover: 3.5	20% of total cover: 1.4	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>370</u> (B)

Prevalence Index = B/A = 3.36

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	95	10YR 5/6	5	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP065
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Small Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'59.40" Long: 94° 8'30.53" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP065

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
50% of total cover: _____	20% of total cover: _____		
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
50% of total cover: _____	20% of total cover: _____		
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
50% of total cover: _____	20% of total cover: _____		
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <i>Rhynchospora corniculata</i>	65	Yes	OBL
2. <i>Eleocharis montevidensis</i>	5	No	FACW
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	70 = Total Cover		
50% of total cover: <u>35</u>	20% of total cover: <u>14</u>		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
50% of total cover: _____	20% of total cover: _____		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>65</u>	x 1 = <u>65</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>75</u> (B)

Prevalence Index = B/A = 1.07

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	75	10YR 5/6	25	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP066
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'0.36" Long: 94° 8'31.02" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP066

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum dilatatum</i>	15	No	FAC
2. <i>Stenotaphrum secundatum</i>	65	Yes	FAC
3. <i>Diodia virginiana</i>	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
82 = Total Cover			
50% of total cover: 41		20% of total cover: 16.4	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>2</u>	x 2 = <u>4</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>82</u> (A)	<u>244</u> (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	85	10YR 5/6	15	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP067
 Investigator(s): John Williams and Sally Clark Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Small Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'1.26" Long: 94° 8'29.05" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots(C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP067

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <u>Stenotaphrum secundatum</u>	60	Yes	FAC
2. <u>Paspalum dilatatum</u>	5	No	FAC
3. <u>Cyperus rotundus</u>	3	No	FAC
4. <u>Paspalum notatum</u>	20	Yes	FACU
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	88 = Total Cover		
	50% of total cover: <u>44</u>	20% of total cover: <u>17.6</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>68</u>	x 3 = <u>204</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>88</u> (A)	<u>284</u> (B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP068
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'8.79" Long: 94° 8'35.19" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP068

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Quercus nigra</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>80</u> = Total Cover		
	50% of total cover: <u>40</u>	20% of total cover: <u>16</u>	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Quercus nigra</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	<u>5</u> = Total Cover		
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Campsis radicans</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>60</u> = Total Cover		
	50% of total cover: <u>30</u>	20% of total cover: <u>12</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>480</u> (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP069
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Small Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'53.39" Long: 94° 8'54.11" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
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Remarks:
 This point was determined to be within a wetland due to the presence of all 3 wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2"</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 A positive indication of wetland hydrology was observed (at least one primary indicator).
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP069

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Eleocharis montevidensis</i>	45	Yes	FACW
2. <i>Eleocharis quadrangulata</i>	20	Yes	OBL
3. <i>Juncus canadensis</i>	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 70		20% of total cover: 14	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25</u>	x 1 = <u>25</u>
FACW species <u>45</u>	x 2 = <u>90</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>115</u> (B)

Prevalence Index = B/A = 1.64

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	90	10YR 5/6	10	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP070
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'53.32" Long: 94° 8'53.81" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP070

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	90	Yes	FAC
2. <i>Mimosa microphylla</i>	5	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>95</u>	(A) <u>295</u> (B)

Prevalence Index = B/A = 3.11

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP071
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'50.27" Long: 94° 8'55.95" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP071

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	40	Yes	FAC
2. <i>Ulmus parvifolia</i>	35	Yes	FACU
3. <i>Triadica sebifera</i>	5	No	FAC
4. <i>Liquidambar styraciflua</i>	15	No	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	95 = Total Cover		
	50% of total cover: 47.5	20% of total cover: 19	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Quercus phellos</i>	15	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Campsis radicans</i>	40	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	40 = Total Cover		
	50% of total cover: 20	20% of total cover: 8	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>150</u> (A)	<u>470</u> (B)

Prevalence Index = B/A = 3.13

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	100	None	—	—	—	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP072
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 2'49.83" Long: 94° 8'58.27" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP072

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	50	Yes	FACU
2. <i>Ambrosia psilostachya</i>	15	No	FAC
3. <i>Panicum repens</i>	25	Yes	FACW
4. <i>Chloris gayana</i>	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>315</u> (B)

Prevalence Index = B/A = 3.32

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/1	60	None				Clay	Fill material
0-12	10YR 6/6	20	None				Clay	Fill material
0-12	10YR 5/8	10	None				Clay	Fill material

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: Dp073
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'20.08" Long: 94° 8'15.65" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: Dp073

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	75	Yes	FACU
2. <i>Sorghum halepense</i>	25	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP074
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 4'2.83" Long: 94° 8'2.69" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP074

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	95	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>95</u>	x 3 = <u>285</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>285</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>		<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>		<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP075
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 4'18.78" Long: 94° 8'3.12" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP075

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Chloris gayana</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Sorghum halepense</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Chamaesyce prostrata</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ = Total Cover			
50% of total cover: <u>95</u>		20% of total cover: <u>19</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>75</u>	x 4 = <u>300</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>95</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 4.21

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	98	10YR 4/1	2	C	M	Clay	Fill material present

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP076
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 4'49.98" Long: 94° 8'6.75" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP076

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	75	Yes	FACU
2. <i>Stenotaphrum secundatum</i>	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover: 47.5		20% of total cover: 19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>75</u>	x 4 = <u>300</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>360</u> (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	Fill

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP077
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'11.11" Long: 94° 8'7.63" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP077

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	100	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP078
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'26.11" Long: 94° 8'7.95" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%;"> <tr> <td><u> </u> Surface Water (A1)</td> <td><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td><u> </u> High Water Table (A2)</td> <td><u> </u> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><u> </u> Saturation (A3)</td> <td><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><u> </u> Water Marks (B1)</td> <td><u> </u> Oxidized Rhizospheres on Living Roots(C3)</td> </tr> <tr> <td><u> </u> Sediment Deposits (B2)</td> <td><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><u> </u> Drift Deposits (B3)</td> <td><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><u> </u> Algal Mat or Crust (B4)</td> <td><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td><u> </u> Iron Deposits (B5)</td> <td><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><u> </u> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots(C3)	<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Water-Stained Leaves (B9)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%;"> <tr><td><u> </u> Surface Soil Cracks (B6)</td></tr> <tr><td><u> </u> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><u> </u> Drainage Patterns (B10)</td></tr> <tr><td><u> </u> Moss Trim Lines (B16)</td></tr> <tr><td><u> </u> Dry-Season Water Table (C2)</td></tr> <tr><td><u> </u> Crayfish Burrows (C8)</td></tr> <tr><td><u> </u> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><u> </u> Geomorphic Position (D2)</td></tr> <tr><td><u> </u> Shallow Aquitard (D3)</td></tr> <tr><td><u> </u> FAC-Neutral Test (D5)</td></tr> <tr><td><u> </u> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<u> </u> Surface Soil Cracks (B6)	<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Drainage Patterns (B10)	<u> </u> Moss Trim Lines (B16)	<u> </u> Dry-Season Water Table (C2)	<u> </u> Crayfish Burrows (C8)	<u> </u> Saturation Visible on Aerial Imagery (C9)	<u> </u> Geomorphic Position (D2)	<u> </u> Shallow Aquitard (D3)	<u> </u> FAC-Neutral Test (D5)	<u> </u> Sphagnum moss (D8) (LRR T, U)
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)																															
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)																															
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)																															
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<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)																															
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<u> </u> Sphagnum moss (D8) (LRR T, U)																																

<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	<p>Wetland Hydrology Present? Yes <u> </u> No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP078

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	<u>70</u>	<u>Yes</u>	<u>FACU</u>
2. <i>Stenotaphrum secundatum</i>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>370</u> (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 5/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP079
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'44.32" Long: 94° 7'19.27" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP079

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP080
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'46.23" Long: 94° 7'22.62" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP080

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP081
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'54.48" Long: 94° 8'7.71" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP081

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP082
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 6'24.84" Long: 94° 8'11.01" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots(C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
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<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	<p>Wetland Hydrology Present? Yes <u> </u> No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP082

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP083
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 6'5.63" Long: 94° 8'13.52" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP083

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP084
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'15.47" Long: 94° 8'11.22" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP084

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	100 = Total Cover		
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>100</u>	x 3 =	<u>300</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>100</u>	(A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP085
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'1.18" Long: 94° 8'11.80" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP085

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	85	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>42.5</u>		20% of total cover: <u>17</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>85</u> (A)	<u>340</u> (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP086
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 4'44.93" Long: 94° 8'11.00" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP086

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u>	(A) <u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP087
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'37.83" Long: 94° 8'8.94" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP087

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 50		20% of total cover: 20	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 11, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP088
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3' 20.0088" Long: 94.141245° Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP088

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)			
1. <i>Cynodon dactylon</i>	100	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)			
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 5/2	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP089
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'48.10" Long: 94° 8'1.79" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP089

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	90	Yes	FACU
2. <i>Verbena brasiliensis</i>	2	No	UPL
3. <i>Mimosa microphylla</i>	2	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
94 = Total Cover			
50% of total cover:		20% of total cover:	
47		18.8	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>90</u>	x 4 = <u>360</u>
UPL species <u>4</u>	x 5 = <u>20</u>
Column Totals: <u>94</u>	(A) <u>380</u> (B)

Prevalence Index = B/A = 4.04

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP090
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Small Depression Local relief (concave, convex, none): Concave Slope (%): 1-3
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'46.85" Long: 94° 8'3.27" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP090

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)			
1. <i>Pinus taeda</i>	15	Yes	FAC
2. <i>Acer rubrum</i>	10	Yes	FAC
3. <i>Myrica cerifera</i>	10	Yes	FAC
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: 17.5		20% of total cover: 7	
Shrub Stratum (Plot size: 30 ft.)			
1. <i>Lagerstroemia indica</i>	5	Yes	UPL
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: 2.5		20% of total cover: 1	
Herb Stratum (Plot size: 30 ft.)			
1. <i>Solidago canadensis</i>	65	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 32.5		20% of total cover: 13	
Woody Vine Stratum (Plot size: 30 ft.)			
1. <i>Rubus trivialis</i>	60	Yes	FACU
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: 30		20% of total cover: 12	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>125</u>	x 4 = <u>500</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>165</u> (A)	<u>630</u> (B)

Prevalence Index = B/A = 3.82

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: Dp091
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 6'29.47" Long: 94° 8'18.75" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: Dp091

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Liquidambar styraciflua</i>	40	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
40 = Total Cover			
50% of total cover: 20		20% of total cover: 8	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Celtis occidentalis</i>	15	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
15 = Total Cover			
50% of total cover: 7.5		20% of total cover: 3	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	55	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
55 = Total Cover			
50% of total cover: 27.5		20% of total cover: 11	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>95</u>	x 3 = <u>285</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>345</u> (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP092
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 4'18.80" Long: 94° 8'6.70" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP092

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
= Total Cover			
50% of total cover:		20% of total cover:	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	75	Yes	FAC
2. <i>Paspalum notatum</i>	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
95 = Total Cover			
50% of total cover:		20% of total cover:	
47.5		19	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
= Total Cover			
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u>	(A) <u>305</u> (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP093
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 3'50.83" Long: 94° 8'5.55" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP093

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	45	Yes	FAC
2. <i>Paspalum notatum</i>	45	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: 45		20% of total cover: 18	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u>	(A) <u>315</u> (B)

Prevalence Index = B/A = 3.50

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP094
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'0.80" Long: 94° 7'56.05" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP094

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	20	Yes	FAC
2. <i>Quercus virginiana</i>	25	Yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	45 = Total Cover		
	50% of total cover: 22.5	20% of total cover: 9	
Sapling Stratum (Plot size: 30 ft.)			
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)			
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)			
1. <i>Stenotaphrum secundatum</i>	95	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	95 = Total Cover		
	50% of total cover: 47.5	20% of total cover: 19	
Woody Vine Stratum (Plot size: 30 ft.)			
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ = Total Cover		
	50% of total cover: _____	20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>115</u>	x 3 = <u>345</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>445</u> (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP095
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'1.81" Long: 94° 8'25.52" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP095

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: Texas Sample Point: DP096
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5' 40.6968" Long: 94° 8' 2.4" Datum: NAD 1984 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP096

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: June 12, 2019
 Applicant/Owner: TxDOT-BMT State: TX Sample Point: DP097
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30° 5'43.66" Long: 94° 7'49.56" Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP097

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Stenotaphrum secundatum</i>	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
_____ = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (if observed, list morphological adaptations below).

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100	None	—	—	—	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: July 19, 2019
 Applicant/Owner: TxDOT - BMT State: TX Sample Point: DP098
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30.095170° Long: -94.135550° Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> Hydric Soil Present? Yes <u> </u> No <u> X </u> Wetland Hydrology Present? Yes <u> </u> No <u> X </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u> X </u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots(C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u> X </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP098

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Shrub Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
6.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Paspalum notatum</i>	94	Yes	FACU
2. <i>Verbena brasiliensis</i>	2	No	UPL
3. <i>Mimosa microphylla</i>	2	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
98 = Total Cover			
50% of total cover: 49		20% of total cover: 19.6	
Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2.			
3.			
4.			
5.			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>94</u>	x 4 = <u>376</u>
UPL species <u>4</u>	x 5 = <u>20</u>
Column Totals: <u>98</u>	(A) <u>396</u> (B)

Prevalence Index = B/A = 4.04

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No X _____</p>
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Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: 10/69 Interchanges Project County: Jefferson Sampling Date: July 19, 2019
 Applicant/Owner: TxDOT - BMT State: TX Sample Point: DP099
 Investigator(s): John Williams and Sally Clark Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 30.093778° Long: -94.136079° Datum: NAD 1983 (Conus)
 Soil Map Unit Name: Urban Land NWI Classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 This point was determined not to be within a wetland due to the lack of all three wetland criteria.

HYDROLOGY

<p>Wetland hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u> </u> Surface Water (A1)</td> <td style="width: 50%; border: none;"><u> </u> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><u> </u> High Water Table (A2)</td> <td style="border: none;"><u> </u> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><u> </u> Saturation (A3)</td> <td style="border: none;"><u> </u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><u> </u> Water Marks (B1)</td> <td style="border: none;"><u> </u> Oxidized Rhizospheres on Living Roots(C3)</td> </tr> <tr> <td style="border: none;"><u> </u> Sediment Deposits (B2)</td> <td style="border: none;"><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><u> </u> Drift Deposits (B3)</td> <td style="border: none;"><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><u> </u> Algal Mat or Crust (B4)</td> <td style="border: none;"><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><u> </u> Iron Deposits (B5)</td> <td style="border: none;"><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><u> </u> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><u> </u> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)	<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)	<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots(C3)	<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)	<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)	<u> </u> Inundation Visible on Aerial Imagery (B7)		<u> </u> Water-Stained Leaves (B9)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width: 100%; border: none;"> <tr><td style="border: none;"><u> </u> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><u> </u> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><u> </u> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><u> </u> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><u> </u> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><u> </u> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><u> </u> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><u> </u> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><u> </u> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><u> </u> FAC-Neutral Test (D5)</td></tr> <tr><td style="border: none;"><u> </u> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<u> </u> Surface Soil Cracks (B6)	<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Drainage Patterns (B10)	<u> </u> Moss Trim Lines (B16)	<u> </u> Dry-Season Water Table (C2)	<u> </u> Crayfish Burrows (C8)	<u> </u> Saturation Visible on Aerial Imagery (C9)	<u> </u> Geomorphic Position (D2)	<u> </u> Shallow Aquitard (D3)	<u> </u> FAC-Neutral Test (D5)	<u> </u> Sphagnum moss (D8) (LRR T, U)
<u> </u> Surface Water (A1)	<u> </u> Aquatic Fauna (B13)																															
<u> </u> High Water Table (A2)	<u> </u> Marl Deposits (B15) (LRR U)																															
<u> </u> Saturation (A3)	<u> </u> Hydrogen Sulfide Odor (C1)																															
<u> </u> Water Marks (B1)	<u> </u> Oxidized Rhizospheres on Living Roots(C3)																															
<u> </u> Sediment Deposits (B2)	<u> </u> Presence of Reduced Iron (C4)																															
<u> </u> Drift Deposits (B3)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)																															
<u> </u> Algal Mat or Crust (B4)	<u> </u> Thin Muck Surface (C7)																															
<u> </u> Iron Deposits (B5)	<u> </u> Other (Explain in Remarks)																															
<u> </u> Inundation Visible on Aerial Imagery (B7)																																
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<u> </u> Sphagnum moss (D8) (LRR T, U)																																

<p>Field Observations:</p> Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP099

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____		20% of total cover: _____	
Sapling Stratum (Plot size: 30 ft.)			
1. <i>Pinus taeda</i>	10	Yes	FAC
2. <i>Acer rubrum</i>	10	Yes	FAC
3. <i>Myrica cerifera</i>	8	Yes	FAC
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: 14		20% of total cover: 5.6	
Shrub Stratum (Plot size: 30 ft.)			
1. <i>Lagerstroemia indica</i>	5	Yes	UPL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: 2.5		20% of total cover: 1	
Herb Stratum (Plot size: 30 ft.)			
1. <i>Solidago canadensis</i>	20	Yes	FACU
2. <i>Cortaderia selloana</i>	45	Yes	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ = Total Cover			
50% of total cover: 32.5		20% of total cover: 13	
Woody Vine Stratum (Plot size: 30 ft.)			
1. <i>Rubus trivialis</i>	60	Yes	FACU
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: 30		20% of total cover: 12	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>28</u>	x 3 = <u>84</u>
FACU species <u>125</u>	x 4 = <u>500</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>158</u>	(A) <u>609</u> (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (if observed, list morphological adaptations below).

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100	None	—	—	—	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soils Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks:

No positive indication of hydric soils was observed.

**APPENDIX D:
GPS SURVEY DATA**

**GPS Survey Data Wetland Delineation Report
10/69 Interchanges Project Jefferson County, Texas**

Unique Point Name and Number		NAD 1983 UTM coordinate		Number of Satellites	Position Dilution of Point (PDOP)	Distances Point to Point (Feet)
		Latitude	Longitude			
Stream 1	Stream	30.0370872	-94.1588995	13	6.3	19
Stream 1	Stream	30.03708718	-94.1588995	15	6.3	20
Stream 1	Stream	30.03708728	-94.15889952	17	6.3	11
Stream 1	Stream	30.03708734	-94.15889952	14	6.3	34
Stream 1	Stream	30.03708743	-94.15889954	16	6.3	16
Stream 1	Stream	30.0370875	-94.15889963	15	6.3	17
Stream 1	Stream	30.03708747	-94.15889959	14	6.3	2
Stream 1	Stream	30.03708418	-94.15886584	13	6.3	16
Stream 1	Stream	30.03707058	-94.15883964	16	6.3	12
Stream 1	Stream	30.03707037	-94.15883944	17	6.3	11
Stream 1	Stream	30.03707036	-94.15883924	15	6.3	10
Stream 1	Stream	30.03703147	-94.15887124	15	2.2	9
Stream 1	Stream	30.03703144	-94.15887126	13	2.2	9
Stream 1	Stream	30.03703143	-94.15887133	12	2.2	5
Stream 1	Stream	30.03704321	-94.15889749	13	2.2	3
Stream 1	Stream	30.03704337	-94.1588975	14	2.2	19
Stream 1	Stream	30.03705853	-94.1589191	15	2.2	27
Stream 1	Stream	30.0370587	-94.15891899	14	2.2	6
Stream 1	Stream	30.0370588	-94.15891906	14	2.2	9
Stream 5	Stream	30.04734976	-94.14526895	15	3.9	14
Stream 5	Stream	30.04734979	-94.14526912	16	3.9	33
Stream 5	Stream	30.04734951	-94.14526846	17	3.9	34
Stream 5	Stream	30.04734966	-94.14526855	17	3.9	16
Stream 5	Stream	30.04735114	-94.1452689	16	3.9	10
Stream 5	Stream	30.04735316	-94.14526748	12	3.9	5
Stream 5	Stream	30.04735015	-94.14527284	14	3.9	3
Stream 5	Stream	30.04735536	-94.14526891	17	3.9	11
Stream 5	Stream	30.04735868	-94.14527137	17	3.9	14
Stream 5	Stream	30.04736653	-94.14527233	14	3.9	7
Stream 5	Stream	30.04737961	-94.14527972	16	3.9	12
Stream 5	Stream	30.04738486	-94.14528394	15	3.9	15
Stream 5	Stream	30.04738841	-94.14528143	14	3.9	11
Stream 5	Stream	30.0473927	-94.1452801	13	3.9	7
Stream 5	Stream	30.04739821	-94.14527768	17	3.9	12
Stream 5	Stream	30.0474015	-94.14527519	15	3.9	8
Stream 5	Stream	30.04740199	-94.14527331	13	3.9	11
Stream 5	Stream	30.04740098	-94.14527325	12	3.9	11
Stream 5	Stream	30.04740317	-94.14527204	13	3.9	21
Stream 5	Stream	30.04740472	-94.14527243	14	3.9	18
Stream 5	Stream	30.04740808	-94.14527246	15	3.9	16
Stream 5	Stream	30.04741126	-94.1452724	14	3.9	17
Stream 5	Stream	30.04741804	-94.14527218	14	3.9	18
Stream 5	Stream	30.04741985	-94.14527049	13	3.9	18
Stream 5	Stream	30.04742459	-94.14527195	15	3.9	12
Stream 5	Stream	30.04743448	-94.14526567	16	3.9	9
Stream 5	Stream	30.04743659	-94.1452758	17	3.9	8
Stream 5	Stream	30.04743696	-94.14527758	17	3.9	5
Stream 5	Stream	30.04744641	-94.14526687	16	3.9	9
Stream 5	Stream	30.04745088	-94.14526416	13	3.9	9
Stream 5	Stream	30.04745395	-94.14526483	12	3.9	11
Stream 5	Stream	30.04745735	-94.14526172	12	3.9	14
Stream 5	Stream	30.0474633	-94.14525875	11	3.9	16
Stream 5	Stream	30.04747586	-94.14526788	14	3.9	19
Stream 5	Stream	30.04747202	-94.14525164	13	3.9	17
Stream 5	Stream	30.04747593	-94.14525498	15	3.9	18

**GPS Survey Data Wetland Delineation Report
10/69 Interchanges Project Jefferson County, Texas**

Unique Point Name and Number		NAD 1983 UTM coordinate		Number of Satellites	Position Dilution of Point (PDOP)	Distances Point to Point (Feet)
		Latitude	Longitude			
Stream 5	Stream	30.04748853	-94.14525101	17	3.9	12
Stream 5	Stream	30.0475086	-94.14524769	17	3.9	8
Stream 5	Stream	30.0475164	-94.14523892	14	3.9	9
Stream 5	Stream	30.04751144	-94.14522912	16	3.9	11
Stream 5	Stream	30.04751254	-94.14523432	15	3.9	15
Stream 5	Stream	30.0475207	-94.14522649	14	3.9	18
Stream 5	Stream	30.04752089	-94.14522685	13	3.9	17
Stream 5	Stream	30.04753456	-94.14522361	16	3.9	19
Stream 5	Stream	30.04753386	-94.14522165	17	3.9	12
Stream 5	Stream	30.04753437	-94.1452208	15	3.9	18
Stream 5	Stream	30.04753475	-94.14522059	15	3.9	8
Stream 5	Stream	30.04754945	-94.14519586	13	3.9	9
Stream 5	Stream	30.04755248	-94.14519696	12	3.9	6
Stream 5	Stream	30.04755899	-94.14519882	13	3.9	12
Stream 5	Stream	30.04756151	-94.14519459	14	3.9	11
Stream 5	Stream	30.04756484	-94.14519051	15	3.9	16
Stream 5	Stream	30.04757176	-94.14518574	14	3.9	17
Stream 5	Stream	30.04757608	-94.14518471	14	3.9	12
Stream 5	Stream	30.04757958	-94.14518213	13	3.9	16
Stream 5	Stream	30.04758464	-94.14518427	15	3.9	12
Stream 5	Stream	30.04759051	-94.14519705	16	3.9	8
Stream 5	Stream	30.04759936	-94.14518902	17	3.9	11
Stream 5	Stream	30.04760623	-94.14519042	17	3.9	9
Stream 5	Stream	30.04760128	-94.14518092	16	3.9	13
Stream 5	Stream	30.04759734	-94.14517891	13	3.9	11
Stream 5	Stream	30.04759626	-94.14517751	12	3.9	9
Stream 5	Stream	30.04760179	-94.14518364	12	3.9	16
Stream 5	Stream	30.04761559	-94.14520071	11	3.9	12
Stream 5	Stream	30.04762614	-94.14519467	14	3.9	17
Stream 5	Stream	30.04762857	-94.14520267	13	3.9	5
Stream 5	Stream	30.04762902	-94.14520173	15	3.9	16
Stream 5	Stream	30.04763374	-94.14520302	17	3.9	18
Stream 5	Stream	30.04763794	-94.14520278	17	3.9	22
Stream 5	Stream	30.04764619	-94.14520189	14	3.9	15
Stream 5	Stream	30.04765413	-94.1452029	16	3.9	34
Stream 5	Stream	30.04766005	-94.14520468	13	3.9	56
Stream 5	Stream	30.04766459	-94.14520733	15	3.9	37
Stream 8	Stream	30.0413543	-94.12944037	11	3.4	7
Stream 8	Stream	30.04135396	-94.12944106	11	3.4	16
Stream 8	Stream	30.0413517	-94.12943848	11	3.4	9
Stream 8	Stream	30.041346	-94.12943623	13	3.4	16
Stream 8	Stream	30.0413391	-94.12943432	16	3.4	12
Stream 8	Stream	30.04133194	-94.12943321	17	3.4	9
Stream 8	Stream	30.04132407	-94.12943423	15	3.4	19
Stream 8	Stream	30.04131681	-94.12943615	15	3.4	16
Stream 8	Stream	30.04130938	-94.12943864	13	3.4	19
Stream 8	Stream	30.04130186	-94.12944114	12	3.4	14
Stream 8	Stream	30.04129467	-94.12944422	13	3.4	19
Stream 8	Stream	30.04128709	-94.12944674	14	3.4	8
Stream 8	Stream	30.04128461	-94.1294476	15	3.4	18
Stream 8	Stream	30.04127846	-94.12945059	14	3.4	18
Stream 8	Stream	30.04127155	-94.12945376	14	3.4	23
Stream 8	Stream	30.04126525	-94.12945589	15	3.4	13
Stream 8	Stream	30.04125801	-94.12945814	16	3.4	11
Stream 8	Stream	30.04124954	-94.12945922	17	3.4	15

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Unique Point Name and Number		NAD 1983 UTM coordinate		Number of Satellites	Position Dilution of Point (PDOP)	Distances Point to Point (Feet)
		Latitude	Longitude			
Stream 8	Stream	30.0412407	-94.12945757	17	3.4	15
Stream 8	Stream	30.04123362	-94.12945798	16	3.4	14
Stream 8	Stream	30.04122694	-94.1294587	12	3.4	9
Stream 8	Stream	30.04121807	-94.129458	14	3.4	93
Stream 8	Stream	30.04121164	-94.12945807	17	3.4	18
Stream 8	Stream	30.04120414	-94.12945797	17	3.4	22
Stream 8	Stream	30.04119782	-94.12945848	14	3.4	14
Stream 8	Stream	30.04118919	-94.12945794	16	3.4	9
Stream 8	Stream	30.04118105	-94.12945799	15	3.4	8
Stream 8	Stream	30.04117798	-94.12945824	14	3.4	23
Stream 8	Stream	30.04117831	-94.12945786	13	3.4	12
Stream 8	Stream	30.04117871	-94.12945797	17	3.4	15
Stream 8	Stream	30.04117895	-94.12945807	15	3.4	5
Stream 8	Stream	30.04117901	-94.12945796	11	3.4	17
Stream 8	Stream	30.04117903	-94.1294579	11	3.4	11
Stream 8	Stream	30.04117901	-94.12945847	11	3.4	5
Stream 8	Stream	30.04117902	-94.12945853	11	3.4	9
Stream 9	Stream	30.04507359	-94.13661547	15	3.7	8
Stream 9	Stream	30.04507401	-94.13661616	17	3.7	22
Stream 9	Stream	30.04507398	-94.13661635	14	3.7	14
Stream 9	Stream	30.04510073	-94.13660868	16	3.7	18
Stream 9	Stream	30.04510479	-94.13658081	15	3.7	11
Stream 9	Stream	30.0451093	-94.13658009	14	3.7	9
Stream 9	Stream	30.04511332	-94.13657571	13	3.7	7
Stream 9	Stream	30.0451177	-94.13658053	16	3.7	14
Stream 9	Stream	30.04512048	-94.13657724	17	3.7	12
Stream 9	Stream	30.04512445	-94.13657423	15	3.7	11
Stream 9	Stream	30.04512854	-94.13657194	17	3.7	12
Stream 9	Stream	30.04513371	-94.13656653	14	3.7	17
Stream 9	Stream	30.04513778	-94.13656186	16	3.7	16
Stream 9	Stream	30.04513983	-94.13656107	15	3.7	12
Stream 9	Stream	30.0451426	-94.13655797	14	3.7	8
Stream 9	Stream	30.04514704	-94.13655584	13	3.7	15
Stream 9	Stream	30.04515079	-94.13655165	16	3.7	9
Stream 9	Stream	30.04515388	-94.13654665	17	3.7	11
Stream 9	Stream	30.04516075	-94.13653945	15	3.7	13
Stream 9	Stream	30.04516772	-94.13653615	15	3.7	9
Stream 9	Stream	30.04517239	-94.13653633	13	3.7	8
Stream 9	Stream	30.04517618	-94.13653408	12	3.7	9
Stream 9	Stream	30.04517976	-94.13653154	13	3.7	11
Stream 9	Stream	30.04518484	-94.1365274	14	3.7	14
Stream 9	Stream	30.04518723	-94.13652511	15	3.7	17
Stream 9	Stream	30.04518966	-94.13652382	14	3.7	18
Stream 9	Stream	30.04519423	-94.13651922	14	3.7	12
Stream 9	Stream	30.04519728	-94.1365153	15	3.7	11
Stream 9	Stream	30.04519942	-94.13651062	16	3.7	15
Stream 9	Stream	30.04519225	-94.13651218	17	3.7	18
Stream 9	Stream	30.04518982	-94.13649864	17	3.7	12
Stream 9	Stream	30.04518676	-94.13649606	16	3.7	7
Stream 9	Stream	30.04518821	-94.13650865	12	3.7	8
Stream 9	Stream	30.04520027	-94.136503	14	3.7	18
Stream 9	Stream	30.04519802	-94.13649559	17	3.7	17
Stream 9	Stream	30.04518983	-94.13652169	17	3.7	23
Stream 9	Stream	30.04518954	-94.13652083	14	3.7	15
Stream 9	Stream	30.04518927	-94.1365202	16	3.7	15

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Unique Point Name and Number		NAD 1983 UTM coordinate		Number of Satellites	Position Dilution of Point (PDOP)	Distances Point to Point (Feet)
		Latitude	Longitude			
Stream 9	Stream	30.0451893	-94.13651984	15	3.7	19
Stream 9	Stream	30.04518919	-94.13651941	14	3.7	93
Stream 9	Stream	30.04518906	-94.13651871	13	3.7	19
Stream 9	Stream	30.04518951	-94.13651895	17	3.7	29
Stream 9	Stream	30.04518956	-94.13651888	15	3.7	23
Stream 9	Stream	30.0451896	-94.1365186	13	3.7	19
Stream 9	Stream	30.04518998	-94.13651643	12	3.7	60
Stream 9	Stream	30.04518861	-94.13651503	13	3.7	5
Stream 9	Stream	30.04518921	-94.13651271	14	3.7	13
Stream 9	Stream	30.04519188	-94.13650426	15	3.7	8
Stream 9	Stream	30.04519812	-94.13647734	14	3.7	18
Stream 9	Stream	30.04519762	-94.13646055	14	3.7	93
Stream 9	Stream	30.04520164	-94.1364547	13	3.7	14
Wetland 1	Wetland	30.03611285	-94.15829728	15	3.1	5
Wetland 1	Wetland	30.0361128	-94.15829719	16	3.1	9
Wetland 1	Wetland	30.03611286	-94.15829726	17	3.1	9
Wetland 1	Wetland	30.03611285	-94.15829725	17	3.1	11
Wetland 1	Wetland	30.03611278	-94.15829704	16	3.1	14
Wetland 1	Wetland	30.03611132	-94.15829882	13	3.1	16
Wetland 1	Wetland	30.03610934	-94.15830327	12	3.1	19
Wetland 1	Wetland	30.0361061	-94.15830787	12	3.1	17
Wetland 1	Wetland	30.03610048	-94.15831388	11	3.1	18
Wetland 1	Wetland	30.0360946	-94.15831888	14	3.1	12
Wetland 1	Wetland	30.0360893	-94.15832457	13	3.1	11
Wetland 1	Wetland	30.03608442	-94.15833039	15	3.1	9
Wetland 1	Wetland	30.03607957	-94.15833741	17	3.1	11
Wetland 1	Wetland	30.03607566	-94.15834482	17	3.1	15
Wetland 1	Wetland	30.03607109	-94.15835123	14	3.1	18
Wetland 1	Wetland	30.03606676	-94.15835773	16	3.1	17
Wetland 1	Wetland	30.03606257	-94.15836488	15	3.1	19
Wetland 1	Wetland	30.03605762	-94.15837163	14	3.1	12
Wetland 1	Wetland	30.03605256	-94.15837783	13	3.1	4
Wetland 1	Wetland	30.03604635	-94.15838396	16	3.1	8
Wetland 1	Wetland	30.03603969	-94.15838975	17	3.1	9
Wetland 1	Wetland	30.0360339	-94.15839325	15	3.1	6
Wetland 1	Wetland	30.03602922	-94.15839045	15	3.1	9
Wetland 1	Wetland	30.0360274	-94.15838445	13	3.1	11
Wetland 1	Wetland	30.03602999	-94.15837837	12	3.1	16
Wetland 1	Wetland	30.03603382	-94.15837279	13	3.1	14
Wetland 1	Wetland	30.03603749	-94.15836559	14	3.1	9
Wetland 1	Wetland	30.03604341	-94.15836029	15	3.1	5
Wetland 1	Wetland	30.03604909	-94.15835425	14	3.1	18
Wetland 1	Wetland	30.03605417	-94.15834854	14	3.1	12
Wetland 1	Wetland	30.03605883	-94.15834153	13	3.1	29
Wetland 1	Wetland	30.03606316	-94.1583333	15	3.1	31
Wetland 1	Wetland	30.03606768	-94.1583253	16	3.1	4
Wetland 1	Wetland	30.03607288	-94.15831896	17	3.1	23
Wetland 1	Wetland	30.03607883	-94.15831378	17	3.1	30
Wetland 1	Wetland	30.03608279	-94.15830792	16	3.1	14
Wetland 1	Wetland	30.03608702	-94.15830183	13	3.1	11
Wetland 1	Wetland	30.03609067	-94.1582958	12	3.1	9
Wetland 1	Wetland	30.03609364	-94.15828893	12	3.1	18
Wetland 1	Wetland	30.03609258	-94.15828349	11	3.1	9
Wetland 1	Wetland	30.03608691	-94.15827982	14	3.1	12
Wetland 1	Wetland	30.03608202	-94.15827906	13	3.1	11

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		Latitude	Longitude			
Wetland 1	Wetland	30.03607733	-94.15827498	13	3.1	17
Wetland 1	Wetland	30.03607143	-94.15827289	16	3.1	12
Wetland 1	Wetland	30.03606505	-94.1582722	17	3.1	12
Wetland 1	Wetland	30.03605929	-94.15827363	15	3.1	8
Wetland 1	Wetland	30.0360532	-94.15827283	15	3.1	19
Wetland 1	Wetland	30.03604659	-94.15827249	13	3.1	12
Wetland 1	Wetland	30.03603922	-94.1582729	12	3.1	17
Wetland 1	Wetland	30.0360317	-94.15827348	13	3.1	16
Wetland 1	Wetland	30.03602406	-94.15827365	14	3.1	17
Wetland 1	Wetland	30.03601648	-94.15827412	15	3.1	9
Wetland 1	Wetland	30.03600849	-94.15827583	14	3.1	8
Wetland 1	Wetland	30.03600135	-94.15827773	14	3.1	12
Wetland 1	Wetland	30.03599283	-94.1582797	15	3.1	27
Wetland 1	Wetland	30.03598453	-94.15828329	16	3.1	17
Wetland 1	Wetland	30.0359772	-94.15828672	11	3.1	13
Wetland 1	Wetland	30.03596967	-94.15829024	11	3.1	14
Wetland 1	Wetland	30.03596105	-94.1582929	16	3.1	33
Wetland 1	Wetland	30.0359534	-94.15829472	12	3.1	34
Wetland 1	Wetland	30.03594626	-94.1582974	14	3.1	16
Wetland 1	Wetland	30.0359382	-94.15829976	15	3.1	10
Wetland 1	Wetland	30.03593087	-94.15830147	11	3.1	5
Wetland 1	Wetland	30.03592417	-94.15830257	14	3.1	3
Wetland 1	Wetland	30.03591802	-94.15830392	16	3.1	11
Wetland 1	Wetland	30.03591082	-94.15830466	15	3.1	14
Wetland 1	Wetland	30.03590192	-94.15830459	14	3.1	7
Wetland 1	Wetland	30.03589489	-94.15830438	13	3.1	12
Wetland 1	Wetland	30.03588735	-94.15830541	11	3.1	15
Wetland 1	Wetland	30.03587963	-94.15830634	15	3.1	11
Wetland 1	Wetland	30.03587351	-94.15830728	13	3.1	7
Wetland 1	Wetland	30.03586502	-94.15830878	12	3.1	12
Wetland 1	Wetland	30.03585858	-94.15830908	13	3.1	8
Wetland 1	Wetland	30.03585072	-94.15830916	14	3.1	11
Wetland 1	Wetland	30.03584243	-94.15830895	15	3.1	11
Wetland 1	Wetland	30.035834	-94.15830896	14	3.1	21
Wetland 1	Wetland	30.03582609	-94.15830952	14	3.1	18
Wetland 1	Wetland	30.03581773	-94.15830941	13	3.1	16
Wetland 1	Wetland	30.03580981	-94.15830982	15	3.1	17
Wetland 1	Wetland	30.03580089	-94.15831045	16	3.1	18
Wetland 1	Wetland	30.03579257	-94.15831034	12	3.1	18
Wetland 1	Wetland	30.03578509	-94.15831079	14	3.1	12
Wetland 1	Wetland	30.03578068	-94.15831038	16	3.1	9
Wetland 1	Wetland	30.03577985	-94.15831075	13	3.1	8
Wetland 1	Wetland	30.03577966	-94.15831108	12	3.1	5
Wetland 2	Wetland	30.04838942	-94.14813473	12	3.2	9
Wetland 2	Wetland	30.04839053	-94.14813501	11	3.2	9
Wetland 2	Wetland	30.04839322	-94.14813895	14	3.2	11
Wetland 2	Wetland	30.04839495	-94.14814633	13	3.2	14
Wetland 2	Wetland	30.04839274	-94.1481543	15	3.2	16
Wetland 2	Wetland	30.04838727	-94.14816263	13	3.2	19
Wetland 2	Wetland	30.0483806	-94.14816963	11	3.2	17
Wetland 2	Wetland	30.04837299	-94.14817742	14	3.2	18
Wetland 2	Wetland	30.04836528	-94.14818432	16	3.2	12
Wetland 2	Wetland	30.0483573	-94.14819211	15	3.2	8
Wetland 2	Wetland	30.04834906	-94.1481996	14	3.2	9
Wetland 2	Wetland	30.04834252	-94.14820561	13	3.2	11

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		Latitude	Longitude			
Wetland 2	Wetland	30.04833602	-94.14821159	16	3.2	15
Wetland 2	Wetland	30.04832962	-94.14821855	17	3.2	18
Wetland 2	Wetland	30.04832299	-94.14822583	15	3.2	17
Wetland 2	Wetland	30.048316	-94.14823216	15	3.2	19
Wetland 2	Wetland	30.04830874	-94.14823857	13	3.2	12
Wetland 2	Wetland	30.04830226	-94.14824535	12	3.2	18
Wetland 2	Wetland	30.04829617	-94.14825306	13	3.2	8
Wetland 2	Wetland	30.04829022	-94.14826021	14	3.2	9
Wetland 2	Wetland	30.04828374	-94.14826831	15	3.2	6
Wetland 2	Wetland	30.04827741	-94.14827557	14	3.2	12
Wetland 2	Wetland	30.04827122	-94.14828234	14	3.2	11
Wetland 2	Wetland	30.04826491	-94.14828817	13	3.2	16
Wetland 2	Wetland	30.04825828	-94.14829445	15	3.2	17
Wetland 2	Wetland	30.04825171	-94.14830015	16	3.2	12
Wetland 2	Wetland	30.04824449	-94.14830562	17	3.2	16
Wetland 2	Wetland	30.04823854	-94.14831163	17	3.2	12
Wetland 2	Wetland	30.04823224	-94.14831886	16	3.2	8
Wetland 2	Wetland	30.04822592	-94.14832479	13	3.2	11
Wetland 2	Wetland	30.04821938	-94.1483302	12	3.2	9
Wetland 2	Wetland	30.04821284	-94.14833551	12	3.2	13
Wetland 2	Wetland	30.04820738	-94.1483416	11	3.2	11
Wetland 2	Wetland	30.04820194	-94.14834823	14	3.2	9
Wetland 2	Wetland	30.04819665	-94.14835532	13	3.2	16
Wetland 2	Wetland	30.0481908	-94.14836274	15	3.2	12
Wetland 2	Wetland	30.04818495	-94.14836978	17	3.2	17
Wetland 2	Wetland	30.04817952	-94.1483757	17	3.2	5
Wetland 2	Wetland	30.0481741	-94.14838174	14	3.2	16
Wetland 2	Wetland	30.04816965	-94.14838834	16	3.2	18
Wetland 2	Wetland	30.04816691	-94.14839613	13	3.2	22
Wetland 2	Wetland	30.04816386	-94.14840339	15	3.2	15
Wetland 2	Wetland	30.04815846	-94.14840976	11	3.2	34
Wetland 2	Wetland	30.04815255	-94.14841691	11	3.2	56
Wetland 2	Wetland	30.04814613	-94.14842317	11	3.2	37
Wetland 2	Wetland	30.04813951	-94.14842875	13	3.2	7
Wetland 2	Wetland	30.04813398	-94.14843329	16	3.2	16
Wetland 2	Wetland	30.04812844	-94.14843732	17	3.2	9
Wetland 2	Wetland	30.04812188	-94.14844006	15	3.2	16
Wetland 2	Wetland	30.04811515	-94.14844292	15	3.2	12
Wetland 2	Wetland	30.04810834	-94.14844804	13	3.2	9
Wetland 2	Wetland	30.04810102	-94.14845313	12	3.2	19
Wetland 2	Wetland	30.04809295	-94.14845853	13	3.2	16
Wetland 2	Wetland	30.04808809	-94.14845517	14	3.2	19
Wetland 2	Wetland	30.04808518	-94.14844759	15	3.2	14
Wetland 2	Wetland	30.04808821	-94.14844035	14	3.2	19
Wetland 2	Wetland	30.04809411	-94.14843505	14	3.2	8
Wetland 2	Wetland	30.04810059	-94.1484295	15	3.2	18
Wetland 2	Wetland	30.0481046	-94.14842234	16	3.2	18
Wetland 2	Wetland	30.04810549	-94.1484138	17	3.2	23
Wetland 2	Wetland	30.04810583	-94.14840502	17	3.2	13
Wetland 2	Wetland	30.04810396	-94.14839663	16	3.2	11
Wetland 2	Wetland	30.04809946	-94.14838868	12	3.2	15
Wetland 2	Wetland	30.0480939	-94.14838254	14	3.2	15
Wetland 2	Wetland	30.04808816	-94.14837666	17	3.2	14
Wetland 2	Wetland	30.04808204	-94.14837136	17	3.2	9
Wetland 2	Wetland	30.04807556	-94.14836748	14	3.2	93

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Unique Point Name and Number		NAD 1983 UTM coordinate		Number of Satellites	Position Dilution of Point (PDOP)	Distances Point to Point (Feet)
		Latitude	Longitude			
Wetland 2	Wetland	30.04806804	-94.14836521	16	3.2	18
Wetland 2	Wetland	30.04806164	-94.14836065	15	3.2	22
Wetland 2	Wetland	30.04806018	-94.14835326	14	3.2	14
Wetland 2	Wetland	30.04806218	-94.14834548	13	3.2	9
Wetland 2	Wetland	30.04806595	-94.14833782	17	3.2	8
Wetland 2	Wetland	30.04807173	-94.14833114	15	3.2	23
Wetland 2	Wetland	30.04807896	-94.14832849	11	3.2	12
Wetland 2	Wetland	30.04808618	-94.14832833	11	3.2	15
Wetland 2	Wetland	30.04809332	-94.14833224	11	3.2	5
Wetland 2	Wetland	30.04809943	-94.14833674	11	3.2	17
Wetland 2	Wetland	30.04810704	-94.14834008	15	3.2	11
Wetland 2	Wetland	30.04811345	-94.14834408	17	3.2	5
Wetland 2	Wetland	30.04811968	-94.14834752	14	3.2	9
Wetland 2	Wetland	30.04812685	-94.14835159	16	3.2	8
Wetland 2	Wetland	30.04813244	-94.14835542	15	3.2	22
Wetland 2	Wetland	30.04813605	-94.14835681	14	3.2	14
Wetland 2	Wetland	30.04813816	-94.14835823	13	3.2	18
Wetland 2	Wetland	30.04814297	-94.14835811	16	3.2	11
Wetland 2	Wetland	30.04814951	-94.14835706	17	3.2	9
Wetland 2	Wetland	30.04815695	-94.14835434	15	3.2	7
Wetland 2	Wetland	30.04816449	-94.14835131	17	3.2	14
Wetland 2	Wetland	30.04817215	-94.14834753	14	3.2	12
Wetland 2	Wetland	30.04818012	-94.1483412	16	3.2	11
Wetland 2	Wetland	30.04818804	-94.1483347	15	3.2	12
Wetland 2	Wetland	30.0481961	-94.1483292	14	3.2	17
Wetland 2	Wetland	30.04820359	-94.14832385	13	3.2	16
Wetland 2	Wetland	30.0482101	-94.14831914	16	3.2	12
Wetland 2	Wetland	30.04821645	-94.14831325	17	3.2	8
Wetland 2	Wetland	30.04822347	-94.14830648	15	3.2	15
Wetland 2	Wetland	30.0482289	-94.14829985	15	3.2	9
Wetland 2	Wetland	30.04823562	-94.14829274	13	3.2	11
Wetland 2	Wetland	30.04824281	-94.14828561	12	3.2	13
Wetland 2	Wetland	30.04824935	-94.14827862	13	3.2	9
Wetland 2	Wetland	30.04825644	-94.14827147	14	3.2	8
Wetland 2	Wetland	30.04826245	-94.14826524	15	3.2	9
Wetland 2	Wetland	30.04826919	-94.14825846	14	3.2	11
Wetland 2	Wetland	30.04827494	-94.14825302	14	3.2	14
Wetland 2	Wetland	30.04827786	-94.14825054	15	3.2	17
Wetland 2	Wetland	30.04827876	-94.14824957	16	3.2	18
Wetland 2	Wetland	30.0482828	-94.14824439	17	3.2	12
Wetland 2	Wetland	30.04828985	-94.14823794	17	3.2	11
Wetland 2	Wetland	30.04829777	-94.14823143	16	3.2	15
Wetland 2	Wetland	30.04830646	-94.14822366	12	3.2	18
Wetland 2	Wetland	30.04831543	-94.14821499	14	3.2	12
Wetland 2	Wetland	30.04832337	-94.14820666	17	3.2	7
Wetland 2	Wetland	30.04833103	-94.14819822	13	3.2	8
Wetland 2	Wetland	30.04833787	-94.14818902	16	3.2	18
Wetland 2	Wetland	30.04834427	-94.14818021	17	3.2	17
Wetland 2	Wetland	30.04835083	-94.14817193	15	3.2	23
Wetland 2	Wetland	30.04835839	-94.14816419	15	3.2	15
Wetland 2	Wetland	30.04836661	-94.148157	13	3.2	15
Wetland 2	Wetland	30.04837353	-94.1481495	12	3.2	19
Wetland 2	Wetland	30.04838071	-94.14814232	13	3.2	93
Wetland 2	Wetland	30.04838757	-94.1481357	14	3.2	19
Wetland 2	Wetland	30.04839398	-94.14813092	15	3.2	29

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		Latitude	Longitude			
Wetland 2	Wetland	30.04838942	-94.14813473	14	3.2	23
Wetland 3	Wetland	30.04995134	-94.14655201	14	5.6	6
Wetland 3	Wetland	30.04995146	-94.14655238	15	5.6	12
Wetland 3	Wetland	30.04995101	-94.14655213	16	5.6	8
Wetland 3	Wetland	30.04995306	-94.14654807	11	5.6	11
Wetland 3	Wetland	30.04995917	-94.14654093	11	5.6	11
Wetland 3	Wetland	30.04996646	-94.14653313	16	5.6	22
Wetland 3	Wetland	30.04997253	-94.14652461	12	5.6	18
Wetland 3	Wetland	30.04997822	-94.14651545	14	5.6	16
Wetland 3	Wetland	30.04998422	-94.14650672	15	5.6	17
Wetland 3	Wetland	30.04999053	-94.14649803	11	5.6	18
Wetland 3	Wetland	30.04999884	-94.14649084	14	5.6	18
Wetland 3	Wetland	30.05000662	-94.14648373	16	5.6	12
Wetland 3	Wetland	30.05001408	-94.1464763	15	5.6	9
Wetland 3	Wetland	30.0500207	-94.14646791	14	5.6	8
Wetland 3	Wetland	30.05002671	-94.14646172	13	5.6	5
Wetland 3	Wetland	30.05003374	-94.14645535	11	5.6	9
Wetland 3	Wetland	30.05003897	-94.14644824	15	5.6	9
Wetland 3	Wetland	30.0500434	-94.14643943	13	5.6	11
Wetland 3	Wetland	30.05004793	-94.14643256	12	5.6	14
Wetland 3	Wetland	30.05005309	-94.14642532	13	5.6	16
Wetland 3	Wetland	30.05005747	-94.14641697	14	5.6	19
Wetland 3	Wetland	30.0500625	-94.1464091	15	5.6	17
Wetland 3	Wetland	30.05006756	-94.14640105	14	5.6	18
Wetland 3	Wetland	30.05007093	-94.14639248	14	5.6	12
Wetland 3	Wetland	30.05007528	-94.14638293	13	5.6	11
Wetland 3	Wetland	30.05007682	-94.14637516	15	5.6	9
Wetland 3	Wetland	30.05008089	-94.14636674	16	5.6	11
Wetland 3	Wetland	30.05008555	-94.14635814	12	5.6	15
Wetland 3	Wetland	30.05008941	-94.14635099	14	5.6	18
Wetland 3	Wetland	30.0500945	-94.1463445	16	5.6	17
Wetland 3	Wetland	30.0501008	-94.1463371	13	5.6	19
Wetland 3	Wetland	30.0501076	-94.14633169	12	5.6	12
Wetland 3	Wetland	30.05011448	-94.14632684	12	5.6	4
Wetland 3	Wetland	30.05012028	-94.14631964	11	5.6	8
Wetland 3	Wetland	30.05012721	-94.14631358	14	5.6	9
Wetland 3	Wetland	30.05013532	-94.14630956	13	5.6	6
Wetland 3	Wetland	30.05014328	-94.14630763	15	5.6	9
Wetland 3	Wetland	30.05015077	-94.14630581	13	5.6	11
Wetland 3	Wetland	30.0501591	-94.14630497	11	5.6	16
Wetland 3	Wetland	30.05016721	-94.14630512	14	5.6	14
Wetland 3	Wetland	30.05017541	-94.1463046	16	5.6	9
Wetland 3	Wetland	30.05018356	-94.146305	11	5.6	5
Wetland 3	Wetland	30.05019094	-94.14630685	15	5.6	18
Wetland 3	Wetland	30.05019615	-94.14631263	17	5.6	12
Wetland 3	Wetland	30.05019695	-94.14632102	14	5.6	29
Wetland 3	Wetland	30.05019593	-94.14632862	16	5.6	31
Wetland 3	Wetland	30.05019191	-94.14633571	15	5.6	4
Wetland 3	Wetland	30.0501879	-94.14634271	14	5.6	23
Wetland 3	Wetland	30.05018355	-94.14634924	13	5.6	30
Wetland 3	Wetland	30.05017819	-94.14635507	16	5.6	14
Wetland 3	Wetland	30.05017349	-94.14636084	17	5.6	11
Wetland 3	Wetland	30.05016807	-94.14636641	15	5.6	9
Wetland 3	Wetland	30.05016299	-94.1463722	17	5.6	18
Wetland 3	Wetland	30.05015752	-94.14637844	14	5.6	9

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Wetland 3	Wetland	30.05015268	-94.14638558	16	5.6	12
Wetland 3	Wetland	30.05014886	-94.14639245	15	5.6	11
Wetland 3	Wetland	30.05014285	-94.14639838	14	5.6	17
Wetland 3	Wetland	30.05013742	-94.14640457	13	5.6	12
Wetland 3	Wetland	30.05013225	-94.14641031	16	5.6	12
Wetland 3	Wetland	30.05012531	-94.14641541	17	5.6	8
Wetland 3	Wetland	30.05011932	-94.14642241	15	5.6	19
Wetland 3	Wetland	30.05011367	-94.1464275	15	5.6	12
Wetland 3	Wetland	30.05010787	-94.14643183	13	5.6	17
Wetland 3	Wetland	30.05010319	-94.14643848	12	5.6	16
Wetland 3	Wetland	30.05009935	-94.14644621	13	5.6	17
Wetland 3	Wetland	30.05009432	-94.14645066	14	5.6	9
Wetland 3	Wetland	30.05008813	-94.14645499	15	5.6	8
Wetland 3	Wetland	30.05008152	-94.14646061	14	5.6	12
Wetland 3	Wetland	30.05007523	-94.14646694	14	5.6	27
Wetland 3	Wetland	30.05007002	-94.14647246	13	5.6	17
Wetland 3	Wetland	30.05006353	-94.14647748	16	5.6	13
Wetland 3	Wetland	30.05005684	-94.14648306	17	5.6	14
Wetland 3	Wetland	30.05005065	-94.14648953	15	5.6	33
Wetland 3	Wetland	30.0500439	-94.14649484	15	5.6	34
Wetland 3	Wetland	30.05003706	-94.14650005	13	5.6	16
Wetland 3	Wetland	30.05003105	-94.14650545	12	5.6	10
Wetland 3	Wetland	30.05002392	-94.14650965	13	5.6	5
Wetland 3	Wetland	30.05001658	-94.14651358	14	5.6	3
Wetland 3	Wetland	30.05000983	-94.1465183	15	5.6	11
Wetland 3	Wetland	30.05000351	-94.14652373	14	5.6	14
Wetland 3	Wetland	30.04999743	-94.14652999	14	5.6	7
Wetland 3	Wetland	30.04999165	-94.1465361	15	5.6	12
Wetland 3	Wetland	30.04998569	-94.1465419	16	5.6	15
Wetland 3	Wetland	30.04998022	-94.14654888	11	5.6	11
Wetland 3	Wetland	30.04997508	-94.14655623	11	5.6	7
Wetland 3	Wetland	30.04996961	-94.14656148	16	5.6	12
Wetland 3	Wetland	30.04996679	-94.14656451	12	5.6	8
Wetland 3	Wetland	30.04996626	-94.14656471	14	5.6	11
Wetland 3	Wetland	30.04996619	-94.14656499	15	5.6	11
Wetland 3	Wetland	30.04996605	-94.1465653	11	5.6	21
Wetland 3	Wetland	30.04996187	-94.14656675	14	5.6	18
Wetland 3	Wetland	30.04995683	-94.14656871	16	5.6	16
Wetland 3	Wetland	30.04995367	-94.14656861	15	5.6	17
Wetland 4	Wetland	30.05112814	-94.14475058	14	4.3	18
Wetland 4	Wetland	30.05112952	-94.14475375	13	4.3	16
Wetland 4	Wetland	30.05113697	-94.14475555	11	4.3	17
Wetland 4	Wetland	30.05113959	-94.14476252	15	4.3	18
Wetland 4	Wetland	30.05113636	-94.14475872	13	4.3	18
Wetland 4	Wetland	30.05113765	-94.14476284	12	4.3	12
Wetland 4	Wetland	30.05114393	-94.14476116	13	4.3	9
Wetland 4	Wetland	30.05115606	-94.14476553	14	4.3	8
Wetland 4	Wetland	30.05116056	-94.14477477	15	4.3	5
Wetland 4	Wetland	30.05116715	-94.14477858	14	4.3	9
Wetland 4	Wetland	30.0511646	-94.14477641	14	4.3	9
Wetland 4	Wetland	30.0511869	-94.14476106	13	4.3	11
Wetland 4	Wetland	30.05119197	-94.14475851	15	4.3	14
Wetland 4	Wetland	30.05118648	-94.14472951	16	4.3	16
Wetland 4	Wetland	30.05118915	-94.14472669	12	4.3	19
Wetland 4	Wetland	30.0512005	-94.14472878	14	4.3	17

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		Latitude	Longitude			
Wetland 4	Wetland	30.05120384	-94.14473277	16	4.3	18
Wetland 4	Wetland	30.05121072	-94.14473076	13	4.3	12
Wetland 4	Wetland	30.05121905	-94.14472597	12	4.3	8
Wetland 4	Wetland	30.05120991	-94.14471148	12	4.3	9
Wetland 4	Wetland	30.05121054	-94.14471048	11	4.3	11
Wetland 4	Wetland	30.05121597	-94.14470852	14	4.3	15
Wetland 4	Wetland	30.05122367	-94.14470688	13	4.3	18
Wetland 4	Wetland	30.05122659	-94.14470588	15	4.3	17
Wetland 4	Wetland	30.05124336	-94.1446994	13	4.3	19
Wetland 4	Wetland	30.05124391	-94.14469826	11	4.3	12
Wetland 4	Wetland	30.05125601	-94.14468606	14	4.3	18
Wetland 4	Wetland	30.05126883	-94.14467629	16	4.3	8
Wetland 4	Wetland	30.05126908	-94.14467743	15	4.3	9
Wetland 4	Wetland	30.0512686	-94.14466981	16	4.3	6
Wetland 4	Wetland	30.05126391	-94.14465976	15	4.3	12
Wetland 4	Wetland	30.05127141	-94.14464995	14	4.3	11
Wetland 4	Wetland	30.05126909	-94.14464069	13	4.3	16
Wetland 4	Wetland	30.05127223	-94.14462884	16	4.3	17
Wetland 4	Wetland	30.05127309	-94.14462331	17	4.3	12
Wetland 4	Wetland	30.05127527	-94.14462253	15	4.3	16
Wetland 4	Wetland	30.05127042	-94.14461277	15	4.3	12
Wetland 4	Wetland	30.05128398	-94.1446153	13	4.3	8
Wetland 4	Wetland	30.05128526	-94.14461401	12	4.3	11
Wetland 4	Wetland	30.05128802	-94.14461215	13	4.3	9
Wetland 4	Wetland	30.05128736	-94.14460975	14	4.3	13
Wetland 4	Wetland	30.05128687	-94.14460671	15	4.3	11
Wetland 4	Wetland	30.05129172	-94.14460187	14	4.3	9
Wetland 4	Wetland	30.05129433	-94.1446009	14	4.3	16
Wetland 4	Wetland	30.0512978	-94.14459755	13	4.3	12
Wetland 4	Wetland	30.0513106	-94.14458814	16	4.3	17
Wetland 4	Wetland	30.05130898	-94.14459159	17	4.3	5
Wetland 4	Wetland	30.05131169	-94.1445818	15	4.3	16
Wetland 4	Wetland	30.05131538	-94.14457874	15	4.3	18
Wetland 4	Wetland	30.05131779	-94.14457905	13	4.3	22
Wetland 4	Wetland	30.05132301	-94.14457653	12	4.3	15
Wetland 4	Wetland	30.05132505	-94.1445749	13	4.3	34
Wetland 4	Wetland	30.05133397	-94.1445617	14	4.3	56
Wetland 4	Wetland	30.05133509	-94.14456227	15	4.3	37
Wetland 4	Wetland	30.05133761	-94.14456299	14	4.3	7
Wetland 4	Wetland	30.05134467	-94.14455713	14	4.3	16
Wetland 4	Wetland	30.05134676	-94.14455313	15	4.3	9
Wetland 4	Wetland	30.05134824	-94.14454732	16	4.3	16
Wetland 4	Wetland	30.05131866	-94.14449617	11	4.3	12
Wetland 4	Wetland	30.05132106	-94.14449304	11	4.3	9
Wetland 4	Wetland	30.05130961	-94.14446998	16	4.3	19
Wetland 4	Wetland	30.05130907	-94.14445624	12	4.3	16
Wetland 4	Wetland	30.05130576	-94.14445886	14	4.3	19
Wetland 4	Wetland	30.05130035	-94.14445569	15	4.3	14
Wetland 4	Wetland	30.05129407	-94.14445072	11	4.3	19
Wetland 4	Wetland	30.05128668	-94.14445246	14	4.3	8
Wetland 4	Wetland	30.05127945	-94.14445273	16	4.3	18
Wetland 4	Wetland	30.05127607	-94.14445386	15	4.3	18
Wetland 4	Wetland	30.05127587	-94.14445885	14	4.3	23
Wetland 4	Wetland	30.05127008	-94.14445476	13	4.3	13
Wetland 4	Wetland	30.05125625	-94.1444363	11	4.3	11

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		Latitude	Longitude			
Wetland 4	Wetland	30.05125963	-94.14443868	15	4.3	15
Wetland 4	Wetland	30.05125449	-94.14445232	13	4.3	15
Wetland 4	Wetland	30.05125033	-94.1444516	12	4.3	14
Wetland 4	Wetland	30.05123951	-94.14444646	13	4.3	9
Wetland 4	Wetland	30.05123893	-94.14445174	14	4.3	93
Wetland 4	Wetland	30.05123172	-94.14443731	15	4.3	18
Wetland 4	Wetland	30.0512262	-94.14444661	14	4.3	22
Wetland 4	Wetland	30.05121789	-94.14445492	14	4.3	14
Wetland 4	Wetland	30.05121973	-94.1444485	13	4.3	9
Wetland 4	Wetland	30.05121457	-94.1444512	15	4.3	8
Wetland 4	Wetland	30.05121261	-94.14446194	16	4.3	23
Wetland 4	Wetland	30.05121114	-94.14446623	12	4.3	12
Wetland 4	Wetland	30.05120894	-94.14446592	14	4.3	15
Wetland 4	Wetland	30.05120583	-94.14446998	16	4.3	5
Wetland 4	Wetland	30.05117465	-94.14448194	13	4.3	17
Wetland 4	Wetland	30.05117281	-94.14448277	12	4.3	11
Wetland 4	Wetland	30.05116107	-94.14451949	12	4.3	5
Wetland 4	Wetland	30.0511602	-94.14451815	11	4.3	9
Wetland 4	Wetland	30.05116726	-94.14451868	14	4.3	8
Wetland 4	Wetland	30.05116282	-94.14452751	13	4.3	22
Wetland 4	Wetland	30.05116166	-94.14453756	15	4.3	14
Wetland 4	Wetland	30.05115783	-94.14454992	13	4.3	18
Wetland 4	Wetland	30.05115819	-94.14455809	11	4.3	11
Wetland 4	Wetland	30.05115477	-94.14456261	14	4.3	9
Wetland 4	Wetland	30.05115383	-94.14456833	16	4.3	7
Wetland 4	Wetland	30.05114602	-94.14455919	15	4.3	14
Wetland 4	Wetland	30.0511441	-94.14456041	16	4.3	12
Wetland 4	Wetland	30.05113767	-94.14455786	15	4.3	11
Wetland 4	Wetland	30.05112814	-94.14456379	14	4.3	12
Wetland 4	Wetland	30.05111463	-94.14456695	13	4.3	17
Wetland 4	Wetland	30.05110974	-94.14457327	16	4.3	16
Wetland 4	Wetland	30.05110671	-94.14459018	17	4.3	12
Wetland 4	Wetland	30.05110852	-94.14457585	15	4.3	8
Wetland 4	Wetland	30.05110636	-94.14457441	15	4.3	15
Wetland 4	Wetland	30.05110382	-94.144583	13	4.3	9
Wetland 4	Wetland	30.05110722	-94.14458287	12	4.3	11
Wetland 4	Wetland	30.05110344	-94.1445956	13	4.3	13
Wetland 4	Wetland	30.05107273	-94.1446023	14	4.3	9
Wetland 4	Wetland	30.05107436	-94.14460738	15	4.3	8
Wetland 4	Wetland	30.05107165	-94.14461221	14	4.3	9
Wetland 4	Wetland	30.05108047	-94.14461435	14	4.3	11
Wetland 4	Wetland	30.0510837	-94.14462395	13	4.3	14
Wetland 4	Wetland	30.05108885	-94.14463093	16	4.3	17
Wetland 4	Wetland	30.05109289	-94.14463408	17	4.3	18
Wetland 4	Wetland	30.0510834	-94.14465733	15	4.3	12
Wetland 4	Wetland	30.05112178	-94.14471107	16	4.3	11
Wetland 4	Wetland	30.05112194	-94.14471096	13	4.3	15
Wetland 4	Wetland	30.05111907	-94.14470548	12	4.3	18
Wetland 4	Wetland	30.05112431	-94.14471251	12	4.3	12
Wetland 4	Wetland	30.05112346	-94.14470188	11	4.3	7
Wetland 4	Wetland	30.0511252	-94.14470226	14	4.3	8
Wetland 4	Wetland	30.0511139	-94.14471576	13	4.3	18
Wetland 4	Wetland	30.0511349	-94.14473247	15	4.3	17
Wetland 4	Wetland	30.05113993	-94.14472767	13	4.3	23
Wetland 4	Wetland	30.05113757	-94.1447438	11	4.3	15

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		Latitude	Longitude			
Wetland 4	Wetland	30.05115576	-94.14475696	14	4.3	15
Wetland 5	Wetland	30.05151259	-94.14424102	16	3.3	19
Wetland 5	Wetland	30.05151306	-94.14423873	15	3.3	93
Wetland 5	Wetland	30.05151487	-94.14423182	16	3.3	19
Wetland 5	Wetland	30.05151708	-94.14422135	15	3.3	29
Wetland 5	Wetland	30.05151955	-94.14420976	14	3.3	23
Wetland 5	Wetland	30.05152293	-94.14419837	13	3.3	19
Wetland 5	Wetland	30.05152718	-94.14418662	16	3.3	60
Wetland 5	Wetland	30.05153158	-94.14417456	17	3.3	5
Wetland 5	Wetland	30.05153704	-94.14416384	15	3.3	13
Wetland 5	Wetland	30.05154482	-94.14415548	15	3.3	8
Wetland 5	Wetland	30.05155456	-94.14414898	13	3.3	18
Wetland 5	Wetland	30.05156324	-94.14414235	12	3.3	93
Wetland 5	Wetland	30.05157231	-94.14413661	13	3.3	14
Wetland 5	Wetland	30.05158221	-94.14413302	14	3.3	29
Wetland 5	Wetland	30.05159289	-94.14412966	15	3.3	23
Wetland 5	Wetland	30.05160155	-94.14412712	14	3.3	19
Wetland 5	Wetland	30.05161116	-94.14412477	14	3.3	21
Wetland 5	Wetland	30.05161936	-94.14412294	13	3.3	5
Wetland 5	Wetland	30.05162902	-94.14412071	16	3.3	9
Wetland 5	Wetland	30.05163907	-94.14411883	17	3.3	8
Wetland 5	Wetland	30.05164914	-94.14411715	15	3.3	18
Wetland 5	Wetland	30.05165892	-94.1441155	15	3.3	11
Wetland 5	Wetland	30.05166885	-94.144113	13	3.3	10
Wetland 5	Wetland	30.05167876	-94.14411025	12	3.3	18
Wetland 5	Wetland	30.05168784	-94.1441065	13	3.3	12
Wetland 5	Wetland	30.05169681	-94.14410263	14	3.3	19
Wetland 5	Wetland	30.05170609	-94.14409994	15	3.3	12
Wetland 5	Wetland	30.05171592	-94.14409818	14	3.3	7
Wetland 5	Wetland	30.05172467	-94.14409582	12	3.3	19
Wetland 5	Wetland	30.05173439	-94.14409379	14	3.3	48
Wetland 5	Wetland	30.05174318	-94.14409187	15	3.3	11
Wetland 5	Wetland	30.05175296	-94.14408962	11	3.3	34
Wetland 5	Wetland	30.05176271	-94.1440871	14	3.3	16
Wetland 5	Wetland	30.05177187	-94.14408458	16	3.3	17
Wetland 5	Wetland	30.0517809	-94.14408254	15	3.3	12
Wetland 5	Wetland	30.05178982	-94.14408002	14	3.3	8
Wetland 5	Wetland	30.05179942	-94.14407683	13	3.3	6
Wetland 5	Wetland	30.05180868	-94.14407379	11	3.3	27
Wetland 5	Wetland	30.05181831	-94.14407074	15	3.3	13
Wetland 5	Wetland	30.05182739	-94.14406772	13	3.3	14
Wetland 5	Wetland	30.05183631	-94.14406489	12	3.3	21
Wetland 5	Wetland	30.05184595	-94.14406145	13	3.3	9
Wetland 5	Wetland	30.05185395	-94.1440573	14	3.3	11
Wetland 5	Wetland	30.05186294	-94.14405366	15	3.3	18
Wetland 5	Wetland	30.05187156	-94.14405121	14	3.3	17
Wetland 5	Wetland	30.05188078	-94.14404844	14	3.3	45
Wetland 5	Wetland	30.05188899	-94.14404593	13	3.3	16
Wetland 5	Wetland	30.05189784	-94.14404234	15	3.3	71
Wetland 5	Wetland	30.05190663	-94.14403907	16	3.3	5
Wetland 5	Wetland	30.05191625	-94.14403617	12	3.3	9
Wetland 5	Wetland	30.05192512	-94.14403321	14	3.3	14
Wetland 5	Wetland	30.05193323	-94.14402855	16	3.3	16
Wetland 5	Wetland	30.05194156	-94.14402305	13	3.3	19
Wetland 5	Wetland	30.05195037	-94.14401816	12	3.3	12

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		Latitude	Longitude			
Wetland 5	Wetland	30.05195908	-94.1440151	12	3.3	8
Wetland 5	Wetland	30.05196791	-94.14401116	11	3.3	9
Wetland 5	Wetland	30.05197662	-94.14400823	14	3.3	18
Wetland 5	Wetland	30.0519855	-94.14400403	13	3.3	17
Wetland 5	Wetland	30.05199385	-94.14400101	15	3.3	19
Wetland 5	Wetland	30.05200232	-94.1439983	13	3.3	8
Wetland 5	Wetland	30.05201084	-94.14399511	11	3.3	41
Wetland 5	Wetland	30.05202	-94.14399122	14	3.3	27
Wetland 5	Wetland	30.05202753	-94.14398666	16	3.3	23
Wetland 5	Wetland	30.05203401	-94.14398234	15	3.3	13
Wetland 5	Wetland	30.05204082	-94.14397743	14	3.3	11
Wetland 5	Wetland	30.05204818	-94.14397248	13	3.3	15
Wetland 5	Wetland	30.05205579	-94.14396782	16	3.3	35
Wetland 5	Wetland	30.05206486	-94.14396547	17	3.3	14
Wetland 5	Wetland	30.05207333	-94.14396481	15	3.3	9
Wetland 5	Wetland	30.05208231	-94.1439638	15	3.3	15
Wetland 5	Wetland	30.0520907	-94.14396024	13	3.3	22
Wetland 5	Wetland	30.05209795	-94.14395721	12	3.3	14
Wetland 5	Wetland	30.05210489	-94.14395544	13	3.3	29
Wetland 5	Wetland	30.05211305	-94.14395229	14	3.3	31
Wetland 5	Wetland	30.05212095	-94.14394877	15	3.3	24
Wetland 5	Wetland	30.05212816	-94.1439449	14	3.3	23
Wetland 5	Wetland	30.05213584	-94.14394142	14	3.3	19
Wetland 5	Wetland	30.05214357	-94.14393665	13	3.3	60
Wetland 5	Wetland	30.0521507	-94.14393254	15	3.3	15
Wetland 5	Wetland	30.05215858	-94.14392808	16	3.3	19
Wetland 5	Wetland	30.05216655	-94.14392272	17	3.3	19
Wetland 5	Wetland	30.05217369	-94.14391736	17	3.3	16
Wetland 5	Wetland	30.05218074	-94.14390995	16	3.3	19
Wetland 5	Wetland	30.05218787	-94.14390351	13	3.3	14
Wetland 5	Wetland	30.05219507	-94.1438986	12	3.3	19
Wetland 5	Wetland	30.05220276	-94.14389349	12	3.3	8
Wetland 5	Wetland	30.0522114	-94.14388856	11	3.3	18
Wetland 5	Wetland	30.05221934	-94.14388444	14	3.3	18
Wetland 5	Wetland	30.05222808	-94.14388148	13	3.3	23
Wetland 5	Wetland	30.05223703	-94.14387921	15	3.3	13
Wetland 5	Wetland	30.05224624	-94.14387549	17	3.3	11
Wetland 5	Wetland	30.05225498	-94.14387305	17	3.3	15
Wetland 5	Wetland	30.05226324	-94.14387091	14	3.3	15
Wetland 5	Wetland	30.05227004	-94.1438687	16	3.3	14
Wetland 5	Wetland	30.0522777	-94.14386739	13	3.3	9
Wetland 5	Wetland	30.05228518	-94.14386606	15	3.3	93
Wetland 5	Wetland	30.05229253	-94.14386508	11	3.3	18
Wetland 5	Wetland	30.05230065	-94.14386412	11	3.3	22
Wetland 5	Wetland	30.05230807	-94.14386332	11	3.3	14
Wetland 5	Wetland	30.05231226	-94.14386599	13	3.3	9
Wetland 5	Wetland	30.05231274	-94.14387315	16	3.3	8
Wetland 5	Wetland	30.05231177	-94.14387998	17	3.3	23
Wetland 5	Wetland	30.05230819	-94.14388668	15	3.3	12
Wetland 5	Wetland	30.05230347	-94.14389312	15	3.3	15
Wetland 5	Wetland	30.05229999	-94.14390128	13	3.3	5
Wetland 5	Wetland	30.05229697	-94.14390927	12	3.3	17
Wetland 5	Wetland	30.05229253	-94.14391493	13	3.3	11
Wetland 5	Wetland	30.05228731	-94.14391987	14	3.3	5
Wetland 5	Wetland	30.05228423	-94.14392786	15	3.3	9

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		Latitude	Longitude			
Wetland 5	Wetland	30.05228202	-94.14393454	14	3.3	8
Wetland 5	Wetland	30.05227918	-94.14394046	14	3.3	22
Wetland 5	Wetland	30.05227499	-94.14394721	15	3.3	14
Wetland 5	Wetland	30.05227375	-94.14395611	16	3.3	18
Wetland 5	Wetland	30.0522752	-94.14396348	17	3.3	11
Wetland 5	Wetland	30.05227469	-94.14397181	17	3.3	9
Wetland 5	Wetland	30.05227132	-94.14397915	12	3.3	7
Wetland 5	Wetland	30.05226547	-94.14398333	14	3.3	14
Wetland 5	Wetland	30.05225934	-94.1439881	15	3.3	12
Wetland 5	Wetland	30.05225398	-94.14399091	14	3.3	11
Wetland 5	Wetland	30.05224922	-94.1439943	14	3.3	12
Wetland 5	Wetland	30.05224346	-94.14399757	13	3.3	17
Wetland 5	Wetland	30.05223852	-94.14400083	15	3.3	16
Wetland 5	Wetland	30.05223387	-94.14400354	16	3.3	12
Wetland 5	Wetland	30.05222904	-94.14400615	17	3.3	8
Wetland 5	Wetland	30.05222486	-94.14400963	17	3.3	15
Wetland 5	Wetland	30.05222014	-94.14401256	16	3.3	9
Wetland 5	Wetland	30.05221611	-94.14401532	13	3.3	11
Wetland 5	Wetland	30.05221308	-94.14401628	12	3.3	13
Wetland 5	Wetland	30.0521902	-94.14405991	12	3.3	9
Wetland 5	Wetland	30.0521903	-94.14405991	11	3.3	8
Wetland 5	Wetland	30.05217723	-94.14407971	14	3.3	9
Wetland 5	Wetland	30.05215733	-94.1440923	13	3.3	11
Wetland 5	Wetland	30.05213434	-94.14411608	15	3.3	14
Wetland 5	Wetland	30.05207285	-94.14413685	17	3.3	17
Wetland 5	Wetland	30.0520728	-94.14413694	17	3.3	18
Wetland 5	Wetland	30.05204924	-94.14414272	14	3.3	12
Wetland 5	Wetland	30.05204785	-94.14414478	16	3.3	11
Wetland 5	Wetland	30.05204266	-94.1441496	15	3.3	15
Wetland 5	Wetland	30.05203642	-94.14415385	14	3.3	18
Wetland 5	Wetland	30.05202951	-94.14415763	13	3.3	12
Wetland 5	Wetland	30.05202372	-94.14416234	16	3.3	7
Wetland 5	Wetland	30.05201769	-94.14416543	17	3.3	8
Wetland 5	Wetland	30.05201104	-94.14416927	15	3.3	18
Wetland 5	Wetland	30.05200348	-94.144175	15	3.3	17
Wetland 5	Wetland	30.05199477	-94.14417829	13	3.3	23
Wetland 5	Wetland	30.05198605	-94.14417832	12	3.3	15
Wetland 5	Wetland	30.05197623	-94.14418063	13	3.3	15
Wetland 5	Wetland	30.05196715	-94.14418304	14	3.3	19
Wetland 5	Wetland	30.05195831	-94.14418467	15	3.3	93
Wetland 5	Wetland	30.05195242	-94.14418449	14	3.3	19
Wetland 5	Wetland	30.05194599	-94.14418391	14	3.3	29
Wetland 5	Wetland	30.05193763	-94.14418421	13	3.3	23
Wetland 5	Wetland	30.05193035	-94.14418893	15	3.3	19
Wetland 5	Wetland	30.05192336	-94.14419521	16	3.3	60
Wetland 5	Wetland	30.05191666	-94.14420127	17	3.3	5
Wetland 5	Wetland	30.05191057	-94.14420569	17	3.3	13
Wetland 5	Wetland	30.05190093	-94.14420809	16	3.3	8
Wetland 5	Wetland	30.05189196	-94.14421065	13	3.3	18
Wetland 5	Wetland	30.05188278	-94.14421382	12	3.3	93
Wetland 5	Wetland	30.05187479	-94.14421847	12	3.3	14
Wetland 5	Wetland	30.05186872	-94.14422639	11	3.3	29
Wetland 5	Wetland	30.05186483	-94.14423576	14	3.3	23
Wetland 5	Wetland	30.05186124	-94.14424385	13	3.3	19
Wetland 5	Wetland	30.05185865	-94.1442477	15	3.3	21

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		Latitude	Longitude			
Wetland 5	Wetland	30.05185891	-94.14425027	17	3.3	5
Wetland 5	Wetland	30.05185597	-94.14425577	17	3.3	9
Wetland 5	Wetland	30.05185538	-94.144265	14	3.3	8
Wetland 5	Wetland	30.05185555	-94.14427481	16	3.3	18
Wetland 5	Wetland	30.05185457	-94.14428436	13	3.3	11
Wetland 5	Wetland	30.05184922	-94.14429088	15	3.3	10
Wetland 5	Wetland	30.05184281	-94.14429529	11	3.3	18
Wetland 5	Wetland	30.05183499	-94.14429477	11	3.3	12
Wetland 5	Wetland	30.05182985	-94.14429371	11	3.3	19
Wetland 5	Wetland	30.05182708	-94.14429415	13	3.3	12
Wetland 5	Wetland	30.05182049	-94.1442972	16	3.3	7
Wetland 5	Wetland	30.05181327	-94.14429831	17	3.3	19
Wetland 5	Wetland	30.05181207	-94.14429706	15	3.3	48
Wetland 5	Wetland	30.0518097	-94.14429835	15	3.3	11
Wetland 5	Wetland	30.05180171	-94.14430153	13	3.3	34
Wetland 5	Wetland	30.05179244	-94.14430337	12	3.3	16
Wetland 5	Wetland	30.05178265	-94.14430549	13	3.3	17
Wetland 5	Wetland	30.05177296	-94.14430675	14	3.3	12
Wetland 5	Wetland	30.05176464	-94.14430745	15	3.3	8
Wetland 5	Wetland	30.05175571	-94.14430591	14	3.3	11
Wetland 5	Wetland	30.05174583	-94.14430535	14	3.3	9
Wetland 5	Wetland	30.05173755	-94.144306	15	3.3	7
Wetland 5	Wetland	30.05172936	-94.14430591	16	3.3	19
Wetland 5	Wetland	30.05172115	-94.14430654	17	3.3	20
Wetland 5	Wetland	30.05171246	-94.14430919	17	3.3	11
Wetland 5	Wetland	30.05170485	-94.14431372	16	3.3	34
Wetland 5	Wetland	30.05169777	-94.14431923	12	3.3	16
Wetland 5	Wetland	30.05168921	-94.14431957	14	3.3	17
Wetland 5	Wetland	30.05168138	-94.14431871	17	3.3	2
Wetland 5	Wetland	30.05167185	-94.14431839	17	3.3	16
Wetland 5	Wetland	30.05166331	-94.14431953	14	3.3	12
Wetland 5	Wetland	30.05165501	-94.14432063	16	3.3	11
Wetland 5	Wetland	30.05164769	-94.14432293	15	3.3	10
Wetland 5	Wetland	30.05163802	-94.14432514	14	3.3	9
Wetland 5	Wetland	30.05162911	-94.14432421	13	3.3	9
Wetland 5	Wetland	30.0516208	-94.14432345	17	3.3	5
Wetland 5	Wetland	30.0516117	-94.14432205	15	3.3	3
Wetland 5	Wetland	30.05160288	-94.14432107	11	3.3	19
Wetland 5	Wetland	30.05159433	-94.14432058	11	3.3	27
Wetland 5	Wetland	30.05158637	-94.14432028	11	3.3	6
Wetland 5	Wetland	30.05157677	-94.14432005	11	3.3	9
Wetland 5	Wetland	30.05156879	-94.14431969	15	3.3	11
Wetland 5	Wetland	30.05156107	-94.14431987	17	3.3	15
Wetland 5	Wetland	30.05155266	-94.1443191	14	3.3	18
Wetland 5	Wetland	30.05154259	-94.14431956	16	3.3	17
Wetland 5	Wetland	30.05153339	-94.14432019	15	3.3	19
Wetland 5	Wetland	30.05152349	-94.14432061	14	3.3	12
Wetland 5	Wetland	30.05151392	-94.1443216	13	3.3	7
Wetland 5	Wetland	30.05150487	-94.14432558	16	3.3	8
Wetland 5	Wetland	30.05149721	-94.1443334	17	3.3	4
Wetland 5	Wetland	30.05149024	-94.14434318	15	3.3	9
Wetland 5	Wetland	30.05148261	-94.14435341	17	3.3	18
Wetland 5	Wetland	30.05147507	-94.1443627	14	3.3	9
Wetland 5	Wetland	30.05146766	-94.14437196	16	3.3	12
Wetland 5	Wetland	30.05145987	-94.14438132	15	3.3	11

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		Latitude	Longitude			
Wetland 5	Wetland	30.05145092	-94.14438956	14	3.3	17
Wetland 5	Wetland	30.05144209	-94.14439692	13	3.3	12
Wetland 5	Wetland	30.05143175	-94.14440054	16	3.3	12
Wetland 5	Wetland	30.05142134	-94.14439821	17	3.3	8
Wetland 5	Wetland	30.05141332	-94.14439135	15	3.3	19
Wetland 5	Wetland	30.05141253	-94.14437967	15	3.3	12
Wetland 5	Wetland	30.05141617	-94.14436858	13	3.3	17
Wetland 5	Wetland	30.05142035	-94.1443592	12	3.3	20
Wetland 5	Wetland	30.05142603	-94.14435114	13	3.3	17
Wetland 5	Wetland	30.05143239	-94.14434316	14	3.3	9
Wetland 5	Wetland	30.05143786	-94.14433653	15	3.3	8
Wetland 5	Wetland	30.05144089	-94.14433244	14	3.3	8
Wetland 5	Wetland	30.05144223	-94.14433142	14	3.3	27
Wetland 5	Wetland	30.0514426	-94.14433151	15	3.3	17
Wetland 5	Wetland	30.05144295	-94.14433125	16	3.3	13
Wetland 5	Wetland	30.05144548	-94.14432861	17	3.3	14
Wetland 5	Wetland	30.05145118	-94.14432237	17	3.3	33
Wetland 5	Wetland	30.05145887	-94.14431609	16	3.3	34
Wetland 5	Wetland	30.05146785	-94.14431039	12	3.3	16
Wetland 5	Wetland	30.0514762	-94.14430398	14	3.3	10
Wetland 5	Wetland	30.05148453	-94.14429823	17	3.3	9
Wetland 5	Wetland	30.05149225	-94.14429189	17	3.3	3
Wetland 5	Wetland	30.0514982	-94.14428313	14	3.3	11
Wetland 5	Wetland	30.05150337	-94.14427428	16	3.3	14
Wetland 5	Wetland	30.05150703	-94.14426549	15	3.3	7
Wetland 5	Wetland	30.05150971	-94.14425736	14	3.3	12
Wetland 5	Wetland	30.05151042	-94.14424936	13	3.3	15
Wetland 6	Wetland	30.04975303	-94.14419736	17	6.8	60
Wetland 6	Wetland	30.04975757	-94.14419424	15	6.8	5
Wetland 6	Wetland	30.04976299	-94.14419112	13	6.8	13
Wetland 6	Wetland	30.04977049	-94.14418989	12	6.8	8
Wetland 6	Wetland	30.0497784	-94.1441898	13	6.8	18
Wetland 6	Wetland	30.04978591	-94.14418954	14	6.8	93
Wetland 6	Wetland	30.04979298	-94.14419049	15	6.8	14
Wetland 6	Wetland	30.04980057	-94.14419134	14	6.8	29
Wetland 6	Wetland	30.04980819	-94.14418937	14	6.8	23
Wetland 6	Wetland	30.04981497	-94.14418652	13	6.8	19
Wetland 6	Wetland	30.04982167	-94.1441827	15	6.8	21
Wetland 6	Wetland	30.04982884	-94.14417898	16	6.8	5
Wetland 6	Wetland	30.04983612	-94.14417489	17	6.8	9
Wetland 6	Wetland	30.04984393	-94.14417013	17	6.8	8
Wetland 6	Wetland	30.04985105	-94.14416464	16	6.8	18
Wetland 6	Wetland	30.04985748	-94.14415897	13	6.8	11
Wetland 6	Wetland	30.04986403	-94.14415554	12	6.8	10
Wetland 6	Wetland	30.04987199	-94.14415521	12	6.8	18
Wetland 6	Wetland	30.04988078	-94.14415641	11	6.8	12
Wetland 6	Wetland	30.04988844	-94.14415817	14	6.8	19
Wetland 6	Wetland	30.04989495	-94.1441588	13	6.8	12
Wetland 6	Wetland	30.04990297	-94.14415946	15	6.8	7
Wetland 6	Wetland	30.04991071	-94.14415798	17	6.8	19
Wetland 6	Wetland	30.0499185	-94.14415683	17	6.8	48
Wetland 6	Wetland	30.04992665	-94.1441557	14	6.8	11
Wetland 6	Wetland	30.04993527	-94.14415435	16	6.8	34
Wetland 6	Wetland	30.04994323	-94.14415368	15	6.8	16
Wetland 6	Wetland	30.04995087	-94.14415384	14	6.8	17

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		Latitude	Longitude			
Wetland 6	Wetland	30.04995887	-94.14415435	13	6.8	12
Wetland 6	Wetland	30.04996687	-94.14415524	16	6.8	8
Wetland 6	Wetland	30.04997501	-94.14415537	17	6.8	6
Wetland 6	Wetland	30.04998365	-94.14415501	15	6.8	27
Wetland 6	Wetland	30.04999155	-94.14415378	15	6.8	13
Wetland 6	Wetland	30.0499997	-94.14415323	13	6.8	14
Wetland 6	Wetland	30.05000778	-94.14415235	12	6.8	21
Wetland 6	Wetland	30.05001557	-94.14415004	13	6.8	9
Wetland 6	Wetland	30.05002356	-94.14414729	14	6.8	11
Wetland 6	Wetland	30.05003128	-94.14414495	15	6.8	18
Wetland 6	Wetland	30.05003887	-94.1441422	14	6.8	17
Wetland 6	Wetland	30.05004659	-94.14413911	14	6.8	45
Wetland 6	Wetland	30.05005452	-94.14413581	13	6.8	16
Wetland 6	Wetland	30.05006158	-94.14413293	15	6.8	71
Wetland 6	Wetland	30.05006998	-94.14413002	16	6.8	5
Wetland 6	Wetland	30.05007835	-94.14412721	17	6.8	9
Wetland 6	Wetland	30.05008632	-94.14412427	17	6.8	14
Wetland 6	Wetland	30.0500893	-94.14412363	16	6.8	16
Wetland 6	Wetland	30.05008968	-94.14412414	13	6.8	19
Wetland 6	Wetland	30.05009212	-94.14412437	12	6.8	12
Wetland 6	Wetland	30.05010011	-94.14412472	12	6.8	8
Wetland 6	Wetland	30.05010537	-94.14412426	11	6.8	9
Wetland 6	Wetland	30.05011116	-94.14412411	14	6.8	18
Wetland 6	Wetland	30.05011999	-94.14412342	13	6.8	17
Wetland 6	Wetland	30.05012817	-94.14412306	13	6.8	19
Wetland 6	Wetland	30.05013654	-94.14412363	16	6.8	8
Wetland 6	Wetland	30.0501442	-94.14412363	17	6.8	41
Wetland 6	Wetland	30.0501489	-94.14412658	15	6.8	27
Wetland 6	Wetland	30.05015414	-94.14413058	15	6.8	23
Wetland 6	Wetland	30.05015989	-94.14413649	13	6.8	13
Wetland 6	Wetland	30.0501654	-94.14414015	12	6.8	11
Wetland 6	Wetland	30.05017078	-94.14414458	13	6.8	15
Wetland 6	Wetland	30.05017124	-94.14414662	14	6.8	35
Wetland 6	Wetland	30.05016657	-94.14414883	15	6.8	14
Wetland 6	Wetland	30.05016231	-94.14414897	14	6.8	9
Wetland 6	Wetland	30.05015674	-94.14414847	14	6.8	15
Wetland 6	Wetland	30.05014965	-94.14414726	15	6.8	22
Wetland 6	Wetland	30.05014313	-94.14414836	16	6.8	14
Wetland 6	Wetland	30.05013551	-94.14414763	11	6.8	29
Wetland 6	Wetland	30.05012726	-94.14414573	11	6.8	31
Wetland 6	Wetland	30.05011909	-94.14414345	16	6.8	24
Wetland 6	Wetland	30.05011065	-94.14414445	12	6.8	23
Wetland 6	Wetland	30.05010204	-94.14414747	14	6.8	19
Wetland 6	Wetland	30.050095	-94.14415241	15	6.8	60
Wetland 6	Wetland	30.05008856	-94.14415641	11	6.8	15
Wetland 6	Wetland	30.05008114	-94.14415976	14	6.8	19
Wetland 6	Wetland	30.05007285	-94.14416102	16	6.8	19
Wetland 6	Wetland	30.05006403	-94.144162	15	6.8	16
Wetland 6	Wetland	30.05005596	-94.14416422	14	6.8	19
Wetland 6	Wetland	30.0500473	-94.14416596	13	6.8	14
Wetland 6	Wetland	30.05003931	-94.14416876	11	6.8	19
Wetland 6	Wetland	30.05003178	-94.14417268	15	6.8	8
Wetland 6	Wetland	30.05002341	-94.14417579	13	6.8	18
Wetland 6	Wetland	30.05001585	-94.14417869	12	6.8	18
Wetland 6	Wetland	30.05000796	-94.14418038	13	6.8	23

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Wetland 6	Wetland	30.05000076	-94.14418216	14	6.8	13
Wetland 6	Wetland	30.04999223	-94.14418284	15	6.8	11
Wetland 6	Wetland	30.04998444	-94.1441845	14	6.8	15
Wetland 6	Wetland	30.04997711	-94.14418807	14	6.8	15
Wetland 6	Wetland	30.04996901	-94.14419152	13	6.8	14
Wetland 6	Wetland	30.04996181	-94.14419299	15	6.8	9
Wetland 6	Wetland	30.04995327	-94.14419558	16	6.8	93
Wetland 6	Wetland	30.0499463	-94.14419716	12	6.8	18
Wetland 6	Wetland	30.04994072	-94.14419696	14	6.8	22
Wetland 6	Wetland	30.04993348	-94.14419741	16	6.8	14
Wetland 6	Wetland	30.04992646	-94.14419866	13	6.8	9
Wetland 6	Wetland	30.04992	-94.14419897	12	6.8	8
Wetland 6	Wetland	30.04991356	-94.1442028	12	6.8	23
Wetland 6	Wetland	30.04990779	-94.14420624	11	6.8	12
Wetland 6	Wetland	30.0499009	-94.14420953	14	6.8	15
Wetland 6	Wetland	30.04989447	-94.14421146	13	6.8	5
Wetland 6	Wetland	30.04988801	-94.14421137	15	6.8	17
Wetland 6	Wetland	30.04988144	-94.14421261	13	6.8	11
Wetland 6	Wetland	30.04987411	-94.14421526	11	6.8	5
Wetland 6	Wetland	30.04986734	-94.14421846	14	6.8	9
Wetland 6	Wetland	30.04986137	-94.14422155	16	6.8	8
Wetland 6	Wetland	30.04985465	-94.14422304	15	6.8	22
Wetland 6	Wetland	30.04984704	-94.14422493	14	6.8	14
Wetland 6	Wetland	30.04984001	-94.14422723	13	6.8	18
Wetland 6	Wetland	30.04983402	-94.14422772	16	6.8	11
Wetland 6	Wetland	30.04982697	-94.14422845	17	6.8	9
Wetland 6	Wetland	30.04981951	-94.14422929	15	6.8	7
Wetland 6	Wetland	30.04981059	-94.14423208	15	6.8	14
Wetland 6	Wetland	30.04980318	-94.14423204	13	6.8	12
Wetland 6	Wetland	30.04979731	-94.1442332	12	6.8	11
Wetland 6	Wetland	30.04979175	-94.14423661	13	6.8	12
Wetland 6	Wetland	30.04978683	-94.14423871	14	6.8	17
Wetland 6	Wetland	30.04978159	-94.14423943	15	6.8	16
Wetland 6	Wetland	30.04977848	-94.14423778	14	6.8	12
Wetland 6	Wetland	30.04977378	-94.14423243	14	6.8	8
Wetland 6	Wetland	30.04976903	-94.14422997	13	6.8	15
Wetland 6	Wetland	30.04976295	-94.1442286	15	6.8	9
Wetland 6	Wetland	30.04975554	-94.1442276	16	6.8	11
Wetland 6	Wetland	30.04974981	-94.14422533	17	6.8	13
Wetland 6	Wetland	30.04974712	-94.14422039	17	6.8	9
Wetland 6	Wetland	30.0497427	-94.14421549	16	6.8	8
Wetland 6	Wetland	30.04973916	-94.1442103	13	6.8	9
Wetland 6	Wetland	30.04973769	-94.14420426	12	6.8	11
Wetland 6	Wetland	30.0497414	-94.1441998	12	6.8	14
Wetland 6	Wetland	30.04974647	-94.14419755	11	6.8	17
Wetland 6	Wetland	30.04975193	-94.14419626	14	6.8	18
Wetland 6	Wetland	30.04975246	-94.14419571	13	6.8	12
Wetland 6	Wetland	30.04975253	-94.1441956	15	6.8	11
Wetland 6	Wetland	30.04975261	-94.14419521	17	6.8	15
Wetland 6	Wetland	30.04975253	-94.14419548	17	6.8	18
Wetland 6	Wetland	30.0497525	-94.14419563	14	6.8	12
Wetland 6	Wetland	30.04975261	-94.14419572	16	6.8	7
Wetland 6	Wetland	30.04975259	-94.14419566	13	6.8	8
Wetland 6	Wetland	30.04975254	-94.1441957	15	6.8	18
Wetland 7	Wetland	30.05032513	-94.14190581	11	6.4	11

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Wetland 7	Wetland	30.05032519	-94.14190624	11	6.4	34
Wetland 7	Wetland	30.05032496	-94.14190594	11	6.4	16
Wetland 7	Wetland	30.05032461	-94.14190396	13	6.4	17
Wetland 7	Wetland	30.05032175	-94.14190174	16	6.4	12
Wetland 7	Wetland	30.05031588	-94.14190085	17	6.4	8
Wetland 7	Wetland	30.05031102	-94.14189973	15	6.4	6
Wetland 7	Wetland	30.05030519	-94.14189804	15	6.4	27
Wetland 7	Wetland	30.05029864	-94.14189611	13	6.4	13
Wetland 7	Wetland	30.05029178	-94.14189489	12	6.4	14
Wetland 7	Wetland	30.05028506	-94.14189364	13	6.4	21
Wetland 7	Wetland	30.05027768	-94.14189297	14	6.4	9
Wetland 7	Wetland	30.05026964	-94.1418922	15	6.4	11
Wetland 7	Wetland	30.05026128	-94.14189036	14	6.4	18
Wetland 7	Wetland	30.05025337	-94.14188823	14	6.4	17
Wetland 7	Wetland	30.05024452	-94.14188759	15	6.4	45
Wetland 7	Wetland	30.05023629	-94.14188745	16	6.4	16
Wetland 7	Wetland	30.0502276	-94.1418865	17	6.4	71
Wetland 7	Wetland	30.05021916	-94.14188565	17	6.4	5
Wetland 7	Wetland	30.05021024	-94.14188474	16	6.4	9
Wetland 7	Wetland	30.05020285	-94.14188307	12	6.4	14
Wetland 7	Wetland	30.05019595	-94.14188035	14	6.4	16
Wetland 7	Wetland	30.05018913	-94.14187682	17	6.4	19
Wetland 7	Wetland	30.0501812	-94.1418765	17	6.4	12
Wetland 7	Wetland	30.05017307	-94.14187775	14	6.4	8
Wetland 7	Wetland	30.05016514	-94.14187785	16	6.4	9
Wetland 7	Wetland	30.05015717	-94.14187681	15	6.4	18
Wetland 7	Wetland	30.05014915	-94.14187509	14	6.4	17
Wetland 7	Wetland	30.05014092	-94.14187376	13	6.4	19
Wetland 7	Wetland	30.05013317	-94.14187228	17	6.4	8
Wetland 7	Wetland	30.05012566	-94.14186991	15	6.4	41
Wetland 7	Wetland	30.05011701	-94.14186786	11	6.4	27
Wetland 7	Wetland	30.05010927	-94.14186543	11	6.4	23
Wetland 7	Wetland	30.05010141	-94.14186271	11	6.4	13
Wetland 7	Wetland	30.05009339	-94.14186164	11	6.4	11
Wetland 7	Wetland	30.05008531	-94.1418619	15	6.4	15
Wetland 7	Wetland	30.05007762	-94.14186068	17	6.4	35
Wetland 7	Wetland	30.05006973	-94.14185913	14	6.4	14
Wetland 7	Wetland	30.050062	-94.14185679	16	6.4	9
Wetland 7	Wetland	30.05005478	-94.14185465	15	6.4	15
Wetland 7	Wetland	30.05004681	-94.14185343	14	6.4	22
Wetland 7	Wetland	30.05003923	-94.14185223	13	6.4	14
Wetland 7	Wetland	30.05003225	-94.14185037	16	6.4	29
Wetland 7	Wetland	30.05002435	-94.14184902	17	6.4	31
Wetland 7	Wetland	30.05001617	-94.1418465	15	6.4	24
Wetland 7	Wetland	30.05000801	-94.1418433	17	6.4	23
Wetland 7	Wetland	30.05000115	-94.14184016	14	6.4	19
Wetland 7	Wetland	30.0499936	-94.14183582	16	6.4	60
Wetland 7	Wetland	30.04998506	-94.14183397	15	6.4	15
Wetland 7	Wetland	30.04997641	-94.14183104	14	6.4	19
Wetland 7	Wetland	30.04996801	-94.14183009	13	6.4	9
Wetland 7	Wetland	30.04995959	-94.14182756	16	6.4	8
Wetland 7	Wetland	30.04995093	-94.1418247	17	6.4	23
Wetland 7	Wetland	30.04994295	-94.14182117	15	6.4	12
Wetland 7	Wetland	30.04993442	-94.14181805	15	6.4	15
Wetland 7	Wetland	30.04992529	-94.14181589	13	6.4	5

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		Latitude	Longitude			
Wetland 7	Wetland	30.04991673	-94.14181469	12	6.4	17
Wetland 7	Wetland	30.0499087	-94.14181257	13	6.4	11
Wetland 7	Wetland	30.04989995	-94.14181163	14	6.4	5
Wetland 7	Wetland	30.0498914	-94.14180987	15	6.4	9
Wetland 7	Wetland	30.04988333	-94.14180697	14	6.4	8
Wetland 7	Wetland	30.04987463	-94.14180394	14	6.4	22
Wetland 7	Wetland	30.04986643	-94.14180088	15	6.4	14
Wetland 7	Wetland	30.04985839	-94.1417981	16	6.4	18
Wetland 7	Wetland	30.04985055	-94.14179562	17	6.4	11
Wetland 7	Wetland	30.04984204	-94.14179361	17	6.4	9
Wetland 7	Wetland	30.04983326	-94.14179023	16	6.4	7
Wetland 7	Wetland	30.04982429	-94.14178806	12	6.4	14
Wetland 7	Wetland	30.04981544	-94.14178463	14	6.4	12
Wetland 7	Wetland	30.0498079	-94.14178317	17	6.4	17
Wetland 7	Wetland	30.04979949	-94.14178062	13	6.4	19
Wetland 7	Wetland	30.04979128	-94.14177949	16	6.4	8
Wetland 7	Wetland	30.04978292	-94.1417778	17	6.4	41
Wetland 7	Wetland	30.04977511	-94.14177452	15	6.4	27
Wetland 7	Wetland	30.04976691	-94.1417707	15	6.4	23
Wetland 7	Wetland	30.04975922	-94.14176756	13	6.4	13
Wetland 7	Wetland	30.04975263	-94.14176446	12	6.4	11
Wetland 7	Wetland	30.04974658	-94.14176173	13	6.4	15
Wetland 7	Wetland	30.04973585	-94.14175855	14	6.4	35
Wetland 7	Wetland	30.04972893	-94.14175611	15	6.4	14
Wetland 7	Wetland	30.0497205	-94.14175513	14	6.4	9
Wetland 7	Wetland	30.04971217	-94.1417508	14	6.4	15
Wetland 7	Wetland	30.04970585	-94.14174869	15	6.4	22
Wetland 7	Wetland	30.04969774	-94.14174693	16	6.4	14
Wetland 7	Wetland	30.04968781	-94.14174342	11	6.4	29
Wetland 7	Wetland	30.04967983	-94.14174284	11	6.4	31
Wetland 7	Wetland	30.04967073	-94.14174175	16	6.4	24
Wetland 7	Wetland	30.04966236	-94.14174024	12	6.4	23
Wetland 7	Wetland	30.04965472	-94.14174069	14	6.4	19
Wetland 7	Wetland	30.04964629	-94.14174159	15	6.4	60
Wetland 7	Wetland	30.04963803	-94.14174235	11	6.4	15
Wetland 7	Wetland	30.04962999	-94.14174107	14	6.4	19
Wetland 7	Wetland	30.04962217	-94.14173963	16	6.4	9
Wetland 7	Wetland	30.04961481	-94.14173687	15	6.4	8
Wetland 7	Wetland	30.04960767	-94.14173269	14	6.4	23
Wetland 7	Wetland	30.04960006	-94.14172742	13	6.4	12
Wetland 7	Wetland	30.04959204	-94.14172348	11	6.4	15
Wetland 7	Wetland	30.04958394	-94.14171922	15	6.4	5
Wetland 7	Wetland	30.04957486	-94.14171545	13	6.4	17
Wetland 7	Wetland	30.04956657	-94.14171332	12	6.4	11
Wetland 7	Wetland	30.04955728	-94.14170988	13	6.4	5
Wetland 7	Wetland	30.04954934	-94.14170844	14	6.4	9
Wetland 7	Wetland	30.04954102	-94.14170941	15	6.4	8
Wetland 7	Wetland	30.04953393	-94.14171359	14	6.4	22
Wetland 7	Wetland	30.04952951	-94.14172125	14	6.4	14
Wetland 7	Wetland	30.04952841	-94.14172897	13	6.4	18
Wetland 7	Wetland	30.04953109	-94.14173646	15	6.4	11
Wetland 7	Wetland	30.0495355	-94.14174438	16	6.4	9
Wetland 7	Wetland	30.04953956	-94.14175305	12	6.4	7
Wetland 7	Wetland	30.04954683	-94.14175865	14	6.4	19
Wetland 7	Wetland	30.04955583	-94.14176178	16	6.4	20

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		Latitude	Longitude			
Wetland 7	Wetland	30.04956472	-94.14176467	13	6.4	11
Wetland 7	Wetland	30.04957322	-94.14176766	12	6.4	34
Wetland 7	Wetland	30.04958203	-94.14177077	12	6.4	16
Wetland 7	Wetland	30.04959002	-94.14177661	11	6.4	17
Wetland 7	Wetland	30.04959758	-94.14178126	14	6.4	2
Wetland 7	Wetland	30.04960579	-94.14178474	13	6.4	16
Wetland 7	Wetland	30.04961351	-94.14178707	15	6.4	12
Wetland 7	Wetland	30.04961714	-94.14178371	13	6.4	11
Wetland 7	Wetland	30.04961789	-94.14178997	11	6.4	10
Wetland 7	Wetland	30.0496178	-94.14179024	14	6.4	9
Wetland 7	Wetland	30.04961763	-94.14178998	16	6.4	9
Wetland 7	Wetland	30.04961733	-94.14178908	11	6.4	5
Wetland 7	Wetland	30.0496171	-94.14178899	15	6.4	3
Wetland 7	Wetland	30.04961716	-94.14178851	17	6.4	19
Wetland 7	Wetland	30.0496173	-94.14178799	14	6.4	27
Wetland 7	Wetland	30.04961747	-94.1417893	16	6.4	6
Wetland 7	Wetland	30.04964144	-94.14178144	15	6.4	9
Wetland 7	Wetland	30.04970308	-94.14178366	14	6.4	11
Wetland 7	Wetland	30.04970295	-94.14178359	13	6.4	15
Wetland 7	Wetland	30.04981891	-94.14182593	16	6.4	18
Wetland 7	Wetland	30.04981891	-94.14182569	17	6.4	17
Wetland 7	Wetland	30.04987185	-94.14183876	15	6.4	19
Wetland 7	Wetland	30.04987131	-94.14183869	17	6.4	12
Wetland 7	Wetland	30.04987115	-94.14183828	14	6.4	7
Wetland 7	Wetland	30.04992487	-94.14184944	16	6.4	8
Wetland 7	Wetland	30.04992435	-94.14184908	15	6.4	4
Wetland 7	Wetland	30.04996116	-94.14186083	14	6.4	9
Wetland 7	Wetland	30.05000345	-94.14187482	13	6.4	18
Wetland 7	Wetland	30.04999764	-94.14187819	16	6.4	9
Wetland 7	Wetland	30.05000632	-94.14187704	17	6.4	12
Wetland 7	Wetland	30.05001098	-94.14187946	15	6.4	11
Wetland 7	Wetland	30.05001364	-94.14188615	15	6.4	17
Wetland 7	Wetland	30.05001718	-94.14189471	13	6.4	12
Wetland 7	Wetland	30.05001948	-94.14190317	12	6.4	12
Wetland 7	Wetland	30.050021	-94.14191015	13	6.4	8
Wetland 7	Wetland	30.05002762	-94.14191371	14	6.4	19
Wetland 7	Wetland	30.05003581	-94.14191471	15	6.4	12
Wetland 7	Wetland	30.05004502	-94.14191385	14	6.4	17
Wetland 7	Wetland	30.0500519	-94.14191072	14	6.4	20
Wetland 7	Wetland	30.05006032	-94.14190695	13	6.4	17
Wetland 7	Wetland	30.05006804	-94.14190373	16	6.4	9
Wetland 7	Wetland	30.05007563	-94.14190157	17	6.4	8
Wetland 7	Wetland	30.05008367	-94.14190019	15	6.4	8
Wetland 7	Wetland	30.05009089	-94.14189974	15	6.4	27
Wetland 7	Wetland	30.05009851	-94.14189973	13	6.4	17
Wetland 7	Wetland	30.05010571	-94.14190091	12	6.4	13
Wetland 7	Wetland	30.05011281	-94.14190194	13	6.4	14
Wetland 7	Wetland	30.05011965	-94.1419042	14	6.4	33
Wetland 7	Wetland	30.05012649	-94.14190849	15	6.4	34
Wetland 7	Wetland	30.05013318	-94.14191326	14	6.4	16
Wetland 7	Wetland	30.05014043	-94.14191702	14	6.4	10
Wetland 7	Wetland	30.05014791	-94.1419191	15	6.4	9
Wetland 7	Wetland	30.05015604	-94.14192032	16	6.4	3
Wetland 7	Wetland	30.05016384	-94.14192147	11	6.4	11
Wetland 7	Wetland	30.05017181	-94.14192201	11	6.4	14

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Wetland 7	Wetland	30.0501795	-94.14192143	16	6.4	7
Wetland 7	Wetland	30.05018667	-94.14192319	12	6.4	12
Wetland 7	Wetland	30.05019448	-94.14192705	14	6.4	15
Wetland 7	Wetland	30.05020171	-94.14193063	15	6.4	11
Wetland 7	Wetland	30.0502097	-94.14193366	11	6.4	6
Wetland 7	Wetland	30.05021566	-94.14193813	14	6.4	12
Wetland 7	Wetland	30.05022196	-94.14194365	16	6.4	8
Wetland 7	Wetland	30.05022989	-94.14194706	15	6.4	11
Wetland 7	Wetland	30.05023726	-94.14194442	14	6.4	11
Wetland 7	Wetland	30.05024506	-94.14194069	13	6.4	22
Wetland 7	Wetland	30.05025232	-94.14193905	11	6.4	18
Wetland 7	Wetland	30.05026022	-94.14193783	15	6.4	16
Wetland 7	Wetland	30.05026749	-94.1419351	13	6.4	17
Wetland 7	Wetland	30.05027472	-94.14193269	12	6.4	18
Wetland 7	Wetland	30.05028293	-94.14193268	13	6.4	18
Wetland 7	Wetland	30.05029075	-94.14193374	14	6.4	12
Wetland 7	Wetland	30.05029857	-94.14193394	15	6.4	9
Wetland 7	Wetland	30.05032513	-94.14190581	14	6.4	8
Wetland 8	Wetland	30.04699682	-94.14104713	14	4.5	35
Wetland 8	Wetland	30.04699722	-94.14104675	13	4.5	14
Wetland 8	Wetland	30.04703835	-94.14105243	15	4.5	9
Wetland 8	Wetland	30.0470221	-94.14109146	16	4.5	15
Wetland 8	Wetland	30.04701211	-94.14109254	12	4.5	22
Wetland 8	Wetland	30.04697763	-94.14109836	14	4.5	14
Wetland 8	Wetland	30.04694511	-94.14109756	16	4.5	29
Wetland 8	Wetland	30.04692346	-94.14110402	13	4.5	31
Wetland 8	Wetland	30.04689118	-94.14109303	12	4.5	24
Wetland 8	Wetland	30.04685999	-94.14110183	12	4.5	23
Wetland 8	Wetland	30.04683623	-94.14108426	11	4.5	19
Wetland 8	Wetland	30.04682504	-94.14105833	14	4.5	60
Wetland 8	Wetland	30.04681291	-94.14105229	13	4.5	15
Wetland 8	Wetland	30.04678481	-94.14104947	15	4.5	19
Wetland 8	Wetland	30.04677395	-94.14103419	13	4.5	9
Wetland 8	Wetland	30.04677174	-94.14103453	11	4.5	8
Wetland 8	Wetland	30.04676864	-94.14102976	14	4.5	23
Wetland 8	Wetland	30.0467746	-94.1410299	16	4.5	12
Wetland 8	Wetland	30.04676721	-94.14102755	15	4.5	15
Wetland 8	Wetland	30.04676638	-94.1410282	16	4.5	5
Wetland 8	Wetland	30.04676108	-94.14101696	15	4.5	17
Wetland 8	Wetland	30.04676467	-94.14100417	14	4.5	11
Wetland 8	Wetland	30.0467646	-94.14099956	13	4.5	5
Wetland 8	Wetland	30.04675045	-94.14099379	16	4.5	9
Wetland 8	Wetland	30.04674697	-94.14098786	17	4.5	8
Wetland 8	Wetland	30.0467416	-94.14099925	15	4.5	22
Wetland 8	Wetland	30.04673183	-94.1410009	15	4.5	14
Wetland 8	Wetland	30.04671057	-94.14097723	13	4.5	18
Wetland 8	Wetland	30.04671174	-94.14097611	12	4.5	11
Wetland 8	Wetland	30.04671175	-94.14097833	13	4.5	9
Wetland 8	Wetland	30.0467136	-94.14097698	14	4.5	7
Wetland 8	Wetland	30.04672195	-94.14096542	15	4.5	14
Wetland 8	Wetland	30.04670015	-94.14096935	14	4.5	12
Wetland 8	Wetland	30.04669836	-94.14095943	14	4.5	17
Wetland 8	Wetland	30.04668879	-94.14095258	13	4.5	19
Wetland 8	Wetland	30.04668898	-94.14095295	16	4.5	8
Wetland 8	Wetland	30.04668777	-94.14094966	17	4.5	41

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Wetland 8	Wetland	30.0466809	-94.1409497	15	4.5	27
Wetland 8	Wetland	30.04667805	-94.14095363	15	4.5	23
Wetland 8	Wetland	30.04664507	-94.14093775	13	4.5	13
Wetland 8	Wetland	30.04665671	-94.14094008	12	4.5	11
Wetland 8	Wetland	30.04665858	-94.14094509	13	4.5	15
Wetland 8	Wetland	30.04664489	-94.14095217	14	4.5	35
Wetland 8	Wetland	30.04664585	-94.14096271	15	4.5	14
Wetland 8	Wetland	30.04664201	-94.14094766	14	4.5	9
Wetland 8	Wetland	30.04663613	-94.14092906	14	4.5	15
Wetland 8	Wetland	30.04663588	-94.14092794	15	4.5	22
Wetland 8	Wetland	30.04663116	-94.1409235	16	4.5	14
Wetland 8	Wetland	30.04662347	-94.14092646	11	4.5	29
Wetland 8	Wetland	30.04662347	-94.14091748	11	4.5	31
Wetland 8	Wetland	30.04662012	-94.14092103	16	4.5	24
Wetland 8	Wetland	30.04661847	-94.14090909	12	4.5	23
Wetland 8	Wetland	30.04661229	-94.14088746	14	4.5	19
Wetland 8	Wetland	30.04661621	-94.14088583	15	4.5	60
Wetland 8	Wetland	30.04660055	-94.14087388	11	4.5	15
Wetland 8	Wetland	30.04658881	-94.1408676	14	4.5	19
Wetland 8	Wetland	30.04658997	-94.14087063	16	4.5	9
Wetland 8	Wetland	30.04659121	-94.14086156	15	4.5	8
Wetland 8	Wetland	30.04656627	-94.14086224	14	4.5	23
Wetland 8	Wetland	30.04656019	-94.1408632	13	4.5	12
Wetland 8	Wetland	30.04655959	-94.14085988	11	4.5	15
Wetland 8	Wetland	30.04655695	-94.14085365	15	4.5	5
Wetland 8	Wetland	30.04656044	-94.14084888	13	4.5	17
Wetland 8	Wetland	30.04655947	-94.1408452	12	4.5	11
Wetland 8	Wetland	30.04655022	-94.14084747	13	4.5	5
Wetland 8	Wetland	30.04654564	-94.14082688	14	4.5	9
Wetland 8	Wetland	30.04654362	-94.1408206	15	4.5	8
Wetland 8	Wetland	30.04654258	-94.14084019	14	4.5	22
Wetland 8	Wetland	30.04653648	-94.14083089	14	4.5	14
Wetland 8	Wetland	30.0465374	-94.14082112	13	4.5	18
Wetland 8	Wetland	30.04653599	-94.14080895	15	4.5	11
Wetland 8	Wetland	30.04653284	-94.14079538	16	4.5	9
Wetland 8	Wetland	30.04653169	-94.14079387	12	4.5	18
Wetland 8	Wetland	30.04653996	-94.14078764	14	4.5	17
Wetland 8	Wetland	30.0465307	-94.14078227	16	4.5	45
Wetland 8	Wetland	30.04651132	-94.14077536	13	4.5	16
Wetland 8	Wetland	30.04651184	-94.14079007	12	4.5	71
Wetland 8	Wetland	30.04649801	-94.14078112	12	4.5	5
Wetland 8	Wetland	30.04649822	-94.14077201	11	4.5	9
Wetland 8	Wetland	30.0464912	-94.14075181	14	4.5	14
Wetland 8	Wetland	30.04650124	-94.14072817	13	4.5	16
Wetland 8	Wetland	30.04651345	-94.14072383	15	4.5	19
Wetland 8	Wetland	30.04652887	-94.14072314	13	4.5	12
Wetland 8	Wetland	30.04653481	-94.14072807	11	4.5	8
Wetland 8	Wetland	30.04652277	-94.14072218	14	4.5	9
Wetland 8	Wetland	30.04653999	-94.14072842	16	4.5	18
Wetland 8	Wetland	30.04654091	-94.14073443	15	4.5	17
Wetland 8	Wetland	30.0465253	-94.14073479	16	4.5	19
Wetland 8	Wetland	30.04655542	-94.14073534	15	4.5	8
Wetland 8	Wetland	30.04656616	-94.14074918	14	4.5	41
Wetland 8	Wetland	30.04657353	-94.14076111	13	4.5	27
Wetland 8	Wetland	30.04659305	-94.1407747	16	4.5	23

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		Latitude	Longitude			
Wetland 8	Wetland	30.0465921	-94.14075837	17	4.5	13
Wetland 8	Wetland	30.04658334	-94.14076541	15	4.5	11
Wetland 8	Wetland	30.04657987	-94.14076289	15	4.5	15
Wetland 8	Wetland	30.04661203	-94.14079543	13	4.5	35
Wetland 8	Wetland	30.04661	-94.14079485	12	4.5	14
Wetland 8	Wetland	30.04660953	-94.14079678	13	4.5	9
Wetland 8	Wetland	30.04661397	-94.14080141	14	4.5	15
Wetland 8	Wetland	30.0466205	-94.1408058	15	4.5	22
Wetland 8	Wetland	30.04662473	-94.14081137	14	4.5	14
Wetland 8	Wetland	30.04662998	-94.14081539	14	4.5	29
Wetland 8	Wetland	30.0466324	-94.14082109	13	4.5	31
Wetland 8	Wetland	30.04664116	-94.14082417	16	4.5	24
Wetland 8	Wetland	30.04665722	-94.14082689	17	4.5	23
Wetland 8	Wetland	30.04667098	-94.14082897	15	4.5	19
Wetland 8	Wetland	30.04667584	-94.14083915	16	4.5	60
Wetland 8	Wetland	30.04667573	-94.14085155	13	4.5	15
Wetland 8	Wetland	30.04667384	-94.14083846	12	4.5	19
Wetland 8	Wetland	30.04666339	-94.14084173	12	4.5	9
Wetland 8	Wetland	30.04668092	-94.14084394	11	4.5	8
Wetland 8	Wetland	30.04667638	-94.14086025	14	4.5	23
Wetland 8	Wetland	30.04669152	-94.14086413	13	4.5	12
Wetland 8	Wetland	30.04667833	-94.14086808	15	4.5	15
Wetland 8	Wetland	30.04668186	-94.14088904	13	4.5	5
Wetland 8	Wetland	30.04669272	-94.14088795	11	4.5	17
Wetland 8	Wetland	30.04669798	-94.14088784	14	4.5	11
Wetland 8	Wetland	30.04671454	-94.14089435	16	4.5	5
Wetland 8	Wetland	30.04673142	-94.14090577	15	4.5	9
Wetland 8	Wetland	30.04673018	-94.14088563	16	4.5	8
Wetland 8	Wetland	30.04671859	-94.14088107	15	4.5	22
Wetland 8	Wetland	30.04673367	-94.14088662	14	4.5	14
Wetland 8	Wetland	30.0467352	-94.14089473	13	4.5	18
Wetland 8	Wetland	30.04674078	-94.14090517	16	4.5	11
Wetland 8	Wetland	30.04673428	-94.14090483	17	4.5	9
Wetland 8	Wetland	30.04674078	-94.1409155	17	4.5	7
Wetland 8	Wetland	30.04673307	-94.14091811	14	4.5	14
Wetland 8	Wetland	30.04673991	-94.14091525	16	4.5	12
Wetland 8	Wetland	30.04674138	-94.14092045	15	4.5	17
Wetland 8	Wetland	30.04674452	-94.14092869	14	4.5	19
Wetland 8	Wetland	30.04673215	-94.14093762	13	4.5	8
Wetland 8	Wetland	30.04675566	-94.14093357	16	4.5	41
Wetland 8	Wetland	30.04676873	-94.14094399	17	4.5	27
Wetland 8	Wetland	30.04677531	-94.14095079	15	4.5	23
Wetland 8	Wetland	30.04677263	-94.14096013	15	4.5	13
Wetland 8	Wetland	30.04679083	-94.14096982	13	4.5	11
Wetland 8	Wetland	30.04680341	-94.14093727	12	4.5	15
Wetland 8	Wetland	30.04681246	-94.14094574	13	4.5	35
Wetland 8	Wetland	30.04683702	-94.14095563	14	4.5	14
Wetland 8	Wetland	30.04684944	-94.14097334	15	4.5	9
Wetland 8	Wetland	30.04683748	-94.14096779	14	4.5	15
Wetland 8	Wetland	30.04681645	-94.14096538	14	4.5	22
Wetland 8	Wetland	30.04680246	-94.14095604	15	4.5	14
Wetland 8	Wetland	30.04681973	-94.14095227	16	4.5	29
Wetland 8	Wetland	30.04681811	-94.14095079	17	4.5	31
Wetland 8	Wetland	30.04682558	-94.14096638	11	4.5	24
Wetland 8	Wetland	30.04683279	-94.14098044	11	4.5	23

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		Latitude	Longitude			
Wetland 8	Wetland	30.0468463	-94.14097375	17	4.5	19
Wetland 8	Wetland	30.04685534	-94.14095602	14	4.5	60
Wetland 8	Wetland	30.04685629	-94.14097061	16	4.5	15
Wetland 8	Wetland	30.04686606	-94.14097674	15	4.5	19
Wetland 8	Wetland	30.04686577	-94.14098192	14	4.5	9
Wetland 8	Wetland	30.04686561	-94.14099146	13	4.5	8
Wetland 8	Wetland	30.04687374	-94.14099345	16	4.5	23
Wetland 8	Wetland	30.04687958	-94.14099795	17	4.5	12
Wetland 8	Wetland	30.0468749	-94.14100095	15	4.5	15
Wetland 8	Wetland	30.04688894	-94.14099788	15	4.5	5
Wetland 8	Wetland	30.04689269	-94.14099865	13	4.5	17
Wetland 8	Wetland	30.04690433	-94.14099747	12	4.5	11
Wetland 8	Wetland	30.04691389	-94.14101011	13	4.5	9
Wetland 8	Wetland	30.04691196	-94.14100982	14	4.5	7
Wetland 8	Wetland	30.04691484	-94.14100883	15	4.5	19
Wetland 8	Wetland	30.0469285	-94.14101932	14	4.5	20
Wetland 8	Wetland	30.04692247	-94.14102388	14	4.5	11
Wetland 8	Wetland	30.04693456	-94.14102254	15	4.5	34
Wetland 8	Wetland	30.04693893	-94.14102249	16	4.5	16
Wetland 8	Wetland	30.0469417	-94.14102135	17	4.5	17
Wetland 8	Wetland	30.04695259	-94.14102974	11	4.5	2
Wetland 8	Wetland	30.04699682	-94.14104713	11	4.5	16
DP001	Data Point	30.03710767	-94.15887557	13	2	-
DP002	Data Point	30.03647571	-94.15940981	15	2.1	-
DP003	Data Point	30.03510327	-94.15937745	17	1.5	-
DP005	Data Point	30.03600628	-94.15834009	14	1.9	-
DP006	Data Point	30.03610903	-94.15826567	16	1.9	-
DP007	Data Point	30.03622438	-94.15812057	15	1.7	-
DP008	Data Point	30.03876032	-94.15544872	14	2.4	-
DP009	Data Point	30.04406466	-94.15003423	13	5.2	-
DP010	Data Point	30.04517361	-94.15070736	16	1.8	-
DP011	Data Point	30.04295887	-94.15274355	17	1.9	-
DP012	Data Point	30.0418028	-94.15385929	15	2.4	-
DP013	Data Point	30.04531174	-94.14879442	15	2.3	-
DP014	Data Point	30.04755917	-94.14524756	13	2.9	-
DP015	Data Point	30.04769753	-94.14558989	12	1.9	-
DP016	Data Point	30.04769082	-94.14402933	13	1.9	-
DP017	Data Point	30.04750546	-94.14226749	14	4.3	-
DP018	Data Point	30.04695827	-94.14106824	15	2.9	-
DP019	Data Point	30.04687649	-94.1409011	14	2.4	-
DP020	Data Point	30.04617119	-94.13955456	14	2.2	-
DP022	Data Point	30.04492399	-94.1379609	15	3.5	-
DP023	Data Point	30.04264656	-94.13407296	16	2.9	-
DP024	Data Point	30.04175836	-94.13054208	17	2	-
DP025	Data Point	30.04098453	-94.12660354	17	1.8	-
DP026	Data Point	30.04237826	-94.12930722	16	3.2	-
DP027	Data Point	30.0423551	-94.12908663	12	2.8	-
DP029	Data Point	30.04202801	-94.12740687	14	3.5	-
DP032	Data Point	30.04369431	-94.13333876	17	2.7	-
DP033	Data Point	30.04372118	-94.13342167	17	1.8	-
DP034	Data Point	30.04557788	-94.13712741	14	3	-
DP035	Data Point	30.04633589	-94.13801749	16	2.3	-
DP036	Data Point	30.04678961	-94.13846595	15	2.8	-
DP037	Data Point	30.04687699	-94.13885344	14	2.4	-
DP038	Data Point	30.04699209	-94.13907899	13	4.5	-

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		Latitude	Longitude			
DP040	Data Point	30.0477597	-94.13984342	17	2.5	-
DP041	Data Point	30.049772	-94.14102094	15	2.9	-
DP043	Data Point	30.04855104	-94.1405196	13	3.9	-
DP044	Data Point	30.05104879	-94.14117741	12	2.8	-
DP045	Data Point	30.05039364	-94.14568633	13	3.3	-
DP046	Data Point	30.05114984	-94.14462123	14	3.1	-
DP047	Data Point	30.05096668	-94.14490845	15	4.1	-
DP048	Data Point	30.05144747	-94.14422576	14	2.1	-
DP049	Data Point	30.0516155	-94.14421669	14	2.1	-
DP050	Data Point	30.04945402	-94.1467175	13	4.4	-
DP051	Data Point	30.05009055	-94.14640746	15	2.2	-
DP052	Data Point	30.05016046	-94.14626746	16	4.1	-
DP053	Data Point	30.04944986	-94.14470398	17	2.5	-
DP054	Data Point	30.04979841	-94.14433437	17	2.8	-
DP055	Data Point	30.0497932	-94.14421354	16	5.3	-
DP056	Data Point	30.04994981	-94.14407215	13	1.9	-
DP057	Data Point	30.04797755	-94.14404286	12	1.7	-
DP058	Data Point	30.04859201	-94.14516867	12	5.1	-
DP059	Data Point	30.04843837	-94.14342346	11	5.4	-
DP060	Data Point	30.04878598	-94.14277594	14	2.2	-
DP061	Data Point	30.04823857	-94.14167356	13	3.2	-
DP062	Data Point	30.05148765	-94.14230689	15	3.6	-
DP063	Data Point	30.05072808	-94.14326673	17	3.4	-
DP064	Data Point	30.049762	-94.14203627	17	2.8	-
DP065	Data Point	30.0498345	-94.1418186	14	6.3	-
DP066	Data Point	30.05010633	-94.14195684	16	3.4	-
DP067	Data Point	30.05035547	-94.14141019	15	2.1	-
DP068	Data Point	30.0524493	-94.1431165	14	2.8	-
DP069	Data Point	30.04817007	-94.14837153	13	1.4	-
DP070	Data Point	30.04814866	-94.14828773	16	1.9	-
DP071	Data Point	30.04729833	-94.1488818	17	3.1	-
DP072	Data Point	30.04717968	-94.14952735	15	2.3	-
DP073	Data Point	30.05558524	-94.137686	15	1.6	-
DP074	Data Point	30.06746005	-94.13408352	13	2.4	-
DP075	Data Point	30.07188895	-94.13420534	12	1.8	-
DP076	Data Point	30.08055499	-94.13521644	13	1.8	-
DP077	Data Point	30.08642372	-94.13545835	14	2.2	-
DP078	Data Point	30.09059138	-94.13554772	15	4	-
DP079	Data Point	30.09565019	-94.12202468	14	3.6	-
DP080	Data Point	30.09617942	-94.12295579	14	4.9	-
DP081	Data Point	30.09847217	-94.13548128	13	2	-
DP082	Data Point	30.10690653	-94.13639816	15	2.1	-
DP083	Data Point	30.1015693	-94.13709473	16	3.9	-
DP084	Data Point	30.08763673	-94.13645544	17	1.8	-
DP085	Data Point	30.08366655	-94.13661726	17	7.6	-
DP086	Data Point	30.07915014	-94.13639395	16	2.8	-
DP087	Data Point	30.06051268	-94.13582321	13	2.7	-
DP088	Data Point	30.0553945	-94.1413766	12	4.8	-
DP089	Data Point	30.09669852	-94.13383828	12	1.9	-
DP090	Data Point	30.09635325	-94.1342518	11	4.3	-
DP091	Data Point	30.10819189	-94.13855309	14	6.6	-
DP092	Data Point	30.07189324	-94.13519848	13	2.6	-
DP093	Data Point	30.06412518	-94.13488148	15	2.1	-
DP094	Data Point	30.08356175	-94.13224361	17	3.6	-
DP095	Data Point	30.08384141	-94.1404294	17	1.6	-

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		Latitude	Longitude			
DP096	Data Point	30.09464278	-94.13400553	14	1.6	-
DP097	Data Point	30.09546494	-94.13043804	16	1.6	-
DP098	Data Point	30.09517	-94.13555	13	2.1	-
DP099	Data Point	30.093778	-94.136079	15	2.7	-

5/15/2019 & 6/11/2019 &

Date: 7/19/2019
GPS Operator: SC
Receiver Type: Trimble Geo XT
Correction: Real-Time