Surface Water Resources Technical Report

Loop 1604 from State Highway (SH) 16 to Interstate Highway (I-) 35

Bexar County, Texas

CSJs: 2452-02-083, 2452-03-087, 2452-03-113, 0072-08-144

August 2020

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 9, 2019, and executed by FHWA and TxDOT.

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1.0 Introduction and Purpose

The Texas Department of Transportation (TxDOT) proposes expansion of Loop 1604 from State Highway (SH) 16 west to Interstate Highway (I)-35 in Bexar County, Texas (**Attachment A, Figures 1a-1d**). The purpose of the project is to accommodate current and future traffic volumes on Loop 1604 from SH 16 to I-35.

TxDOT proposes to expand Loop 1604 from a four-lane expressway to a 10-lane expressway by adding two general purpose lanes and one high-occupancy vehicle (HOV) special-purpose lane in each direction. The layout of auxiliary lanes and entrance and exit ramps would be reconfigured. The interchange at I-10 would be modernized by removing the cloverleaf connectors, adding direct connectors, and replacing the signalized frontage road intersections with a continuous-flow configuration. The project would also include accommodations for bicyclists and pedestrians, water quality protection, and other highway features. All improvements would be located within the existing right-of-way and easements. The project would not include any toll components.

The purpose of this Surface Water Resources Technical Report is to evaluate potential water resources and regulatory issues associated with the proposed improvements to Loop 1604, including the potential for impacts to Waters of the United States (U.S.), including wetlands, water quality, floodplains, and groundwater. Relevant water resources within the project area include several creeks, tributaries, floodplains, two aquifers, and wetlands. In addition, three important regulatory zones are present: the Edwards Aquifer Contributing Zone (EACZ), Edwards Aquifer Transition Zone (EATZ), and the Edwards Aquifer Recharge Zone (EARZ).

This report also describes potentially jurisdictional wetlands and Waters of the U.S. located within the proposed project area to assist in avoidance of impacts and determine whether U.S. Army Corps of Engineers (USACE) project authorization would be required. Conclusions regarding potential USACE jurisdiction are the opinions of the professionals conducting the study and are subject to confirmation by the USACE Fort Worth District.

2.0 Methods

2.1 Data Review

Qualified wetland ecologists reviewed several published data resources prior to field investigations to identify potentially jurisdictional crossings. Sources consulted included National Wetlands Inventory (NWI) maps, the National Hydrography Dataset (NHD), the Natural Resources Conservation Service (NRCS) Soil Survey for Bexar County, U.S. Geological Survey (USGS) 7.5-minute quadrangle sheets, Federal Emergency Management Agency (FEMA) floodplain maps, and recent aerial photography. Select information from this data review is shown in **Attachment A, Figures 2a-2d**.

2.2 Field Delineation

Qualified wetland ecologists conducted field investigations in May, July, and August 2019 and January and April 2020 within the proposed project area. The routine method of wetland delineation outlined in the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual* (Wetland Training Institute [WTI] 1991) and updated in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region, Version 2.0* (USACE 2010) was utilized for wetland identifications within the project area. Field activities focused on wetlands and Waters of the U.S. delineation and description.

The *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) defines wetlands based on three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In general, all three criteria must be present for an area to qualify as a wetland. Some exceptions can occur in disturbed areas or in newly formed wetlands where one indicator (such as hydric soils) might be lacking. These areas would be addressed on an individual basis as outlined in the *Field Guide for Wetland Delineation* (WTI 1991) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region, Version 2.0* (USACE 2010).

In addition to the jurisdictional wetlands defined above, the Clean Water Act (CWA) regulates impacts to other Waters of the U.S. The term "Waters of the U.S." has broad meaning and incorporates both deepwater aquatic habitats and special aquatic sites, including wetlands, as listed below:

- The territorial seas with respect to the discharge of fill material
- Coastal and inland waters, lakes, rivers, and streams that are navigable Waters of the U.S., including their adjacent wetlands
- Tributaries to navigable Waters of the U.S., including adjacent wetlands
- Interstate waters and their tributaries, including adjacent wetlands

For linear Waters of the U.S., the ordinary high water mark (OHWM) was determined by assessing a combination of factors at each site, in accordance with Section 328.3(e) of the CWA and Regulatory Guidance Letter 05-05 (USACE December 5, 2005).

Potential water features were evaluated in the field, and localized hydrologic characteristics and the dominant vegetative species observed at the site were described. The identified Waters of the U.S. and wetland boundaries are shown in **Attachment A, Figures 3a–3bf**. Photographs of the evaluated waters and wetlands are included in **Attachment B** of this report. Water feature data forms were completed for all water features and easements with water conveyance structures. Some easements were documented in two forms, one for the westbound side and one for the eastbound side, depending on field constraints.

3.0 Results

3.1 General Description of the Project Area

3.1.1 Vicinity and Project Area

The proposed project area is located within Bexar County, Texas. The project area is in the existing Loop 1604 and I-10 transportation right-of-way. The project area also includes easements throughout the project area. The project area is urban, suburban, and undeveloped. Surrounding land use is commercial, residential, agricultural, and undeveloped.

3.1.2 Soils

Information regarding soils within the project corridor was obtained from the U.S. Department of Agriculture NRCS Soil Survey for Bexar County (NRCS 2019a), which identified twenty-three soil map units. Information on soils is included in **Table 1**. Two soil map units are listed in the *National Hydric Soils List* as containing hydric inclusions (NRCS 2015).

Table 1: Soil Map Units within the Project Area

Soil Map Unit Code	Soil Map Unit	Hydric (Yes/No)
AuB	Austin silty clay, 1 to 3 percent slopes	No
AuC	Austin silty clay, 2 to 5 percent slopes, eroded	No
BrD	Brackett gravelly clay loam, 3 to 12 percent slopes	No
BsC	Whitewright-Austin complex, 1 to 5 percent slopes	No
Ca	Anhalt clay, 0 to 2 percent slopes	No
Cb	Crawford and Bexar stony soils	No
HnB	Heiden clay, 1 to 3 percent slopes	No
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	No
HoD3	Heiden-Ferris complex, 5 to 10 percent slopes, severely eroded	No
HsB	Houston Black clay, 1 to 3 percent slopes	No
HuC	Houston Black gravelly clay, 3 to 5 percent slopes	No
HuD	Houston Black gravelly clay, 5 to 8 percent slopes	No
Kr	Krum clay, 1 to 5 percent slopes	No
LvA	Lewisville silty clay, 0 to 1 percent slopes	No
LvB	Lewisville silty clay, 1 to 3 percent slopes	No
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	No
Pt	Pits and Quarries, 1 to 90 percent slopes	No
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	No
TaC	Eckrant cobbly clay, 5 to 15 percent slopes	No
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	No
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	No
Tc	Tinn clay, 0 to 1 percent slopes, occasionally flooded	Yes
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	Yes

3.1.3 Hydrology

The project area is located within the Guadalupe and San Antonio River basins. The project corridor crosses French, Huesta, Leon, Salado, Panther Springs, Lorence, Mud, Elm, and Elm Waterhole Creeks and several of their tributaries, as well as tributaries to Cibolo Creek (see **Attachment A**, **Figures 2a-2d**).

To determine the normality of rainfall at the time of wetland field investigations, both current rainfall data and historical data were obtained from the NRCS WETS station SAN ANTONIO INTLAP, located approximately 4.5 miles south of the project area (NRCS 2019b). The recent local precipitation data is summarized in **Tables 2a-2c,** and the current condition was determined by the NRCS method (NRCS 1997). Based on these calculations, normal conditions were present during the May and August 2019 wetland investigations and wetter than normal conditions were present during the July 2019 wetland investigations. See **Attachment C** for the NRCS Climate Analysis Tables. No wetland investigations were conducted as part of the January and April 2020 field investigations.

Table 2a: Local Rainfall Evaluation – May 2019

		WETS Rainfall Percentile					Product of Condition Value and Month Weight
	Prior Month	30th (inches)	70th (inches)	2019 Measured Rainfall (inches)	Condition Value[1]	Month Weight[2]	
	1st—April	0.86	3.07	3.47	3	3	9
	2nd—March	0.89	2.47	0.46	1	2	2
	3rd—February	0.60	1.99	0.47	1	1	1
						Sum[3]:	12

Source: NRCS 2019b
Notes: 1. Condition Value: 1 = dry, 2 = normal, 3 = wet
2. Month Weight Value: highest value assigned to the most recent month
3. Sum of Products: drier than normal (sum is 6–9), normal (sum is 10–14), wetter than normal (sum is 15–18)

Table 2b: Local Rainfall Evaluation – July 2019

		WETS Rainfall Percentile					Product of Condition Value and Month Weight
	Prior Month	30th (inches)	70th (inches)	2019 Measured Rainfall (inches)	Condition Value[1]	Month Weight[2]	
	1st—June	1.55	4.57	5.51	3	3	9
	2nd—May	2.07	5.43	3.30	2	2	4
	3rd—April	0.86	3.07	3.47	3	1	3
						Sum[3]:	16

Source: NRCS 2019b
Notes: 1. Condition Value: 1 = dry, 2 = normal, 3 = wet
2. Month Weight Value: highest value assigned to the most recent month
3. Sum of Products: drier than normal (sum is 6–9), normal (sum is 10–14), wetter than normal (sum is 15–18)

Table 2c: Local Rainfall Evaluation – August 2019

		WETS Rainfall Percentile					Product of Condition Value and Month Weight
	Prior Month	30th (inches)	70th (inches)	2019 Measured Rainfall (inches)	Condition Value[1]	Month Weight[2]	
	1st—July	0.63	2.73	0.14	1	3	3
	2nd—June	1.55	4.57	5.51	3	2	6
	3rd—May	2.07	5.43	3.30	2	1	2
						Sum[3]:	11

Source: NRCS 2019b
Notes: 1. Condition Value: 1 = dry, 2 = normal, 3 = wet
2. Month Weight Value: highest value assigned to the most recent month
3. Sum of Products: drier than normal (sum is 6–9), normal (sum is 10–14), wetter than normal (sum is 15–18)

3.1.4 Project Area Vegetation

Vegetation observed within the project area during field investigations consisted of Urban; Disturbed Prairie; Riparian; Tallgrass Prairie, Grassland; and Edwards Plateau Savanna, Woodland, and Shrubland habitat types. Additional documentation of the project area vegetation is included in the Biological Evaluation Form and Tier 1 Site Assessment Form and their Supplemental Attachments, provided under separate cover.

3.2 Section 404 of the Clean Water Act

3.2.1 Water Features Evaluated

Thirty-one crossings, comprised of 35 water features and two wetlands, were identified within the project area during field investigations. These water features include: French, Huesta, Leon, Salado, Panther Springs, Lorence, Mud, Elm, and Elm Waterhole Creeks, unnamed tributaries to these creeks, and unnamed tributaries to Cibolo Creek.

A majority of the streams are ephemeral, although a few may be intermittent, meaning the primary source of water is supplied by groundwater with supplemental flow from rainwater runoff, and the presence of flowing water varies temporally. None of the identified features are perennial within the proposed project area. See **Section 3.2.2** below for the USACE definitions of the three types of streams.

The majority of the creeks pass through the right-of-way and under Loop 1604 enclosed in culverts (typically concrete boxes) that extend from outside the frontage road across the right-of-way to the outside of the opposite frontage road. The majority of the stream beds are contained within the concrete culverts and aprons, except for small portions on each end of the culverts. The non-culverted portions of the stream represent a small area that could be impacted by the proposed project. The larger creeks and tributaries identified along the corridor pass through the right-of-way underneath a series of frontage road and mainlane bridges. The stream bottoms are typically gravelly deposits or grass. Two emergent wetlands were identified within the proposed project area, in association with streams.

There are existing easements located upstream and/or downstream at many of the crossings. The easements are largely undeveloped and contain unaltered meandering flow of the streams.

All of the creeks and tributaries flow to traditionally navigable waters. They are depicted on **Figures 2a-2d** and **3a-3bf** in **Attachment A**. Photographs of the features and points where wetland determination forms were completed are included in **Attachment B**, the wetland determination forms are included in **Attachment D**, water feature data forms are included in **Attachment E**, and a schematic overlay of Waters of the U.S. is shown in **Attachment F**. Detailed descriptions of the water features are included in **Attachment G** and are summarized in **Table 3**.

3.2.2 Streams

Table 3 indicates the streams that would be directly or indirectly impacted by the proposed project. The USACE describes three different types of jurisdictional streams:

- Ephemeral stream: Primary source of water for these features is rainwater runoff. The water table is located below the stream bed. Flowing water is present only during and for a short time after precipitation events.
- Intermittent: Primary source of water is supplied by groundwater with supplemental flow from rainwater runoff. Presence of flowing water varies temporally.
- Perennial: Primary source of water is supplied by groundwater with supplemental flow from rainwater runoff. The water table is located above the stream bed. Flowing water is present year-round.

Streams were designated as intermittent if water was present during at least one of the 2019 field visits and were determined to be ephemeral if no water was present during any of the field visits. The 2020 field visits were conducted following large rainfall events and therefore

were not considered in the determination of stream categorization. No perennial streams were identified in the project area.

Table 3: Water Features in the Project Area

	Crossing Number	Water Feature Name	Easement Number	Type	Existing ROW Structures	Direct Impacts	Indirect Impacts
	Crossing 1	Water 1 – Tributary to French Creek	E2	Intermittent[1]	Culvert	Yes[3]	Yes [2]
	Crossing 2	French Creek	E3	Intermittent[1]	Culvert	Yes[3]	Yes [2]
	Crossing 3	Water 2 – Tributary to French Creek	E4	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
	Crossing 4	Water 3 – Tributary to French Creek	E5a	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
	Crossing 4	Water 4 – Tributary to French Creek	E5a	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
	Crossing 5	Huesta Creek	E5b	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
	Crossing 6	Water 5 – Tributary to Huesta Creek	E6	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
	Crossing 7	Water 6 – Tributary to Huesta Creek	E7	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
	Crossing 8	Water 7 – Tributary to Huesta Creek	E8	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
	Crossing 8	Water 8 – Tributary to Huesta Creek	E8	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
	Crossing 9	Water 9 – Tributary to Huesta Creek	E9	Intermittent[1]	Culvert	Yes[3]	Yes [2]
	Crossing 10	Water 10 – Tributary to Leon Creek	NA	Ephemeral[1]	Culvert	No	Yes [2]
	Crossing 11	Water 11 – Tributary to Leon Creek	E10	Ephemeral[1]	Culvert	No	Yes [2]
	Crossing 12	Leon Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
	Crossing 13	Leon Creek	E11	Ephemeral[1]	Bridge	Yes[3]	Yes [2]

Crossing Number	Water Feature Name	Easement Number	Type	Existing ROW Structures	Direct Impacts	Indirect Impacts
Crossing 14	Leon Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 15	Leon Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 15	Wetland 1	NA	Emergent wetland[1]	Bridge	No	Yes [2]
Crossing 16	Water 12 – Tributary to Leon Creek	E14	Ephemeral[1]	Culvert	No	Yes [2]
Crossing 16	Wetland 2	E14	Emergent wetland[1]	NA	No	Yes [2]
Crossing 17	Salado Creek	E28	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 17	Water 13 – Tributary to Salado Creek	E28	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 17	Water 14 – Tributary to Salado Creek	E29	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 18	Water 15– Tributary to Panther Springs Creek	E31	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 19	Water 16 - Tributary to Panther Springs Creek	E34	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 20	Panther Springs Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 21	Lorence Creek	E38	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 22	Mud Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 23	Water 17 – Tributary to Elm Creek	E40	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 24	Elm Creek	NA	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 25	Elm Waterhole Creek	NA	Ephemeral[1]	Bridge	Yes[3]	Yes [2]
Crossing 26	Water 18 – Tributary to Elm Waterhole Creek	E48	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 27	Water 19 – Tributary to Elm Waterhole Creek	E51	Ephemeral[1]	Culvert	Yes[3]	Yes [2]

Crossing Number	Water Feature Name	Easement Number	Type	Existing ROW Structures	Direct Impacts	Indirect Impacts
Crossing 28	Water 20 – Tributary to Cibolo Creek	E58	Intermittent[1]	Culvert	Yes[3]	Yes [2]
Crossing 29	Water 21 – Tributary to Cibolo Creek	E60	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 30	Water 22 – Tributary to Cibolo Creek	E61	Ephemeral[1]	Culvert	Yes[3]	Yes [2]
Crossing 31	Water 23 – Tributary to Cibolo Creek	E63 & E64	Intermittent[1]	Culvert	Yes	Yes [2]

[1] These water features are subject to Section 404 of the CWA. None of the features are subject to the Wild and Scenic Rivers Act of 1968 or the Rivers and Harbors Act (RHA) of 1899.
[2] Indirect impacts would be reasonably foreseeable in downstream extents of streams crossed by the project. See Section 3.2.5 Indirect Impacts to Streams.
[3] Temporary and/or permanent direct impacts would occur. See Section 3.2.3 Direct Impacts to Streams.

3.2.3 Direct Impacts to Streams

Under implementation of the proposed project, direct impacts to streams include the discharge of dredge or fill material (**Table 4**).

Table 4: Direct Impacts to Streams

Water Feature	Project Activity	Temporary and Permanent Direct Impacts
Crossing 1, Water 1	• Sidewalk construction	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable.
Crossing 2, French Creek	• Culvert conversion to a bridge (open channel) structure	• Temporary discharge of materials during the removal of the existing culvert and adjacent grading of the proposed channel's side slopes. • Permanent impacts would be avoided within the footprint of the existing culvert. The flow line of the proposed channel is anticipated to be the same as the existing culvert flow line, and no permanent grading of the OHWM is anticipated within the footprint of the existing culvert. • Due to the conversion of culvert to open-stream channel, the condition of the channel would be improved at the completion of construction.
Crossing 3, Water 2	• Sidewalk construction • Addition of one box culvert to the existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable.

Water Feature	Project Activity	Temporary and Permanent Direct Impacts
Crossing 4, Water 3	• Culvert Improvements	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • No permanent impacts anticipated.
Crossing 4, Water 4	• Culvert improvements (upsize)	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge during culvert improvements. • No permanent impacts anticipated.
Crossing 5, Huesta Creek	• Widen bridge between proposed mainlanes and frontage roads. • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 6, Water 5	• Lateral culvert outfall at existing headwall	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • No permanent impacts anticipated.
Crossing 7, Water 6	• Lateral culvert outfalls within existing culvert and at existing headwall	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • No permanent impacts anticipated.
Crossing 8, Water 7 and Water 8	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts to Water 7 would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present. • No permanent impacts to Water 8 would occur.
Crossing 9, Water 9	• Sidewalk construction • Lateral culvert outfalls within existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 12, Leon Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.

Water Feature	Project Activity	Temporary and Permanent Direct Impacts
Crossing 13, Leon Creek	• Complete replacement of mainlane and westbound frontage road bridges • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 14, Leon Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 15, Leon Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts to Leon Creek would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 17, Salado Creek, Water 13, and Water 14	• Widen bridge between proposed mainlanes and frontage roads • Lateral culvert outfalls within existing headwall • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 18, Water 15	• Sidewalk construction • Lateral culvert outfall within existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 19, Water 16	• Sidewalk construction	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 20, Panther Springs Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 21, Lorence Creek	• Lateral culvert outfall within existing culvert	• Temporary discharge associated with lateral culvert outfall within existing culvert. • No permanent impacts anticipated.

Water Feature	Project Activity	Temporary and Permanent Direct Impacts
Crossing 22, Mud Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 23, Water 17	• Lateral culvert outfalls within existing culvert	• Temporary discharge associated with lateral culvert outfall within existing culvert. • No permanent impacts anticipated.
Crossing 24, Elm Creek	• Sidewalk construction • Lateral culvert outfalls within existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 25, Elm Waterhole Creek	• Widen bridge between proposed mainlanes and frontage roads • Bridge piers would be poured	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Permanent impacts are not anticipated. Channel is concrete-lined.
Crossing 26, Water 18	• Sidewalk construction • Lateral culvert outfalls within existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 27, Water 19	• Sidewalk construction • Lateral culvert outfalls within existing culvert	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 28, Water 20	• Sidewalk construction • Lateral culvert outfalls within existing culvert and at existing headwall	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable.

Water Feature	Project Activity	Temporary and Permanent Direct Impacts
Crossing 29, Water 21	• Sidewalk construction • Lateral culvert outfalls within existing culvert and at existing headwall	• Temporary discharge of dredge or fill from construction access and construction activities in the channel bottom. • Temporary discharge associated with lateral culvert outfall within existing culvert. • Permanent impacts would be avoided to the greatest extent practicable. Streambed is ephemeral and limited aquatic habitat is present.
Crossing 30, Water 22	• Lateral culvert outfalls within existing culvert	• Temporary discharge associated with lateral culvert outfall within existing culvert. • No permanent impacts anticipated.
Crossing 31, Water 23	• Lateral culvert outfalls within existing culvert	• Temporary discharge associated with lateral culvert outfall within existing culvert. • No permanent impacts anticipated.

Any temporary fill that results from the proposed project would be removed entirely. If construction activities result in alterations to stream morphology below the OHWM, preconstruction contours would be restored. Based on the direct impacts described above, Table 5 provides the USACE Section 404 permitting requirements for the proposed project.

Table 5: USACE Section 404 Permitting Requirements

Crossing Number	Water Feature	Activity	Permanent Loss of Waters of the U.S. (acres/linear feet)	Temporary Impacts of Waters of the U.S. (acres)	Section 404 Permit Requirement
Crossing 1	Water 1 – Tributary to French Creek	See Table 4	0.00502 acre/ 20 linear feet	0.015983 acre/ 176 linear feet	NWP 14, no PCN
Crossing 2	French Creek	See Table 4	0.00005 acre/ 1 linear foot	0.507000 acre/ 628 linear feet	NWP 14, no PCN
Crossing 3	Water 2 – Tributary to French Creek	See Table 4	0.002457 acre/ 5 linear feet	0.073524 acre/ 248 linear feet	NWP 14, no PCN
Crossing 4	Water 3 – Tributary to French Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0020 acre/ 88 linear feet	NWP 14, no PCN
Crossing 4	Water 4 – Tributary to French Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0280 acre/ 108 linear feet	NWP 14, no PCN
Crossing 5	Huesta Creek	See Table 4	0.000046 acre/ 3 linear feet	0.238953 acre/ 548 linear feet	NWP 14, no PCN
Crossing 6	Water 5 – Tributary to Huesta Creek	See Table 4	0.0000 acre/ 0 linear feet	0.00110 acre/ 110 linear feet	NWP 14, no PCN
Crossing 7	Water 6 – Tributary to Huesta Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0190 acre/ 129 linear feet	NWP 14, no PCN

	Crossing Number	Water Feature	Activity	Permanent Loss of Waters of the U.S. (acres/linear feet)	Temporary Impacts of Waters of the U.S. (acres)	Section 404 Permit Requirement
	Crossing 8	Water 7 – Tributary to Huesta Creek	See Table 4	0.001245 acre/ 30 linear feet	0.427072 acre/ 1,036 linear feet	NWP 14, no PCN
	Crossing 8	Water 8 – Tributary to Huesta Creek	See Table 4	0.0000 acre/ 0 linear feet	0.018834 acre/ 78 linear feet	NWP 14, no PCN
	Crossing 9	Water 9 – Tributary to Huesta Creek	See Table 4	0.000766 acre/ 6 linear feet	0.067333 acre/ 147 linear feet	NWP 14, no PCN
	Crossing 10	Water 10 – Tributary to Leon Creek	None	0.0000 acre/ 0 linear feet	0.0000 acre/ 0 linear feet	None
	Crossing 11	Water 11 – Tributary to Leon Creek	None	0.0000 acre/ 0 linear feet	0.0000 acre/ 0 linear feet	None
	Crossing 12	Leon Creek	See Table 4	0.001789 acre/ 29 linear feet	0.440585 acre/ 605 linear feet	NWP 14, no PCN
	Crossing 13	Leon Creek	See Table 4	0.004985 acre/ 101 linear feet	0.574878 acre/ 691 linear feet	NWP 14, no PCN
	Crossing 14	Leon Creek	See Table 4	0.000005 acre/ 2 linear feet	0.133723 acre/ 467 linear feet	NWP 14, no PCN
	Crossing 15	Leon Creek	See Table 4	0.000288 acre/ 3 linear feet	0.219163 acre/ 599 linear feet	NWP 14, no PCN
	Crossing 15	Wetland 1	None	0.0000 acre/ NA	0. 0000 acre/ NA	None
	Crossing 16	Water 12 – Tributary to Leon Creek	None	0.0000 acre/ 0 linear feet	0.0000 acre/ 0 linear feet	None
	Crossing 16	Wetland 2	None	0.0000 acre/ NA	0.0000 acre/ NA	None
	Crossing 17	Salado Creek	See Table 4	0.001071 acre/ 22 linear feet	0.383281 acre/ 622 linear feet	NWP 14, no PCN
	Crossing 17	Water 13 – Tributary to Salado Creek	See Table 4	0.0000 acre/ 0 linear feet	0.120598 acre/ 275 linear feet	NWP 14, no PCN
	Crossing 17	Water 14 – Tributary to Salado Creek	See Table 4	0.000644 acre/ 3 linear feet	0.023181 acre/ 104 linear feet	NWP 14, no PCN
	Crossing 18	Water 15– Tributary to Panther Springs Creek	See Table 4	0.008551 acre/ 36 linear feet	0.043148 acre/ 308 linear feet	NWP 14, no PCN
	Crossing 19	Water 16 - Tributary to Panther Springs Creek	See Table 4	0.000016 acre/ 1 linear foot	0.016389 acre/ 98 linear feet	NWP 14, no PCN

	Crossing Number	Water Feature	Activity	Permanent Loss of Waters of the U.S. (acres/linear feet)	Temporary Impacts of Waters of the U.S. (acres)	Section 404 Permit Requirement
	Crossing 20	Panther Springs Creek	See Table 4	0.001623 acre/ 30 linear feet	0.251773 acre/ 568 linear feet	NWP 14, no PCN
	Crossing 21	Lorence Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0140 acre/ 35 linear feet	NWP 14, no PCN
	Crossing 22	Mud Creek	See Table 4	0.000263 acre/ 6 linear feet	0.315346 acre/ 500 linear feet	NWP 14, no PCN
	Crossing 23	Water 17 – Tributary to Elm Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0120 acre/ 57 linear feet	NWP 14, no PCN
	Crossing 24	Elm Creek	See Table 4	0.001481 acre/ 11 linear feet	0.008256 acre/ 58 linear feet	NWP 14, no PCN
	Crossing 25	Elm Waterhole Creek	See Table 4	0.0000 acre/ 0 linear feet	0.68800 acre/ 707 linear feet	NWP 14, no PCN
	Crossing 26	Water 18 – Tributary to Elm Waterhole Creek	See Table 4	0.014614 acre/ 50 linear feet	0.095441 acre/ 306 linear feet	NWP 14, no PCN
	Crossing 27	Water 19 – Tributary to Elm Waterhole Creek	See Table 4	0.000313 acre/ 6 linear feet	0.007251 acre/ 54 linear feet	NWP 14, no PCN
	Crossing 28	Water 20 – Tributary to Cibolo Creek	See Table 4	0.002367 acre/ 5 linear feet	0.042464 acre/ 109 linear feet	NWP 14, no PCN
	Crossing 29	Water 21 – Tributary to Cibolo Creek	See Table 4	0.000538 acre/ 34 linear feet	0.066599 acre/ 172 linear feet	NWP 14, no PCN
	Crossing 30	Water 22 – Tributary to Cibolo Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0100 acre/ 27 linear feet	NWP 14, no PCN
	Crossing 31	Water 23 – Tributary to Cibolo Creek	See Table 4	0.0000 acre/ 0 linear feet	0.0060 acre/ 54 linear feet	NWP 14, no PCN

Based on the available project information and the results of field investigations, it is expected that the proposed activities would qualify for authorization under Nationwide Permit (NWP) 14, without Preconstruction Notification (PCN) to the USACE.

The proposed project would expand and modify the linear transportation facility along Loop 1604 from SH 16 to I-35. TxDOT would take appropriate measures to maintain normal downstream flows and to minimize flooding. Temporary fills would consist of construction-related materials and would be placed in a manner that would not be eroded by expected high flows. TxDOT would remove temporary fills in their entirety upon the completion of construction, and the affected area would be returned to preconstruction elevations and would be revegetated, as appropriate. Most of the temporary discharges of dredge or fill material would be associated with drilling shafts for bridges and would be in place for short

duration. TxDOT would avoid permanent and temporary discharge of dredge of fill material in any wetland. Temporary impacts to streams were calculated using the following methodology:

- For bridged features, the entire stream channels and wetlands within the proposed right-of-way are considered subject to temporary impacts.
- For culverted features, all channels within 100 feet of permanent construction are considered subject to temporary impacts.
- For Crossings 2 and 3, where improvements to the culvert and culverted portion of the feature are proposed, a 100-foot buffer around the existing culverts is considered subject to temporary impacts.
- For outfalls (i.e., connections) between proposed lateral culverts and existing culverts, temporary discharge was assumed within an area five feet upstream and downstream of the outfall. For proposed outfalls in existing headwalls, temporary discharge was assumed within an area 100 feet from the proposed outfall.

The proposed project would comply with the NWP general and regional conditions applicable to NWP 14. The activities at each individual crossing have been identified as single and complete projects, as defined in the nationwide permit program. As such, each impacted crossing would be permitted under a separate NWP.

3.2.4 Outfalls for Stormwater Management Facilities

Several outfalls would be necessary to drain stormwater management facilities, such as in-line detention. Best Management Practices (BMPs) would be implemented to control total suspended solids (TSS). The stormwater management facilities shown on the schematic are subject to change when the detailed design is determined. The construction of outfalls may involve direct and indirect impacts to streams.

Outfalls (typically concrete pipes) would likely tie into the sides of existing box culverts. In these cases, no permanent loss of waters would result because the outfalls already have concrete bottoms. However, temporary discharges of fill may occur. If outfalls are required in the banks of natural-substrate channels, temporary discharges of dredge or fill and a minor permanent loss of Waters of the U.S. may result. During detailed design, outfall velocities would be calculated; if they are erosive, minor amounts of concrete lining may be required around the outfall, thereby resulting in minor losses of Waters of the U.S. Each outfall would be authorized by an NWP, such as NWP 14 or NWP 18 — *Minor Discharges*.

Based on the current level of design, PCNs are not expected to be required to obtain permit coverage under NWP 14. Impacts resulting from any pending outfall elements (discussed above) are anticipated to be authorized by a nationwide permit without a need for a PCN. The terms and conditions of each NWP required to construct the project would be implemented. In addition, Texas Commission on Environmental Quality (TCEQ)-approved erosion, sedimentation, and post-construction TSS controls would be utilized in accordance with the TCEQ's Section 401 Certification Conditions for each NWP. During the detailed design and construction phase, project activities would be regularly evaluated to determine the appropriate permitting under Section 404 of the CWA.

3.2.5 *Indirect Impacts to Streams*

The primary indirect impacts to streams pertain to how runoff characteristics would change during the construction phase and during the operation and maintenance (i.e., post-construction phase) of the completed facility. The streams within the TxDOT right-of-way and downstream of the TxDOT right-of-way would experience indirect effects of work in the right-of-way.

For this analysis, runoff characteristics are divided into two categories:

- Quantity impacts
- Quality impacts

Quantity Impacts to Streams

Examples of quantity impacts that may result from a new highway or the modification of an existing highway are shown in **Table 6** (American Association of State Highway and Transportation Officials [AASHTO] 1999). Some of these impact types are applicable to the proposed project, but others are not. A project-specific analysis is presented in **Table 6.**

Table 6: Quantity Impacts to Streams

	Examples of Quantity Impacts (AASHTO 1999)	Project Impacts and Mitigation
	An increase or decrease in the existing peak and volume of runoff into receiving waters.	The proposed project would add impervious cover, which would increase runoff and peak flows. Detention of approximately 70.88 acre-feet would be required to mitigate peak flow and runoff volume impacts. This volume is proposed to be provided within TxDOT right-of-way in the form of in-line ditch detention systems, as shown on the schematic (TxDOT 2020a).
	The storage volume in lake, reservoir, and wetland areas may be reduced. Conversely, permanent impoundments created by highways can increase storage volumes.	No lakes or reservoirs are located within the project construction limits (PCL). Therefore, none would be impacted under implementation of the proposed project. Wetlands are located in the PCL. However, their storage volumes would not be impacted by the proposed project. Floodplain volume impacts and mitigation are summarized in Section 3.5 - Floodplains.
	Channel modifications may increase or decrease the quantity of stream length, and the highway's geometrical and pavement features may change the quantity of runoff reaching the channel.	The proposed project would not alter the length of any streams. Increased pavement may affect runoff quantity.
	Cross-drainage structures may decrease the peak discharge downstream from a highway by temporarily impounding stormwater runoff.	Peak flow and runoff volume impacts and mitigation are summarized above and presented in detail in the project's drainage study (TxDOT 2020a).
	Storm drains may increase a stream's peak discharge.	Storm drains and outfalls would be needed to accommodate stormwater management facilities. These conveyances would be determined during the detailed design phase. Section 3.2.3 - Outfalls for Stormwater Management Facilities provides additional details.

If not mitigated, the proposed project's surface water quantity impacts may result in the following:

- Erosion of the bed and banks of streams and deposition of eroded materials downstream, involving the following receptors:
  - Ephemeral and intermittent stream habitats
  - Wetland habitats
  - Recharge areas for the Edwards Aquifer

Changes in flow characteristics have been evaluated consistent with a schematic level of effort. During the detailed design phase, these characteristics would be re-examined to ensure all applicable standards and commitments are achieved.

Quality Impacts to Streams

Examples of quality impacts that may result from a new highway or the modification of an existing highway are shown in **Table 7** (AASHTO 1999). Some of these impact types are applicable to the proposed project, while others are not. A project-specific analysis is presented in **Table 7.**

Table 7: Quality Impacts to Streams

	Examples of Quality Impacts	Project-Specific Analysis and Mitigation
	Changes in sediment bed load transportation and deposition can impact spawning grounds. Turbidity can cause mortality in fish.	Under implementation of the proposed project, there is limited potential for this impact mechanism because there is minimal aquatic habitat in receiving streams. Since peak flow and runoff volume impacts would be mitigated, no long-term sediment transport impacts are anticipated. However, there is the potential for short-term impacts during construction (See Construction-Phase Impacts to Streams subsection below).
	Other pollutants may adhere to sediment particles and cause toxicity to fish and other aquatic species.	In order to protect surface water and groundwater quality, TCEQ has established requirements for TSS loadings as a surrogate for other pollutants (See Post–Construction-Phase Impacts to Streams subsection below).
	Water quality may affect the visual quality (i.e., color, smell, appearance, accessibility, and suitability for contact recreation) of surface waters.	Under implementation of the proposed project, there is limited potential for this impact mechanism because there is no persistent water column in most of the project area.

3.2.6 Construction-Phase Impacts to Streams

Construction-phase impacts are generally short-term impacts that coincide with the reconstruction of the facility from its existing condition to the proposed project. The project's construction phase would involve the removal of grass that stabilizes the soil and the subsequent excavation of rock and soils. Particulates would be generated by the removal of existing infrastructure (e.g., milling pavement, saw-cutting, and breaking concrete structures). The project would also require importing materials for construction such as earthen fill,

aggregates, asphalt, concrete, concrete curing compounds, and asphalt binders. Many of these materials would be stockpiled on site. The earthen materials would be subject to erosion by wind and rain, which can carry sediments into receiving waters.

Aquatic habitats located downstream of the construction disturbance could experience short-term increases in turbidity or deposition, which can be harmful to aquatic life. Any impacts to aquatic habitats would result from the combined effects of the project's runoff and runoff from the remainder of the upstream watershed.

Several environmental permits would be required for the proposed project and contain provisions for managing potential pollutants during the construction phase. These include the following:

- NWPs contain provisions for use of appropriate erosion and sedimentation controls. The TCEQ's Section 401 *Certification Conditions for Nationwide Permits* requires that specific TCEQ-approved controls be used in conjunction with NWPs.
- A Construction General Permit (CGP) under the Texas Pollutant Discharge Elimination System's (TPDES) permit program would be required. Since the project would disturb more than five acres of soil, a Notice of Intent (NOI) would be filed with the TCEQ to obtain permit coverage. A Storm Water Pollution Prevention Plan (SW3P) would be prepared and implemented. The SW3P would outline BMPs that would be used during construction to minimize erosion and offsite sedimentation and minimize other constituents from traveling offsite through stormwater. Construction BMPs may include temporary vegetation, blankets/matting, mulch, and sod for erosion control and silt fences and rock berms for sedimentation control. The BMPs would be implemented prior to construction and would be inspected and maintained throughout construction.

Additional construction-related BMPs appropriate for the project include:

  - Remove temporary dredge or fill from streambeds promptly, before rain events
  - Maintain perimeter erosion controls around stockpiles
  - Washout concrete trucks in designated washout pits
  - Promptly stabilize areas to minimize the soil disturbed at any given time

- An Edwards Aquifer Water Pollution Abatement Plan (WPAP) would be prepared for the proposed project. One component of the WPAP is a Temporary Stormwater Section, which includes requirements for erosion and sediment control during construction and requires additional information regarding sensitive features.

In addition to the project-specific permits discussed above, TxDOT's Municipal Separate Storm Sewer System (MS4) Permit is applicable to activities conducted within the limits of an MS4. The proposed project is within the limits and would drain to the City of San Antonio MS4, which also contains provisions for management of construction sites.

TxDOT's Environmental Management System is intended to improve communication of environmental permits, issues, and commitments (EPICs) throughout the planning, detailed design, and construction of a project. TxDOT has specific requirements for contractor education on stormwater management topics.

3.2.7 Post–Construction-Phase Impacts to Streams

The proposed project would add approximately 198 acres of additional impervious cover over the Edwards Aquifer Recharge Zone and 3 acres over the Contributing Zone of the Edwards Aquifer (TxDOT 2020b).

Impervious cover prevents rain from seeping into the ground and thereby reduces natural soil infiltration. Stormwater runoff from parking lots, highways, roof tops, yards, sidewalks, and other impervious surfaces contains suspended solids, pesticides, bacteria, petroleum residues (i.e., oil and grease), fertilizers, animal waste, and metals (Texas Register [TexReg] 1998).

The TCEQ adopted the Edwards Aquifer Rules (30 Texas Administrative Code [TAC] 213) for the specific purpose of regulating activities that have the potential to pollute the Edwards Aquifer and hydrologically connected surface water to protect existing and potential uses of groundwater and to maintain Texas Surface Water Quality Standards (TexReg 1998). The proposed project and associated activities would comply with the Edwards Aquifer rules and any applicable TCEQ guidance documents.

The proposed project would be subject to 30 TAC 213 and would require treatment of runoff. Mitigation measures would be designed, constructed, operated, and maintained to ensure that 80 percent of the incremental increase in the annual mass loading of TSS from the site caused by the regulated activity is removed. TSS does not provide a complete assessment of water quality issues associated with stormwater. However, it serves as a good indicator of significant pollutants of concern, such as oil and grease, and water quality in general. TSS correlates with other water quality constituents, including but not limited to, oil and grease (TexReg 1998).

A combination of BMPs were selected as the desirable BMPs for the project for numerous reasons (TxDOT 2020b). Vegetative filter strips, grassy swales, concrete-walled sediment-filtration ponds and batched detention basins are considered to be the preferred treatment method. Earthen-walled basins were not considered during this analysis, as they would have a larger footprint and require more maintenance than concrete basins.

Due to their high removal efficiency and relatively low cost, vegetative filter strips would be utilized wherever possible along the frontage roads and ramps by providing 15-foot-wide, 5:1 side slopes adjacent to the new pavement edges. Grassy swales would also be included in areas where space is available for wide and flat ditches (<0.5 percent grade) that could achieve the required removal rates.

Water quality sand filter ponds would be added in open areas within the right-of-way. They would be sized to treat as much of the required area as possible, within the available space provided. In some instances, the ponds would not be sized for optimal efficiency, but would still provide as much treatment as needed to meet the TSS removal requirements. In most cases, 5-foot deep ponds would be used. Outfall elevations would be verified by comparing the cross-culvert flowline with the proposed outfall at the pond.

In areas where space would be limited, underground wet vaults would be proposed along the storm sewer system and may include proprietary devices such as Baysaver and StormFilter. It will be up to the Plans, Specifications, and Estimates (PS&E) designer to determine the water quality device to use for the project. For the schematic design analysis, wet vaults would be proposed in tight areas because of their small footprint and high efficiency.

Removing TSS may not remove dissolved constituents such as nitrogen and phosphorous (i.e., nutrients found in fertilizers). TxDOT uses fertilizers to vegetate and stabilize soils at the completion of construction but does not use fertilizer as part of ongoing operation and maintenance. Therefore, the proposed project would not represent a long-term source of nutrient loads to receiving waters.

3.2.8 Water Pollution Abatement Plan

As stated above, impervious cover would increase over the EARZ and the EACZ. For this reason, it is anticipated that the project would require the preparation and implementation of an Edwards Aquifer WPAP. The WPAP would include a plan for the operation and maintenance of BMPs.

The details on TSS removal BMP types, sizes, and locations would be determined during the detailed design phase of the project. These details would be presented in an Edwards Aquifer WPAP and would be subject to TCEQ review and approval before construction may commence.

3.2.9 Hazardous Materials Spills

Hazardous materials spills have the potential to pollute surface water and groundwater. Hazardous materials are used at a variety of facilities in the watershed, such as gas stations, manufacturing facilities, and service facilities. The hazardous materials initial site assessment prepared for this project contains additional information on the private and public facilities that utilize hazardous materials in the project area.

In the highway environment, hazardous materials include gasoline and diesel in vehicles' fuel tanks and a variety of solid, liquid, and gaseous materials are transported on highways as cargo. Similarly, underground sanitary sewer lines that cross the landscape carry wastewater from developments in the watershed. These materials pose a risk to water quality if released to the environment.

Hazardous materials spills may result

- from use of the existing facility;

- during the project's construction phase; or
- after the proposed project is complete.

The Non-Radioactive Hazardous Materials (NRHM) Route Plan prohibits the use of Loop 1604 for through-transport of hazardous materials; however, I-10 within the project area is identified as a hazardous materials route (TxDOT 2019).

TxDOT maintains a contract with an emergency hazardous materials response company to respond to spills as needed (e.g., in the case where the party responsible for the spill is not responsive in procuring their own clean-up company).

During construction, traffic would continue to use the facility as a route for hazardous materials transport and pose a risk of spills. The construction activity itself temporarily changes the risk scenario. Hazardous materials are used in roadway construction and include fuel for equipment, asphalt emulsions, concrete additives, and curing compounds. To help reduce the risk of spills that could affect water resources, TxDOT has specific restrictions and requirements the contractor must follow during construction, including the following:

- TxDOT would not allow hazardous materials storage on TxDOT right-of-way within the EARZ.
- The construction contractor would be responsible for the response, clean-up, and notification of any spills related to construction.
- Following construction, traffic would continue to use the facility and pose a risk of spills. The Edwards Aquifer WPAP would describe the measures that would be used to contain any spill of hydrocarbons or hazardous substances such as on a roadway (TexReg 1998).

All of the hard-structure water quality control measures would provide spill control with valves included on the downstream side. The proposed facility would be operated in accordance with the Hazardous Materials Route Plan, the Edwards Aquifer WPAP, and the MS4 Permit.

3.2.10 Wetlands

Two wetlands (Wetlands 1 and 2) were identified in the PCL as part of this study (**Table 8**). The wetlands are connected to streams that are Waters of the U.S. and are therefore assumed jurisdictional.

Table 8: Wetlands

Crossing Number	Water Feature	Location	Type	Acreage within the Project Area	Direct Impacts	Indirect Impacts
Crossing 15	Wetland 1	Leon Creek within right-of-way	Emergent	0.023	No	Altered hyrdology
Crossing 17	Wetland 2	E14 SB	Emergent	0.004	No	Altered hyrdology

Detailed descriptions of the wetlands are provided below:

- Wetland 1 is a non-forested emergent wetland located underneath the Loop 1604 west bound bridge at Leon Creek. This wetland connects to Leon Creek within the project area. Dominant vegetation includes green ash (*Fraxinus pennsylvanica*), swamp smartweed (*Persicaria hydropiperoides*), and green flatsedge (*Cyperus virens*).
- Wetland 2 is non-forested emergent wetland located on the west side of I-10 within Easement 14. This wetland is adjacent and connects to Water 14. Dominant vegetation includes black willow (*Salix nigra*), Vasey grass (*Paspalum urvillei*), and western umbrella-sedge (*Fuirena simplex*).

Temporary and permanent impacts to both wetlands would be avoided. Special care will be required to avoid impacts to Wetland 1 due to its proximity to permanent construction. The wetlands are not anticipated to experience indirect effects such as those described in Section 3.2.4 - *Indirect Impacts to Streams*. The mitigation plans for streams would also protect wetlands.

Both wetlands may be indirectly affected through subtle alterations in project area hydrology.

3.3 Section 401 of the Clean Water Act

Erosion control, sediment control, and post-construction TSS controls would be incorporated into the construction plan to provide for the protection of surface water quality.

3.4 Navigable Waters

No navigable waterways pursuant to Section 9 or Section 10 of the RHA or the General Bridge Act are located within the proposed project area.

3.5 Floodplains

The project is in Bexar County, which is a participant in the National Flood Insurance Program. According to the FEMA Flood Insurance Rate Map (FIRM) Community Panel Numbers 48029C0220G, 48029C0210G, 48029C0230G, 48029C0235G, 48029C0255G, 48029C0260G, and 48029C0280F (FEMA 2019), the project intersects the FEMA-designated 100-year floodplains associated with French Creek, Huesta Creek, Leon Creek, Salado Creek, Panther Springs Creek, Lorence Creek, Mud Creek, Elm Creek, Elm Waterhole Creek, and unnamed tributaries to these creeks, as well as with unnamed tributaries to Cibolo Creek (see **Attachment A**, **Figures 2a-2d**).

The project would require the placement of fill in some portions of the floodplain and the removal of earth materials from the floodplain in other areas. At Loop 1604 and French Creek (Crossing 2) and at I-10 and Leon Creek (Crossing 13) portions of the roadways overtop during some storm events. Replacement bridges would be constructed in these areas accompanied by the removal of fill from the floodplain. Detailed cut and fill calculations for the PCL have not been performed yet. FEMA regulations require that fill in the 100-year floodplain be compensated with an equal amount of cut below the 100-year floodplain elevation in an area with flow connectivity to the main channel floodplain. The floodplain fill compensation would

be accommodated within the right-of-way. Coordination with the local floodplain administrator would be required.

The hydraulic design for this project would be in accordance with current Federal Highway Administration and TxDOT design policies. The facility would permit the conveyance of the 100-year flood, inundation of the roadway being acceptable, without causing significant damage to the facility, stream, or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances.

The proposed action may be considered a significant encroachment on the floodplain as defined by 23 Code of Federal Regulations (CFR) 650.105. Therefore, it is necessary to demonstrate that the significant encroachment is the only practicable alternative. The following support documentation would be required:

- The reasons why the proposed action must be in the floodplain
- The alternatives considered and why they were not practicable
- A statement indicating whether the action conforms to applicable state or local floodplain protection standards.

The existing alignment of Loop 1604 is located within the FEMA-mapped floodplains. There are no alternative transportation corridors of similar functional class connecting Loop 1604 at SH 16 to I-35 that would avoid floodplains. Designs that utilize the existing right-of-way and mitigate for floodplain impacts would be practicable. The project would be designed to conform with applicable state and local floodplain protection standards. Based on this information, an encroachment on a floodplain would be the only practicable alternative.

3.5.1 Executive Order — Floodplain Management (EO 11988)

Executive Order (EO) 11988 directs each federal agency to act to reduce the risk of losses associated with floods, to minimize the impact of floods on human health and safety, and to preserve the beneficial values of floodplains. Compliance with EO 11988 is addressed programmatically through the implementation of the TxDOT Hydraulic Design Manual, which includes notification and coordination with local floodplain administrators.

3.6 Water Quality

3.6.1 Section 303(d) of the Clean Water Act

The project area is located within the Leon Creek, San Antonio River, Salado Creek, and Upper Cibolo Creek watersheds within the San Antonio River Basin. For the purposes of monitoring water quality, the TCEQ has divided the major water bodies within the San Antonio River Basin into 13 discrete segments. Water runoff from the project area is within five stream miles of and drains to two impaired stream segments: Segment 1908_03 – Upper Cibolo Creek and Segment 1906_06 – Leon Creek. Segment 1908_03 is listed as impaired for chloride and Segment 1906_06 is listed as impaired due to polychlorinated biphenyls (PCBs) in edible

tissue. The PCBs are associated with land use around former Kelly Air Force Base, approximately 13 miles downstream of the project. The proposed project is not expected to contribute to the constituents of concern for the impaired units. The TCEQ 2018 303(d) list, approved on December 23, 2019, was utilized in this assessment (TCEQ 2018). Coordination with the TCEQ is required. See **Attachment A**, **Figure 4**.

3.6.2 Section 402 of the Clean Water Act: Texas Pollutant Discharge Elimination System

The proposed project would include five or more acres of earth disturbance. TxDOT would comply with the TCEQ's TPDES CGP. Efforts would be made to avoid and minimize impacts to the aquatic ecosystem during roadway design. Minimization would be achieved by preparing and implementing a SW3P and by implementing BMPs, including temporary erosion, sedimentation, and TSS water pollution controls. All temporary erosion controls would follow TxDOT Standard Specifications and would be in place, according to the construction plans, prior to commencement of construction-related activities. The contractor would take appropriate measures to prevent, minimize, and control the spill of fuels, lubricants, and hazardous materials in the construction staging areas. A construction site notice would be posted. An NOI and Notice of Termination would be required.

3.6.3 Section 402 of the Clean Water Act: Municipal Separate Storm Sewer System

The project area lies within an MS4 area. Since TPDES CGP authorization and compliance (and the associated documentation) occur outside the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of projects. The Project Development Process Manual and PS&E Preparation Manual require a SW3P be included in the plans of all projects that disturb one or more acres. The Construction Contract Administration Manual requires that the appropriate CGP authorization documents (NOI or site notice) be completed, posted, and submitted, when required by the CGP, to TCEQ and the MS4 operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specification Checklists" require Special Provision 506-003 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SW3P and to complete the appropriate authorization documents.

3.7 Executive Order 11990, Wetlands

EO 11990, Protection of Wetlands (issued in 1977), requires federal agencies to minimize the destruction or modification of wetlands. Two wetlands were identified within the proposed project area. No permanent impacts to wetlands are anticipated.

3.8 Texas Coastal Management Program

The project is located within Bexar County, which is located outside the Coastal Zone Boundary. No coordination would be required.

3.9 Coastal Barrier Resources Act

The Coastal Barrier Resources Act (CBRA) was enacted in 1982 to discourage development in certain coastal areas along the Atlantic and Gulf coasts. The act designated certain undeveloped coastal areas as coastal barrier/system units under the Coastal Barrier Resources System (CBRS) and made those units ineligible for most new federal expenditures and financial assistance.

The proposed project is located within Bexar County and is not located within a CBRS unit or otherwise protected area; therefore, CBRA is not applicable.

3.10 Wild and Scenic Rivers

The proposed project would not involve work within a segment of any river designated as a Wild and Scenic River, and it would not harm the free-flowing condition, water quality, or outstanding resource values of any designated Wild and Scenic Rivers.

3.11 Groundwater

3.11.1 Edwards Aquifer

The Edwards Aquifer is the most productive and most regulated of the aquifers within the project area. Collectively, the Georgetown, Person, and Kainer Formations (a.k.a. Edwards limestones) are the host rocks for the Edwards Aquifer. Where the Edwards limestones are exposed at the surface, the karst terrain is characterized by the presence of sinkholes, sinking (losing) streams, and caves. Underground, water moves through highly permeable fractures and voids, which results in prolific wells but also reduces the aquifer's ability to filter potential contaminants. This characteristic makes the aquifer's water quality highly dependent on the quality of surface water flowing over the recharge zone. The project would maintain compliance with the Edwards Aquifer rules by submitting an Edwards Aquifer WPAP prior to construction. The studies for this project include more detailed engineering and environmental reports on groundwater with an emphasis on the Edwards Aquifer.

Exhibit 1 shows the zones of the Edwards Aquifer.

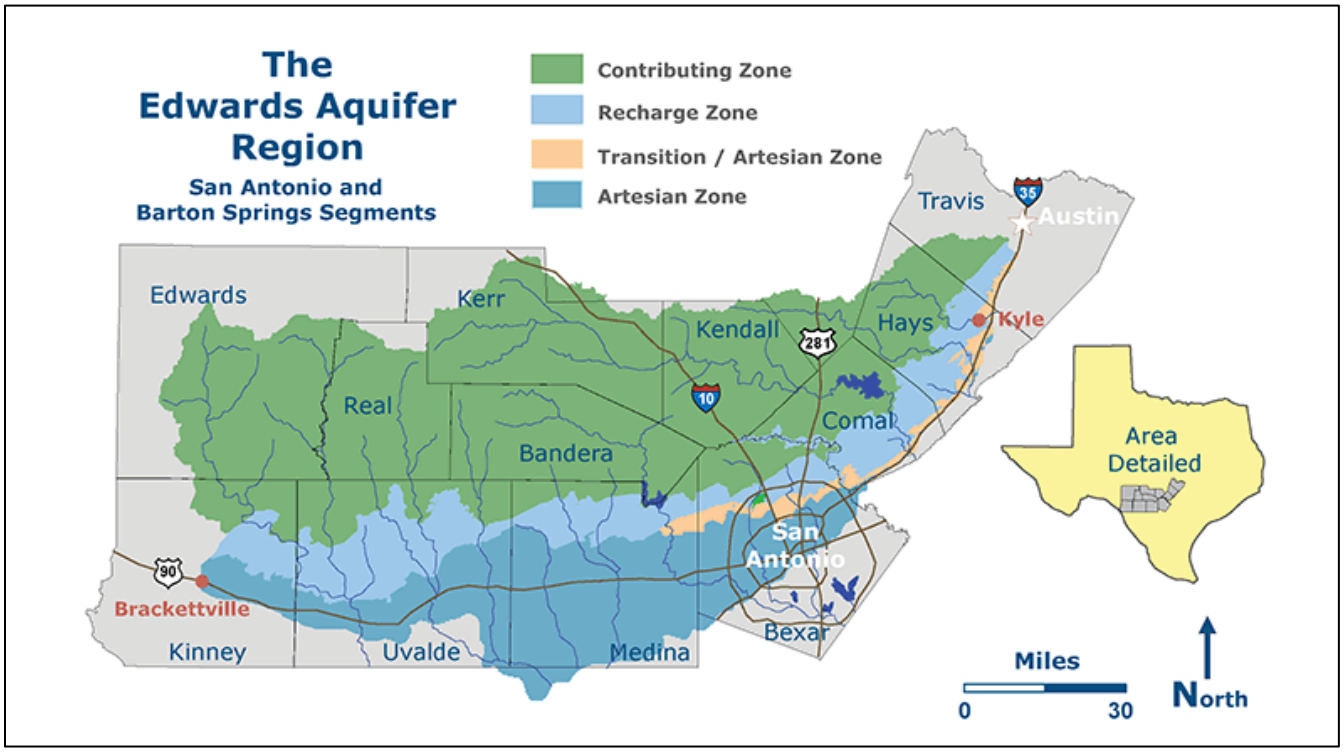

Exhibit 1: Edwards Aquifer Zones

3.12 International Boundary and Water Commission

The project would not be located within the floodplain of any international waters; therefore, coordination with the International Boundary and Water Commission would not be required.

4.0 Conclusions

Thirty-one crossings, comprised of 35 water features and two wetlands, were identified within the project limits. These water features include: French, Huesta, Leon, Salado, Panther Springs, Lorence, Mud, Elm, and Elm Waterhole Creeks, unnamed tributaries to these creeks, and unnamed tributaries to Cibolo Creek. It is anticipated that impacts would be permitted under NWP 14 without PCN to the USACE for Crossings 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, and 31. The project would be required to apply for authorization under the CGP. As such, completion and implementation of a SW3P, filing of an NOI with TCEQ, and posting of a site notice would be required.

An NOI would be submitted to the local MS4 operator, and possible floodplain impacts would be coordinated through the local floodplain administrator.

Permits for the proposed project would include the completion of an Edwards Aquifer WPAP for submittal to TCEQ for review and approval.

5.0 References

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

COX | McLAIN
Environmental Consulting

Attachment A
Figures

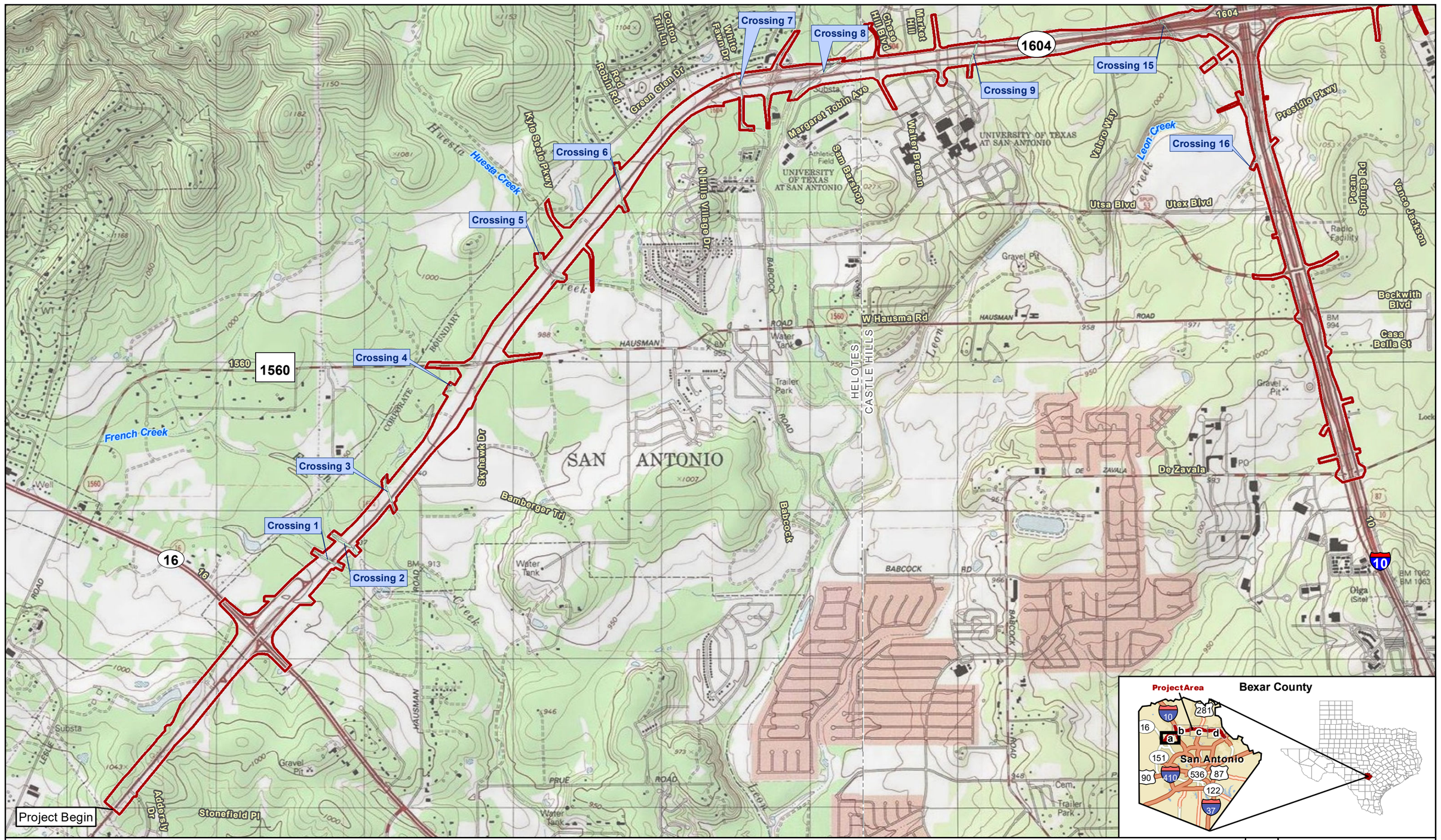

Figure 1a

Project Location (Topographic Base)

Loop 1604: SH 16 to I-35

Project Location
Water Crossing

Basemap Sources: USGS Helotes (1992), Castle Hills (1992), Longhorn (1992) and Schertz (1992) 7.5' Quadrangles

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

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0 600 Meters — Scale: 1:24,000
Date: 5/28/2020

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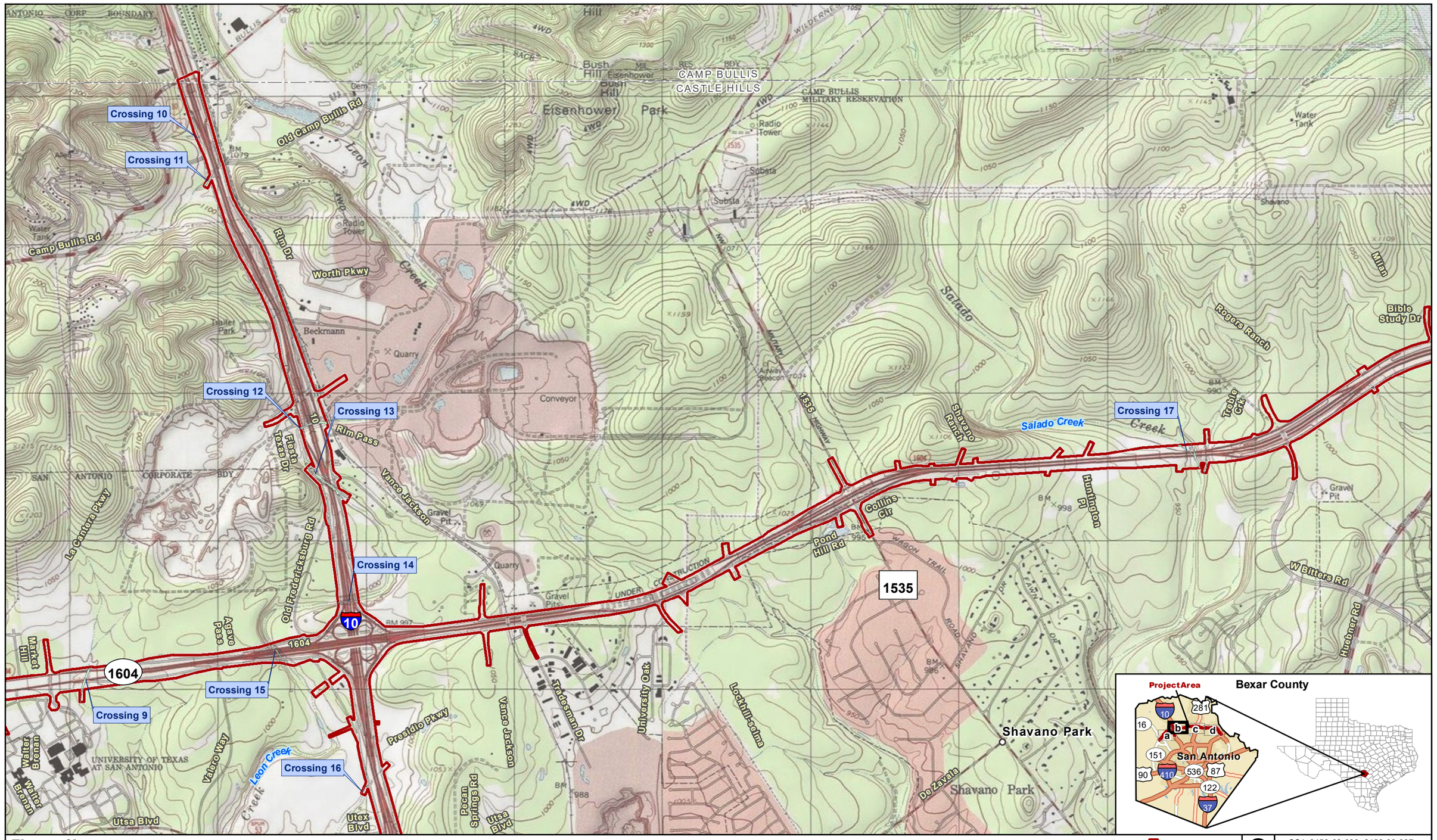

Figure 1b

Project Location (Topographic Base)

Loop 1604: SH 16 to I-35

Project Location

Water Crossing

Basemap Sources: USGS Helotes (1992), Castle Hills (1992), Longhorn (1992) and Schertz (1992) 7.5' Quadrangles

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

0 2,000 Feet

0 600 Meters

1 in = 2,000 feet

Scale: 1:24,000

Date: 5/28/2020

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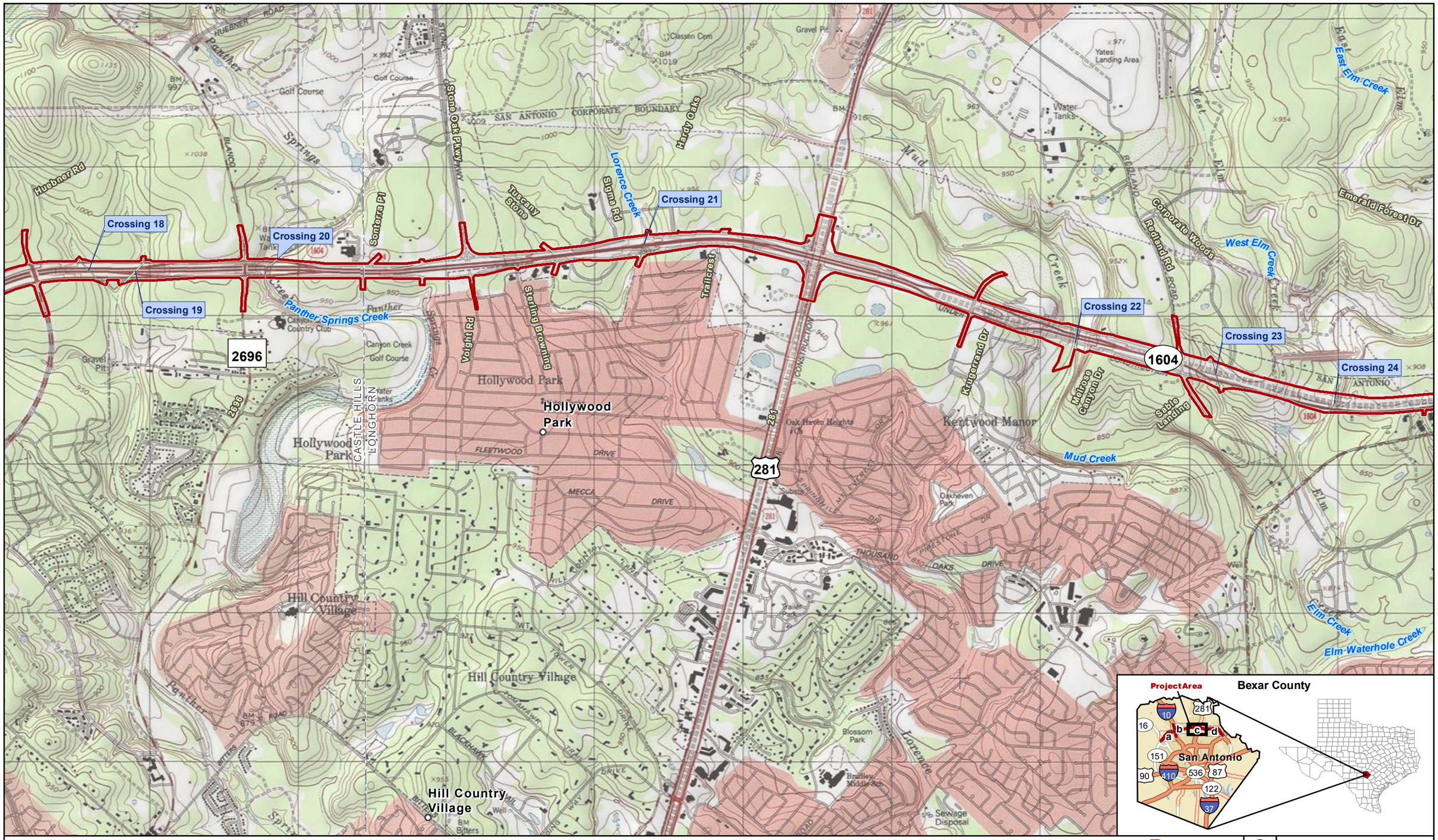

Figure 1c

Project Location (Topographic Base)

Loop 1604: SH 16 to I-35

Project Location

Water Crossing

Basemap Sources: USGS Helotes (1992), Castle Hills (1992), Longhorn (1992) and Schertz (1992) 7.5' Quadrangles

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

0 2,000 Feet

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1 in = 2,000 feet

Scale: 1:24,000

Date: 5/28/2020

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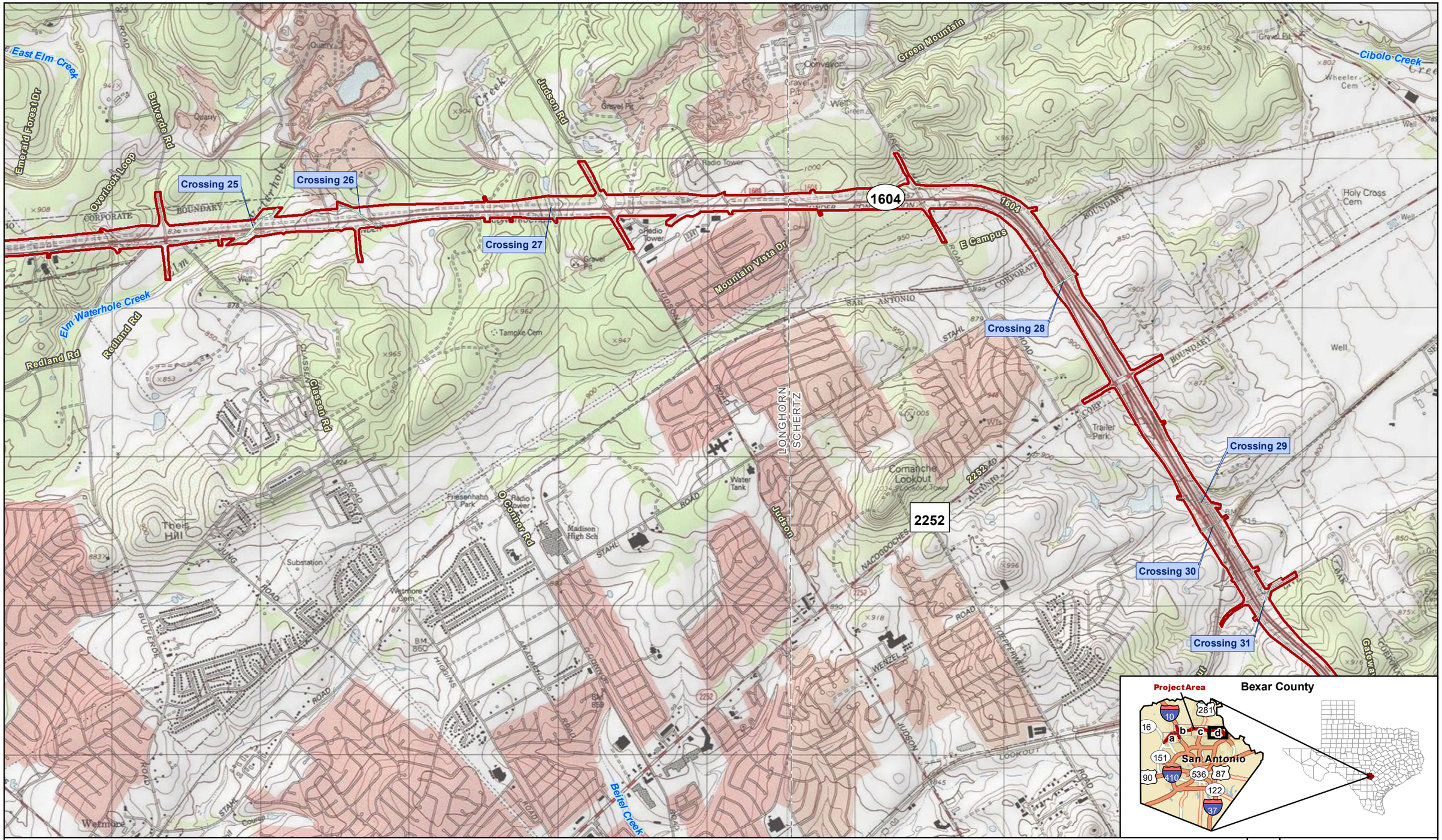

Figure 1d

Project Location (Topographic Base)

Loop 1604: SH 16 to I-35

Project Location

Water Crossing

Basemap Sources: USGS Helotes (1992), Castle Hills (1992), Longhorn (1992) and Schertz (1992) 7.5' Quadrangles

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

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Date: 5/28/2020

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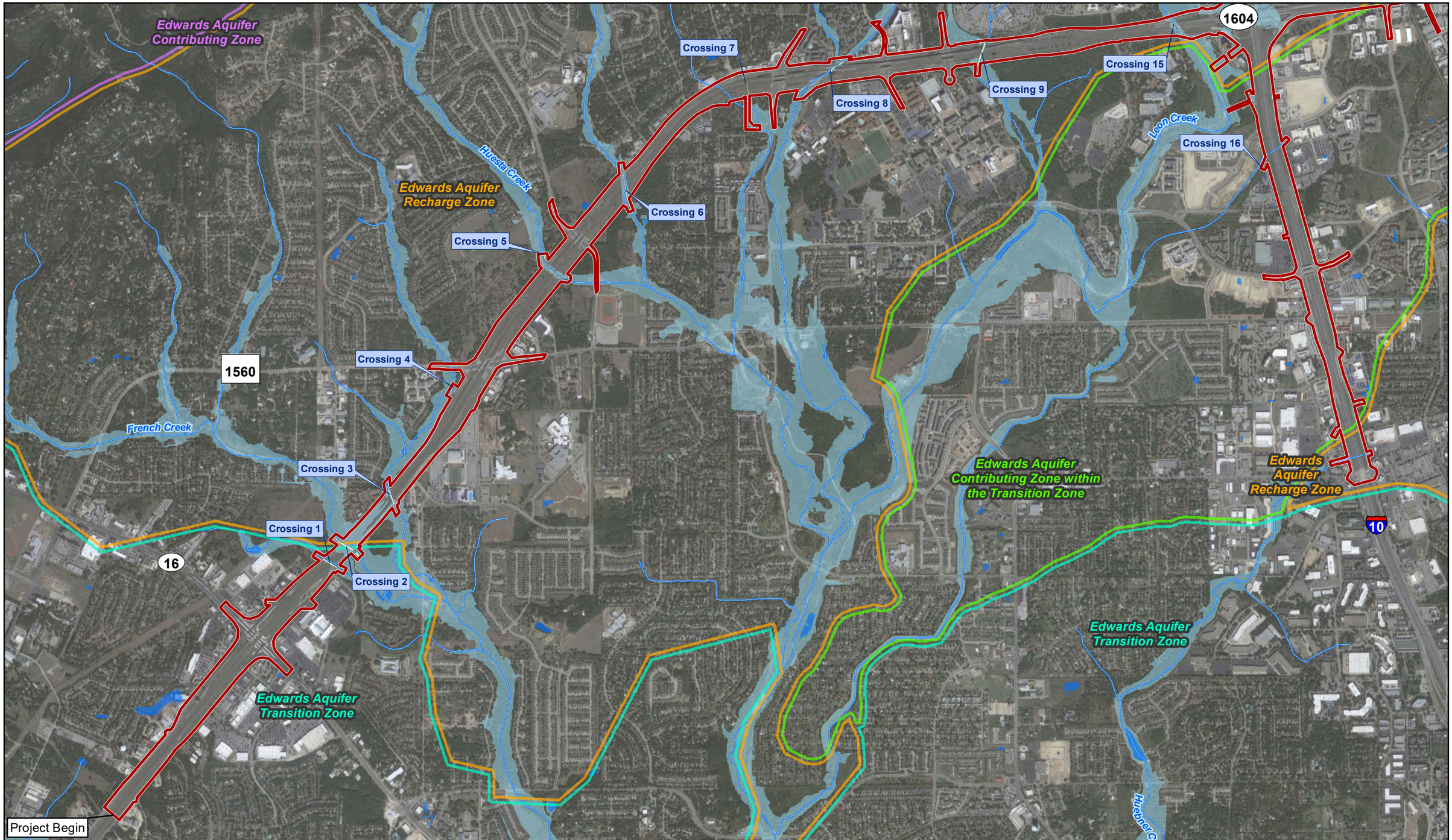


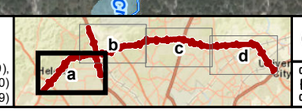
Figure 2a

Water Resources

Loop 1604: SH 16 to I-35

- Project Location
- NHD Stream
- NHD Water
- 100-Year Flood Zone
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Contributing Zone within the Transition Zone
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Transition Zone
- Water Crossing

Data Sources: NHD (2019), FEMA NFHL (2018), CMEC (2019, 2020)
Aerial Source: Google (2019)



CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

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Date: 5/28/2020

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Figure 2b

Water Resources

Loop 1604: SH 16 to I-35

Project Location
NHD Stream
NHD Water
100-Year Flood Zone
Designated Floodway
Edwards Aquifer Contributing Zone
Edwards Aquifer Contributing Zone within the Transition Zone
Edwards Aquifer Recharge Zone
Edwards Aquifer Transition Zone
Water Crossing

Data Sources: NHD (2019),
FEMA NFHL (2018), CMEC (2019, 2020)
Aerial Source: Google (2019)

CSJ: 2452-02-083, 2452-03-087,
2452-03-113, 2452-02-128

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Figure 2c

Water Resources

Loop 1604: SH 16 to I-35

Project Location
NHD Stream
NHD Water
100-Year Flood Zone
Designated Floodway
Edwards Aquifer Recharge Zone
Edwards Aquifer Transition Zone
Water Crossing

Data Sources: NHD (2019), FEMA NFHL (2018), CMEC (2019, 2020)
Aerial Source: Google (2019)

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/28/2020

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East Elm Creek

Edwards Aquifer Recharge Zone

Crossing 26

Soil Conservation Service Site 13a Reservoir

1604

Crossing 25

Crossing 27

Elm Waterhole Creek

Edwards Aquifer Transition Zone

Crossing 28

Edwards Aquifer Recharge Zone

Cibolo Creek

2252

Crossing 29

Crea Brothers Lake

Crossing 31

Crossing 30

Harmark Lake

35

Beitel Creek

Project End

Figure 2d

Water Resources

Loop 1604: SH 16 to I-35

Project Location
NHD Stream
NHD Water
100-Year Flood Zone
Designated Floodway
Edwards Aquifer Recharge Zone
Edwards Aquifer Transition Zone
Water Crossing

Data Sources: NHD (2019), FEMA NFHL (2018), CMEC (2019, 2020)
Aerial Source: Google (2019)

CSJ: 2452-02-083, 2452-03-087, 2452-03-113, 2452-02-128

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1

WDP12_AB_7.11

1604

WDP1_WM_7.10

1

Helotes

Universal City

Figure 3a

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way

Existing Drainage Easement

Sheet Limits

Limits of Construction

Wetland Determination Point (Upland)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

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1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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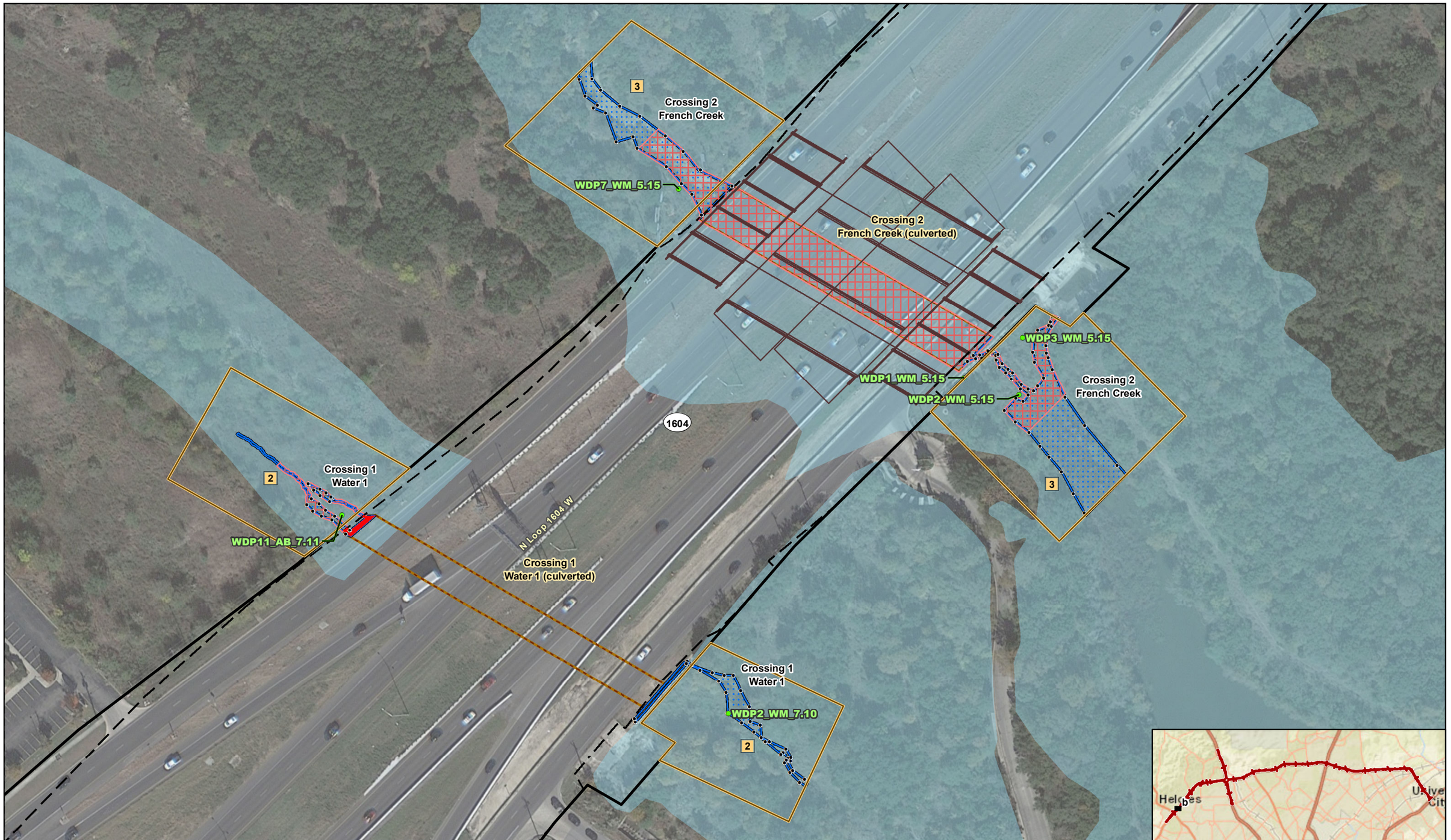

Figure 3b

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Western Vw

Essen Forest

Crossing 3
Water 2

4

WDP6_WM_5.15

Crossing 3
Water 2 (culverted)

1604

Bamberger Trl

S Hausman Rd

Crossing 3
Water 2

WDP4_WM_5.15

WDP5_WM_5.15

4

Helotes

Figure 3c

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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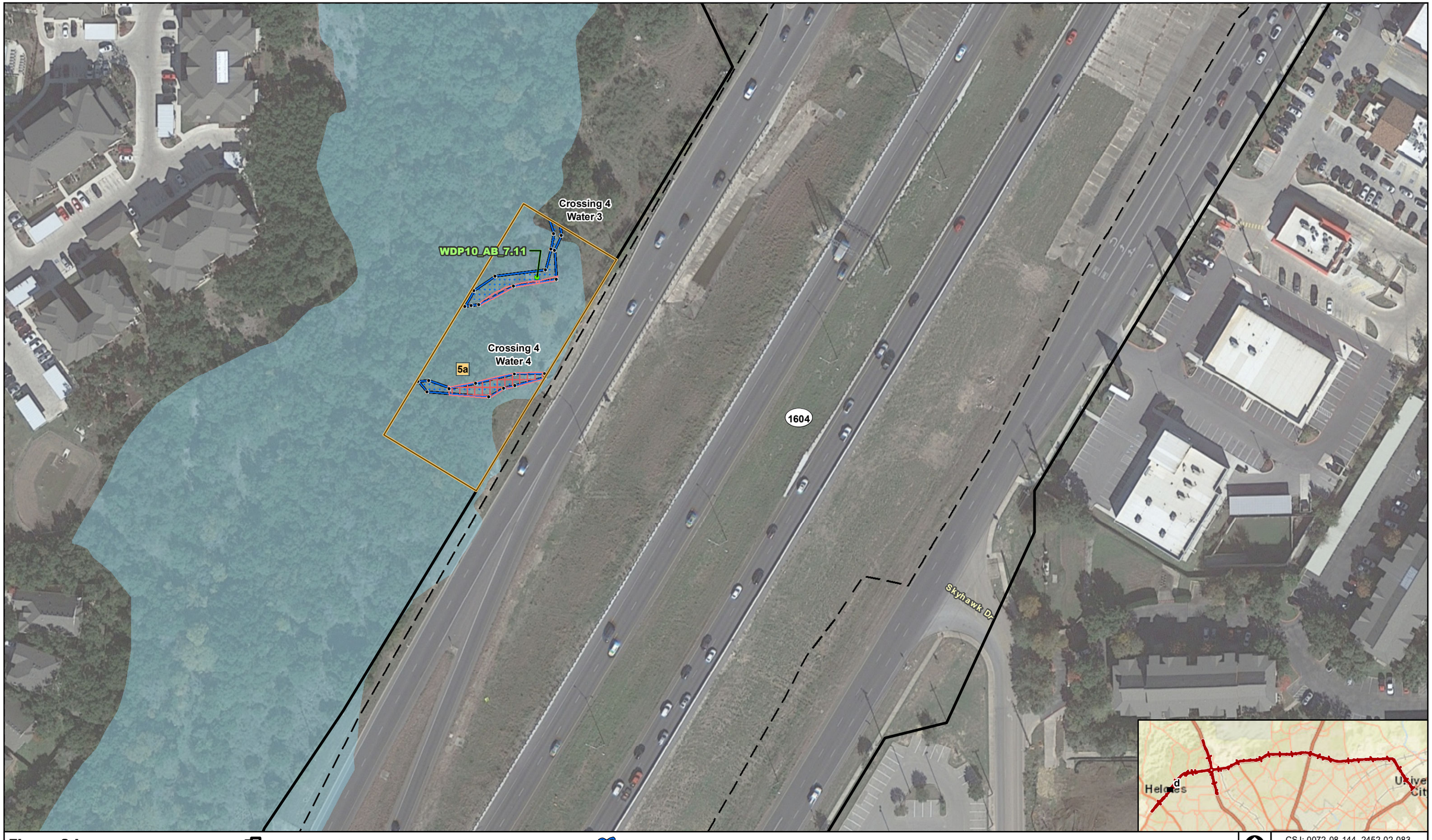

Figure 3d

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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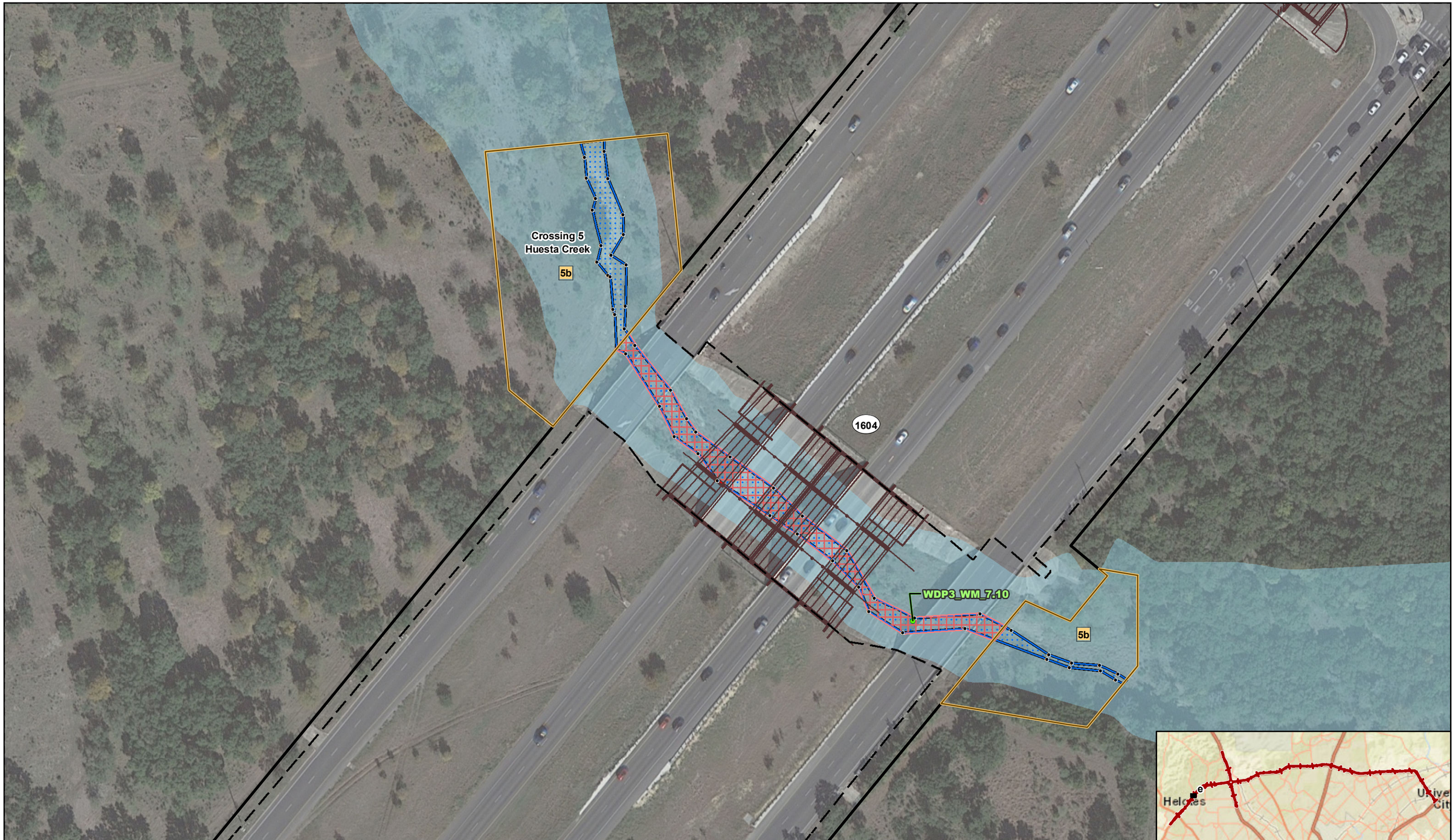

Figure 3e

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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6

Crossing 6
Water 5

1604

Crossing 6
Water 5 (culverted)

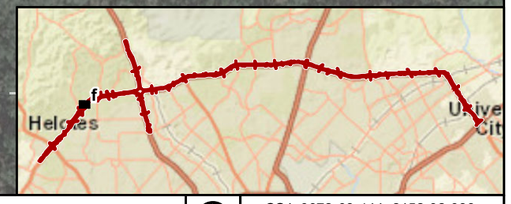

Figure 3f

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
GPS Point (OHWM)
Delineated Water
Culverted Water
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 6
Water 5 (culverted)

WDP4_WM_7.10

Crossing 6
Water 5

6

1604

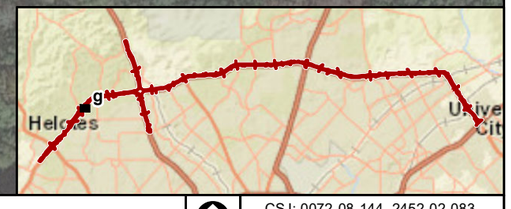

Figure 3g

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3h

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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1604

Crossing 7
Water 6 (culverted)

WDP6_WM_7.10

Crossing 7
Water 6

7

WDP5_WM_7.10

Babcock

Helotes

Figure 3i

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083,
2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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1604

Babcock

Crossing 8
Water 7

8

Sam Barshop

Margaret Tobin Ave

Helotes

Figure 3j

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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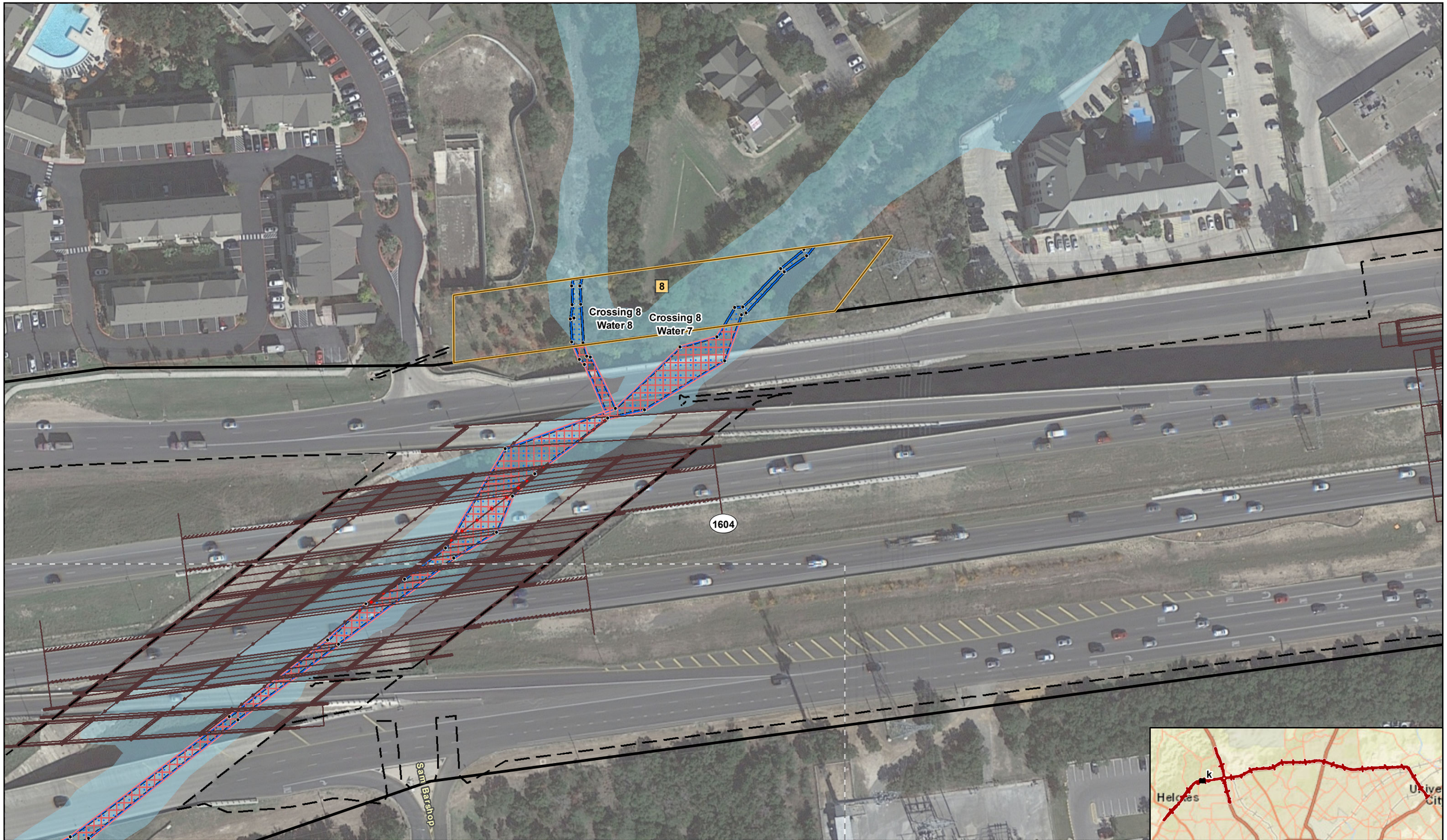

Figure 3k

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 9
Water 9

WDP7_AB_7.11

9

Crossing 9
Water 9 (culverted)

1604

WDP9_AB_7.11

Crossing 9
Water 9

9

WDP8_AB_7.11

Margaret Tobin Ave

John Peace Blvd

Helotes

Figure 3I
Waters of the U.S.
Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 10
Water 10

10

Summer Oaks

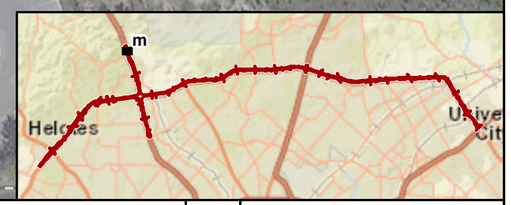

Figure 3m

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
GPS Point (OHWM)
Delineated Water
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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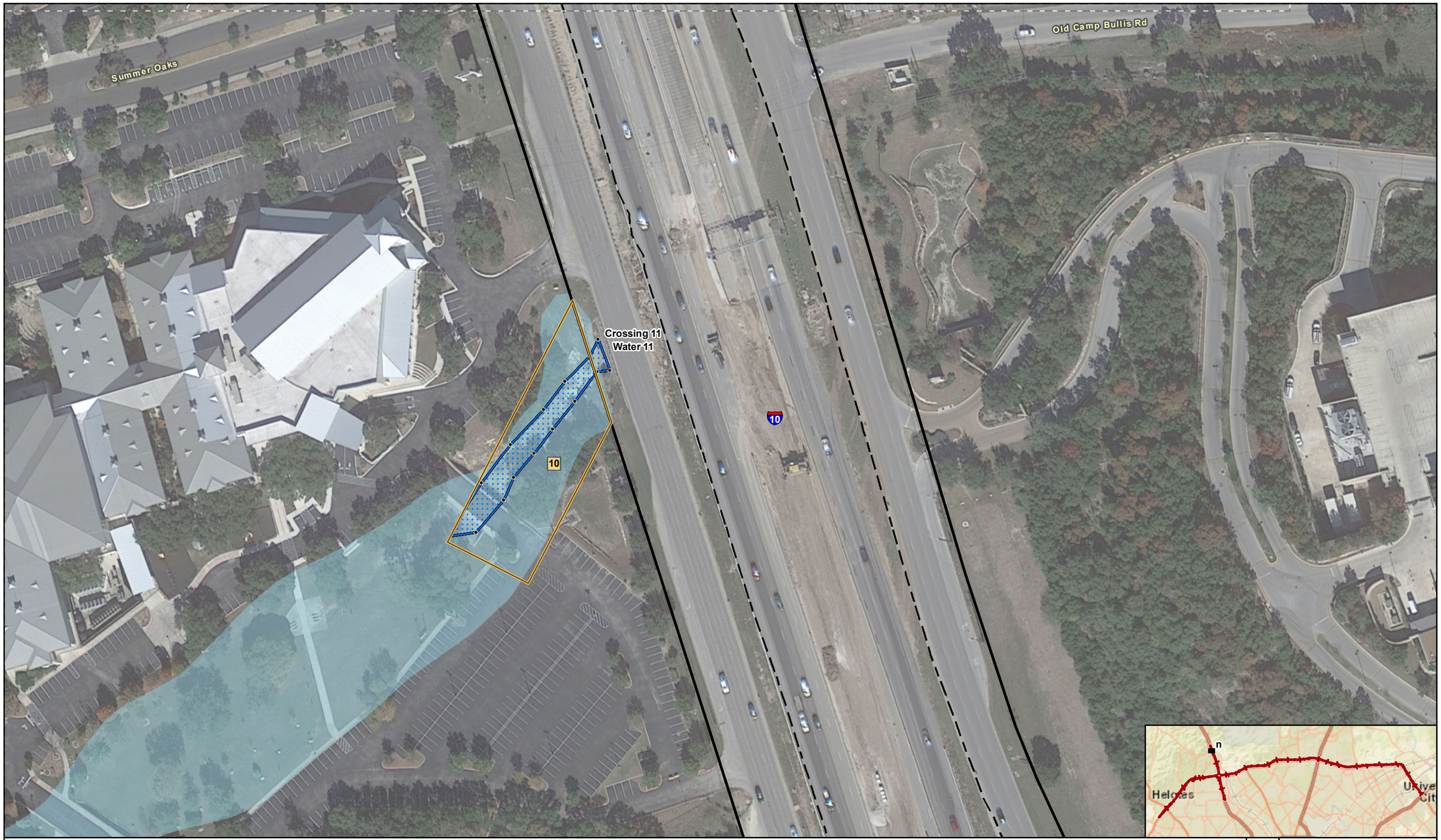

Figure 3n

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
GPS Point (OHWM)
Delineated Water
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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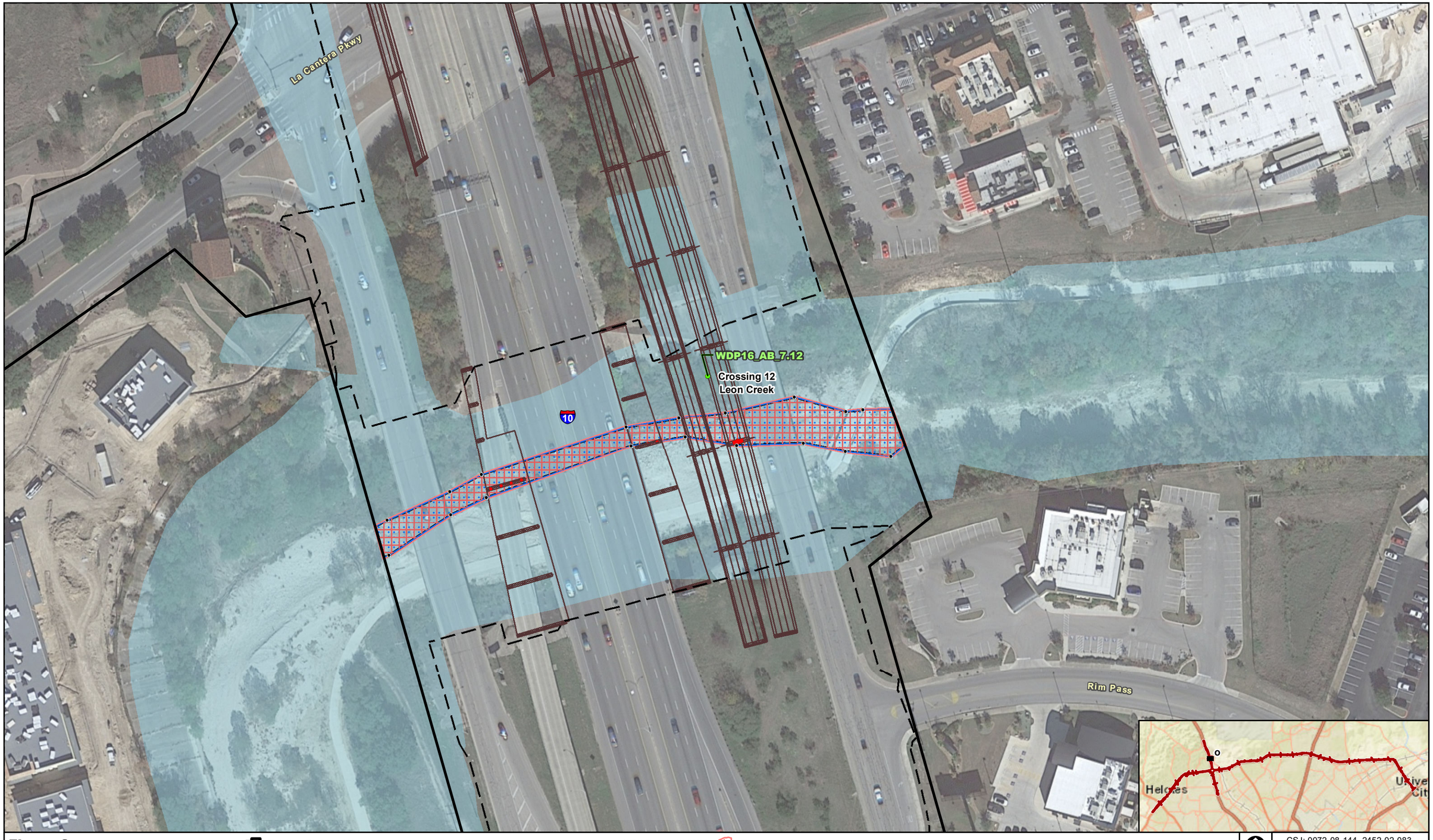

Figure 3o

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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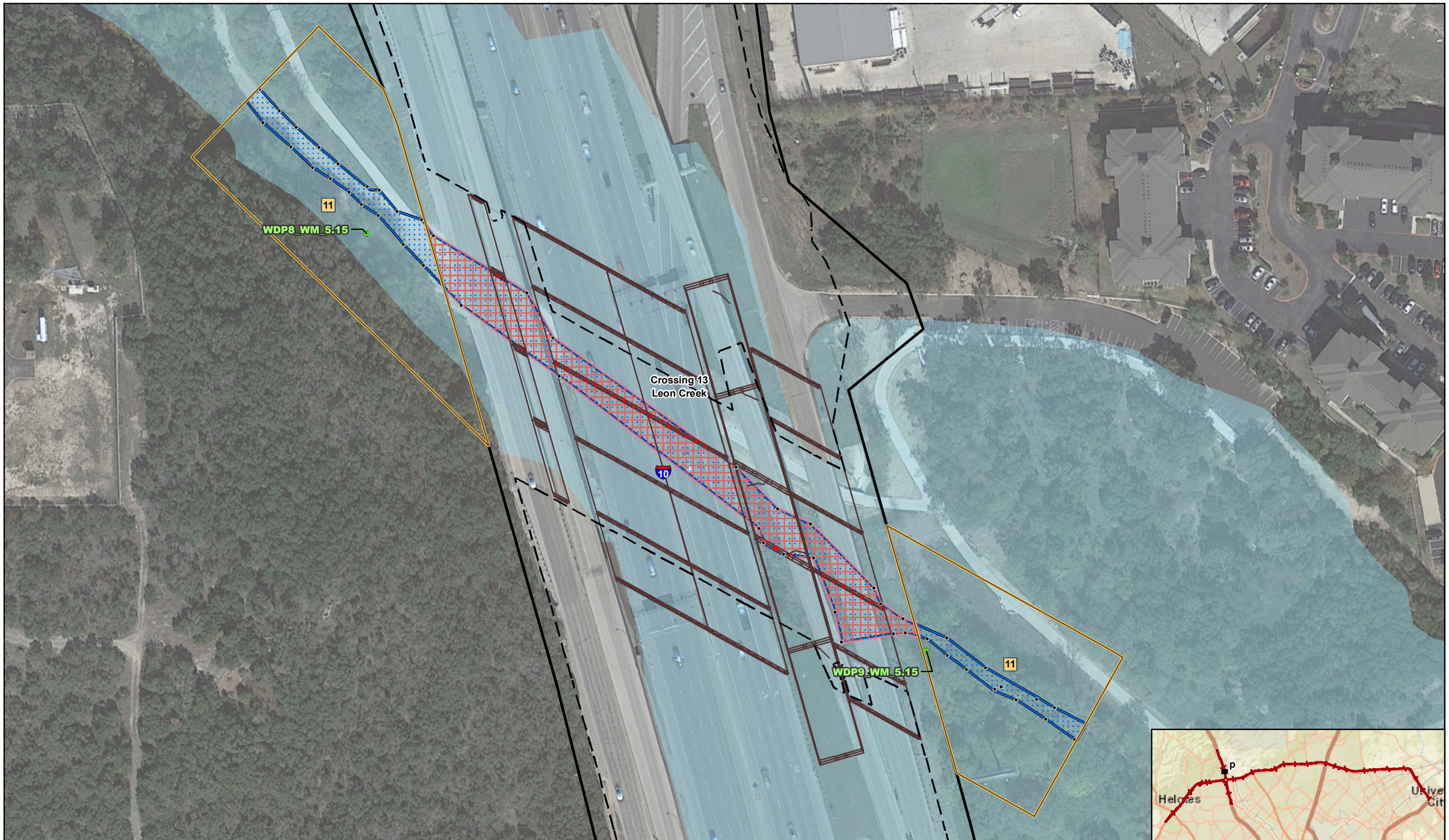

Figure 3p

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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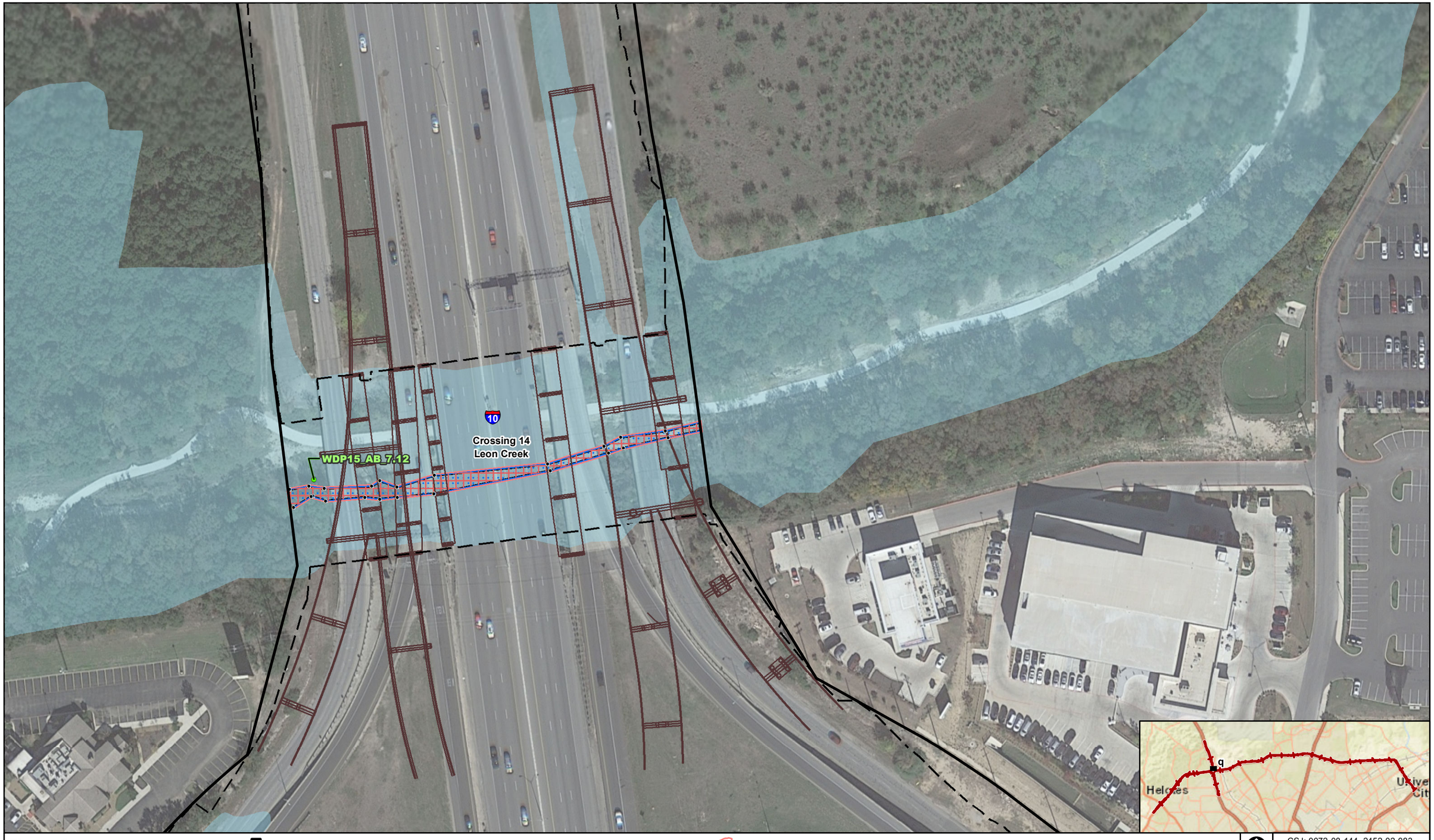

Figure 3q

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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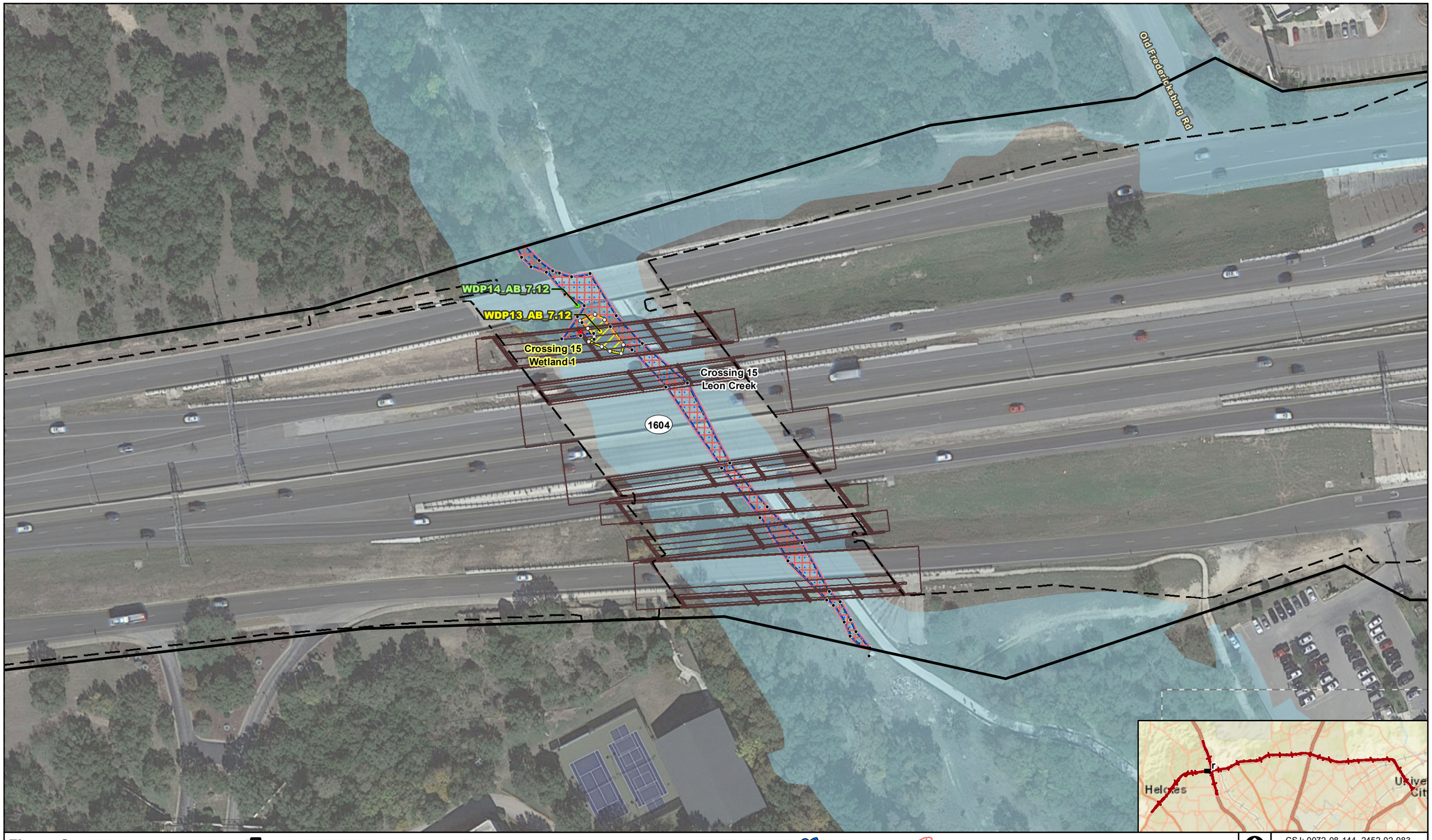

Figure 3r

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
Wetland Determination Point (Wetland)
GPS Point (OHWM)
GPS Point (Wetland)
Delineated Water
Delineated Wetland
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3s

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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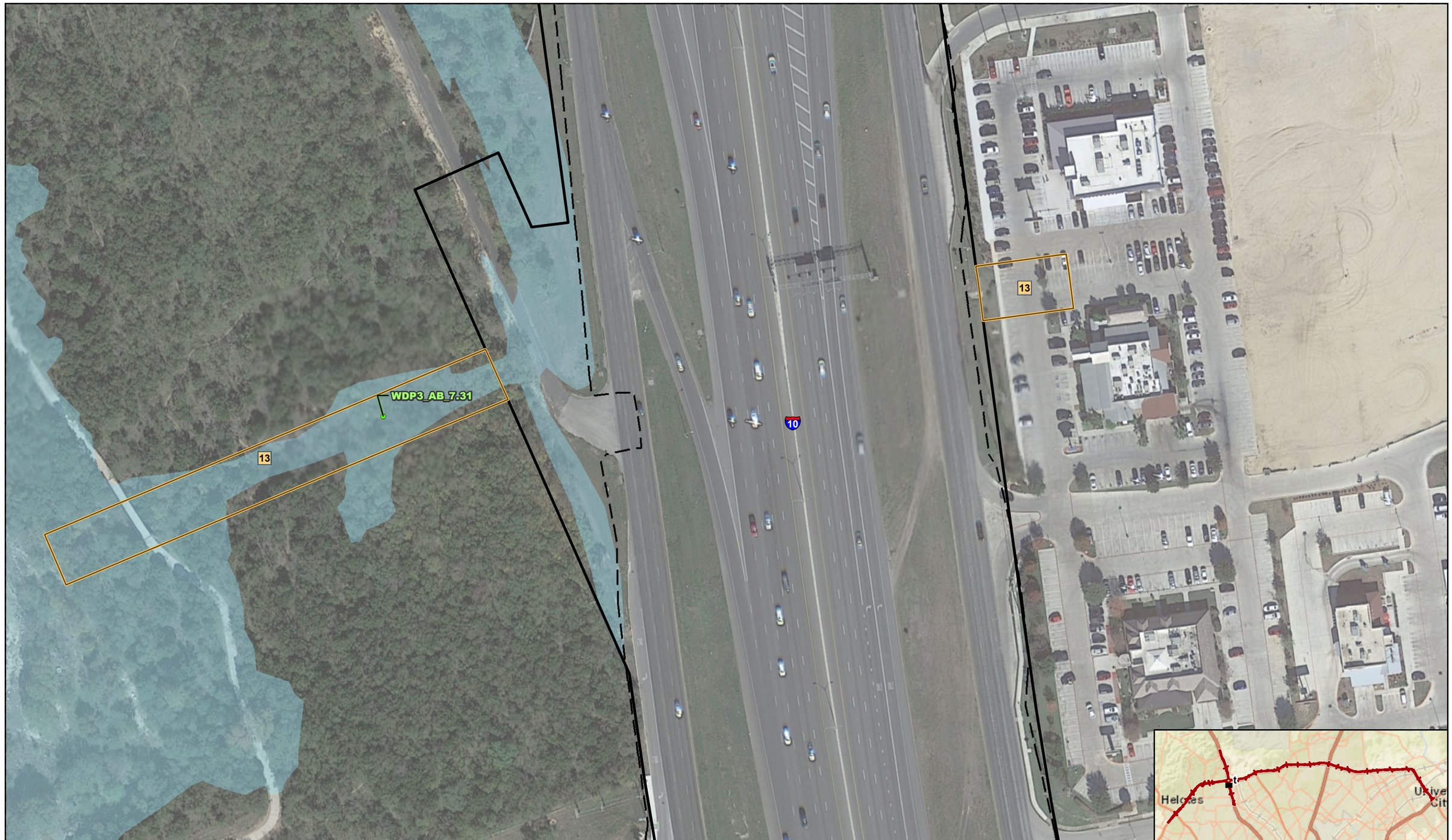

Figure 3t

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3u

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
Wetland Determination Point (Wetland)
GPS Point (OHWM)
GPS Point (Wetland)
Delineated Water
Delineated Wetland

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3v

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3w

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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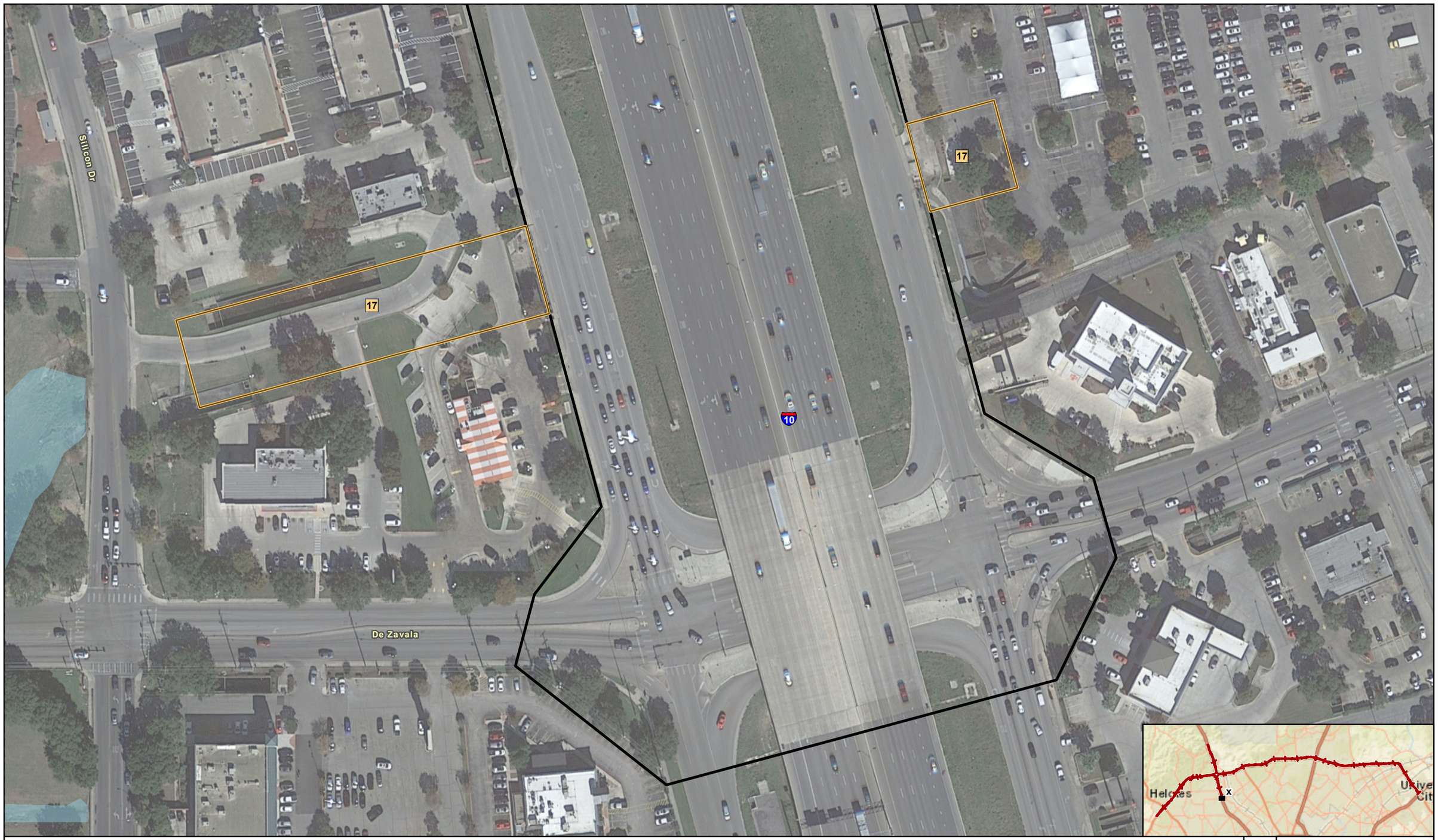

Figure 3x

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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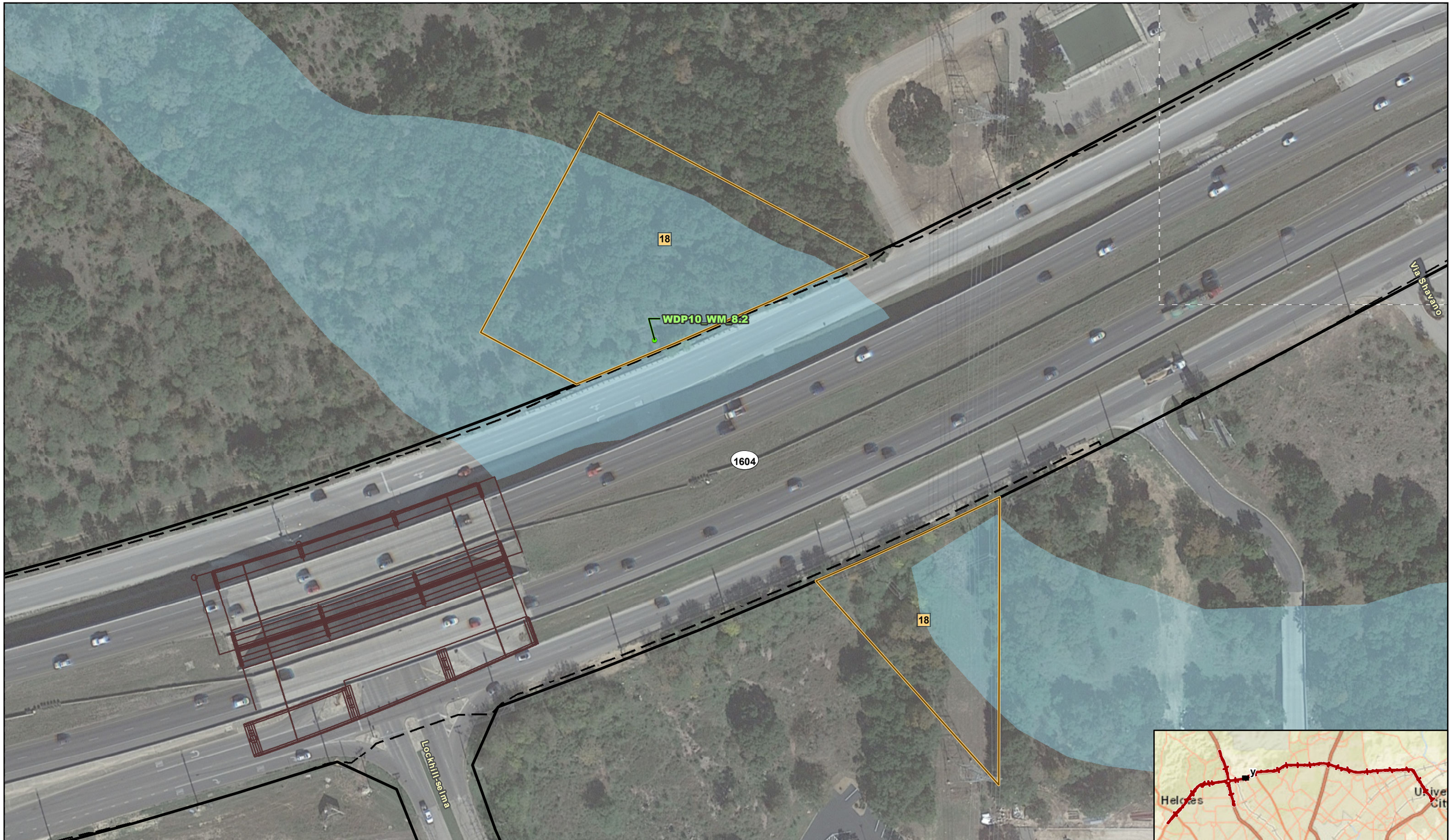

Figure 3y

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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WDP9_AB_8.2

19

1604

WDP7_AB_8.1

19

Figure 3z

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3aa

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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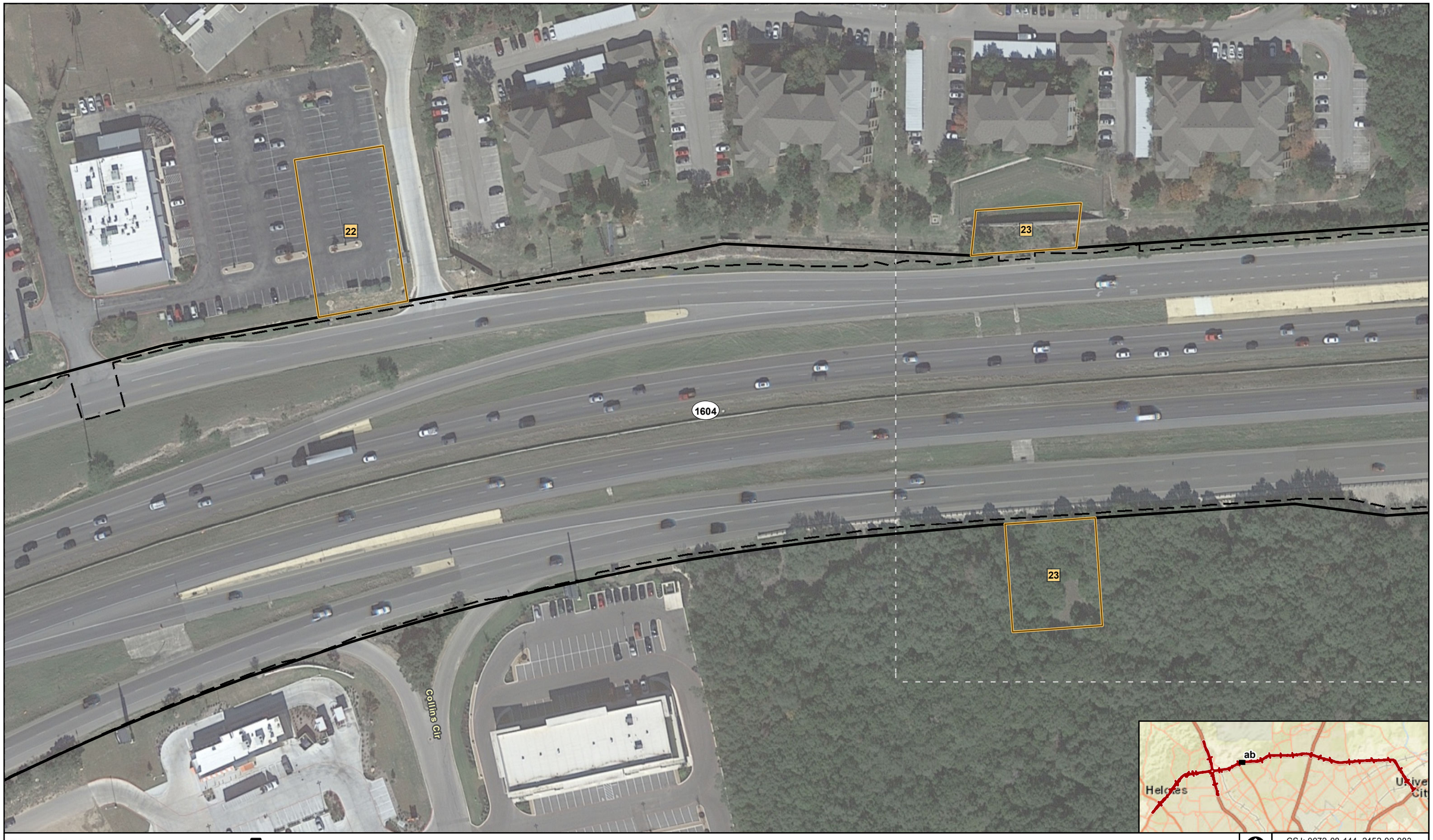

Figure 3ab

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

G:\Projects\TXDOT\LP1604_SH16_I35N\JD2020_Figure_3_Crossings_20200722.mxd

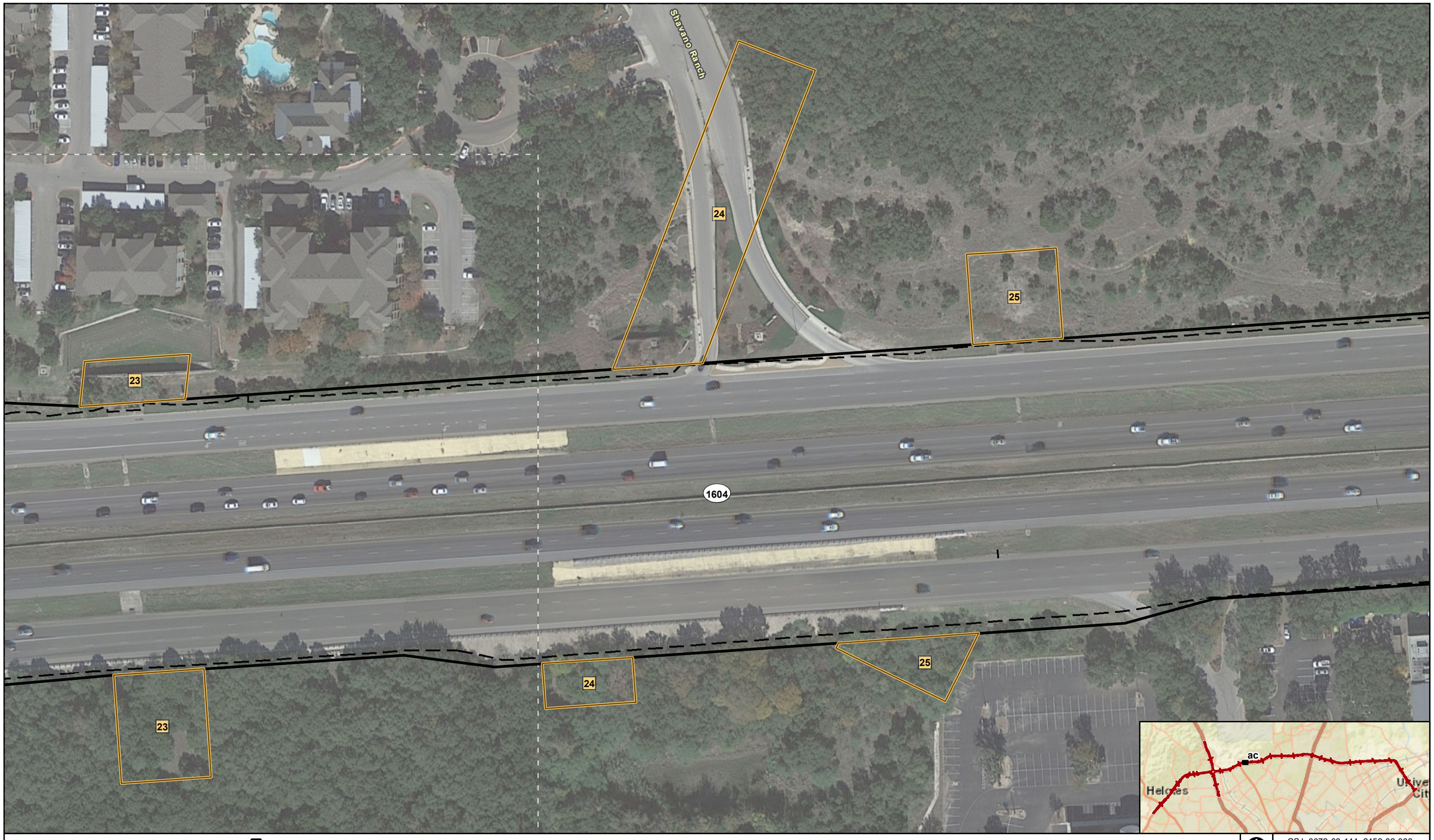

Figure 3ac

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3ad

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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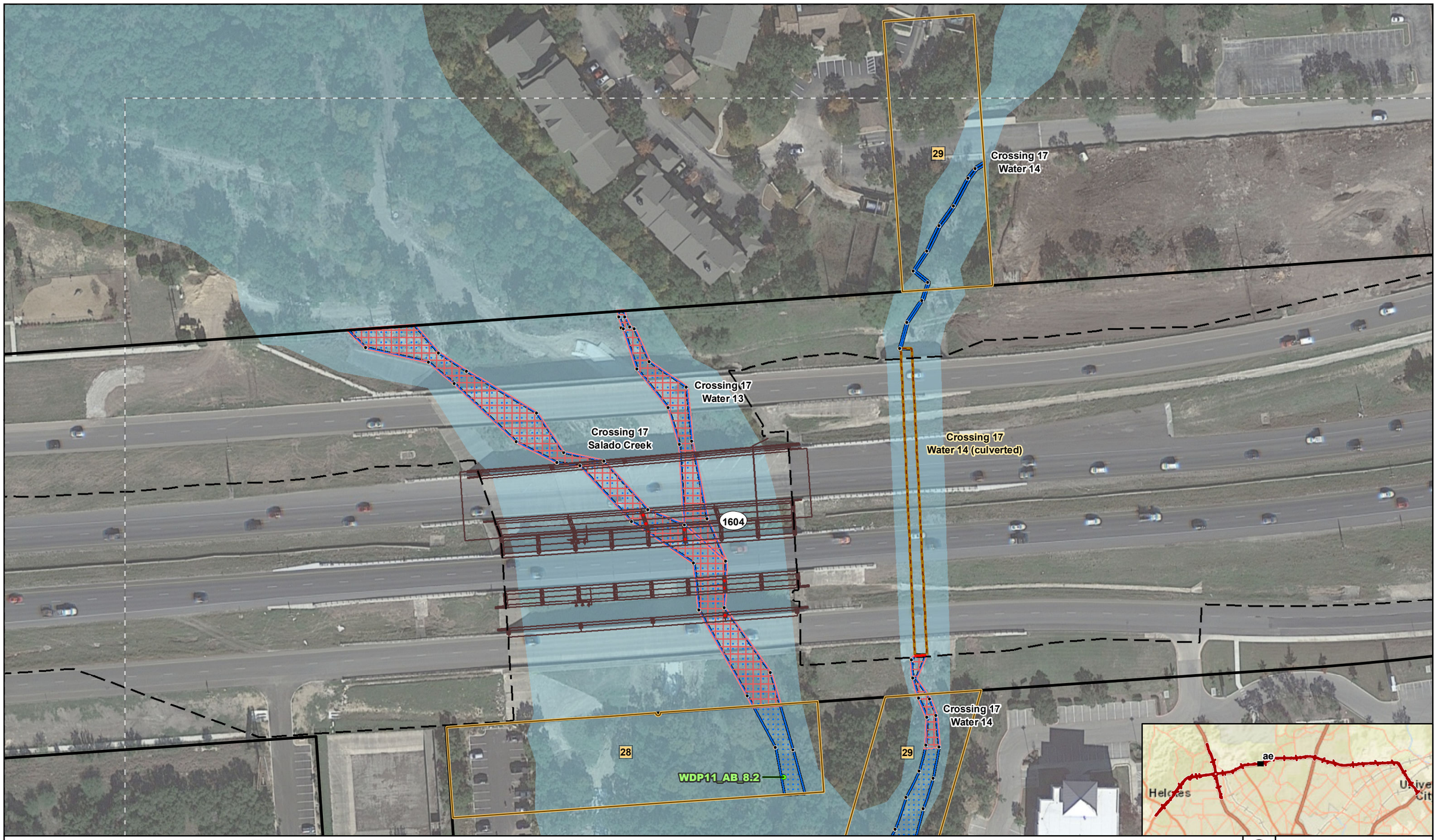

Figure 3ae

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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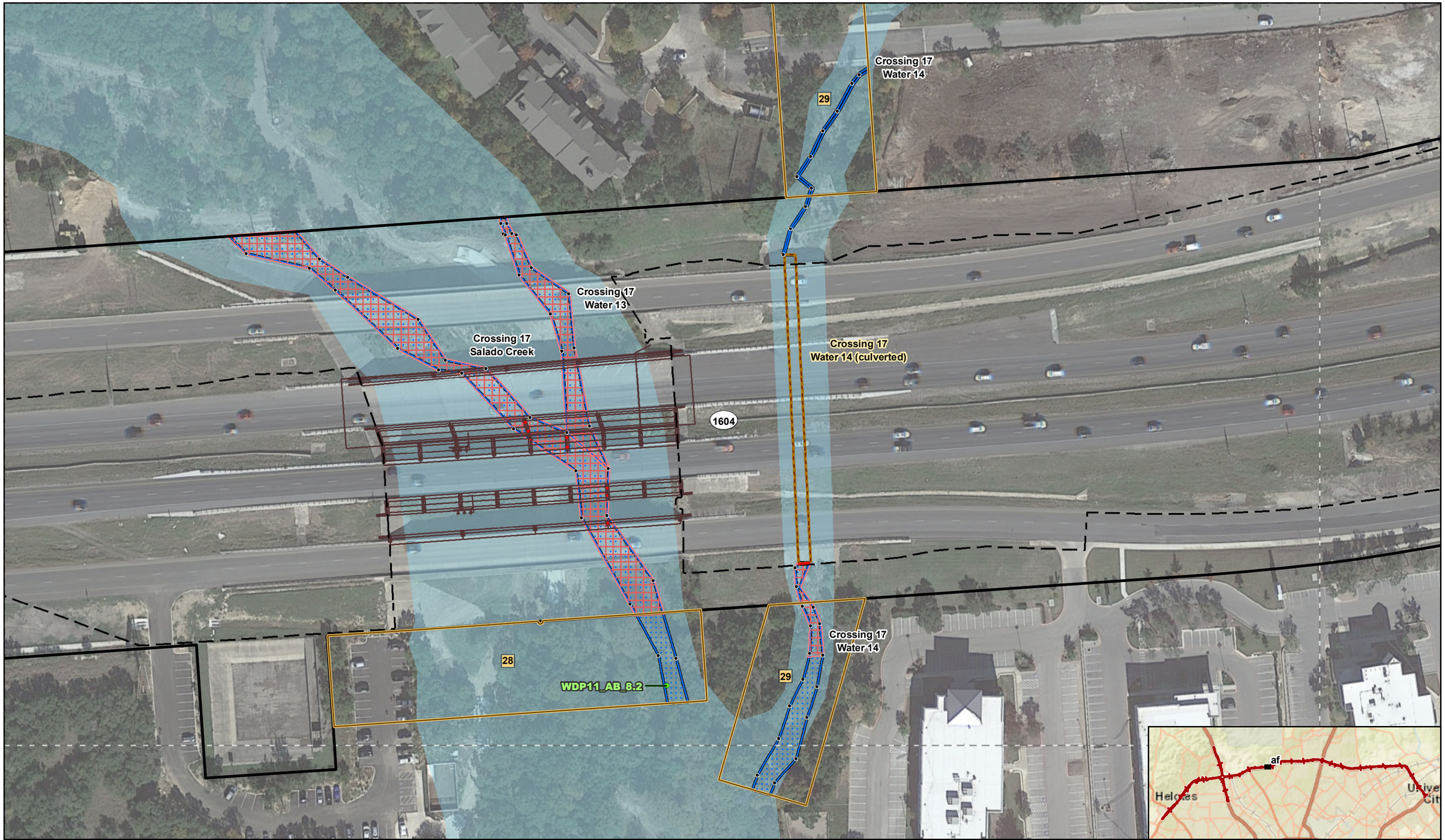

Figure 3af

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3ag

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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WDP3_AB_8.6
31
Crossing 18
Water 15
Crossing 18
Water 15 (culverted)
1604
Crossing 19
Water 16 (culverted)
Crossing 18
Water 15
31
WDP4_AB_8.6
34
Crossing 19
Water 16
WDP2_AB_8.6

Figure 3ah

Waters of the U.S.

Loop 1604: SH 16 to I-35

- Existing Right-of-Way
- Existing Drainage Easement
- Sheet Limits
- Limits of Construction
- Wetland Determination Point (Upland)
- GPS Point (OHWM)
- Delineated Water
- Culverted Water
- Permanent Impact
- Temporary Impact
- 100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 19
Water 16

34

WDP1_AB_8.6

Crossing 19
Water 16 (culverted)

1604

Crossing 19
Water 16

34

WDP2_AB_8.6

ai

Helotes

Figure 3ai

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 20
Panther Springs Creek

1604

2696

WDP6_AB_8.6

aj

Helotes

Figure 3aj

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3ak

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3al

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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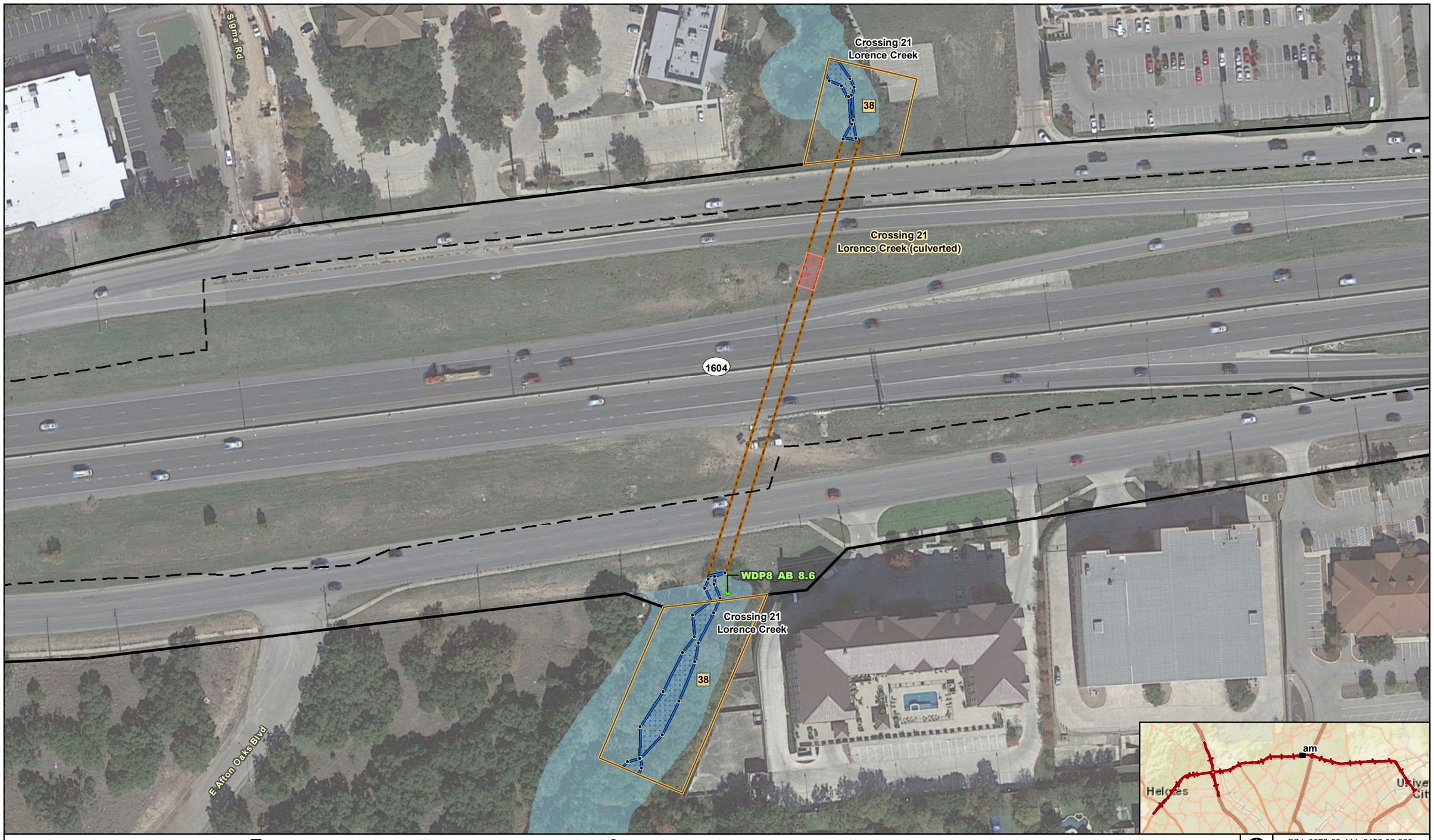

Figure 3am

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3an

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way

Existing Drainage Easement

Sheet Limits

Limits of Construction

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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WDP2_WM_8.6

1604

Crossing 22
Mud Creek

Pendant Pass

Karal Dr

WDP1_WM_8.6

ao

Helotes

Figure 3ao
Waters of the U.S.
Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083,
2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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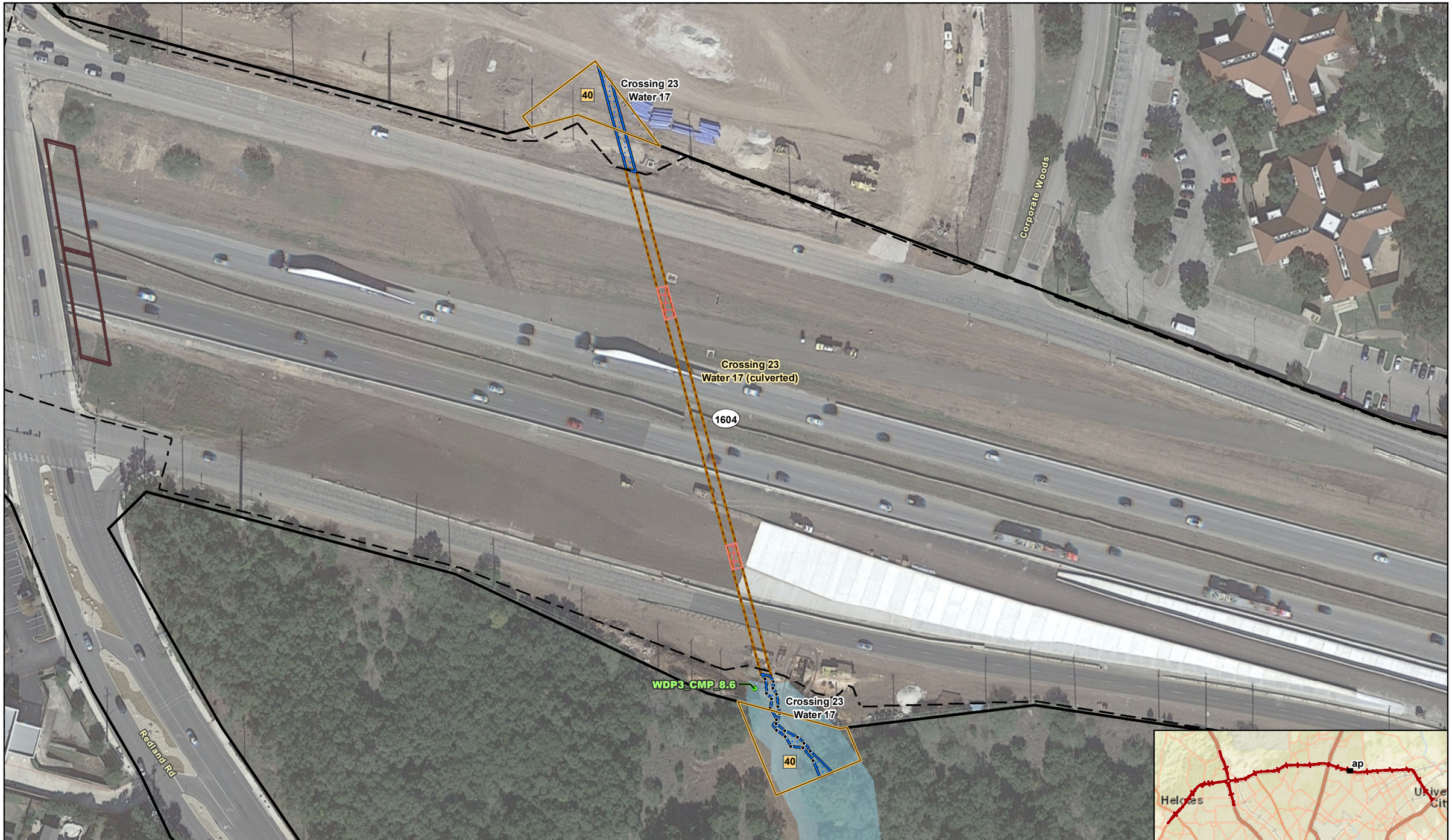

Figure 3ap

Waters of the U.S.

Loop 1604: SH 16 to I-35

- Existing Right-of-Way
- Existing Drainage Easement
- Sheet Limits
- Limits of Construction
- Bridge Design
- Wetland Determination Point (Upland)
- GPS Point (OHWM)
- Delineated Water
- Culverted Water
- Temporary Impact
- 100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 24
Elm Creek

Crossing 24
Elm Creek (culverted)

41

1604

Crossing 24
Elm Creek

WDP4_CMP_8.6

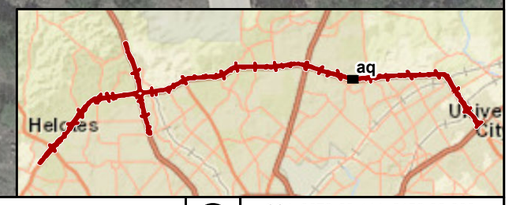

Figure 3aq

Waters of the U.S.

Loop 1604: SH 16 to I-35

- Existing Right-of-Way
- Existing Drainage Easement
- Sheet Limits
- Limits of Construction
- Wetland Determination Point (Upland)
- GPS Point (OHWM)
- Delineated Water
- Culverted Water
- Permanent Impact
- Temporary Impact
- 100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3ar

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3as

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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WDP6_CMP_8.6

Crossing 25
Elm Waterhole Creek

45

WDP7_CMP_8.6

1604

46

WDP5_CMP_8.6

WDP8_CMP_8.6

45

44

at

Helotes

Figure 3at

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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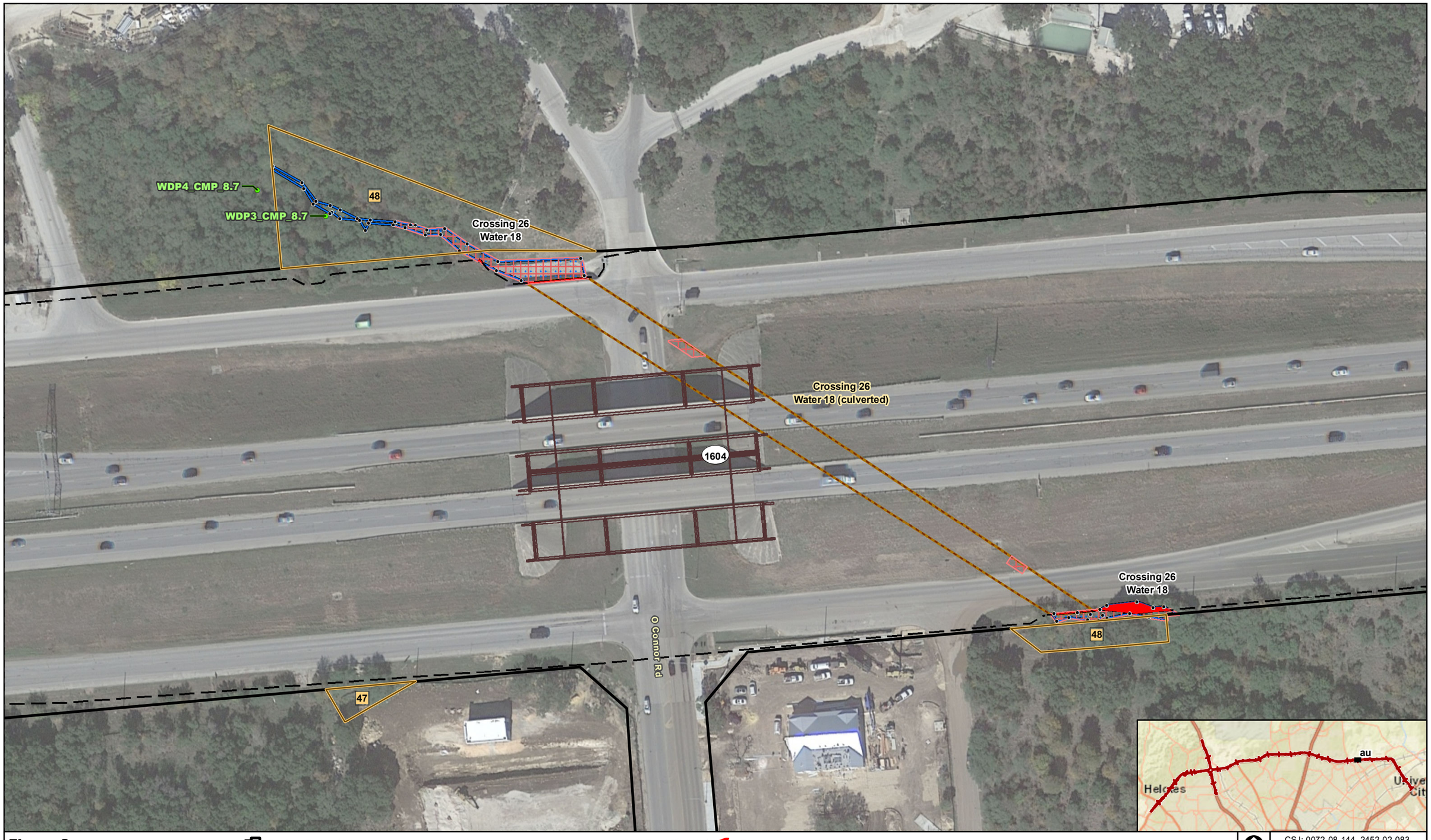

Figure 3au

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3av

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 27
Water 19

Crossing 27
Water 19 (culverted)

WDP1_CMP_8.7

Crossing 27
Water 19

52

51

Judson Rd

1604

Judson

Helotes

aw

Figure 3aw

Waters of the U.S.

Loop 1604: SH 16 to I-35

- Existing Right-of-Way
- Existing Drainage Easement
- Sheet Limits
- Limits of Construction
- Bridge Design
- Wetland Determination Point (Upland)
- GPS Point (OHWM)
- Delineated Water
- Culverted Water
- Permanent Impact
- Temporary Impact
- 100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083,
2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3ax

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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55

1604

55

Mountain Vista Dr

Helotes

ay

Figure 3ay

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way

Existing Drainage Easement

Sheet Limits

Limits of Construction

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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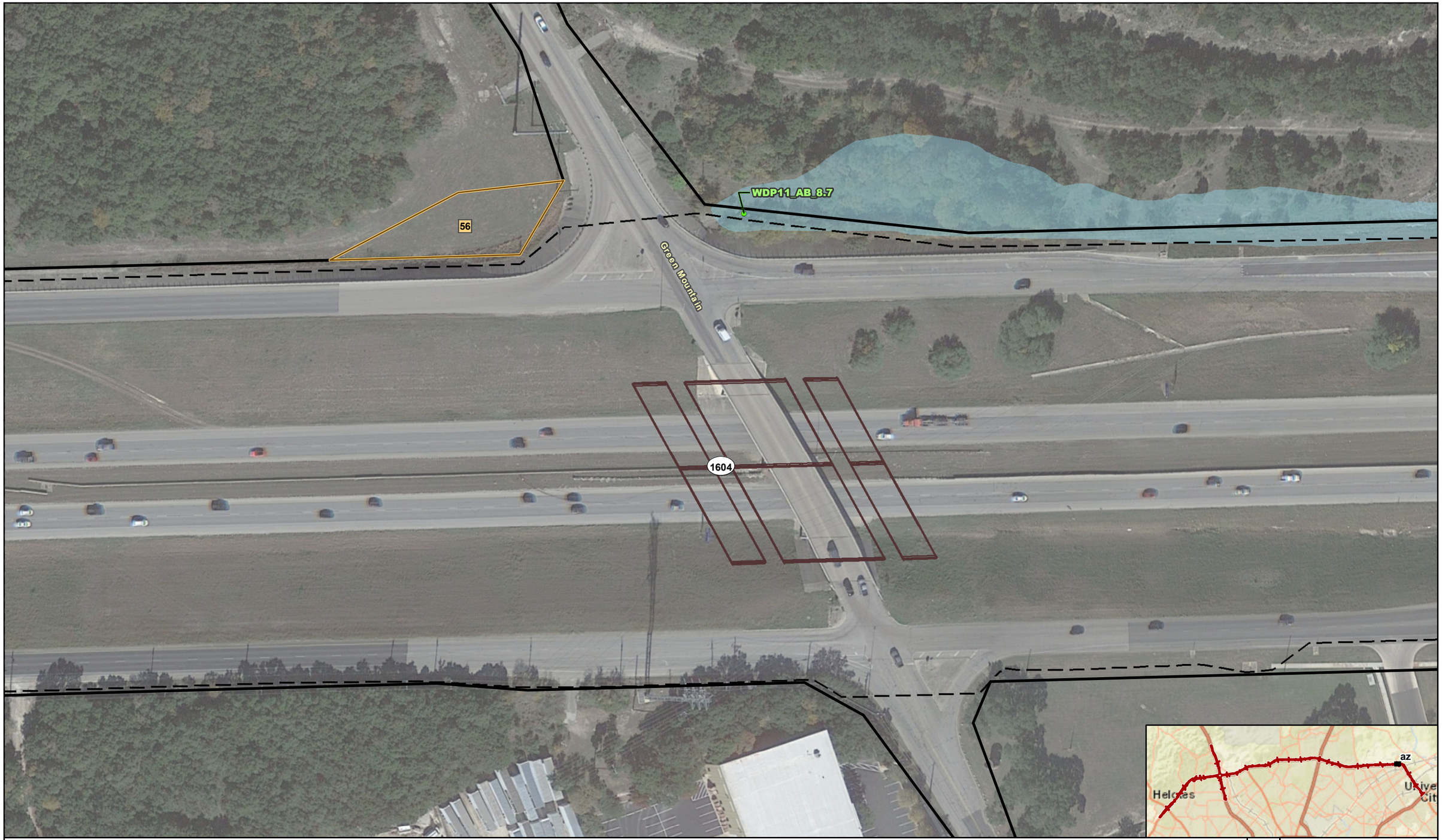

Figure 3az

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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57

1604

ba

Helotes

Figure 3ba

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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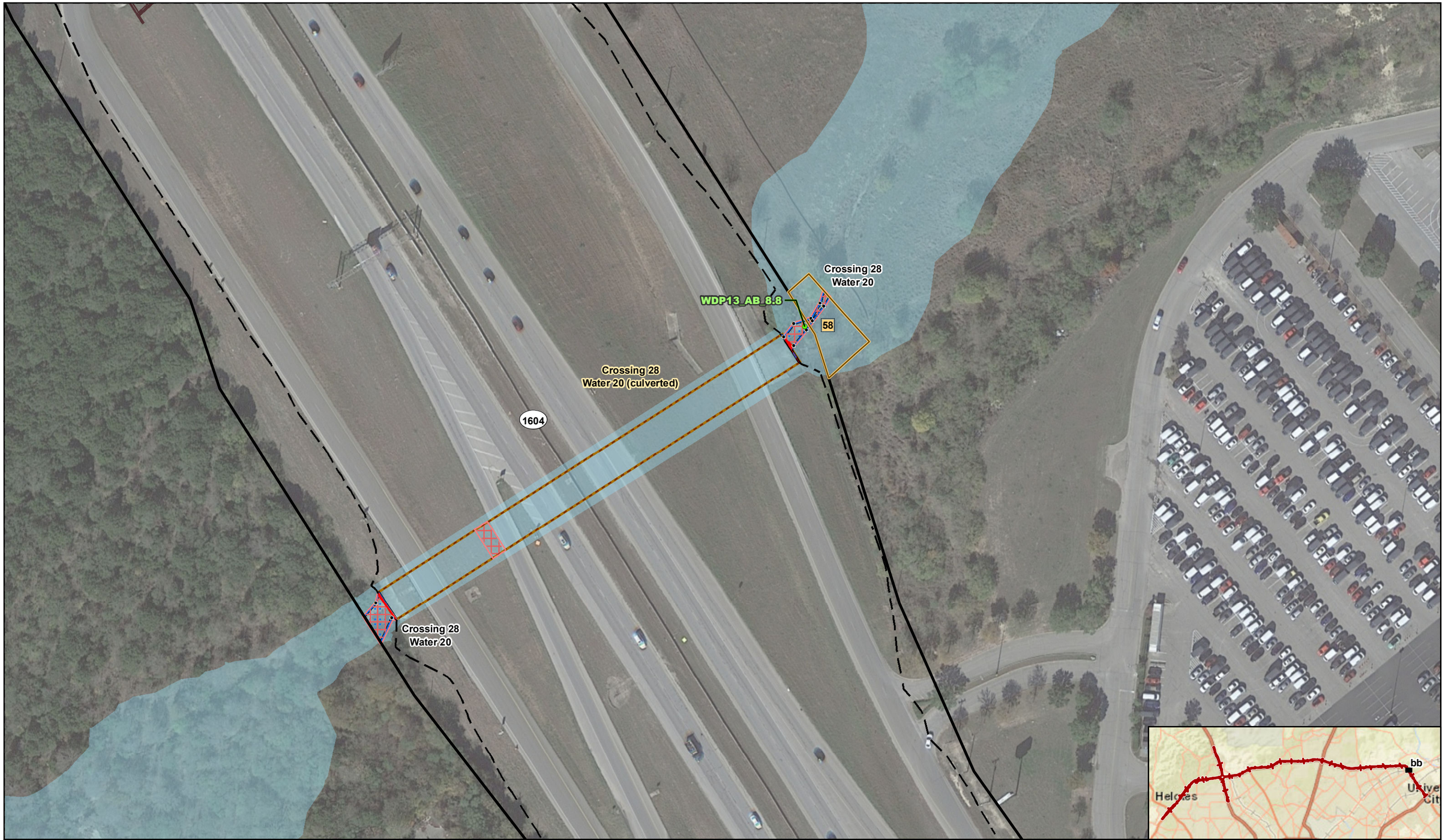

Figure 3bb

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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WDP3_CMP_8.8
WDP4_WM_8.8
59
1604
WDP2_WM_8.8
WDP1_WM_8.8
59
bc

Figure 3bc
Waters of the U.S.
Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
Wetland Determination Point (Wetland)
GPS Point (Wetland)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters
1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Crossing 29
Water 21

60

Crossing 29
Water 21 (culverted)

Crossing 29
Water 21

60

1604

Crossing 30
Water 22

WDP6_CMP_8.8

WDP5_CMP_8.8

61

Crossing 30
Water 22 (culverted)

Crossing 30
Water 22

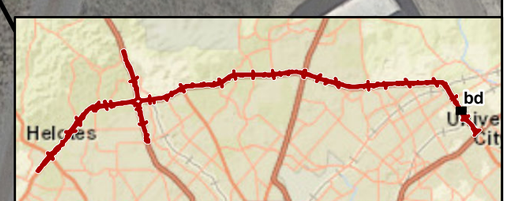

Figure 3bd
Waters of the U.S.
Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Permanent Impact
Temporary Impact
100-Year Flood Zone

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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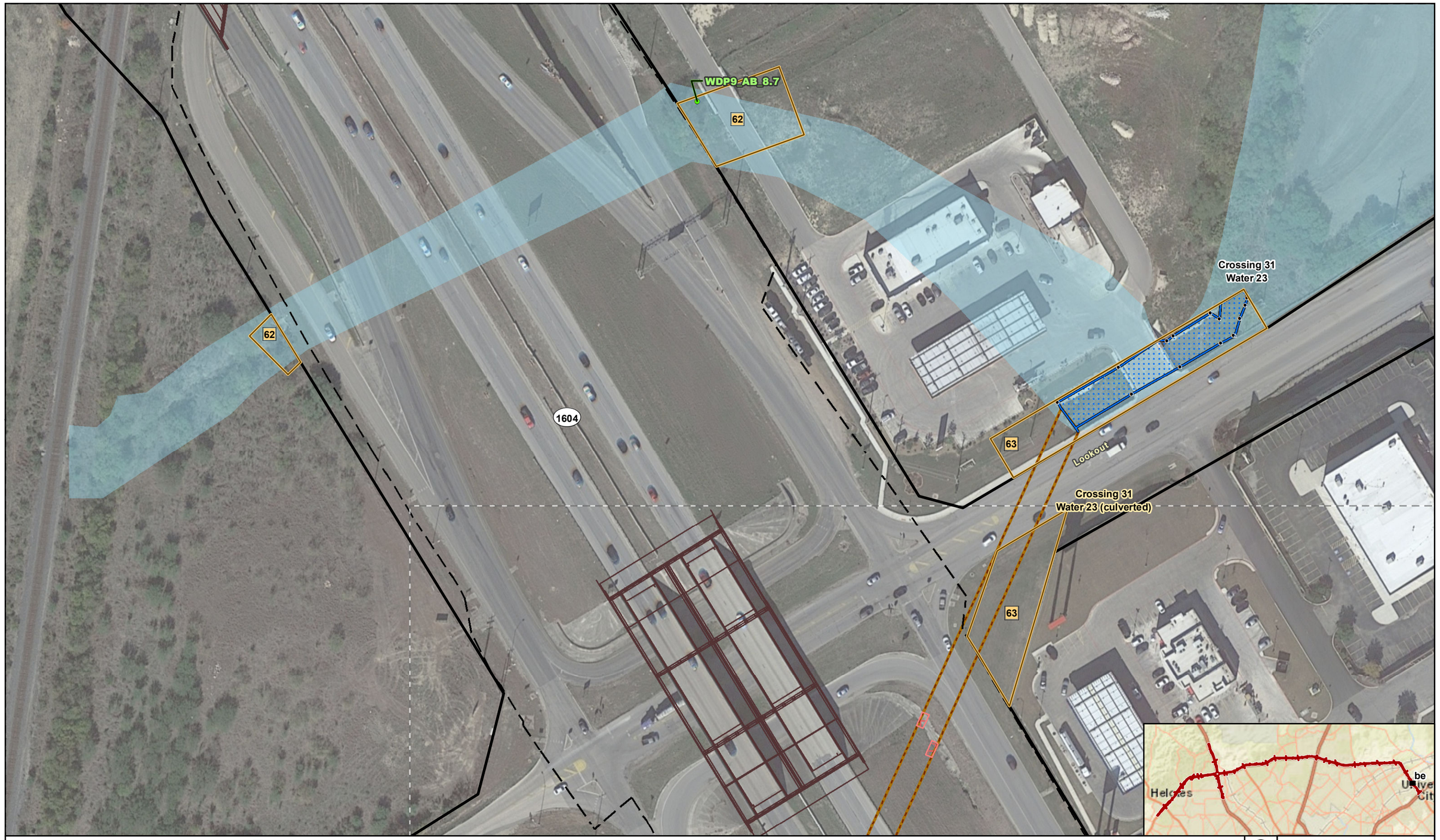

Figure 3be

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3bf

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Bridge Design
Wetland Determination Point (Upland)
GPS Point (OHWM)
Delineated Water
Culverted Water
Temporary Impact
100-Year Flood Zone

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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Figure 3bg

Waters of the U.S.

Loop 1604: SH 16 to I-35

Existing Right-of-Way
Existing Drainage Easement
Sheet Limits
Limits of Construction
Wetland Determination Point (Upland)
GPS Point (Wetland)

Data Sources:
CMEC (2019, 2020), AECOM (2020)
Aerial Source: Google (2019)

CSJ: 0072-08-144, 2452-02-083, 2452-03-087, 2452-03-113

0 100 Feet
0 25 Meters

1 in = 100 feet
Scale: 1:1,200
Date: 7/22/2020

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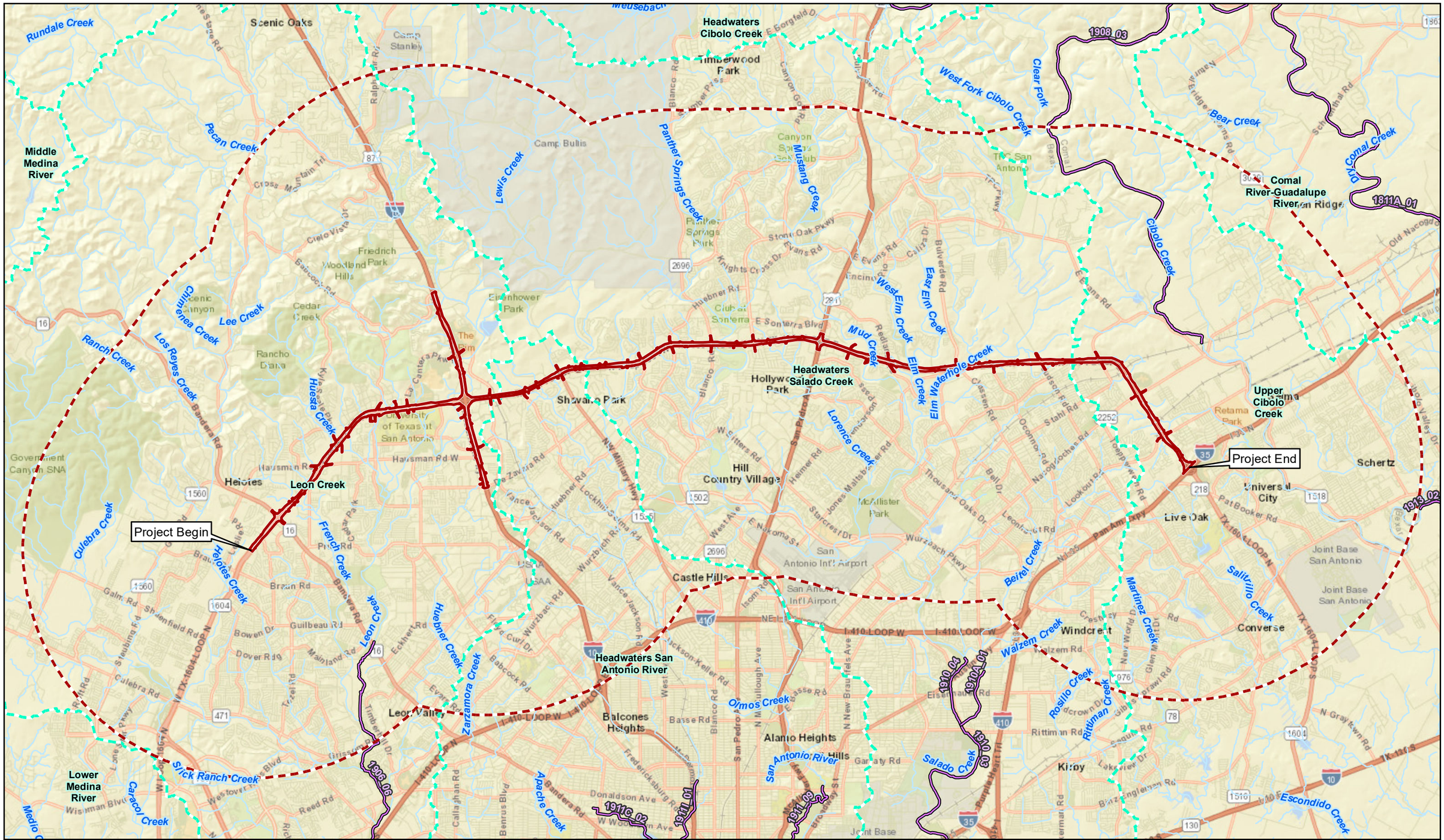


Figure 4

303(d)-Listed Stream Segments

Loop 1604: SH 16 to I-35

Project Location
5-mile Buffer of Project Location
Watershed
303(d)-Listed Stream Segment
NHD Stream

C:\Users\matthew\OneDrive - Cox McLain Environmental Consulting\MCS_BACKUP_PROJECTS_20200506\LP1604_SH16_I35N\JD2020_Figure_4_303d_Listed_Stream_Segments_20200512.mxd

Attachment B
Project Area Photographs

Photo No. 1 – Western project terminus; viewing north.

Photo No. 2 – Easement 1 east bound; WDP1_WM_7.10 (upland); viewing northeast.

Photo No. 3 – Easement 1 west bound; WDP12_AB_7.11 (upland); viewing east.

Photo No. 4 – Easement 2 east bound; view of WDP2_WM_7.10 (upland); viewing northwest.

Photo No. 5 – Easement 2 west bound; view from right-of-way of Crossing 1, Water 1; viewing northwest.

Photo No. 6 – Easement 2 west bound; view of Water 1; viewing southeast.

Photo No. 7 – Easement 2 west bound; view of WDP11_AB_7.11 (upland) and box culverts; viewing southeast.

Photo No. 8 – Easement 3 east bound; view from edge of easement of Crossing 2, French Creek; viewing northwest.

Photo No. 9 – Easement 3 east bound; view of WDP1_WM_5.15 (upland); viewing north.

Photo No. 10 – Easement 3 east bound; view of WDP2_WM_5.15 (upland); viewing east.

Photo No. 11 – Easement 3 east bound; view of WDP3_WM_5.15 (upland); viewing east.

Photo No. 12 – Easement 4 east bound; view of WDP4_WM_5.15 (upland); viewing south.

Photo No. 13 – Easement 4 east bound; view of WDP5_WM_5.15 (upland); viewing north.

Photo No. 14 – Easement 4 west bound; view of WDP6_WM_5.15 (upland); viewing south.

Photo No. 15 – Easement 4 west bound; view from the edge of the easement of Crossing 3, Water 2; viewing south.

Photo No. 16 – Easement 4 west bound; view of Crossing 3, Water 2 and culverts; viewing south.

Photo No. 17 – Easement 5a west bound; view of Crossing 4, Water 3 adjacent to WDP10_AB_7.11 (upland); viewing west.

Photo No. 18 – Easement 5a west bound; view of Crossing 4, Water 4 flowing southwest; viewing southwest.

Photo No. 19 – Easement 5b west bound; upstream view of Crossing 5, Huesta Creek; viewing north.

Photo No. 20 – Easement 5b west bound; Crossing 5, Huesta Creek, downstream view of easement from edge of easement; viewing south.

Photo No. 21 – Easement 5b east bound; view of WDP3_WM_7.10 (upland); viewing northwest.

Photo No. 22 – Easement 6 east bound; view of Crossing 6, Water 5 from edge of easement; viewing north.

Photo No. 23 – Easement 6 east bound; view of WDP4_WM_7.10 (upland); viewing north.

Photo No. 24 – Easement 6 west bound; downstream view of Crossing 6, Water 5 with box culvert at right-of-way; viewing south.

Photo No. 25 – Easement 7 east bound; view of Crossing 7, Water 6 from edge of easement; viewing west.

Photo No. 26 – Easement 7 east bound; view of WDP5_WM_7.10 (upland); viewing north.

Photo No. 27 – Easement 7 east bound; view of WDP6_WM_7.10 (upland) with box culverts and small ephemeral stream behind it; viewing north.

Photo No. 28 – Easement 8 east bound; downstream view of Crossing 8, Water 7 at edge of easement; viewing south.

Photo No. 29 – Easement 8 west bound; view from edge of easement with Crossing 8, Water 8; viewing south.

Photo No. 30 – Easement 9 west bound; view of WDP7_AB_7.11 (upland) and box culverts; viewing east.

Photo No. 31 – Easement 9 east bound; view of WDP8_AB_7.11 (upland); viewing north.

Photo No. 32 – Easement 9 east bound; view of easement with Crossing 9, Water 9 from edge of right-of-way; viewing south.

Photo No. 33 – Easement 9 east bound; view of WDP9_AB_7.11 (upland); viewing east.

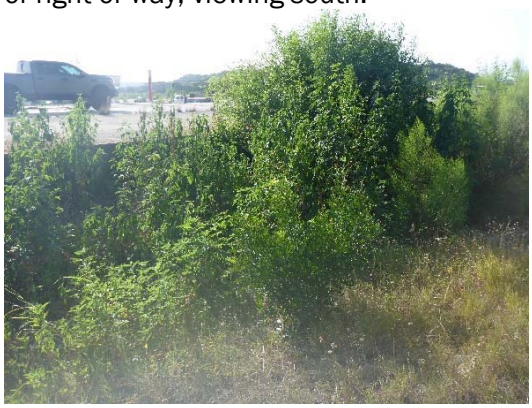


Photo No. 34 – Crossing 10; view of Water 10; viewing southeast.

Photo No. 35 – Easement 10 south bound; view of upstream Crossing 11, Water 11 from edge of right-of-way; viewing southwest.

Photo No. 36 – Easement 10 south bound; view of downstream Crossing 11, Water 11 from edge of easement; viewing northeast.

Photo No. 37 – Crossing 12, Leon Creek; view of WDP16_AB_7.12 (upland); viewing east.

Photo No. 38 – Crossing 12, Leon Creek; view from edge of right-of-way; viewing west.

Photo No. 39 – Crossing 12, Leon Creek; view of from edge of right-of-way; viewing east.

Photo No. 40 – Easement 11 south bound; view of WDP8_WM_7.15 (upland); viewing east.

Photo No. 41 – Easement 11 north bound; view of WDP9_WM_7.15 (upland); viewing west.

Photo No. 42 – Easement 11 north bound; view of Crossing 13, Leon Creek at edge of easement; viewing northwest.

Photo No. 43 – Crossing 14, Leon Creek; view of WDP15_AB_7.12 (upland); viewing east.

Photo No. 44 – Crossing 14, Leon Creek; view from edge of right-of-way; viewing east.

Photo No. 45 – Crossing 14, Leon Creek; view of Crossing 14 Leon Creek; viewing east.

Photo No. 46 – Crossing 14, Leon Creek; view of Crossing 14, Leon Creek from edge of right-of-way; viewing west.

Photo No. 47 – Crossing 15, Leon Creek; view of WDP13_AB_7.12 (wetland) in Wetland 1; viewing south.

Photo No. 48 – Crossing 15, Leon Creek; view of WDP14_AB_7.12 (upland); viewing south.

Photo No. 49 – Crossing 15, Leon Creek; view from edge of right-of-way; viewing north.

Photo No. 50 – Crossing 15, Leon Creek; viewing south.

Photo No. 51 – Easement 12; view of WDP1_AB_7.31 at edge of easement; viewing southwest.

Photo No. 52 – Easement 12; view of WDP2_AB_7.31 (upland) with culverts behind; viewing west.

Photo No. 53 – Easement 13 south bound; view of WDP3_AB_7.31 (upland); viewing west.

Photo No. 54 – Easement 14 south bound; view of WDP5_WM_7.31 (wetland) in Wetland 2; viewing northeast.

Photo No. 55 – Easement 14 south bound; view of WDP4_WM_7.31 (upland); viewing northeast.

Photo No. 56 – Easement 14 south bound; downstream view of Crossing 16, Water 12; viewing southwest.

Photo No. 57 – Easement 16 north bound; view of WDP6_WM_7.31; viewing west.

Photo No. 58 – Easement 18 west bound; as seen from the existing culvert. Also pictured, WDP_WM_8.2. (upland); viewing northwest.

Photo No. 59 – Easement 19 east bound; view of WDP7_AB_8.1 and culverts; viewing north.

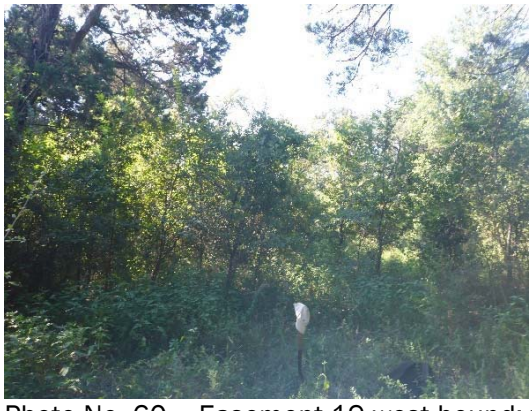


Photo No. 60 – Easement 19 west bound; view of WDP9_AB_8.2; viewing south.

Photo No. 61 – Easement 21 east bound; view of WDP8_WM_8.1 (upland); viewing east.

Photo No. 62 – Crossing 17, Salado Creek; view from under frontage road bridge; viewing north.

Photo No. 63 – Crossing 17, Salado Creek; viewing OHWM north of Loop 1604; viewing northwest.

Photo No. 64 – Easement 28 west bound; upstream view of Crossing 17, Water 13 from edge of right-of-way; viewing north.

Photo No. 65 – Easement 29 east bound; upstream view of Crossing 17, Water 14 from edge of easement; viewing north.

Photo No. 66 – Easement 28 east bound; view of WDP11_AB_8.2 (upland); viewing north.

Photo No. 67 – Easement 30 west bound; view of WDP5_AB_8.6 (upland); viewing south.

Photo No. 68 – Easement 31 west bound; view of WDP3_AB_8.6 (upland); viewing north.

Photo No. 69 – Easement 31 west bound; downstream view of Crossing 18, Water 15 from edge of easement; viewing south.

Photo No. 70 – Easement 34 west bound; view of Crossing 19, Water 16 and easement from edge of right-of-way; viewing north.

Photo No. 71 – Easement 34 west bound; view of WDP1_AB_8.6 (upland); viewing south.

Photo No. 72 – Easement 34 east bound; view of WDP2_AB_8.6 (upland); viewing north.

Photo No. 73 – Crossing 20, Panther Springs Creek under Loop 1604; viewing west.

Photo No. 74 – Crossing 20, Panther Springs Creek under Loop 1604; viewing north.

Photo No. 75 – Crossing 20, Panther Springs Creek under Loop 1604; view of WDP6_AB_8.6 (upland); viewing east.

Photo No. 76 – Easement 37 east bound; view of WDP7_AB_8.6 (upland; viewing east.

Photo No. 77 – Easement 38 east bound; upstream view of Crossing 21, Lorence Creek within easement; viewing north.

Photo No. 78 – Easement 38 east bound; view of WDP8_AB_8.6 (upland); viewing southwest.

Photo No. 79 – Crossing 22, Mud Creek; view of retention pond within right-of-way; viewing north.

Photo No. 80 – Crossing 22, Mud Creek under Loop 1604; view of upstream side of overpass; viewing north.

Photo No. 81 – Crossing 22, Mud Creek; view of WDP1_WM_8.6 (upland); viewing west.

Photo No. 82 – Mud Creek under 1604; view of WDP2_WM_8.6 (upland) within right-of-way; viewing south.

Photo No. 83 – Easement 40 east bound; upstream view of Crossing 23, Water 17 from edge of easement; viewing north.

Photo No. 84 – Easement 40 east bound; view of WDP3_CMP_8.6 (upland); viewing west.

Photo No. 85 – Crossing 24, Elm Creek within the right-of-way; view of WDP4_CMP_8.6 (upland); viewing north.

Photo No. 86 – Easement 44 east bound; view of WDP5_CMP_8.6; viewing north.

Photo No. 87 – Easement 45, Crossing 25, Elm Waterhole Creek; view of bridges in right-of-way; viewing south.

Photo No. 88 – Easement 45 west bound; view of WDP6_CMP_8.6; viewing north.

Photo No. 89 – Easement 45 west bound; view of WDP7_CMP_8.6; viewing east.

Photo No. 90 – Easement 45 east bound; view of WDP8_CMP_8.6; viewing southwest.

Photo No. 91 – Easement 48 west bound; view of Crossing 26, Water 18; viewing east.

Photo No. 92 – Easement 48 west bound; view of WDP3_CMP_8.7 (upland); viewing west.

Photo No. 93 – Easement 48 west bound; view of WDP4_CMP_8.7 (upland); viewing east.

Photo No. 94 – Easement 49 west bound; view of WDP2_CMP_8.7 (upland); viewing south.

Photo No. 95 – Easement 51 east bound; view of Crossing 28, Water 20 from edge of easement; viewing south.

Photo No. 96 – Easement 53 east bound; view of WDP10_AB_8.7 (upland); viewing northeast.

Photo No. 97 – Easement 58 west bound; Crossing 28, Water 20; standing water present due to heavy rains the day prior; viewing northeast.

Photo No. 98 – Easement 58 west bound; view of WDP13_AB_8.8 (upland) ephemeral stream within easement; viewing northeast.

Photo No. 99 – Easement 59 west bound; view of WDP1_WM_8.8; viewing west.

Photo No. 100 – Easement 59 west bound; view of WDP2_WM_8.8 (upland); viewing south.

Photo No. 101 – Easement 59 east bound; view of WDP3_WM_8.8 (non-jurisdicitional wetland); viewing west.

Photo No. 102 – Easement 59 east bound; view of WDP4_WM_8.8 (upland); viewing west.

Photo No. 103 – Easement 60 west bound; view of Crossing 29, Water 21 from edge of easement; viewing west.

Photo No. 104 – Easement 61 east bound; view of Crossing 30, Water 22; viewing west.

Photo No. 105 – Easement 61 west bound; view of WDP5_CMP_8.8 (upland); viewing south.

Photo No. 106 – Easement 61 west bound; view of WDP6_CMP_8.8 (upland); viewing south.

Photo No. 107 – Easement 62 west bound; view of WDP9_AB_8.7 (upland); viewing east.

Photo No. 108 – Easement 63; Crossing 31, Water 23; viewing southwest.

Photo No. 109 – Easement 63; view of Crossing 31, Water 23 within easement; viewing north.

Photo No. 110 – Easement 64 east bound; view of Crossing 31, Water 23 within easement; viewing west.

Photo No. 111 – Easement 64 east bound; view of WDP5_CMP_8.7 (upland); viewing west.

Photo No. 112 – Easement 65 west bound; view of WDP6_CMP_8.7 (upland); viewing east.

Photo No. 113 – Easement 65 west bound; view of WDP7_CMP_8.7 (upland); viewing west.

Photo No. 114– Eastern project terminus; viewing northwest.

Attachment C
NRCS Climate Analysis for Wetlands Table

WETS Table

WETS Station: SAN ANTONIO INTL AP, TX								
Requested years: 1971 - 2019								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	62.7	40.1	51.4	1.79	0.76	2.15	4	0.4
Feb	67.4	44.1	55.8	1.65	0.60	1.99	3	0.1
Mar	74.4	51.4	62.9	2.02	0.89	2.47	4	0.0
Apr	80.7	58.5	69.6	2.56	0.86	3.07	4	0.0
May	86.5	66.6	76.6	4.44	2.07	5.43	5	0.0
Jun	92.2	72.7	82.4	3.76	1.55	4.57	5	0.0
Jul	94.7	74.9	84.8	2.54	0.63	2.73	3	0.0
Aug	95.5	74.9	85.2	2.39	0.66	2.81	3	0.0
Sep	90.3	69.8	80.0	3.68	1.66	4.49	5	0.0
Oct	82.4	60.3	71.3	3.75	1.34	4.52	4	0.0
Nov	72.0	49.9	60.9	2.39	0.74	2.85	4	0.0
Dec	64.5	42.1	53.3	1.87	0.61	2.23	3	0.0
Annual:					27.03	37.52		
Average	80.3	58.8	69.5	-	-	-	-	-
Total	-	-	-	32.86			47	0.5

GROWING SEASON DATES			
Years with missing data:	24 deg = 1	28 deg = 1	32 deg = 0
Years with no occurrence:	24 deg = 20	28 deg = 2	32 deg = 0
Data years used:	24 deg = 48	28 deg = 48	32 deg = 49
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	1/4 to 1/21: 382 days	1/31 to 12/16: 319 days	2/26 to 11/28: 275 days
70 percent *	No occurrence	1/22 to 12/25: 337 days	2/20 to 12/4: 287 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1942							8.19	1.88	7.67	9.56	0.47	0.64	28.41
1943	0.73	0.09	1.58	1.48	2.56	1.91	3.72	0.78	4.34	0.17	1.95	1.20	20.51
1944	3.49	1.68	3.72	0.94	6.76	1.64	T	4.32	1.30	1.52	3.66	4.16	33.19
1945	2.97	3.90	2.73	2.91	1.24	5.31	1.19	1.19	3.00	3.49	1.35	1.18	30.46
1946	3.64	2.24	1.75	5.54	3.47	2.92	0.20	4.03	15.78	1.31	1.86	2.43	45.17
1947	2.14	0.29	1.46	0.30	3.32	0.31	1.00	5.34	0.06	0.19	1.01	1.90	17.32
1948	0.61	1.86	0.59	1.40	1.59	2.96	2.35	5.83	1.98	3.24	1.00	0.23	23.64
1949	2.91	2.98	2.27	8.99	0.85	8.26	2.24	1.03	0.78	7.58	0.13	2.79	40.81

1950	0.32	1.43	0.24	3.42	2.41	1.03	1.60	6.15	3.02	0.08	0.13	0.03	19.86
1951	0.25	2.43	2.76	0.93	4.44	7.07	0.51	0.06	3.75	1.44	0.67	0.13	24.44
1952	0.81	2.01	2.34	3.40	1.91	1.86	2.75	0.00	3.02	T	4.47	3.67	26.24
1953	0.41	0.90	0.53	2.08	1.00	2.19	0.01	3.12	2.48	3.06	0.34	1.44	17.56
1954	0.51	0.03	0.03	1.94	1.46	2.71	1.25	1.05	0.52	1.98	2.02	0.20	13.70
1955	1.45	2.33	1.40	0.14	4.44	2.88	1.32	0.81	0.79	0.39	1.57	0.66	18.18
1956	0.81	0.85	0.27	0.49	3.07	0.27	0.53	3.94	0.62	1.23	1.13	1.10	14.31
1957	0.51	2.53	4.19	9.32	8.22	3.49	0.73	0.21	11.10	4.71	2.90	0.92	48.83
1958	4.57	3.88	1.08	1.32	1.98	3.39	7.39	0.45	8.36	5.43	0.77	1.07	39.69
1959	0.52	2.50	0.13	2.55	2.43	1.32	1.48	3.05	1.72	5.11	2.17	1.52	24.50
1960	0.76	1.22	1.65	2.08	1.21	2.70	1.31	5.96	0.76	7.84	1.30	2.97	29.76
1961	0.68	1.79	0.03	0.32	0.17	7.87	7.04	0.15	2.24	3.39	2.09	0.70	26.47
1962	0.48	0.90	0.91	4.02	1.31	2.44	0.13	1.57	2.69	2.19	4.97	2.29	23.90
1963	0.27	3.59	0.21	1.88	3.03	2.28	0.03	0.63	1.11	2.75	1.93	0.94	18.65
1964	3.40	1.89	1.73	1.16	1.79	4.88	0.02	5.19	4.15	1.64	4.81	1.22	31.88
1965	2.40	6.43	2.30	1.97	8.18	2.42	0.08	1.65	3.13	2.69	0.89	4.51	36.65
1966	1.47	2.30	1.14	3.20	3.53	1.78	0.06	4.28	2.13	1.11	T	0.44	21.44
1967	0.18	0.48	2.18	0.94	2.22	0.01	2.12	3.17	11.16	2.00	3.42	1.38	29.26
1968	8.52	1.85	1.27	1.92	2.82	2.63	1.53	0.94	2.99	0.69	4.58	0.66	30.40
1969	1.76	2.90	2.35	2.46	4.61	2.32	0.36	4.19	1.32	5.85	1.02	2.28	31.42
1970	1.10	2.66	1.98	1.13	7.30	0.89	0.91	0.95	4.35	1.31	0.01	0.15	22.74
1971	0.04	0.81	0.04	1.39	1.52	2.74	1.05	9.42	4.57	4.62	2.74	2.86	31.80
1972	1.35	0.40	0.13	1.94	11.24	2.86	3.13	4.24	1.40	1.99	2.37	0.44	31.49
1973	2.77	2.76	1.58	5.41	2.73	10.44	6.91	1.29	13.09	4.85	0.29	0.16	52.28
1974	1.36	0.04	0.94	2.18	4.28	1.02	1.28	11.14	3.85	4.09	5.39	1.43	37.00
1975	1.04	3.30	0.52	2.69	6.91	4.60	1.06	1.28	0.51	2.25	0.03	1.48	25.67
1976	0.56	0.13	1.20	5.67	5.80	1.61	5.39	2.09	3.79	8.48	2.46	1.95	39.13
1977	3.10	0.91	0.88	8.80	1.62	2.26	0.10	0.06	2.11	3.47	6.01	0.32	29.64
1978	0.68	1.76	1.71	3.62	2.45	3.96	1.43	4.97	8.86	0.55	4.91	1.09	35.99
1979	4.07	1.38	3.55	5.34	1.98	5.59	7.38	2.09	0.86	0.11	1.43	2.86	36.64
1980	0.72	0.74	0.98	1.67	6.42	0.52	0.26	2.64	5.05	1.09	3.53	0.61	24.23
1981	2.06	0.96	1.96	2.21	6.43	8.71	0.25	2.41	1.36	8.61	0.72	0.69	36.37
1982	0.72	1.28	0.69	1.23	6.42	1.37	0.14	0.55	0.87	2.84	4.54	2.31	22.96
1983	1.48	1.54	3.89	0.18	4.37	1.27	2.43	2.00	3.86	1.64	3.06	0.39	26.11

1984	1.87	0.54	1.91	0.11	3.76	1.40	T	3.04	1.06	5.94	2.91	3.41	25.95
1985	2.68	1.91	2.85	3.27	2.47	8.20	5.80	0.45	4.80	3.91	5.00	0.09	41.43
1986	0.76	2.52	0.35	0.60	6.29	11.95	0.05	1.86	2.83	6.58	1.83	7.11	42.73
1987	1.13	4.78	1.10	1.48	12.85	7.69	1.21	0.33	2.24	0.44	2.53	2.18	37.96
1988	0.39	0.92	0.86	1.23	0.41	5.50	5.58	1.98	0.83	0.62	0.02	0.67	19.01
1989	2.96	0.29	1.24	2.55	0.33	3.96	0.69	0.48	1.54	5.81	1.93	0.36	22.14
1990	1.17	2.68	5.17	4.52	3.28	1.18	8.29	1.30	3.70	3.71	3.11	0.20	38.31
1991	5.08	2.34	1.06	4.91	5.30	2.28	2.23	2.84	1.42	0.87	0.47	13.96	42.76
1992	5.64	6.37	6.12	3.03	8.15	5.67	1.28	2.56	1.12	0.92	3.47	2.16	46.49
1993	1.31	3.72	1.56	1.81	12.47	6.43	T	0.01	0.52	3.07	0.66	0.44	32.00
1994	1.55	0.64	5.06	2.21	7.01	1.66	0.50	2.54	5.52	9.75	0.71	3.28	40.43
1995	0.28	1.19	1.58	1.07	5.36	4.81	0.70	2.03	4.49	0.23	0.82	0.64	23.20
1996	T	0.69	0.30	0.89	1.26	2.12	1.31	2.86	3.66	0.36	2.79	1.56	17.80
1997	0.44	2.44	2.24	5.72	3.91	7.30	T	0.62	1.86	4.08	1.76	3.55	33.92
1998	3.21	3.37	2.85	0.05	0.34	0.81	0.21	7.78	1.57	18.07	3.40	0.39	42.05
1999	0.04	0.01	3.48	0.91	2.78	3.37	1.80	2.11	0.05	1.29	0.05	0.52	16.41
2000	1.40	2.20	0.91	1.22	3.59	7.61	0.34	0.16	2.65	5.62	8.58	1.57	35.85
2001	2.85	0.70	2.77	2.29	2.48	3.39	0.50	7.83	4.05	2.06	4.37	3.43	36.72
2002	0.37	0.42	1.19	3.82	2.26	1.48	16.92	0.54	7.02	7.64	2.08	2.53	46.27
2003	0.99	2.15	0.77	0.17	0.12	2.90	8.12	1.65	9.21	1.94	0.32	0.11	28.45
2004	2.31	1.73	2.35	5.02	1.80	9.47	0.61	1.10	1.92	9.47	9.46	0.08	45.32
2005	2.18	2.42	2.00	0.01	2.97	0.81	2.10	1.22	1.39	1.14	0.20	0.10	16.54
2006	0.35	0.62	1.36	1.40	3.80	1.63	1.41	0.03	4.11	3.44	0.75	2.44	21.34
2007	4.33	0.08	7.24	4.61	3.35	6.47	11.76	6.77	1.09	0.75	0.40	0.40	47.25
2008	0.42	0.20	1.82	0.83	0.66	0.01	3.86	4.98	0.46	0.26	0.01	0.25	13.76
2009	0.27	0.65	2.51	2.05	1.57	0.45	0.48	0.45	6.35	11.90	2.09	1.92	30.69
2010	4.45	4.38	2.09	3.57	4.48	4.24	3.68	0.07	9.37	0.17	0.26	0.63	37.39
2011	2.66	0.49	0.01	0.03	0.84	1.58	0.96	0.15	2.93	3.28	1.81	2.84	17.58
2012	3.99	5.63	3.24	0.04	9.84	0.11	3.79	2.41	7.31	2.40	0.27	0.37	39.40
2013	2.83	0.10	0.95	2.77	13.19	2.02	0.73	0.85	3.70	2.81	1.50	0.55	32.00
2014	0.23	0.42	1.06	0.68	4.97	5.38	3.25	0.08	1.77	1.91	7.21	1.24	28.20
2015	3.67	0.53	2.97	7.54	8.57	6.42	0.07	0.29	2.32	7.78	2.58	1.48	44.22
2016	1.38	1.55	3.56	6.19	9.14	2.39	0.33	4.91	6.30	0.16	1.79	6.22	43.92
2017	2.72	3.61	2.09	2.89	1.76	0.40	0.16	5.87	2.80	0.46	0.53	4.04	27.33

2018	0.28	1.91	4.02	0.36	0.97	0.71	4.87	0.62	16.86	6.47	1.78	2.35	41.20
2019	1.63	0.47	0.46	3.47	3.30	5.51	0.14	0.31	1.45	4.02	M0.23		20.99
Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.													
Data missing for all days in a month or year is blank.													
Creation date: 2016-07-22													

Attachment D
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_AB_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.58795132 Long: -98.60089022 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	40	Y	FAC
2. *Fraxinus pennsylvanica*	30	Y	FAC
3. *Celtis laevigata*	10	N	FACU
4. *Vachellia farnesiana*	5	N	FACU
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	75	Y	FAC
2. *Elymus canadensis*	10	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetation dominance test passed.

SOIL

Sampling Point: WDP1_AB_7.31

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/1	100	None				Clay	
2-14	10 YR 3/3	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Hydrology indicators drift deposits (B3), drainage patterns (B10), and geomorphic position (D2) are present. Wetland hydrology is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_AB_8.6

Investigator(s): Austin Blase, Claire Para Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60922246 Long: -98.51525205 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	20	Y	FAC
2. *Vachellia farnesiana*	20	Y	FACU
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vachellia farnesiana*	15	Y	FACU
2. *Ulmus crassifolia*	10	Y	FAC
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	75	Y	FAC
2. *Ratibida columnifera*	30	Y	FACU
3. *Verbena brasiliensis*	20	N	FACU
4. *Elymus canadensis*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP1_AB_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-11	10 YR 3/2	100	None				Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 11"

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): LRR I Lat: 29.60170888 Long: -98.39124567 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	60	Y	FACU
2. *Quercus virginiana*	20	Y	FACU
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	15	Y	FACU
2. *Ulmus crassifolia*	12	Y	FAC
3. *Fraxinus albicans*	5	N	FACU
4.			
5.			
	32	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	15	Y	FAC
2. *Elymus virginicus*	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	10	Y	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP1_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100	None				Clay Loam	Limestone/cobble within layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 6"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage pattern (B10) and geomorphic position (D2) are present. Wetland hydrology is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.55878721 Long: -98.66058104 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vachellia farnesiana*	10	Y	FACU
2. *Baccharis neglecta*	5	Y	FAC
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	16	Y	FAC
2. *Bromus arvensis*	15	Y	FACU
3. *Lolium perenne*	15	Y	FACU
4. *Avena sativa*	15	Y	FACU
5. *Torilis arvensis*	10	N	FAC
6. *Elymus canadensis*	10	N	FACU
7. *Sorghum halepense*	10	N	FACU
8. *Rumex pulcher*	10	N	FACW
9. *Ratibida columnifera*	5	N	FAC
10.			
	106	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	25	Y	FACU
2.			
	25	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP1_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10 YR 2/2	100	None				Clay Loam	Gravel
12-14	5 Y 2.5/1	100	None				Clay Loam	Gravel
14-16	10 YR 4/1	100	None				Clay Loam	Gravel
16-18	5 Y 2.5/1	100	None				Clay Loam	Gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 18"

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 16"

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

One secondary indicator geomorphic position (D2) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.55575977 Long: -98.66352262 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:
Wetter than normal conditions were present. Two of the three wetland indicators are present. The point is not located in a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Eleocharis palustris*	100	Y	OBL
2. *Persicaria hydropiperoides*	40	Y	FACW
3. *Oenothera curtiflora*	20	N	UPL
4. *Cyperus virens*	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	170	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP1_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100	None				Clay loam	
4-6	10YR 3/1	98	10YR 5/6	2	C	PL	Clay loam	
6-7	2.5Y 3/3	99	10YR 4/6	1	C	PL	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Nylon netting

Depth (inches): 7

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present. Constructed drainage channel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Wetland hydrology indicators drainage patterns (B10) and geomorphic position (D2) present. Meets Wetland hydrology criteria.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_WM_8.6

Investigator(s): Corey Pursell, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60268213 Long: -98.45091497 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three wetland indicators are present. This point is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	40	Y	FACU
2. *Ulmus crassifolia*	20	Y	FAC
3. *Juniperus ashei*	10	N	FACU
4. *Prosopis glandulosa*	5	N	FACU
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Diospyros texana*	5	Y	FAC
2. *Sapindus saponaria*	5	Y	FAC
3. *Ptelea trifoliata*	5	Y	FAC
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *None*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passed the dominance test.

SOIL

Sampling Point: WDP1_WM_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone/Cobble

Depth (inches): 7"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic pattern (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP1_WM_8.8

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58908464 Long: -98.34899023 Datum: NAD 83

Soil Map Unit Name: HnC2 - Heiden clay, 3 to 5 percent slopes, eroded NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	60	Y	FACW
2. *Vachellia farnesiana*	40	Y	FACU
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Elymus virginicus*	80	Y	FAC
2. *Panicum capillare*	60	Y	FAC
3. *Toxicodendron radicans*	5	N	FACU
4. *Cyclachaena xanthiifolia*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	150	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP1_WM_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10 YR 5/3	60	None				Clay Loam	
	10 YR 6/3	40	None				Silt Loam	
3-14	10 YR 6/3	100	None				Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

One secondary indicator drainage patterns (B10) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: Tx Sampling Point: WDP2_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.55777699 Long: -98.6613958 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	10	Y	FAC
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Sesbania drummondii*	10	Y	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Setaria parviflora*	70	Y	FACW
2. *Paspalum urvillei*	40	Y	FACW
3. *Cyperus virens*	30	N	FACW
4. *Persicaria hydropiperoides*	30	N	FACW
5. *Ruellia metziae*	10	N	FAC
6. *Teucrium canadense*	5	N	FACW
7.			
8.			
9.			
10.			
	185	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP2_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR 3/1	100					Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 10

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Four primary indicators saturation (A3), water marks (B1), sediment deposits (B2), drift deposits (B3), and two secondary indicators drainage pattern (B10), and geomorphic position (D2) are present. Wetland hydrology is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_AB_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58795132 Long: -98.60089022 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. Two of the three wetland indicators are present. The point is not located in a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	30	Y	FAC
2. *Vachellia farnesiana*	10	Y	FACU
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Verbena hastata*	5	Y	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Paspalum urvillei*	60	Y	FACW
2. *Setaria verticillata*	20	Y	FAC
3. *Cyperus virens*	15	N	FACW
4. *Ambrosia trifida*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP2_AB_7.31

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 3/1	100	None				Clay Loam	
6-12	10 YR 2/1	100	None				Clay Loam	
12-14	10 YR 2/1	50	None				Clay Loam	
	10 YR 6/3	50	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes ___ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Two primary indicators sediment deposits (B2), drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60785299 Long: -98.5165964 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three wetland indicators are present. The point is not located in a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	15	Y	FAC
2. *Vachellia farnesiana*	10	Y	FACU
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	50	Y	FAC
2. *Elymus canadensis*	15	N	FACU
3. *Bidens tenuisecta*	10	N	FACW
4. *Ratibida columnifera*	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP2_AB_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 3/2	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 4"

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60285673 Long: -98.39604905 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	60	Y	FAC
2. *Quercus virginiana*	50	Y	FACU
3.			
4.			
	110	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *None*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	5	Y	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP2_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2), drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.55873595 Long: -98.66039104 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Sesbania drummondii*	50	Y	FACW
2. *Vachellia farnesiana*	15	Y	FACU
3.			
4.			
5.			
	65	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Panicum capillare*	50	Y	FAC
2. *Persicaria hydropiperoides*	20	Y	FACW
3. *Rumex pulcher*	15	N	FACW
4. *Elymus canadensis*	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP2_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10 YR 3/2	100	None				Loam	
3-6	10 YR 3/2	100	None				Loam	Prevalent non-decomposed organics
6-16	10 YR 4/4	100	None				Loam	Prevalent sand and gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 3"

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Four primary indicators high water table (A2), saturation (A3), sediment deposits (B2), and two secondary drift deposits (B3), drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_WM_8.6

Investigator(s): Corey Pursell, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60268213 Long: -98.45091497 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	80	Y	FACU
2. *Solidago altissima*	15	N	FACU
3. *Calyptocarpus vialis*	10	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP2_WM_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock rip-rap

Depth (inches): 5"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator sediment deposits (B2) and one secondary indicator geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP2_WM_8.8

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58916875 Long: -98.34912507 Datum: NAD 83

Soil Map Unit Name: HnC2 - Heiden clay, 3 to 5 percent slopes, eroded NWI classification: R4SCB

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	50	Y	FACW
2.			
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Cyclachaena xanthiifolia*	85	Y	FAC
2. *Elymus virginicus*	60	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	145 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *Melothria pendula*	10	Y	FAC
2.			
	10 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP2_WM_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 4/2	50	None				Clay Loam	
	10 YR 4/2	50	None				Silt Loam	
8-14	10 YR 6/4	100	None				Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: Tx Sampling Point: WDP3_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.57525514 Long: -98.6462814 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Wetter than normal conditions were present. None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Bothriochloa bladhii*	60	Y	FACU
2. *Ambrosia trifida*	45	Y	FAC
3. *Sorghum halepense*	45	Y	FACU
4. *Cynodon dactylon*	30	N	FACU
5. *Ipomoea alba*	20	N	FAC
6.			
7.			
8.			
9.			
10.			
	200	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP3_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100	None				Clay loam	
4-8	10Y 3/3	100	None				Clay	with sand & gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock-Limestone

Depth (inches): 8

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

One secondary indicator geomorphic position (D2) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_AB_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58559517 Long: -98.59908734 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	100	Y	FACU
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	20	Y	FAC
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Ruellia metziae*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP3_AB_7.31

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✓ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicators drift deposits (B3), and three secondary sparsely vegetated concave surface (B8), drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_AB_8.6

Investigator(s): Austin Blase, Claire Para Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Streamside Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60928092 Long: -98.51981445 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	25	Y	FACU
2. *Vachellia farnesiana*	15	Y	FACU
3. *Quercus virginiana*	5	N	FACU
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Quercus virginiana*	10	Y	FACU
2. *Opuntia cymochila*	10	Y	UPL
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Schizachyrium scoparium*	70	Y	FACU
2. *Bothriochloa ischaemum*	20	N	FACU
3. *Bouteloua curtipendula*	15	N	FAC
4. *Monarda punctata*	10	N	UPL
5. *Bidens tenuisecta*	10	N	FACW
6.			
7.			
8.			
9.			
10.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP3_AB_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 3/2	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 4"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60117816 Long: -98.44059094 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	40	Y	FACU
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	15	Y	FACU
2. *Rhus aromatica*	12	Y	UPL
3. *Mahonia trifoliolata*	7	Y	FACU
4.			
5.			
	34	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Paspalum setaceum*	50	Y	FAC
2. *Elymus canadensis*	45	Y	FACU
3. *Calyptocarpus vialis*	40	Y	FAC
4. *Ruellia metziae*	10	N	FAC
5. *Wedelia acapulcensis*	7	N	FAC
6. *Ratibida columnifera*	5	N	FAC
7.			
8.			
9.			
10.			
	157	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	15	Y	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP3_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10 YR 2/1	100	None				Silty Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ✓ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2), drift deposits (B3), and three secondary indicators surface soil cracks (B6), drainage patterns (B10), and feomorphic positio (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60250673 Long: -98.40611556 Datum: NAD 83

Soil Map Unit Name: LvB - Lewisville silty clay, 1 to 3 percent slopes NWI classification: PUBHh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus albicans*	60	Y	FACU
2. *Vachellia farnesiana*	35	Y	FACU
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus albicans*	12	Y	FACU
2. *Ulmus crassifolia*	8	Y	FAC
3. *Melia azedarach*	5	Y	FACU
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Elymus virginicus*	65	Y	FAC
2. *Ambrosia trifida*	40	Y	FAC
3. *Ruellia metziae*	35	Y	FAC
4. *Calyptocarpus vialis*	15	N	FAC
5. *Carex austrina*	5	N	FACU
6.			
7.			
8.			
9.			
10.			
	160	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP3_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					Clay Loam	
6-9	10 YR 2/1	69	10 YR 3/6	1	C	PL	Clay Loam	
	10 YR 3/2	30					Sandy Clay	
9-14	10 YR 3/2	99	10 YR 3/6	1	C	PL	Clay Loam	
14-16	10 YR 5/4	98	10 YR 6/6	2	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B3), and two secondary indicators drainage patterns (B10), an dgeomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_CMP_8.8

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5891019 Long: -98.35102411 Datum: NAD 83

Soil Map Unit Name: AuC - Austin silty clay, 2 to 5 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:
All three of the necessary wetland indicators are present. The WDP is located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	10	Y	FACU
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Salix nigra*	15	Y	FACW
2. *Fraxinus pennsylvanica*	5	Y	FAC
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Carex cherokeensis*	90	Y	FACW
2. *Cyclachaena xanthiifolia*	30	Y	FAC
3. *Cyperus odoratus*	5	N	FACW
4. *Juncus torreyi*	5	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP3_CMP_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10 YR 6/3	99	10 YR 5/6	1	C	PL	Clay Loam	
4-6	GLY 1/3N	100					Silt	High organic content
6-10	10 YR 6/2	99	10 YR 6/4	1	C	PL	Clay	
10-16	10 YR 5/1	98	2.5 Y 5/4	2	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes ✓ No ___

Remarks:

Hydric soil indicator depleted matrix (F3) is present. High organic content was found between 4-6".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 14"

Water Table Present? Yes ✓ No ___ Depth (inches): 0-16"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0-16"

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Three primary indicators surface water (A1), high water table (A2), and saturation (A3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP3_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.55890799 Long: -98.66037822 Datum: NAD 83

Soil Map Unit Name: PaB NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus rubra*	15	Y	FACU
2. *Ulmus crassifolia*	5	Y	FAC
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Sorghum halepense*	40	Y	FACU
2. *Teucrium canadense*	35	Y	FACW
3. *Elymus canadensis*	30	Y	FACU
4. *Rumex pulcher*	30	Y	FACW
5. *Bromus arvensis*	25	N	FACU
6. *Ratibida columnifera*	15	N	FACU
7. *Festuca versuta*	10	N	FACU
8.			
9.			
10.			
	185	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP3_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 2/2	100	None				Loam	
4-8	10 YR 3/2	100	None				Loam	Prevalent small gravel
8-14	10 YR 3/1	100	None				LoM	
14-18	10 YR 6/3	70	None				Clay Loam	
	10 YR 4/6	30	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.57969051 Long: -98.6415883 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Parkinsonia aculeata*	40	Y	UPL
2.			
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Elymus canadensis*	40	Y	FAC
2. *Ruellia metziae*	40	Y	FAC
3. *Ambrosia psilostachya*	30	Y	FAC
4. *Sorghum halepense*	10	N	FACU
5. *Ambrosia trifida*	5	N	FAC
6.			
7.			
8.			
9.			
10.			
	125 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP4_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100	None				Clay loam	
5-9	10YR 3/2	40					Clay loam	
	10YR 3/4	60					Sandy clay	
9-16	10YR 2/1	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

One primary indicator drift deposits (B3) and one secondary indicator drainage patterns (B10) indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60777609 Long: -98.51801809 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ungnadia speciosa*	25	Y	FACU
2. *Juniperus ashei*	20	Y	FACU
3. *Quercus virginiana*	15	Y	FACU
4. *Vachellia farnesiana*	15	Y	FACU
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	20	Y	FACU
2. *Ulmus alata*	15	Y	FAC
3. *Celtis laevigata*	15	Y	FACU
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Schizachyrium scoparium*	90	Y	FACU
2. *Ambrosia trifida*	70	Y	FAC
3. *Bidens tenuisecta*	20	N	FAC
4. *Verbena hastata*	5	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	185	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 11.1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP4_AB_8.6

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 2"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.59965092 Long: -98.43285947 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	35	Y	FAC
2. *Quercus virginiana*	30	Y	FACU
3. *Salix nigra*	10	N	FACW
4. *Juniperus ashei*	5	N	FACU
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	15	Y	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	45	Y	FAC
2. *Ruellia metziae*	40	Y	FAC
3. *Paspalum setaceum*	20	N	FAC
4. *Carex austrina*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	20	Y	FACU
2. *Campsis radicans*	5	Y	FAC
	25	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP4_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100	None				Loam	
6-14	10 YR 2/1	70	None				Loam	
	10 YR 3/1	30	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator sediment deposits (B2), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 1-3

Subregion (LRR): LRR I Lat: 29.60258586 Long: -98.40635362 Datum: NAD 83

Soil Map Unit Name: LvB - Lewisville silty clay, 1 to 3 percent slopes NWI classification: PUBHh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	40	Y	FACU
2. *Celtis laevigata*	25	Y	FACU
3. *Fraxinus pennsylvanica*	20	Y	FAC
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Carex austrina*	75	Y	FACU
2. *Ambrosia trifida*	40	Y	FAC
3. *Ruellia metziae*	30	N	FAC
4. *Elymus virginicus*	20	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	165	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP4_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 2/1	100	None				Clay Loam	
4-9	10 YR 4/3	100	None				Clay Loam	
9-12	10 YR 2/2	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present. Small gravel was present throughout the soil sample.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.56136733 Long: -98.65756528 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	35	Y	FAC
2. *Vachellia farnesiana*	25	Y	FACU
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Aloysia gratissima*	30	Y	FAC
2.			
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Lolium perenne*	60	Y	FACU
2. *Calyptocarpus vialis*	40	Y	FAC
3. *Carex austrina*	15	N	FACU
4. *Elymus canadensis*	10	N	FACU
5. *Cyclachaena xanthiifolia*	5	N	FAC
6.			
7.			
8.			
9.			
10.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP4_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 2/1	100	None				Clay Loam	
2-6	10 YR 3/2	100	None				Clay Loam	
6-8	10 YR 5/6	100	None				Clay	Limestone cobble (90%)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 8"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_WM_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58180244 Long: -98.59775194 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	45	Y	FACU
2. *Prosopis glandulosa*	35	Y	FACU
3. *Celtis laevigata*	20	N	FAC
4. *Diospyros texana*	10	N	UPL/NI
	110	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	85	Y	FAC
2. *Ruellia metziae*	45	Y	UPL/NI
3. *Elymus virginicus*	15	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	145	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP4_WM_7.31

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 5/3	100	None				Loam	
4-5	10 YR 2/1	100	None				Loam	
5-6	10 YR 5/3	100	None				Loam	
6-14	10 YR 2/1	100	None				Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B2) and one secondary indicator drainage patterns (B10) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP4_WM_8.8

Investigator(s): Walt Maitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5890515 Long: -98.35100117 Datum: NAD 83

Soil Map Unit Name: AuC - Austin silty clay, 2 to 5 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Salix nigra*	5	Y	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	95	Y	FACU
2. *Helianthus annuus*	15	N	FACU
3. *Cyclachaena xanthiifolia*	12	N	FAC
4. *Solidago altissima*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	127 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP4_WM_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10 YR 5/1	60	None				Clay Loam	
	10 YR 6/3	40	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock rip-rap

Depth (inches): 12"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58447127 Long: -98.6332484 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Setaria parviflora*	60	Y	FAC
2. *Cynodon dactylon*	60	Y	FACU
3. *Cyperus virens*	55	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	175	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP5_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 2/1	100					Clay Loam	
4-7	10 YR 3/6	100					Sandy Clay	Sand and gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 7"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.6071334 Long: -98.52814633 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus ashei*	40	Y	FACU
2. *Celtis laevigata*	10	Y	FACU
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Bouteloua curtipendula*	30	Y	FAC
2. *Mondara punctata*	10	Y	UPL
3. *Elymus canadensis*	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP5_AB_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10 YR 3/2	100	None				Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 4"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 3-5

Subregion (LRR): LRR I Lat: 29.60051537 Long: -98.4144449 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Sorghum halepense*	90	Y	FACU
2. *Echinochloa crus-galli*	20	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Cucurbita foetidissima*	10	Y	FACU
2. *Convolvulus arvensis*	10	Y	FAC
	20	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test. Vegetation was recently mowed.

SOIL

Sampling Point: WDP5_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 2/1	100					Clay Loam	
10-14	10 YR 2/1	98	10 YR 3/6	2	C	PL	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ✓ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators drift deposits (B3) and odixized rhizospheres (C3), and one secondary indicator geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58447127 Long: -98.6332484 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	90	Y	FACU
2.			
3.			
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	10	Y	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Torilis arvensis*	75	Y	FAC
2. *Ruellia metziae*	20	N	FAC
3. *Solidago altissima*	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	15	Y	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP5_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 3/1	100	None				Clay Loam	
2-14	10 YR 4/1	60	None				Clay	
	5 YR 4/6	20	None				Sand	Crushed mineral
	2.5 YR 6/4	10	None				Clay	
	10 YR 9.5/2	10	None				Clay	Caliche

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

One secondary indicator geomorphic position (D2) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_CMP_8.8

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.583331 Long: -98.34474585 Datum: NAD 83

Soil Map Unit Name: Tf NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	60	Y	FAC
2. *Vachellia farnesiana*	30	Y	FACU
3. *Celtis laevigata*	20	N	FACU
4.			
	110	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	15	Y	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ruellia metziae*	12	Y	FAC
2. *Ambrosia trifida*	10	Y	FAC
3. *Torilis arvensis*	5	N	FAC
4. *Elymus virginicus*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	32	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	60	Y	FACU
2.			
	60	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP5_CMP_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 4/2	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone cobble

Depth (inches): 10"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

One secondary indicator geomorphic position (D2) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.56125291 Long: -98.65763074 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	10	Y	FACU
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Aloysa gratissima*	10	Y	UPL
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Carex brevior*	30	Y	FAC
2. *Cyperus odoratus*	15	Y	FACW
3. *Calyptocarpus vialis*	15	Y	FAC
4. *Lolium perenne*	10	N	FACU
5. *Phalaris canariensis*	10	N	FACU
6. *Elymus canadensis*	5	N	FACU
7. *Cyclachaena xanthiifolia*	5	N	FAC
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP5_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 6"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Two primary indicators drift deposits (B3) and water-stained leaves (B9), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP5_WM_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58209915 Long: -98.5976063 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	45	Y	FACW
2.			
3.			
4.			
	45 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Salix nigra*	35	Y	FACW
2. *Ligustrum sinense*	5	N	UPL
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Paspalum urvillei*	65	Y	FACW
2. *Fuirena simplex*	25	Y	OBL
3. *Cyperus virens*	15	N	FACW
4. *Cyperus esculentus*	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP5_WM_7.31

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10 YR 2/1	100					Sandy Loam	
1-5	10 YR 6/4	90	10 YR 5/8	10	C	PL	Clay Loam	
5-14	10 YR 4/1	95	10 YR 5/6	5	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes ✓ No ___

Remarks:

Hydric soil indicator depleted matrix (F3) is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

One primary indicator drift deposits (B3) and one secondary indicator drainage patterns (B10) are present. Wetland hydrology is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.10.2019

Applicant/Owner: TxDOT State: Tx Sampling Point: WDP6_WM_7.10

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58604814 Long: -98.6333189 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyperus virens*	60	Y	FACW
2. *Paspalum plicatulum*	55	Y	FAC
3. *Tridens albescens*	30	N	FAC
4. *Ratibida columnifera*	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	155	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP6_WM_7.10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100	None				Clay Loam	
6-14	10 YR 3/2	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Crushed Limestone

Depth (inches): 14"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators (B10) and (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60227169 Long: -98.41061005 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: PUSCh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vachellia farnesiana*	5	Y	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	90	Y	FAC
2. *Clematis vitalba*	30	Y	UPL
3. *Panicum capillare*	25	N	FAC
4. *Ruellia nudiflora*	20	N	FAC
5. *Cynodon dactylon*	20	N	FACU
6.			
7.			
8.			
9.			
10.			
	185	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP6_AB_8.6

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 3"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60227169 Long: -98.41061005 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	60	Y	FACW
2. *Triadica sebifera*	20	Y	FAC
3. *Ulmus crassifolia*	10	N	FAC
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyclachaena xanthiifolia*	90	Y	FAC
2. *Carex austrina*	80	Y	FACU
3. *Solidago altissima*	10	N	FACU
4. *Rumex pulcher*	5	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	185	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test. Vegetation was grazed.

SOIL

Sampling Point: WDP6_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 3/2	100	None				Clay Loam	
5-14	5 YR 4/6	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2) and drift deposits (B3), and one secondary geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_CMP_8.7

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58604814 Long: -98.6333189 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	30	Y	FACW
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Triadica sebifera*	10	Y	FAC
2. *Baccharis neglecta*	7	Y	FAC
3. *Fraxinus pennsylvanica*	5	Y	FAC
4.			
5.			
	22	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Andropogon glomeratus*	70	Y	FACW
2. *Scirpus divaricatus*	20	N	OBL
3. *Ludwigia palustris*	15	N	OBL
4. *Eleocharis palustris*	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	10	Y	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP6_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 2/2	100	None				Clay Loam	
3-7	10 YR 2/1	100	None				Clay Loam	
7-14	10 YR 4/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 4"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 3"

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators high water table (A2) and saturation (A3) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_CMP_8.8

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58330008 Long: -98.34518879 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	5	Y	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	10	Y	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyclachaena xanthiifolia*	70	Y	FAC
2. *Cynodon dactylon*	20	Y	FACU
3. *Helianthus annuus*	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	5	Y	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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		x 1 =	
FACW species	5	x 2 =	10
FAC species	70	x 3 =	210
FACU species	45	x 4 =	180
UPL species		x 5 =	
Column Totals:	115 (A)		400 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP6_CMP_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 5/4	98	10 YR 5/6	2	C	PL	Clay	
3-14	10 YR 3/1	97	10 YR 3/6	3	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes ___ No ✓

Remarks:

One primary hydric soil indicator redox dark surface (F6) is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ✓ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

One primary indicator oxidized rhizospheres on living roots (C3) and one secondary indicator geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): LRR I Lat: 29.56255965 Long: -98.65816596 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Aloysia gratissima*	40	Y	UPL
2. *Celtis laevigata*	10	N	FACU
3.			
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Torilis arvensis*	85	Y	FAC
2. *Ambrosia trifida*	60	Y	FAC
3. *Elymus canadensis*	30	N	FACU
4. *Sorghum halepense*	20	N	FACU
5. *Coreopsis tinctoria*	20	N	FAC
6. *Trichostema arizonicum*	10	N	NI
7.			
8.			
9.			
10.			
	225	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP6_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 2/2	100	None				Loam	
2-8	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 8"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicators drift deposits (B3), and one secondary indicator drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.31.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP6_WM_7.31

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.56760611 Long: -98.59111504 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Rumex pulcher*	85	Y	FACW
2. *Paspalum urvillei*	45	Y	FACW
3. *Ambrosia trifida*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP6_WM_7.31

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

One secondary indicator geomorphic position (D2) is present. There is a large trapezoidal channel.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.01.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_AB_8.1

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.59526233 Long: -98.57192323 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	50	Y	FAC
2. *Salix nigra*	40	Y	FACW
3. *Triadica sebifera*	25	Y	FAC
4.			
	115	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	30	Y	FAC
2. *Triadica sebifera*	10	N	FAC
3. *Baccharis neglecta*	7	N	FAC
4. *Vachellia farnesiana*	5	N	FACU
5.			
	52	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyclachaena xanthiifolia*	85	Y	FAC
2. *Elymus virginicus*	12	N	FAC
3. *Calyptocarpus vialis*	10	N	FAC
4. *Torilis arvensis*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	112	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP7_AB_8.1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100					Clay loam	
2-4	10 YR 2/2	100					Clay	
4-6	10 YR 2/2	95	10 YR 3/6	5	C	PL	Clay	
6-16	10 YR 6/4	98	10 YR 4/6	2	C	PL	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Streamside Local relief (concave, convex, none): None Slope (%): 1-2

Subregion (LRR): LRR I Lat: 29.60875943 Long: -98.48661615 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus virginiana*	95	Y	FACU
2. *Triadica sebifera*	30	N	FAC
3. *Sophora secundiflora*	20	N	FACU
4. *Fraxinus velutina*	10	N	FAC
	155	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Diospyros texana*	20	Y	FAC
2. *Sophora secundiflora*	5	Y	FACU
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	50	Y	FAC
2. *Calyptocarpus vialis*	50	Y	FAC
3. *Sorghum halepense*	5	N	FACU
4. *Panicum capillare*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	30	Y	FACU
2.			
	30	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP7_AB_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10 YR 2/2	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60183023 Long: -98.41163768 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	20	Y	FACU
2. *Salix nigra*	15	Y	FACW
3. *Ulmus crassifolia*	10	Y	FAC
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vachellia farnesiana*	5	Y	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	30	Y	FAC
2. *Carex austrina*	25	Y	FACU
3. *Elymus virginicus*	23	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	78	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	15	Y	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP7_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100					Clay Loam	
2-8	10 YR 3/2	99	10 YR 3/6	1	C	PL	Clay Loam	Oxidized root pores

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone/cobble

Depth (inches): 8"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ✓ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Three primary indicators sediment deposits (B2), drift deposits (B3), and oxidized rhizospheres on living roots (C3), and two secondary indicators drainage patterns (B10) and geomorphic position(D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_CMP_8.7

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.57197292 Long: -98.33608217 Datum: NAD 83

Soil Map Unit Name: HoD3 - Heiden-Ferris complex, 5 to 10 percent slopes, severely eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	30	Y	FACW
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Triadica sebifera*	37	Y	FAC
2. *Baccharis neglecta*	20	Y	FAC
3. *Fraxinus pennsylvanica*	10	N	FAC
4. *Vachellia farnesiana*	5	N	FACU
5.			
	72	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Eleocharis palustris*	70	Y	OBL
2. *Scirpus divaricatus*	60	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis mustangensis*	20	Y	FAC
2. *Rubus trivialis*	10	Y	FACU
	30	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP7_CMP_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 3/1	100	None				Clay	
6-14	5 YR 2.5/1	100	None				Clay	Gravel present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 7"

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 3"

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators high water table (A2) and saturation (A3) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5593596 Long: -98.66156195 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus ashei*	5	Y	FACU
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	25	Y	FAC
2. *Ulmus crassifolia*	20	Y	FAC
3.			
4.			
5.			
	45 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Torilis arvensis*	85	Y	FAC
2. *Coreopsis tinctoria*	25	N	FAC
3. *Elymus canadensis*	20	N	FACU
4. *Ambrosia trifida*	15	N	FAC
5. *Bromus arvensis*	10	N	FACU
6. *Oxalis dillenii*	5	N	FACU
7. *Monarda citriodora*	5	N	UPL
8. *Oenothera curtiflora*	5	N	UPL
9.			
10.			
	170 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP7_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/2	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Alluvial stones

Depth (inches): 6"

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP7_AB_7.11

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58935413 Long: -98.6168965 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	20	Y	FAC
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	30	Y	FAC
2.			
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Sorghum halepense*	30	Y	FACU
2. *Torilis arvensis*	10	Y	FAC
3. *Commelina communis*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Lonicera albiflora*	40	Y	FAC
2. *Melothria pendula*	30	Y	FAC
	70	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP7_AB_7.11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 4/3	100						Alluvium to cobble size
5-10	10 YR 2/2	100						Alluvium to cobble size

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 10"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2) and drift deposits (B3), and two secondary indicators drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP8_AB_7.11

Investigator(s): Austin Blase, Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58734626 Long: -98.61745952 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus ashei*	30	Y	FACU
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyperus virens*	27	Y	FACW
2. *Paspalum urvillei*	25	Y	FACW
3. *Verbena hastata*	20	Y	FACW
4. *Ruellia metziae*	17	N	FAC
5. *Coreopsis tinctoria*	15	N	FAC
6. *Panicum capillare*	10	N	FAC
7. *Solanum elaeagnifolium*	7	N	FAC
8. *Ratibida columnifera*	5	N	FACU
9.			
10.			
	126	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	10	Y	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP8_AB_7.11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 2/1						Clay Loam	
3-8	10 YR 3/2						Clay Loam	
8-12	10 YR 3/2						Clay Loam	High gravel content

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): 2"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 1"

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

Two primary indicators (A2) and (A3) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP8_AB_8.6

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Streamside Local relief (concave, convex, none): None Slope (%): 1-2

Subregion (LRR): LRR I Lat: 29.60927145 Long: -98.48069219 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus virginiana*	80	Y	FACU
2. *Vachellia farnesiana*	35	N	FACU
3. *Ligustrum lucidum*	25	N	FAC
4. *Juniperus ashei*	20	N	FACU
	160	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Juniperus ashei*	25	Y	FACU
2. *Ulmus crassifolia*	10	Y	FAC
3. *Diospyros texana*	10	Y	FAC
4.			
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Elymus canadensis*	50	Y	FACU
2. *Calyptocarpus vialis*	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	5	Y	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP8_AB_8.6

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 10"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators drift deposits (B3) and water-stained leaves (B9) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.06.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP8_CMP_8.6

Investigator(s): Walt Meitzen, Corey Pursell Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.6003488 Long: -98.41361566 Datum: NAD 83

Soil Map Unit Name: PaB NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	60	Y	FACW
2. *Vachellia farnesiana*	25	Y	FACU
3.			
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Elymus virginicus*	90	Y	FAC
2. *Carex austrina*	20	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis mustangensis*	80	Y	FAC
2.			
	80	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP8_CMP_8.6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10 YR 3/2	100					Silty Loam	
8-18	10 YR 2/2	98	10 YR 3/6	2	C	PL	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage patterns (B8) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35N City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP8_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60113922 Long: -98.60125878 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	40	Y	FAC
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	85	Y	FACU
2. *Ambrosia trifida*	10	N	FAC
3. *Lolium perenne*	5	N	FACU
4. *Cyclachaena xanthiifolia*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP8_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 3/1	100	None				Clay Loam	Alternating bands
	10 YR 6/4	100	None				Sandy Loam	
4-8	10 YR 6/3	100	None				Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 8"

Hydric Soil Present? **Yes** ____ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ✓ No ____ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0"

Wetland Hydrology Present? **Yes** ✓ **No** ____

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

Remarks:

Four primary indicators high water table (A2), saturation (A3), sediment deposits (B2), and water-stained leaves (B9) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.01.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP8_WM_8.1

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.59840303 Long: -98.56476177 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Triadica sebifera*	35	Y	FAC
2. *Ligustrum japonicum*	30	Y	UPL
3. *Celtis laevigata*	20	Y	FACU
4. *Salix nigra*	15	N	FACW
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	15	Y	FACU
2. *Triadica sebifera*	10	Y	FAC
3. *Ulmus crassifolia*	5	N	FAC
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ruellia metziae*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Cocculus diversifolius*	15	Y	FAC
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP8_WM_8.1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 8"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B3), and two secondary indicators drainage pattern (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP9_AB_7.11

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58784425 Long: -98.61746953 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	10	Y	FACW
2. *Vachellia farnesiana*	10	Y	FACU
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Paspalum urvillei*	80	Y	FACW
2. *Euphorbia marginata*	40	Y	FACU
3. *Ruellia metziae*	30	N	FAC
4. *Elymus canadensis*	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	160	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP9_AB_7.11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10 YR 2/1	100	None				Clay Loam	
7-16	10 YR 3/2	100	None				Clay Loam	Gravel/cobble from ~9-11"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.02.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP9_AB_8.2

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.59675876 Long: -98.57264873 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus virginiana*	40	Y	UPL
2. *Quercus virginiana*	20	Y	FACU
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Juniperus virginiana*	30	Y	UPL
2. *Ulmus crassifolia*	30	Y	FAC
3. *Foresteria pubescens*	15	N	FACU
4. *Quercus virginiana*	5	N	FACU
5. *Vachellia farnesiana*	5	N	FACU
	85	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	40	Y	FAC
2. *Wedelia acapulcensis*	15	Y	FAC
3. *Pavonia lasiopetala*	5	N	FAC
4. *Ambrosia psilostachya*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	5	Y	FACU
2. *Rubus trivialis*	5	Y	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP9_AB_8.2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 7"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator water-stained leaves (B9) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP9_AB_8.7

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): LRR I Lat: 29.58024043 Long: -98.3428633 Datum: NAD 83

Soil Map Unit Name: LvB - Lewisville silty clay, 1 to 3 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	10	Y	FACW
2. *Fraxinus pennsylvanica*	10	Y	FAC
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Salix nigra*	10	Y	FACW
2. *Fraxinus pennsylvanica*	10	Y	FAC
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	70	Y	FACU
2. *Cyperus virens*	50	Y	FACW
3. *Baccharis neglecta*	10	N	FAC
4. *Iva annua*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP9_AB_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10 YR 3/2	100	None				Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage pattern (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 05.15.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP9_WM_5.15

Investigator(s): Walt Meitzen Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5998762 Long: -98.59933259 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	15	Y	FAC
2. *Salix nigra*	10	Y	FACW
3. *Populus deltoides*	5	N	FAC
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	35	Y	FAC
2.			
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	90	Y	FACU
2. *Ambrosia trifida*	60	Y	FAC
3. *Torilis arvensis*	30	N	FAC
4. *Coreopsis tinctoria*	20	N	FAC
5. *Rudbeckia hirta*	15	N	FACU
6.			
7.			
8.			
9.			
10.			
	215	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP9_WM_5.15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 4/1	100	None				Sandy Loam	
4-8	10 YR 4/2	100	None				Sandy Loam	
8-18	10 YR 6/4	100	None				Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? **Yes** ____ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): 1"

Water Table Present? Yes ✓ No ____ Depth (inches): 1"

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 1"

Wetland Hydrology Present? **Yes** ✓ **No** ____

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

Remarks:

Five primary indicators surface water (A1), high water table (A2), saturation (A3), sediment deposit (B2), and drift deposits (B3) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP10_AB_7.11

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5686534 Long: -98.65357436 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus virginiana*	75	Y	UPL
2. *Quercus virginiana*	25	N	FACU
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	45	Y	FAC
2. *Forestiera pubescens*	10	N	FACU
3. *Juniperus virginiana*	5	N	UPL
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Calyptocarpus vialis*	50	Y	FAC
2. *Oxalis dillenii*	10	N	FACU
3. *Ambrosia trifida*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax bona-nox*	5	Y	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP10_AB_7.11

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP10_AB_8.7

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Terrace Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.6013097 Long: -98.38325715 Datum: NAD 83

Soil Map Unit Name: AuB - Austin silty clay, 1 to 3 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	80	Y	FAC
2. *Vachellia farnesiana*	35	Y	FACU
3. *Celtis laevigata*	20	N	FACU
4.			
	135	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *None*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP10_AB_8.7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/2	100	None				Loam	
6-16	10 YR 4/3	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Only hydrology indicator geomorphic position (D2) is present. Wetland hydrology is not present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.02.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP10_WM_8.2

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.59438223 Long: -98.5763728 Datum: NAD 83

Soil Map Unit Name: Ca - Anhalt clay, 0 to 2 percent slopes NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	10	Y	FAC
2. *Vachellia farnesiana*	10	Y	FACU
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Baccharis neglecta*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cyperus virens*	50	Y	FACW
2. *Chloris cucullata*	45	Y	FAC
3. *Paspalum urvillei*	15	N	FACW
4. *Ruellia metziae*	15	N	FAC
5. *Verbena hastata*	10	N	FACW
6.			
7.			
8.			
9.			
10.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Campsis radicans*	20	Y	FAC
2. *Vitis mustangensis*	10	Y	FAC
	30	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP10_WM_8.2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10 YR 4/2	100	None				Silty Loam	
1-7	10 YR 5/6	30	None				Clay	Fill Gravel
	10 YR 5/2	20	None				Clay	Fill Gravel
	10 YR 5/3	30	None				Clay	Fill Gravel
	10 YR 2/1	20	None				Clay	Fill Gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Compacted gravel/clay

Depth (inches): 7"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2) and water-stained leaves (B9), and one secondary indicator geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP11_AB_7.11

Investigator(s): Walt Meitzen, Austin Blaze Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.55837908 Long: -98.6627255 Datum: NAD 83

Soil Map Unit Name: PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Melia azedarach*	10	Y	FACU
2. *Celtis laevigata*	5	Y	FACU
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	20	Y	FAC
2. *Ligustrum sinense*	5	Y	UPL
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Sorghum halepense*	40	Y	FACU
2. *Ambrosia trifida*	35	Y	FAC
3. *Bidens tenuisecta*	30	Y	FACW
4. *Solidago altissima*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	25	Y	FACU
2.			
	25	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP11_AB_7.11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10 YR 2/1	100	None				Clay	
1-6	10 YR 2/1	60	None				Clay	
	10 YR 5/6	40	None				Gravel	
6-14	10 YR 2/1	100	None				Clay Loam	Some fill mixed in

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.02.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP11_AB_8.2

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60135723 Long: -98.53949749 Datum: NAD 83

Soil Map Unit Name: Tc - Tinn clay, 0 to 1 percent slopes, occasionally flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus virginiana*	60	Y	FACU
2. *Ulmus crassifolia*	40	Y	FAC
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Celtis laevigata*	30	Y	FACU
2. *Quercus shumardii*	15	Y	FAC
3. *Sapindus saponaria*	10	N	FAC
4.			
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	30	Y	FAC
2. *Chasmanthium latifolium*	10	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 70

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP11_AB_8.2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10 YR 2/1	100	None				Clay Loam	Small gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicator water-stained leaves (B9), and two secondary indicators drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.07.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP11_AB_8.7

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.60358508 Long: -98.36602123 Datum: NAD 83

Soil Map Unit Name: TaB - Eckrant cobbly clay, 1 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

One of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus alata*	40	Y	FACU
2. *Melia azedarach*	25	Y	FACU
3. *Celtis laevigata*	10	N	FACU
4. *Salix nigra*	10	N	FACW
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Diospyros texana*	10	Y	FAC
2. *Ulmus alata*	5	Y	FACU
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Elymus virginicus*	100	Y	FAC
2. *Bidens tenuisecta*	10	N	FACW
3. *Solidago altissima*	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis mustangensis*	5	Y	FAC
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP11_AB_8.7

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 10"

Hydric Soil Present? **Yes** ____ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): ____

Wetland Hydrology Present? **Yes** ✓ **No** ____

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.11.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP12_AB_7.11

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.55565137 Long: -98.66631237 Datum: NAD 83

Soil Map Unit Name: Cb - Crawford and Bexar stony soils NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Eleocharis palustris*	100	Y	OBL
2. *Paspalum dilatatum*	30	Y	FAC
3. *Cyperus virens*	5	N	FACW
4. *Verbena hastata*	5	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP12_AB_7.11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100	None				Loam	
6-7	10 YR 5/4	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone ruble

Depth (inches): 7"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two secondary indicators drainage patterns (B10) and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP12_AB_8.8

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.58448369 Long: -98.34804529 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
None of the necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vachellia farnesiana*	30	Y	FACU
2. *Prosopis glandulosa*	5	N	FACU
3.			
4.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vachellia farnesiana*	5	Y	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Iva annua*	60	Y	FAC
2. *Cynodon dactylon*	30	Y	FACU
3. *Paspalum urvillei*	20	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
The vegetative community did not pass the dominance test.

SOIL

Sampling Point: WDP12_AB_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-9	10 YR 3/2	100	None				Clay Loam	
9-16	10 YR 2/1	100	None				Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.12.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP13_AB_7.12

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.5905436 Long: -98.60410496 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:
Wetter than normal conditions were present. All three of the necessary wetland indicators are present. The WDP is located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	25	Y	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Persicaria hydropiperoides*	60	Y	OBL
2. *Cyperus virens*	30	Y	FACW
3. *Cyclachaena xanthiifolia*	10	N	FAC
4. *Cynodon dactylon*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP13_AB_7.12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 6/2	98	10 YR 5/6	2	C	PL	Silt	High organics
5-10	10 YR 5/2	95	10 YR 3/6	5	C	PL	Silty Sand	Increasing sand towards the bottom

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 10"

Hydric Soil Present? Yes ✓ No ___

Remarks:

Hydric soil indicator depleted matrix (F3) is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ✓ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Two primary indicators drift deposits (B3) and water-stained leaves (B9), and one secondary indicator oxidized rhizospheres (C3) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 08.08.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP13_AB_8.8

Investigator(s): Austin Blase, Claire Parra Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-2

Subregion (LRR): LRR I Lat: 29.59817476 Long: -98.35518033 Datum: NAD 83

Soil Map Unit Name: AuB - Austin silty clay, 1 to 3 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	25	Y	FAC
2. *Carya texana*	20	Y	FAC
3. *Vachellia farnesiana*	10	N	FACU
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus crassifolia*	10	Y	FAC
2. *Prosopis glandulosa*	5	Y	FACU
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	30	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP13_AB_8.8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 2/1	50	None				Silty Loam	
	10 YR 6/3	50	None				Silty Loam	
8-16	10 YR 4/4	100	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

One primary indicator drift deposits (B3) is present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.12.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP14_AB_7.12

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.5906226 Long: -98.60418251 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetter than normal conditions were present. Two of the three necessary wetland indicators is present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	60	Y	FAC
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	70	Y	FACU
2. *Cyclachaena xanthiifolia*	5	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP14_AB_7.12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 3/3	100	None				Sandy Loam	
6-10	10 YR 5/3	100	None				Clay Loam	
10-14	10 YR 6/4	60	None				Fine Sand	
	10 YR 4/2	40	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): N/A

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

One primary indicators water marks (B1), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.12.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP15_AB_7.12

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-1

Subregion (LRR): LRR I Lat: 29.5933346 Long: -98.59947647 Datum: NAD 83

Soil Map Unit Name: Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	25	Y	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Sesbania drummondii*	25	Y	FACW
2. *Fraxinus pennsylvanica*	5	N	FAC
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Cynodon dactylon*	60	Y	FACU
2. *Ambrosia trifida*	50	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP15_AB_7.12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 5/3	100					Loam	
4-12	10 YR 5/3	95	7.5 YR 5/6	5	C	PL	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock Gravel

Depth (inches): 12

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

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

Remarks:

Two primary indicators sediment deposits (B2) and drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Loop 1604 from SH 16 to I-35 City/County: Bexar County Sampling Date: 07.12.2019

Applicant/Owner: TxDOT State: TX Sampling Point: WDP16_AB_7.12

Investigator(s): Walt Meitzen, Austin Blase Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): LRR I Lat: 29.60443934 Long: -98.60098283 Datum: NAD 83

Soil Map Unit Name: Pt - Pits and Quarries, 1 to 90 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Wetter than normal conditions were present. Two of the three necessary wetland indicators are present. The WDP is not located within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus rubra*	35	Y	FACU
2. *Vachellia farnesiana*	30	Y	FACU
3. *Salix nigra*	10	N	FACW
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Populus deltoides*	10	Y	FAC
2. *Ulmus crassifolia*	5	Y	FAC
3. *Baccharis neglecta*	5	Y	FAC
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia trifida*	35	Y	FAC
2. *Torilis arvensis*	30	Y	FAC
3. *Cyclachaena xanthiifolia*	10	N	FAC
4. *Teucrium canadense*	10	N	FACW
5. *Elymus canadensis*	5	N	FACW
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Rubus trivialis*	30	Y	FACU
2.			
	30	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
The vegetative community passes the dominance test.

SOIL

Sampling Point: WDP16_AB_7.12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 2/1	100	None				Sandy Loam	
2-8	10 YR 5/3	100	None				Firm Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Limestone

Depth (inches): 8"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Two primary indicators sediment deposits (B2) and drift deposits (B3), and two secondary indicators drainage patterns (B10), and geomorphic position (D2) are present.

Attachment E
Water Feature Data Forms

Water Feature Investigation - Field Data Form

Project: 1604 Date 7.10.19

Investigator(s): AB, LM

Water Feature # N/A Feature Name E1 EB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

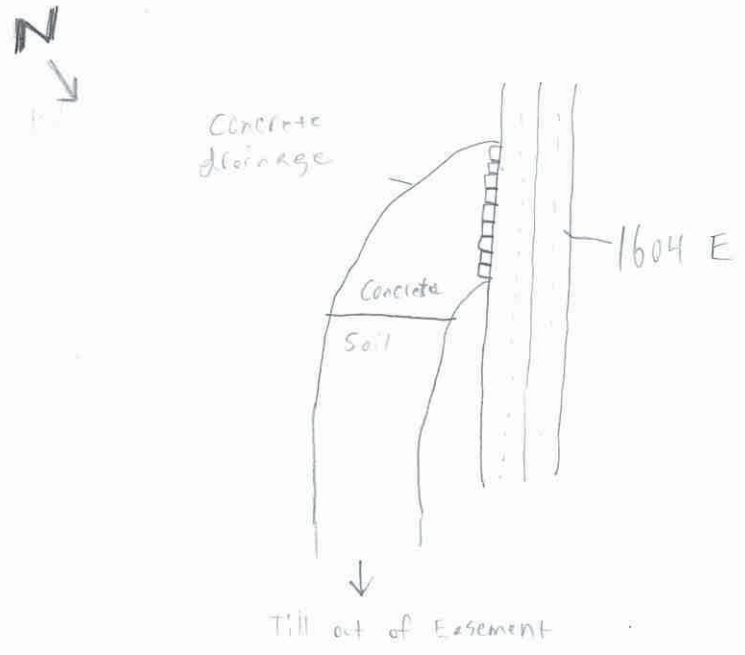
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #___) ____ Bridge

9 Box (es): #___ size 3x6 ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.11.19

Investigator(s): AB, WM

Water Feature # N/A Feature Name E1WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

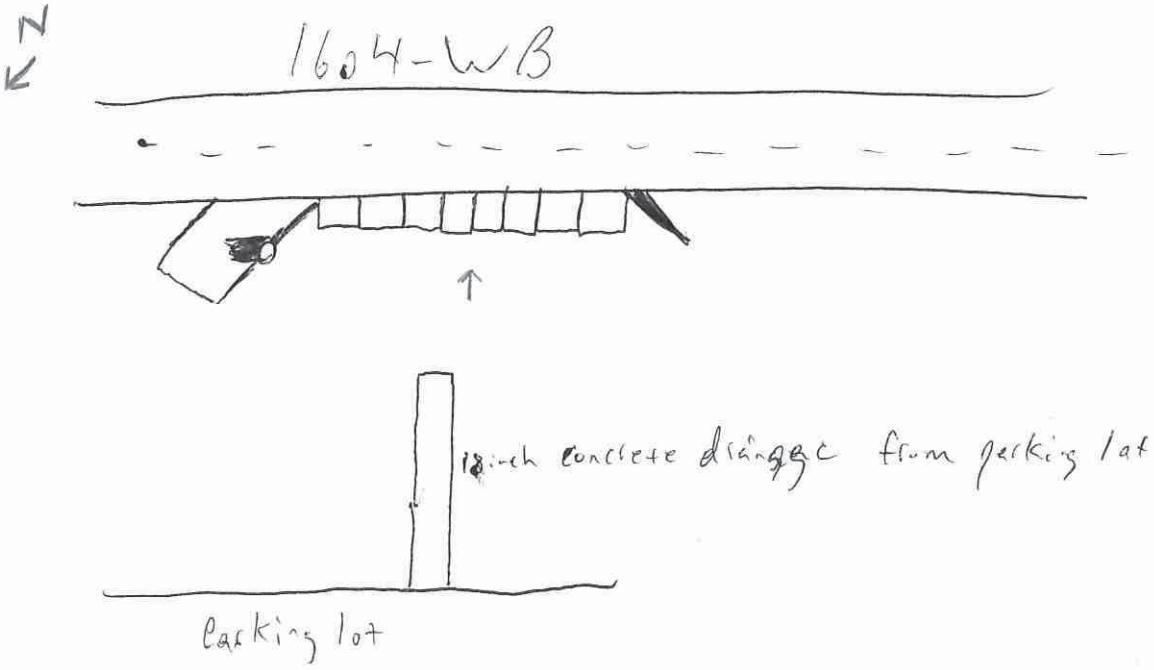
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

1 Pipe (s): #___) 24inch ____ Bridge

8 Box (es): #___ size 3x9 ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 7/10

Investigator(s): AB, WM

Water Feature # 1 Feature Name E2EB

Structure # _____ Station # _____

crossing #1

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

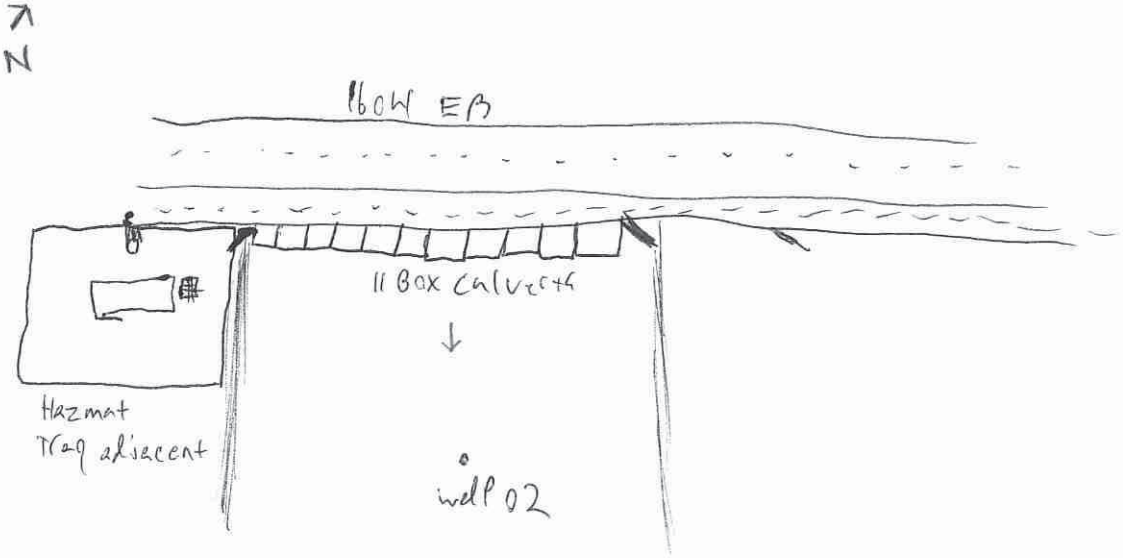
__ Pipe (s): #___)

|| Box (es): #___ size 4X06

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/11

Investigator(s): AB + WM

Water Feature # 1 Feature Name EOB 2 WB

Structure # _____ Station # _____

Crossing 1

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	6.4 Ft	NA	
Upstream above ROW	2.5 ft	NA	standing water
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

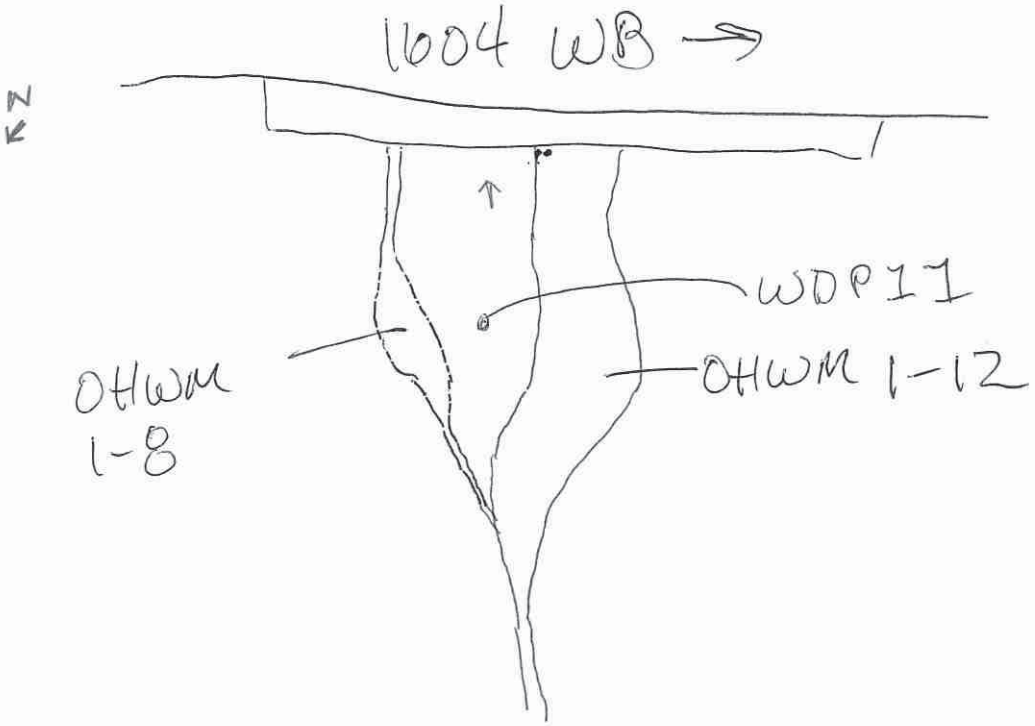
__ Pipe (s): #___)

1 Box (es): #8 size 4x8

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.10.19

Investigator(s): AB & WM

Water Feature # French Creek Feature Name E03EB

Structure # _____ Station #_____

crossing 2

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	9.1 ft	N	
Downstream below ROW	53.9 ft	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

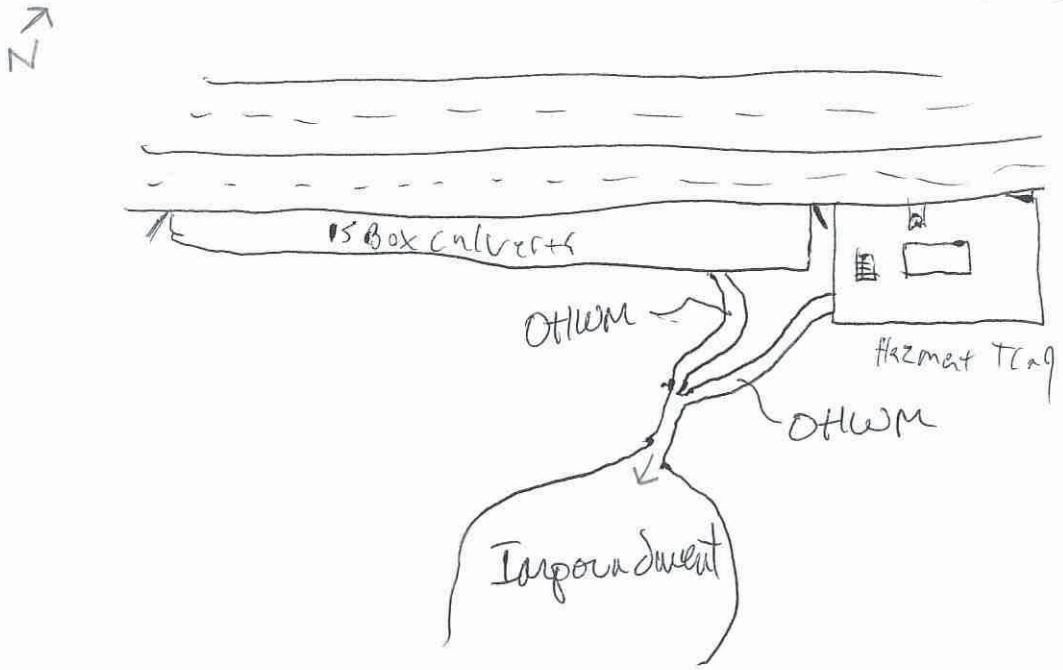
__ Pipe (s): #___)

15 Box (es): #___ size 4x6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/11

Investigator(s): AB + WM

Water Feature # French Creek Feature Name E03WB

Structure # _____ Station #_____

crossing 2

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	45.8 ft	N	
Upstream above ROW	14-38 ft	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

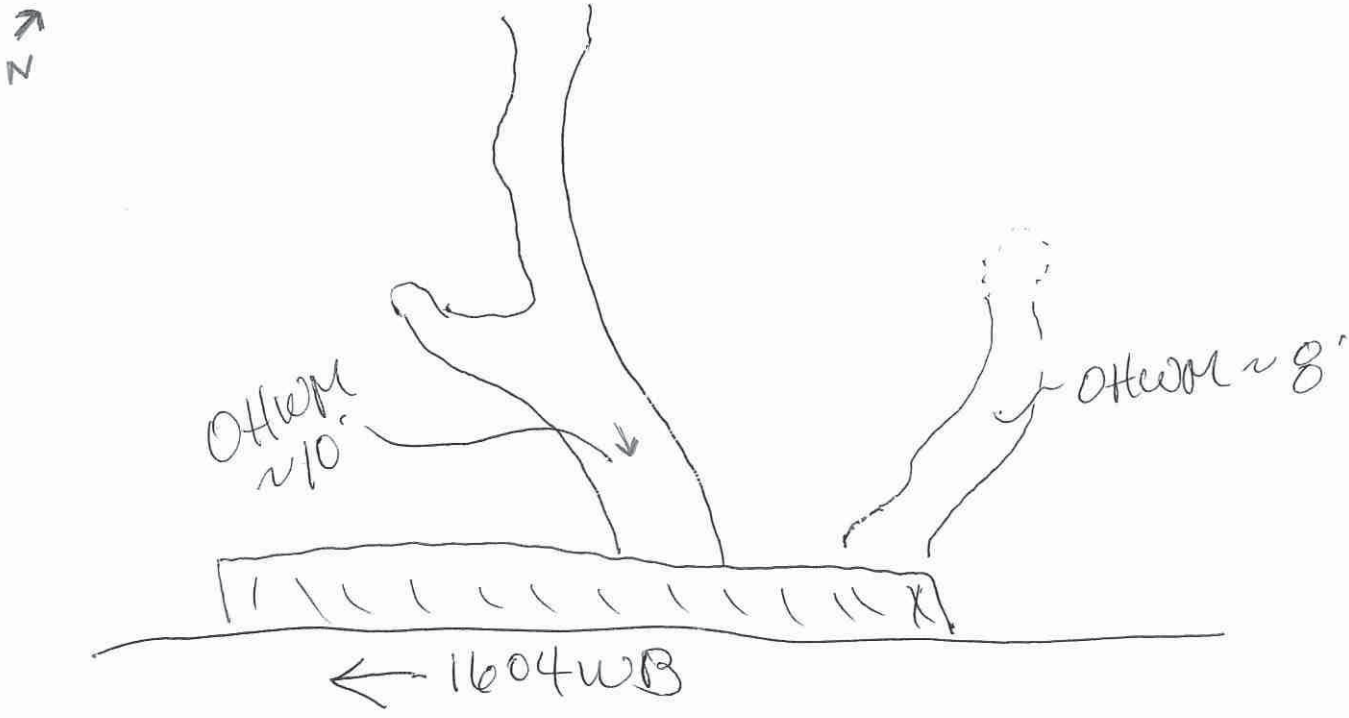
__ Pipe (s): #___)

X Box (es): #15 size 5X6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.10.19

Investigator(s): AB, WM

Water Feature # 2 Feature Name ~~2~~ E4 EB

Structure # _____ Station # _____

Crossing 3

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	~8.5 ft	N	
Downstream below ROW	4-14 ft	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

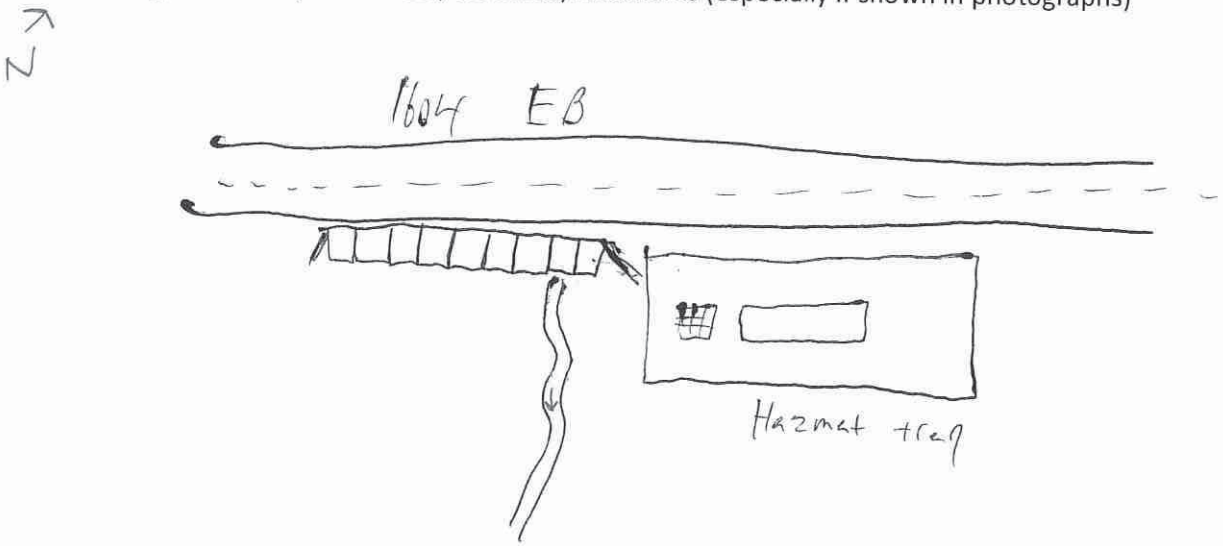
__ Pipe (s): #___)

2 Box (es): #___ size 4 x 6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.11.19

Investigator(s): AB, WM

Water Feature # 2 Feature Name E4 WB

Structure # _____ Station # _____

Crossing 3

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	40.8 ft	N	
Upstream above ROW	10-30ft	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

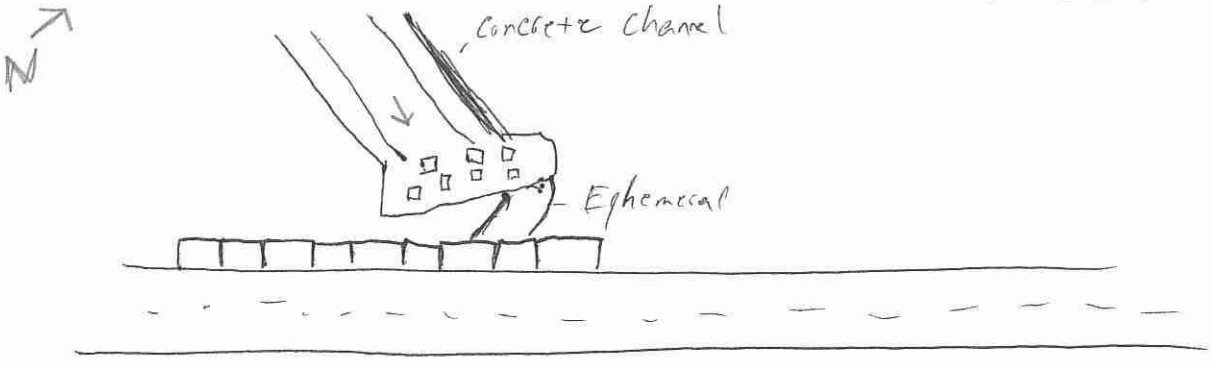
__ Pipe (s): #___)

2 Box (es): #___ size 4x8

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 5.11.19

Investigator(s): AB, WM

Water Feature # 3 & 4 Feature Name E5a WB

Structure # Crossing 4 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW	NA	NA	
Downstream below ROW	15 feet	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

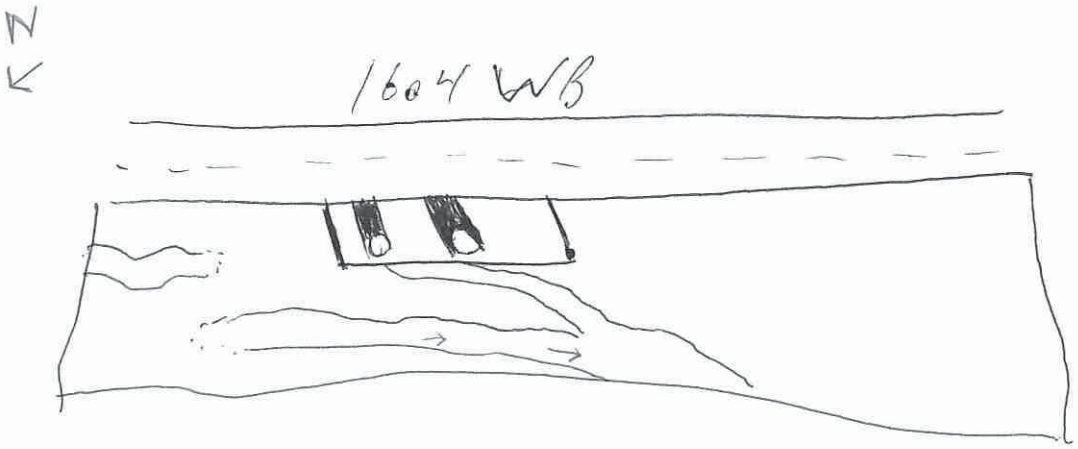
2 (Pipe (s): #___)

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.11.19

Investigator(s): AB, WM

Water Feature # N/A Feature Name Row on 1560

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

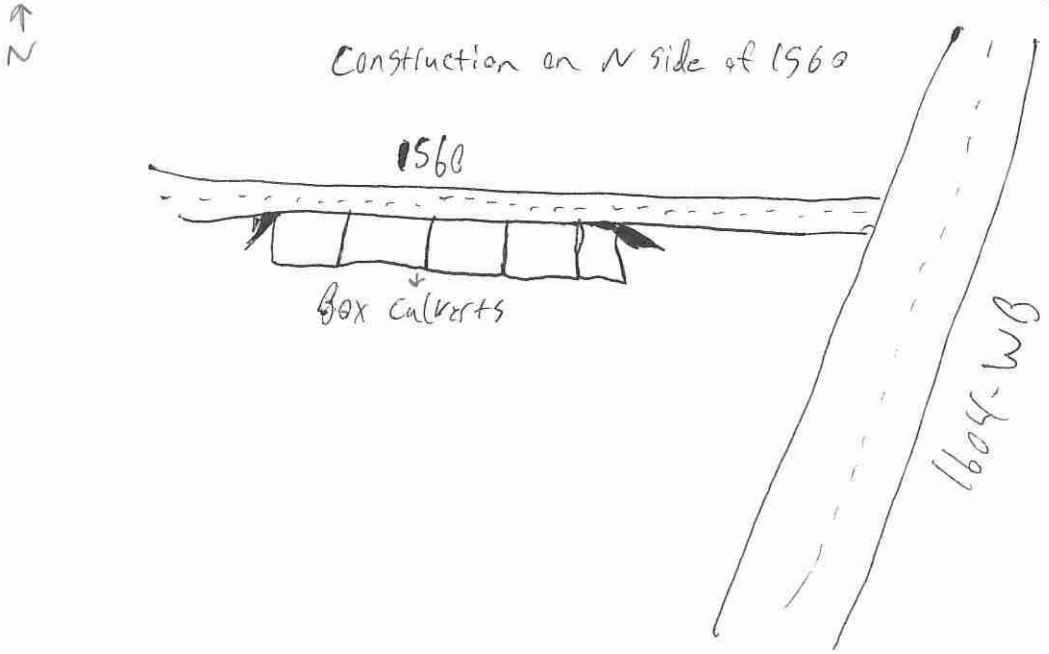
__ Pipe (s): #___)

4 Box (es): #___ size 5x9

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/10

Investigator(s): WM + AB

Water Feature # Huesta Creek Feature Name E05b WB & EB

Structure # _____ Station #_____

Crossing 5

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	~20' abv Ease ~15' w/in Ease	N/A	
Downstream in ROW	N/A	N/A	
Downstream below ROW	OHWM starts near Easement edge	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

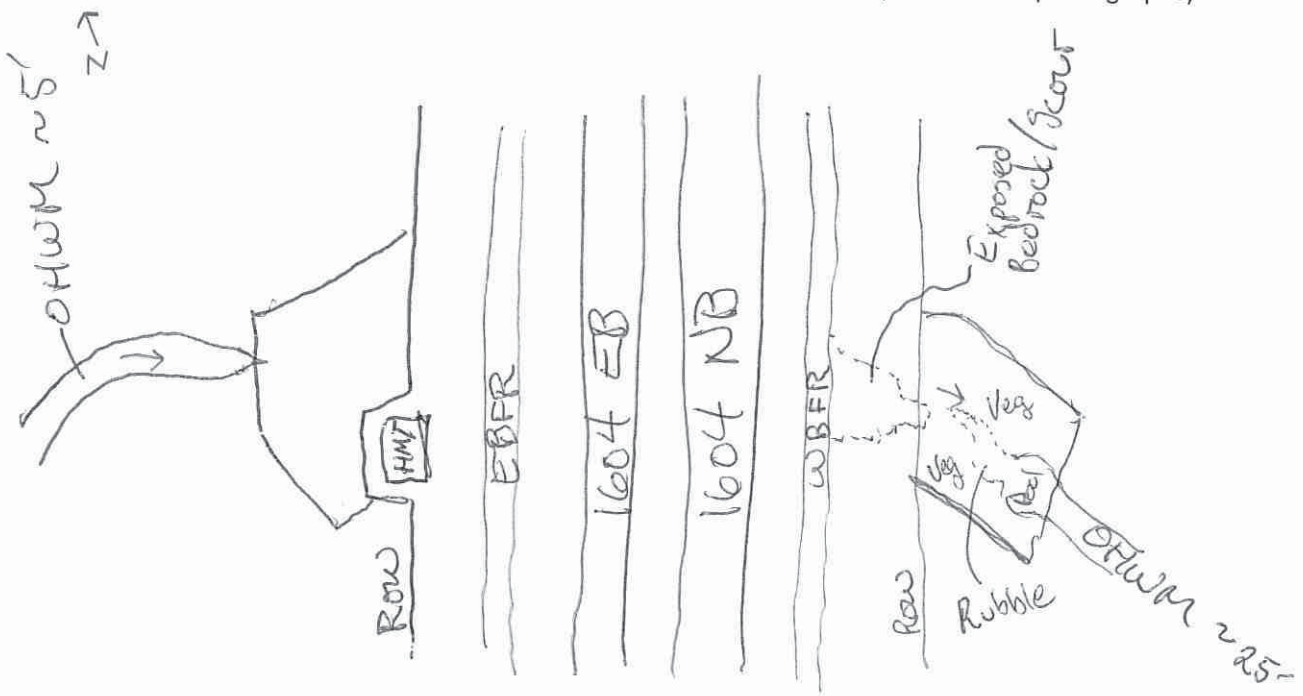
__ Pipe (s): #___)

__ Box (es): #___ size_____

4 ___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 Date 7/10

Investigator(s): AB + WM

Water Feature # 5 Feature Name E06EB

Structure # _____ Station # _____

Crossing 6

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	6-8' w/n Esmt 0 w/n ROW	N/A	
Downstream below ROW	4-20'	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

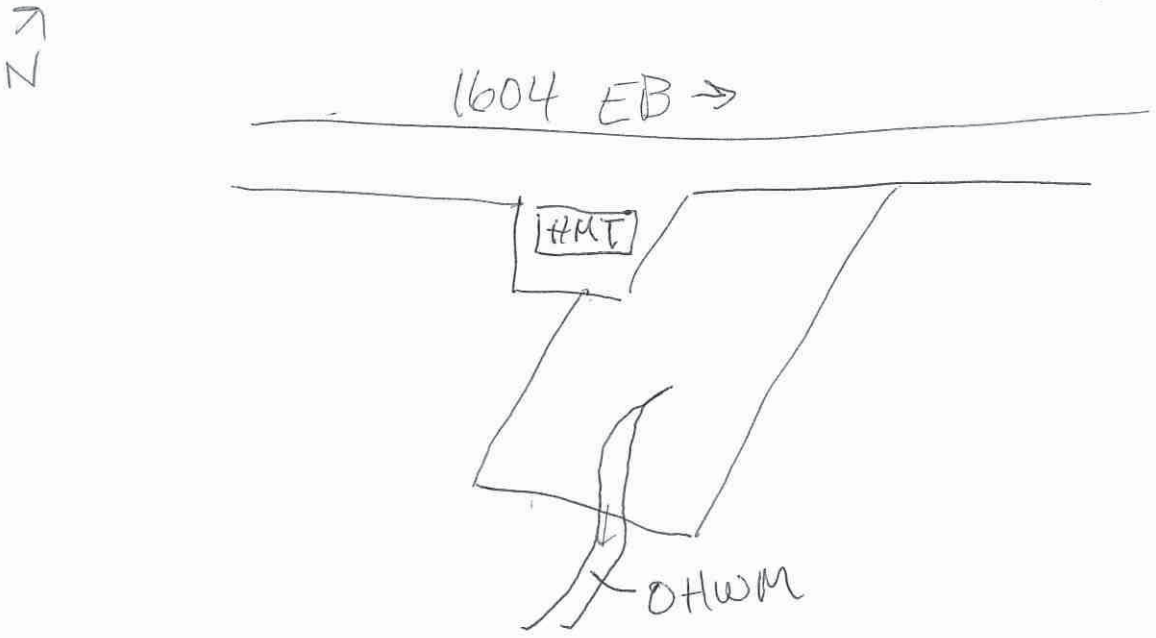
__ Pipe (s): #___)

9 Box (es): #___ size 6 x 4

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/11

Investigator(s): AB & WM

Water Feature # 5 Feature Name EO6WB

Structure # _____ Station # _____

Crossing 6

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	18	N	
Upstream above ROW	6-8	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

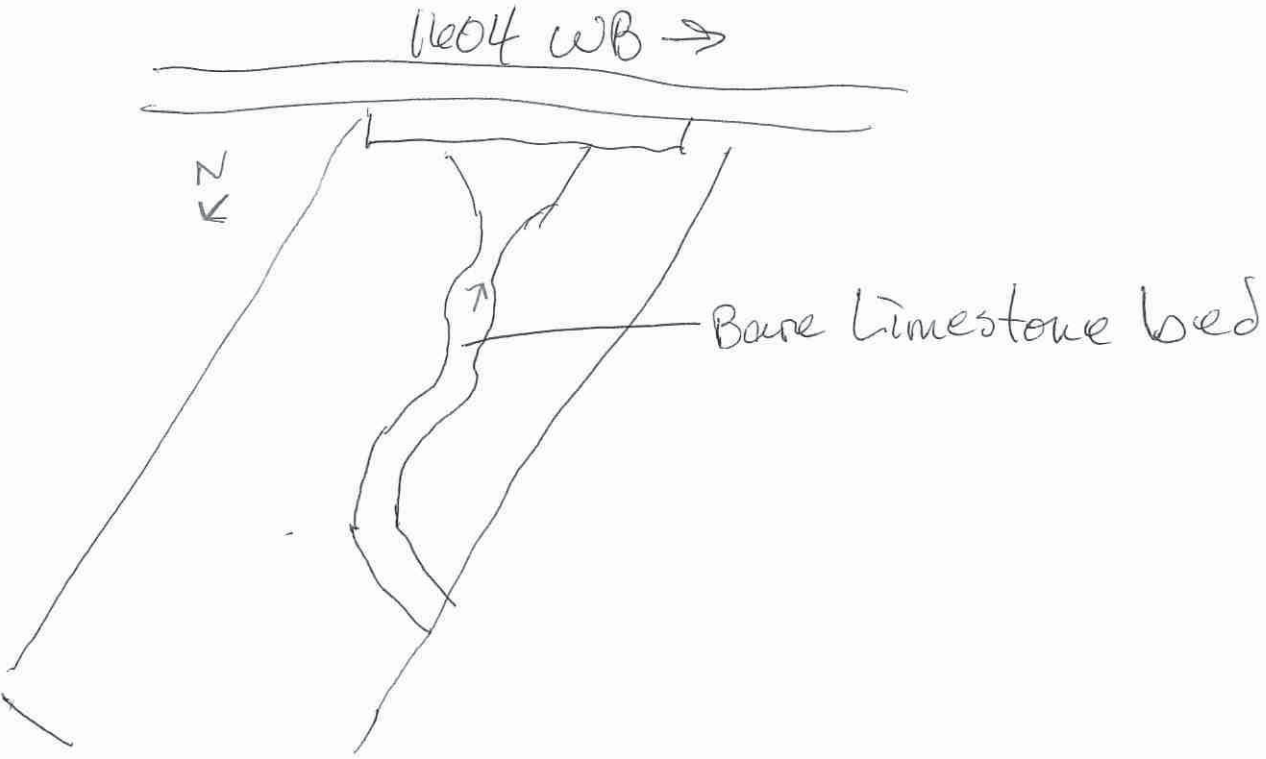
__ Pipe (s): #___)

Y Box (es): # 9 size 16x4

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 Date: 7/10

Investigator(s): AB + WM

Water Feature # 6 Feature Name E07EB

Structure # Crossing 7 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	7.8'	N	
Downstream below ROW	~2'	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

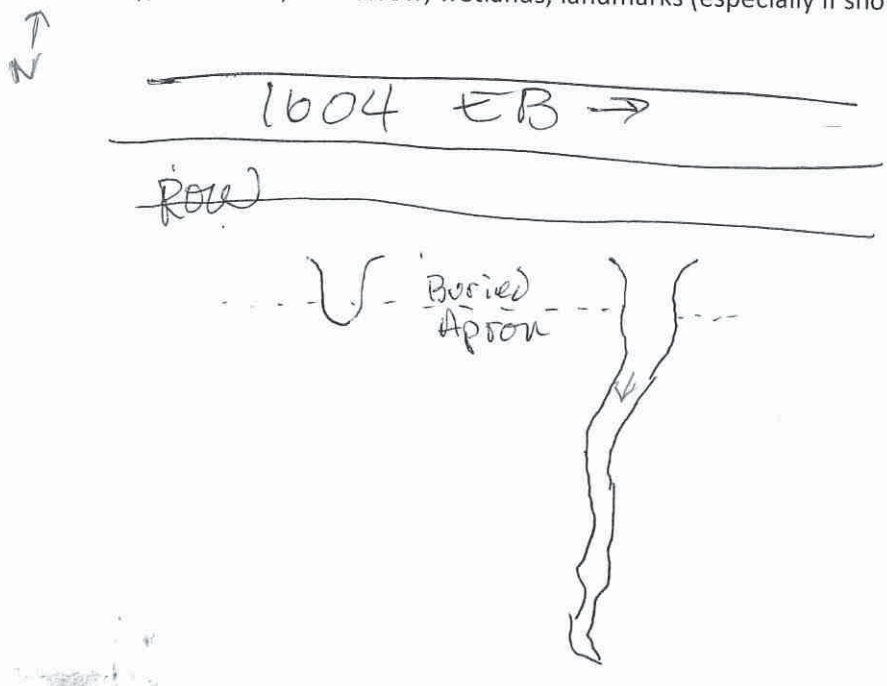
___ Pipe (s): #___

X Box (es): #_9_ size 3X7

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16-35N Date 7/10/19

Investigator(s): WM & AB

Water Feature # 8 & 7 Feature Name EOBEB & EOBWB

Structure # _____ Station # _____

Crossing 8

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	5-10		
Upstream above ROW	10-12		
Downstream in ROW	Obscured		
Downstream below ROW	5-10		

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

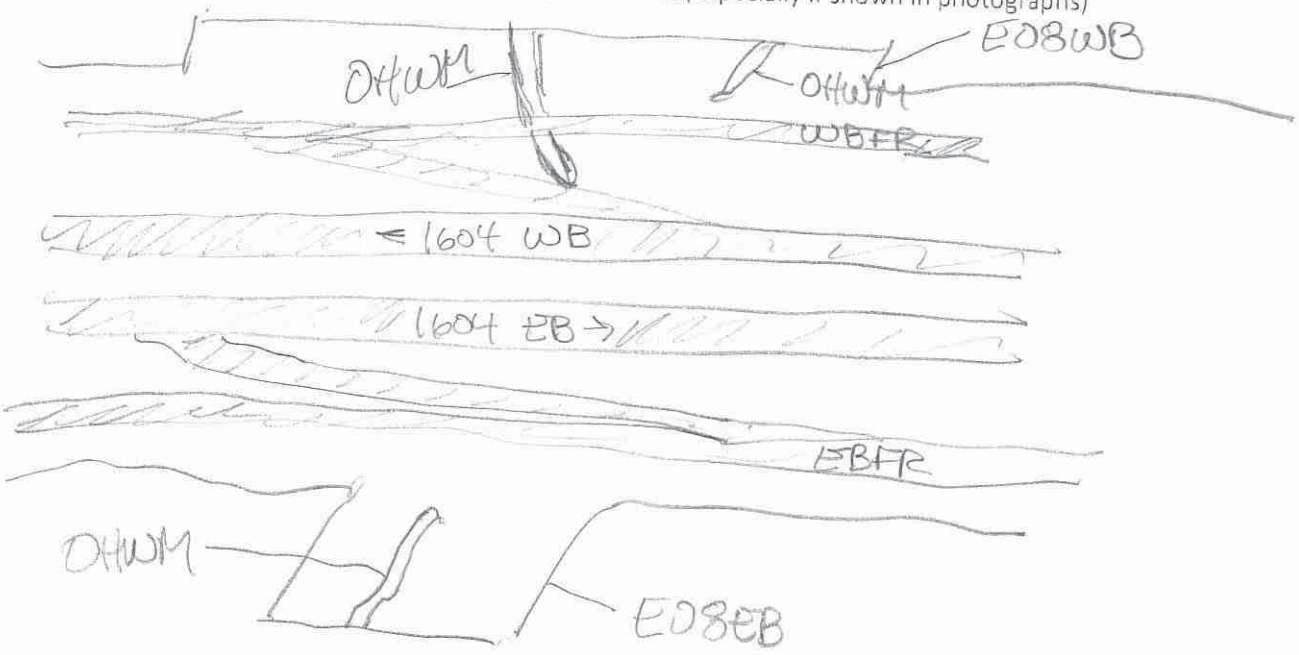
__ Pipe (s): #___)

__ Box (es): #___ size_____

X Bridge (6)

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 Date 7/11

Investigator(s):

Water Feature # 9 Feature Name E09 EB

Structure # Station #

Crossing 9

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	~6'	N	
Downstream below ROW	2-4'	N	Standing water Flowing water

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

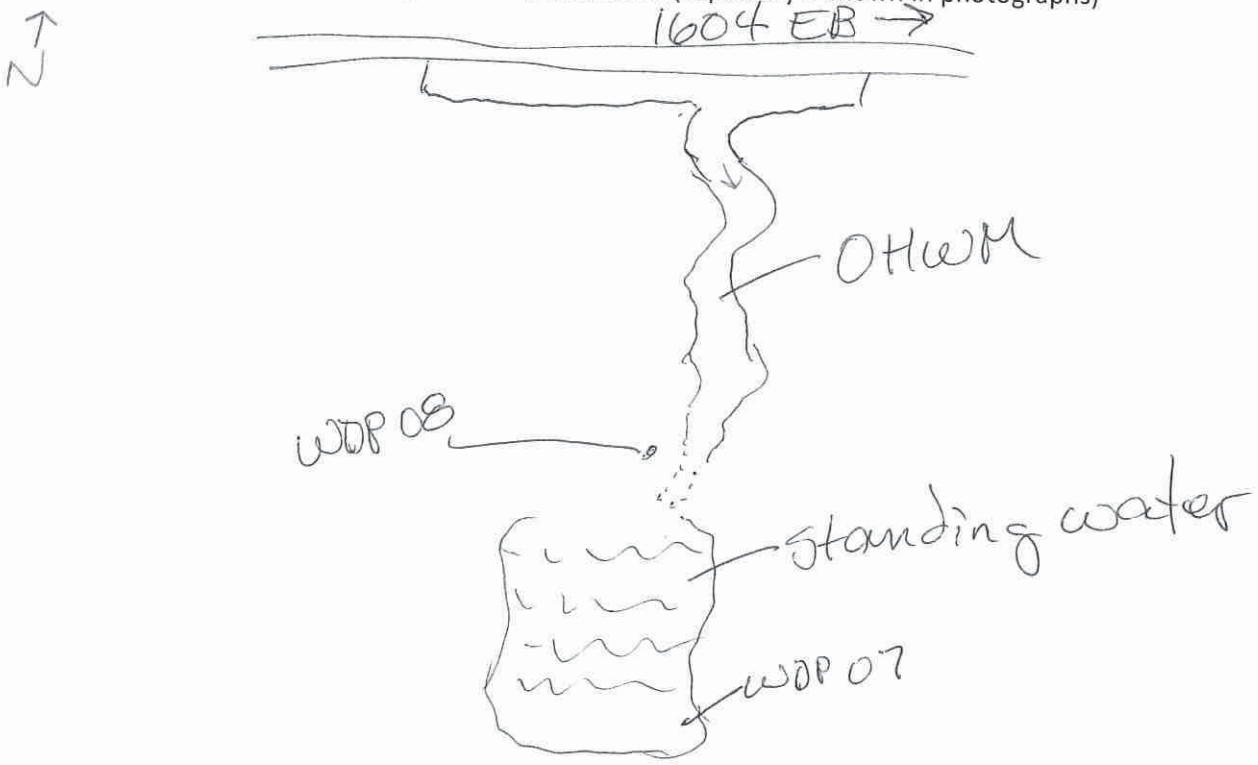
___ Pipe (s): #___)

X Box (es): #5 size ~~8~~ X 10

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 Date 7.11.19

Investigator(s): AB, WM

Water Feature # 9 Feature Name E 9 WB

Structure # Crossing 9 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	1 foot	NA	
Upstream above ROW	2-5 feet	NA	flowing water
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

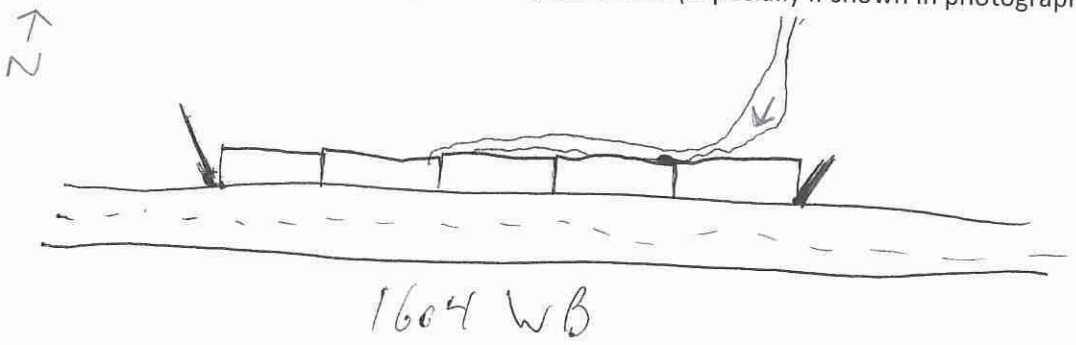
__ Pipe (s): #___)

5 Box (es): #___ size 5x10

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



98384

Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 7/31

Investigator(s): WM, AB

Water Feature # 11 Feature Name E10 - I-10 EB

Structure # _____ Station # _____

CROSSING 11

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	15'	N/A	9SMH
Upstream above ROW	25'	NA	Bedrock
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

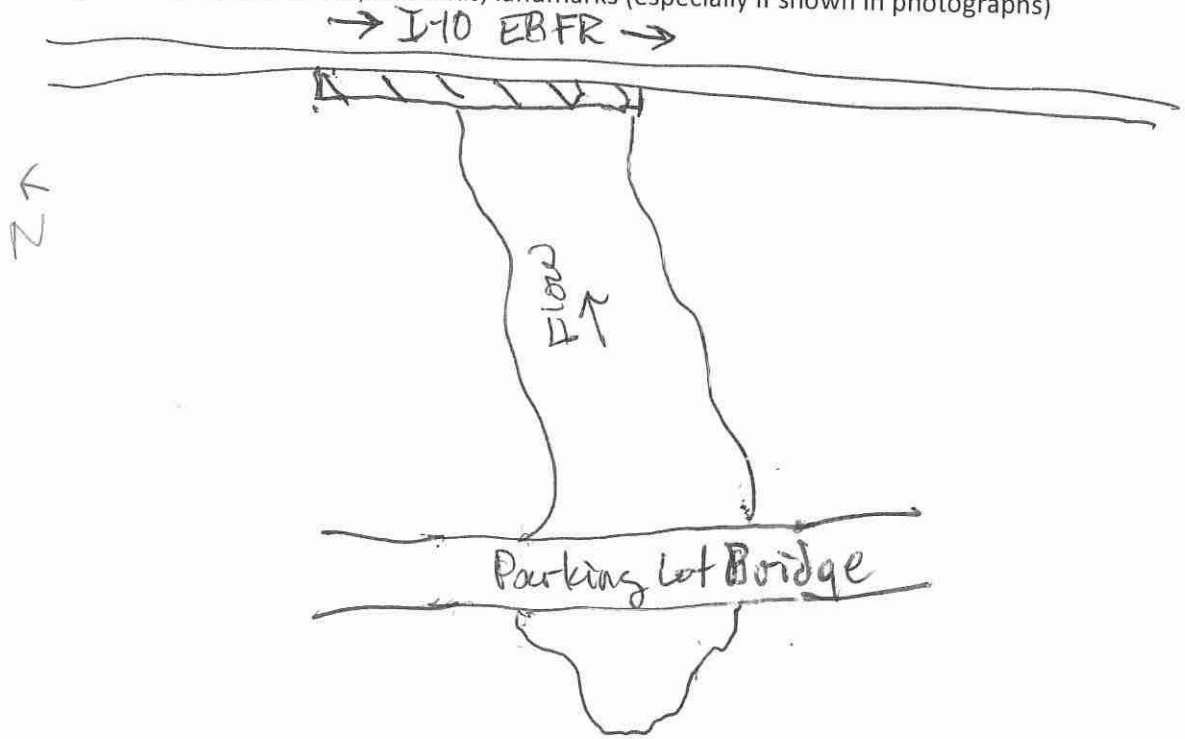
__ Pipe (s): #___)

__ Box (es): # 5 size 6x6
#1 size 4X10

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.31.19

Investigator(s): AB, WM

Water Feature # N/A Feature Name Across From Bass pro South

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

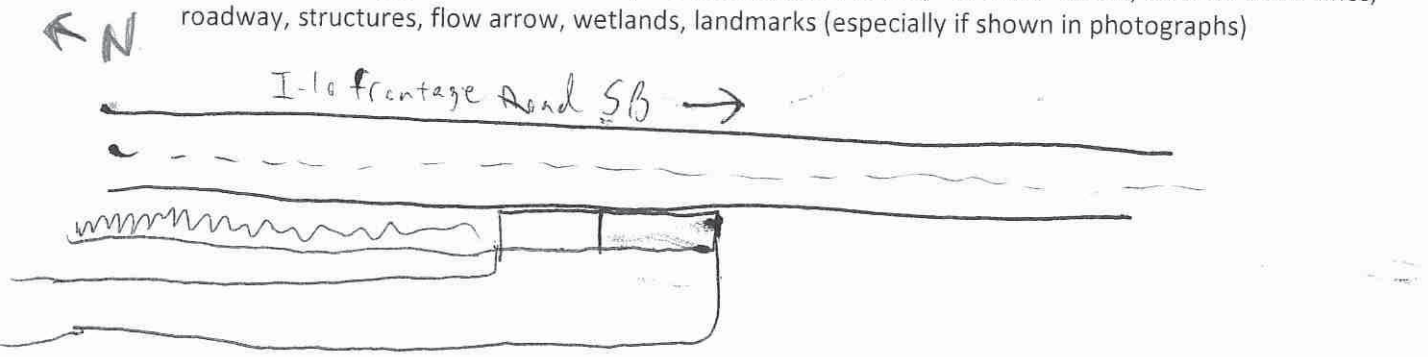
__ Pipe (s): #___)

2 Box (es): #___ size 4X8

____ Bridge

____ Other (explain) Mapped as NWI feature

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Concrete drainage channel to culverts and edge of ROW

No OHWM

Water Feature Investigation - Field Data Form

Project: 1604 Date 7.31.19

Investigator(s): AB, WM

Water Feature # N/A Feature Name Access from Bass Pro North

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

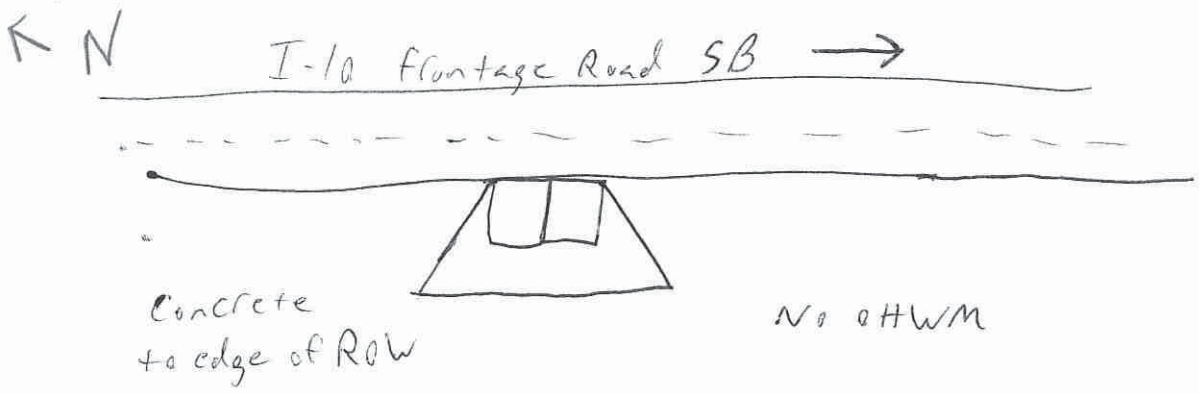
__ Pipe (s): #___)

2 Box (es): #___ size 6x6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.31.19

Investigator(s): AB, WM

Water Feature # 10 Feature Name ~~[illegible]~~ I0N-SB

Structure # Station #

Crossing 10

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	6-15'	NA	NWI feature
Upstream above ROW	N/A	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

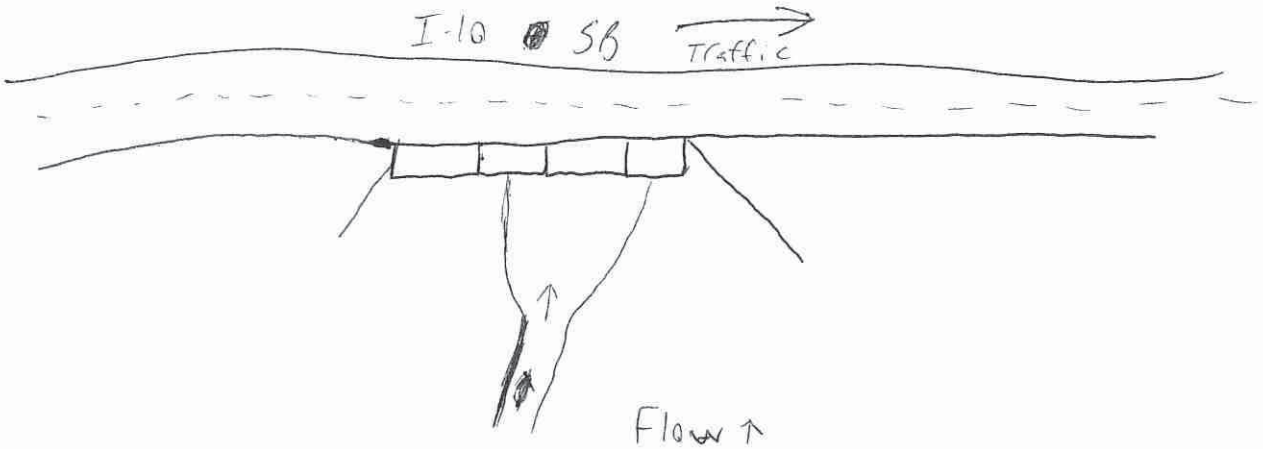
__ Pipe (s): #___)

4 Box (es): #___ size 5 x 8

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/12

Investigator(s): AB & WM

Water Feature # Leon Cr. Feature Name Lean Creek #2

Structure # _____ Station #_____

Crossing 12

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	20-25	N	
Upstream above ROW	20-25	N	
Downstream in ROW	20-25	N	
Downstream below ROW	25-35	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #___)

___ Box (es): #___ size_____

X Bridge 3

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

Water Feature Investigation - Field Data Form

Project:_____ Date 7/12

Investigator(s): AB + WM

Water Feature # Leon Cr Feature Name Leon CR 03 E11

Structure # _____ Station #_____

crossing 13

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	10-20	N	
Upstream above ROW	150	N	
Downstream in ROW	150	N	
Downstream below ROW	20	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

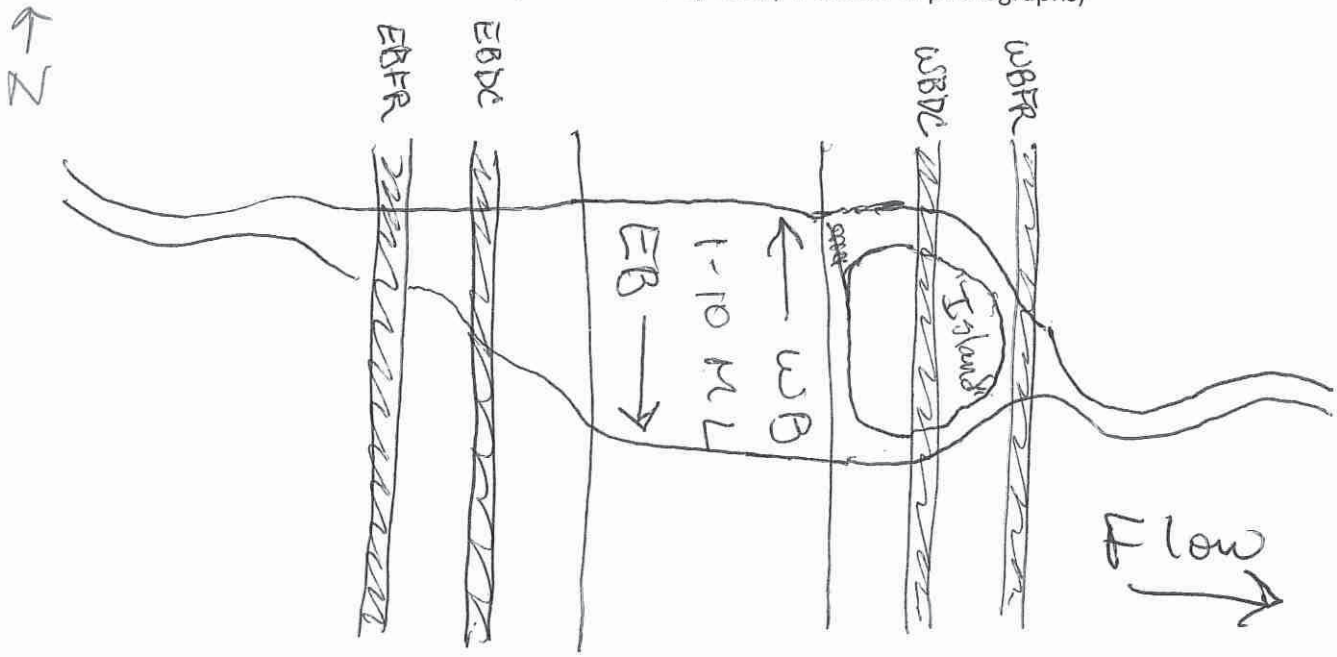
__ Pipe (s): #___)

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 160-1 Date 2.12.19

Investigator(s): AG, WM

Water Feature # Lean Cr. Feature Name Crossing lean creek #2

Structure # Crossing 14 Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	10-12 ft	N	
Upstream above ROW	10-12 ft	N	
Downstream in ROW	10-12 ft	N	
Downstream below ROW	10-12	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #___)

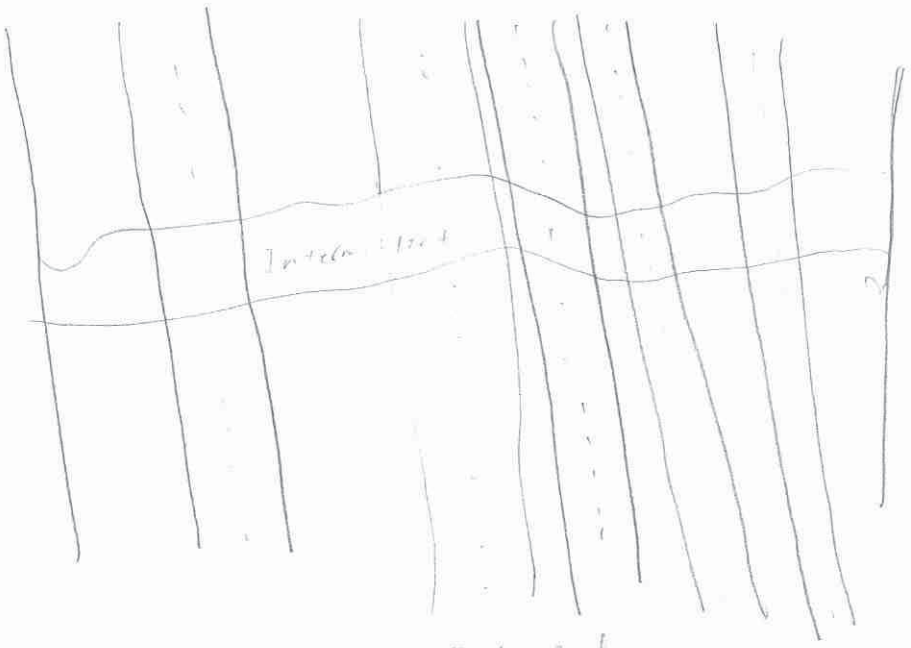
__ Box (es): #___ size_____

5 Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N ↑



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Water Feature Investigation - Field Data Form

Project: 1604 Date 7/12

Investigator(s): AB + WM

Water Feature # N/A Feature Name Leon Creek

Structure # _____ Station #_____

crossing 15

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	13-65'	Y	standing water
Upstream above ROW			"
Downstream in ROW	10-15'	N	"
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

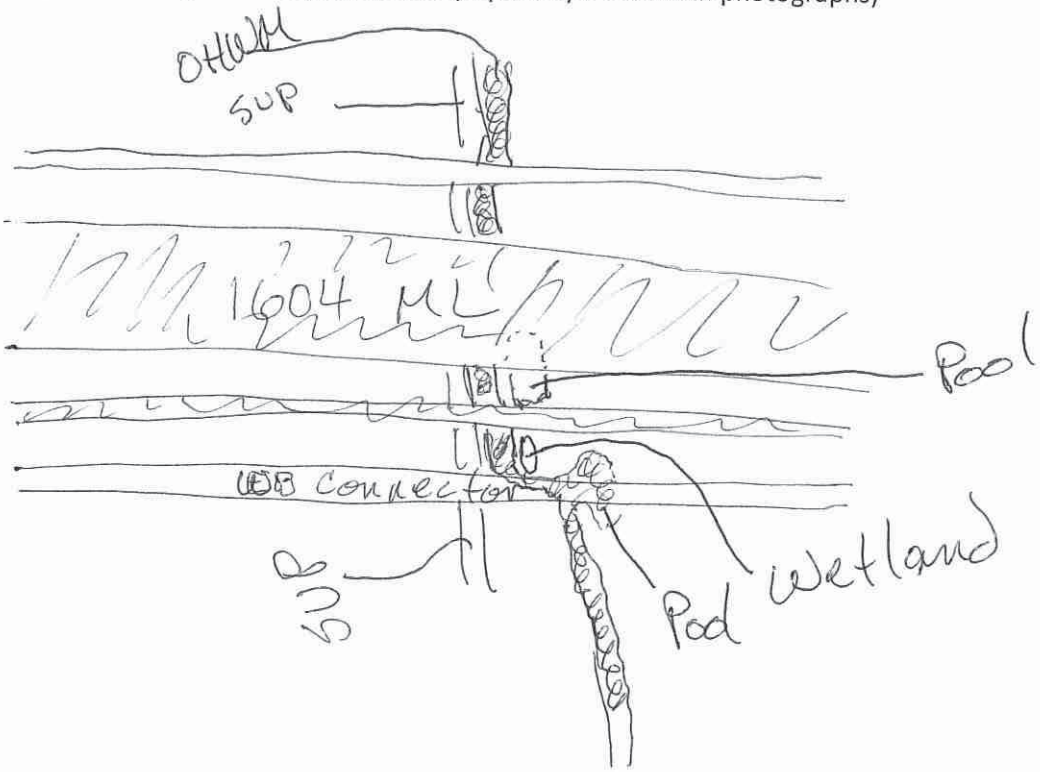
__ Pipe (s): #___)

__ Box (es): #___ size_____

X Bridge 5 bridges

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 (16-35) Date 7/31

Investigator(s): WM AB

Water Feature # _____ Feature Name E12 EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	X		
Upstream above ROW	X		
Downstream in ROW	N/A	N/A	
Downstream below ROW	0-12	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

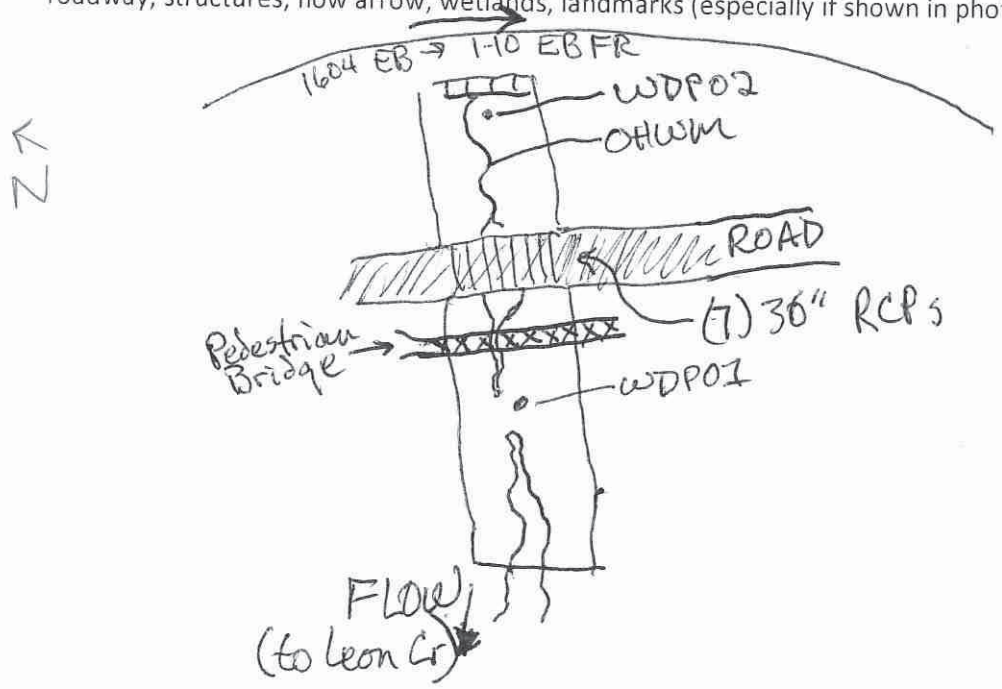
✓ Pipe (s): # 7) 36" (see below

✓ Box (es): # 4 size 3 X 6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 (6-35) Date 7/31

Investigator(s): AB + WM

Water Feature # _____ Feature Name E13EB

Structure # Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	~15	NA	
Downstream below ROW	0-15	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

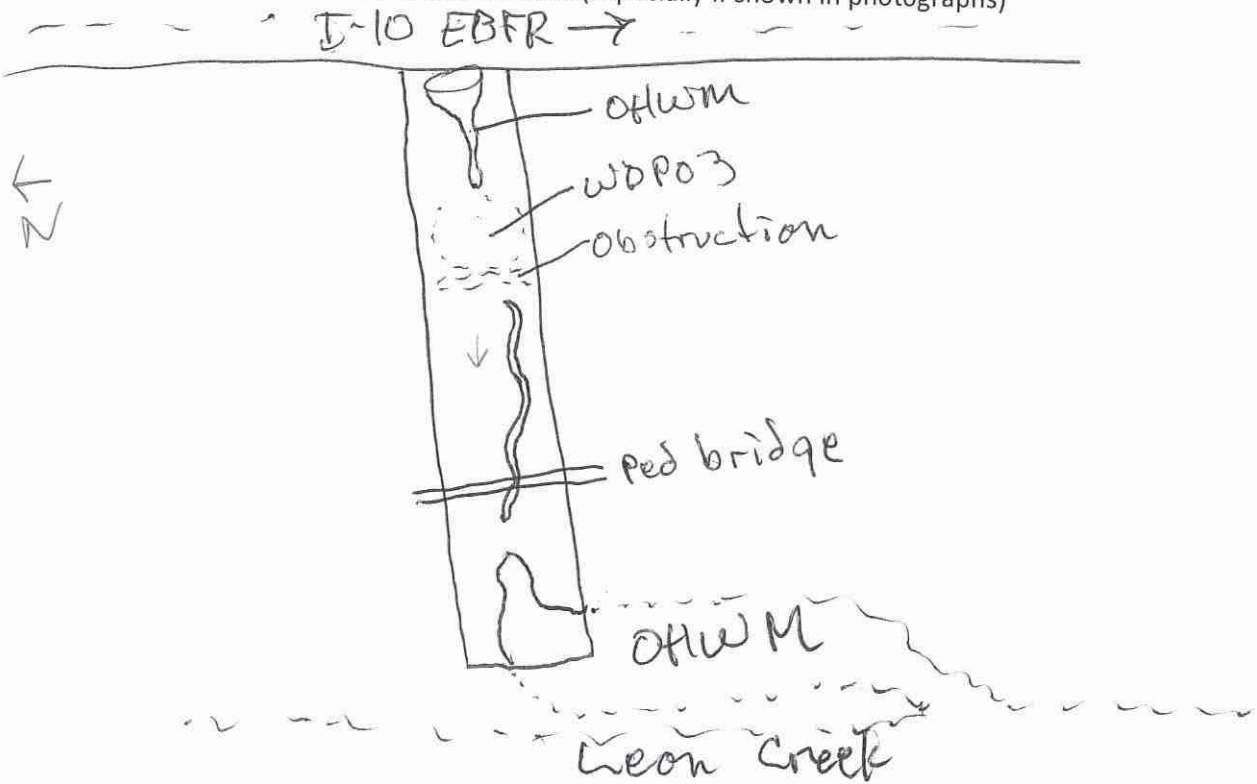
1 Pipe (s): #___)

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: A1604 Date 7.31.19

Investigator(s): AB, WM

Water Feature # 12 Feature Name E14EB

Structure # _____ Station # _____

Crossing 16

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW	NA	NA	
Downstream below ROW	2-3'	Y Emergent	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

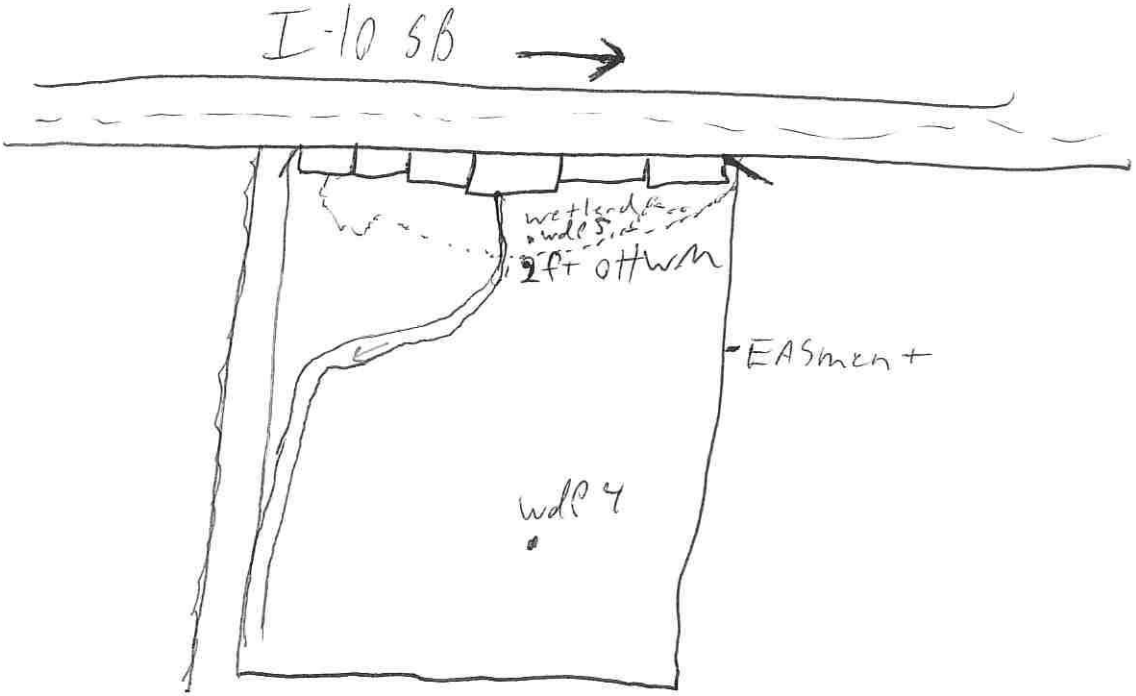
__ Pipe (s): #___)

__6__ Box (es): #___ size 3 x 6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7/31

Investigator(s): AB + WM

Water Feature # N/A Feature Name E16NB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

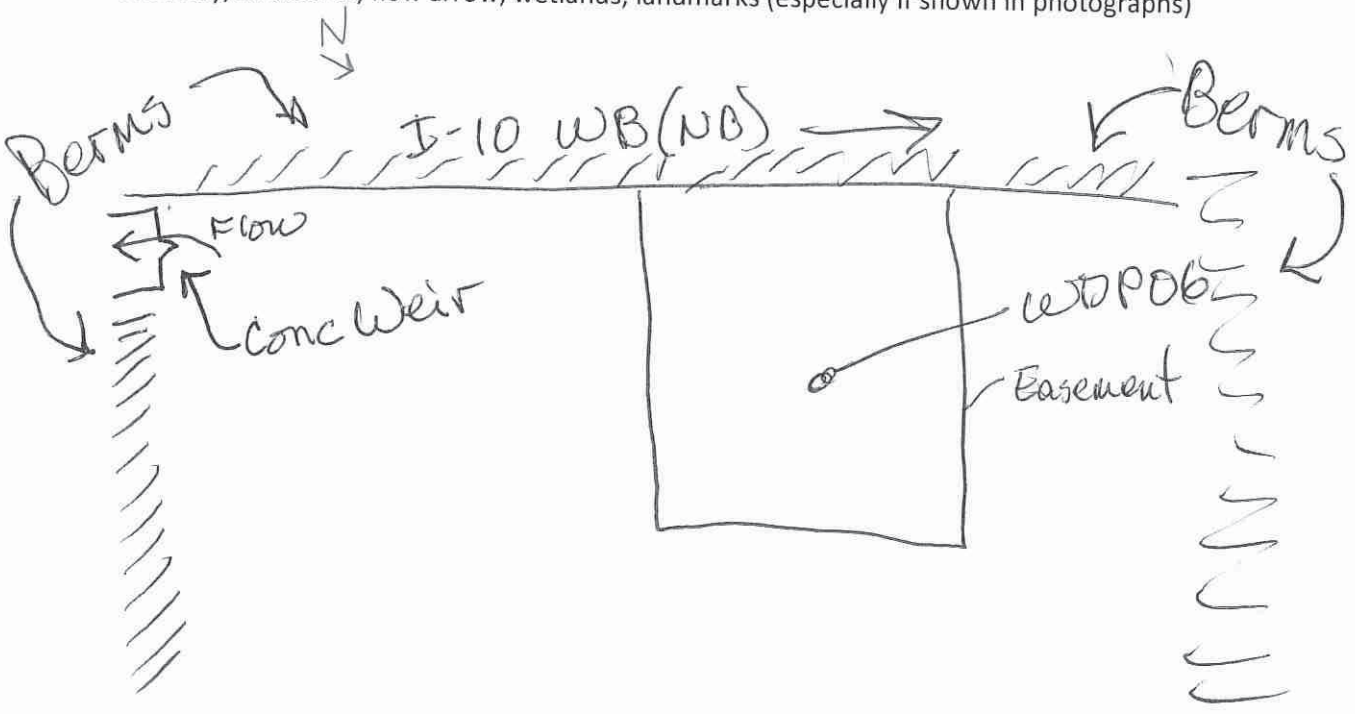
__ Pipe (s): #___)

__ Box (es): #___ size_____

____ Bridge

____ Other (explain) Concrete Weir (not in ROW or easement)

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/2

Investigator(s): AB + NM

Water Feature # N/A Feature Name E 18 WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

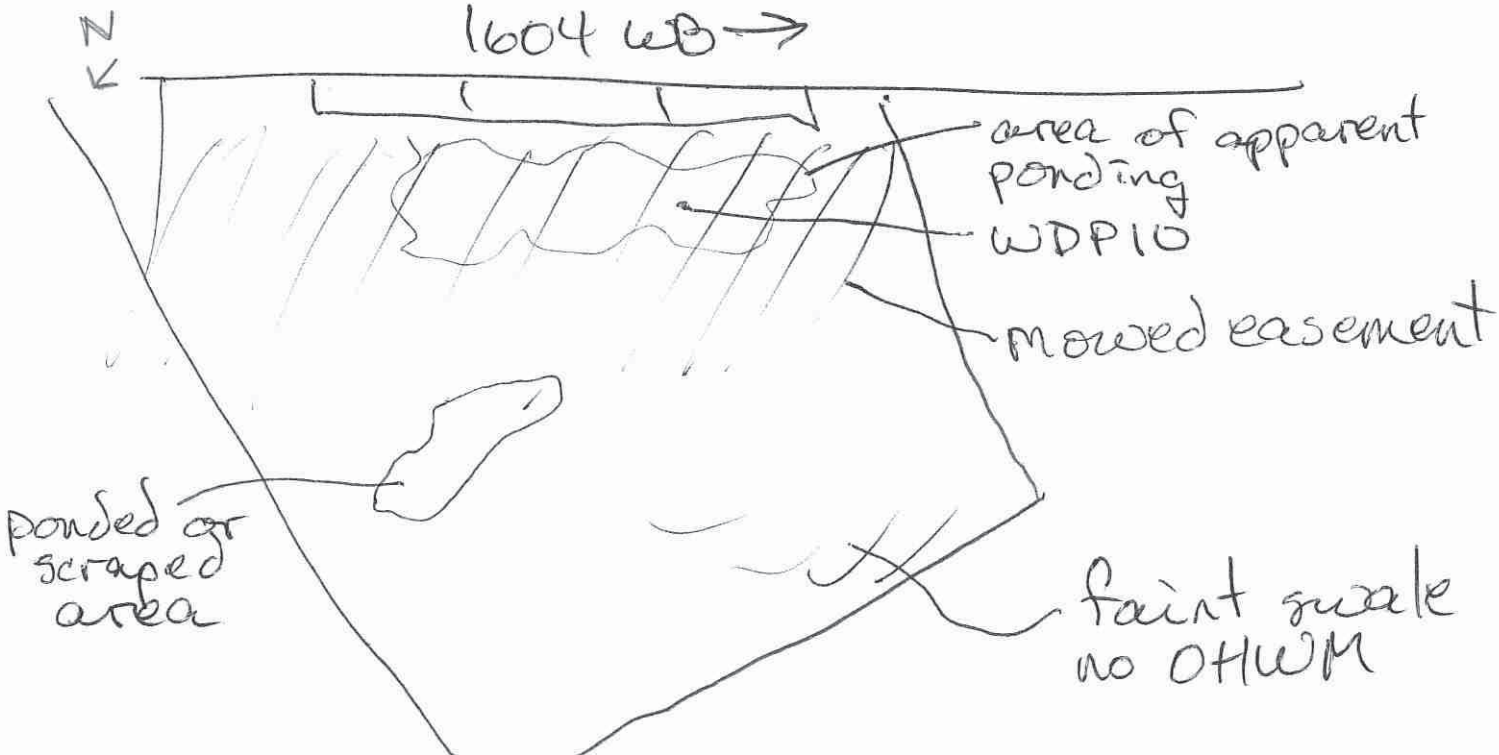
__ Pipe (s): #___)

X Box (es): #3 size 4x10

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 (16-35) Date 8/1

Investigator(s): AB + WM

Water Feature # _____ Feature Name ~~E19EB~~

Structure # _____ Station #_____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	12	No	
Downstream below ROW	1-20	No	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

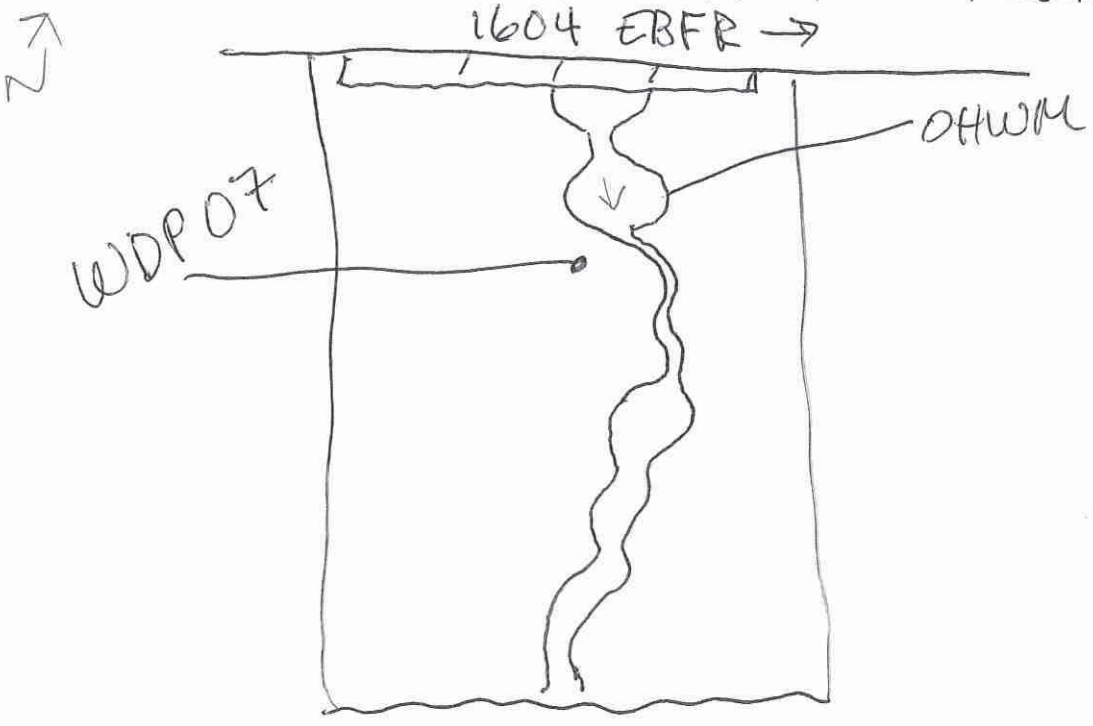
__ Pipe (s): #___)

X Box (es): #4 size 5X10

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 16024 16-35 Date 8/2

Investigator(s): AB & WM E19 WB

Water Feature # _____ Feature Name E19 WB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

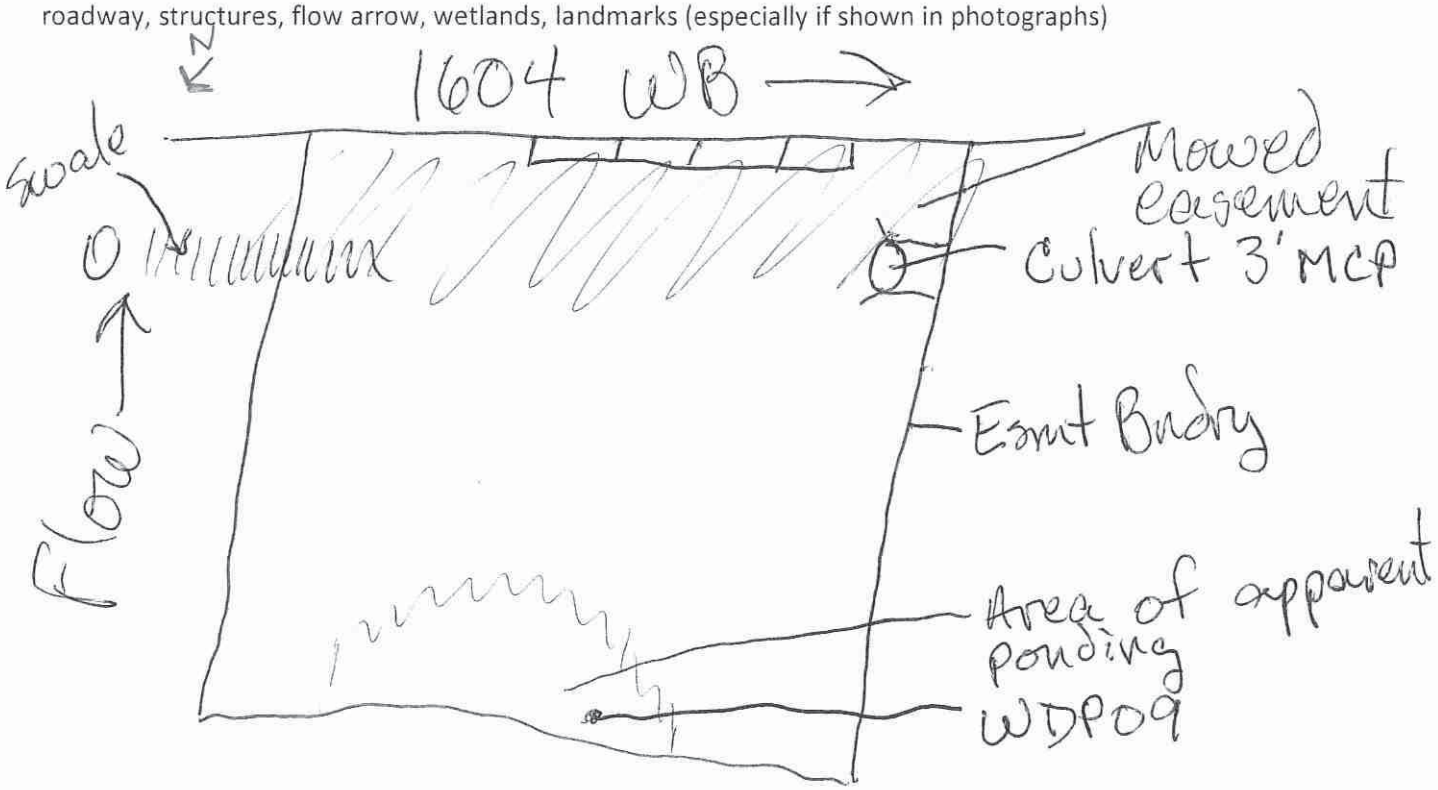
__ Pipe (s): #___)

X Box (es): #4 size 4x10

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/1

Investigator(s): AB + WM

Water Feature # _____ Feature Name E21 EB

Structure # _____ Station #_____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N/A	
Downstream below ROW	N/A	N/A	

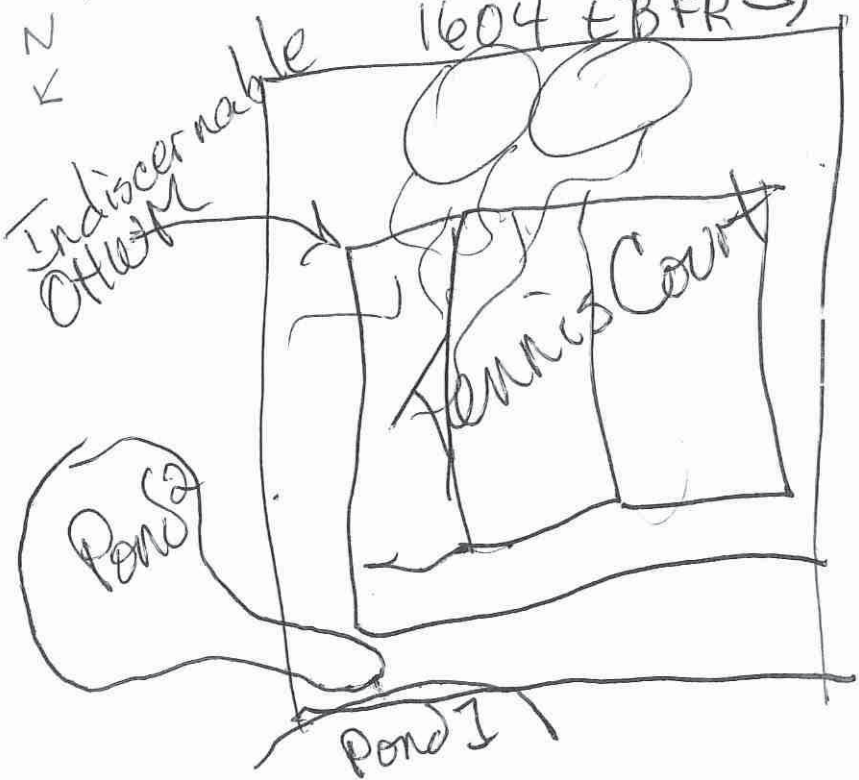
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): #2) 10" RCMP ____ Bridge

___ Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 (16-35) Date 8/1

Investigator(s): ABtoWM

Water Feature # N/A Feature Name E23EB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

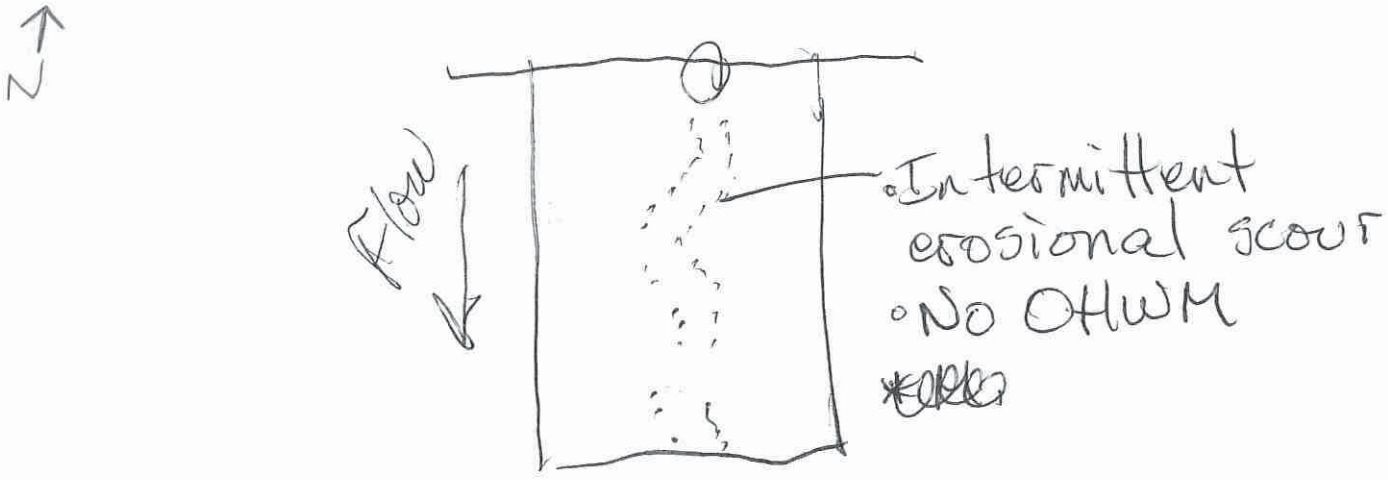
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): # 1 24"CMP ____ Bridge

__ Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/2

Investigator(s): AB & WM E23WB

Water Feature # N/A Feature Name E23WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA		
Upstream above ROW	NA		
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

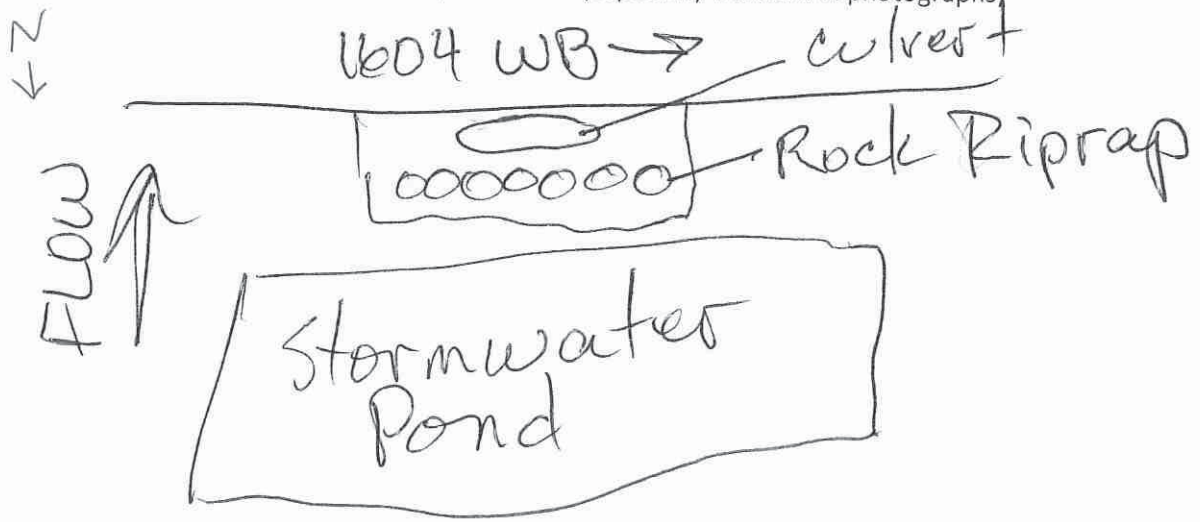
X Pipe (s): # 1 5' MCP

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: Loop 1604 Date 8/1

Investigator(s): AB + WM

Water Feature # N/A Feature Name E 24 EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

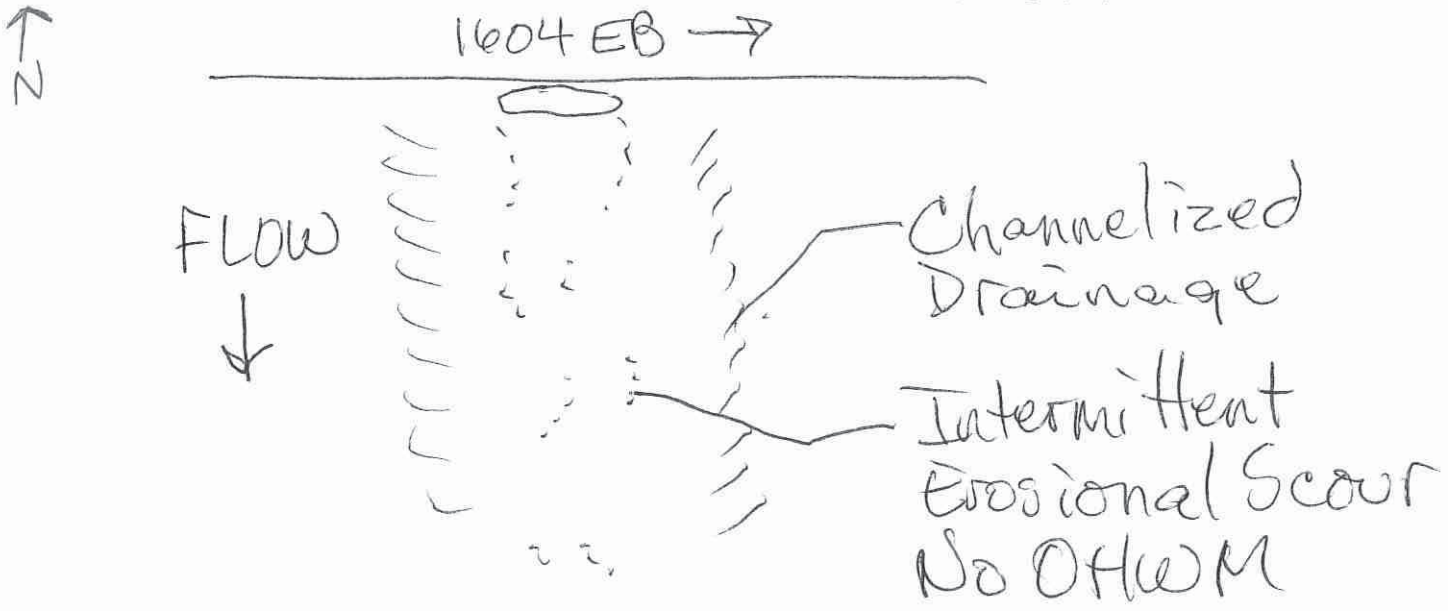
X Pipe (s): # 1 3'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: Loop 1604 Date 8/8/11

Investigator(s): AB & WM

Water Feature # N/A Feature Name E24WB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

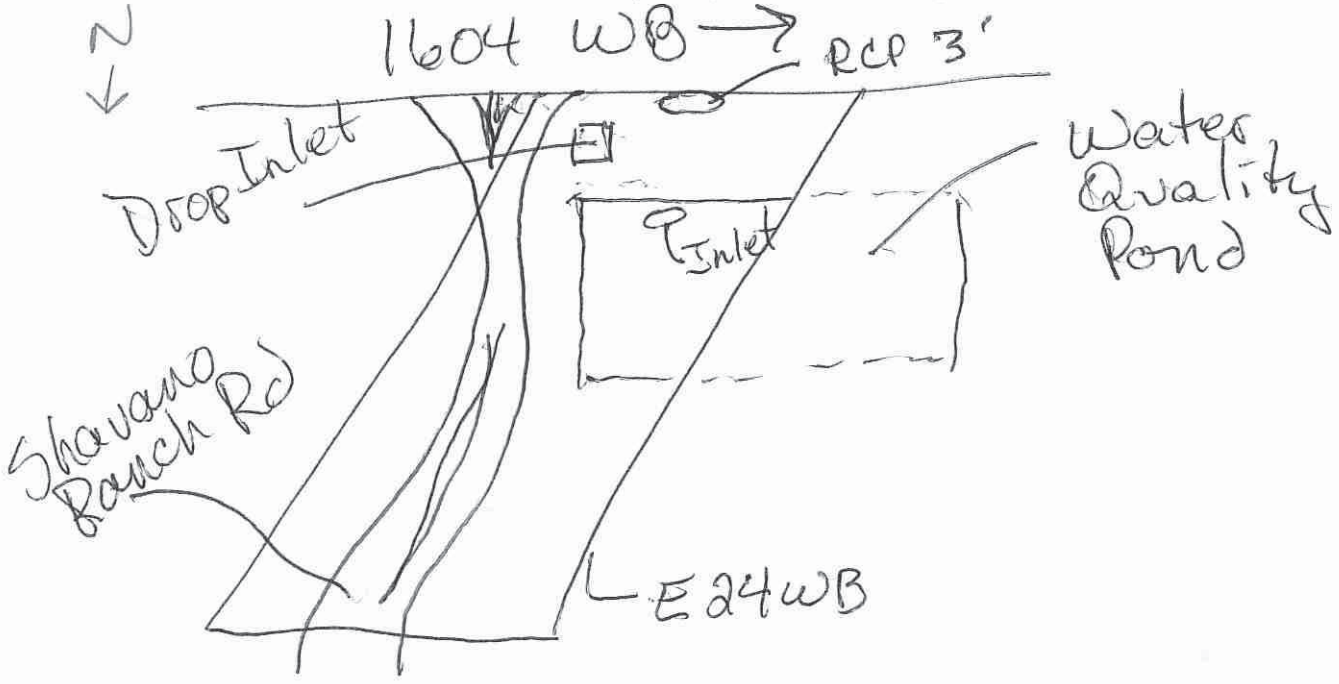
X Pipe (s): #1 3'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: ~~E~~ 1604 (16-35) Date 8/1

Investigator(s): AB + WM

Water Feature # N/A Feature Name E25EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

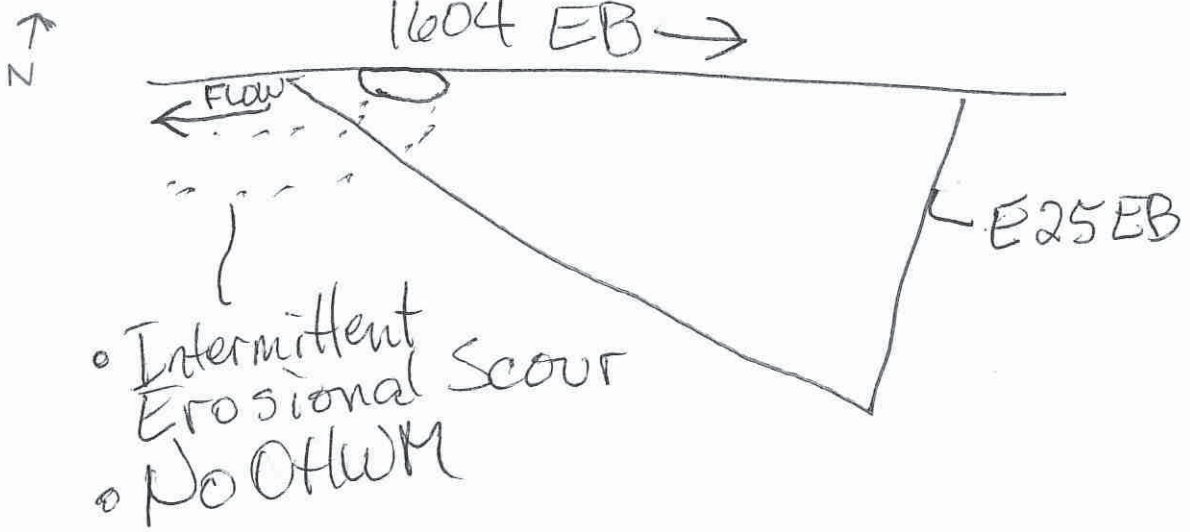
X Pipe (s): #1 3'

X Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8.1.19

Investigator(s): AB, WM

Water Feature # N/A Feature Name E 25 WB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	looks to be graded for drainage
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

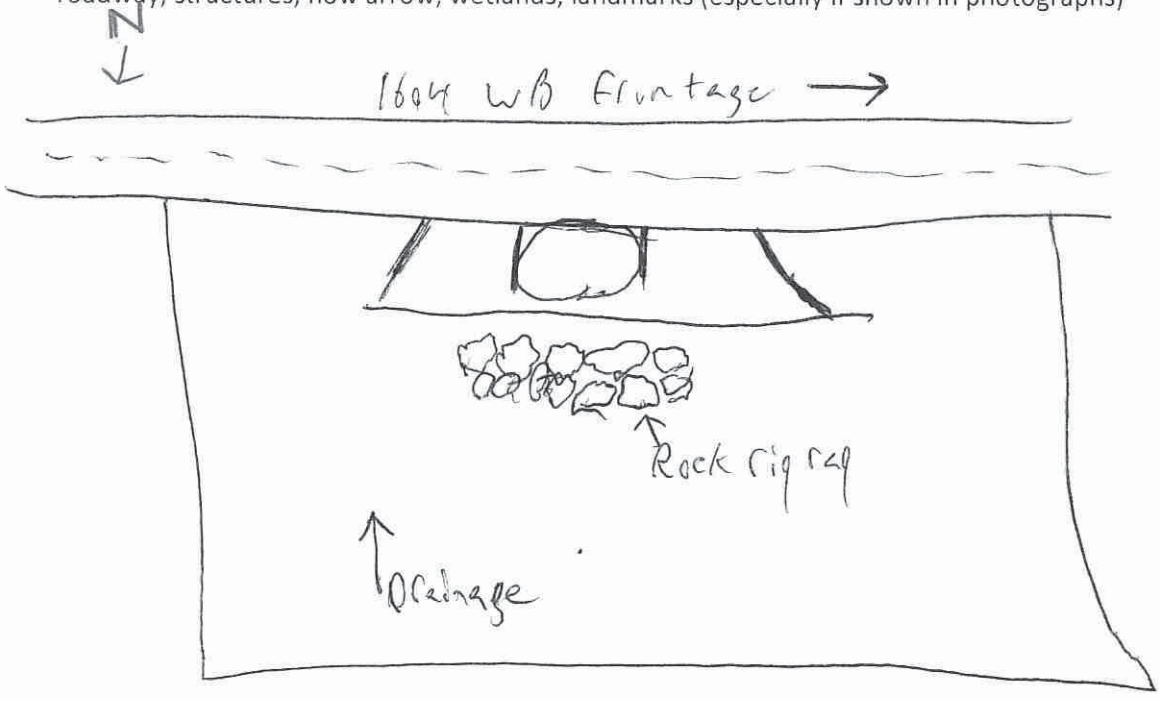
1 Pipe (s): #3'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/2

Investigator(s): AB+WM

Water Feature # N/A Feature Name E26 EB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

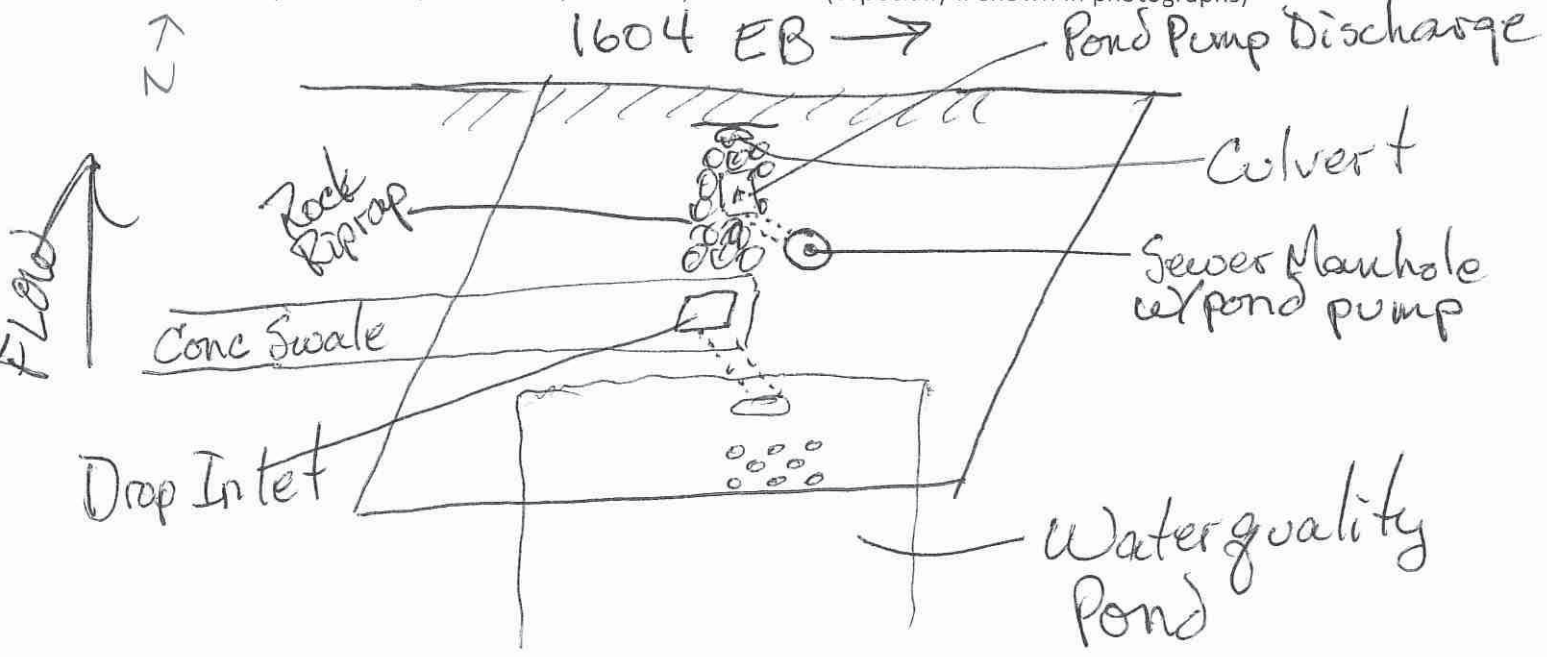
X Pipe (s): # 1) 3'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 (16-35) Date 8/2

Investigator(s): AB + WM

Water Feature # N/A Feature Name E26 WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N/A	
Downstream below ROW	N/A	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

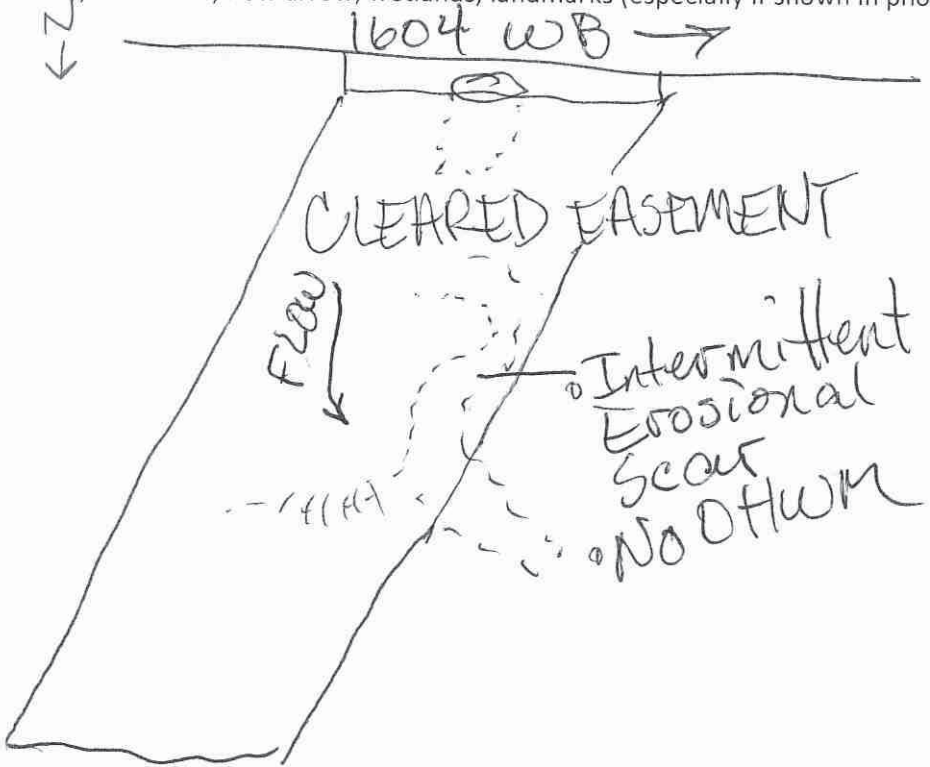
X Pipe (s): # 1) 3'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 8/2

Investigator(s): ABowm

Water Feature # 13 & Salado Creek Feature Name E28

Structure # Crossing 17 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	6	N	
Upstream above ROW	6	N	
Downstream in ROW	N/A	N	
Downstream below ROW	N/A	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

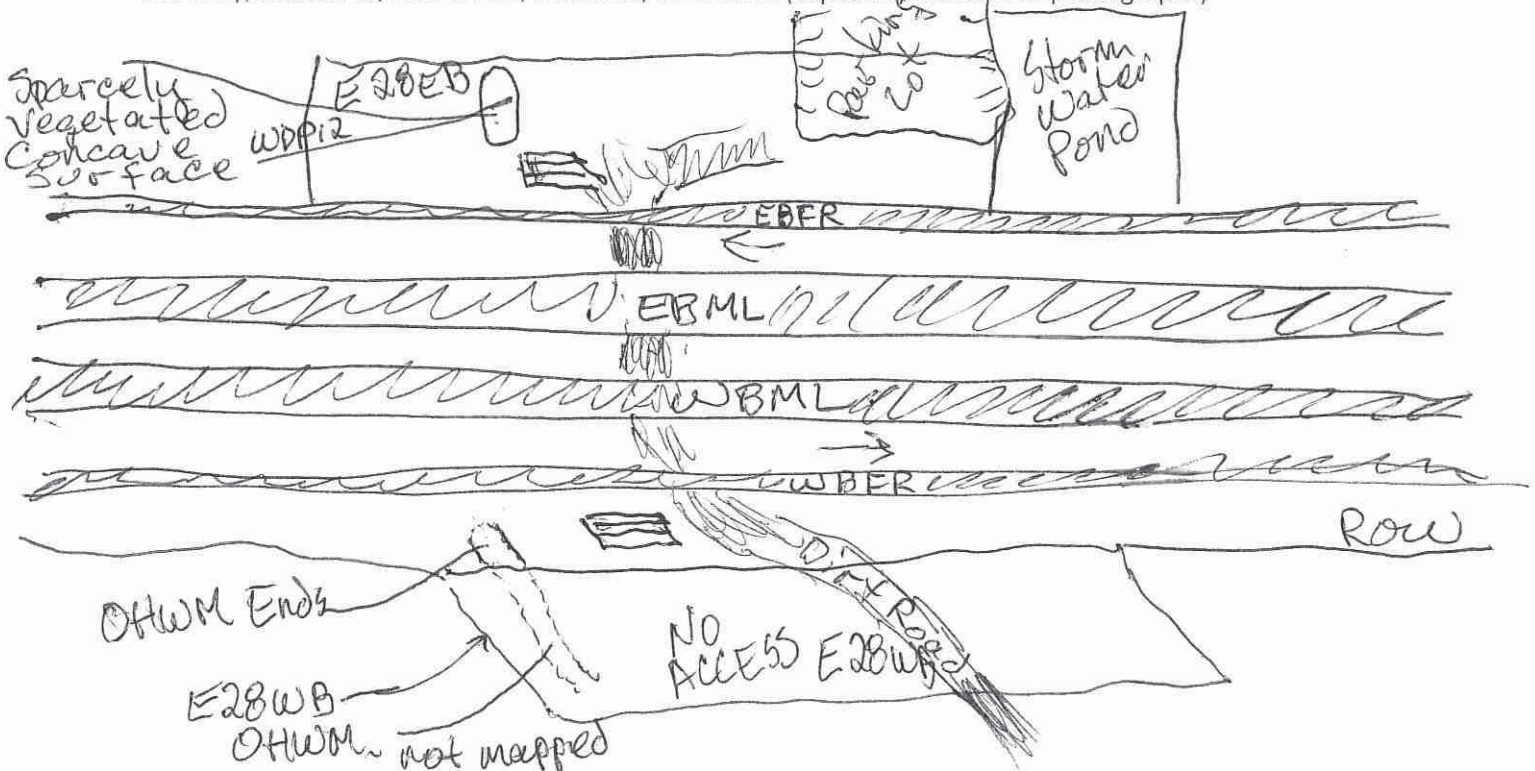
__ Pipe (s): #___)

__ Box (es): #___ size_____

✓ Bridge 4

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/2

Investigator(s): AB + WM

Water Feature # 13 & 14 Feature Name E29EB

Structure # _____ Station # _____

Crossing 17

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	2'		
Downstream below ROW	10-20		

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

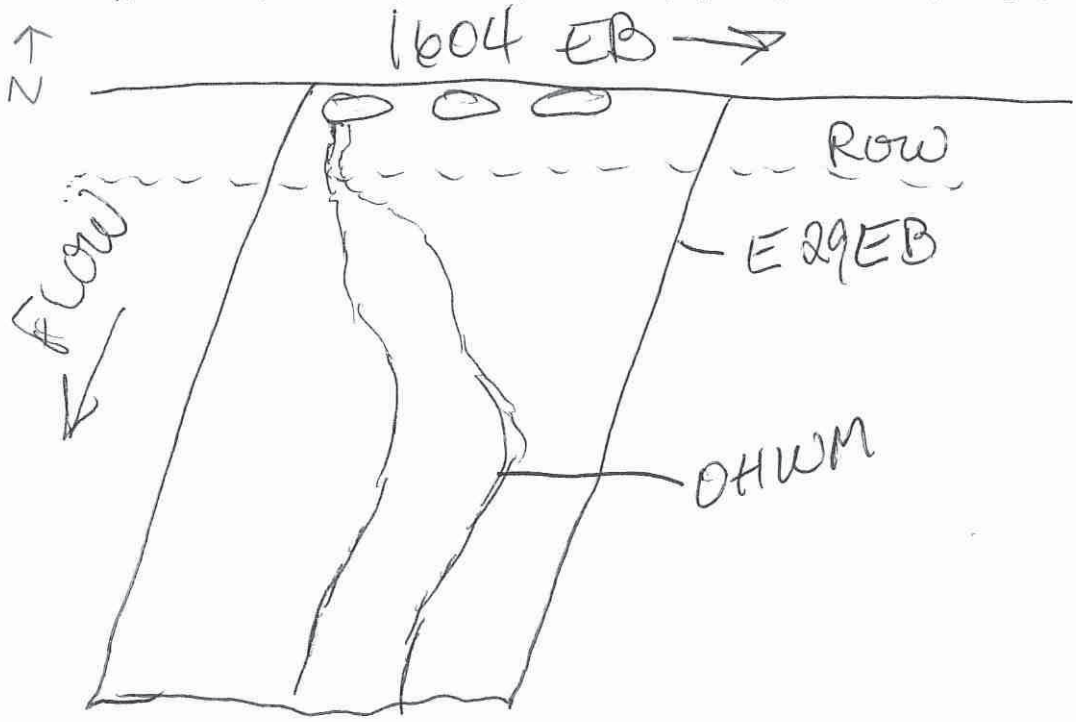
X Pipe (s): #3 (8')

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/2

Investigator(s): AB + WM L

Water Feature # 13 & 14 Feature Name E29WB

Structure # _____ Station # _____

crossing 17

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	1-3'	N	
Upstream above ROW	3-12'	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

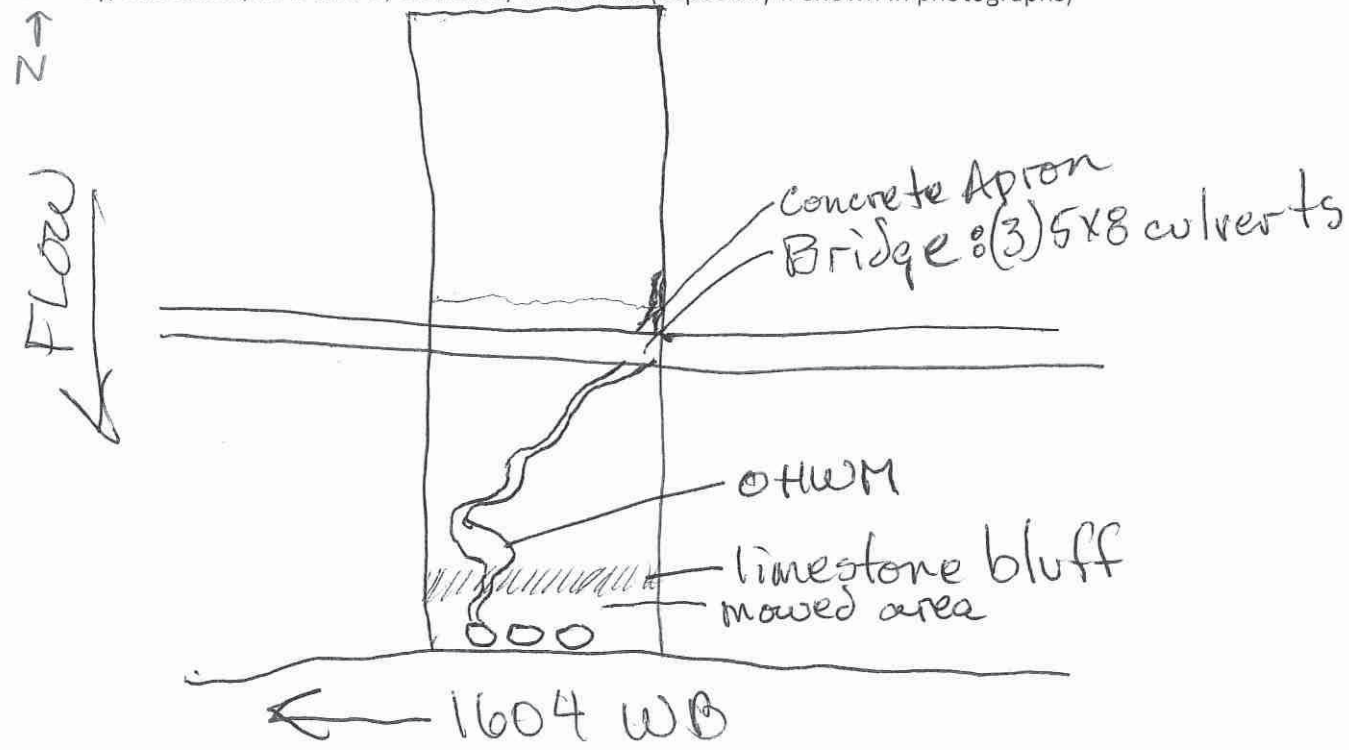
X Pipe (s): #3 8

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase, Parra

Water Feature # _____ Feature Name E 30 EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	16	N	
Downstream below ROW	12	N	

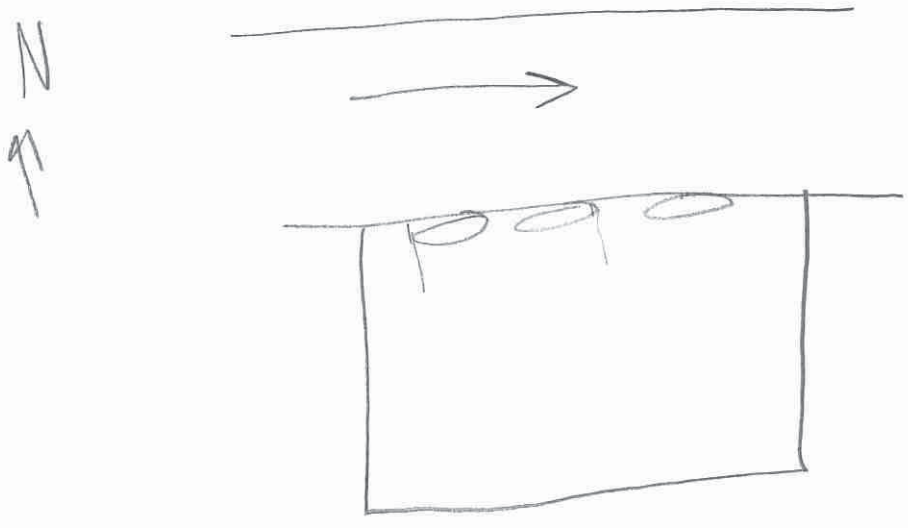
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): # 3) 1 Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase Parra

Water Feature # _____ Feature Name E30WB

Structure # Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	12	N	
Upstream above ROW	12	N	
Downstream in ROW	\	\	
Downstream below ROW	\	\	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

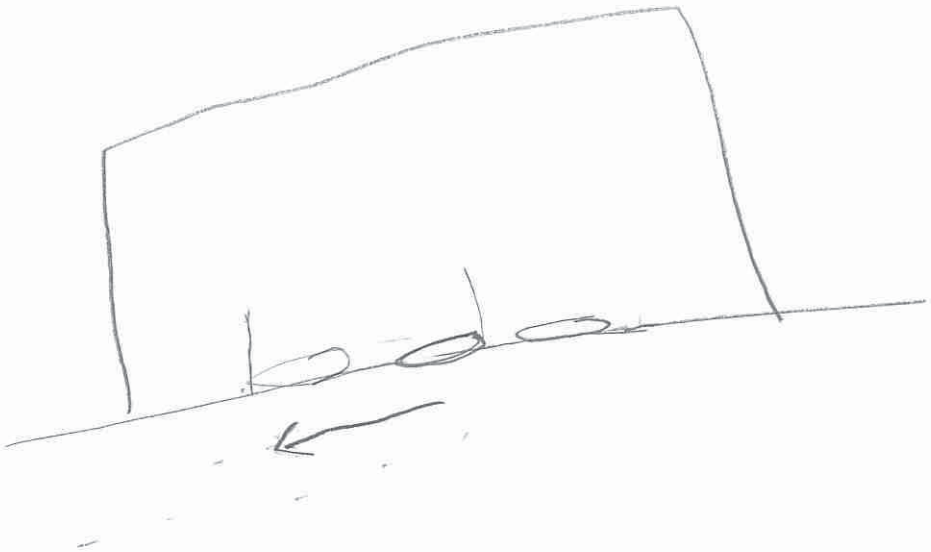
Existing Structure

X Pipe (s): #2 8 ft ____ Bridge

___ Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N



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Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase Parra

Water Feature # 15 Feature Name E3 EB

Structure # Crossing 18 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	none	N	
Downstream below ROW	none	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

X Pipe (s): # 2

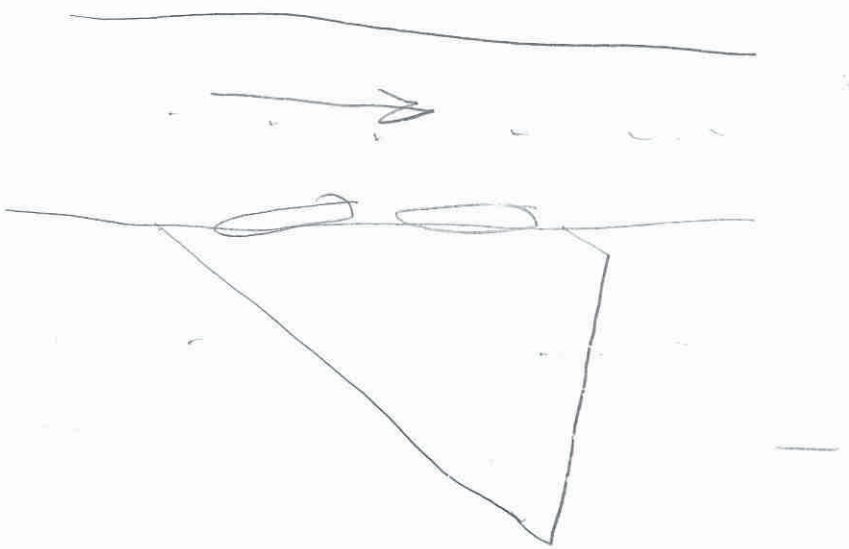
___ Box (es): #___ size___

___ Bridge

___ Other (explain) ___

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase, Parra

Water Feature # 15 Feature Name E31WB

Structure # Crossing 18 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	8	N	
Upstream above ROW	6	N	
Downstream in ROW	\	\	
Downstream below ROW	\	\	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

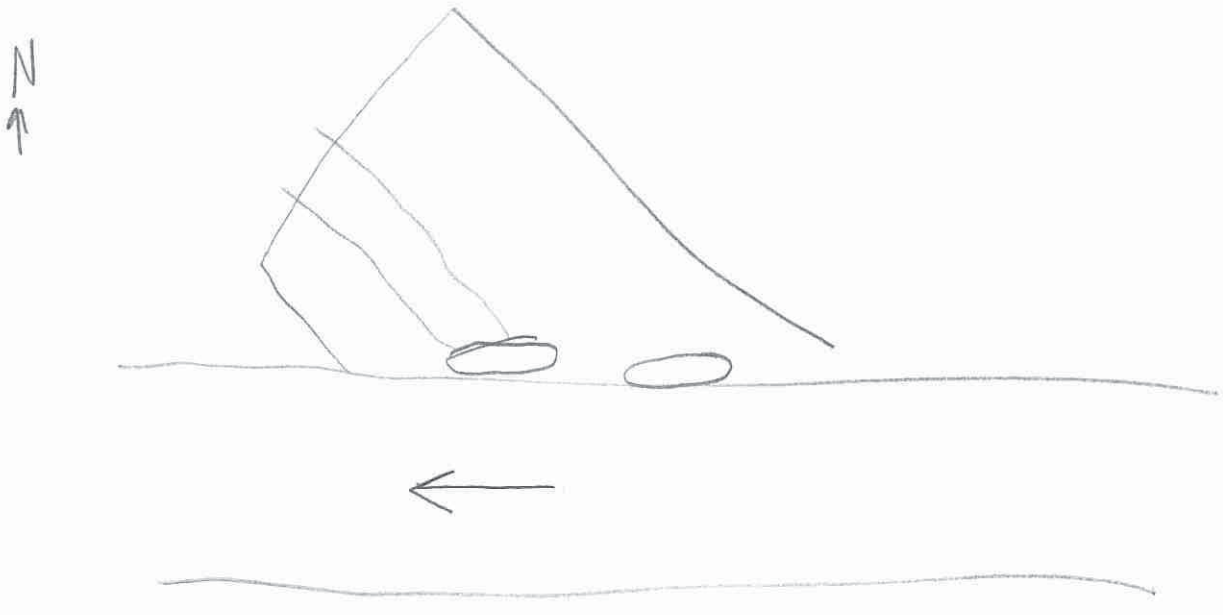
X Pipe (s): # 2

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase, Parra

Water Feature # 16 Feature Name E 34 EB

Structure # _____ Station # _____

Crossing 19

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	none	N	
Upstream above ROW	none	N	
Downstream in ROW	/	/	
Downstream below ROW	/	/	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

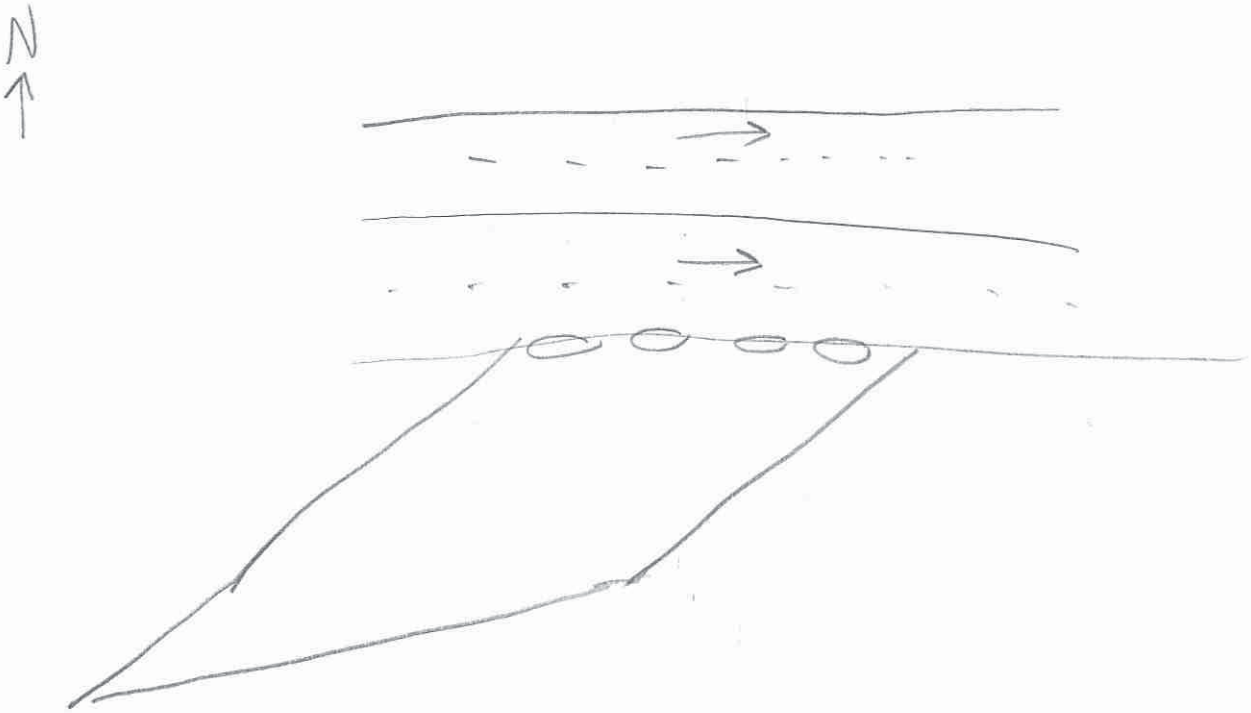
X Pipe (s): #4) 1 RA

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: LP 1604 Date 8/6/19

Investigator(s): Blust, Parra

Water Feature # 16 - Feature Name E34WB

Structure # Crossing 19 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	3-4	N	
Upstream above ROW	2	N	
Downstream in ROW	\		
Downstream below ROW	\		

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

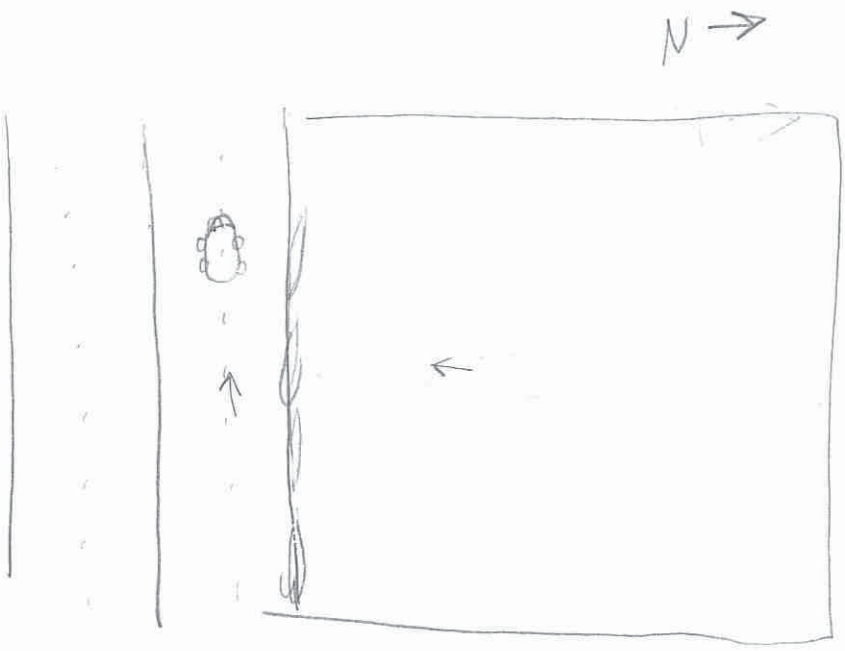
X Pipe (s): #4) 7 feet

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blaise Parra

Water Feature # Panther's Spring Creek Feature Name Panther's Spring Creek

Structure # _____ Station # _____

Crossing 20

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	none	N	sidewalk
Upstream above ROW	none	N	
Downstream in ROW	none	N	"
Downstream below ROW	none	N	"

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

__ Pipe (s): #___)

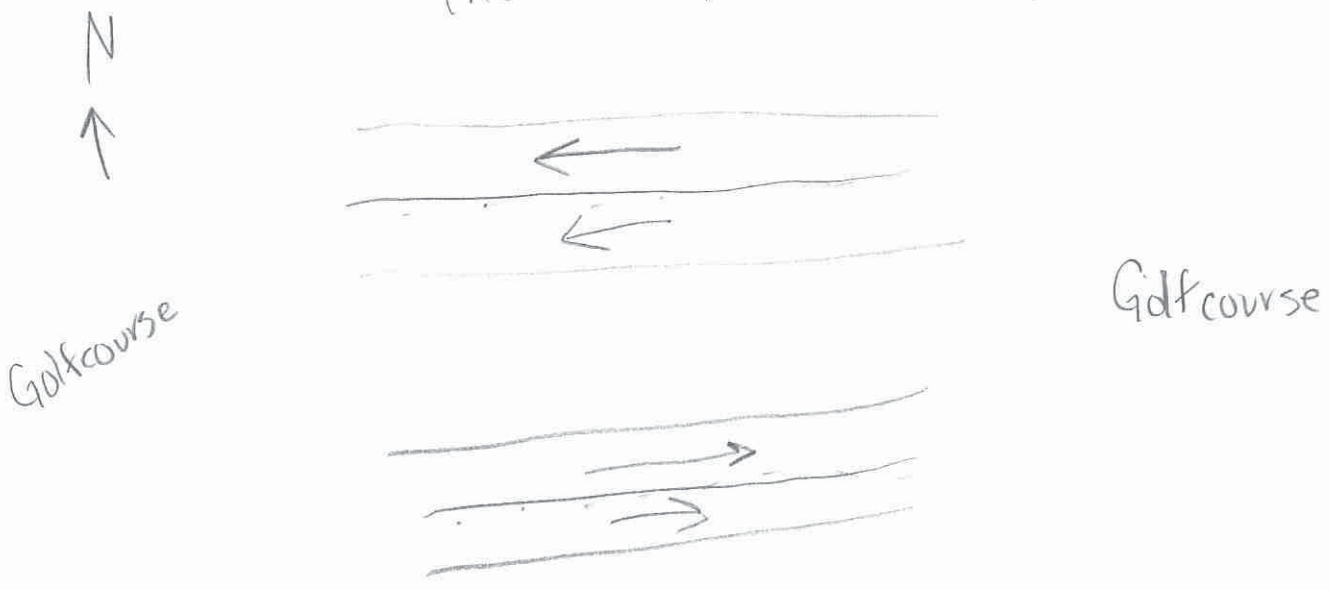
__ Box (es): #___ size_____

__X__ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

(no OHWM, NHD blueline)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase Parra

Water Feature # _____ Feature Name E35EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	NA	N	
Downstream below ROW	1-5	N	

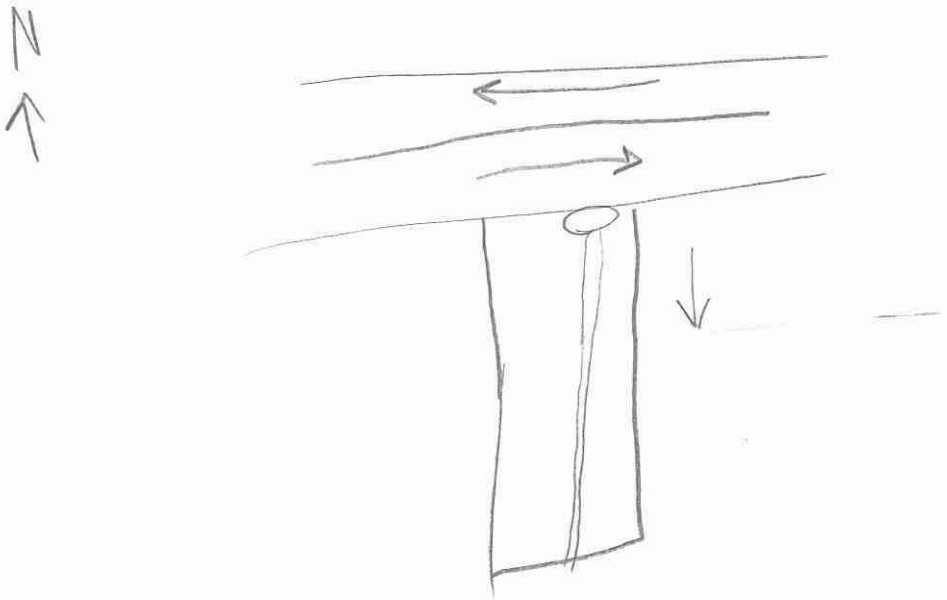
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): # 1) 4 17 ___ Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6

Investigator(s): Blase Parra

Water Feature # _____ Feature Name E35WB

Structure # Station #_____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

__ Pipe (s): #___)

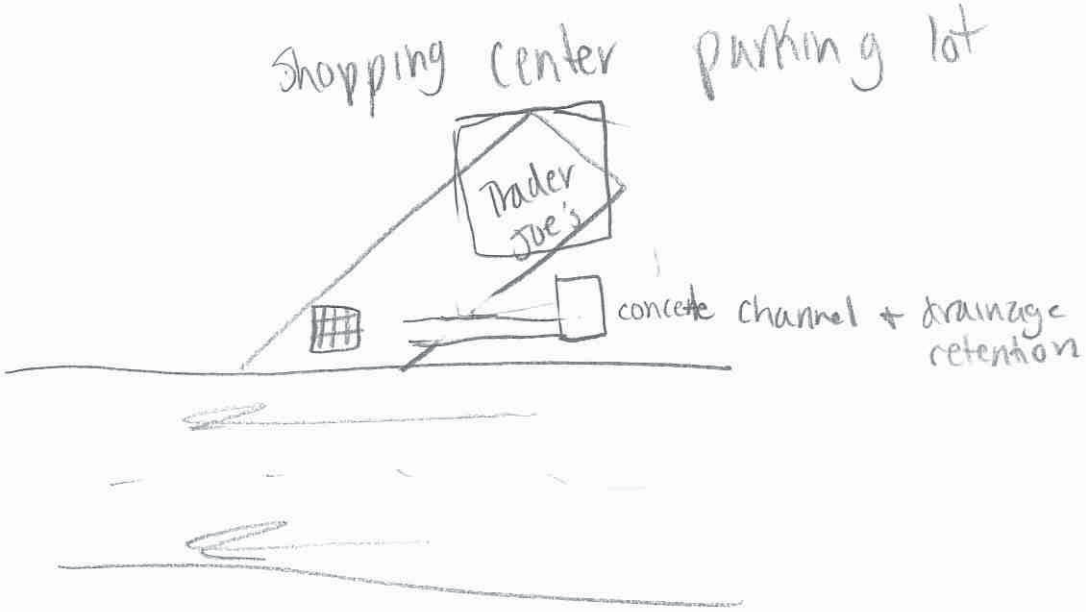
__ Box (es): #___ size_____

__X__ Bridge

____ Other (explain) grate

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase, Parra

Water Feature # N/A Feature Name E 36 EB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N/A	
Downstream below ROW	N/A	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

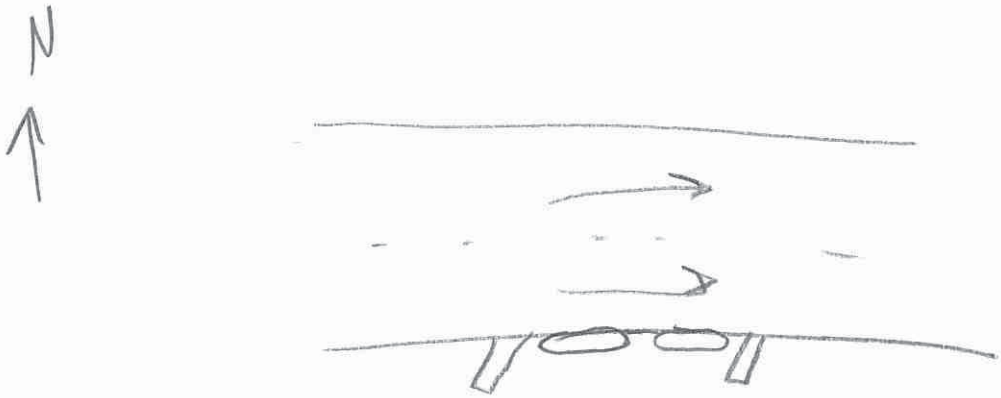
X Pipe (s): # 2 4ft

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6

Investigator(s): Blaise Parra

Water Feature # N/A Feature Name E36WB

Structure # _____ Station #_____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	
Downstream in ROW		N	
Downstream below ROW		N	

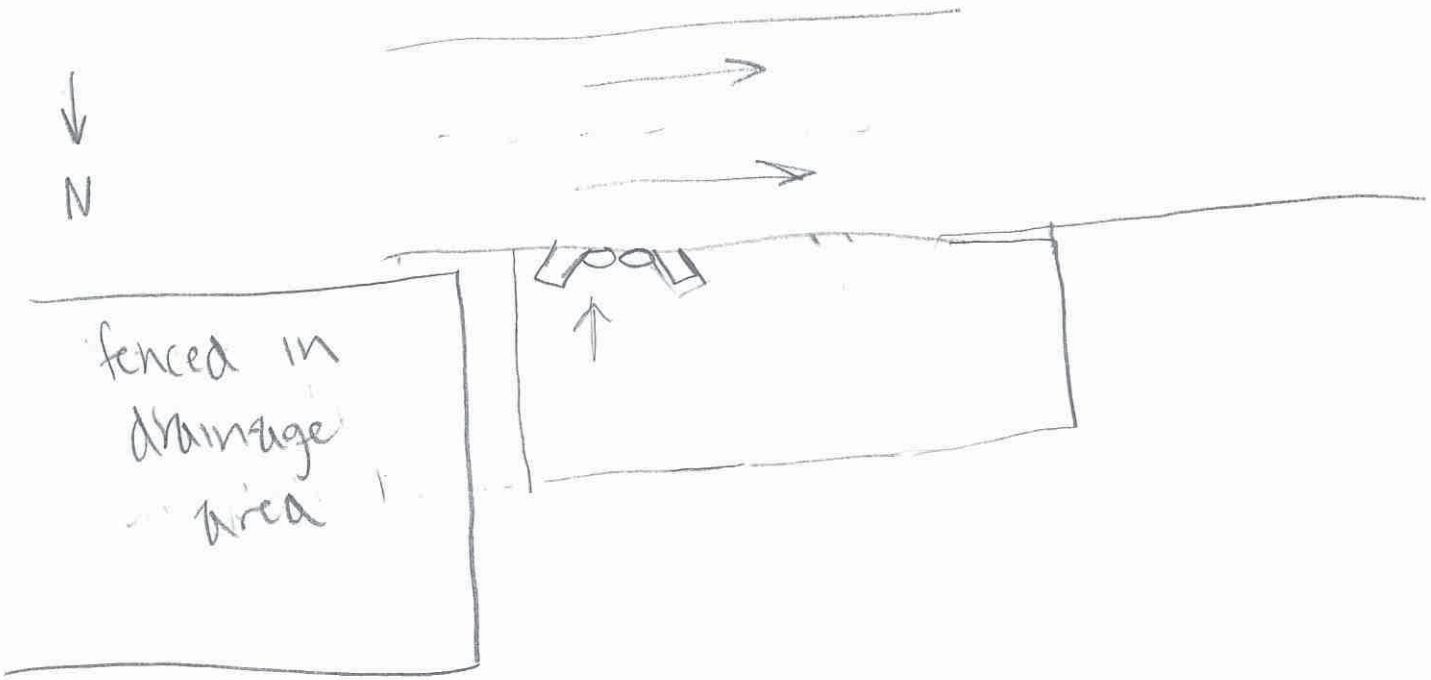
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): #2) ___ Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6/19

Investigator(s): Blase Parra

Water Feature # _____ Feature Name E37EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	N/A	N	
Downstream below ROW	3-8	N	1-8 inches FW

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

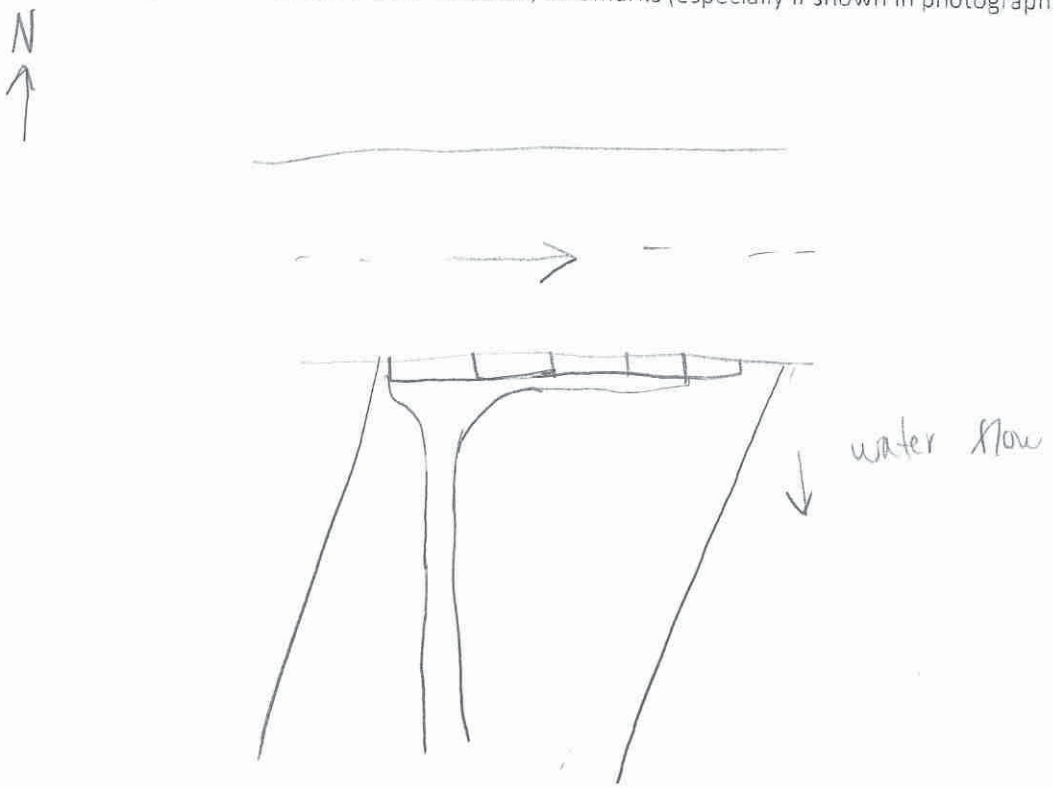
___ Pipe (s): #___)

X Box (es): #5 size 5x5

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 7.11.19

Investigator(s): AB, WM

Water Feature # _____ Feature Name E37WB

Structure # _____ Station #_____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

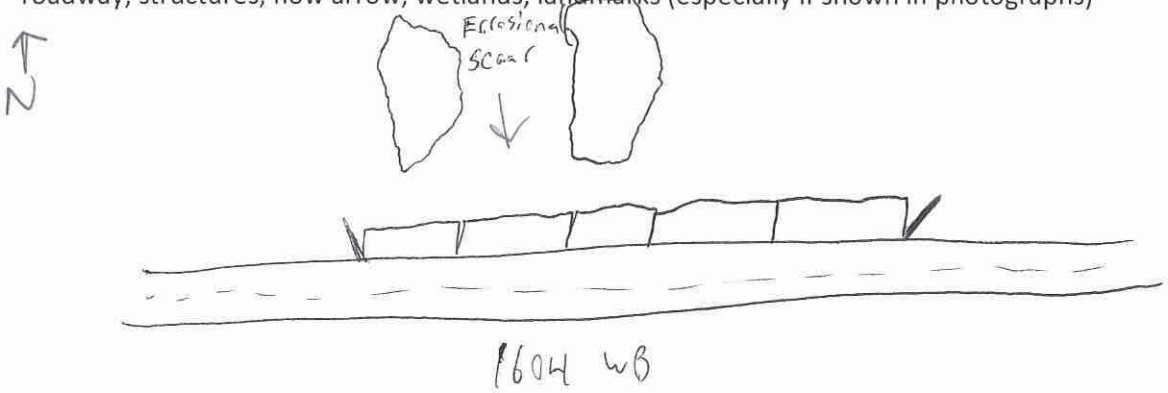
__ Pipe (s): #___)

5 Box (es): #___ size 5 x 15

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1609 Date 8/6/2019

Investigator(s): Blase, Parra

Water Feature # Lorence Creek Feature Name E38EB

Structure # Crossing 21 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	15	N	
Downstream below ROW	7-15	N	

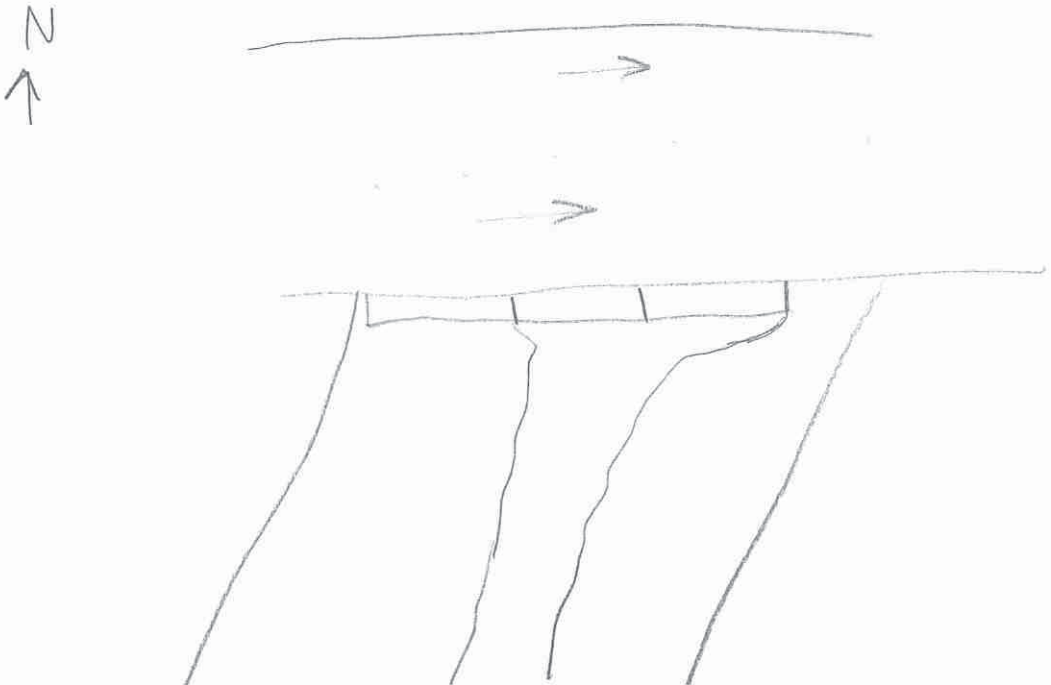
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

X Pipe (s): #___) ___ Bridge

X Box (es): #3 size 10 feet x 6 ft ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Parra

Water Feature # Lorence Creek Feature Name E38WB

Structure # Crossing 21 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	13-20'	N	
Downstream in ROW	/	/	
Downstream below ROW	/	/	pond of SW pooled downstream of dam.

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Pond is 2a-24in deep

Existing Structure

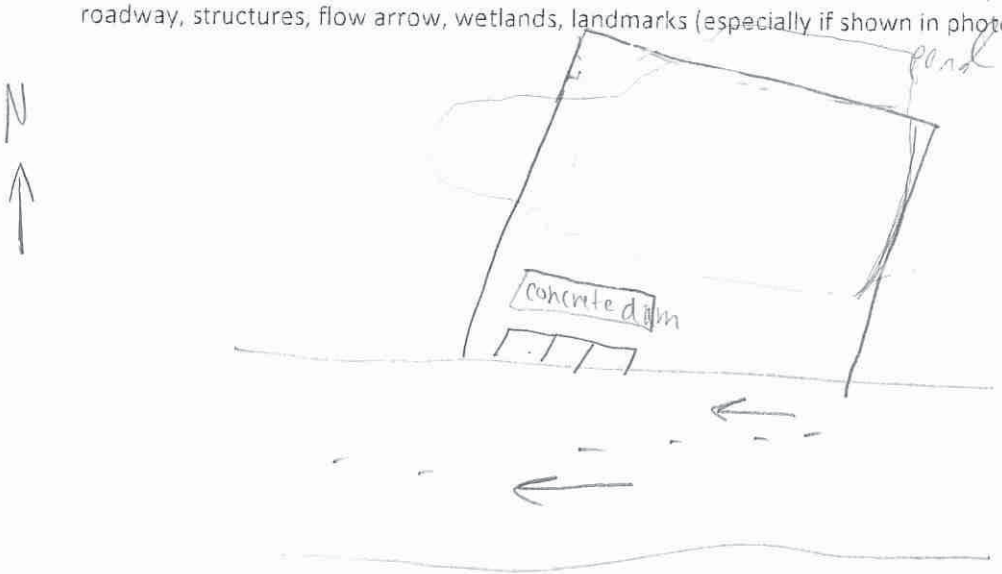
___ Pipe (s): #___)

X Box (es): #3 size 5 x 5

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/6

Investigator(s): Blase Parra

Water Feature # N/A Feature Name E39

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW		N	
Upstream above ROW		N	
Downstream in ROW		N	
Downstream below ROW		N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

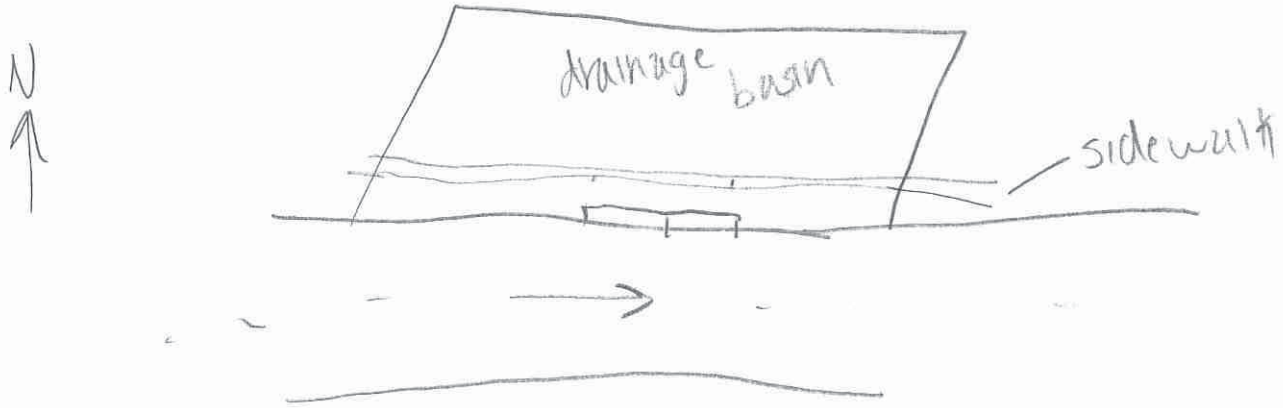
___ Pipe (s): #___)

X Box (es): #2 size 5X7

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # N/A Feature Name Mud creek

Structure # Station #

Crossing 22

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	Mowed utility easement along swale
Upstream above ROW	NA	NA	
Downstream in ROW	NA	NA	
Downstream below ROW	6'	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

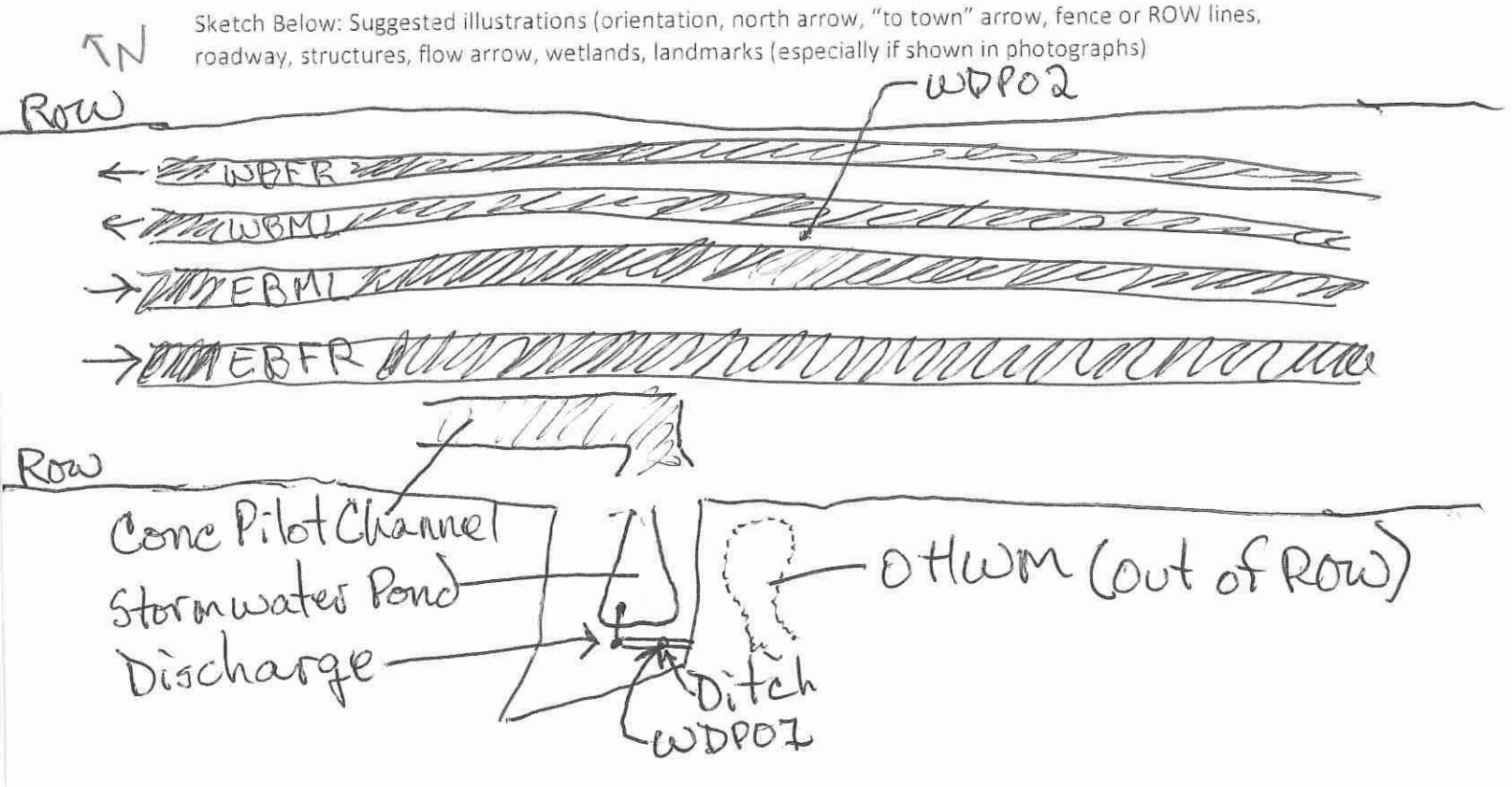
__ Pipe (s): #___)

__ Box (es): #___ size_____

X Bridge 4

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # 17 Feature Name E40EB

Structure # _____ Station # _____

crossing 23

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	3-5	NA	
Downstream below ROW	3	NA	

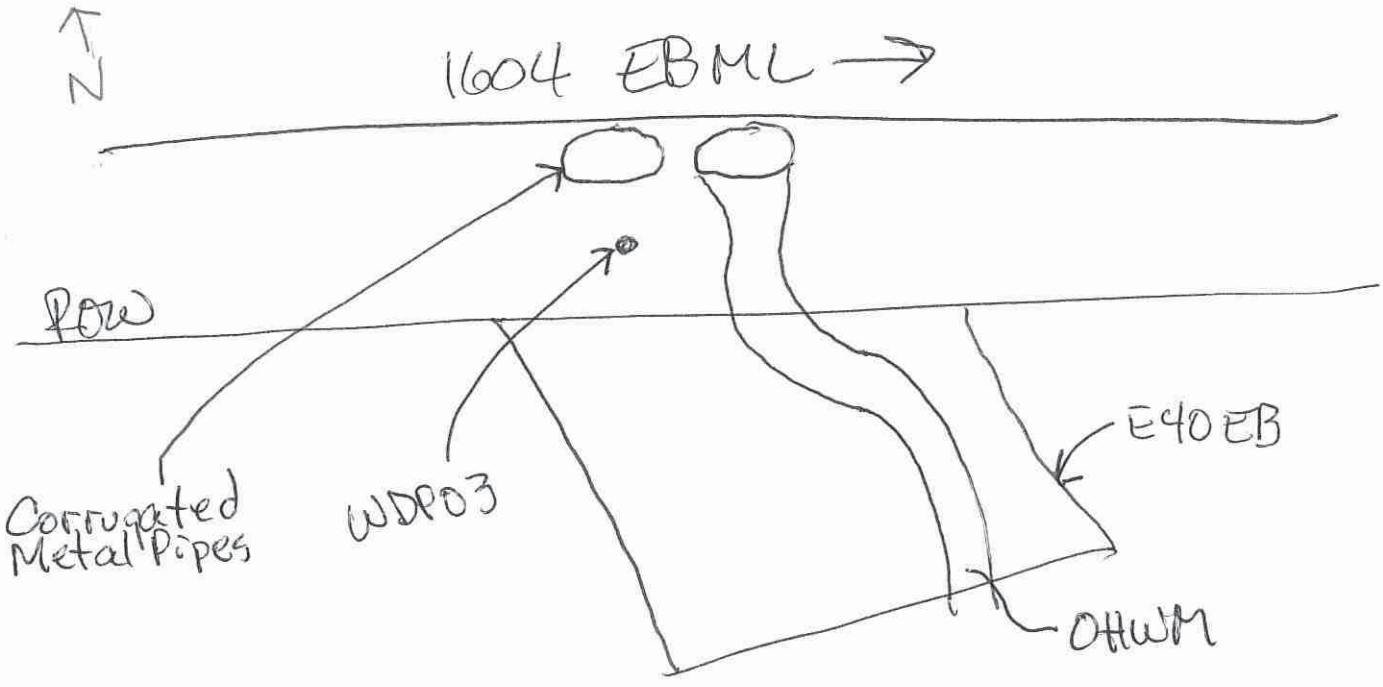
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): # 2 6' ~~RCP~~ CMP ___ Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16.35 Date 7/8

Investigator(s): ABtoWM

Water Feature # 17 Feature Name E40WB

Structure # _____ Station # _____

Crossing 23

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Under construction

Existing Structure

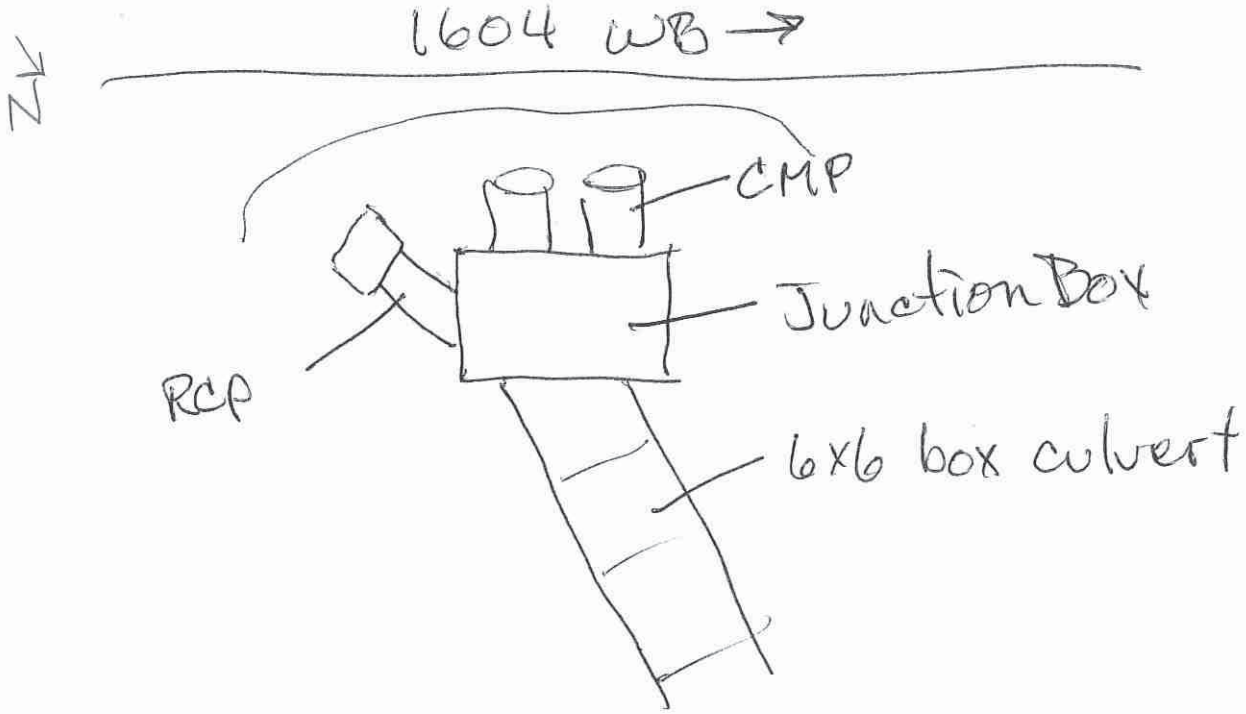
X Pipe (s): # 2 CMP

X Box (es): # 1 size 6x6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16·35 Date 8/7/2019

Investigator(s): CMP WM

Water Feature # N/A Feature Name E41WB Elm Creek

Structure # Crossing 24 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

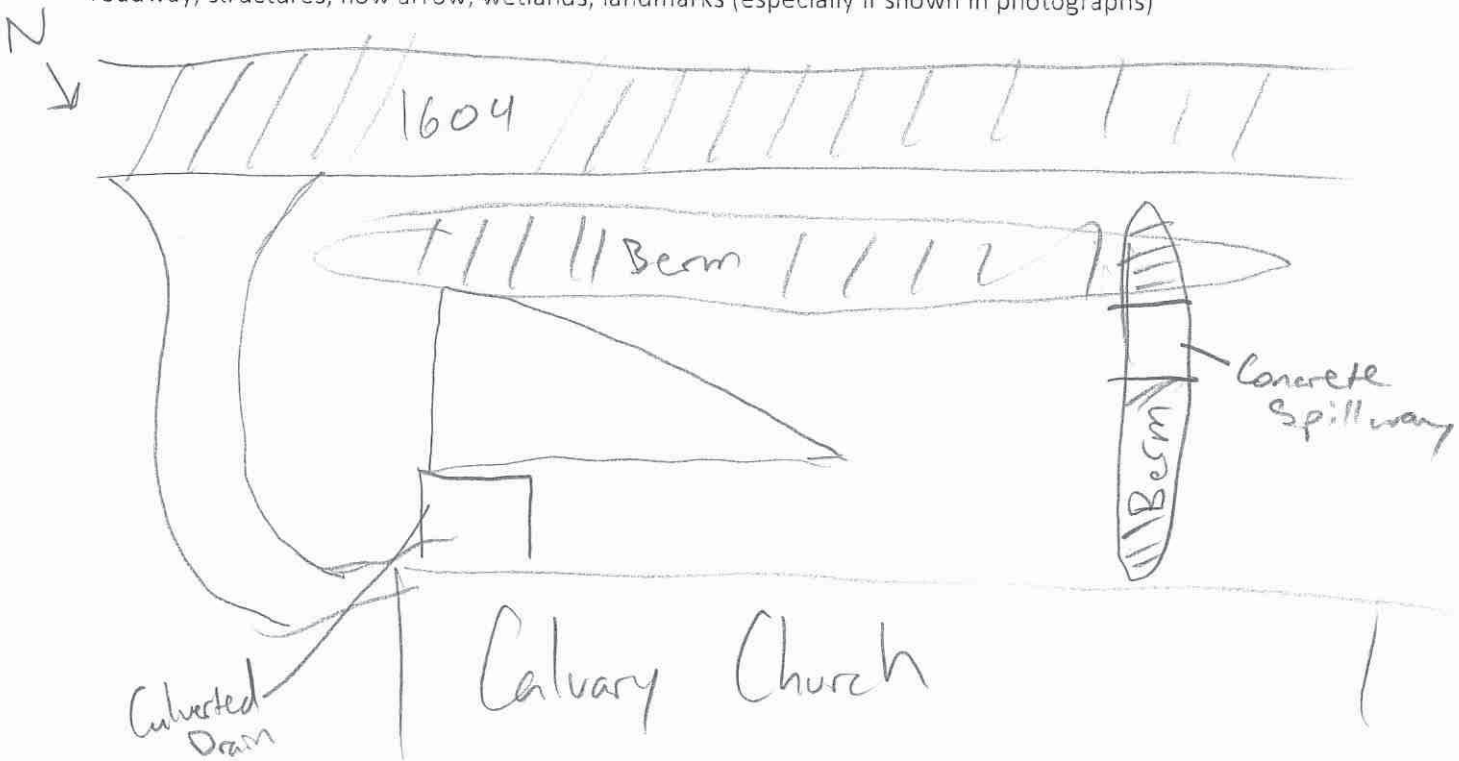
__ Pipe (s): #___)

_1_ Box (es): #___ size 3ft

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # E 41 EB Feature Name Elm Creek EB

Structure # _____ Station #_____

Crossing 24

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	15'	N	
Downstream below ROW	15-0	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

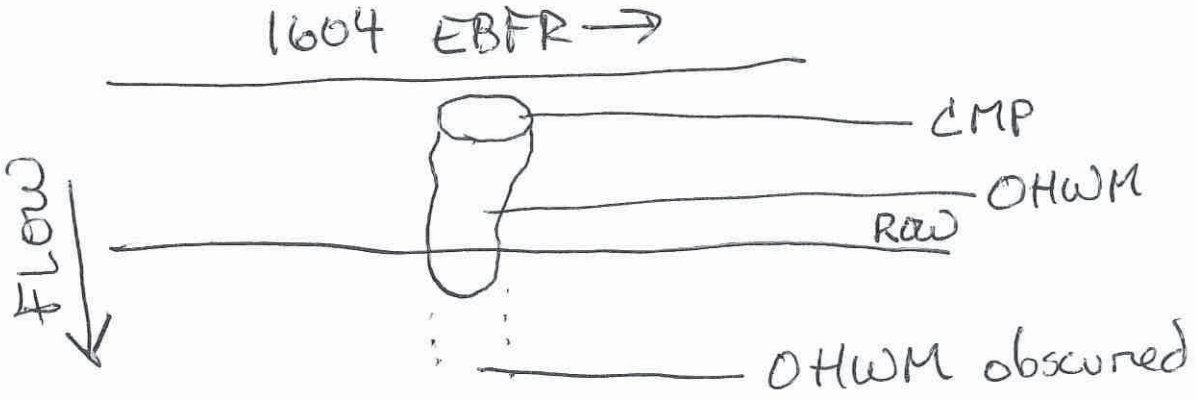
X Pipe (s): #1) 6'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 EB Date 8/6

Investigator(s): AB + WM

Water Feature # N/A Feature Name E42EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

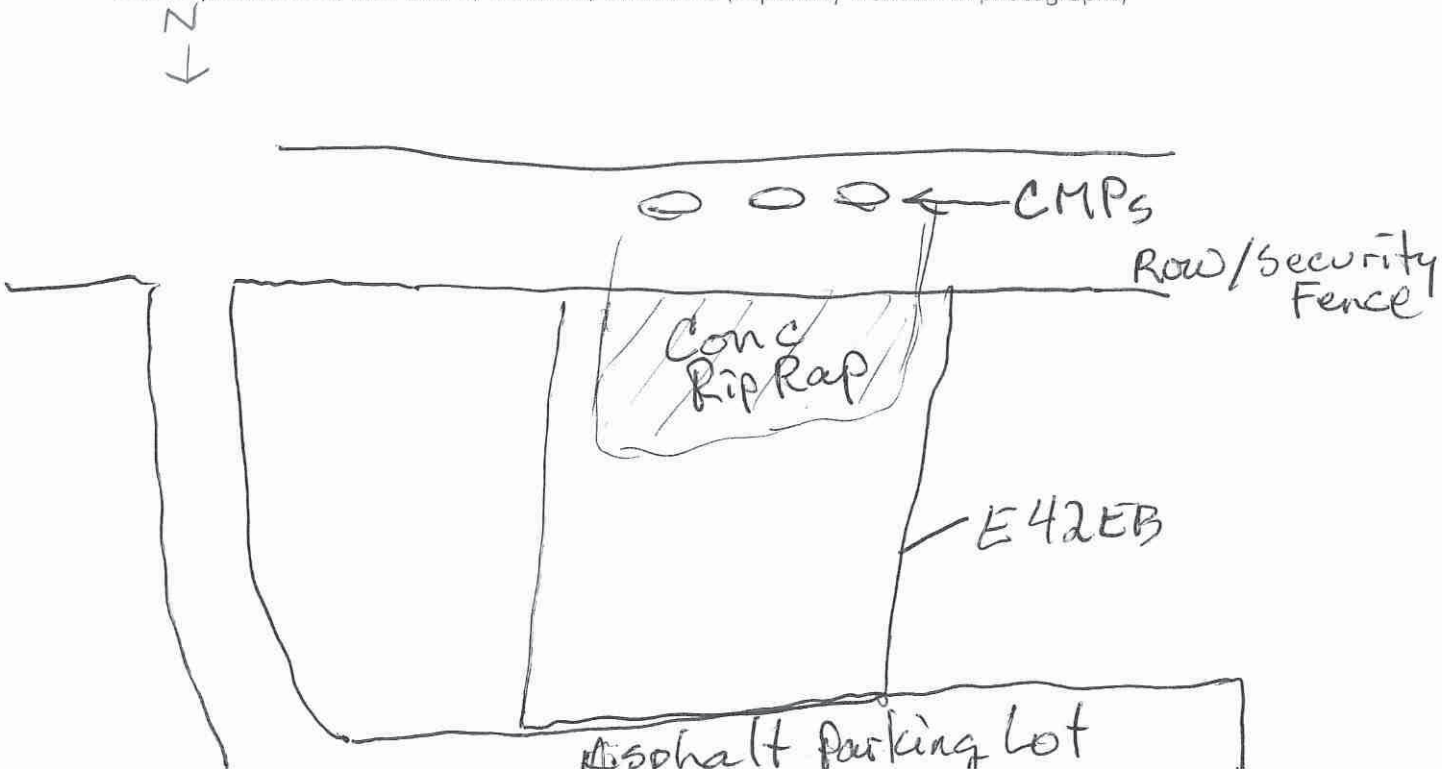
~~X~~ Pipe (s): # 3) 4'

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB+WM

Water Feature # N/A Feature Name E43 EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	NA	
Downstream below ROW	NA	NA	

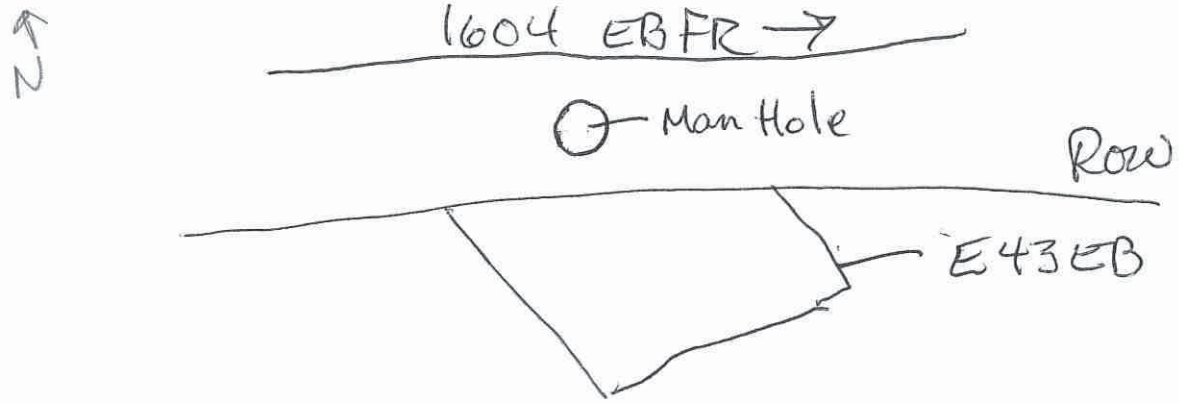
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure None (Underground?)

__ Pipe (s): #___) ____ Bridge

___ Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/4

Investigator(s): AB + WM

Water Feature # N/A Feature Name E43 WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	Stormwater Pond
Downstream in ROW			
Downstream below ROW			

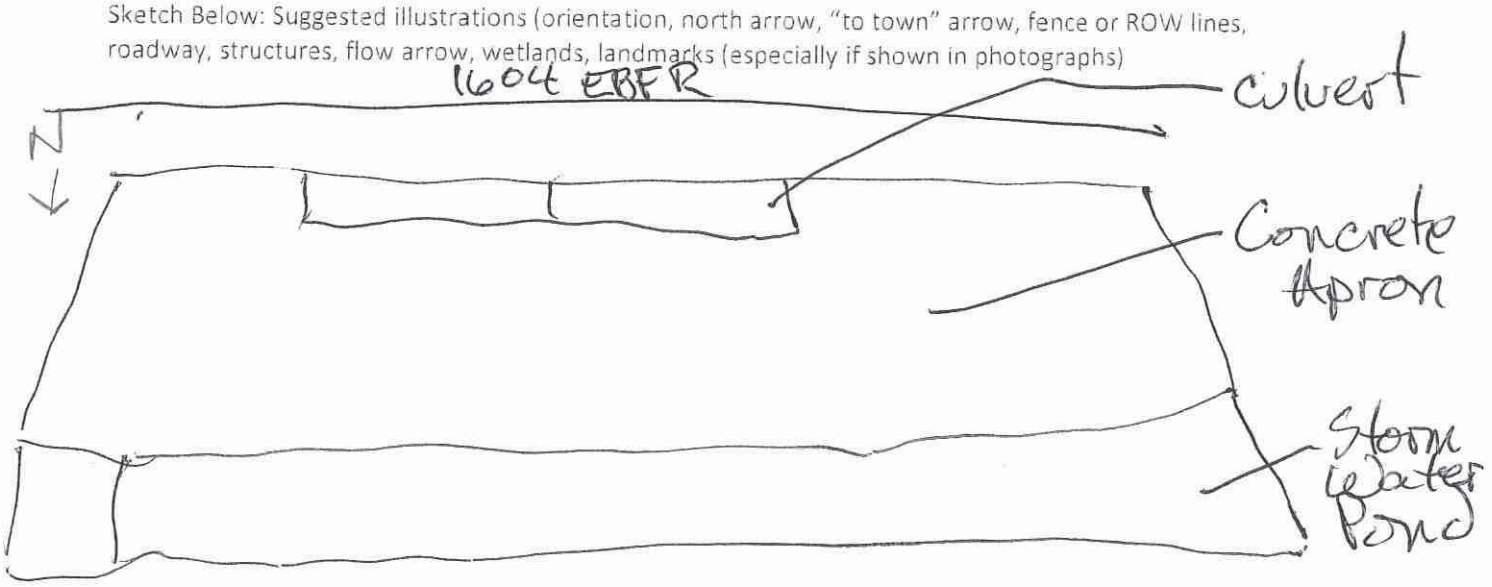
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

__ Pipe (s): #___) ____ Bridge

2 Box (es): #2 size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # _____ Feature Name E 44 EB

Structure # Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	1-3	N/A	
Downstream below ROW	1-3	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

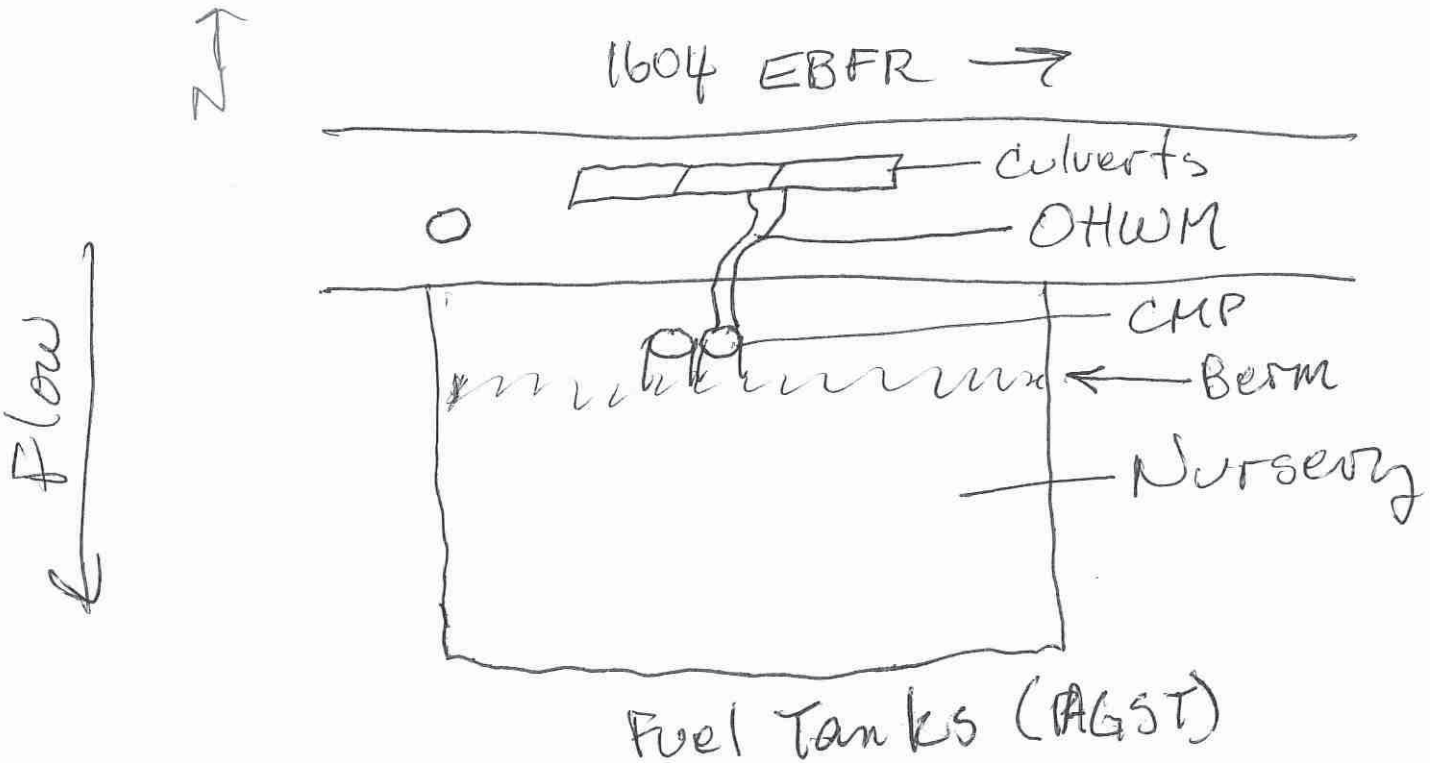
X Pipe (s): # 2 3'

X Box (es): # 3 size 4X6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/7

Investigator(s): AB + WM

Water Feature # _____ Feature Name Blue line ox E44EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	5-10	N	~~Obscured by road~~
Upstream above ROW	?	N	Obscured by road
Downstream in ROW	/	/	
Downstream below ROW	/	/	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #___) ____ Bridge

X Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

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Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # Elm Waterhole Creek Feature Name E45WB

Structure # _____ Station # _____

Crossing 25

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N/A	Sediment & Drift deposits but no clear bed a/o banks
Upstream above ROW	N/A	N/A	
Downstream in ROW			
Downstream below ROW			

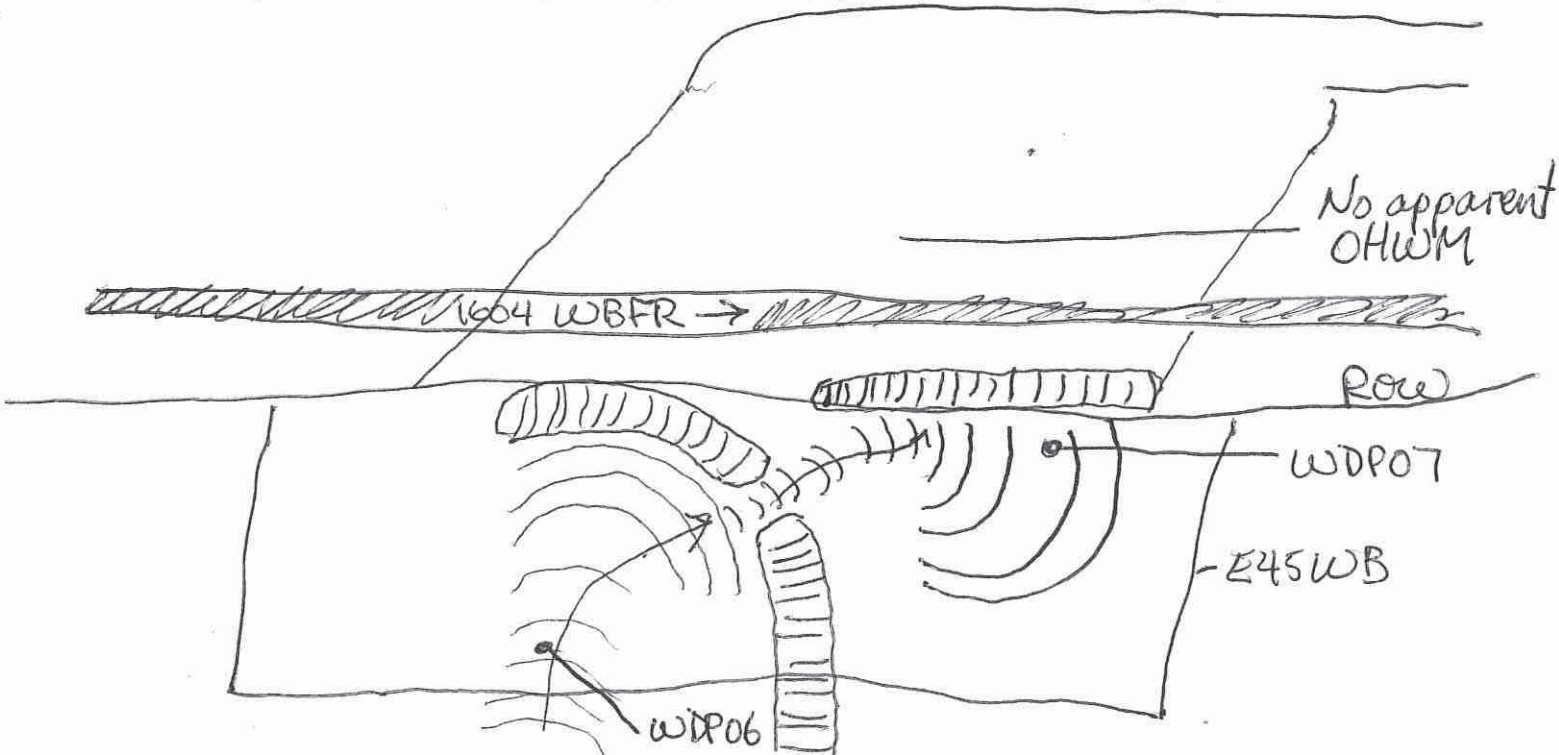
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #___) ____ Bridge

___ Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # N/A Feature Name E 46 EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

__ Pipe (s): #___)

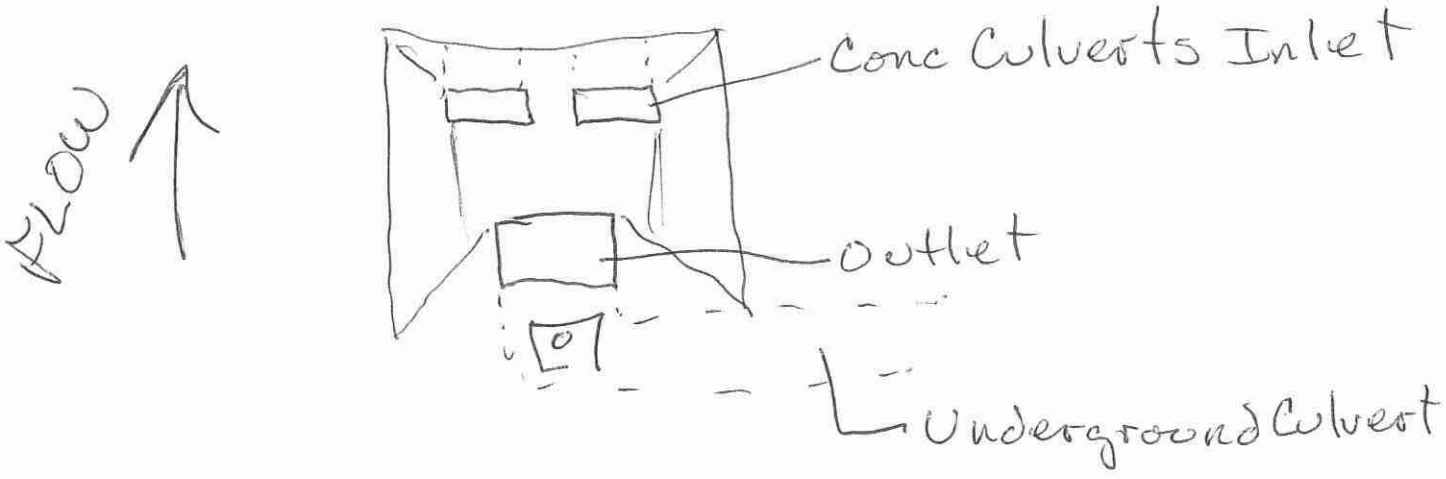
✓ Box (es): # 2 size 2x3
1 3x3

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N ↑ 1604 EB →



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB + WM

Water Feature # N/A Feature Name E 47 EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N	
Downstream below ROW	N/A	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

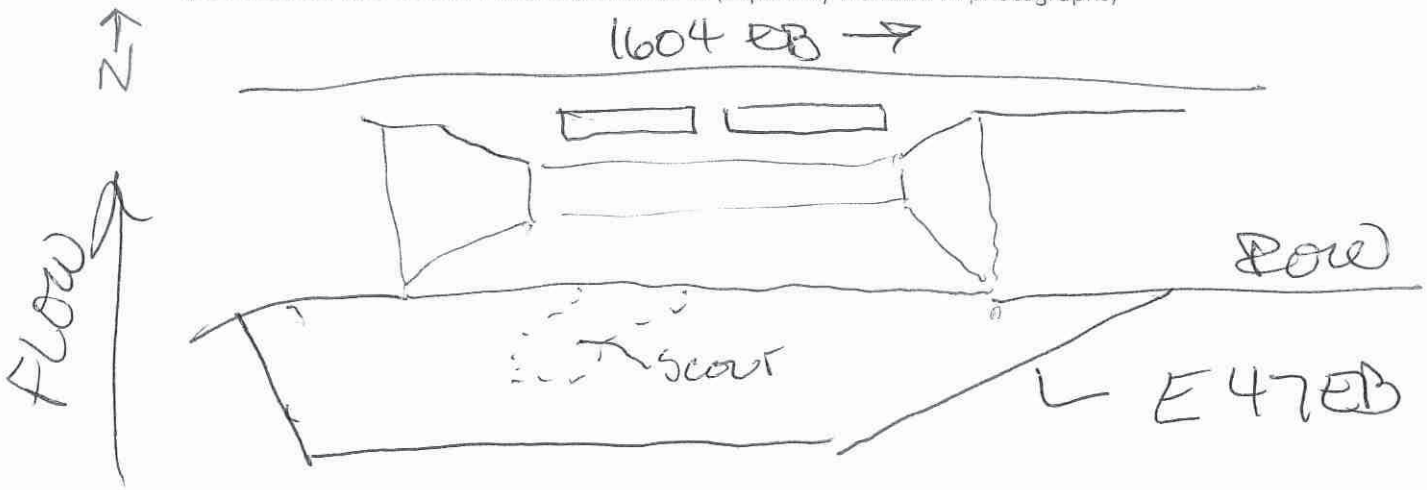
__ Pipe (s): #___)

✓ Box (es): #2 size 3X6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



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Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/6

Investigator(s): AB tWM

Water Feature # 18 Feature Name E48EB

Structure # Crossing 26 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N	
Downstream below ROW	5-10'	N	

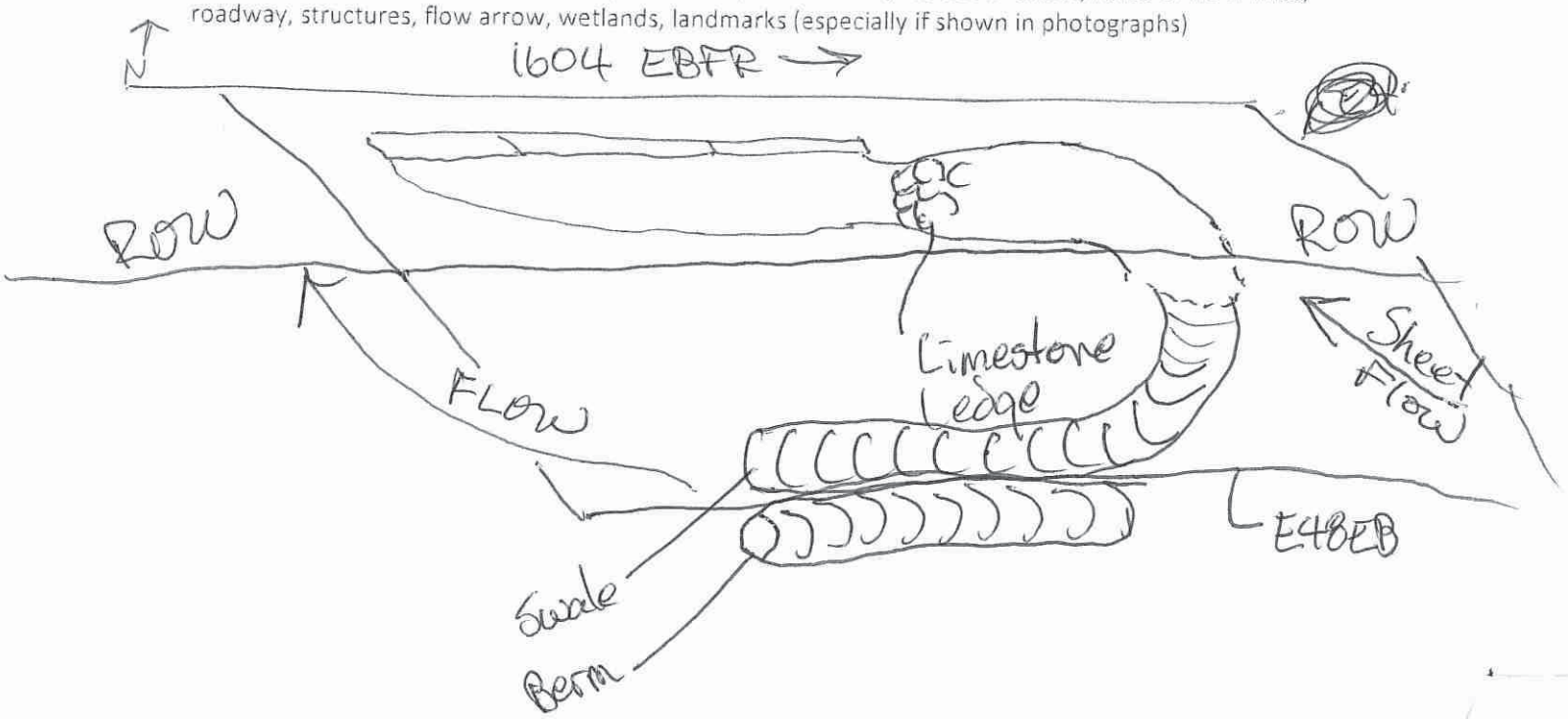
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

X Pipe (s): #___)
X Box (es): #3 size 3X8

___ Bridge
___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 16024 16-35 Date 6/7

Investigator(s): AB & CP

Water Feature # 18 Feature Name E48WB

Structure # _____ Station # _____

Crossing 26

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	1.5-10'	N	
Upstream above ROW	2-12'	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

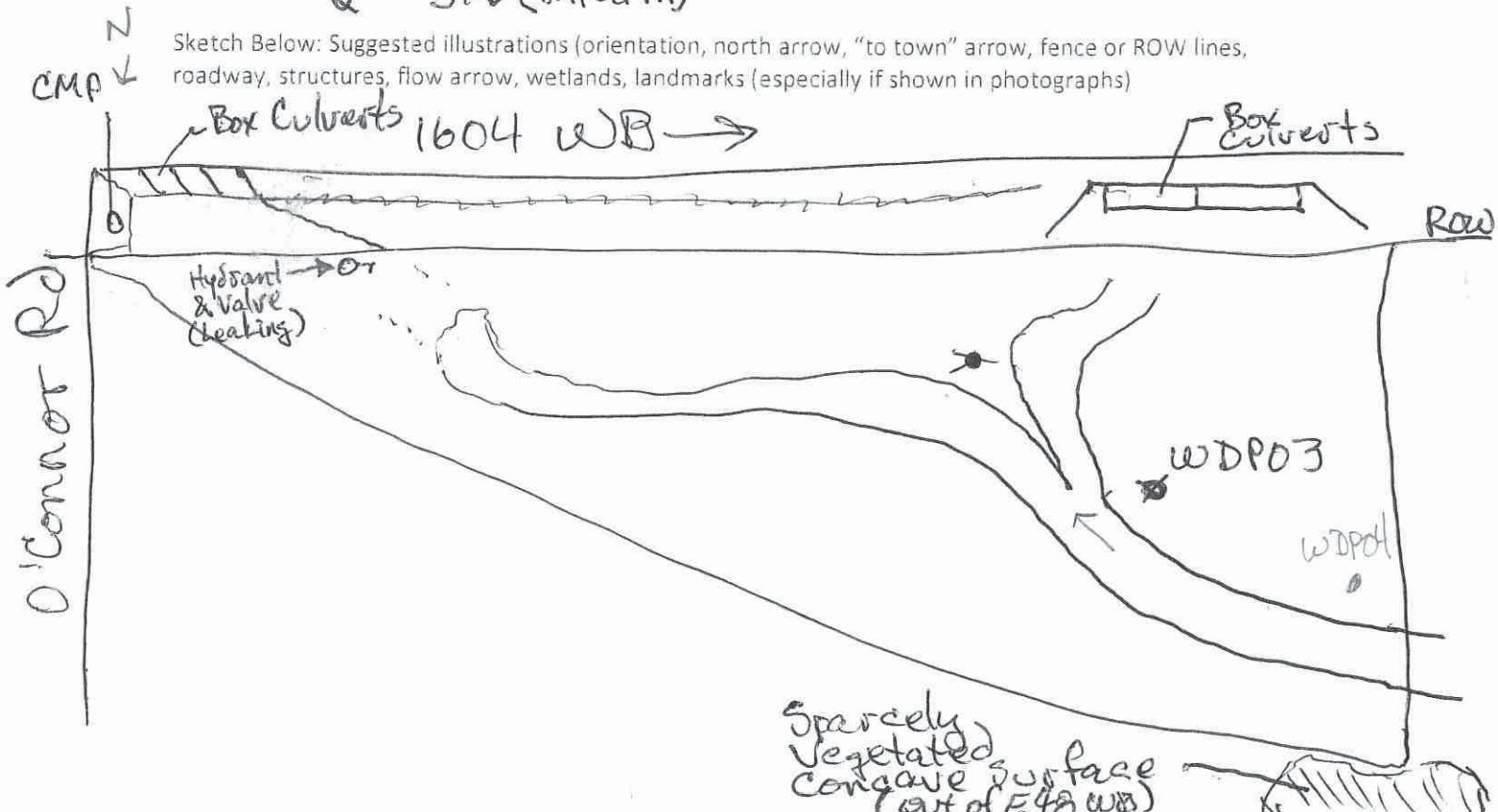
Existing Structure

X Pipe (s): # 1 24" (CMP) ___ Bridge

X Box (es): # 4 size 3x6 ___ Other (explain) _____

2 3x6 (silted in)

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: Loop 1604 Date 8/6

Investigator(s): AB & CP

Water Feature # _____ Feature Name E49 EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N	
Downstream below ROW	7'	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

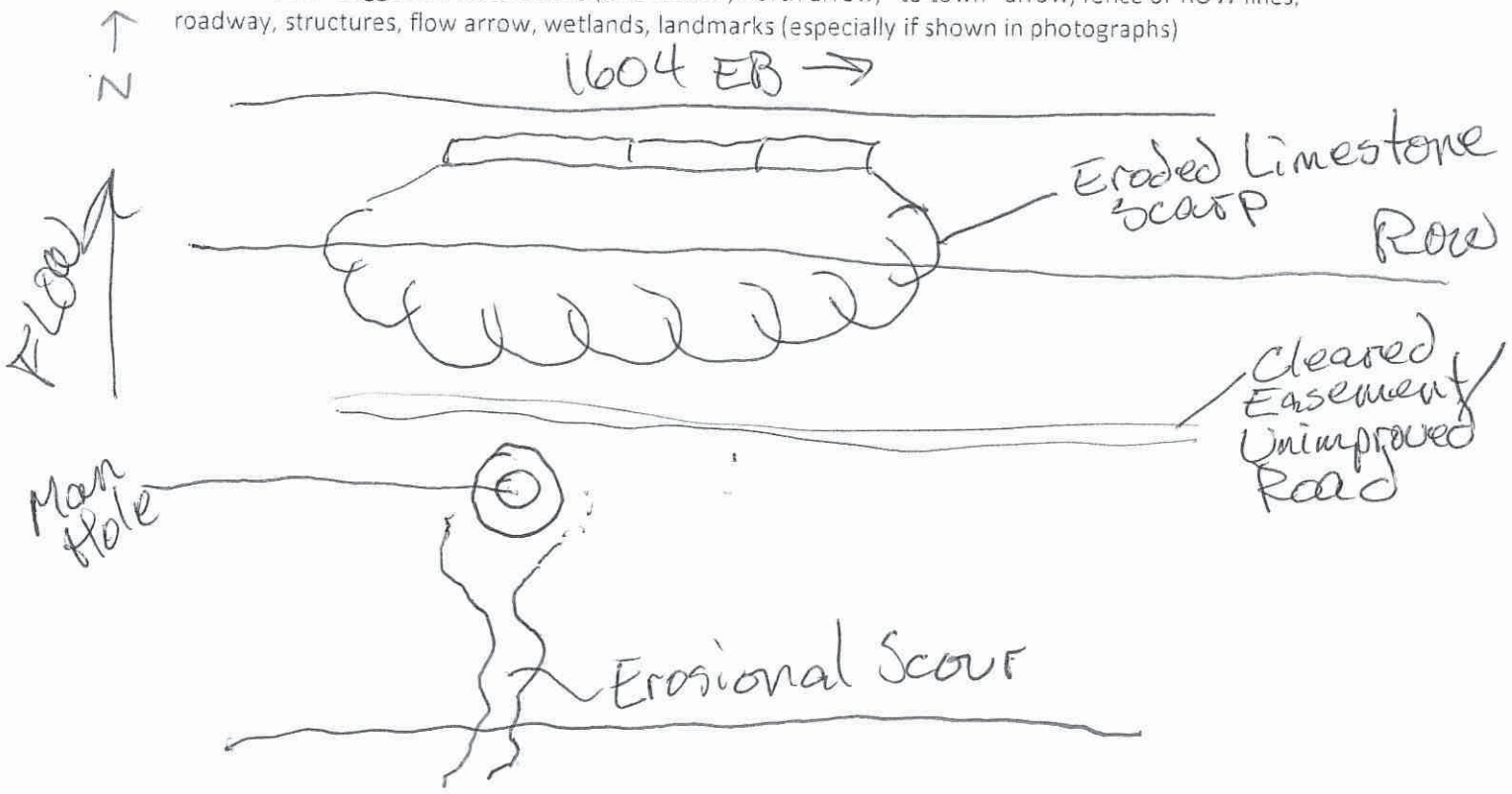
__ Pipe (s): #___)

X Box (es): # 3 size 4x6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date ~~8/8~~ 8/7

Investigator(s): AB 6CP

Water Feature # _____ Feature Name E 49 WB

Structure # Station #_____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	5-20'	N	
Upstream above ROW	3-14'	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

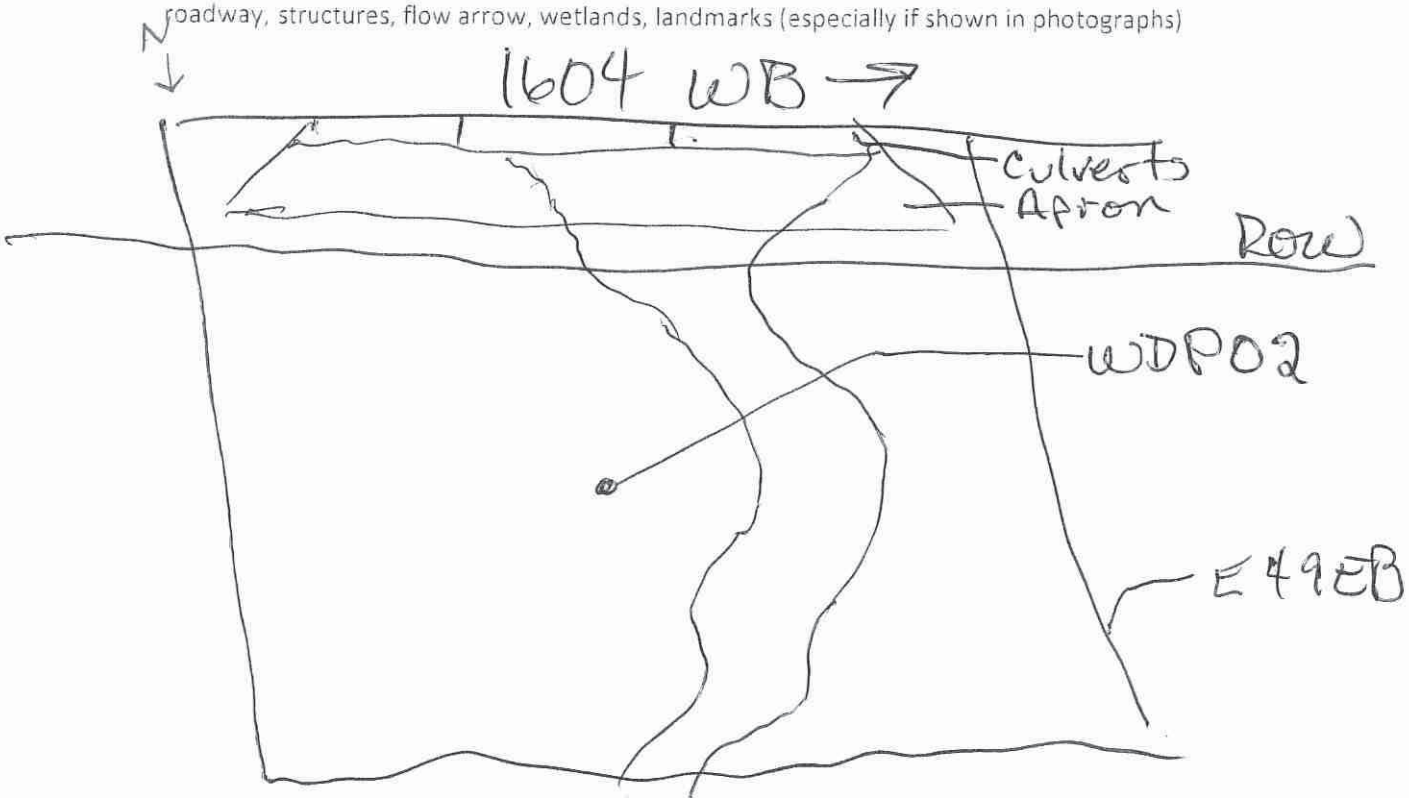
Abundant heavy trash (mattresses, etc.)

Existing Structure

__ Pipe (s): #___) ____ Bridge

X Box (es): #___ size_____ ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/7

Investigator(s): AB + CP

Water Feature # 19 Feature Name E51EB

Structure # Station #

Crossing 27

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	8-14'	N	
Downstream below ROW	4-9'	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

__ Pipe (s): #__

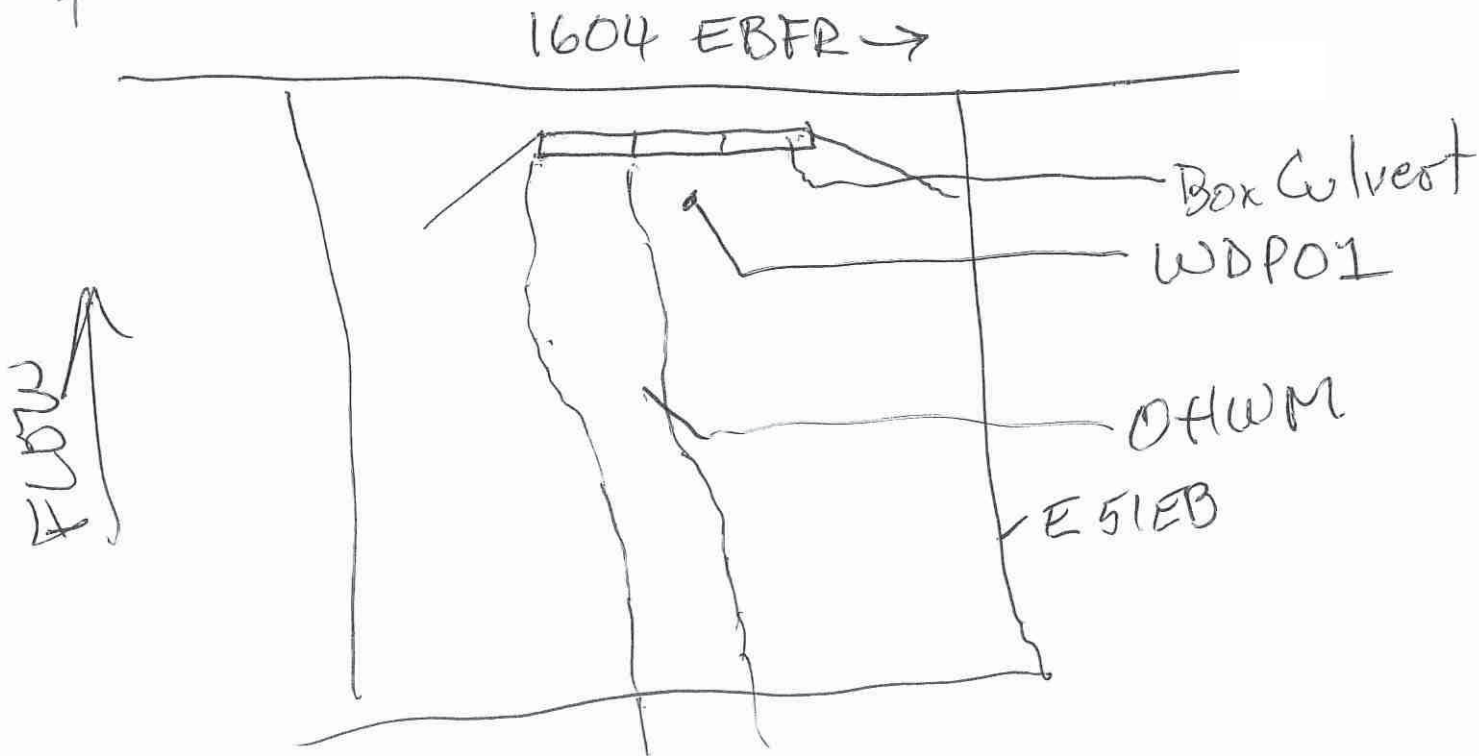
V Box (es): # 4 size 3x6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)

N



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Purra

Water Feature # _____ Feature Name E52WB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	\	\	
Downstream below ROW	1-2 ft	\	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

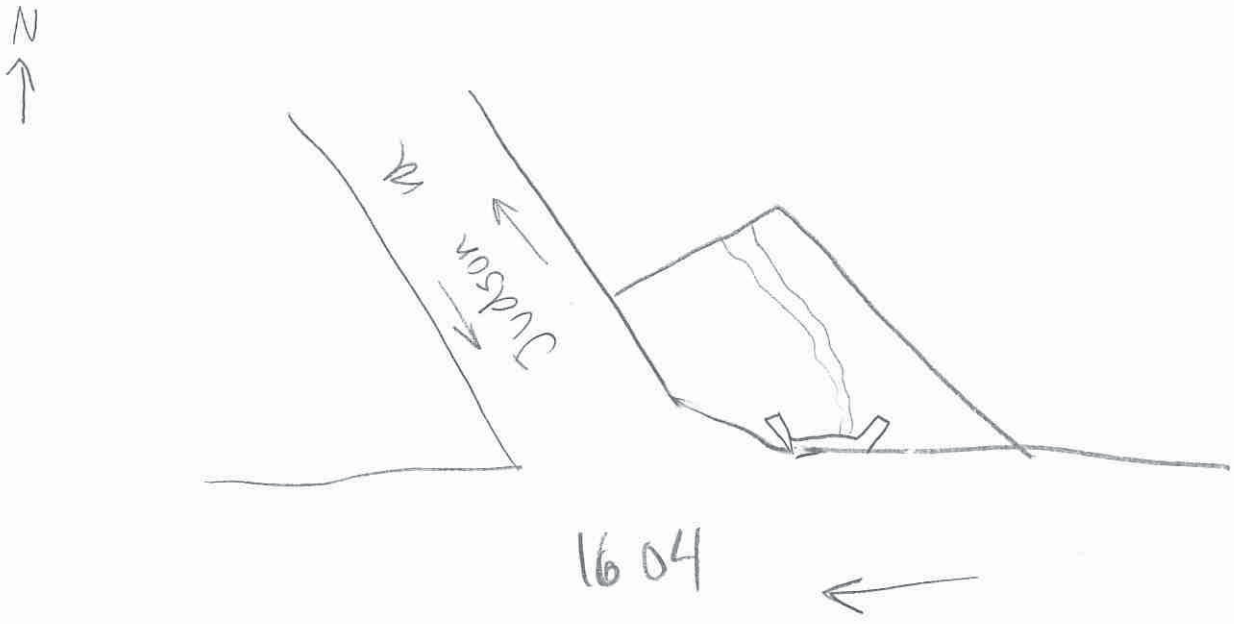
X Pipe (s): #___)

X Box (es): #1 size 4X6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/14

Investigator(s): Blase Parra

Water Feature # N/A Feature Name E53 EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	/	/	
Upstream above ROW	/	/	
Downstream in ROW	N/A	N	
Downstream below ROW	N/A	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

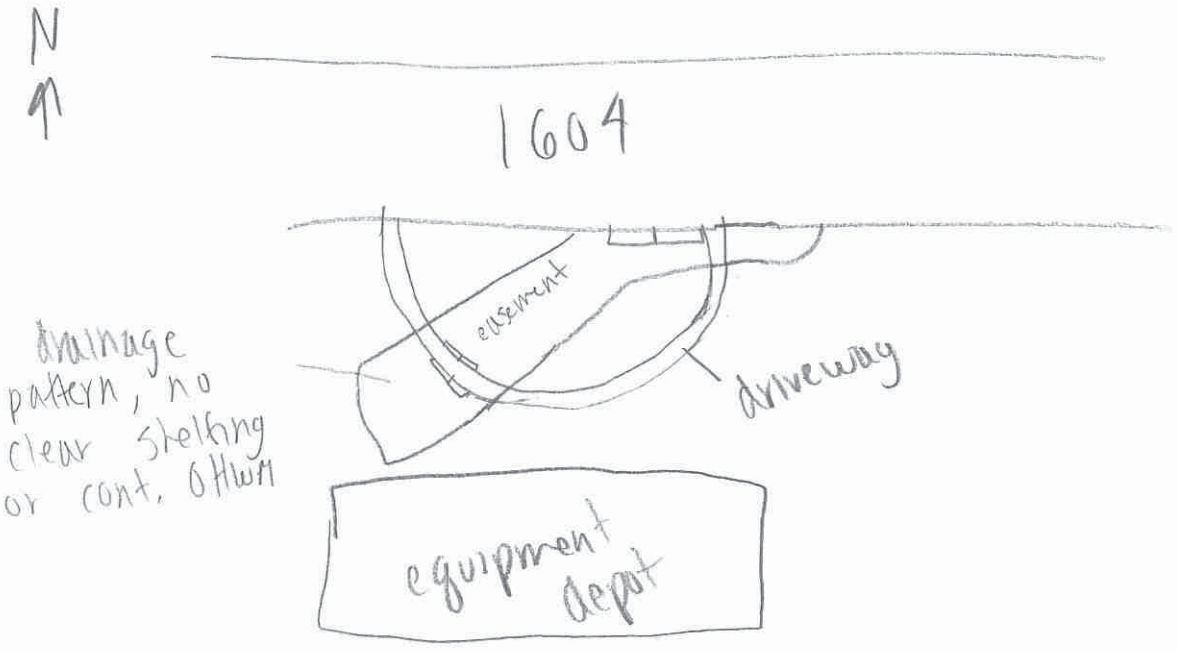
___ Pipe (s): #___)

2 Box (es): #2 size 3 x 12
2 6x6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Parra

Water Feature # N/A Feature Name E54WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	
Downstream in ROW			
Downstream below ROW			

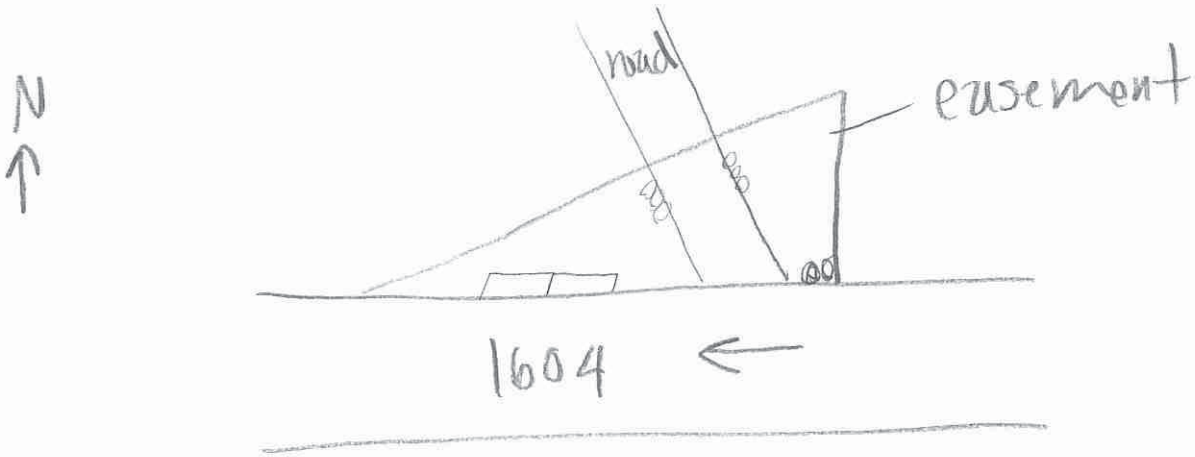
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

5 Pipe (s): #3") ____ Bridge

2 Box (es): #___ size 4x10 ____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/2019

Investigator(s): Blase Parra

Water Feature # N/A Feature Name E55EB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N	
Downstream below ROW	N/A	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

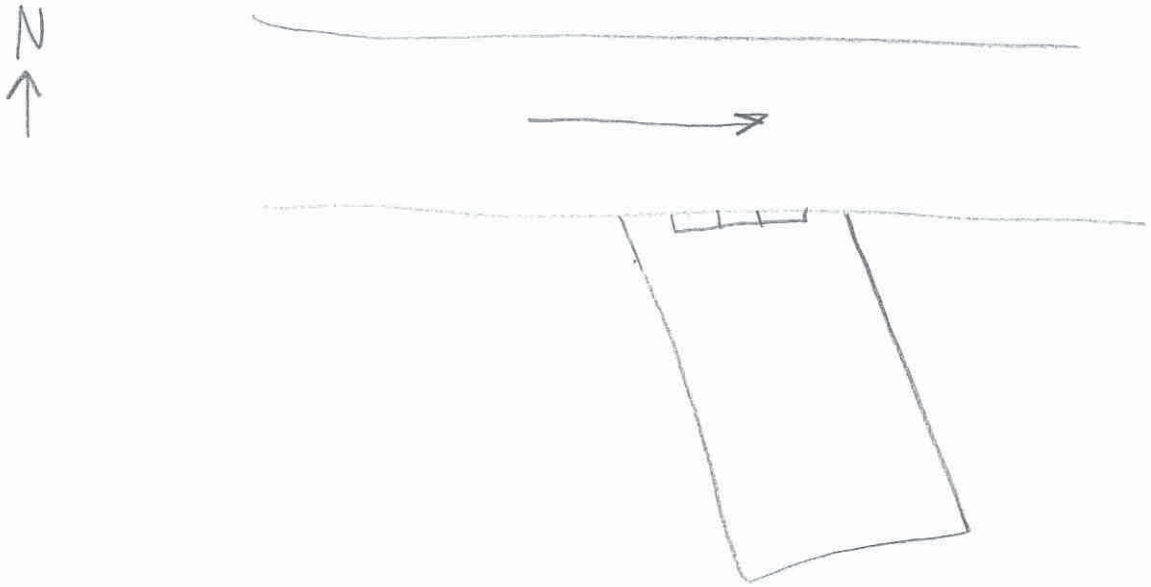
___ Pipe (s): #___)

X Box (es): #3 size 4X6

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Parra

Water Feature # N/A Feature Name ESSWB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

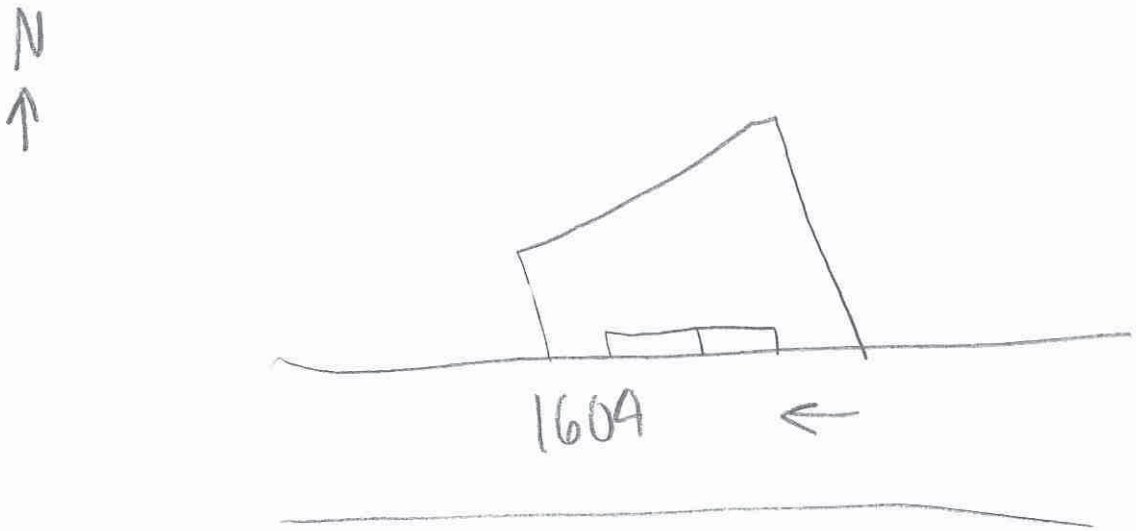
__ Pipe (s): #___)

X Box (es): #1 size 6x3

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blose Parra

Water Feature # N/A Feature Name E56WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A	N	
Upstream above ROW	N/A	N	
Downstream in ROW	\	\	
Downstream below ROW	\	\	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

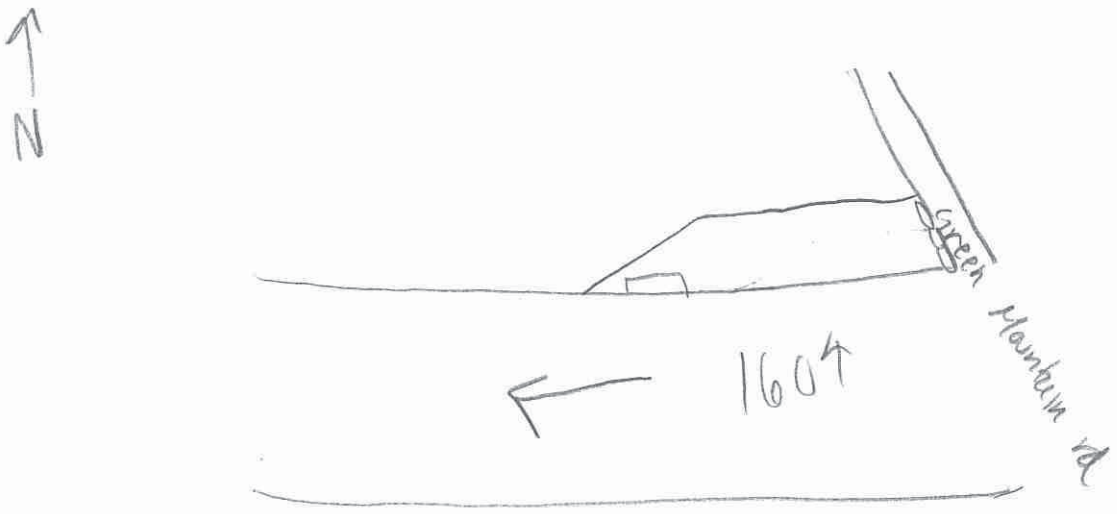
X Pipe (s): # 3) 4 ft

X Box (es): # 1 size 3 x 12

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Bruise Parra

Water Feature # N/A Feature Name Across Green Mnt. Rd from ES6 WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	12'	N	
Downstream below ROW	N/A	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

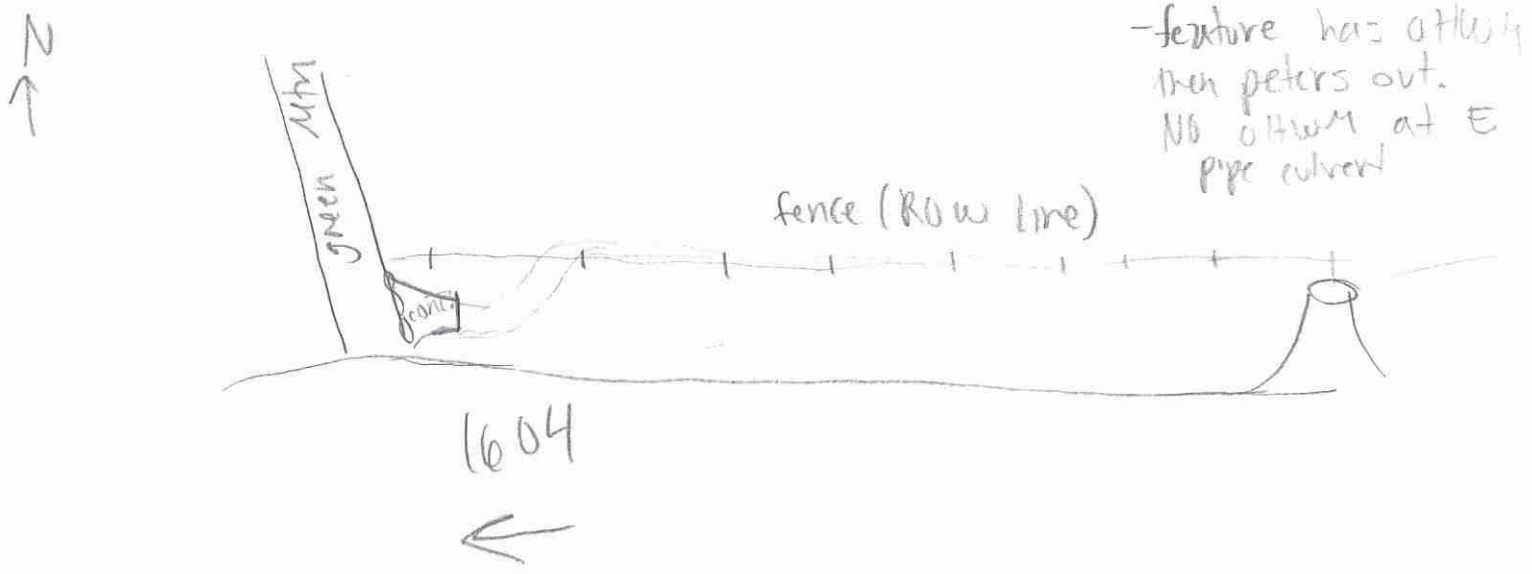
X Pipe (s): # 3 + 1

___ Box (es): #___ size_____

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Parra

Water Feature # ____ Feature Name E57 WB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	18 ft	N	flowing water, 1-10 in
Downstream below ROW	3-12	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

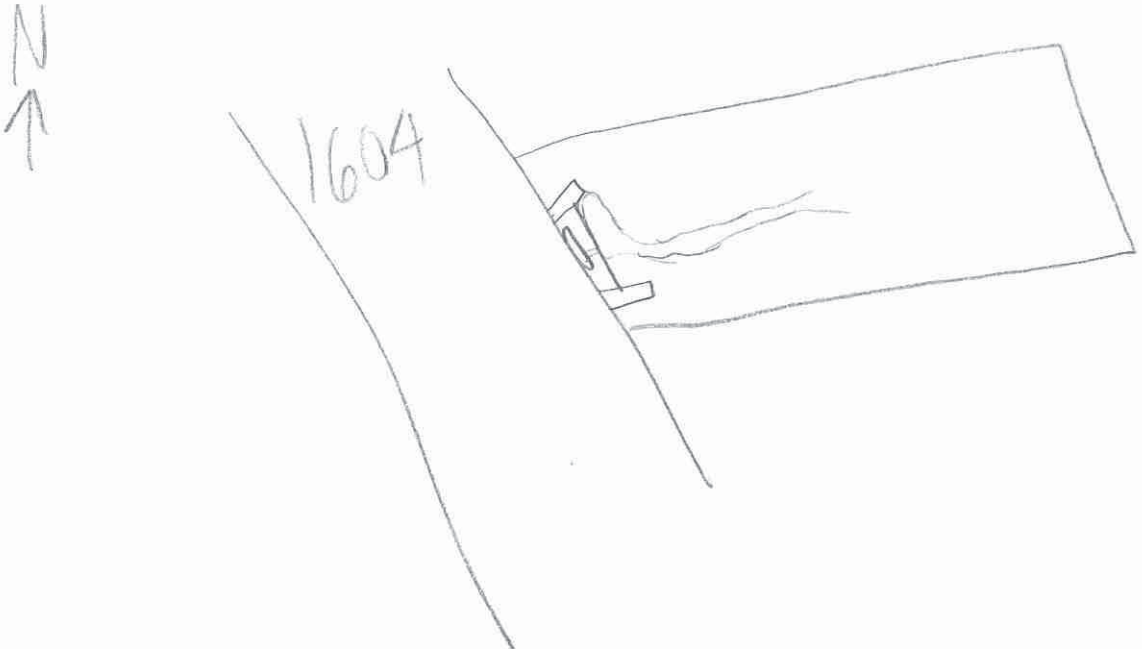
X Pipe (s): #1) 6 ft

___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1609 Date 8/8/19

Investigator(s): Parva Blase

Water Feature # N/A Feature Name E58WB

Structure # Crossing 28 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	N/A	N	bats in culvert
Downstream below ROW	N/A	N	

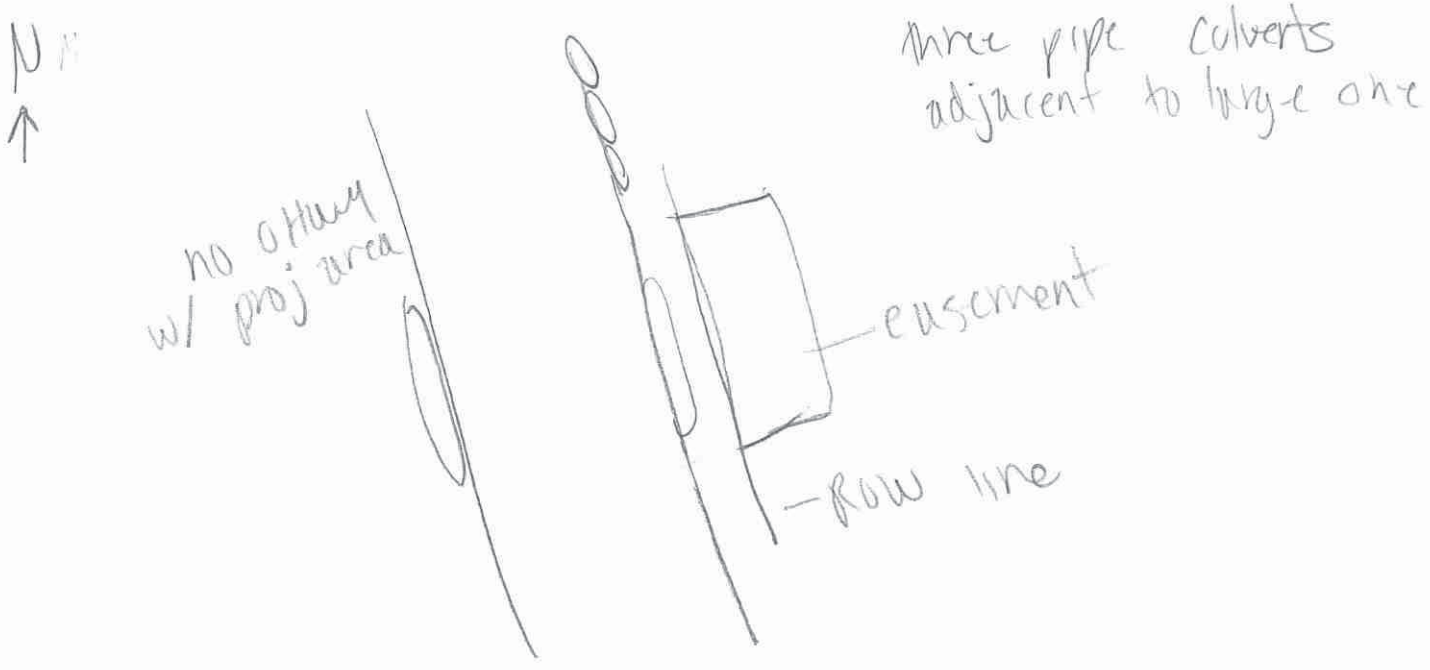
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

X Pipe (s): #1 oblong shape 12x36 ___ Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/8/2019

Investigator(s): CMP WM

Water Feature # ~~~ Feature Name E59EB

Structure # Station #

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	1 ft	N	
Upstream above ROW	2 ft	Y	
Downstream in ROW	1 ft	N	
Downstream below ROW			

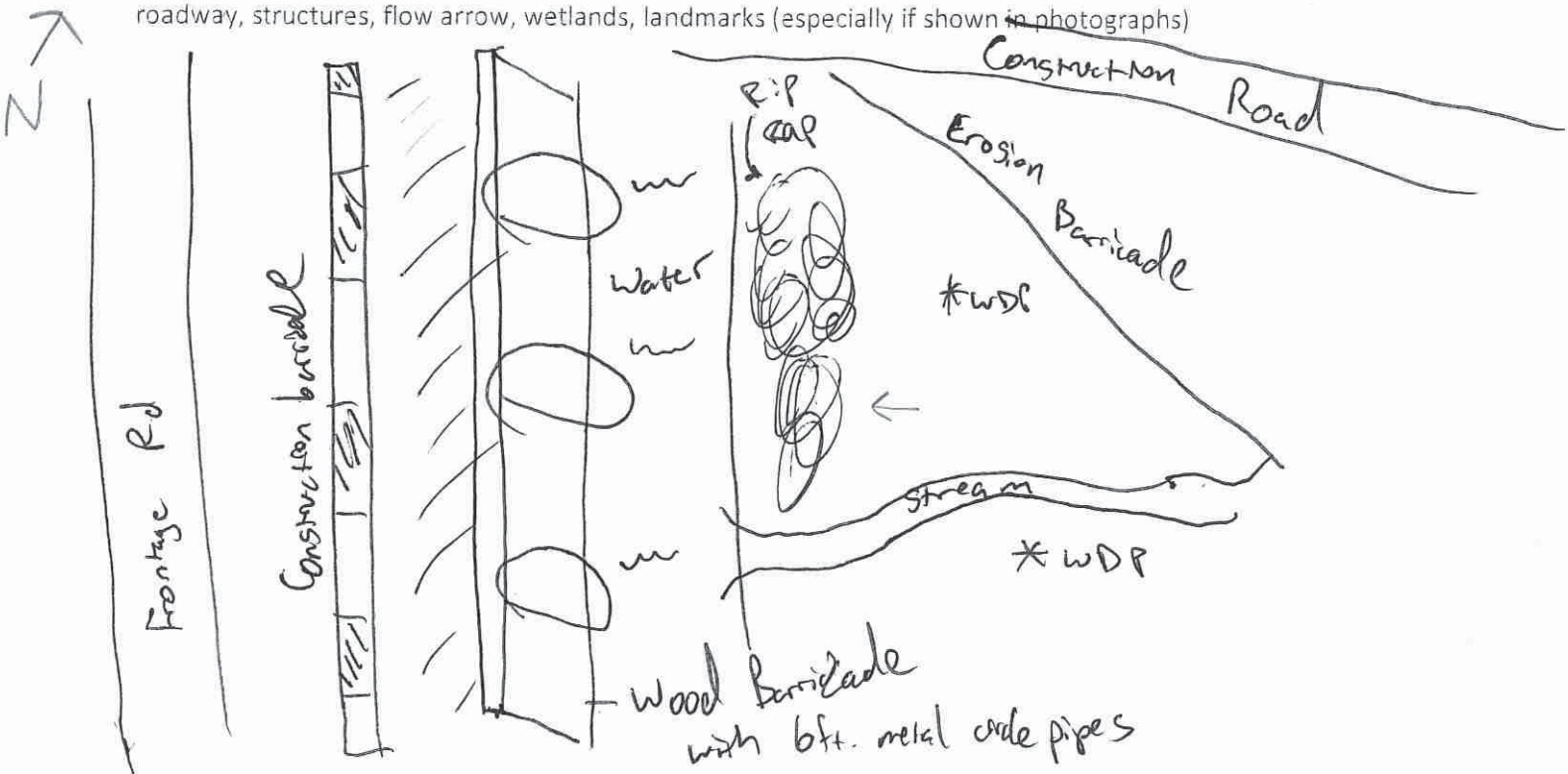
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

(✓) Pipe (s): #3) ___ Bridge

___ Box (es): #___ size_____ ___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown ~~in photographs~~)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/8

Investigator(s): CMP WM

Water Feature # _ _ _ Feature Name E59WB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	NA	N	
Downstream below ROW	2-10	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Flowing water

Existing Structure

X Pipe (s): # 1 6ft.

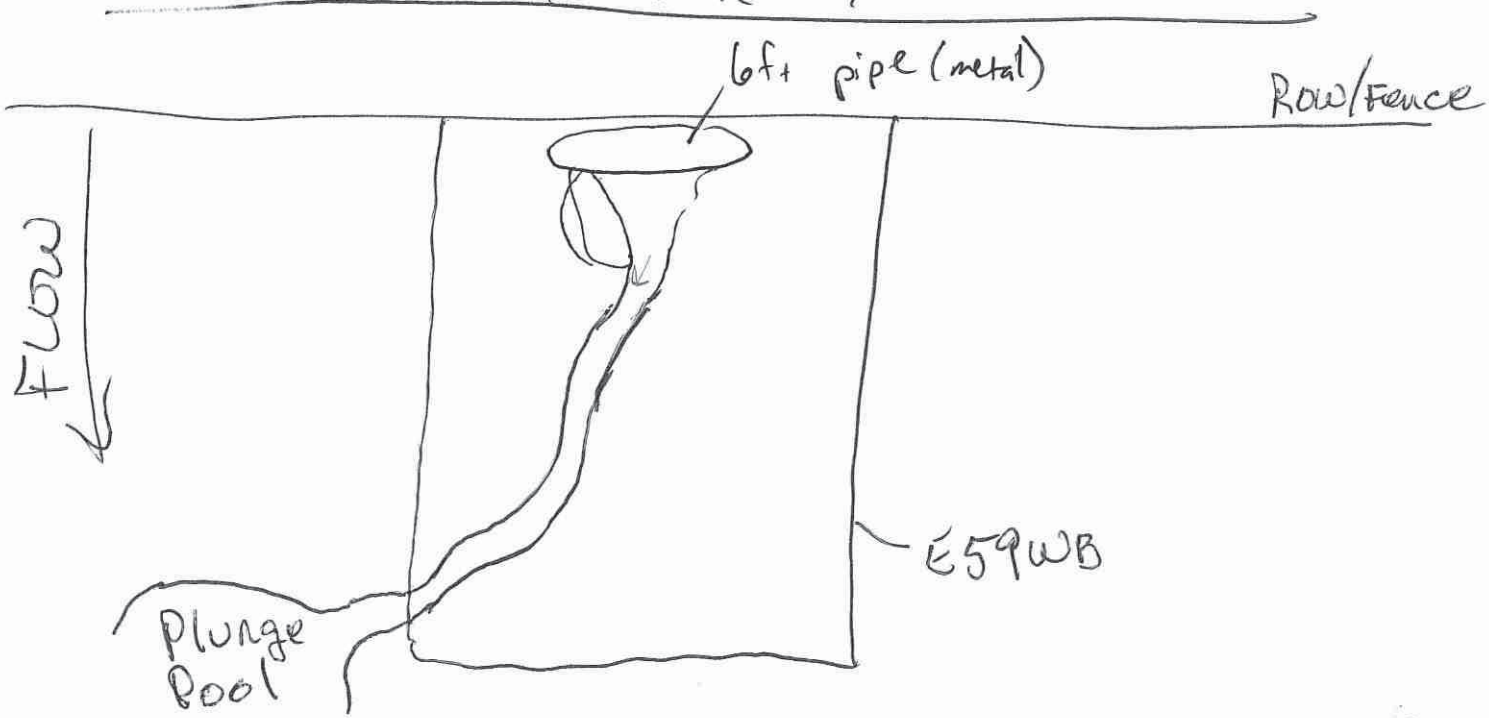
___ Box (es): #___ size_____

___ Bridge

___ Other (explain) _____

N

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Please Note: Form was completed during initial field visits in summer of 2019. Subsequent guidance from TxDOT has resulted in revisions to the OHWM displayed on this form. The figures in Attachment A depict the OHWMs that were assessed in the Surface Water Technical Report.

Water Feature Investigation - Field Data Form

Project: LP 1604 Date: 8/8/19

Investigator(s): Parra Blase

Water Feature # 21 Feature Name E60 EB + WB

Structure # Station #

Crossing 29

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	N	no OHWM
Upstream above ROW	\	N	no OHWM
Downstream in ROW	4'	N	
Downstream below ROW	4'	N	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

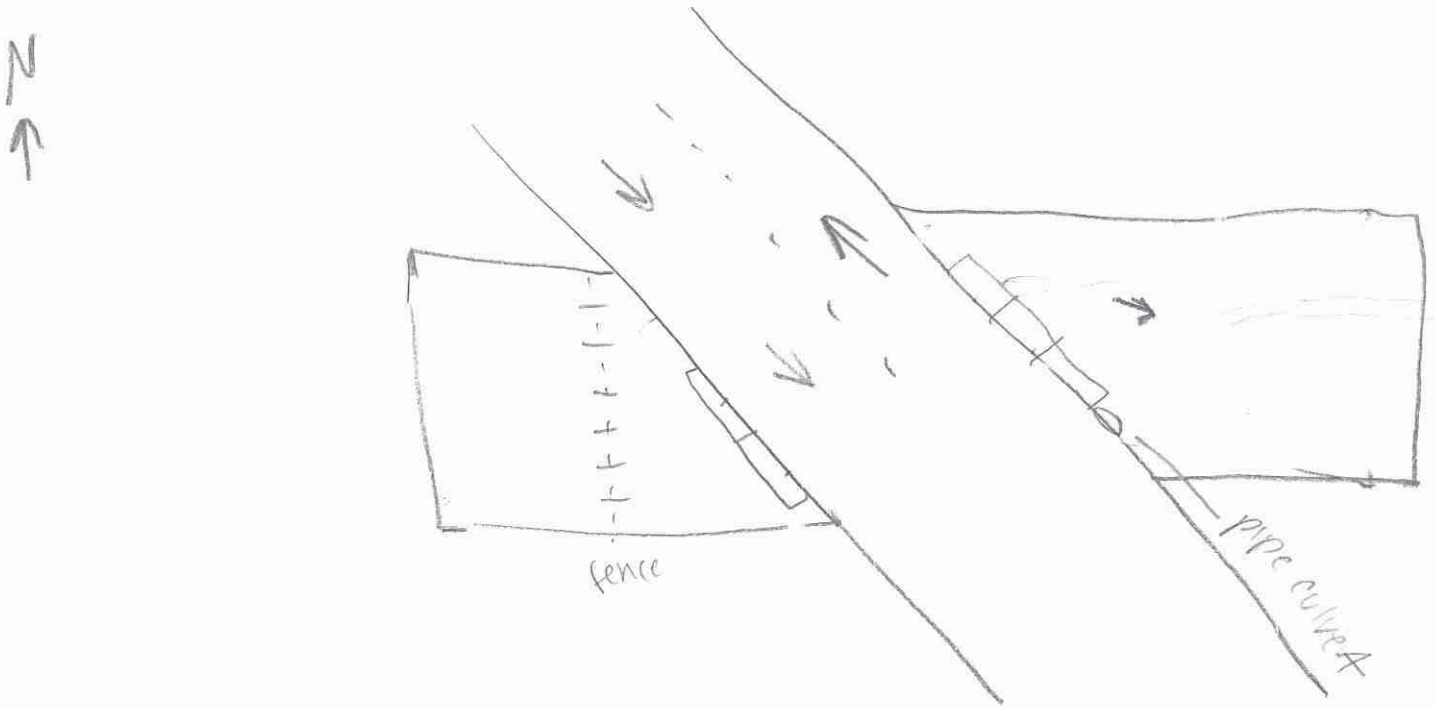
X Pipe (s): # 1) 2 feet (water trickling out - no OHWM until E edge

X Box (es): # 2 size 12x14 / 3 6 x 12

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16.35 Date 8/8/2019

Investigator(s): CMP WM

Water Feature # 22 Feature Name E61 EB

Structure # Crossing 30 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	N/A 8ft	N/A	
Upstream above ROW	N/A	N/A	
Downstream in ROW	16ft	N/A	
Downstream below ROW	N/A	N/A	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

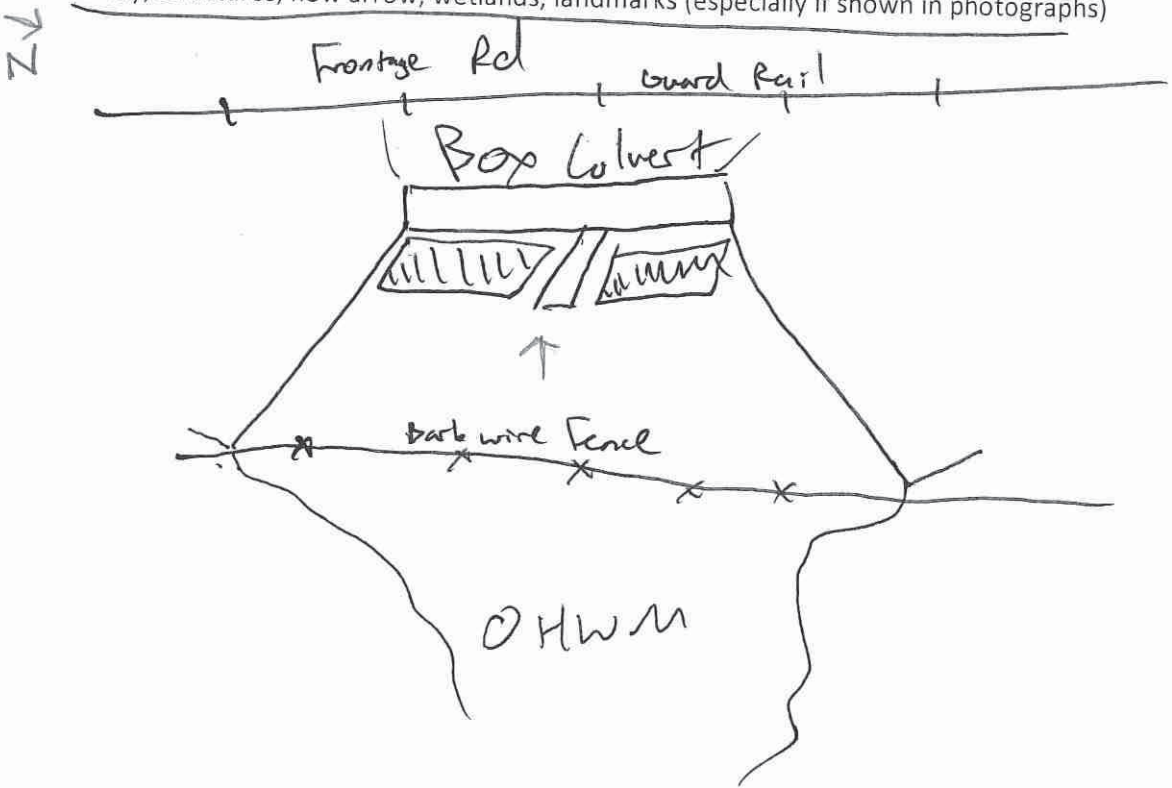
__ Pipe (s): #___)

X Box (es): #2 size 10 x 10

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/8/19

Investigator(s): Payra Blase

Water Feature # 23 Feature Name E 61 WB

Structure # Crossing 30 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	10-12	N	very incised, steep banks
Downstream below ROW	10-12	N	" "

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

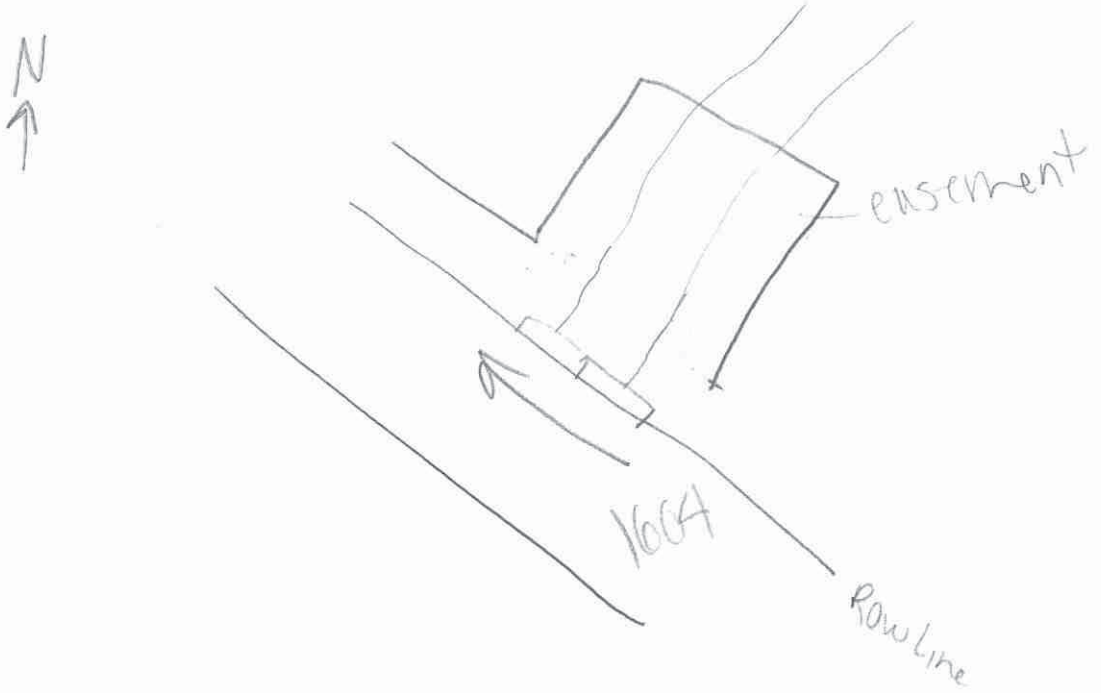
__ Pipe (s): #___)

X Box (es): #2 size 12 X 6

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/7/19

Investigator(s): Blase Parra

Water Feature # N/A Feature Name E62WB

Structure # _____ Station # _____

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	\	\	
Upstream above ROW	\	\	
Downstream in ROW	N/A	N	
Downstream below ROW	N/A	N	drainage pattern, no shelving or distinct OHWM

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Existing Structure

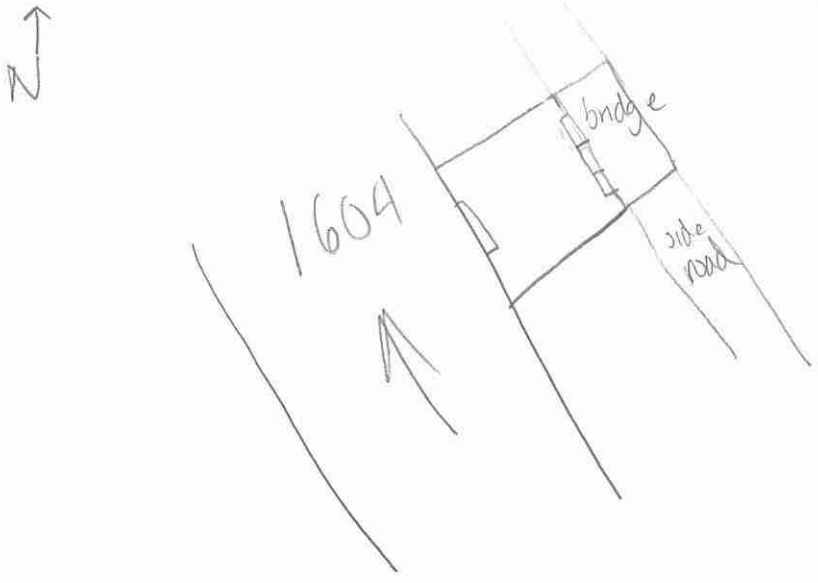
__ Pipe (s): #___)

X Box (es): #1 size 4X2

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 Date 8/1/19

Investigator(s): Blase, Parra

Water Feature # 23 Feature Name E 63 WB

Structure # Crossing 31 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	N/A	N	
Downstream below ROW	18	N	

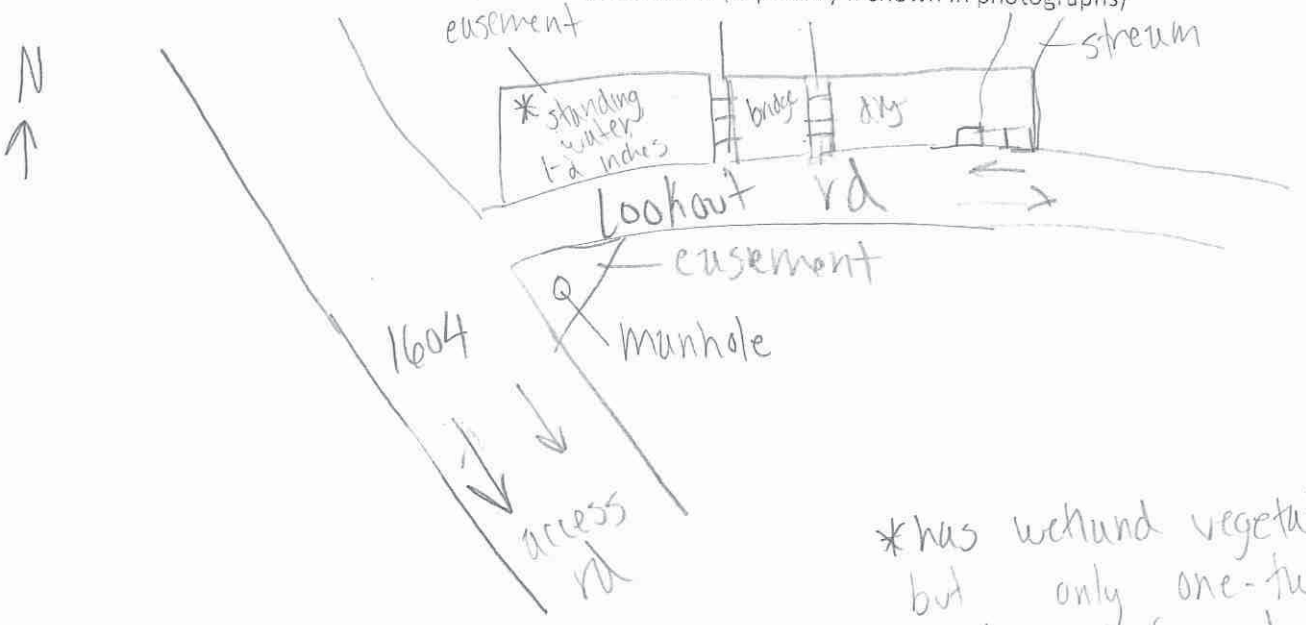
Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH)

Existing Structure

X Pipe (s): #___)
X Box (es): # 4 size 4 x 5
3 4 x 7

___ Bridge
X Other (explain) Manhole
gas station

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



*has wetland vegetation but only one-two inches of soil

Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 8/7/16

Investigator(s): WM & AB

Water Feature # 23 Feature Name E64EB

Structure # Crossing 31 Station #

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	~10		
Upstream above ROW	5-8		
Downstream in ROW	NA		
Downstream below ROW	NA		

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

standing water - not flowing

Existing Structure

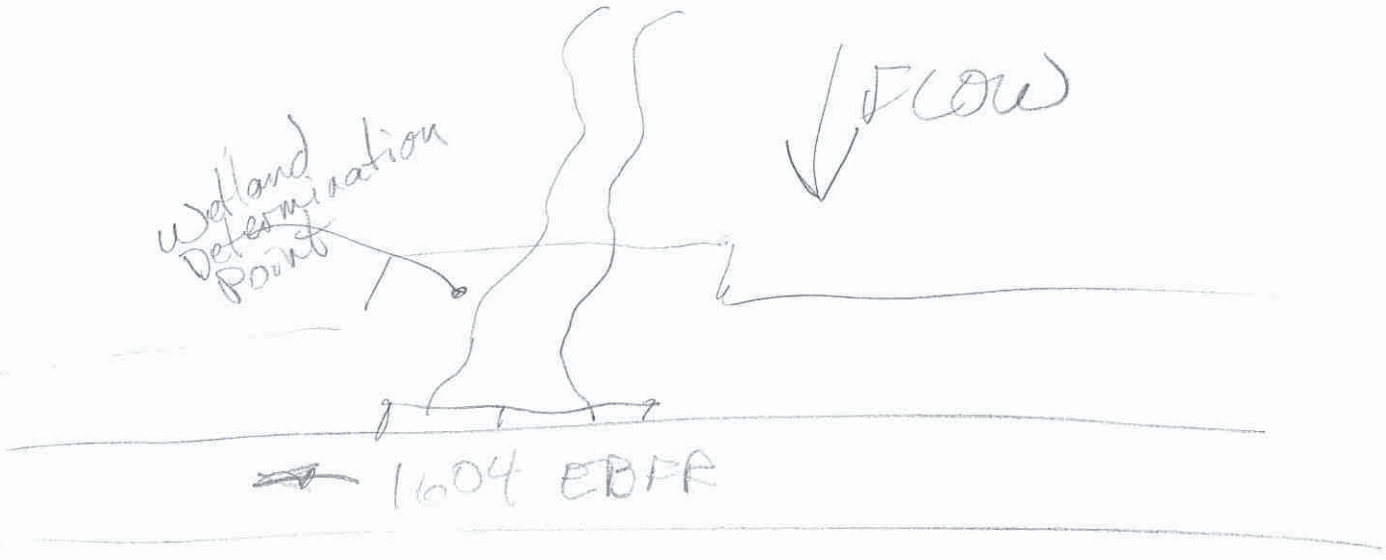
__ Pipe (s): #___)

X Box (es): # 2 size 4x5

____ Bridge

____ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 7/8

Investigator(s): ABtWM

Water Feature # _____ Feature Name E65 EB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW	NA	NA	
Upstream above ROW	NA	NA	
Downstream in ROW			
Downstream below ROW			

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Flowing water

Existing Structure

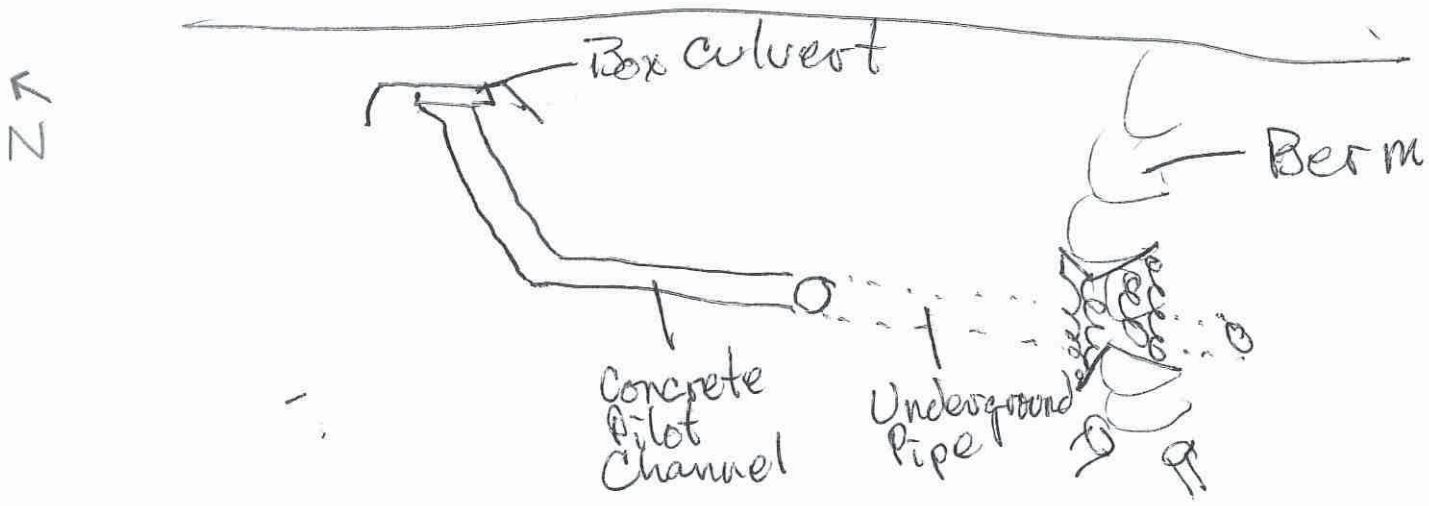
___ Pipe (s): #___)

X Box (es): #1 size 3X4

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Water Feature Investigation - Field Data Form

Project: 1604 16-35 Date 7/8

Investigator(s): AB + WM

Water Feature # _____ Feature Name E 65 WB

Structure # _____ Station # _____

non-jurisdictional feature

	Width of OHWM	Wetland	Notable Features
Upstream in ROW			
Upstream above ROW			
Downstream in ROW	1-2	NA	
Downstream below ROW	2-4	NA	

Notable Features may include: 100-yr flood plain (100), flowing water (FW), standing water (SW), obvious contamination (OC), sewage (S), sinkhole (SH).

Flowing water

Existing Structure

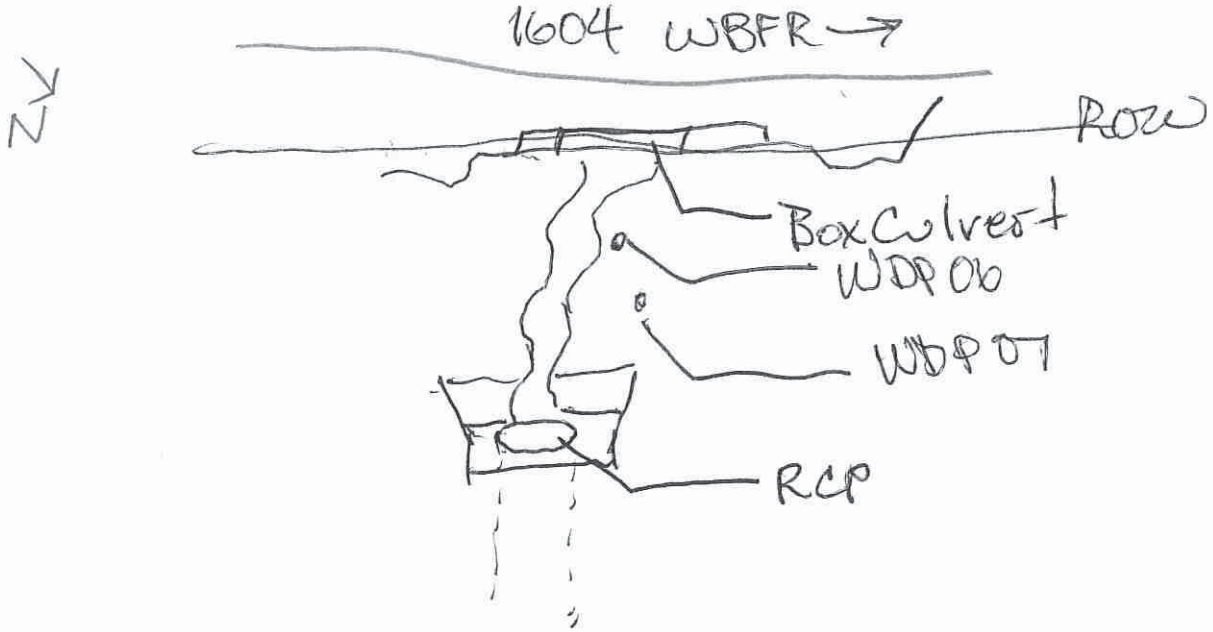
X Pipe (s): # 1 5' RCP

X Box (es): # 1 size 3x5

___ Bridge

___ Other (explain) _____

Sketch Below: Suggested illustrations (orientation, north arrow, "to town" arrow, fence or ROW lines, roadway, structures, flow arrow, wetlands, landmarks (especially if shown in photographs)



Attachment F
Waters of the U.S. – Schematic Overlay

PROJECT LOCATION MAP

PART 1 OF 1
CONTROL: 2412 SECTION: 02 JOB: 082

TEXAS DEPARTMENT OF TRANSPORTATION

CONCEPTUAL SCHEMATIC LAYOUT
LOOP 1604
BEXAR COUNTY

IH 10
LIMITS FROM CASP BULLIS ROAD TO UTSA BLVD
LENGTH: 44 MILES
FUNCTIONAL CLASS: INTERSTATE

LOOP 1604
LIMITS FROM IH 10 TO IH
LENGTH: 18 MILES
DESIGN SPEED: 60 MPH
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO, TEXAS

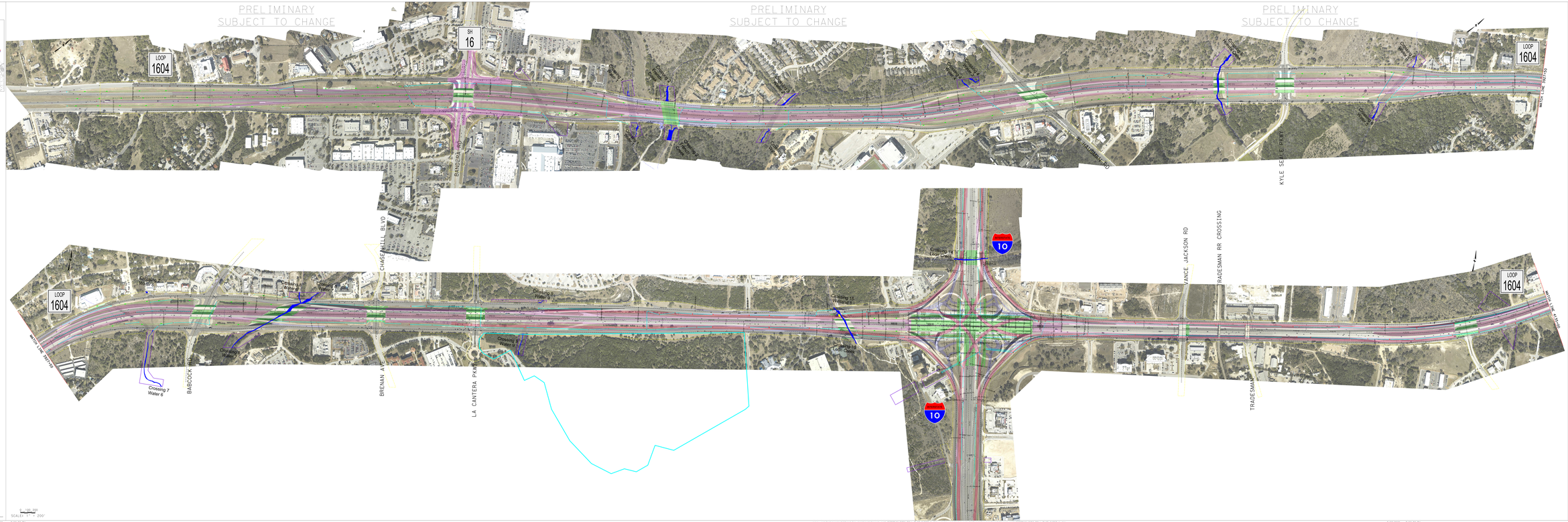
LEGEND

- DIRECTION OF FLOW
- PROP MANHOLE
- PROP STORM SEWER
- EXIST STORM SEWER
- OPEN DITCH
- VFS VEGETATIVE FILTER STRIP
- GS GRASSY SWALE

COLOR LEGEND

- WETLANDS
- WATERS OF THE U.S.
- EASEMENT
- EXISTING RESIDENTIAL MAIN LANES
- PROPOSED RESIDENTIAL MAIN LANES, CD ROADS, & RAMPS
- PROPOSED DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- CRITICAL FEATURES

PRELIMINARY
SUBJECT TO CHANGE



PRELIMINARY
SUBJECT TO CHANGE

PROJECT LOCATION MAP

PART 1 OF 1
CONTROL: 2x12 SECTION: 02 JOB: 082

TEXAS DEPARTMENT OF TRANSPORTATION

CONCEPTUAL SCHEMATIC LAYOUT
LOOP 1604
BEXAR COUNTY

IH 10:
LIMITS FROM CAMP BULLIS ROAD TO UTSA BLVD
LENGTH: 10 MILES
FUNCTIONAL CLASS: INTERSTATE

LOOP 1604:
LIMITS FROM IH 10 TO IH 10
LENGTH: 33 MILES
DESIGN SPEED: 60 MPH
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL

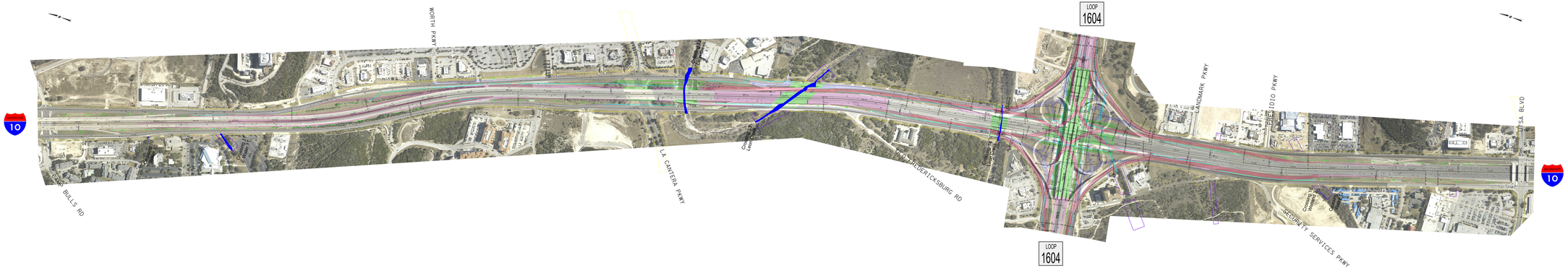
OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO, TEXAS

LEGEND

- DIRECTION OF FLOW
- PROP MANHOLE
- PROP STORM SEWER
- EXIST STORM SEWER
- OPEN DITCH
- VFS VEGETATIVE FILTER STRIP
- GS GRASSY SWALE

COLOR LEGEND

- WETLANDS
- WATERS OF THE U.S.
- EASEMENT
- EXISTING ROADWAY MAIN LANES
- PROPOSED ROADWAY MAIN LANES, CD ROADS, & RAMPS
- PROPOSED DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- CRITICAL FEATURES



SCALE: 1" = 200'

PRELIMINARY
SUBJECT TO CHANGE

PRELIMINARY
SUBJECT TO CHANGE

WATERS OF THE U.S. SCHEMATIC OVERLAY

LOOP 1604

SCALE: 1" = 200 FT HORIZ

2
4

9/27/2020 10:43:55 AM

PROJECT LOCATION MAP

PART 1 OF 1
CONTROL: 2412 SECTION: 02 JOB: 082

TEXAS DEPARTMENT OF TRANSPORTATION

CONCEPTUAL SCHEMATIC LAYOUT
LOOP 1604
BEXAR COUNTY

IH 10:
LIMITS FROM CAMP BULLIS ROAD TO UTSA BLVD
LENGTH: 44 MILES
FUNCTIONAL CLASS: INTERSTATE

LOOP 1604:
LIMITS FROM IH 10 TO IH
LENGTH: 33 MILES
DESIGN SPEED: 60 MPH
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO, TEXAS

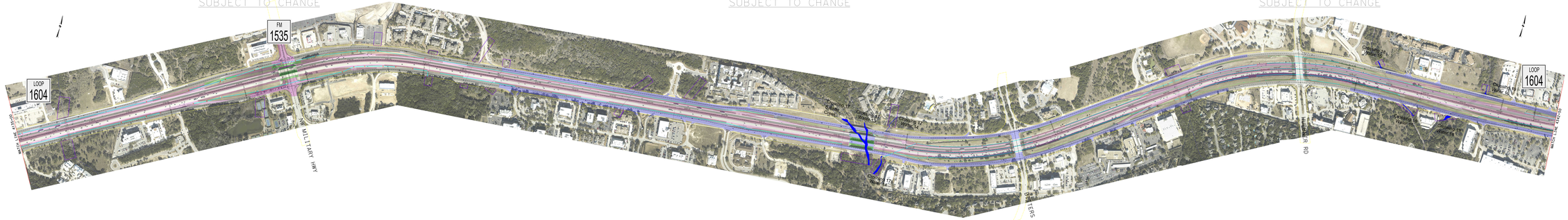
LEGEND

- DIRECTION OF FLOW
- PROP MANHOLE
- PROP STORM SEWER
- EXIST STORM SEWER
- OPEN DITCH
- VFS VEGETATIVE FILTER STRIP
- GS GRASSY SWALE

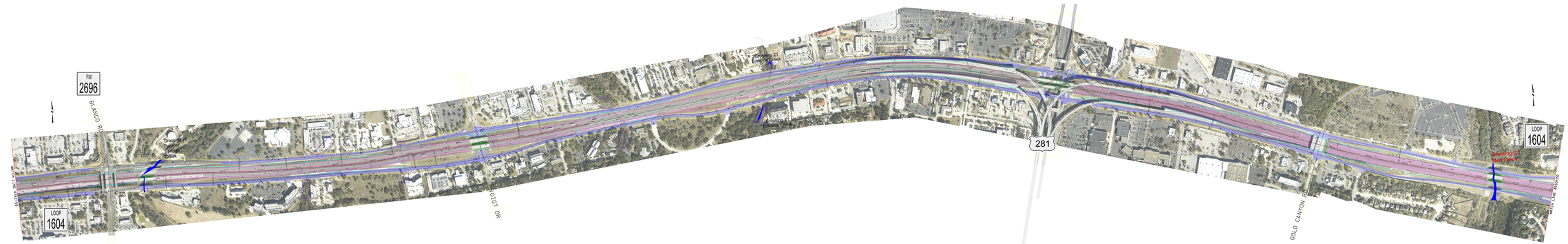
COLOR LEGEND

- WETLANDS
- WATERS OF THE U.S.
- EASEMENT
- EXISTING MISSING MAIN LANES
- PROPOSED MISSING MAIN LANES, CD ROADS, & RAMPS
- PROPOSED DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- CRITICAL FEATURES

PRELIMINARY
SUBJECT TO CHANGE



PRELIMINARY
SUBJECT TO CHANGE



PRELIMINARY
SUBJECT TO CHANGE

SCALES 1" = 200'

PROJECT LOCATION MAP

PART 1 OF 1
CONTROL: 2x12 SECTION: 02 JOB: 082

TEXAS DEPARTMENT OF TRANSPORTATION

CONCEPTUAL SCHEMATIC LAYOUT
LOOP 1604
BEXAR COUNTY

IH 10:
LIMITS FROM CAMP BULLIS ROAD TO UTSA BLVD
LENGTH: 44 MILES
FUNCTIONAL CLASS: INTERSTATE

LOOP 1604:
LIMITS FROM IH 10 TO IH
LENGTH: 35 MILES
DESIGN SPEED: 60 MPH
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO, TEXAS

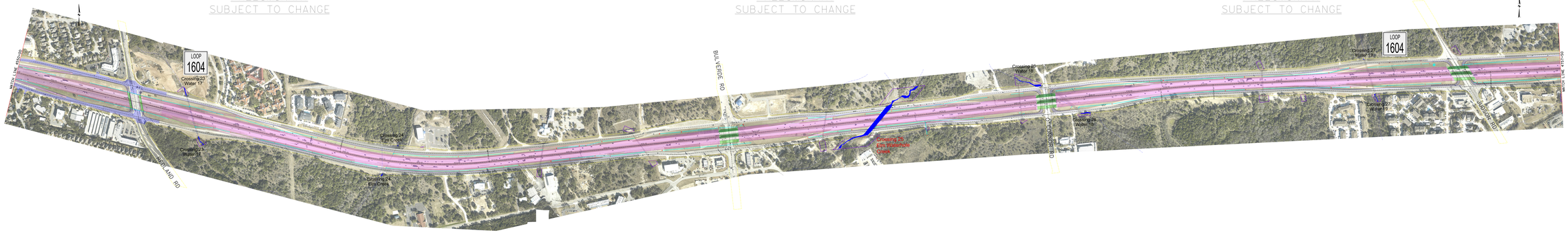
LEGEND

- DIRECTION OF FLOW
- PROP MANHOLE
- PROP STORM SEWER
- EXIST STORM SEWER
- OPEN DITCH
- VFS VEGETATIVE FILTER STRIP
- GS GRASSY SWALE

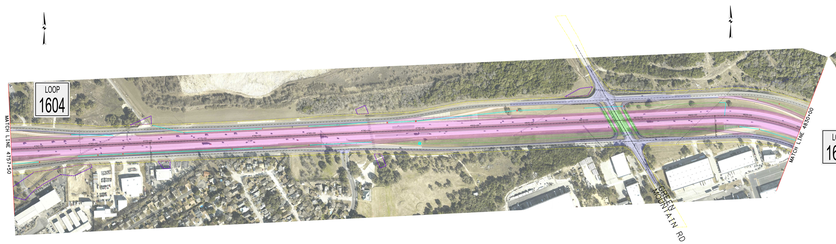
COLOR LEGEND

- WETLANDS
- WATERS OF THE U.S.
- EASEMENT
- EXISTING MIDDENTO MAIN LANES
- PROPOSED MIDDENTO MAIN LANES, CD ROADS, & RAMPS
- PROPOSED DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- CRITICAL FEATURES

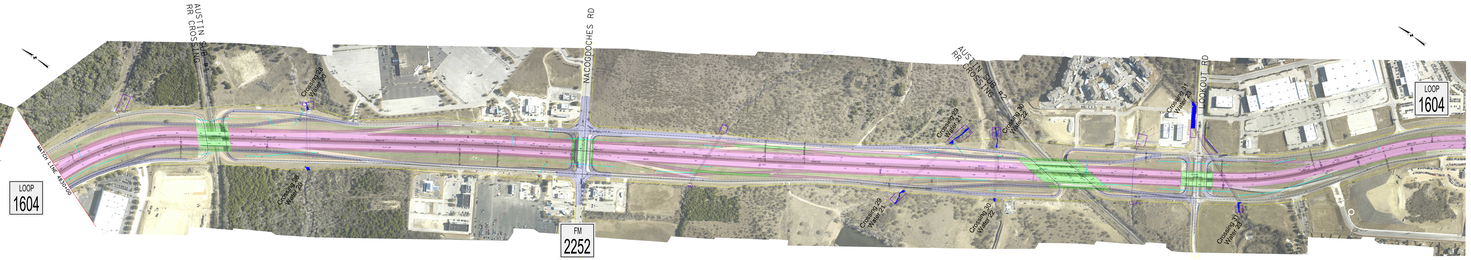
PRELIMINARY
SUBJECT TO CHANGE



PRELIMINARY
SUBJECT TO CHANGE



PRELIMINARY
SUBJECT TO CHANGE



SCALES 1" = 200'

SCALE: 1" = 200 FT HORIZ

SHEET 4 OF 4

Attachment G
Detailed Descriptions of Waters of the U.S. Crossings

Attachment G: Detailed Descriptions of Waters of the U.S. Crossings

Note: Content in parentheses following the crossing number indicates the features associated with the crossing. "E" followed by a number indicates the easement number associated with the feature (corresponds to the numbering on the figures in Attachment A). Some features are not associated with an easement.

Crossing 1 (Water 1, unnamed tributary to French Creek, E2)

Water 1 consists of two disconnected channels northwest of Loop 1604, each with an OHWM of approximately three feet. Some small pools of standing water were observed at the time of the field visit. Dominant vegetation consisted of cedar elm (*Ulmus crassifolia*) in the tree layer, Drummond's rattlebox (*Sesbania drummondii*) in the shrub layer, and marsh bristlegrass (*Setaria parviflora*) in the herb stratum.

Crossing 2 (French Creek, E3)

French Creek is impounded southeast of Loop 1604. No water was observed in the creek northwest of Loop 1604. On the first field visit, open (impounded) water reached to the culvert apron and a hazardous materials trap. The level had fallen by the next visit, which indicates considerable fluctuation is possible. Dominant vegetation consisted of red mulberry (*Morus rubra*) in the tree layer, Drummond's rattlebox and huisache (*Vachellia farnesiana*) in the shrub layer, curly dock (*Rumex crispus*) and Johnsongrass (*Sorghum halepense*) in the herb stratum, and southern dewberry (*Rubus trivialis*) in the vine stratum.

Crossing 3 (Water 2, unnamed tributary to French Creek, E4)

Water 2 had an OHWM of approximately twelve feet with no water in the channel. Dominant vegetation consisted of cedar elm and huisache in the tree layer, whitebrush (*Aloysia gratissima*) in the shrub layer, and perennial ryegrass (*Lolium perenne*) and spreading hedge parsley (*Torilis arvensis*) in the herb stratum.

Crossing 4 (Water 3 and Water 4, unnamed tributaries to French Creek, E5a)

Water 4 joined Water 3 northwest of the project area. The features each had an OHWM of approximately eleven feet with no water within the channel. Dominant vegetation consisted of cedar elm in the tree layer and shrub layer, straggler daisy (*Calyptocarpus vialis*) in the herb stratum and saw-tooth greenbrier (*Smilax bona-nox*) in the vine stratum.

Crossing 5 (Huesta Creek , E5b)

Huesta Creek had an OHWM of approximately twenty-one feet. No water was observed in the channel. Dominant vegetation consisted of Caucasian bluestem (*Bothriochloa bladhii*), giant ragweed (*Ambrosia trifida*), and Johnsongrass in the herb stratum.

Crossing 6 (Water 5, unnamed tributary to Huesta Creek, E6)
Water 5 had an OHWM of approximately eleven feet with no water in the channel. The feature drains from south to north. The feature ended near what was apparently an unimproved access road outside of the existing right-of- way. Dominant vegetation consisted of retama (*Parkinsonia aculeata*) in the tree layer, and Canada wildrye (*Elymus canadensis*) and Mexican petunia (*Ruellia simplex*) in the herb stratum.

Crossing 7 (Water 6, unnamed tributary to Huesta Creek, E7)
Water 6 had an OHWM of approximately five feet with no water in the channel. Dominant vegetation consisted of marsh bristlegrass, Bermudagrass (*Cynodon dactlyon*), and green flatsedge (*Cypreus virens*) in the herb stratum.

Crossing 8 (Water 7 and Water 8, unnamed tributaries to Huesta Creek, E8)
Crossing 8 is composed of Water 7 and Water 8. The features had OHWMs of approximately seven feet for Water 7 and nine feet for Water 8, with no water in the channel of either feature. Dominant vegetation consisted of plateau live oak (*Quercus fusiformis*), Ashe juniper (*Juniperus ashei*), retama, and huisache in the tree stratum, evergreen sumac (*Rhus virens*) in the shrub stratum, and Johnsongrass in the herb stratum.

Crossing 9 (Water 9, unnamed tributary to Huesta Creek, E9)
Water 9 had an OHWM of approximately four feet with approximately four inches of standing water. Dominant vegetation consisted of cedar elm, Ashe juniper, and black willow (*Salix nigra*) in the tree stratum, Rooseveltweed (*Baccharis neglecta*) in the shrub stratum, Johnsongrass, and Vasey grass (*Paspalum urvillei*) in the herb stratum, and Japanese honey suckle (*Lonicera japonicum*), and southern dewberry in the vine stratum.

Crossing 10 (Water 10, unnamed tributary to Leon Creek)
Water 10 had an OHWM of approximately ten feet with no water in the channel. Dominant vegetation consisted of plateau live oak in the tree stratum, evergreen sumac in the shrub stratum, and giant ragweed in the herb stratum.

Crossing 11 (Water 11, unnamed tributary to Leon Creek, E10)
Water 11 had an OHWM of approximately 24 feet with no water in the channel. Dominant vegetation consisted of plateau live oak in the tree stratum, Rooseveltweed in the shrub stratum, and Bermudagrass in the herb stratum.

Crossing 12 (Leon Creek)
Leon Creek had an OHWM of approximately 32 feet with no water in the channel. Dominant vegetation consisted of red mulberry, huisache, and black willow in the tree stratum, eastern

cottonwood (*Populus deltoides*), cedar elm, and Rooseveltweed in the shrub stratum, giant ragweed and hedge parsley in the herb stratum, and southern dewberry in the vine stratum.

Crossing 13 (Leon Creek, E11)

Leon Creek had an OHWM of approximately 30 feet with no water in the channel. Dominant vegetation consisted of green ash (*Fraxinus pennsylvanica*) in the tree stratum, eastern cottonwood, cedar elm, and Rooseveltweed in the shrub stratum, giant ragweed and hedge parsley in the herb stratum, and southern dewberry in the vine stratum.

Crossing 14 (Leon Creek)

Leon Creek had an OHWM of approximately 13 feet with no water in the channel. Dominant vegetation consisted of green ash in the tree stratum, Drummond's rattlebox in the shrub stratum, and giant ragweed and Bermudagrass in the herb stratum.

Crossing 15 (Leon Creek, Wetland 1)

Leon Creek had an OHWM of approximately 17 feet with no water in the channel. Wetland 1 is an adjacent wetland. Dominant vegetation consisted of green ash in the tree stratum, green ash in the shrub stratum, and swamp smartweed (*Persicaria hydropiperoides*) and Bermudagrass in the herb stratum.

Crossing 16 (Water 12, Wetland 2, unnamed tributary to Leon Creek, E14)

Water 12 had an OHWM of approximately two feet with no water in the channel. Wetland 2 is an adjacent wetland. Dominant vegetation consisted of Shumard oak (*Quercus shumardii*), black willow, and honey mesquite (*Prosopis glandulosa*) in the tree stratum, black willow in the shrub stratum, and Mexican petunia, straggler daisy, and Vasey grass in the herb stratum.

Crossing 17 (Salado Creek, Water 13 and Water 14, unnamed tributaries to Salado Creek, E28 and E29)

Salado Creek had an OHWM of approximately 15 feet with no water in the channel. Water 13 had an OHWM of approximately five feet with no water in the channel. Water 14 had an OHWM of approximately ten feet with no water in the channel. Dominant vegetation consisted of plateau live oak and cedar elm in the tree stratum, sugarberry (*Celtis laevigata*) and Shumard oak in the shrub stratum, and giant ragweed and inland sea oats (*Chasmanthium latifolium*) in the herb stratum.

Crossing 18 (Water 15, unnamed tributary to Panther Springs Creek, E31)

Water 15 had an OHWM of approximately ten feet with no water in the channel. Dominant vegetation consisted of huisache and sugarberry in the tree stratum, plateau live oak and Texas prickly pear (*Opuntia englemannii*) in the shrub stratum, and little bluestem (*Schizachyrium scoparium*) and King Ranch bluestem (*Bothriochloa ischaemum*) in the herb stratum.

Crossing 19 (Water 16, unnamed tributary to Panther Springs Creek, E34)
Water 16 had an OHWM of approximately five feet with no water in the channel. Dominant vegetation consisted of huisache and cedar elm in the tree stratum and in the shrub stratum, and giant ragweed and Mexican hat (*Ratibida columnifera*) in the herb stratum.

Crossing 20 (Panther Springs Creek)
Panther Springs Creek had an OHWM of approximately 40 feet with no water in the channel. Dominant vegetation consisted of huisache in the shrub stratum, and giant ragweed and old man's beard (*Clematis vitalba*) in the herb stratum.

Crossing 21 (Lorence Creek, E38)
Lorence Creek had an OHWM of approximately 15 feet with no water in the channel. Dominant vegetation consisted of plateau live oak and huisache in the tree stratum, Texas persimmon (*Diospyrus texana*), and Arizona ash (*Fraxinus velutina)* in the shrub stratum, Canada wildrye and straggler daisy in the herb stratum, and saw-tooth greenbrier in the vine stratum.

Crossing 22 (Mud Creek)
Mud Creek had an OHWM of approximately 32 feet with no water in the channel. Dominant vegetation consisted of huisache and cedar elm in the tree stratum, Texas persimmon, western soapberry (*Sapindus saponaria*), and common hop tree (*Ptelea trifoliata*) in the shrub stratum, and Bermuda grass in the herb stratum.

Crossing 23 (Water 17, unnamed tributary to Elm Creek, E40)
Water 17 had an OHWM of approximately seven feet with no water in the channel. Dominant vegetation consisted of huisache in the tree stratum, sugarberry and fragrant sumac (*Rhus aromatica*) in the shrub stratum, Canada wildrye, thin paspalum (*Paspalum setaceum*), and straggler daisy in the herb stratum, and saw-tooth greenbrier in the vine stratum.

Crossing 24 (Elm Creek, E41)
Elm Creek had an OHWM of approximately 13 feet with no water in the channel. Dominant vegetation consisted of cedar elm and plateau live oak in the tree stratum, cedar elm in the shrub stratum, straggler daisy, Mexican petunia, and thin paspalum in the herb stratum, and southern dewberry and trumpet vine (*Campsis radicans*) in the vine stratum.

Crossing 25 (Elm Waterhole Creek, E45)

Elm Waterhole Creek had an OHWM of approximately 40 feet with no water in the channel. Dominant vegetation consisted of huisache, sugarberry, cedar elm, Chinese tallow (*Triadica sebifera*), and black willow in the tree stratum, huisache in the shrub stratum, and rag sumpweed (*Cyclachaena xanthiifolia*), giant ragweed, Virginia wildrye, and southern sedge (*Carex austrina*) in the herb stratum, and mustang grape (*Vitis mustangensis*) and saw-tooth greenbrier in the vine stratum.

Crossing 26 (Water 18, unnamed tributary to Elm Waterhole Creek, E48)

Water 18 had an OHWM of approximately five feet with no water in the channel. Dominant vegetation consisted of huisache, sugarberry, black willow, and green ash in the tree stratum, cedar elm and Rooseveltweed in the shrub stratum, giant ragweed and common spike rush (*Eleocharis palustris*) in the herb stratum, and mustang grape and southern dewberry in the vine stratum.

Crossing 27 (Water 19, tributary to Elm Waterhole Creek, E51)

Water 19 had an OHWM of approximately six feet with no water in the channel. Dominant vegetation consisted of Texas ash (*Fraxinus albicans*) and plateau live oak in the tree stratum, sugarberry, cedar elm, and Texas ash in the shrub stratum, straggler daisy and Canada wildrye in the herb stratum, and southern dewberry in the vine stratum.

Crossing 28 (Water 20, tributary to Cibolo Creek, E58)

Water 20 had an OHWM of approximately six feet with no water in the channel during the first visit and two to three inches of standing water during a subsequent visit (after a heavy rain the day prior). Dominant vegetation consisted of box elder (*Acer negundo*) and black hickory (*Carya texana*) in the tree stratum, cedar elm, and honey mesquite in the shrub stratum, and giant ragweed in the herb stratum.

Crossing 29 (Water 21, tributary to Cibolo Creek, E60)

Water 21 had an OHWM of approximately nine feet with no water in the channel. Dominant vegetation consisted of black willow and sugarberry in the tree stratum, black willow and green ash in the shrub stratum, and giant ragweed in the herb stratum.

Crossing 30 (Water 22, tributary to Cibolo Creek, E61)

Water 22 had an OHWM of approximately eight feet with no water in the channel. Vegetation on the south side of the channel is herbaceous while on the north side it is herbaceous and woody. Dominant woody vegetation is green ash and huisache. The herbaceous layer is dominated by giant ragweed.

Crossing 31 (Water 23, tributary to Cibolo Creek, E63 & E64)

Water 23 had an OHWM of approximately 13.5 feet with approximately 12 inches of standing water in the portion with a natural stream bottom. The concrete-lined portion of the channel had one to two inches of standing water. Dominant vegetation consisted of green ash,

huisache, and sugarberry in the tree stratum, green ash and Rooseveltweed in the shrub stratum, Mexican petunia, giant ragweed and Virginia wildrye in the herb stratum, and southern dewberry in the vine stratum.