

U.S. ARMY CORPS OF ENGINEERS REGULATORY PROGRAM APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM) NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 07-OCT-2020

ORM Number: SWF-2019-00255

Associated JDs: N/A
Review Area Location¹:
State/Territory: TX
City: Fort Worth

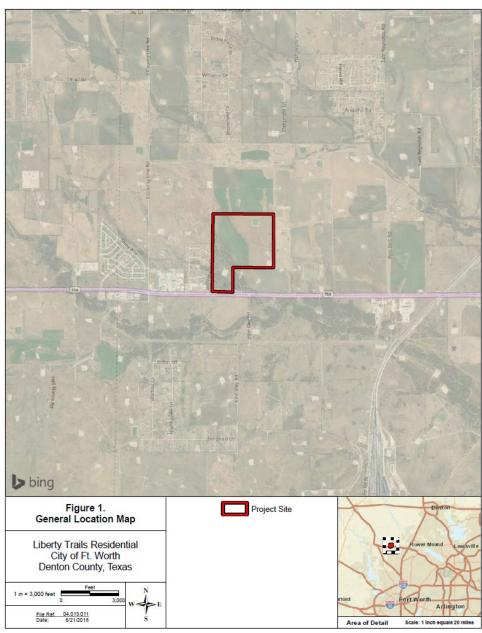
County/Parish/Borough:

Denton County

Center Coordinates of

Review Area:

Latitude: 33.043008, Longitude: -97.376003



¹ Map(s)/Figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

II. FINDINGS

Α.	Summary: Check all that apply. At least one box from the following list MUST be selected. Complete
	the corresponding sections/tables and summarize data sources.

The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.

There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in section II.B).

There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in section II.C).

There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination		
N/A	N/A	N/A	N/A		

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters)³

(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A	N/A	N/A	N/A

Tributaries ((a)(2) waters):

(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
SWF-2019-00255 Tributary 1	N/A	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	Contributes surface water flow into Elizabeth Creek, which drains to Grapevine Lake, which eventually leads to the Trinity River, which is considered an (a)(1) water.
SWF-2019-00255 Tributary 2	N/A	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	Contributes surface water flow into Elizabeth Creek, which drains to Grapevine Lake, which eventually leads to the Trinity River, which is considered an (a)(1) water.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):

akes and ponds, and impoundments of jurisdictional waters ((a)(5) waters).					
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination		
SWF-2019-00255 Pond 1	(a)(3) Lake/pond or impoundment of a jurisdictional water contributes surface water flow directly or indirectly to an (a)(1) water in a typical year		Impoundment of an (a)(2) water, and contributes surface water flow indirectly to the Trinity River, an (a)(1) water in a typical year.		
SWF-2019-00255 Pond 2	N/A	(a)(3) Lake/pond or impoundment of a jurisdictional water contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	Impoundment of an (a)(2) water, and contributes surface water flow indirectly to the Trinity River, an (a)(1) water in a typical year.		
SWF-2019-00255 Pond 3	N/A	(a)(3) Lake/pond or impoundment of a jurisdictional water contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	Impoundment of an (a)(2) water, and contributes surface water flow indirectly to the Trinity River, an (a)(1) water in a typical year.		
SWF-2019-00255 Pond 4	N/A	(a)(3) Lake/pond or impoundment of a jurisdictional water contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	Impoundment of an (a)(2) water, and contributes surface water flow indirectly to the Trinity River, an (a)(1) water in a typical year.		

Adjacent wetlands ((a)(4) waters):

(a)(4) Name	(a)(4) Name (a)(4) Size (a)(4) Criteria		Rationale for (a)(4) Determination
SWF-2019-00255 Forested Wetland	N/A	(a)(4) Wetland abuts an (a)(1)-(a)(3) water	Wetland receives surface water flow from and similarly drains into an (a)(2) water, which contributes surface water flow indirectly to the Trinity River, an (a)(1) water in a typical year.

D. Excluded Waters or Features

Excluded waters $((b)(1) - (b)(12))^4$:

Exclusion Name Exclusion Size		Exclusion ⁵	Rationale for Exclusion Determination		
SWF-2019-00255 Pond 5	N/A	(b)(8) Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water that meets (c)(6)	Stock pond constructed in uplands.		
SWF-2019-00255 Pond 6 N/A d a		(b)(1) Lake/pond or impoundment that does not contribute surface water flow directly or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year	Stock pond constructed in uplands.		
SWF-2019-00255 Pond 7	N/A	(b)(1) Surface water channel that does not contribute surface water flow directly or indirectly to an (a)(1) water in a typical year	Stock pond constructed in uplands.		
SWF-2019-00255 Pond 8	ΙΝ/Δ		Stock pond constructed in uplands.		
SWF-2019-00255 Tributary 3	Tributary 3 N/A ephemeral stream, swale, gully, rill, or		Inconsistent ephemeral feature that does not carry surface water flow directly or indirectly to an (a)1) water.		
SWF-2019-00255 Wetland 2	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W3	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W4 N/A (b)(1) Nor		(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W5 N/A (b)(1) Non-adjacent wetland		(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W6	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W7	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W8	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		
SWF-2019-00255 W9	N/A	(b)(1) Non-adjacent wetland	No surface water flow connection to (a)(1) waters.		

III. SUPPORTING INFORMATION

- **A.** Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.
 - X Information submitted by, or on behalf of, the applicant/consultant: Attachment B-3, Wetland Determination Data Forms, dated 06/26/2018, 07/03/2018, 08/21/2019.

This information *is* sufficient for purposes of this AJD.

Rationale: N/A.

Data sheets prepared by the Corps: N/A.

X Photographs: Attachment B-2, Representative Photographs (On Site Photos)

Corps Site visit(s) conducted on: N/A.

Previous Jurisdictional Determinations (AJDs or PJDs): N/A

X Antecedent Precipitation Tool: Two outputs attached - see discussion in Section III.B. below.

X USDA NRCS Soil Survey: Figure 3, Soils Map, dated 06/21/2018.

USFWS NWI maps: Title(s) and/or date(s).

X USGS topographic maps: Figure 2, Topographic Setting, dated 06/21/2018.

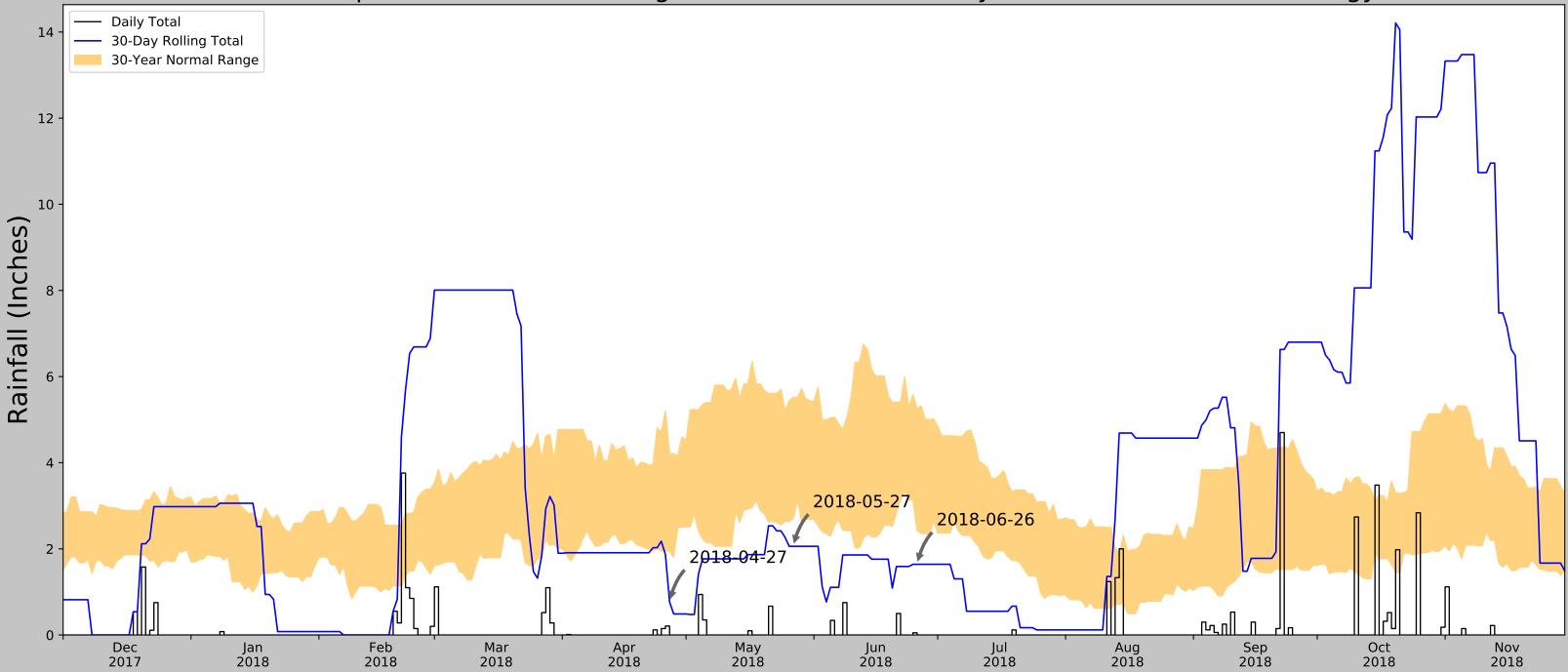
Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.

Other Sources	Google Earth, Digital Globe.

- **B.** Typical year assessment(s): Typical year assessment is considered drier than normal within the moderate and severe drought seasons. From April 2018 July 2018, the 30-Day Rolling Total stays below the 30-Year Normal Range. However, August 2018 November 2018 have several rain events that make the 30-Day Rolling Total much higher than the 30-Year Normal Range, so additional aerial photos after the site visit dates were reviewed to check the conditions against the information submitted.
- **C.** Additional comments to support AJD: Additional aerial photos were reviewed through Google Earth and other electronic tools, which supported the findings found within this report.

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



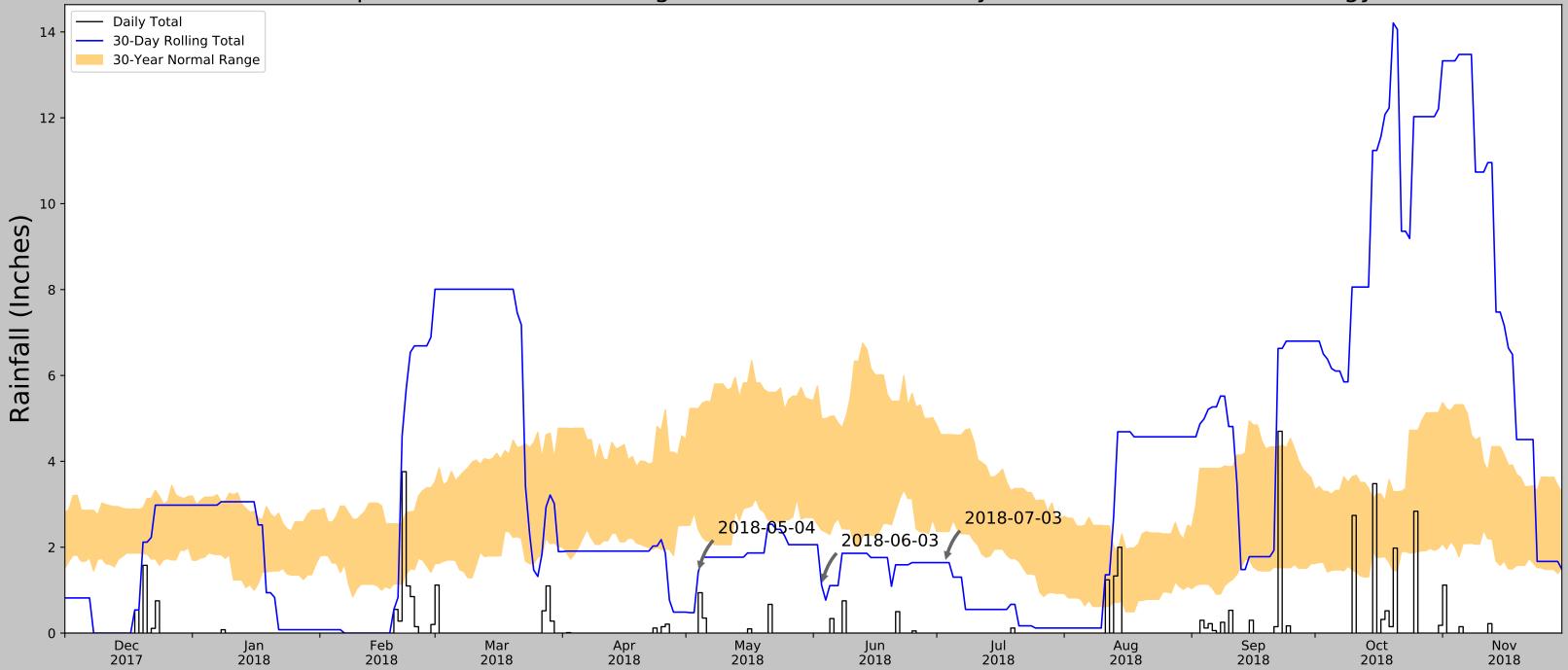
Coordinates	33.043008, -97.376003
Observation Date	2018-06-26
Elevation (ft)	761.63
Drought Index (PDSI)	Moderate drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2018-06-26	2.428347	5.252756	1.641732	Dry	1	3	3
2018-05-27	2.707874	5.517323	2.059055	Dry	1	2	2
2018-04-27	1.949213	4.21063	0.767717	Dry	1	1	1
Result							Drier than Normal - 6

CORPS OF EN	Figure and tables made by the Antecedent Precipitation Tool Version 1.0
ROLLATORY PROGRAM	Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
JUSTIN	33.0806, -97.2967	640.092	5.276	121.538	3.015	5732	90
HASLET	32.9867, -97.3722	752.953	3.897	8.677	1.787	1	0
HASLET 3.7 WNW	32.9881, -97.3932	813.976	3.922	52.346	1.97	13	0
ROANOKE 4.0 WNW	33.0187, -97.2982	617.126	4.81	144.504	2.859	1	0
FT WORTH ALLIANCE AP	32.9733, -97.3181	685.039	5.87	76.591	3.091	1371	0
ROANOKE	33.005, -97.2331	641.076	8.685	120.554	4.955	4118	0
BOYD	33.08, -97.5639	729.987	11.177	31.643	5.383	105	0
EAGLE MTN LAKE	32.8692, -97.4497	759.843	12.746	1.787	5.759	12	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

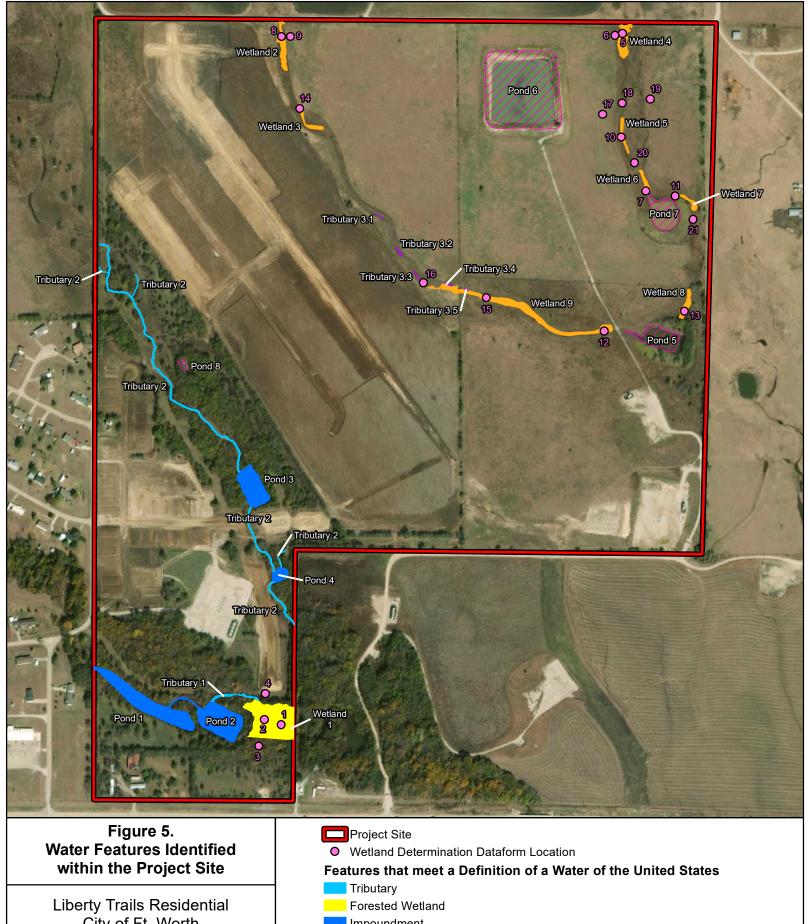


Coordinates	33.043008, -97.376003
Observation Date	2018-07-03
Elevation (ft)	761.63
Drought Index (PDSI)	Severe drought
WebWIMP H ₂ O Balance	Dry Season

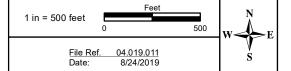
30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2018-07-03	2.367717	4.622441	1.641732	Dry	1	3	3
2018-06-03	2.398819	4.99252	1.11811	Dry	1	2	2
2018-05-04	2.420473	5.222047	1.417323	Dry	1	1	1
Result							Drier than Normal - 6

CORPS OF EN	Figure and tables made by the Antecedent Precipitation Tool Version 1.0
ROLLATORY PROGRAM	Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
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FT WORTH ALLIANCE AP	32.9733, -97.3181	685.039	5.87	76.591	3.091	1371	0
ROANOKE	33.005, -97.2331	641.076	8.685	120.554	4.955	4118	0
BOYD	33.08, -97.5639	729.987	11.177	31.643	5.383	105	0
EAGLE MTN LAKE	32.8692, -97.4497	759.843	12.746	1.787	5.759	12	0



City of Ft. Worth Denton County, Texas



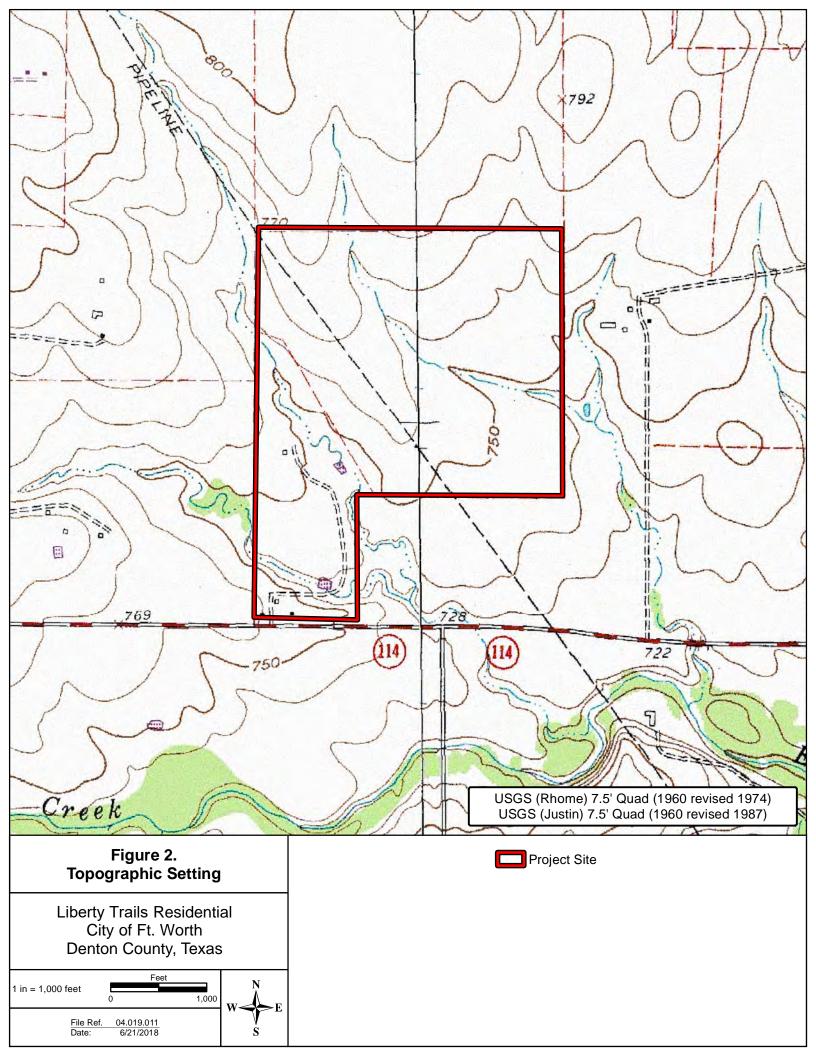
Impoundment

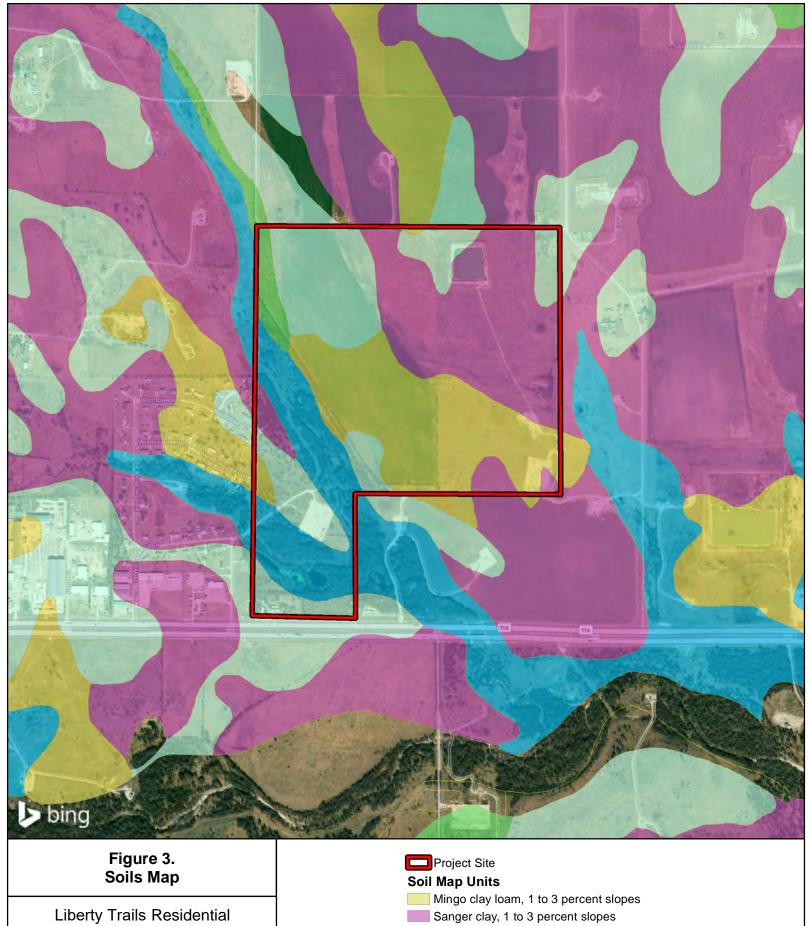
Features that do not meet a Definition of a Water of the United States

Artificial Pond

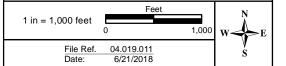
Ephemeral Tributary

Isolated Wetland

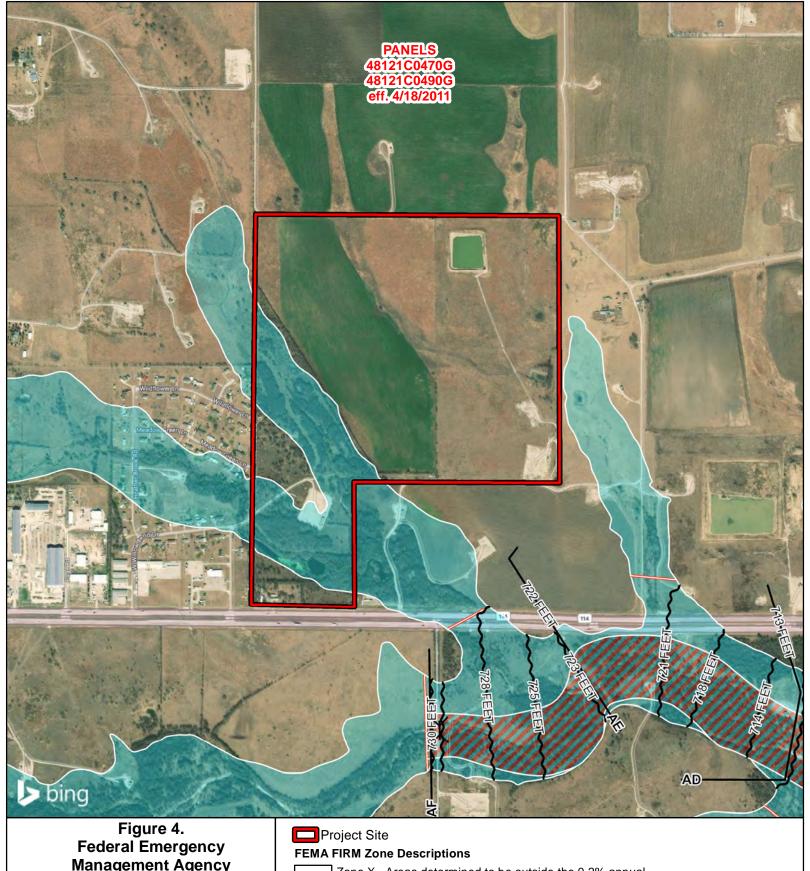




Liberty Trails Residential City of Ft. Worth Denton County, Texas

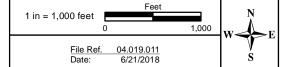


- Sanger clay, 3 to 5 percent slopes
- Slidell clay, 1 to 3 percent slopes
- Somervell gravelly loam, 1 to 5 percent slopes



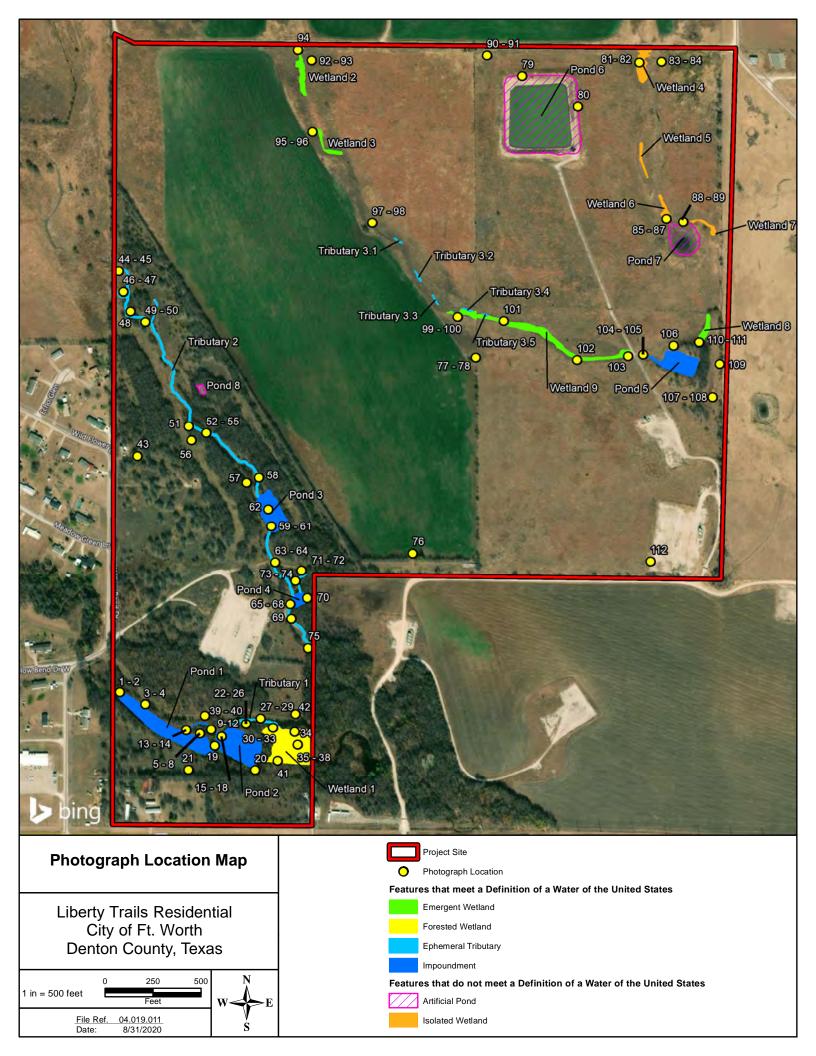
Management Agency Flood Insurance Rate Map

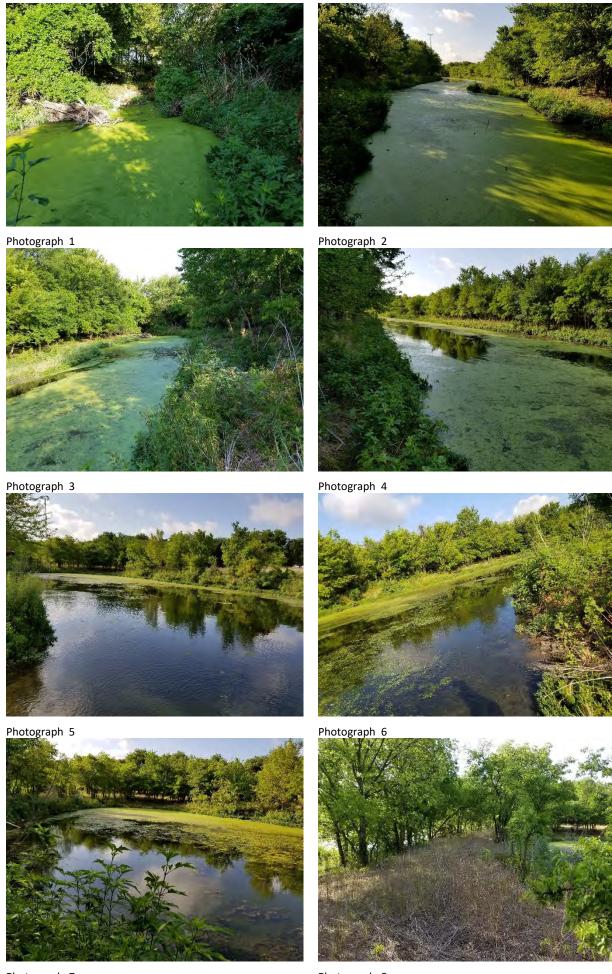
Liberty Trails Residential City of Ft. Worth Denton County, Texas



- Zone X Areas determined to be outside the 0.2% annual chance floodplain
- Zone X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood
- Zone A Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; No base flood elevations determined
- Zone AE Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; Base flood elevations determined
- Zone AE Floodway areas in Zone AE

ATTACHMENT B-2 REPRESENTATIVE PHOTOGRAPHS

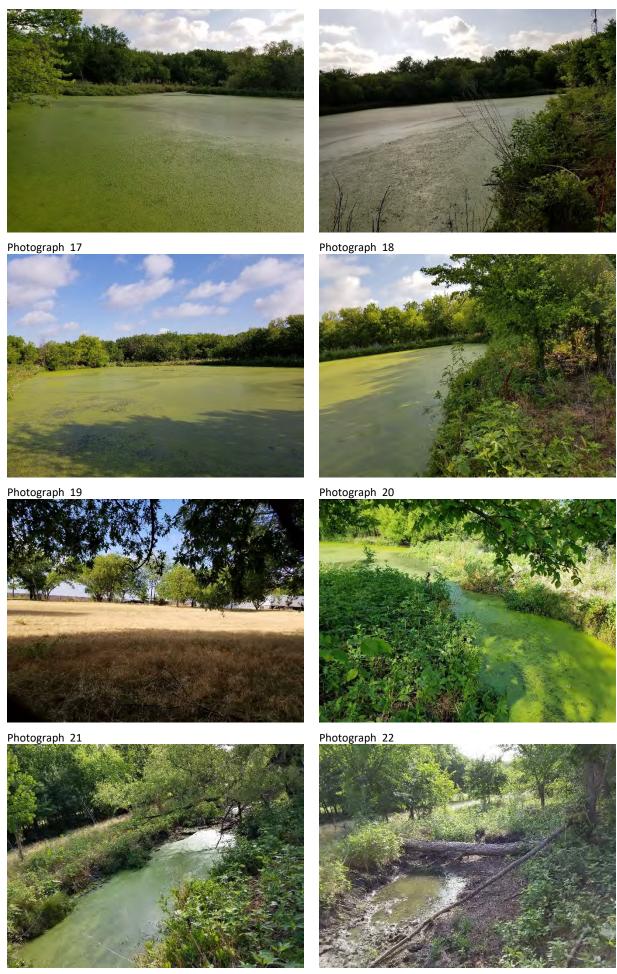




Photograph 7 Photograph 8



Photograph 15 Photograph 16



Photograph 23 Photograph 24



Photograph 31 Photograph 32







Photograph 39 Photograph 40



Photograph 47 Photograph 48



Photograph 55 Photograph 56



Photograph 63 Photograph 64





Photograph 67



Photograph 69



Photograph 71



Photograph 66



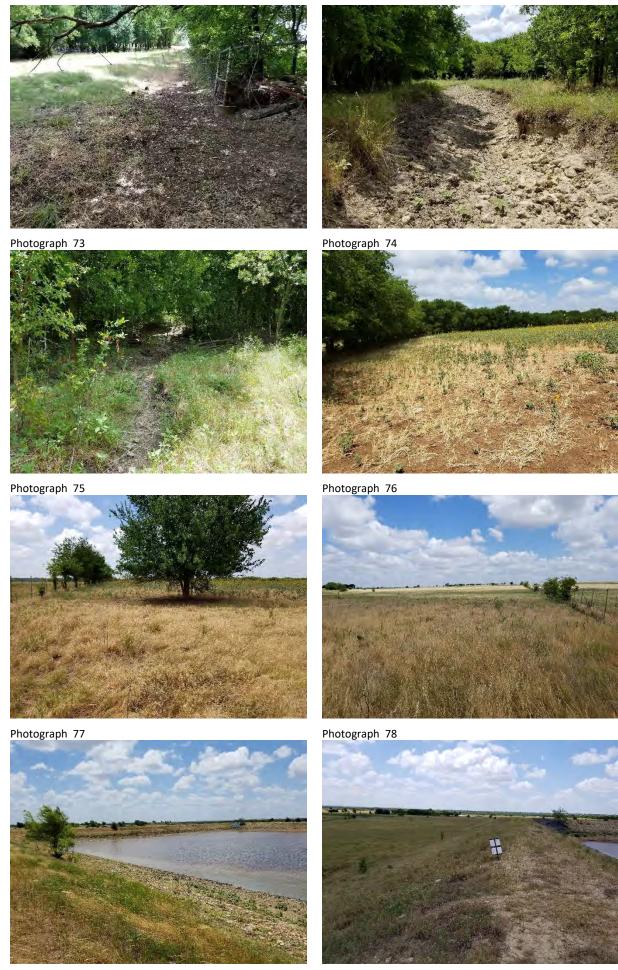
Photograph 68



Photograph 70



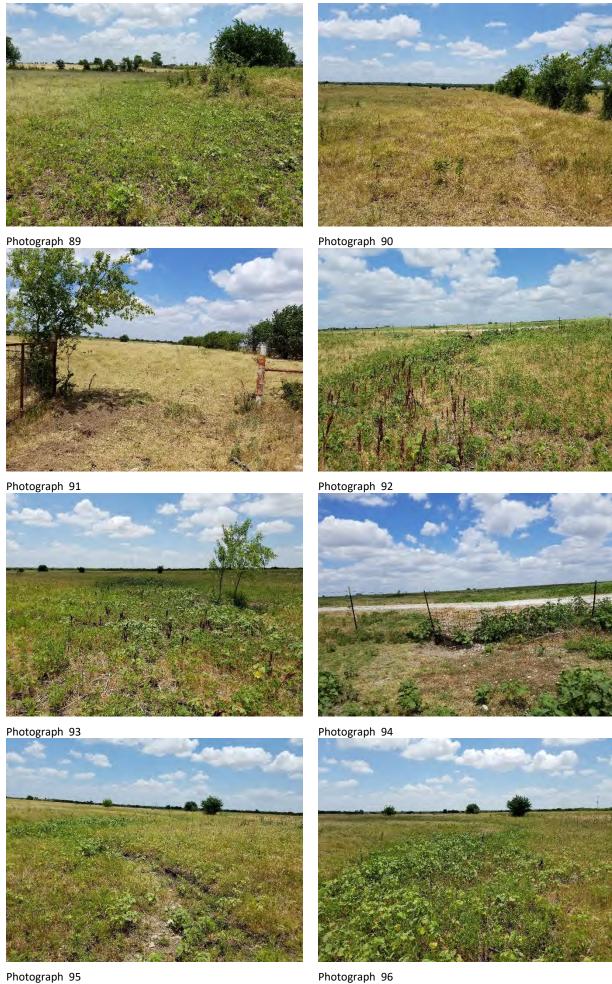
Photograph 72

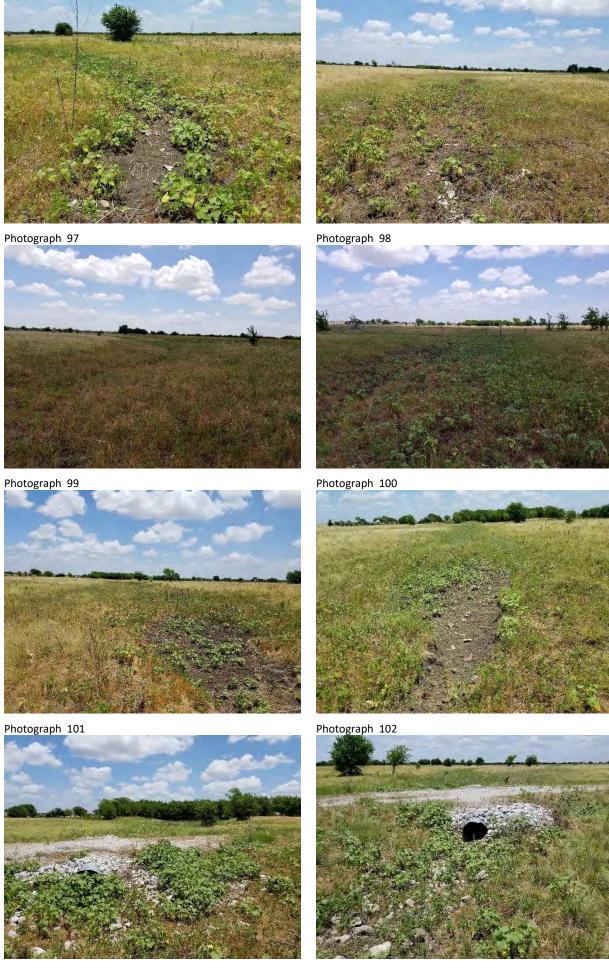


Photograph 79 Photograph 80



Photograph 87 Photograph 88





Photograph 103 Photograph 104



Photograph 111 Photograph 112

ATTACHMENT B-3

WETLAND DETERMINATION DATA FORMS

Project/Site: Liberty Trails		City/County:	Justin/Denton		Sampling Date	e: _ <i>(</i>	6/26/2018	
Applicant/Owner: DR Horton, Inc.			St	ate: TX	Sampling Poir	nt:I	1	
Investigator(s): JH, SG		Section, Township	, Range: N/A					
Landform (hillslope, terrace, etc.): Rise between s	cours	Local relief (co	ncave, convex, none):	Convex	Slo	ope %:	1-2	
Subregion (LRR): J	Lat: 33.037	Z N Lon	g:97.3776 W		Datum:	NAD 19	83	
Soil Map Unit Name: Slidell clay, 1 to 3 percent slope	95			NWI Classificat	ion: N/A			
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes 🖂 No		(If no, explain in Ren	narks.)				
Are vegetation, Soil, Or I	hydrology 🔲 Significantly	disturbed?	Are "Normal Circums	stances" present? Ye	es 🛛 No 🗌			
Are vegetation, Soil, Or I	hydrology 🔲 Naturally pro	blematic?	(If needed, explain a	ny answers in Remarks.)				
SUMMARY OF FINDINGS — Attach site	e map showing sampling	point locations.	transects, imr	ortant features	. etc.			
	Yes 🛛 No 🗆		, _					
	Yes No	Is the Sampled Area	Yes	⊠ No				
·	Yes 🛛 No 🗆	within a wetland?	163		Ш			
Remarks:								
VEGETATION — Use scientific names of	of plants.							
	41 1 . 0/	D	1. 12	Dominance Test w	orksheet:			
Tree Stratum (Plot Size: 30' Radius	Absolute % Coverage	Dominant Species?	Indicator Status	Number of Dominant				
1. Salix nigra	80	YES	FACW	Are OBL, FACW, or FA (excluding FAC-):		2		(A)
2. Fraxinus pennsylvanica	10	NO	FAC	Total Novel on af Dom				
3. Maclura pomifera		NO	FACU	Total Number of Dom Across All Strata:	inant Species	4		(B)
4.				D . (D	c : T .			
	95	= Total Cover		Percent of Dominant : Are OBL, FACW, or FA		50		(A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radio	us)			Prevalence Index	Worksheet:			
1. none				Total % (Cover of:	Mı	ultiply By:	
2.				OBL species	0	x 1 =	0	_
3.				FACW species	85	x 2 =	170	_
4.				FAC species	50	x 3 =	150	_
5		- <u></u> -		FACU species	65	x 4 =	260	<u>—</u>
	0	= Total Cover		UPL species	0	x 5 =	0	_
Herb Stratum (Plot Size: 5' Radius)			Column Totals:	200	(A)	580	(B)
1. Ambrosia trifida	40	YES	FAC					
2. Toxicodendron radicans	25	YES	FACU	Prevalence In	dex = B/A =	2.90		
3. Polygonum pensylvanicum	5	<u>NO</u>	FACW					
4. Elymus canadensis	5	<u>NO</u>	FACU	Hydrophytic Vege	tation Indicators:			
5.								
6.					1 - Rapid Test for		•	
7					2 - Dominance Tes		-	
8.				X	3 - Prevalence Ind	· -		
9.					4 - Morphological in Remarks or		ns¹ (Provide sup) rate cheet)	oorting data
10.							,	
	75	= Total Cover		11.2	Problematic Hydrophyt			
Woody Vine Stratum (Plot Size: 30' Radio	us)			Indicators of hy disturbed or pr	dric soil and wetland hy oblematic.	/drology m	iust be present,	unless
1. Parthenocissus quinquefolia	30	YES	FACU					
2.								
	30	= Total Cover		Hydrophytic Veget Present?	tation Yes 🗵]	No 🗌	
% Bare Ground in Herb Stratum 15				11636111:				
Remarks:				1				

Type: Bedrack Phydric Soil Present? Ves No PROLOGY Present Phydric Soil Present? Ves No		trix		Redox Featu			_	
Siny (lay 25% percel					-			-
Commisteration Designation	0-10 7.5 YR 2.5/1	85	10 R 4/8	5	(PL/M	Silty Clay	10% roots, shells, etc.
Soli Indicators: (Applicable to all LBRs, unless otherwise noted.) Solicy of Matrix (54) Solicy	10-13 7.5 YR 2.5/1						Silty Clay	25% gravel
Casil indicators: (Applicable to all LRRs, unless otherwise noted.) Solicy of Matrix (54) Solicy of Matrix (54) Solicy of Matrix (54) Solicy of Matrix (55) Solicy of Matrix (56) Solicy of Matrix (57) Solicy				<u> </u>				
CS Sall Actionaries (Applicable to all LRRs, unless otherwise noted.) Sandy Gloyed Matrix (S) Sandy Robox (S) Sa								
Historia (JA) Canaba Can				ns. ² Location: PL=	Pore Lining, M=Matrix			- 44.0
S can Mustry Pear or Pear (\$3) (LRR F)	Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (1 cm Muck (A9) (LRR F Depleted below Dark Su Thick Dark Surface (A12	.RR F) .G, H) rface (All)		Sandy Redox (SS) Stripped Matrix (S6) Loamy Mucky Mineral (F Loamy Gleyed Matrix (F3) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F8) Redox Depressions (F8)	1) 2)		1 CM Muck (A9) (LRR I, Coast Prairie Redox (A1 Dark Surface (S7) (LRR High Plains Depression (LRR H outside Reduced Vertic (F18) Red Parent Material (TF Very Shallow Dark Surf Other (Explain in Remai	J) 6) (LRR F, G, H) G) s (F16) of MLRA 72 & 73) 2) ace (TF12)
DROLOGY Inaid Mydrology Indicators: ary indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Soil Crask (86) Surface Soil Crask (8	5 cm Mucky Peat or Pea			• •	•			
Secondary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required)	Type: Bedrock					Hydric Soil P	resent? Yes 🗵	No 🗆
Company Comp								
Training Hydrology Indicators: Contact Water (AI)	rks:							
Surface Water (A1) Surface Water (A2) Aquatic Invertebrates (B13) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B1) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Concave Surface (B1) Sparsely Vegetated Concave Surface (B1) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Rhizospheres on Living Roots (C3) Sparsely Vegetated Rh								
Surface Water (A1)	ROLOGY							
Table Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes No under capillary fringe) Cribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY and Hydrology Indicators:	1: check all that apply)				Secondary In	dicators (minimum of t	wo required)
er Table Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes No cration Present? Yes? No? Depth (inches): N/A udes capillary fringe) Tribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9)		Aquatic Invertebra Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface	Odor (C1) Table (C2) Table (C2) Ies on Living Roots (C3) Ied Iron (C4)		Surf Spai Drai Oxic (v Satu	ace Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) Living Roots (C3)
ation Present? Yes? No? Depth (inches): N/A des capillary fringe) ibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9)		Aquatic Invertebra Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface	Odor (C1) Table (C2) Table (C2) Ies on Living Roots (C3) Ied Iron (C4)		Surf Spai Drai Oxic (v Satu	ace Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) Living Roots (C3)
des capillary fringe) ibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9)	y (B7)	Aquatic Invertebra Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4))	Surf Spai Drai Oxic (v Satu	ace Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) Living Roots (C3)
	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Driff Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water Stained Leaves (B9) Observations: Ee Water Present? Ye	y (B7) 5? □ No? ⊠	Aquatic Invertebra Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4) emarks)		Surf Span Span Cray Cray FAC	ace Soil Cracks (B6) rsely Vegetated Concav nage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) t-Heave Hummocks (D7)	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
arks:	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9) Observations: :e Water Present? Ye ation Present? Ye des capillary fringe)	y (B7)	Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Red Depth (inches): Depth (inches):	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4) emarks) N/A N/A N/A		Surf Span Span Cray Cray FAC	ace Soil Cracks (B6) rsely Vegetated Concav nage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) t-Heave Hummocks (D7)	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
IIRS:	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9) Observations: :e Water Present? Ye ation Present? Ye des capillary fringe)	y (B7)	Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Red Depth (inches): Depth (inches):	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4) emarks) N/A N/A N/A		Surf Span Span Cray Cray FAC	ace Soil Cracks (B6) rsely Vegetated Concav nage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) t-Heave Hummocks (D7)	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9) Observations: we Water Present? Ye Table Present? Ye des capillary fringe) the Recorded Data (stream gauge, more	y (B7)	Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Red Depth (inches): Depth (inches):	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4) emarks) N/A N/A N/A		Surf Span Span Cray Cray FAC	ace Soil Cracks (B6) rsely Vegetated Concav nage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) t-Heave Hummocks (D7)	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
	ROLOGY and Hydrology Indicators: ry indicators (minimum of one require 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 Image Water Stained Leaves (B9) Observations: we Water Present? Ye Table Present? Ye des capillary fringe) the Recorded Data (stream gauge, more	y (B7)	Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Red Depth (inches): Depth (inches):	oldor (C1) Table (C2) eres on Living Roots (C3) led) ed Iron (C4) emarks) N/A N/A N/A		Surf Span Span Cray Cray FAC	ace Soil Cracks (B6) rsely Vegetated Concav nage patterns (B10) dized Rhizospheres on I vhere tilled) rfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) t-Heave Hummocks (D7)	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)

Project/Site: Liberty Trai	ls				City/County:	Justin/Denton			Sampling Dat	e: 6/26/2	018	
Applicant/Owner: DR Hort	ton, Inc.						State: T	Χ	Sampling Poir	nt: 2		
Investigator(s): JH, SG					Section, Townsh	ip, Range: N	/A			_		
Landform (hillslope, terrace, etc.	.): rise betwe	en scours			Local relief (concave, convex, none	e): (i	onvex	Slo	pe %: 2-3		
Subregion (LRR): J			Lat:	33.037	'3 N Lo	ong: -97.3779 V	v		Datum:	NAD 1983		
	II clay, 1 to 3 percent s	lopes					N	WI Classification:	N/A			
Are climatic / hydrologic condition		-	year? Yes 🗵] No	П	(If no, explain in R	emarks.)	•				
Are vegetation,		Or hydrology		- Significantly		Are "Normal Circu	•	sent? Yes 🖂	No 🔲			
Are vegetation,	_	Or hydrology		Naturally pro		(If needed, explain			_			
SUMMARY OF FINDIN	ICS — Attack	ito man				transacte in		fortures etc				
Hydrophytic Vegetation Present		-		<u> </u>	point locultons	, iiuiisetis, iii	iportuiti	ieurores, erc.				
	f	Yes	No No		Is the Sampled Area	1		_				
Hydric Soil Present?		Yes	⊠ No		within a wetland?	Yes	\boxtimes	No 🗌				
Wetland Hydrology Present? Remarks:		Yes	⊠ No									
Remarks:												
VEGETATION — Use s	ciontific name	s of nlan	tc									
VEGETATION 630 3	ciciiiiic iidiiic	o piun	13.				Domin	ance Test workshe	na+-			
				lute %	Dominant	Indicator		of Dominant Species				
Tree Stratum (Plot Size:	30' Radius)		erage	Species?	Status	Are OBI	L, FACW, or FAC		_		
1. Salix nigra			_	70	YES	FACW	(excludi	ing FAC-):		3	(A)
2. <u>Maclura pomifera</u>				15	<u>NO</u>	<u>FACU</u>		umber of Dominant Sp	ecies			
3. Fraxinus pennsylvanica	7			10	<u>NO</u>	FAC	Across	All Strata:		5	(B)
4.					-			of Dominant Species	That			
				95	= Total Cover		Are OBI	L, FACW, or FAC:		60	(A/B)
Sapling/Shrub Stratum	(Plot Size: 15' F	Radius)					Proval	ence Index Worksh	100t:			
	(1101 312e: 13 F	tuuios ,	,	15	YES	FAC	lievai	Total % Cover of:		Multiply	Dv.	
Ulmus americana Crataegus viridis				5	NO NO	FAC	OBL spe		:	Multiply	Dy:	-
	um			5	NO NO					x 2 =		-
 Sideroxylon lanuginosu Gleditsia triacanthos 	VIII		_	2	NO NO	<u>FACU</u> FACU	FACW s		-			-
-			_		NU	FACU	FAC spe			x 3 =		_
5.				27	= Total Cover		FACU sp			x 4 =		-
Uh Characters (DL. a Circ.	r! nii	,		21	— Total Cover		UPL spe			x 5 =		- /D)
Herb Stratum (Plot Size)		40	VEC	FACIL	Column	TOTALS:		(A)		(B)
1. Toxicodendron radican.	s			40	YES	FACU			N/4 —			
2. Ambrosia trifida			_	20	YES	FAC		Prevalence Index = E	B/A=			
3. Elymus canadensis			_	10	<u>NO</u>	<u>FACU</u>						
4.			_				Hydro	phytic Vegetation I	Indicators:			
<u> </u>			_									
6.			_				-	1-	•	Hydrophytic Veg	etation	
7.							<u> </u>		Dominance Tes			
							_	3 -	Prevalence Inc	_		
							_	4-		Adaptations ¹ (Pr on a separate s		ting data
10.											,	
				70	= Total Cover					tic Vegetation¹ (E		
Woody Vine Stratum	(Plot Size: 30' F	Radius)						dicators of hydric soil isturbed or problemat		drology must be	present, uni	less
1. Parthenocissus quinque		′	1	15	YES	FACU		,				
2.												
- -				15	= Total Cover			phytic Vegetation	Yes 🗵] No		
% Bare Ground in Herb Stratum	10				TOTAL COTOL		Preser	ur	_			
Remarks:	10						I					

SOILS Sampling Point: 2

Profile Description	on: (Describe to the depth	needed to docu	ment the indicator or cor	ofirm the absence of	indicators \			Sumpling Form: <u>Z</u>	
		necucu io dotoi	nem me malcaror or cor		•				
Depth (inches)	Matrix Color (moist)	9/0	Color (moist)	Redox Feat %	Type ¹	Loc ²	Texture	Remarks	
								Komurks	
0-16	7.5 YR 2.5/1	95	10 R 4/8		(PL/M	Silty Clay		
									
		-	-						
¹Tyne: (=(oncent	ration, D=Depletion, RM=Re	educed Matrix (S=	Covered or Conted Sand Gra	ins 21 ocation: PI	=Pore Lining, M=Matrix				
	itors: (Applicable to all L			inis. Eccunon. 1E	Toro Eming, in marrix	Indicators for	Problematic Hydric	Soils ³ :	
	Histosol (A1)			Sandy Gleyed Matrix (S	4)		CM Muck (A9) (LRR I,		
	Histic Epipedon (A2)			Sandy Redox (S5)		(c	oast Prairie Redox (A16		
	Black Histic (A3)			Stripped Matrix (S6)			ark Surface (S7) (LRR (
	Hydrogen Sulfide (A4)	-1		Loamy Mucky Mineral (•		igh Plains Depressions		
	Stratified Layers (A5) (LRR I 1 cm Muck (A9) (LRR F, G, I			Loamy Gleyed Matrix (I Depleted Matrix (F3)	-2)	□ R	(LRR H outside o educed Vertic (F18)	T MLKA /2 & /3)	
l H	Depleted below Dark Surface			Redox Dark Surface (F6)		ed Parent Material (TF2)	
	Thick Dark Surface (A12)	` ,	□	Depleted Dark Surface			ery Shallow Dark Surfa		
	Sandy Mucky Mineral (S1)			Redox Depressions (F8)		_	ther (Explain in Remark	•	
	2.5 cm Mucky Peat or Peat (S			High Plains Depression			s of hydrophytic vegeta ent, unless distributed (ation and wetland hydrology must	
Restrictive Layer	5 cm Mucky Peat or Peat (S3) r (if present):	(LKK F)		(MLRA 72 & 73 c	OT LKK H)	ne hi e se	ani, umess aismuulea (or problemant.	
=	N/A						_	_	
Depth (inches						Hydric Soil Pre	esent?Yes 🖂	No 🗌	
Dop.ii (iiiciio)									
HVPPOLOGY									
HYDROLOGY									
Wetland Hydrolo						6 1 1 1		• 10	
	(minimum of one required; ch	eck all that apply)	Salt Crust (B11)				cators (minimum of tw ce Soil Cracks (B6)	o required)	
Surface W	er Table (A2)		Salt Crust (B11) Aquatic Invertebr	ates (R13)		_	ce son cracks (BO) ely Vegetated Concave	Surface (R8)	
Saturation			Hydrogen Sulfide	` '			age patterns (B10)	3311410 (23)	
⊠ Water Mai			Dry-Season Water				zed Rhizospheres on Li	ving Roots (C3)	
	Deposits (B2)			heres on Living Roots (C	3)		here tilled)		
Drift Depo	osits (B3) or Crust (B4)		(where not ti	,			ish Burrows (C8) ation Visible on Aerial I	Imagory (CO)	
Algal Mat Iron Depo	, ,		Presence of Redu	· ·			orphic Position (D2)	illidger y (C7)	
	n Visible on Aerial Imagery (B7	")	Other (Explain in				leutral Test (D5)		
	ined Leaves (B9)	•	_ ,,	•			-Heave Hummocks (D7)	(LRR F)	
Field Observatio	ns:								
Surface Water Pres	ent? Yes?	No? ⊠	Depth (inches)): N/A					
Water Table Presen	it? Yes?	No? ⊠	Depth (inches): N/A	Wetla	ınd Hydrology Pres	sent? Yes [⊠ No □	
Saturation Present?	Yes?	No? ⊠	Depth (inches)): N/A					
(includes capillary f		. 110: [2]	Dopin (menos)	j. <u>11/15</u>					
Describe Recorded	Data (stream gauge, monitorir	g well, aerial photo	os, previous inspections), if a	vailable:					
Remarks:									

Project/Site: Liberty Trails		City/County:	Justin/Denton		Sampling Date:	6/26/2018	
Applicant/Owner: DR Horton, Inc.			St	tate: TX	Sampling Point:	3	
Investigator(s): JH, SG		Section, Township	, Range: N/A	ı			
Landform (hillslope, terrace, etc.): Flat		Local relief (co	ncave, convex, none):	None	Slope %:	0-1	
Subregion (LRR): J	Lat: 33.0369	9 N Lon	g: -97.378 W		Datum: NAD	1983	
Soil Map Unit Name: Slidell clay, 1 to 3 percent slopes				NWI Classification:	N/A		
Are climatic / hydrologic conditions on the site typical for this time of year	ır? Yes 🖂 No		(If no, explain in Ren	marks.)			
Are vegetation, Soil, Or hydrology	Significantly d	isturbed?	Are "Normal Circum	stances" present? Yes 🖂	No 🔲		
Are vegetation, Soil, Or hydrology	☐ Naturally prob	olematic?	(If needed, explain a	ıny answers in Remarks.)			
SUMMARY OF FINDINGS — Attach site map sho	owina samplina p	oint locations,	transects, imi	portant features, etc.			
Hydrophytic Vegetation Present? Yes				•			
Hydric Soil Present? Yes	No 🗆	Is the Sampled Area	Yes	□ No ⊠			
Wetland Hydrology Present?		within a wetland?	103				
Remarks: Determination conducted adjacent to wetland.		1					
VEGETATION — Use scientific names of plants.				<u>, </u>			
	Absolute %	Dominant	Indicator	Dominance Test workshe			
<u>Tree Stratum</u> (Plot Size: <u>30' Radius</u>)	Coverage	Species?	Status	Number of Dominant Species 1 Are OBL, FACW, or FAC	That		
1. Ulmus americana	50	YES	FAC	(excluding FAC-):	<u>_:</u>	3	(A)
2. Salix nigra	30	YES	FACW	Total Number of Dominant Spo	ories		
3. Fraxinus pennsylvanica	15	NO	FAC	Across All Strata:		5	(B)
4.				Percent of Dominant Species 1	'hat		
	95 =	= Total Cover		Are OBL, FACW, or FAC:		50	(A/B)
C. I. (C. I.C							
Sapling/Shrub Stratum (Plot Size: 15' Radius)				Prevalence Index Worksh			
1none				Total % Cover of:		Multiply By:	_
2.				OBL species	x 1 =		_
3.				FACW species 30	x 2 =	60	_
4.				FAC species 75	x 3 =	225	_
5.	0 =	= Total Cover		FACU species 35	x 4 = x 5 =	140	
Herb Stratum (Plot Size: 5' Radius)		- Total Cover		UPL species Column Totals: 140		425	(B)
	15	VEC	FACU	Colonini foldis: 140	(A)	423	(b)
l. Ioxicodendron radicans Ambrosia trifida	10	YES YES	FAC	Prevalence Index = B	/A= 3.04		
3. Smilax bona-nox	10	YES	FACU	Trevulence index — b	/A— <u>3.04</u>		
4. Elymus canadensis	5	NO	FACU	Hydrophytic Vegetation I	ndicators		
5.			TACO	ilyurophynic Vegeturion i	iluiturors.		
6.				1-	Rapid Test for Hydropl	vetic Vanatation	
					Dominance Test is > 4		
0					Prevalence Index is <		
					Morphological Adaptat		nortina data
10.					in Remarks or on a se		porting dura
10.	40 =	= Total Cover		Problem	natic Hydrophytic Vege	tation /Evolain	
		IVIUI CUTGI		1 Indicators of hydric soil			unless
Woody Vine Stratum (Plot Size: 30' Radius)				disturbed or problemat		,	
1. Parthenocissus quinquefolia	5	YES	FACU				
2.				Hydrophytic Vegetation			
	5 =	= Total Cover		Present?	Yes 🗌	No 🖂	
% Bare Ground in Herb Stratum 60							
Remarks:							

SOILS Sampling Point: 3

Surface Water (A1)	Depth	Matrix			Redox Feat			_	
1.5 1.5	(inches) Color (moi	st)		Color (moist)	<u></u> %	Type ¹	Loc ²		Remarks
C-Canacterialism, D-Depletion, NH-Belorded Maria, CS-Covered to Casted Stand Grains Location, PL-Para Linking, NH-Matrix	7.5 YR 2.5/1		95	10 R 4/8			PL/M	Silty Clay	
Soli Indicators (Applicable to all LRBs, unless otherwise noted.) Solidy Glezed Matrix (54) Indicators (54) (RBR. 1, 1) Indicators (55) (RBR. 1, 1)	7.5 YR 2.5/1		85		<u> </u>			Silty Clay	15% gravel
Sali Indicators (Applicable to all LRRs, unless otherwise noted.) Sandy Gleyed Matrix (54) I CAM AND (54) (BR.R. 1, 1) Cost Problementic Hydric Solie?* Cost Problementic Hydric Hydr		<u>-</u>							_
Case Indicators: (Applicable to all LRBs, unless otherwise noted.) Sondy Gleyed Matrix (54)									_
Case Indicators: (Applicable to all LRBs, unless otherwise noted.) Sondy Gleyed Matrix (54)									
Soli Indicators: [Applicable to all LRRs, unless otherwise noted.] Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Indicators for Problementic Hydric Hydric Soli?* Indicators for Problementic Hydric Soli?* Indicators for Hydric					· —				_
Solit Indicators: (Applicable to all LRRs, unless otherwise noted.) Sondy Eleved Matrix (54) IAN Move (54) (RRR F, 6, H) Sondy Eleved Matrix (54) Cast Prairie Refor (140) (RRF F, 6, H) Sondy Eleved (55) Cast Prairie Refor (140) (RRF F, 6, H) Sondy Eleved (55) Cast Prairie Refor (140) (RRF F, 6, H) Cast								-	
Soli Indicators: [Applicable to all LRRs, unless otherwise noted.] Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Sondy Eleved Moriz (54) Indicators for Problementic Hydric Soli?* Indicators for Problementic Hydric Hydric Soli?* Indicators for Problementic Hydric Soli?* Indicators for Hydric									
Scall Indicators: (Applicable to all LRRs, unless otherwise noted.) Sandy Gleyed Matrix (S4) Indicators for Problement: Mydrix Soile?* Indicators for Mydrogram of Mydrogram									_
Rictoral (1a) Somly Glegar Maria: C(4) Softy Febex (15) Construction (17) Co					ins. ² Location: PL=	=Pore Lining, M=Matrix	Indicators	for Problematic Hyd	Iric Soils³:
Sistic Epipedon (A7) Samply Refear (SS) Dear Surface (A16) (LRR F, G, H)		,		· _	Sandy Gleyed Matrix (S	4)			
hydrogon Suffice (A/) closury Marky Mineral (F1) fligh Plains: Depressions (F16) closury Mark (A/) (LRR F, G, H) closury Mineral (F1) closury Minera		<u>?</u>)			Sandy Redox (S5)			Coast Prairie Redox (A16) (LRR F, G, H)
Stretified Layers (55) (LBR F) Loomy Giryed Martix (F2) Robert West (F3) Robert West (F3) Robert West (F4) Robert W		AA \		_		F1\			
				=	, , ,	•			
Thick Durk Surface (A12) Depleted Dark Surface (F7) Depleted Dark Su	☐ 1 cm Muck (A9) (L	RR F, G, H)			Depleted Matrix (F3)	,		Reduced Vertic (F18)	
Sandy Mucky Minteral (S1))			•			
2.5 cm Mucky Pet at or Pett (\$2) (LRR 6, H)									
ROLOGY Secondary Indicators: Secondary Indicators (minimum of required) Secondary Indicators (minimum o	2.5 cm Mucky Peat	or Peat (S2) (LI					3Indica	itors of hydrophytic ve	getation and wetland hydrology must
Type: N/A Hydric Soil Present? Yes No		r Peat (S3) (LRF	R F)		(MLRA 72 & 73 o	of LRR H)	be p	resent, unless distribut	ed or problematic.
Part									
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A1) Surface Soil Crask (B6) Hydrogen Sulfide Odor (L1) Sediment Deposits (B2) Dry. Season Water Marks (B1) Sediment Deposits (B2) Oxidized Mitzespheres on Living Roots (C3) Where Marks (B1) Sediment Deposits (B3) (where not Hilled) Originated Mitzespheres on Living Roots (C3) (where illed) Crayfish Burrows (B8) Algal Mator Crust (B4) Presence of Reduced Iron (L4) Iron Deposits (B5) Into Deposits (B5) Other (Explain in Remarks) Weter Stained Leaves (B9) Observations: the Water Fresent? Ves? No? Depth (inches): Water Marks (B4) Depth (inches): N/A Wetland Hydrology Present? Ves? No? Depth (inches): N/A Wetland Hydrology Present? Ves? No Depth (inches): N/A Depth (inches): N/A Wetland Hydrology Present? Ves No Depth (inches): N/A Wetland Garage Agent							Hydric Soil	Present? Yes	⊠ No □
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; check all that apply) Surface Water (A1) Surface Soil Crucks (86) Sparsely Vegetated Concave Surface (88) Surface Soil Crucks (86) Sparsely Vegetated Concave Surface (88) Surface Water (A1) Depth (A2) Surface Soil Crucks (86) Surface Soil Crucks (86) Sparsely Vegetated Concave Surface (88) Sparsely Vegetated Concave Surface (88) Surface Soil Crucks (81) Depth (A2) Depth (Inches): Weter Andrs (81) Surface Soil Crucks (86) Surface Soil Crucks (86) Douglage Allers (81) Douglage Allers (81) Crucks (81) Crucks (86) Douglage Allers (81) Crucks (86) Crucks (86) Douglage Allers (81) Crucks (86) Crucks (86) Crucks (86) Douglage Allers (81) Crucks (86)	· · · · 								
Surface Water (A1)	KS:								
Surface Water (A1)	KS:								
Surface Water (A1)									
High Water Table (A2)	ROLOGY								
Saturation (A3)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re	quired; check al	ll that apply)						f two required)
Water Marks (B1)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1)	quired; check al	II that apply)	= ' '	ntec (R13)		⊠ Sı	ırface Soil Cracks (B6)	
Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Iron Deposits (B5) Thin Muck Surface Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) I Observations: Ce Water Present? Yes? No? Depth (inches): N/A Table Present? Yes? No? Depth (inches): N/A ation Present? Yes? No? Depth (inches): N/A des capillary fringe) iibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1) High Water Table (A2)	quired; check al	II that apply)	Aquatic Invertebre	, ,	_	∑ St	orface Soil Cracks (B6) Darsely Vegetated Conc	ave Surface (B8)
Algal Mat or Crust (B4)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	quired; check al	II that apply)	Aquatic Invertebre Hydrogen Sulfide Dry-Season Water	Odor (C1) r Table (C2)			orface Soil Cracks (B6) oarsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o	ave Surface (B8)
Iron Deposits (B5)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	quired; check al	II that apply)	Aquatic Invertebro Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph	Odor (C1) r Table (C2) heres on Living Roots (C3	3)	☐ 0:	orface Soil Cracks (B6) parsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled)	ave Surface (B8)
Water Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) I Observations: I Over Water Present? Yes? No? Depth (inches): N/A I Table Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes No Indication Present? Yes? No? Depth (inches): N/A Index capillary fringe) I Depth (inches): N/A Wetland Hydrology Present? Yes No Index capillary fringe)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	quired; check al	II that apply)	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti	Odor (C1) r Table (C2) heres on Living Roots (C3 illed)	3)		orface Soil Cracks (B6) parsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) ayfish Burrows (C8)	ave Surface (B8) n Living Roots (C3)
Observations: Cote Water Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes No? No? Depth (inches): N/A Wetland Hydrology Present? Yes No descapillary fringe)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	quired; check al	ll that apply)	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4)	3)		orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) rayfish Burrows (C8) tuturation Visible on Aer	ave Surface (B8) n Living Roots (C3) ial Imagery (C9)
Table Present? Yes? No? Depth (inches): N/A Table Present? Yes? No? Depth (inches): N/A Antion Present? Yes? No? Depth (inches): N/A des capillary fringe) Table Present? Yes? No? Depth (inches): N/A Table Present? Yes? No? No? Depth (inches): N/A Table Present? Yes No Depth (i	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II		II that apply)	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduc	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e	3)	St St St St St St St St	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) rayfish Burrows (C8) atturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5)	ave Surface (B8) n Living Roots (C3) ial Imagery (C9)
r Table Present? Yes? No? Depth (inches): N/A Wetland Hydrology Present? Yes No descapillary fringe) Wetland Hydrology Present? Yes No descapillary fringe) Wetland Hydrology Present? Yes No descapillary fringe)	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9)		II that apply)	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduc	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e	3)	St St St St St St St St	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) rayfish Burrows (C8) atturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5)	ave Surface (B8) n Living Roots (C3) ial Imagery (C9)
ration Present? Yes? No? No? Depth (inches): N/A Ides capillary fringe) Iibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Observations:	magery (B7)		Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduc Thin Muck Surface Other (Explain in I	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks)	3)	St St St St St St St St	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) rayfish Burrows (C8) atturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5)	ave Surface (B8) n Living Roots (C3) ial Imagery (C9)
des capillary fringe) ibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations:	magery (B7)	No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduct Thin Muck Surface Other (Explain in I	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks)		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
ibe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations:	magery (B7)	No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduct Thin Muck Surface Other (Explain in I	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks)		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 It Water Stained Leaves (B9) Observations: b Water Present? Itable Present?	wagery (B7) Yes? Yes? Yes?	No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduc Thin Muck Surface Other (Explain in f	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks)): N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
rks:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations: s Water Present? Table Present? tion Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduce Thin Muck Surface Other (Explain in I Depth (inches) Depth (inches)	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks) N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
arks:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations: s Water Present? Table Present? tion Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduce Thin Muck Surface Other (Explain in I Depth (inches) Depth (inches)	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks) N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
ins:	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations: s Water Present? Table Present? tion Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduce Thin Muck Surface Other (Explain in I Depth (inches) Depth (inches)	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks) N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations: b Water Present? Itable Present? Itable Present? es capillary fringe) be Recorded Data (stream gauge	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduce Thin Muck Surface Other (Explain in I Depth (inches) Depth (inches)	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks) N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP
	ROLOGY nd Hydrology Indicators: y indicators (minimum of one re 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 II Water Stained Leaves (B9) Dbservations: b Water Present? Itable Present? Itable Present? es capillary fringe) be Recorded Data (stream gauge	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebri Hydrogen Sulfide Dry-Season Water Oxidized Rhizosph (where not ti Presence of Reduce Thin Muck Surface Other (Explain in I Depth (inches) Depth (inches)	Odor (C1) r Table (C2) heres on Living Roots (C3 illed) ced Iron (C4) e Remarks) N/A N/A		Si Si Si Si Si Si Si Si	orface Soil Cracks (B6) carsely Vegetated Conc rainage patterns (B10) xidized Rhizospheres o (where tilled) cayfish Burrows (C8) uturation Visible on Aer eomorphic Position (D2) AC-Neutral Test (D5) ost-Heave Hummocks (ave Surface (B8) In Living Roots (C3) Itial Imagery (C9) Itial (CP) Itial (CP

Project/Site: Liberty Trails		City/County:	Justin/Denton		Sampling Date: 6/26/	2018
Applicant/Owner: DR Horton, Inc.			S	tate: TX	Sampling Point: 4	
Investigator(s): JH, SG		Section, Townshi	p, Range: N/A			
Landform (hillslope, terrace, etc.): Flat		Local relief (c	oncave, convex, none):	None	Slope %: 0	
Subregion (LRR): J	Lat: 33.0377	'N Lo	ng: -97.3779 W		Datum: NAD 1983	
Soil Map Unit Name: Slidell clay, 1 to 3 percent slopes		.	•	NWI Classification:	N/A	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖂 No [(If no, explain in Rer	marks.)		
Are vegetation, Soil, Or hydrology	Significantly d	isturbed?	Are "Normal Circum	stances" present? Yes	No 🛛	
Are vegetation, Soil, Or hydrology	☐ Naturally prob	lematic?	(If needed, explain a	any answers in Remarks.)		
SUMMARY OF FINDINGS — Attach site map sh	owing sampling p	oint locations,	transects, im	portant features, etc.		
Hydrophytic Vegetation Present? Yes		,	<u> </u>	·		
Hydric Soil Present? Yes		Is the Sampled Area	Yes	□ No ⊠		
Wetland Hydrology Present?		within a wetland?	103			
Remarks: Pipeline installation/construction mixed up the soil	<u> </u>					
VEGETATION — Use scientific names of plants	•					
	Absolute %	Dominant	Indicator	Dominance Test workshe		
<u>Tree Stratum</u> (Plot Size: <u>30' Radius</u>)	Coverage	Species?	Status	Number of Dominant Species Are OBL, FACW, or FAC	That	
1. Caltis occidentalis	10	YES	FACU	(excluding FAC-):	0	(A)
2.				Total Number of Dominant Sp	neries	
3.				Across All Strata:	2	(B)
4				Percent of Dominant Species	That	
	10 =	= Total Cover		Are OBL, FACW, or FAC:	0	(A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radius)				Prevalence Index Worksh		
1. none	-			Total % Cover of		у Ву:
2.	<u> </u>	-	-	OBL species	x 1 =	
3.	<u> </u>	-	-	FACW species	x 2 =	
4.	-			FAC species	x 3 =	
5				FACU species	x 4 =	
u i a	0 =	= Total Cover		UPL species	x 5 =	
Herb Stratum (Plot Size: 5' Radius)				Column Totals:	(A)	(B)
1. Nassella leucotricha	60	YES	UPL		n/•	
2. Solanum elaeagnifolium	15	NO NO	UPL	$Prevalence\ Index = I$	В/А=	
3. Asclepias viridis	15	NO NO	UPL			
4. Sorghum halepense	10	NO	FACU	Hydrophytic Vegetation	Indicators:	
5.				,	B :17 . C H L L : W	
6.				1-	Rapid Test for Hydrophytic Veg	jetation
7.					Dominance Test is > 50%	
8.				3-	Prevalence Index is $\leq 3.0^{\circ}$	
9.				4-	Morphological Adaptations ¹ (Pin Remarks or on a separate s	
10.	100	T . 16				
	100 =	= Total Cover			matic Hydrophytic Vegetation ¹ (I and wetland hydrology must b	
Woody Vine Stratum (Plot Size: 30' Radius)				disturbed or problema		- p. 050m, 0m033
1. none						
2.				Hadaa Lee var ee ee		
	0 =	= Total Cover	-	Hydrophytic Vegetation Present?	Yes No	\boxtimes
% Bare Ground in Herb Stratum 0						
Remarks:						

Depth (inches) Color (mois	Matrix		Redox Features									
	t) <u>%</u>	Color (moist)	%	Type ¹	Loc2	Texture	Remarks					
0-16 7.5 YR 2.5/1	60					Clay						
0-16 10 YR 6/4	40					Sandy Clay						
						·						
			·			·						
						<u> </u>						
: C=Concentration, D=Depletion	, RM=Reduced Matrix, CS=	=Covered or Coated Sand Grain	s. ² Location: PL=Por	e Lining, M=Matrix	κ							
ic Soil indicators: (Applicable	to all LRRs, unless othe	rwise noted.)			Indicators fo	r Problematic Hydric S	oils³:					
Histosol (A1)			andy Gleyed Matrix (S4)			I CM Muck (A9) (LRR I, J)						
☐ Histic Epipedon (A2) ☐ Black Histic (A3)			andy Redox (S5) tripped Matrix (S6)		Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G)							
Hydrogen Sulfide (A	4)		namy Mucky Mineral (F1)			High Plains Depressions (I						
Stratified Layers (A			oamy Gleyed Matrix (F2)			(LRR H outside of						
l cm Muck (A9) (LF			epleted Matrix (F3) edox Dark Surface (F6)			Reduced Vertic (F18)						
Depleted below Dar		Red Parent Material (TF2) Very Shallow Dark Surface (TF12)										
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)						☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)						
2.5 cm Mucky Peat	<u> </u>	3	3Indicators of hydrophytic vegetation and wetland hydrology must									
5 cm Mucky Peat or	Peat (S3) (LRR F)		(MLRA 72 & 73 of LR	R H)	be pres	ent, unless distributed or	problematic.					
rictive Layer (if present):												
Type: N/A Depth (inches): N/A					Hydric Soil Pi	resent? Yes 🗌	No 🖂					
Deptii (iliciles): N/A												
ROLOGY												
and Hydrology Indicators:												
and Hydrology Indicators: iry indicators (minimum of one rec	uired; check all that apply)					licators (minimum of two	required)					
and Hydrology Indicators: ıry indicators (minimum of one rec Surface Water (A1)	uired; check all that apply)	Salt Crust (B11)	os (R13)		Surf	ace Soil Cracks (B6)						
and Hydrology Indicators: iry indicators (minimum of one rec Surface Water (A1) High Water Table (A2)	uired; check all that apply)	Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc			Surf	ace Soil Cracks (B6) sely Vegetated Concave S						
and Hydrology Indicators: ıry indicators (minimum of one rec Surface Water (A1)	uired; check all that apply)	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To	dor (C1) able (C2)		Surfi Spar	ace Soil Cracks (B6)	urface (B8)					
and Hydrology Indicators: try indicators (minimum of one rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all that apply)	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizospher	dor (C1) able (C2) res on Living Roots (C3)		Surfo	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi vhere tilled)	urface (B8)					
and Hydrology Indicators: ry indicators (minimum of one rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply)	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille	lor (C1) able (C2) res on Living Roots (C3) ed)		Surfi Spar Spar Drai Oxid (w	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8)	urface (B8) ng Roots (C3)					
and Hydrology Indicators: Iry indicators (minimum of one reconstruction of the Mater (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	uired; check all that apply)	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reduced	lor (C1) able (C2) res on Living Roots (C3) ed)		Surfi Spar Spar Drai Oxid (w	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) ration Visible on Aerial Im	urface (B8) ng Roots (C3)					
and Hydrology Indicators: ry indicators (minimum of one rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surfi Spar Drai Oxid (w Cray	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8)	urface (B8) ng Roots (C3)					
and Hydrology Indicators: try indicators (minimum of one rec 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 Im Water Stained Leaves (B9)		Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surfi Spar Drai Oxid (w Cray Satu	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) ration Visible on Aerial Im morphic Position (D2)	ng Roots (C3)					
and Hydrology Indicators: try indicators (minimum of one rec 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 Im		Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surfi Spar Drai Oxid (w Cray Satu	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) ration Visible on Aerial Im morphic Position (D2) Neutral Test (D5)	ng Roots (C3)					
and Hydrology Indicators: try indicators (minimum of one rec 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 Im Water Stained Leaves (B9)		Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surfi Spar Drai Oxid (w Cray Satu	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) ration Visible on Aerial Im morphic Position (D2) Neutral Test (D5)	ng Roots (C3)					
and Hydrology Indicators: Try indicators (minimum of one reconstruction (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 Imwater Stained Leaves (B9) Observations:	agery (B7)	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Re	dor (C1) able (C2) res on Living Roots (C3) ed) If Iron (C4) marks)	Wetle	Surfi Spar Drai Oxid (w Cray Satu	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: Iry indicators (minimum of one reconsulting to Mater (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 Im Water Stained Leaves (B9) Observations: ce Water Present?	agery (B7) Yes? No? Yes? No?	Aquatic Invertebrativity of the control of the cont	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: Try indicators (minimum of one reconsulting to Mater (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 Im Water Stained Leaves (B9) Observations: Table Present? ation Present? des capillary fringe)	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: ary indicators (minimum of one reconsulting to the content of the con	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: Try indicators (minimum of one reconsulting to Mater (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 Im Water Stained Leaves (B9) Observations: Table Present? ation Present? des capillary fringe)	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: Try indicators (minimum of one reconsulting to Mater (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 Im Water Stained Leaves (B9) Observations: Table Present? ation Present? des capillary fringe)	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: Try indicators (minimum of one reconsulting to Mater (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 Im Water Stained Leaves (B9) Observations: Table Present? ation Present? des capillary fringe)	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					
and Hydrology Indicators: ary indicators (minimum of one reconsultation (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 Visual Deaves (B9) Observations: ce Water Present? It able Present? ation Present? des capillary fringe) ibe Recorded Data (stream gauge,	agery (B7) Yes? □ No? ⊠ Yes? □ No? ⊠ Yes? □ No? ⊠	Aquatic Invertebrate Hydrogen Sulfide Oc Dry-Season Water To Oxidized Rhizosphet (where not tille Presence of Reducee Thin Muck Surface Other (Explain in Re) Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks) N/A N/A N/A	Wetle	Surfi Spar Drai Cray Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Concave S nage patterns (B10) lized Rhizospheres on Livi rhere tilled) fish Burrows (C8) rathy Visible on Aerial Im morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)					

Project/Site: Lib	erty Trails						City/County:	Justin/Denton				So	ampling Date	Đ:	6/26/2018	
Applicant/Owner:	DR Horton, Inc.								Sta	te:	X	So	ampling Poir	nt:	5	
Investigator(s):	JH, SG						Section, Townshi	ip, Range:	N/A							
Landform (hillslope, ter	rrace, etc.):	Shallow swa	ıle				Local relief (c	concave, convex, n	one):	(Concave		Slo	pe %:	1-2	
Subregion (LRR):	J				Lat:	33.0471	N Lo	ong: <u>-97.37</u>	17 W				Datum:	NAD 19	183	
Soil Map Unit Name:	Sanger clay, 1	to 3 percent s	lopes							I	IWI Classificati	on: N	/A			
Are climatic / hydrologi	ic conditions on the	e site typical fo	or this time	of year?	∕es ⊠	No [(If no, explain i	in Rem	arks.)						
Are vegetation,	Soil,		Or hydrolog	у 🗆	Signi	ficantly d	isturbed?	Are "Normal Ci	rcumst	ances" pr	esent? Ye	s 🛛	No 🔲			
Are vegetation,	Soil,		Or hydrolog	у 🗆	Natu	rally prob	lematic?	(If needed, exp	lain ar	y answers	in Remarks.)					
SUMMARY OF F	INDINGS –	Attach si	ite map	showi	ng samp	oling p	oint locations,	, transects,	imp	ortant	features	, etc.				
Hydrophytic Vegetation	Present?		Yes		No											
Hydric Soil Present?			Yes	\boxtimes	No		Is the Sampled Area within a wetland?	Y	es	\boxtimes	No					
Wetland Hydrology Pre	sent?		Yes	\boxtimes	No		willing working:									
Remarks:																
VEGETATION –	Use scienti	fic name	s of pla	nts.						1						
				Absolute	0/0	Dominant	Indicator			nance Test w						
<u>Tree Stratum</u> (P	lot Size:	30' Radius	_)	-	Coverag	e	Species?	Status	_		r of Dominant S L, FACW, or FA		t			
1. none									_		ling FAC-):			2		_ (A)
2.									_	Total N	umber of Domi	inant Specie	ıs			
3.									_		All Strata:	u specie		3		_ (B)
4.									_	Percen	t of Dominant S	Snecies That	t			
				-	0	=	= Total Cover				L, FACW, or FA			67		_ (A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radius)					_		VEC UD			Preva	lence Index V		t:			
1. Prunus mexico	ana				5		YES	UPL	_		Total % C	over ot:			ultiply By:	
2.									_	OBL sp	· -			x 1 =		
3.									_	FACW	_			x 2 =		
4.									_	FAC sp	_			x 3 =		
5.									_	FACU s	_			x 4 =		
Uh. Charatana	/DL-+ C:	r! n!:	,	-	5		= Total Cover			UPL sp	_			x 5 =		
	(Plot Size:	5' Radius	_ '		/0		VEC	FAC		Columi	1 Totals:			(A)		(B)
1. /va annua					60		YES	FAC	_		December 1	J — D/A-	_			
2. Xanthium stru					20		YES	FAC	_		Prevalence Inc	aex — B/A-	-		_	
3. Rumex crispus					10		NO NO	FAC	_		. l i' . W i					
4. <i>Phyla nodiflor</i>	ra .				10		<u>NO</u>	FAC	_	Hyara	phytic Veget	ration inai	cators:			
5.							-	-	_			1 - Ra	:	11	tic Vegetation	
7									_				minance Tes		-	
									_				evalence Ind			
•									_	_				·—	.u [.] ns¹ (Provide su	nnorting data
10.									_	_			Remarks or			pporting auta
10.					100		= Total Cover		_			Drahlamati	ic Uudranhu	tic Vonatnt	ion¹ (Explain)	
				-	100		- Ioidi Covei			<u> </u>	ndicators of hy					. unless
Woody Vine Stratum	(Plot Size	e: 30' Ro	adius)								listurbed or pro			1 - 1 11	p. 030III,	,
1. <i>none</i>									_							
2.									_	ш.,л	nhutia V	atio-				
				-	0	=	= Total Cover			Prese	phytic Veget nt?	ulion	Yes 🗵		No 🗌	
% Bare Ground in Herb	Stratum 0															
Remarks:																

Histosol (A1)	
C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	
C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ***Zecration: Pt=Pore Lining, M=Matrix CS oli Indicators: (Applicable to all LRRs, unless otherwise noted.) Indic Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, onless otherwise noted.) Indicators: (Applicable to all LRRs, onless otherwise noted.) Indicators: (Applicable to all LRRs, onless otherwise noted.) Indicators: (Applicable to all LRRs, op. H) Indicators: (Appl	Clay 10% gravel
Indic	
Indic	
C Soil indicators: (Applicable to all LRRs, unless otherwise noted.)	
Histosol (A1)	
Type: N/A	cators for Problematic Hydric Soils3: 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) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.
Agoult Mydrology Indicators: Irry indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inin Muck Surface Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Observations: Ce Water Present? Yes? No? Depth (inches): N/A Wetland Hydro Mater Stained Present? Yes? No? Depth (inches): N/A Wetland Hydro Wetland Hydro Wetland Hydro Wetland Hydro Wetland Hydro Wetland Hydro Mater Stainer Depth (inches): N/A Wetland Hydro Mescapillary fringe)	ric Soil Present? Yes 🛛 No 🗌
Second Hydrology Indicators: arry indicators (minimum of one required; check all that apply) Second Hydrogen Sulfiace Water (A1) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfiae Odor (C1) Sediment Deposits (B2) Dry-Season Water Table (C2) Drift Deposits (B3) (where not tilled) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Other (Explain in Rema	
Trade Hydrology Indicators: mary indicators (minimum of one required; check all that apply) Seconory indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Dry-Season Water Table (C2) Dxidized Rhizospheres on Living Roots (C3) Where not tilled Presence of Reduced Iron (C4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Ind Observations: face Water Present? Yes? No? Depth (inches): N/A Wetland Hydro	
Second Surface Water (A1) Salt Crust (B11) Salt Crust (B13) Saturation (A3) Saturation (A3) Substitution (A3) Substitution (A3) Second Water Table (A2) Substitution (A3) Second Water Table (C2) Sediment Deposits (B2) Sediment Deposits (B3) Sediment Deposits (B4) Sediment Dep	
Surface Water (A1)	ondary Indicators (minimum of two required)
d Observations: ace Water Present? Yes? \Box No? \Box Depth (inches): \Box N/A er Table Present? Yes? \Box No? \Box Depth (inches): \Box N/A Wetland Hydro ration Present? Yes? \Box No? \Box Depth (inches): \Box N/A	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)
Table Present? Yes? No? Depth (inches): N/A Prable Present? Yes? No? Depth (inches): N/A Wetland Hydro ration Present? Yes? No? Depth (inches): N/A Wetland Hydro ration Present?	Frost-Heave Hummocks (D7) (LRR F)
r Table Present? Yes? No? Depth (inches): N/A Wetland Hydro ation Present? Yes? No? Depth (inches): N/A des capillary fringe)	
ation Present? Yes? No? Depth (inches): N/A des capillary fringe)	
des capillary fringe)	ology Present? Yes 🗵 No 🗌
ibe Kecordea Data (stream gauge, monitoring well, aerial photos, previous inspections), it available:	
nule.	
arks:	

Project/Site: Liberty Trails		City/County:	Justin/Denton		Sampling Date:	5/26/2018
Applicant/Owner: DR Horton, Inc.			Sto	ate: TX	Sampling Point:	i
Investigator(s): JH, SG		Section, Township,	Range: N/A			
Landform (hillslope, terrace, etc.): Side of hillslope	3	Local relief (con	cave, convex, none):	none	Slope %:	3-4
Subregion (LRR): J	Lat: 33.04	7 N Long	: -97.3718 W		Datum: NAD 19	83
Soil Map Unit Name: Sanger clay, 1 to 3 percent slope	es			NWI Classification:	N/A	
Are climatic / hydrologic conditions on the site typical for tl	his time of year? Yes 🛛 No		(If no, explain in Rem	narks.)		
Are vegetation, Soil, Or h	ydrology 🔲 Significantly	disturbed?	Are "Normal Circums	stances" present? Yes 🛛	No 🔲	
Are vegetation, Soil, Or h	ydrology 🔲 Naturally pr	oblematic?	(If needed, explain a	ny answers in Remarks.)		
SUMMARY OF FINDINGS — Attach site	map showing sampling	point locations, 1	ransects, imp	ortant features, etc.		
	Yes No 🖂	<u>, , , , , , , , , , , , , , , , , , , </u>	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		
Hydric Soil Present?	Yes 🛛 No 🔲	Is the Sampled Area	Yes	□ No ⊠		
Wetland Hydrology Present?	Yes No 🖂	within a wetland?	103			
Remarks:	_					
VEGETATION — Use scientific names a	of plants.					
	Absolute %	Dominant	Indicator	Dominance Test workshe	et:	
Tree Stratum (Plot Size: 30' Radius) Coverage	Species?	Status	Number of Dominant Species Are OBL, FACW, or FAC	That	
1. none				(excluding FAC-):	0	(A)
2.				Total Number of Dominant Sp	eries	
3.				Across All Strata:	3	(B)
4				Percent of Dominant Species	That	
	0	= Total Cover		Are OBL, FACW, or FAC:	0	(A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radiu				Prevalence Index Worksh		
1. Prunus mexicana	2	NO	UPL	Total % Cover of		ultiply By:
2		-		OBL species	x 1 =	
3.				FACW species	x 2 =	
4.				FAC species	x 3 =	
5.				FACU species	x 4 =	
	2	= Total Cover		UPL species	x 5 =	
Herb Stratum (Plot Size: 5' Radius)	VEC.	un.	Column Totals:	(A)	(B)
1. Nassella leucotricha	40	YES	UPL		N. 1.	
2. Bromus arvensis		YES	FACU	$Prevalence\ Index = I$		_
3. Amphiachyris amoena		YES	UPL			
4. Solidago canadensis		<u>NO</u>	FACU	Hydrophytic Vegetation	Indicators:	
5.				,	D :17 .6 H . I .	
6.				1-	Rapid Test for Hydrophyt Dominance Test is > 50%	•
7.						
8.				3-	Prevalence Index is ≤ 3 .	u [,] is ¹ (Provide supporting data
9.				4-	in Remarks or on a sepa	
10.		— Tatal Cauca		Ducklo		inal (Francia)
	100	= Total Cover			matic Hydrophytic Vegetat and wetland hydrology m	
Woody Vine Stratum (Plot Size: 30' Radiu	is)			disturbed or problema		20 prosoni, uniuss
1. none						
2.				Hadaalad V + 2		
	0	= Total Cover		Hydrophytic Vegetation Present?	Yes 🗌	No 🗵
% Bare Ground in Herb Stratum 0						
Remarks:						

SOILS Sampling Point: 6

Depth (inches) Color (i	Markeite						
(Matrix moist) %	Color (moist)	Redox Fea %	tures Type ¹	Loc ²	Texture	Remarks
0-8 10 YR 3/1	90	10 R 4/6	2	(PL	Clay	8% gravel
	90	10 K 1/0				Clay	
8-16 10 YR 3/1						Clay	10% gravel
			<u> </u>				
						-	
			<u> </u>				
			_				
ne: (=Concentration, D=Denl	etion. RM=Reduced Matrix	x, CS=Covered or Coated Sand G	Grains 21 ocation: P1	=Pore Lining, M=Matri	ix		
ric Soil indicators: (Applica					Indicators fo	or Problematic Hydri	c Soils³:
Histosol (A1)			Sandy Gleyed Matrix (S	54)		1 CM Muck (A9) (LRR I	
Histic Epipedon	• •		Sandy Redox (S5)			Coast Prairie Redox (A)	
☐ Black Histic (A3	•		Stripped Matrix (S6) Loamy Mucky Mineral	/F1\		Dark Surface (S7) (LRR High Plains Depression	
Stratified Layer	, ,		Loamy Gleyed Matrix (· ·			of MLRA 72 & 73)
	(LRR F, G, H)		Depleted Matrix (F3)	•		Reduced Vertic (F18)	•
	/ Dark Surface (A11)		Redox Dark Surface (F6			Red Parent Material (TF	
☐ Thick Dark Surf ☐ Sandy Mucky M			Depleted Dark Surface Redox Depressions (F8	` '		Very Shallow Dark Surf Other (Explain in Rema	
	leat or Peat (S2) (LRR G, F		High Plains Depression		_		tation and wetland hydrology must
5 cm Mucky Ped	at or Peat (S3) (LRR F)	<u> </u>	(MLRA 72 & 73	of LRR H)		sent, unless distributed	
trictive Layer (if present):							
Type: N/A					Hydric Soil P	resent? Yes	No □
Depth (inches): N/A							
tland Hydrology Indicators:							
tland Hydrology Indicators: nary indicators (minimum of one		···//				dicators (minimum of t	wo required)
tland Hydrology Indicators: nary indicators (minimum of one Surface Water (A1)		Salt Crust (B11)			Sur	face Soil Cracks (B6)	<u> </u>
tland Hydrology Indicators: nary indicators (minimum of ono] Surface Water (A1)] High Water Table (A2)		···//	ebrates (B13)		Spa Suri	face Soil Cracks (B6) rsely Vegetated Concav	<u> </u>
tland Hydrology Indicators: nary indicators (minimum of ond] Surface Water (A1)] High Water Table (A2)] Saturation (A3) Water Marks (B1)		Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi	ebrates (B13) de Odor (C1) ıter Table (C2)		Suri Spa Dra Oxi	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on	e Surface (B8)
tland Hydrology Indicators: nary indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa	ebrates (B13) de Odor (C1) iter Table (C2) ispheres on Living Roots (C	:3)	Suri Spa Dra Oxi	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled)	e Surface (B8)
tland Hydrology Indicators: nary indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not	ebrates (B13) de Odor (C1) ster Table (C2) sspheres on Living Roots (C t tilled)		Suri Spa Dra Oxi (r	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on i where tilled) yfish Burrows (C8)	re Surface (B8) Living Roots (C3)
tland Hydrology Indicators: nary indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not	btrates (B13) de Odor (C1) ster Table (C2) sspheres on Living Roots (C t tilled) duced Iron (C4)		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I where tilled) yfish Burrows (C8) uration Visible on Aeria	re Surface (B8) Living Roots (C3)
tland Hydrology Indicators: nary indicators (minimum of one 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)	e required; check all that a	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not	brates (B13) de Odor (C1) ster Table (C2) sspheres on Living Roots (C t tilled) duced Iron (C4) ace	:3)	Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on i where tilled) yfish Burrows (C8)	re Surface (B8) Living Roots (C3)
tland Hydrology Indicators: nary indicators (minimum of one) 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 Aerie Water Stained Leaves (B9)	e required; check all that a	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re	brates (B13) de Odor (C1) ster Table (C2) sspheres on Living Roots (C t tilled) duced Iron (C4) ace		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I where tilled) yfish Burrows (C8) uration Visible on Aeria omorphic Position (D2)	e Surface (B8) Living Roots (C3) I Imagery (C9)
tland Hydrology Indicators: nary indicators (minimum of one) 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 Aeric Water Stained Leaves (B9) Id Observations:	e required; check all that a	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfe	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks)		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I where tilled) yfish Burrows (C8) uration Visible on Aeria imorphic Position (D2) '-Neutral Test (D5)	e Surface (B8) Living Roots (C3) I Imagery (C9)
tland Hydrology Indicators: nary indicators (minimum of one) 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 Aerie Water Stained Leaves (B9) d Observations:	e required; check all that a	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfe	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks)	(3)	Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on I where tilled) yfish Burrows (C8) uration Visible on Aeria imorphic Position (D2) '-Neutral Test (D5)	e Surface (B8) Living Roots (C3) I Imagery (C9)
tland Hydrology Indicators: nary indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Id Observations:	e required; check all that a	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfii Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es):N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	Te Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
tland Hydrology Indicators: mary indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Id Observations: face Water Present?	e required; check all that a al Imagery (B7) Yes? No? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfii Dry-Season Wa Oxidized Rhizo (where not Fresence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) sspheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
tland Hydrology Indicators: mary indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Id Observations: face Water Present? uration Present? ludes capillary fringe)	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
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 Aeric Water Stained Leaves (B9) Ide Observations: face Water Present? ter Table Present? cludes capillary fringe)	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfii Dry-Season Wa Oxidized Rhizo (where not Fresence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
tland Hydrology Indicators: mary indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Id Observations: face Water Present? ter Table Present?	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
tland Hydrology Indicators: mary indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Id Observations: face Water Present? ter Table Present? uration Present? ludes capillary fringe) cribe Recorded Data (stream gau	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
tland Hydrology Indicators: nary indicators (minimum of one) 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 Aeric Water Stained Leaves (B9) d Observations: ace Water Present? er Table Present? udes capillary fringe)	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)
rland Hydrology Indicators: tary indicators (minimum of one) 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 Aeric Water Stained Leaves (B9) d Observations: ace Water Present? er Table Present? ration Present? udes capillary fringe) cribe Recorded Data (stream gau	al Imagery (B7) Yes? No? Yes? No? Yes? No? Yes? No?	Salt Crust (B11) Aquatic Inverte Hydrogen Sulfi Dry-Season Wa Oxidized Rhizo (where not Presence of Re Thin Muck Surfa Other (Explain) Depth (inch	ebrates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace in Remarks) es): N/A es): N/A		Suri	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on where tilled) yfish Burrows (C8) uration Visible on Aeria bmorphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D:	re Surface (B8) Living Roots (C3) I Imagery (C9) 7) (LRR F)

Project/Site: Liberty Trai	ls					City/County:	Justin/Dento	n			Sampling D	ate: 6/2	26/2018	
Applicant/Owner: DR Hor	ton, Inc.							St	tate:	TX	Sampling P	oint: 7		
Investigator(s): JH, SG						Section, Townshi	ip, Range:	N/A	ı					
Landform (hillslope, terrace, etc): Shallow sv	vale				Local relief (c	concave, convex	, none):		Concave		Slope %:	!	
Subregion (LRR): J				Lat: 3	3.0448 N	N Lo	ong: <u>-97.3</u>	3713 W			Datum:	NAD 1983	3	
Soil Map Unit Name: Sang	er clay, 1 to 3 percent	slopes								NWI Classification	n: N/A			
Are climatic / hydrologic condition	ons on the site typical	for this time o	of year? Ye	s 🖂	No 🗆]	(If no, explai	n in Ren	marks.)					
Are vegetation,	Soil,	Or hydrology		Significo	antly dis	turbed?	Are "Normal	Circum	stances	" present? Yes	⊠ No □]		
Are vegetation,	Soil,	Or hydrology		Naturall	ly proble	ematic?	(If needed, e	xplain a	any ans	wers in Remarks.)				
SUMMARY OF FINDIN	IGS — Attach	site map	showing	g sampli	ng po	oint locations,	, transects	, imp	porta	nt features,	etc.			
Hydrophytic Vegetation Present)	Yes		No [
Hydric Soil Present?		Yes	\boxtimes	No [Is the Sampled Area within a wetland?	l	Yes	\boxtimes	No [٦			
Wetland Hydrology Present?		Yes	\boxtimes	No [willing wellung:				_	_			
Remarks:														
VEGETATION — Use s	cientific nam	es of plan	ıts.											
				Absolute %		Dominant	Indicator			minance Test wo				
<u>Tree Stratum</u> (Plot Size:	30' Radius)	_	Coverage	_	Species?	Status			mber of Dominant Sp e OBL, FACW, or FAC	iecies inat			
1. none					_				(ex	cluding FAC-):		_ 2		(A)
2.					_				Tot	al Number of Domin	ant Species			
3.					_				Ac	ross All Strata:	•	_ 2		(B)
4.					_				Pe	cent of Dominant Sp	ecies That			
			_	0	_ =	Total Cover			Ar	e OBL, FACW, or FAC:		100		(A/B)
Sapling/Shrub Stratum	(Plot Size: 15'	Radius)							D.	evalence Index W	orkshoot.			
	(FIUI 3128: 13	Kuulus)							F	Total % Cov		Mle	inly Dy	
1. <u>none</u> 2.					_			_	np	L species	ver oi:	x 1 =	iply By:	_
					_			_		CW species		_		_
3. 4.					_					_		_ x 2 = _ x 3 =		_
					_		-	_		C species		_		_
5.				0		Total Cover				CU species L species		_ x 4 = _ x 5 =		_
Herb Stratum (Plot Size	: 5' Radius	1	_	- 0		TOTAL COVEL				umn Totals:		- X3 — - (A)		(B)
1. Eleocharis monteviden		/		40		YES	FACW		(0			_ (A) _		(b)
2. Xanthium strumarium	5/3			40	_	YES	FAC			Prevalence Inde	.v — D/A—			
3. Iva annua				15	_	NO	FAC			i i evulence mue	X — D/A—	-	=	
4.				15	_	NU			ш.	drophytic Vegeta	tion Indicators			
5.					_		-	_	"'	aropnynt vegera	mon muncurors.			
,					_					1	- Rapid Test fo	or Hydrophytic	Venetation	
7					_			_			-	Test is $> 50\%$. 590/411011	
					_		-	_				ndex is <u><</u> 3.01		
•					_		-	_				al Adaptations		ortina data
10.					_		-	_				or on a separa		or ring uara
10.				95		Total Cover				D	roblematic Hydropl	vytic Vogotatio	n] /Evalain\	
			_	73		TOTAL COVEL				Indicators of hydr				ınless
Woody Vine Stratum	(Plot Size: 30'	Radius)								disturbed or prob		, 31	L 20/	
1. <i>none</i>					_									
2.					_			_	u.	drophytic Vegeta	tion			
			_	0	_ =	Total Cover				aropnytic vegeta esent?	Tion Yes [⊠ N	lo 🗌	
% Bare Ground in Herb Stratum	5													
Remarks:														

Depth (inch a)	Matrix	n/	f 1 / 1 a	Redox Feat		1 2	Ŧ .	n '
(inches) Color (noist)	<u></u>	Color (moist)	9/0	Type ¹	Loc ²	Texture	Remarks
-16 10 YR 3/1		95	10 R 4/6		(PL/M	Clay	
				<u> </u>				
							-	
				- —				
C=Concentration, D=Depl				ains. ² Location: PL=	=Pore Lining, M=Matrix			
c Soil indicators: (Application	ıble to all LRRs	, unless other	wise noted.)				r Problematic Hydric	
Histosol (A1)	44.00			Sandy Gleyed Matrix (S	4)		1 CM Muck (A9) (LRR I,	
Histic Epipedon Black Histic (A3				Sandy Redox (S5) Stripped Matrix (S6)			Coast Prairie Redox (A10 Dark Surface (S7) (LRR	
Hydrogen Sulfi	•		H	Loamy Mucky Mineral (F1)		High Plains Depressions	•
	rs (A5) (LRR F)		ੂ	Loamy Gleyed Matrix (F				f MLRA 72 & 73)
	(LRR F, G, H)			Depleted Matrix (F3)	_		Reduced Vertic (F18)	
☐ Depleted below ☐ Thick Dark Surf	/ Dark Surface (A)	i 1)		Redox Dark Surface (F6)	•	_	Red Parent Material (TF2 Very Shallow Dark Surfa	
Sandy Mucky M				Depleted Dark Surface (Redox Depressions (F8)			Other (Explain in Remar	
	eat or Peat (S2) (LRR G, H)	Ī	High Plains Depression				ation and wetland hydrology must
	at or Peat (S3) (L I	RR F)		(MLRA 72 & 73 c	of LRR H)	be pre	sent, unless distributed	or problematic.
ictive Layer (if present):								
Type: N/A						Hydric Soil P	resent?Yes 🗵	No 🗌
Depth (inches): N/A								
rks:								
ks:								
ROLOGY and Hydrology Indicators: ry indicators (minimum of on		all that apply)					dicators (minimum of tw	vo required)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on		all that apply)	Salt Crust (B11)	rates (D12)		⊠ Sur	face Soil Cracks (B6)	
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2)		all that apply)	Aquatic Inverteb			⊠ Suri ⊠ Spa	face Soil Cracks (B6) rsely Vegetated Concave	
ROLOGY and Hydrology Indicators: ry indicators (minimum of on		all that apply)	Aquatic Invertebr	e Odor (C1) er Table (C2)		Suri	face Soil Cracks (B6)	Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp	e Odor (C1) er Table (C2) oheres on Living Roots (C	3)	Suri Spa Dra Oxi	iace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled)	Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t	e Odor (C1) er Table (C2) oheres on Living Roots (C t illed)	3)	Suri Spa Dra Oxi (v	iace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8)	Surface (B8) iving Roots (C3)
ROLOGY und Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t	e Odor (C1) er Table (C2) oheres on Living Roots (C t illed) uced Iron (C4)	3)	Suri Spa Dra Oxi (Cra Sati	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial	Surface (B8) iving Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	e required; check	all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t	e Odor (CI) er Table (C2) oheres on Living Roots (C t illed) uced Iron (C4) e	3)	Suri	iace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8)	Surface (B8) iving Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Inon Deposits (B4) Iron Deposits (B5) Inundation Visible on Aeri Water Stained Leaves (B9)	e required; check	all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not † Presence of Redu	e Odor (CI) er Table (C2) oheres on Living Roots (C t illed) uced Iron (C4) e	3)	Suri	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2)	Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri	e required; check	all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not † Presence of Redu	e Odor (CI) er Table (C2) oheres on Living Roots (C t illed) uced Iron (C4) e	3)	Suri	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Inon Deposits (B4) Iron Deposits (B5) Inundation Visible on Aeri Water Stained Leaves (B9)	e required; check	all that apply)	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not † Presence of Redu	e Odor (C1) er Table (C2) oheres on Living Roots (C tilled) uced Iron (C4) e Remarks)	3)	Suri	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations:	e required; check al Imagery (87)		Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks)		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	al Imagery (B7) Yes? Yes?	No? ⊠ No? ⊠	Aquatic Invertebre Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not † Presence of Redu Thin Muck Surfac. Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) s): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	e required; check al Imagery (87) Yes?	No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) s): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	al Imagery (87) Yes? Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) Si: N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	al Imagery (87) Yes? Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) Si: N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	al Imagery (87) Yes? Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) Si: N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present?	al Imagery (87) Yes? Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) Si: N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of on 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 Aeri Water Stained Leaves (B9) Observations: e Water Present? Table Present? tition Present? les capillary fringe) be Recorded Data (stream ga	al Imagery (87) Yes? Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebi Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	e Odor (C1) er Table (C2) sheres on Living Roots (C3 tilled) uced Iron (C4) e Remarks) Si: N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) ts-Heave Hummocks (D7)	iving Roots (C3) Imagery (C9)

Project/Site: Liberty Trails			City/County:	Justin/Denton		Sampling Date:	5/26/2018
Applicant/Owner: DR Horton, Inc.				S	tate: TX	Sampling Point:	}
Investigator(s): JH, SG			Section, Townshi	p, Range: N/A	l		
Landform (hillslope, terrace, etc.): Swale			Local relief (c	oncave, convex, none):	Concave	Slope %:	2
Subregion (LRR): J		Lat: 33.0	471 N Lo	ng:97.3775 W		Datum: NAD 19	83
Soil Map Unit Name: Somervell gravelly loam	ı, 1 to 5 percent slopes		_		NWI Classification:	N/A	
Are climatic / hydrologic conditions on the site typic	al for this time of year?	Yes 🛛 No		(If no, explain in Rei	marks.)		
Are vegetation, Soil,	Or hydrology	Significantl	y disturbed?	Are "Normal Circum	stances" present? Yes 🖂	No 🔲	
Are vegetation, Soil,	Or hydrology	☐ Naturally p	roblematic?	(If needed, explain a	any answers in Remarks.)		
SUMMARY OF FINDINGS — Attack	ı site map shov	ving sampling	point locations,	transects, im	portant features, etc.		
Hydrophytic Vegetation Present?	Yes 🖂	No \square	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	· · · · · · · · · · · · · · · · · · ·		
Hydric Soil Present?	Yes 🖂	No	Is the Sampled Area	Yes	⊠ No □		
Wetland Hydrology Present?	Yes 🖂	No 🗆	within a wetland?		<u> </u>		
Remarks:							
VEGETATION — Use scientific nan	nes of plants.						
		Absolute %	Dominant	Indicator	Dominance Test worksho		
Tree Stratum (Plot Size: 30' Radius	<u>:</u>)	Coverage	Species?	Status	Number of Dominant Species Are OBL, FACW, or FAC	That	
1. Salix nigra		5	YES	FACW	(excluding FAC-):	_ 4	(A)
2.					Total Number of Dominant Sp	neries	
3.					Across All Strata:	4	(B)
4					Percent of Dominant Species	That	
		5	= Total Cover		Are OBL, FACW, or FAC:	100	(A/B)
	-1						
	5' Radius)				Prevalence Index Works		
1. none					Total % Cover of		ultiply By:
2.					OBL species	x 1 =	
3.					FACW species	x 2 =	
4.					FAC species	x 3 =	
5.					FACU species	x 4 =	
u Lee	,	0	= Total Cover		UPL species	x 5 =	(0)
Herb Stratum (Plot Size: 5' Radius)	0.5	VEC	FA.CW	Column Totals:	(A)	(B)
1. Eleocharis montevidensis		25 20	YES	FACW FAC	Prevalence Index =	D /A	
2. Xanthium strumarium		15	YES YES	FAC	rrevalence index —	Б /А—	<u> </u>
Rumex crispus Ambrosia trifida		5	NO NO	FAC	Hydrophytic Vegetation	Indiantaus.	
5. Lolium perenne		5	NO NO	FACU	Hydrophylic Vegetation	inaicators:	
6.			NO	TACU	1-	Rapid Test for Hydrophyt	is Vogatation
-					X 2-	Dominance Test is > 509	•
0					3-	Prevalence Index is ≤ 3 .	
					4-	-	os ¹ (Provide supporting data
10						in Remarks or on a sepa	
10.		70	= Total Cover		Proble	matic Hydrophytic Vegetat	ian) (Evalain)
			— Total Cover			l and wetland hydrology m	
Woody Vine Stratum (Plot Size: 30	O' Radius)				disturbed or problema		os. zo prosom, omoss
1. none							
2.					Hydrophytic Vegetation		
		0	= Total Cover		Present?	Yes 🖂	No 🗌
% Bare Ground in Herb Stratum 30							
Remarks:							

SOILS Sampling Point: 8

Profile Description	on: (Describe to the depth no	eded to docun	nent the indicator or cor	nfirm the absence of	indicators.)			Sumpring roun: <u>o</u>	_
Depth	Matrix			Redox Fea	•				
(inches)	Color (moist)	0/0	Color (moist)	0/0	Type ¹	Loc ²	Texture	Remarks	
0-10	10 YR 3/2	50	5 YR 5/6			PL	Silty Clay		
0-10	10 YR 4/3	47					Silty Sand		
10-13	10 YR 3/2	90					Silty Clay	10% gravel	
				<u></u> -					
				<u></u> -					
¹Tvne: (=Concentr	ration, D=Depletion, RM=Redu	ced Matrix. (S=	Covered or Coated Sand Gra	nins 21 ocation: P1	=Pore Lining, M=Matrix				
	tors: (Applicable to all LRRs			anis. Eucunon. 12	roro Emmig, m. munix	Indicators	for Problematic Hydri	c Soils³:	
_	Histosol (A1)			Sandy Gleyed Matrix (S	54)		1 CM Muck (A9) (LRR I		
	Histic Epipedon (A2) Black Histic (A3)			Sandy Redox (S5) Stripped Matrix (S6)			Coast Prairie Redox (A) Dark Surface (S7) (LRR		
	Hydrogen Sulfide (A4)			Loamy Mucky Mineral	(F1)		High Plains Depression		
	Stratified Layers (A5) (LRR F)			Loamy Gleyed Matrix (F2)		•	of MLRA 72 & 73)	
	1 cm Muck (A9) (LRR F, G, H) Depleted below Dark Surface (A	11)		Depleted Matrix (F3) Redox Dark Surface (F6	5)		Reduced Vertic (F18) Red Parent Material (TF	2)	
	Thick Dark Surface (A12)	,		Depleted Dark Surface	(F7)		Very Shallow Dark Surf	ace (TF12)	
	Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2)	IDD C H/		Redox Depressions (F8 High Plains Depression		3Indica	Other (Explain in Rema	rks) tation and wetland hydrology must	
	5 cm Mucky Peat or Peat (S3) (L			(MLRA 72 & 73			esent, unless distributed		
Restrictive Layer	• •								
	Bedrock					Hydric Soil	Present? Yes	No □	
Depth (inches): <u>13</u>								
HYDROLOGY									
Wetland Hydrolog									
Primary indicators (Surface Wa	(minimum of one required; check	all that apply)	Salt Crust (B11)				ndicators (minimum of t	wo required)	
	r Table (A2)		Aquatic Invertebr	ates (B13)			arsely Vegetated Concav	e Surface (B8)	
Saturation			Hydrogen Sulfide	, ,		⊠ Dr	ainage patterns (B10)		
☐ Water Mar ☐ Sediment [ks (B1) Deposits (B2)		Dry-Season Water Oxidized Rhizosp	r Table (C2) heres on Living Roots (C	(3)	_	kidized Rhizospheres on I (where tilled)	LIVING KOOTS (C3)	
☐ Drift Depo	sits (B3)		(where not ti	illed)	,	⊠ (r	ayfish Burrows (C8)		
☐ Algal Mat o	or Crust (B4)		Presence of Redu				turation Visible on Aeria comorphic Position (D2)	l Imagery (C9)	
	ונס) Visible on Aerial Imagery (B7)		Other (Explain in				.C-Neutral Test (D5)		
	ned Leaves (B9)					☐ Fr	ost-Heave Hummocks (D	(LRR F)	
Field Observation									
Surface Water Prese	ent? Yes?	No?⊠	Depth (inches)): <u>N/A</u>					
Water Table Present	t? Yes?	No?⊠	Depth (inches)): N/A	Wetla	nd Hydrology P	resent? Yes	⊠ No □	
Saturation Present?	_	No?⊠	Depth (inches)): <u>N/A</u>					
(includes capillary for Describe Recorded D	ringe) Oata (stream gauge, monitoring v	vell, gerial photo	s, previous inspections), if a	ıvailable:					
	, , ,		,						
Remarks:									

Project/Site: Liberty Trails		City/County:	Justin/Denton		Sampling Date: 6/26/2018	
Applicant/Owner: DR Horton, Inc.			Sta	ite: TX	Sampling Point: 9	
Investigator(s): JH, SG		Section, Township	p, Range: N/A			
Landform (hillslope, terrace, etc.): Hill slope		Local relief (co	oncave, convex, none):	none	Slope %: 4	
Subregion (LRR):	Lat: 33.0471	I N Loi	ng: -97.3773 W		Datum: Nad 1983	
Soil Map Unit Name: Somervell gravelly loam, 1 to 5 percent slope	s			NWI Classification:	N/A	
Are climatic / hydrologic conditions on the site typical for this time of yea	ır? Yes ⊠ No [(If no, explain in Remo	arks.)		
Are vegetation, Soil, Or hydrology	Significantly d	isturbed?	Are "Normal Circumst	ances" present? Yes 🖂	No 🔲	
Are vegetation, Soil, Or hydrology	☐ Naturally prob	olematic?	(If needed, explain an	y answers in Remarks.)		
SUMMARY OF FINDINGS — Attach site map sho	owing sampling p	oint locations,	transects, imp	ortant features, etc.		
Hydrophytic Vegetation Present? Yes				<u> </u>		
Hydric Soil Present? Yes		Is the Sampled Area	Yes	□ No ⊠		
Wetland Hydrology Present?		within a wetland?	163			
Remarks:	_	l				
VEGETATION — Use scientific names of plants.	,			_		
	Absolute %	Dominant	Indicator	Dominance Test workshee		
Tree Stratum (Plot Size: 30' Radius)	Coverage	Species?	Status	Number of Dominant Species 1 Are OBL, FACW, or FAC	That	
1. none				(excluding FAC-):	0	(A)
2.				Total Number of Dominant Spe	eries	
3.				Across All Strata:	2	(B)
4				Percent of Dominant Species T	^r hat	
	0 =	= Total Cover		Are OBL, FACW, or FAC:	0	(A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radius)				Prevalence Index Worksh		
1. none				Total % Cover of:		
2				OBL species	x 1 =	
3.				FACW species	x 2 =	
4				FAC species	x 3 =	
5	·			FACU species	x 4 =	
	0 =	= Total Cover		UPL species	x 5 =	
Herb Stratum (Plot Size: 5' Radius)				Column Totals:	(A)	(B)
1. Nassella leucotricha	50	YES	UPL			
2. Bromus arvensis	30	YES	<u>FACU</u>	Prevalence Index = B	/A=	
3. Monarda punctata	10	<u>NO</u>	UPL			
4. Solidago canadensis	10	<u>NO</u>	FACU	Hydrophytic Vegetation I	ndicators:	
5. Ambrosia artemisiifolia	5	<u>NO</u>	FACU			
6.	-				Rapid Test for Hydrophytic Vegetation	
7.					Dominance Test is > 50%	
8.					Prevalence Index is $\leq 3.0^{\circ}$	
9	-	-	-		Morphological Adaptations ¹ (Provide so in Remarks or on a separate sheet)	upporting data
10						
	105 =	= Total Cover			natic Hydrophytic Vegetation ¹ (Explain)	t unloce
Woody Vine Stratum (Plot Size: 30' Radius)				disturbed or problemati	and wetland hydrology must be presen ic.	i, uniess
1. <i>none</i>						
2.						
	0 =	= Total Cover		Hydrophytic Vegetation Present?	Yes □ No ⊠	
% Bare Ground in Herb Stratum 0						
Remarks:						

Depth	Matrix	<u> </u>	Redox Featu				
(inches) Color (mois	t) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
)-16 10 YR 2/1	100	<u> </u>	<u>.</u>			Clay	
· · · · · · · · · · · · · · · · · · ·							
							
					-		-
C=Concentration, D=Depletion	DM—Paducad Matrix (C	—Covered or Contad Sand Grain	21 ocation DI —	Pore Lining, M=Matr			-
c Soil indicators: (Applicable			sLocuiton: 11—	Tore Lilling, M-Muli		r Problematic Hydric S	oils³:
Histosol (A1)		S	andy Gleyed Matrix (S4))		1 CM Muck (A9) (LRR I, J)	
Histic Epipedon (A2		S	andy Redox (S5)			Coast Prairie Redox (A16)	(LRR F, G, H)
Black Histic (A3)			tripped Matrix (S6)			Dark Surface (S7) (LRR G)	
Hydrogen Sulfide (A			oamy Mucky Mineral (Fi oamy Gleyed Matrix (F2			High Plains Depressions ((LRR H outside of	
Stratified Layers (A		_	oamy Gieyea Mairix (F2 Jepleted Matrix (F3)	:)		Reduced Vertic (F18)	MLKA /2 & /3)
Depleted below Da			edox Dark Surface (F6)			Red Parent Material (TF2)	
Thick Dark Surface			epleted Dark Surface (F	7)		Very Shallow Dark Surface	(TF12)
Sandy Mucky Miner			edox Depressions (F8)			Other (Explain in Remarks	
	or Peat (S2) (LRR G, H)	□ н	ligh Plains Depressions			ors of hydrophytic vegetati sent, unless distributed or	on and wetland hydrology must
5 cm Mucky Peat or ictive Layer (if present):	real (55) (LKK F)	 	(MLRA 72 & 73 of	LKK H)	ne pre	seni, uniess distributed of	problemanc.
Type: N/A							
Depth (inches): N/A					Hydric Soil P	resent? Yes 🗌	No 🛛
· · · · _ · _ · _ · _ · _ · _ · _ · _ ·							
ks:							
ks:							
ks: ROLOGY							
ROLOGY und Hydrology Indicators: ry indicators (minimum of one rei	uired; check all that apply)					dicators (minimum of two	required)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red Surface Water (A1)	uired; check all that apply)	Salt Crust (B11)			Surf	face Soil Cracks (B6)	
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red Surface Water (A1) High Water Table (A2)	uired; check all that apply)	Salt Crust (B11) Aquatic Invertebrat	• •		Surl	face Soil Cracks (B6) rsely Vegetated Concave S	
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3)	uired; check all that apply)	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide O	dor (C1)		Suri	face Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10)	urface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red Surface Water (A1) High Water Table (A2)	uired; check all that apply)	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide O	dor (C1) Table (C2)		Suri Spa Dra Oxi	face Soil Cracks (B6) rsely Vegetated Concave S	urface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one rei Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all that apply)	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide O	dor (C1) Table (C2) Tres on Living Roots (C3)		Suri Spa Dra Oxi	face Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi	urface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	uired; check all that apply)	Salt Crust (B1 1) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till	dor (C1) Table (C2) Tes on Living Roots (C3) ed)		Suri	ace Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi vhere tilled) yfish Burrows (C8) uration Visible on Aerial In	urface (B8) ng Roots (C3)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red 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)		Salt Crust (B1 1) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce	dor (C1) 'able (C2) res on Living Roots (C3) ed) d Iron (C4)		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2)	urface (B8) ng Roots (C3)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one red 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 In		Salt Crust (B1 1) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till	dor (C1) 'able (C2) res on Living Roots (C3) ed) d Iron (C4)		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5)	urface (B8) ng Roots (C3) nagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one red 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)		Salt Crust (B1 1) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce	dor (C1) 'able (C2) res on Living Roots (C3) ed) d Iron (C4)		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2)	urface (B8) ng Roots (C3) nagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one reconstruction (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 In Water Stained Leaves (B9) Observations:	agery (B7)	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) lable (C2) res on Living Roots (C3) ed) d Iron (C4)		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5)	urface (B8) ng Roots (C3) nagery (C9)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one recovered by the 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 In Water Stained Leaves (B9) Observations: e Water Present?	agery (B7) Yes? □ No? ☑	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) Table (C2) Tres on Living Roots (C3) ed) d Iron (C4) Tresmarks)		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one recovered and the 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 In Water Stained Leaves (B9) Observations: e Water Present? Table Present?	agery (B7) Yes? □ No? ☑ Yes? □ No? ☑	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reducet Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) (res on Living Roots (C3) ed) d Iron (C4) (marks) N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one reconstruction (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 Inwater Stained Leaves (B9) Observations: e Water Present? Table Present?	agery (B7) Yes? □ No? ☑	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide O Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) (res on Living Roots (C3) ed) d Iron (C4) (marks) N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one recovered for the property of	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one reconstruction (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 Inwater Stained Leaves (B9) Observations: e Water Present? Table Present?	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one recovered for the property of	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one reconstruction (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 In Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present? tion Present? les capillary fringe) be Recorded Data (stream gauge,	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one recovered for the property of	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one reconstruction (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 In Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present? tion Present? les capillary fringe) be Recorded Data (stream gauge,	ragery (B7) Yes?	Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide Oi Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface Other (Explain in Re	dor (C1) (able (C2) res on Living Roots (C3) ed) d Iron (C4) emarks) N/A N/A N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concave S inage patterns (B10) dized Rhizospheres on Livi where tilled) yfish Burrows (C8) uration Visible on Aerial In morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	urface (B8) ng Roots (C3) nagery (C9) (LRR F)

Project/Site:	Liberty Trails						City/County:	Justin/Dent	on				Sampling Dat	te: 7	/3/2018	
Applicant/Owner:	DR Horton									tate:	TX		Sampling Poi			
Investigator(s):	JH, SG						Section, Townsh	ip, Range:	N/A	ı				_		
Landform (hillslope,	terrace, etc.):	swale					Local relief (concave, conve	x, none):		concave		Slo	ope %:	2	
Subregion (LRR):	J				Lat:	33.045			.3717 W				Datum:	NAD 198		
Soil Map Unit Name:	Sanger Clay	1-3% Slopes			_						NWI Classific	ation:	N/A			
Are climatic / hydrol				of year?	Yes 🖂	No		(If no, expl	ain in Rer	marks.)	_	_	•			
Are vegetation,	Soil,		Or hydrolog	_		nificantly d		Are "Normo	al Circum	stances"	present?	Yes 🖂	No 🔲			
Are vegetation,	Soil,		Or hydrolog	ју 🗆] Nat	turally prol	olematic?	(If needed,	explain a	any ansv	vers in Remarks	.)				
SUMMARY OF	FINDINGS -	- Attach	site mar	o showi	ina sam	plina s	oint locations	, transect	s, imi	porta	nt feature	es, etc.				
Hydrophytic Vegetati			Yes		No			<u> </u>		•						
Hydric Soil Present?			Yes	\boxtimes	No		Is the Sampled Are	a	Yes	\boxtimes	No					
Wetland Hydrology F	Present?		Yes		No		within a wetland?		.03			ш				
Remarks:																
VEGETATION	– Use scient	ific nam	es of pla	ınts.												
					Absolut	۵%	Dominant	Indicato	nr	Do	minance Test	workshee	et:			
<u>Tree Stratum</u>	(Plot Size:	30' Radius)		Coverd		Species?	Status			mber of Dominar OBL, FACW, or I		That			
1. <i>none</i>											cluding FAC-):			3		(A)
2.										Tot	al Number of Do	minant Sne	ories			
3.											oss All Strata:	illinaiii spe	,,,,,,	3		(B)
4.										Per	cent of Dominan	nt Snecies T	hat			
					0	:	= Total Cover				OBL, FACW, or		iiui	100		(A/B)
Sapling/Shrub Stratu	<u>m</u> (Plot S	ize: <u>15'</u>	Radius)						Pre	evalence Inde					
1. <u>none</u>												6 Cover of:			Itiply By:	_
2.											L species			x 1 =		
3.											CW species			x 2 =		
4.											Species			x 3 =		
5.											CU species			x 4 =		
	(DL - C)	el n II			0		= Total Cover				species			x 5 =		
Herb Stratum	(Plot Size:	5' Radius			00		v	F4.6W		Col	umn Totals:			(A)		(B)
-	montevidensis				30		Yes	FACW			D	II — D	/4 —			
2. /va annua	a				25		Yes	FAC			Prevalence	inaex — B	/A= -		_	
3. Phyla nodit					20		Yes	FAC		-	January Wass					
4. Xanthium s					10		No No	FAC		ну	drophytic Veg	etation ii	naicators:			
5. Lolium pero					5		No No	FACU FACU				,	Danid Took for	المربط مصال معا	. V	
6. Solidago ca	nauensis						NO	FACU			X	_	Rapid Test for Dominance Te		-	
7.												-				
8.												_	Prevalence In	_		
9.													in Remarks or		s¹ (Provide sup ate sheet)	porting data
10.					100											
					100		= Total Cover				1 Indicators of	_	natic Hydrophy and wetland h	-		unless
Woody Vine Stratum	(Plot Si	ze: <u>30'</u>	Radius)							disturbed or			, an orogy mil	bo prosoill,	3
1. <i>none</i>																
2.											duante ut					
					0		= Total Cover				drophytic Veg esent?	etation	Yes 🗵	1	No 🗌	
% Bare Ground in He	erb Stratum 0															
Remarks:																

SOILS Sampling Point: 10

Depth	Matrix			Redox Feat			. .	
(inches) Color (m	oist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
-16 10YR 2/2		95	5YR 4/6	5		PL	Clay	
								
C=Concentration, D=Deple	ion, RM=Redu	ed Matrix, CS=	Covered or Coated Sand G	rains. ² Location: PL	=Pore Lining, M=Matrix			
c Soil indicators: (Applica	le to all LRRs	, unless other	wise noted.)			Indicators fo	r Problematic Hydri	c Soils³:
Histosol (A1)				Sandy Gleyed Matrix (S	54)		1 CM Muck (A9) (LRR I,	
Histic Epipedon (12)			Sandy Redox (S5)			Coast Prairie Redox (A1	
☐ Black Histic (A3) ☐ Hydrogen Sulfid	(14)			Stripped Matrix (S6) Loamy Mucky Mineral ((F1)		Dark Surface (S7) (LRR High Plains Depression	•
Stratified Layers				Loamy Gleyed Matrix (of MLRA 72 & 73)
1 cm Muck (A9)	LRR F, G, H)			Depleted Matrix (F3)	•		Reduced Vertic (F18)	•
Depleted below		1)		Redox Dark Surface (F6	•		Red Parent Material (TF	
☐ Thick Dark Surfa ☐ Sandy Mucky Mi				Depleted Dark Surface Redox Depressions (F8			Very Shallow Dark Surfo Other (Explain in Remar	
2.5 cm Mucky Pe		LRR G, H)		High Plains Depression				tation and wetland hydrology must
5 cm Mucky Pear				(MLRA 72 & 73	of LRR H)	be pre	sent, unless distributed	or problematic.
ictive Layer (if present):								
Type: N/A						Hydric Soil P	resent? Yes 🗵	No □
Depth (inches): N/A								
rks:								
rks:								
rks: ROLOGY								
ROLOGY and Hydrology Indicators: ry indicators (minimum of one	equired; check	all that apply)					dicators (minimum of t	wo required)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1)	equired; check	all that apply)	Salt Crust (B11)			Surf	face Soil Cracks (B6)	
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2)	required; check	all that apply)	Aquatic Invertel	brates (B13)		Suri	face Soil Cracks (B6) rsely Vegetated Concav	
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1)	required; check	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat	brates (B13) le Odor (C1) ter Table (C2)		Surt Spa	face Soil Cracks (B6)	e Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	required; check	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos	brates (B13) de Odor (C1) ter Table (C2) spheres on Living Roots (C	3)	Suri Spa Spa Dra Oxi	face Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled)	e Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	required; check	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not	brates (B13) de Odor (C1) ter Table (C2) spheres on Living Roots (C tilled)	3)	Suri Spa Spa Dra Oxi (v	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8)	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	required; check	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4)	.3)	Suri Spa Spa Dra Oxi (v	iace Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	•	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8)	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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)	•	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce	3)	Suri	ace Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2)	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria	•	all that apply)	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce	3)	Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9)	•	all that apply) No? 🖂	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) Juced Iron (C4) Isce n Remarks)	3)	Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations:	Imagery (B7)	No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain in	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks)		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: the Water Present?	Imagery (B7) Yes? Yes?	No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) tce in Remarks) ess: N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: e Water Present? Table Present?	Imagery (B7)	No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain in	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) tce in Remarks) ess: N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: the Water Present?	Imagery (B7) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain ii Depth (inche	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks) Dos): N/A Dos): N/A Dos): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: the Water Present? Table Present?	Imagery (B7) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain ii Depth (inche	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks) Dos): N/A Dos): N/A Dos): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: the Water Present? Table Present?	Imagery (B7) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain ii Depth (inche	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks) Dos): N/A Dos): N/A Dos): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: e Water Present? Table Present? tition Present? les capillary fringe) the Recorded Data (stream gauge	Imagery (B7) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain ii Depth (inche	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks) Dos): N/A Dos): N/A Dos): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one 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 Aeria Water Stained Leaves (B9) Observations: the Water Present? Table Present?	Imagery (B7) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertel Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not Presence of Red Thin Muck Surfa: Other (Explain ii Depth (inche	brates (B13) le Odor (C1) ter Table (C2) spheres on Living Roots (C tilled) duced Iron (C4) sce n Remarks) Dos): N/A Dos): N/A Dos): N/A		Suri	race Soil Cracks (B6) rsely Vegetated Concav inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5) tst-Heave Hummocks (D7	e Surface (B8) Living Roots (C3) I Imagery (C9) () (LRR F)

Project/Site: Liberty Trails			City/County:	Justin/Denton		Sampling Date: 7/3/2018	
Applicant/Owner: DR Horton				Sta	te: TX	Sampling Point: 11	
Investigator(s): JH, SG			Section, Township	, Range: N/A			
Landform (hillslope, terrace, etc.):	swale		Local relief (co	ncave, convex, none):	concave	Slope %: 2	
Subregion (LRR): J		Lat: 33.144	7 N Lon	g:97.3708 W		Datum: NAD 1983	
Soil Map Unit Name: Sanger Clay,	1-3% Slopes				NWI Classification:	N/A	
Are climatic / hydrologic conditions on th	e site typical for this time of year?	Yes 🛛 No		(If no, explain in Remo	urks.)		
Are vegetation, \square Soil,	Or hydrology	Significantly	disturbed?	Are "Normal Circumst	ances" present? Yes 🖂	No 🔲	
Are vegetation, \square Soil,	Or hydrology	☐ Naturally pro	blematic?	(If needed, explain an	y answers in Remarks.)		
SUMMARY OF FINDINGS —	Attach site map show	ving sampling _l	point locations,	transects, imp	ortant features, etc.		
Hydrophytic Vegetation Present?	Yes	No 🔲					
Hydric Soil Present?	Yes	No 🔲	Is the Sampled Area within a wetland?	Yes	⊠ No □		
Wetland Hydrology Present?	Yes	No 🔲					
Remarks:							
VEGETATION — Use scient	tic names of plants.				B		
		Absolute %	Dominant	Indicator	Dominance Test worksher Number of Dominant Species		
<u>Tree Stratum</u> (Plot Size:	30' Radius)	Coverage	Species?	Status	Are OBL, FACW, or FAC	Tillui	
1. none					(excluding FAC-):	3	(A)
2.					Total Number of Dominant Spo	ecies	
3.					Across All Strata:	4	(B)
4.					Percent of Dominant Species T	Chat	
		0	= Total Cover		Are OBL, FACW, or FAC:		(A/B)
Sapling/Shrub Stratum (Plot Siz	re: 15' Radius)				Prevalence Index Worksh	noot:	
1. <i>Celtis laevigata</i>	e: 15 kuulus j	5	Yes	FAC	Total % Cover of:		
2.			163	TAC	OBL species	x 1 =	
3.					FACW species	x 2 =	
4.					FAC species	x 3 =	
5.					FACU species	x 4 =	
J		5	= Total Cover		UPL species	x 5 =	
Herb Stratum (Plot Size:	5' Radius)		Total Cover		Column Totals:	(A)	(B)
1. Iva annua	<u> </u>	50	Yes	FAC		(n)	
2. Cynodon dactylon		40	Yes	UPL	Prevalence Index = B	8/∆=	
3. Xanthium strumarium		30	Yes	FAC	Trovalence index		
4. Lythrum californicum		15	No	OBL	Hydrophytic Vegetation I	ndicators:	
5. Hordeum pussilum	_	5	No	FACU	,,		
6.	_				1-	Rapid Test for Hydrophytic Vegetation	n
7	_					Dominance Test is > 50%	
•						Prevalence Index is $\leq 3.0^{1}$	
•						Morphological Adaptations ¹ (Provide s	supporting data
10.	_					in Remarks or on a separate sheet)	
	_	140	= Total Cover		Problem	matic Hydrophytic Vegetation¹ (Explain))
					1 Indicators of hydric soil	and wetland hydrology must be prese	
Woody Vine Stratum (Plot Siz	e: <u>30' Radius</u>)				disturbed or problemat	ic.	
1.							
2.					Hydrophytic Vegetation	= =	
		0	= Total Cover		Present?	Yes ⊠ No □	
% Bare Ground in Herb Stratum 0							
Remarks:							

SOILS Sampling Point: 11

Profile Description	on: (Describe to the depth	needed to docu	ment the indicator or con	firm the absence of	indicators.)			Sumpling Form: 11
Depth	Matrix			Redox Feat	ures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-6	10YR 2/1	98	5YR 4/6	2	(PL	Clay	
6-16	10YR 2/1	100					Clay	
	<u> </u>							
Tyne, (=Concent	ration, D=Depletion, RM=Red	Jucad Matrix (S=	-Covered or Conted Sand Gra	ins 21 ocation. Pl	=Pore Lining, M=Matrix			
	itors: (Applicable to all LR			ilis. Locuiton: 1 L-	-rore Lilling, M-Mairix	Indicators for	Problematic Hydric	Soils ³ :
	Histosol (A1)			Sandy Gleyed Matrix (S	4)	□ 1	CM Muck (A9) (LRR I, J	I)
	Histic Epipedon (A2)			Sandy Redox (S5)			oast Prairie Redox (A16)	
	Black Histic (A3) Hydrogen Sulfide (A4)			Stripped Matrix (S6) Loamy Mucky Mineral (F1)		ark Surface (S7) (LRR G igh Plains Depressions	
	Stratified Layers (A5) (LRR F)		ä	Loamy Gleyed Matrix (I	•		(LRR H outside of	
	1 cm Muck (A9) (LRR F, G, H			Depleted Matrix (F3)	١		educed Vertic (F18)	
	Depleted below Dark Surface (Thick Dark Surface (A12)	AII)		Redox Dark Surface (F6 Depleted Dark Surface			ed Parent Material (TF2) ery Shallow Dark Surfac	
	Sandy Mucky Mineral (S1)			Redox Depressions (F8)	Ì	☐ 0t	ther (Explain in Remark	s)
	2.5 cm Mucky Peat or Peat (S2) 5 cm Mucky Peat or Peat (S3)			High Plains Depression (MLRA 72 & 73 c			s of hydrophytic vegeta ent, unless distributed o	tion and wetland hydrology must
Restrictive Layer		LKK F)		(MLKA /2 & /3 (JI LKK HJ	во ргозо	ini, omess distributed o	i problemant.
Туре:	N/A					Hydric Soil Pre	esent? Yes 🖂	No 🗆
Depth (inches	s): N/A					nyunc son rie	iseiii: ies 🖂	NO 🗀
Remarks:								
l								
HYDROLOGY								
Wetland Hydrolo	gy Indicators:							
Primary indicators	(minimum of one required; che	k all that apply)				Secondary Indi	cators (minimum of two	required)
Surface W	, ,		Salt Crust (B11)			_	ce Soil Cracks (B6)	
☐ High Wate ☐ Saturation	r Table (A2)		Aquatic Invertebr Hydrogen Sulfide	` '			ely Vegetated Concave age patterns (B10)	Surface (B8)
Water Mar	, ,		Dry-Season Water	` '			age parierns (610) zed Rhizospheres on Liv	ring Roots (C3)
	Deposits (B2)			neres on Living Roots (C	3)		nere tilled)	
☑ Drift Depo ☐ Algal Mat	sits (B3) or Crust (B4)		(where not ti	,			ish Burrows (C8) ation Visible on Aerial I	manery (CQ)
☐ Iron Depo:			☐ Thin Muck Surface	, ,		Geom	orphic Position (D2)	magory (C7)
_	n Visible on Aerial Imagery (B7)		Other (Explain in	Remarks)		_	leutral Test (D5)	(1DD E)
Water Stai	ned Leaves (B9)					Frost-	Heave Hummocks (D7)	(LKK F)
Surface Water Pres		No?⊠	Depth (inches)	: N/A				
	_							7 N. 🗆
Water Table Presen	_		Depth (inches)		Wetial	nd Hydrology Pres	sent? Yes [⊠ No □
Saturation Present? (includes capillary f	_	No?⊠	Depth (inches)	: <u>N/A</u>				
	Data (stream gauge, monitoring	well, aerial phot	os, previous inspections), if a	vailable:	l			
Remarks:								

Project/Site:	Liberty Trails						City/County:	Justin/Dento	n				Sampling Dat	e: 7/	3/2018	
Applicant/Owner:	DR Horton									tate:	TX		Sampling Poi			
Investigator(s):	JH, SG						Section, Townsh	ip, Range:	N/A	١						
Landform (hillslope,		swale						concave, convex,			concave		Slo	ope %:	2	
Subregion (LRR):	, , J	-			Lat:	33.042			, 3721 W				Datum:	NAD 198		
Soil Map Unit Name:	-	, 1-3% Slopes									NWI Classifica	ation.	N/A			
Are climatic / hydrolo				of venr?	Yes 🖂	No	П	(If no, explai	n in Rei	marks)		_	.,,			
Are vegetation,	Soil,		Or hydrolog	_		nificantly o		Are "Normal		•	"nresent?	Yes 🛛	No 🔲			
Are vegetation,	Soil,	_	Or hydrolog		_	turally pro					wers in Remarks.	·				
		_		. –			oint locations	•	-	-						
Hydrophytic Vegetati		- Allucii	Yes		No		Joini locullons	, iiuiisetis	, 1111	portu	iiii ieuioie	3, eit.				
Hydric Soil Present?	OII LI 626III :		Yes	⊠	No		Is the Sampled Area	1		_		_				
•	rocont?						within a wetland?		Yes	\boxtimes	No					
Wetland Hydrology P Remarks:	Teseni:		Yes		No											
Roman KJ.																
VEGETATION -	– Use scient	tific nam	es of pla	ınts.												
										Do	minance Test	workshee	et:			
Tree Stratum	(Plot Size:	30' Radius	1		Absolut Coverd		Dominant Species?	Indicator Status			mber of Dominan					
1. none	(1 101 3126:	JU KUUIUS	_ ′		COVER	iye		310103			e OBL, FACW, or F ccluding FAC-):	FAC		2		(A)
2.										(6)	cciouning i Ac-7.					(A)
											tal Number of Do	minant Spe	ecies	•		(D)
3.										Ati	ross All Strata:					(B)
4.											rcent of Dominan	•	hat	100		(A /D)
					0		= Total Cover			Ar	e OBL, FACW, or F	FAC:		100		(A/B)
Sapling/Shrub Stratu	<u>m</u> (Plot S	ize: 15'	Radius)						Pr	evalence Index	x Worksh	eet:			
1. <i>none</i>				,								Cover of:		Mul	tiply By:	
2.									_	OB	L species	,		x 1 =		_
3.								-			CW species			x 2 =		
4.								-			C species			x 3 =		
5.									_		CU species			x 4 =		
·					0		= Total Cover		_		L species			x 5 =		
Herb Stratum	(Plot Size:	5' Radius)				10141 20101				Lumn Totals:			(A)		(B)
	montevidensis	J Madios	′		50		Yes	FACW						\··/ _		(5)
2. /va annua					50		Yes	FAC	_		Prevalence	Index = R	/ A =			
3. Xanthium si	trumarium				25		No	FAC	_						_	
-	silostaycha				15		No	FACU		н	drophytic Veg	etation l	ndicators:			
5. Rumex crisp					10		No	FAC		,	aropnyme rog		iluicuiois.			
6.	,,,,						110	- 174				1-	Rapid Test for	Hydronhytic	Venetation	
7.											X	_	Dominance Te		regeration	
8.					-				_			-	Prevalence In			
9.					-				_			-	Morphological	_		nortina data
10.													in Remarks or			porting data
10.					150		= Total Cover					Proble-	natic Hydrophy	tic Vonotati-	n] (Evalaia)	
					130	<u> </u>	— Total Cover				1 Indicators of I	-		-		unless
Woody Vine Stratum	(Plot Si	ze: 30'	Radius)							disturbed or p			,	20 p. 030iii,	
1. <i>none</i>																
2.														_		
					0	:	= Total Cover				drophytic Veg esent?	etation	Yes 🗵] !	lo 🗆	
% Bare Ground in He	erb Stratum 0										<u> </u>					
Remarks:																

Depth (inches)	Matrix	0/	C.I. ()	Redox Feat		1 - 2	T	p 1
(inches) Color (moi		<u>%</u>	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
-16 10YR 2/1		85	5YR 4/6	5	(M	Clay	10% Sediment
			•	_				· -
							-	
				_				
C=Concentration, D=Depletion				rains. ² Location: PL=	=Pore Lining, M=Matrix	1		
ic Soil indicators: (Applicable	to all LRRs, u	inless otherw	· _		· A		r Problematic Hydr	
☐ Histosol (A1) ☐ Histic Epipedon (A2	٨			Sandy Gleyed Matrix (S Sandy Redox (SS)	·4)		1 CM Muck (A9) (LRR Coast Prairie Redox (A	
Black Histic (A3)	,			Stripped Matrix (S6)			Dark Surface (S7) (LR I	
Hydrogen Sulfide (44)			Loamy Mucky Mineral ((F1)		High Plains Depressio	•
Stratified Layers (A				Loamy Gleyed Matrix (I	F2)			of MLRA 72 & 73)
1 cm Muck (A9) (L Depleted below Do		1		Depleted Matrix (F3) Redox Dark Surface (F6	3		Reduced Vertic (F18) Red Parent Material (T	E9\
☐ Thick Dark Surface				Depleted Dark Surface	•		Very Shallow Dark Sur	
Sandy Mucky Mine	ral (S1)			Redox Depressions (F8)			Other (Explain in Remo	arks)
2.5 cm Mucky Peat				High Plains Depression	•			etation and wetland hydrology must
5 cm Mucky Peat o	Peat (53) (LRR	. F)		(MLRA 72 & 73 c	ot LRR H)	De pres	sent, unless distribute	a or problematic.
Type: N/A							_	_
Depth (inches): N/A						Hydric Soil P	resent? Yes	⊠ No □
rks:								
rks:								
rks: ROLOGY								
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re	quired; check all	that apply)					dicators (minimum of	two required)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re	quired; check all	that apply)	Salt Crust (B11)			Surf	ace Soil Cracks (B6)	
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2)	quired; check all	that apply)	Aquatic Inverteb	, ,		Surf Spar	ace Soil Cracks (B6) sely Vegetated Conca	
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3)	quired; check all	that apply)	Aquatic Inverteb Hydrogen Sulfide	e Odor (C1)		Surf Spar	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10)	ve Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2)	quired; check all	that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate	e Odor (C1)	3)	Surf Spar Spar Drai	ace Soil Cracks (B6) sely Vegetated Conca	ve Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	quired; check all	that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not to	e Odor (C1) er Table (C2) pheres on Living Roots (C tilled)	3)	Surf Span Span Oxic (v Cray	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on vhere tilled) rfish Burrows (C8)	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	quired; check all	that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4)	3)	Surf Spai Spai Oxic (v Scray Satu	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) rfish Burrows (C8) ration Visible on Aeri	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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)		that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu	le Odor (C1) er Table (C2) pheres on Living Roots (C tilled) luced Iron (C4)	3)	Surf Spar Spar Drai Cvic (v Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) rfish Burrows (C8) ration Visible on Aeriu morphic Position (D2)	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1	le Odor (C1) er Table (C2) pheres on Living Roots (C tilled) luced Iron (C4)	3)	Surf Spar Spar Drai Cray Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) rfish Burrows (C8) ration Visible on Aeri	ve Surface (B8) Living Roots (C3) al Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In		I that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu	le Odor (C1) er Table (C2) pheres on Living Roots (C tilled) luced Iron (C4)	3)	Surf Spar Spar Drai Cray Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) rfish Burrows (C8) ration Visible on Aeriu morphic Position (D2) Neutral Test (D5)	ve Surface (B8) Living Roots (C3) al Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 (85) Inundation Visible on Aerial In Water Stained Leaves (B9)	nagery (B7)	I that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu	e Odor (C1) er Table (C2) pheres on Living Roots (C tilled) uced Iron (C4) ce n Remarks)	3)	Surf Spar Spar Drai Cray Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) rfish Burrows (C8) ration Visible on Aeriu morphic Position (D2) Neutral Test (D5)	ve Surface (B8) Living Roots (C3) al Imagery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations:	nagery (B7)	No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks)		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: te Water Present?	nagery (B7) Yes?	No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redd) Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4) ce n Remarks) ss: N/A		Surf Spar Spar Drai Cray Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 It Water Stained Leaves (B9) Observations: te Water Present? Table Present?	nagery (B7) Yes?	No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4) ce n Remarks) ss: N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: te Water Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: :e Water Present? :table Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: :e Water Present? :table Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: te Water Present? Table Present? stion Present? des capillary fringe) tibe Recorded Data (stream gauge	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one re 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 In Water Stained Leaves (B9) Observations: :e Water Present? :table Present?	Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosy (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surf Spai Drai Cw Cray Geor FAC-	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on where tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2) Neutral Test (D5) t-Heave Hummocks (D	ve Surface (B8) Living Roots (C3) al Imagery (C9) 77) (LRR F)

Project/Site:	Liberty Trails						City/County:	Justin/Denton					Sampling Dat	e: 7	//3/2018	
Applicant/Owner:	DR Horton								Sta	te: T	X		Sampling Poi	nt: 1	3	
Investigator(s):	JH, SG						Section, Townsh	ip, Range:	N/A							
Landform (hillslope,	terrace, etc.):	swale					Local relief (- concave, convex, n	one):	C	oncave		Slo	ре %:	2	
Subregion (LRR):	J				Lat:	33.043	IN Lo	ong: -97.370	07 W				Datum:	NAD 19	83	
Soil Map Unit Name:	Sanger Clay,	1-3% Slopes								N	IWI Classifica	ıtion:	N/A			
Are climatic / hydrol	ogic conditions on th	he site typical	for this time	of year?	Yes 🖂	No		(If no, explain i	in Rem	arks.)						
Are vegetation,	Soil,		Or hydrolog	у 🗆] Sigr	nificantly d	isturbed?	Are "Normal Ci	rcumst	ances" pre	esent? Y	es 🖂	No 🔲			
Are vegetation,	Soil,		Or hydrolog	у 🗆] Nat	urally prol	olematic?	(If needed, exp	lain an	y answers	in Remarks.)				
SUMMARY OF	FINDINGS -	- Attach s	ite mar	showi	na sam	plina p	oint locations	, transects,	imp	ortant	feature	s, etc.				
Hydrophytic Vegetat			Yes		No			,	-							
Hydric Soil Present?			Yes	\boxtimes	No		Is the Sampled Area	1 v	es	\boxtimes	No					
Wetland Hydrology F	Present?		Yes	\boxtimes	No		within a wetland?		•••		110					
Remarks:							1									
VEGETATION	– Use scient	ific name	s of pla	nts.												
					Absolute	. 0/6	Dominant	Indicator		Domir	nance Test v	workshee	t:			
<u>Tree Stratum</u>	(Plot Size:	30' Radius)		Covera		Species?	Status	_		r of Dominan L, FACW, or F		hat			
1. <i>none</i>									_		ing FAC-):	AC		3		(A)
2.									_	Total N	umber of Dor	minant Cno.	rior			
3.											All Strata:	iiiiiuiii spei	ries	_ 3		(B)
4.										Dorcon	t of Dominant	· Cnasias Th	nat.			_
					0	=	= Total Cover				L, FACW, or F		iui	100		(A/B)
				•												-
Sapling/Shrub Stratu	<u>m</u> (Plot Si	ze: <u>15' F</u>	(adius))						Preva	lence Index		et:			
1. Caltis laevi	igata .				5		Yes	FAC	_		Total %	Cover of:			ıltiply By:	
2.									_	OBL sp	ecies			x 1 =		
3.									_	FACWs	pecies			x 2 =		
4.									_	FAC sp	ecies			x 3 =		
5									_	FACU s	pecies			x 4 =		
					5		= Total Cover			UPL sp	ecies			x 5 =		
<u>Herb Stratum</u>	(Plot Size:	5' Radius)							Column	Totals:			(A)		(B)
1. <i>Iva annua</i>					50		Yes	FAC	_							
2. Xanthium s	trumarium				20		Yes	FAC	_		Prevalence I	ndex = B/	A= _		_	
3. <i>Cardiosper</i>	mum halicacabum				10		No	FAC	_							
4. Rumex cris					10		No	FAC	_	Hydro	phytic Vege	etation In	dicators:			
5. Tridens alb	еѕсепѕ				5		No	FAC	_							
6. <i>Phyla nodii</i>	flora				5		No	FAC	_	_		. 1- 1	Rapid Test for	Hydrophyti	c Vegetation	
7.									_	_	X	•	Dominance Te			
8.									_	_		•	Prevalence Inc	_		
9.									_	_			Morphological in Remarks or		ıs¹ (Provide su _l	pporting data
10.									_					•	,	
					100	=	= Total Cover					-	atic Hydrophy			
Woody Vine Stratum	(Plot Siz	:e: 30' F	(adius)							ndicators of h listurbed or p			ydrology m	ust be present,	, unless
1. none	ţ			,							r					
2.									_							
					0		= Total Cover		_	Hydro Prese	phytic Vege	etation	Yes 🗵]	No 🗆	
% Bare Ground in Ho	erb Stratum 0									rresei	111.5				-	
Remarks:										1						

Depth (inch a)	Matrix	0/	61 / 13	Redox Feat	T. 1	1 2	. .	n '
(inches) Colo	r (moist)	<u>%</u>	Color (moist)	0/0	Type ¹	Loc ²	Texture	Remarks
10YR 2/1		85	5YR 4/6	5	(M	Clay	10% Sediment
	<u> </u>							
			•	_				
· · · · · · · · · · · · · · · · · · ·								
C=Concentration, D=De				Grains. ² Location: PL	=Pore Lining, M=Matrix			
ic Soil indicators: (Appl		, unless other	· _	6 1 01 111 "			r Problematic Hydi	
☐ Histosol (A1) ☐ Histic Epiped				Sandy Gleyed Matrix (S Sandy Redox (S5)	·4)		I CM Muck (A9) (LRR Coast Prairie Redox (A	
Black Histic (ä	Stripped Matrix (S6)			Dark Surface (S7) (LR I	
☐ Hydrogen Su	•			Loamy Mucky Mineral ((F1)		High Plains Depression	•
	/ers (A5) (LRR F)			Loamy Gleyed Matrix (F2)		•	of MLRA 72 & 73)
	.9) (LRR F, G, H) ow Dark Surface (A1	(1)		Depleted Matrix (F3) Redox Dark Surface (F6	3		Reduced Vertic (F18) Red Parent Material (T	E9\
☐ Thick Dark S		.1)		Depleted Dark Surface	•		ery Shallow Dark Sur	
Sandy Mucky	Mineral (S1)			Redox Depressions (F8)			Other (Explain in Remo	ırks)
	Peat or Peat (S2) (High Plains Depression	•			etation and wetland hydrology must
ictive Layer (if present	Peat or Peat (S3) (LI •	(R F)		(MLRA 72 & 73 c	ot LRR H)	De pres	ent, unless distribute	a or problematic.
Type: N/A	•						_	
Depth (inches): N/A						Hydric Soil Pi	resent? Yes [⊠ No □
Dopin (menos). m/A								
rks:								
rks:								
ROLOGY and Hydrology Indicator	rs:	all that apply)					licators (minimum of	two required)
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1)	rs:	all that apply)	Salt (rust (B11)			Surf	ace Soil Cracks (B6)	
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1) High Water Table (A2)	rs:	all that apply)	Aquatic Inverte	ebrates (B13)		Surf	ace Soil Cracks (B6) sely Vegetated Conca	
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1)	rs:	all that apply)	Aquatic Inverte Hydrogen Sulfid Dry-Season Wat	ebrates (B13) de Odor (C1) iter Table (C2)		Surf Spar Drai	ace Soil Cracks (B6)	ve Surface (B8)
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	rs:	all that apply)	Aquatic Inverte Hydrogen Sulfic Dry-Season Wat Oxidized Rhizos	brates (B13) de Odor (C1) iter Table (C2) spheres on Living Roots (C	3)	Surfo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on vhere tilled)	ve Surface (B8)
ROLOGY and Hydrology Indicatory indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	rs:	all that apply)	Aquatic Inverte Hydrogen Sulfic Dry-Season Wat Oxidized Rhizos (where not	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled)	3)	Surfi Spar Spar Spar Spar Spar Spar Spar Cvid	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on vhere tilled) fish Burrows (C8)	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	rs:	all that apply)	Aquatic Inverte Hydrogen Sulfid Dry-Season Wat Oxidized Rhizos (where not	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4)	3)	Surfi Spar Spar Spar Oxid (w Cray	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) fish Burrows (C8) ration Visible on Aeri	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicatory indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	r s: one required; check	all that apply)	Aquatic Inverte Hydrogen Sulfic Dry-Season Wat Oxidized Rhizos (where not	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace	3)	Surfi Spar Drai Oxid (w Cray Geo	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on vhere tilled) fish Burrows (C8)	ve Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicator ry indicators (minimum of 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 Ac Water Stained Leaves (E	rs: one required; check erial Imagery (87)	all that apply)	Aquatic Inverte Hydrogen Sulfic Dry-Season Wat Oxidized Rhizos (where not Presence of Rec	brates (B13) de Odor (C1) ster Table (C2) spheres on Living Roots (C t tilled) duced Iron (C4) ace	3)	Surfi Spar Drai Oxid (w Cray Geor	ace Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) lized Rhizospheres on rhere tilled) fish Burrows (C8) ration Visible on Aeri morphic Position (D2)	ve Surface (B8) Living Roots (C3) al Imagery (C9)
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Project/Site: Liberty Trails			City/County:	Justin/Denton		Sampling Date: 7/3/2018	
Applicant/Owner: DR Horton				Sto	ute: TX	Sampling Point: 14	
Investigator(s): JH, SG			Section, Township	o, Range: N/A			
Landform (hillslope, terrace, etc.): swale			Local relief (co	oncave, convex, none):	concave	Slope %: 2	
Subregion (LRR): J		Lat: 33.046	i N Lor	ng: -97.3772 W		Datum: NAD 1983	
Soil Map Unit Name: Sumervell Gravelly Loa	ım, 1-5% Slopes				NWI Classification:	N/A	
Are climatic / hydrologic conditions on the site typ		es 🛛 No	П	(If no, explain in Rem	arks.)		
Are vegetation, Soil,	Or hydrology \square	Significantly		Are "Normal Circums	•	No 🗆	
Are vegetation, Soil,	Or hydrology	Naturally pro			ny answers in Remarks.)	_	
SUMMARY OF FINDINGS — Attac				transects, imp	ortant features, etc.		
Hydrophytic Vegetation Present?	Yes 🖂	No					
Hydric Soil Present?	Yes 🖂	No 🗆	Is the Sampled Area	V	M		
Wetland Hydrology Present?	Yes 🖂	No 🗆	within a wetland?	Yes	⊠ No □		
Remarks:	103						
VEGETATION — Use scientific na	mes of plants.						
		AL 1 - 0/	D : .		Dominance Test workshee	et:	
<u>Tree Stratum</u> (Plot Size: 30' Radiu	s)	Absolute % Coverage	Dominant Species?	Indicator Status	Number of Dominant Species 1	[hat	
1. <i>none</i>	<u> </u>				Are OBL, FACW, or FAC (excluding FAC-):	2	(A)
2.					T. 18 1 65 1 16		
3.					Total Number of Dominant Spe Across All Strata:		(B)
4.							• •
		0	= Total Cover		Percent of Dominant Species T Are OBL, FACW, or FAC:		(A/B)
	_				, ,		.,,
Sapling/Shrub Stratum (Plot Size:	15' Radius)				Prevalence Index Worksh	eet:	
1. none					Total % Cover of:	Multiply By:	_
2.					OBL species	x 1 =	_
3.					FACW species	x 2 =	_
4					FAC species	x 3 =	
5					FACU species	x 4 =	_
	_	0	= Total Cover		UPL species	x 5 =	
Herb Stratum (Plot Size: 5' Radius)				Column Totals:	(A)	(B)
1. Xanthium strumarium		40	Yes	FAC			_
2. Eleocharis montevidensis	_	30	Yes	FACW	Prevalence Index $=$ B	/A=	
3. Ambrosia psilostaycha	_	30	Yes	FACU			
4. Iva annua	_	20	No	FAC	Hydrophytic Vegetation I	ndicators:	
5. Rumex crispus	_	5	No	FAC			
6.	_				1-	Rapid Test for Hydrophytic Vegetation	
7.					Х 2-	Dominance Test is > 50%	
8.					3 -	Prevalence Index is $\leq 3.0^{\circ}$	
9.					4 -	Morphological Adaptations ¹ (Provide suppo	orting data
10.	<u> </u>					in Remarks or on a separate sheet)	
		125	= Total Cover		Problem	natic Hydrophytic Vegetation¹ (Explain)	
	-				1 Indicators of hydric soil	and wetland hydrology must be present, un	nless
Woody Vine Stratum (Plot Size:	30' Radius)				disturbed or problemati	C.	
1. <u>none</u>							
2.					Hydrophytic Vegetation		
	_	0	= Total Cover		Present?	Yes ⊠ No □	
% Bare Ground in Herb Stratum 0							
Remarks:							

Depth	Matrix	0/	61 / 13	Redox Feat		1 ^		n '
(inches) Col	or (moist)	<u></u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
10YR 2/	<u> </u>	85	5YR 4/6	5	(<u>PL</u>	Clay	10% Sediment
								•
				_		-		
				_		-		
				_				
			Covered or Coated Sand Gr	rains. ² Location: PL	=Pore Lining, M=Matrix			
ic Soil indicators: (App		, unless other	wise noted.)				Problematic Hydr	
Histosol (A1	•			Sandy Gleyed Matrix (S	4)		CM Muck (A9) (LRR I	
☐ Histic Epipe ☐ Black Histic				Sandy Redox (S5) Stripped Matrix (S6)			oast Prairie Redox (A Jark Surface (S7) (LRF	
Hydrogen S				Loamy Mucky Mineral (F1)		ligh Plains Depressio	
	ıyers (A5) (LRR F)			Loamy Gleyed Matrix (I			•	of MLRA 72 & 73)
	A9) (LRR F, G, H)			Depleted Matrix (F3)	,		educed Vertic (F18)	F0\
	low Dark Surface (A Surface (A12)	i 1)		Redox Dark Surface (F6 Depleted Dark Surface	•		ed Parent Material (T ery Shallow Dark Sur	
	y Mineral (S1)			Redox Depressions (F8)			Other (Explain in Rema	
2.5 cm Mucl	y Peat or Peat (S2) (High Plains Depression		3Indicator	s of hydrophytic vege	tation and wetland hydrology must
	Peat or Peat (S3) (L	RR F)		(MLRA 72 & 73 c	of LRR H)	be pres	ent, unless distribute	d or problematic.
ictive Layer (if present):							
Type: N/A Depth (inches): N/A						Hydric Soil Pr	esent? Yes	☑ No □
rks:								
rks:								
ROLOGY and Hydrology Indicator	ırs:	all that apply)					icators (minimum of 1	(wo required)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1)	ırs:	all that apply)	Salt Crust (B11)	vetec (012)		⊠ Surfo	ice Soil Cracks (B6)	
ROLOGY and Hydrology Indicator ry indicators (minimum of Surface Water (A1) High Water Table (A2)	ırs:	all that apply)	Aquatic Inverteb	, ,		Surfa	ice Soil Cracks (B6) sely Vegetated Conca	
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1)	ırs:	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate	e Odor (C1) er Table (C2)		Surfa Spar	ice Soil Cracks (B6)	ve Surface (B8)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ors: one required; check	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp	e Odor (C1) er Table (C2) pheres on Living Roots (C	3)	Surfo	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled)	ve Surface (B8)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ors: one required; check	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t	e Odor (C1) er Table (C2) pheres on Living Roots (C tilled)	3)	Surfa Spars Spars Drain Oxid (w	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8)	re Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ors: one required; check	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4)	3)	Surfa Spars Spars Oxid (w Cray	ice Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric	re Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	o rs: one required; check	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t	le Odor (C1) er Table (C2) pheres on Living Roots (C tilled) luced Iron (C4)	3)	Surfc Spar Spar Drain Oxid (w Cray Geon	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8)	re Surface (B8) Living Roots (C3)
ROLOGY and Hydrology Indicate ry indicators (minimum of 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 A Water Stained Leaves (o rs: one required; check erial Imagery (87)	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu	le Odor (C1) er Table (C2) pheres on Living Roots (C tilled) luced Iron (C4)	3)	Surfc Spar Spar Oxid (w Cray Geon FAC-	ice Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2)	re Surface (B8) Living Roots (C3) Il Imagery (C9)
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ROLOGY and Hydrology Indicate ry indicators (minimum of 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 A Water Stained Leaves (o rs: one required; check erial Imagery (87)	all that apply)	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu	e Odor (C1) er Table (C2) pheres on Living Roots (C tilled) uced Iron (C4) ce n Remarks)	3)	Surfc Spar Spar Oxid (w Cray Geon FAC-	rce Soil Cracks (B6) sely Vegetated Conca nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5)	re Surface (B8) Living Roots (C3) Il Imagery (C9)
ROLOGY and Hydrology Indicator ry indicators (minimum of 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 A Water Stained Leaves (Observations:	ors: one required; check erial Imagery (B7) B9)		Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not t Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks)		Surfc Spar Spar Oxid (w Cray Geon FAC-	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)
ROLOGY and Hydrology Indicate ry indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Inundation Visible on A Water Stained Leaves (Observations: the Water Present? Table Present?	erial Imagery (B7) B9) Yes? Yes?	No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4) ce n Remarks) ss: N/A		Surfa	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)
ROLOGY and Hydrology Indicator ry indicators (minimum of 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 A Water Stained Leaves (Observations:	ors: one required; check erial Imagery (B7) B9)	No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in	e Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) uced Iron (C4) ce n Remarks) ss: N/A		Surfa	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)
ROLOGY and Hydrology Indicator ry indicators (minimum of 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 A Water Stained Leaves (Observations: the Water Present? Itable Present?	ors: one required; check erial Imagery (B7) B9) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surfa	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)
ROLOGY and Hydrology Indicator ry indicators (minimum of 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 A Water Stained Leaves (Observations: the Water Present? Itable Present?	ors: one required; check erial Imagery (B7) B9) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surfa	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)
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ROLOGY and Hydrology Indicate ry indicators (minimum of 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 A Water Stained Leaves (Observations: ie Water Present? Table Present? ition Present? des capillary fringe) ibe Recorded Data (stream	ors: one required; check erial Imagery (B7) B9) Yes? Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Inverteb Hydrogen Sulfide Dry-Season Wate Oxidized Rhizosp (where not 1 Presence of Redu Thin Muck Surfac Other (Explain in Depth (inches	le Odor (C1) er Table (C2) pheres on Living Roots (Ci tilled) luced Iron (C4) ce n Remarks) SS: N/A SS: N/A N/A		Surfa	ice Soil Cracks (B6) sely Vegetated Concar nage patterns (B10) ized Rhizospheres on here tilled) fish Burrows (C8) ration Visible on Aeric norphic Position (D2) Neutral Test (D5) -Heave Hummocks (D	ve Surface (B8) Living Roots (C3) Il Imagery (C9) 7) (LRR F)

Springs Spri	Project/Site:	Liberty Trails						City/County:	Justin/De	nton				Sampling Date	e: 8/	21/2019	
										S	itate:	TX		Sampling Poir	nt: 15	·	
International plant Control Co		RAR						Section, Townsh	ip, Range:	N/A	4						
Set to the fine 1	Landform (hillslope,	terrace, etc.):	swale					Local relief (concave, con	vex, none):	:	concave		Slo	pe %: 2	2	
See See		•				Lat:	33.0433							,			
About Abou		Sanger Clay,	1-3% Slopes			_						NWI Classific	ation:	N/A			
	•			for this time	of year?	Yes 🖂	No		(If no, ex	plain in Re	marks.)	_	_	•			
Place Plac		_			_				Are "Nor	mal Circum	stances	s" present?	Yes 🖂	No 🔲			
Pythophysis Present Pr	Are vegetation,	Soil,		Or hydrolog	у [] Nat	urally prob	olematic?	(If neede	d, explain	any ans	swers in Remarks	i.)				
Pythophysis Present Pr	SUMMARY OF	FINDINGS -	Attach s	ite mar	showi	na sam	nlina n	oint locations	. transe	rts. im	porte	ant feature	s. etc.				
Nyelic Soil Present?									,	,	P • · · · ·		,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Worked Riydevilogy Present? Yes Ne									1	Voc	\square	No					
	•	resent?						within a wetland?		162		NO	Ш				
Mathebit																	
Mathebit																	
Mathebit																	
Manual M	VEGETATION	– Use scienti	ific name	s of pla	nts.												
Test						Absoluts	. 0/-	Dominant	Indica	***	D	ominance Test	workshee	t:			
	<u>Tree Stratum</u>	(Plot Size:	30' Radius)										hat			
Acros MS Stretus 2 (B)	1. <i>none</i>												IAC		2		(A)
Acres All Stratum	2.										Т,	stal Number of De	minant Cna	ciac			
Sagiling Stratum	3.												minium spe	cies	2		(B)
Septimus Stratum	4.										D.	arcant of Dominar	nt Chasias Tl	h at			
Total % Cover of: Multiply By:						0		= Total Cover					•	iiui	100		(A/B)
Total 5/ Cover of: Multiply By:					•						-				,		
2	Sapling/Shrub Stratu	<u>m</u> (Plot Siz	re: <u>15' R</u>	adius)							P	revalence Inde	x Workshe	et:			
Second in Herb Stratum Plot Size Size	1. none										-	Total %	6 Cover of:		Mult	tiply By:	<u>—</u>
FAC species X 3 =	2.										0	BL species			x 1 = _		_
FACU species S	3.										F.	ACW species			x 2 =		_
Hearb Stratum Plot Size:	4.										F.	AC species			x 3 =		_
Head Flow	5										F.	ACU species			_		_
1.						0	=	= Total Cover			UI	PL species			x 5 =		
2.	<u>Herb Stratum</u>	(Plot Size:	5' Radius)							Co	olumn Totals:			(A)		(B)
3. Ambrosia psilostaycha 4.	1. Eleocharis	montevidensis				50		Yes	FAC	W							
Hydrophytic Vegetation Indicators:	2. Xanthium s	trumarium				50		Yes	FA	<u> </u>		Prevalence	Index = B/			_	
5.	3. Ambrosia p	silostaycha				10		No	FAC	Ü							
6.	4.										Н	ydrophytic Veg	etation In	idicators:			
X 2 - Dominance Test is > 50% 8.	5.																
8.	6.												_ 1-	Rapid Test for	Hydrophytic	Vegetation	
9	7.											Х	_ 2 -	Dominance Te	st is > 50%		
in Remarks or on a separate sheet) Voody Vine Stratum	8.												_				
Moody Vine Stratum (Plot Size: 30' Radius)	9.																porting data
Woody Vine Stratum (Plot Size: 30' Radius) 1. none 2. O = Total Cover Hydrophytic Vegetation Present? Water Ground in Herb Stratum 0	10.														•		
Woody Vine Stratum (Plot Size: 30' Radius) 1. none 2. Hydrophytic Vegetation Present? We have Ground in Herb Stratum 0					•	110	=	= Total Cover					_		-		
1. none 2. Hydrophytic Vegetation Present? W Bare Ground in Herb Stratum 0	Woody Vine Stratum	(Plot Siz	e: 30' R	adius))										drology mu:	st be present,	unless
2. Bare Ground in Herb Stratum 0 Hydrophytic Vegetation Present? Yes No \Bare Stratum 0		,											-				
0 = Total Cover Hydrophytic Vegetation Yes No																	
% Bare Ground in Herb Stratum 0						0		= Total Cover					jetation	Yes 🗵] N	lo 🗆	
	% Bare Ground in He	erb Stratum 0			•						"	1636111					
		•															

Depth	Matrix			Redox Featu				
(inches) Color (i	noist)	0/0	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-12 10YR 2/1		90	5YR 4/6		(PI/M	Clay	
						-		
						-		
				·				
C=Concentration, D=Depl	tion. RM=Reduc	ed Matrix. CS=	Covered or Coated Sand Grain	ns. ² Location: PL=	=Pore Lining, M=Matrix			
c Soil indicators: (Applica					3/		r Problematic Hydric	Soils ³ :
Histosol (A1)				Sandy Gleyed Matrix (S4	1)		1 CM Muck (A9) (LRR I,	J)
Histic Epipedon				Sandy Redox (S5)			Coast Prairie Redox (A1	
☐ Black Histic (A3				Stripped Matrix (S6)	-11		Dark Surface (S7) (LRR	•
☐ Hydrogen Sulfic	` '			Loamy Mucky Mineral (F Loamy Gleyed Matrix (F	•		High Plains Depression: (LRR H outside a	
1 cm Muck (A9)			=	Depleted Matrix (F3)	-1		Reduced Vertic (F18)	I MERA 72 & 70
= ' '	Dark Surface (A1	1)		Redox Dark Surface (F6)	1		Red Parent Material (TF2	2)
☐ Thick Dark Surf				Depleted Dark Surface (I	•		Very Shallow Dark Surfa	
Sandy Mucky M				Redox Depressions (F8)			Other (Explain in Remar	ks) ation and wetland hydrology must
	eat or Peat (S2) (t or Peat (S3) (LF			High Plains Depressions (MLRA 72 & 73 o			ors of nyarophyfic vegen sent, unless distributed	, 0,
ictive Layer (if present):	1011041(30) (21			(· -			F
Type: NA						Hydric Soil P	resent? Yes 🗵	1 N- 🗆
Depth (inches): NA						nyaric soii Pi	resent? Tes 🛆	No □
ks:								
ks:								
ROLOGY								
ROLOGY and Hydrology Indicators:								
ROLOGY und Hydrology Indicators: ry indicators (minimum of on	required; check	all that apply)	Sala Carra (D11)				dicators (minimum of tv	vo required)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1)	required; check	all that apply)	Salt Crust (B11)	ttes (R] 3)		Surf	ace Soil Cracks (B6)	
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2)	required; check	all that apply)	Aquatic Invertebra			Surf	ace Soil Cracks (B6) rsely Vegetated Concave	
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1)	required; check	all that apply)	Aquatic Invertebra	Odor (C1)		Surf Spai	ace Soil Cracks (B6)	e Surface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	required; check	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizospho	Odor (C1) Table (C2) eres on Living Roots (C3	3)	Surf Surf Spai	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled)	e Surface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	required; check	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosph	Odor (C1) Table (C2) Ieres on Living Roots (C3 Iled)	3)	Surf Spai Spai Spai Oxic (v	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) rfish Burrows (C8)	e Surface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	required; check	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce	Odor (C1) Table (C2) Ieres on Living Roots (C3 Il ed) ed Iron (C4)	3)	Surf Spai Spai Spai Oxic (v Scray	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial	e Surface (B8)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one 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)	•	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface	Odor (C1) Table (C2) ieres on Living Roots (C3 lled) ed Iron (C4)	3)	Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2)	e Surface (B8)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	•	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce	Odor (C1) Table (C2) ieres on Living Roots (C3 lled) ed Iron (C4)	2)	Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial	e Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one 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 Aeric	•	all that apply)	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface	Odor (C1) Table (C2) ieres on Living Roots (C3 lled) ed Iron (C4)	3)	Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY Ind Hydrology Indicators: Ty indicators (minimum of one 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 Aeric Water Stained Leaves (B9)	•	all that apply) No? 🖂	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphe (where not till Presence of Reduce Thin Muck Surface	Odor (C1) Table (C2) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4)	3)	Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L vhere tilled) yfish Burrows (C8) uration Visible on Aerial morphic Position (D2) -Neutral Test (D5)	e Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present?	I Imagery (B7)	No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosph (where not till Presence of Reduce Thin Muck Surface Other (Explain in R	Odor (C1) Table (C2) teres on Living Roots (C3 lled) ed Iron (C4) temarks)		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present?	I Imagery (B7) Yes? Yes?	No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosph (where not fill Presence of Reduce Thin Muck Surface Other (Explain in R) Depth (inches):	Odor (C1) Table (C2) teres on Living Roots (C3 lled) ed Iron (C4) temarks) MA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY Ind Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present?	I Imagery (B7)	No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosph (where not till Presence of Reduce Thin Muck Surface Other (Explain in R	Odor (C1) Table (C2) teres on Living Roots (C3 lled) ed Iron (C4) temarks) MA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present?	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosph (where not fill Presence of Reduce Thin Muck Surface Other (Explain in R) Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present?	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce Thin Muck Surface Other (Explain in R Depth (inches): Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present?	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce Thin Muck Surface Other (Explain in R Depth (inches): Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tition Present? tes capillary fringe) be Recorded Data (stream gate	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce Thin Muck Surface Other (Explain in R Depth (inches): Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tion Present?	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce Thin Muck Surface Other (Explain in R Depth (inches): Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)
ROLOGY und Hydrology Indicators: ry indicators (minimum of one 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 Aeric Water Stained Leaves (B9) Observations: e Water Present? Table Present? tition Present? tes capillary fringe) be Recorded Data (stream gate	Yes? Yes? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebra Hydrogen Sulfide C Dry-Season Water Oxidized Rhizosphi (where not till Presence of Reduce Thin Muck Surface Other (Explain in R Depth (inches): Depth (inches):	Odor (C1) Table (C2) eres on Living Roots (C3 lled) ed Iron (C4) temarks) NA NA		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on L where tilled) yfish Burrows (C8) oration Visible on Aerial morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	er Surface (B8) iving Roots (C3) Imagery (C9)

Project/Site: Liberty Trails City/County:	Justin/Denton Sampling Date: 8/21/2019
Applicant/Owner: DR Horton, Inc.	State: TX Sampling Point: 16
Investigator(s): RAR Section, Township,	Range: N/A
	ncave, convex, none): Concave Slope %: 2
Subregion (LRR): J Lat: 33.043536° N Long	
Soil Map Unit Name: Sanger Clay, 1-3% Slopes	NWI Classification: N/A
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,	transacts important fontures atc
Hydrophytic Vegetation Present? Yes No	mansotis, important touroros, orc.
Hydric Snil Present? Ves No No Is the Sampled Area	v 🗖 🔯
Wetland Hydrology Present? Yes ⊠ No □ within a wetland?	Yes No 🗵
Remarks:	
VEGETATION — Use scientific names of plants.	
	Dominance Test worksheet:
Absolute % Dominant Tree Stratum (Plot Size: 30' Radius) Coverage Species?	Indicator Status Number of Dominant Species That
1. none	Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2.	
3.	Total Number of Dominant Species Across All Strata: 3 (B)
4.	
0 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radius)	Prevalence Index Worksheet:
1. <u>none</u>	Total % Cover of: Multiply By:
2	
3	FACW species x 2 =
4	FAC species x 3 =
5	FACU species x 4 =
O = Total Cover	UPL species x 5 =
Herb Stratum (Plot Size: 5' Radius)	Column Totals: (A) (B)
1. Xanthium strumarium 50 YES	FAC
2. Bromus arvensis 30 YES	FACU Prevalence Index = B/A=
3. Ambrosia psilostaycha 20 YES	FACU
4	Hydrophytic Vegetation Indicators:
5	
6	1 - Rapid Test for Hydrophytic Vegetation
7	2 - Dominance Test is > 50%
8	3 - Prevalence Index is $\leq 3.0^{1}$
9	4 - Morphological Adaptations¹ (Provide supporting data
10	in Remarks or on a separate sheet)
100 = Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot Size: 30' Radius)	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	עואיטועפע טו איטטופווועוונ.
1. <u>none</u> 2.	
0 = Total Cover	Hydrophytic Vegetation Yes No 🖂
% Bare Ground in Herb	Present?
Stratum 0	

S							Sampling Point: 16
	on: (Describe to the depth n	eeded to docume	nt the indicator or conf	firm the absence of indicators	s.)		Jumping Form. 10
Depth	Matrix			Redox Features			
(inches)	Color (moist)		Color (moist)	% Type ¹	Loc	Texture	Remarks
0-16	10 YR 2/1	100				Clay	
							
	ration, D=Depletion, RM=Redu ators: (Applicable to all LRR			ns. ² Location: PL=Pore Lini	0,	itors for Problemati	c Hvdric Soils³:
_	Histosol (A1)	,	•	ındy Gleyed Matrix (S4)		1 CM Muck (A9)	•
	Histic Epipedon (A2) Black Histic (A3)		=	andy Redox (S5) ripped Matrix (S6)		☐ Coast Prairie Re ☐ Dark Surface (S:	edox (A16) (LRR F, G, H)
	Hydrogen Sulfide (A4)		_	pamy Mucky Mineral (F1)		High Plains De	
	Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H)			oamy Gleyed Matrix (F2) epleted Matrix (F3)		☐ (LRR H ou ☐ Reduced Vertic)	utside of MLRA 72 & 73)
_	Depleted below Dark Surface (A	11)		edox Dark Surface (F6)		Red Parent Mat	
	Thick Dark Surface (A12) Sandy Mucky Mineral (S1)			epleted Dark Surface (F7) edox Depressions (F8)		Very Shallow Do Other (Explain i	ark Surface (TF12) n Remarks)
	2.5 cm Mucky Peat or Peat (S2)	(LRR G, H)	=	igh Plains Depressions (F16		Indicators of hydrophy	tic vegetation and wetland hydrology
	5 cm Mucky Peat or Peat (S3) (L r (if present):	RR F)		(MLRA 72 & 73 of LRR H)		must be present, unle	ss distributed or problematic.
-	NA				114.4	. C.: D V	′es □ No ⊠
Depth (inches	s): NA				nyari	c Soil Present? Y	'es □ No ⊠
rks:							
rks:							
rks:							
rks:							
rks:							
ks:							
DLOGY							
DLOGY nd Hydrolo	ngy Indicators:	le all about a cooke)			f	dan ladina (mini	
OLOGY and Hydrolo ry indicators	(minimum of one required; check	11 77	Salt Crust (B11)			ndary Indicators (minin Surface Soil Cracks	. ,
OLOGY and Hydrolo ry indicators Surface Wo High Wate	(minimum of one required; check ater (A1) r Table (A2)		Aquatic Invertebrat	· ·		Surface Soil Cracks Sparsely Vegetated	(B6) Concave Surface (B8)
OLOGY and Hydrolo Iry indicators Surface W High Wate Saturation	(minimum of one required; check ater (A1) r Table (A2) ı (A3)	 [[Aquatic Invertebrat Hydrogen Sulfide O	dor (C1)		Surface Soil Cracks Sparsely Vegetated Drainage patterns ((B6) Concave Surface (B8) (B10)
OLOGY and Hydrolo Iry indicators Surface W High Wate Saturation Water Mar Sediment I	(minimum of one required; check ater (A1) r Table (A2) 1 (A3) rks (B1) Deposits (B2)		Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe	dor (C1) able (C2) res on Living Roots (C3)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled)	(B6) Concave Surface (B8) (B10) eres on Living Roots (C3)
OLOGY and Hydrolo Iry indicators Surface Wi High Wate Saturation Water Mar Sediment I Drift Depo	(minimum of one required; check ater (A1) r Table (A2) 1 (A3) rks (B1) Deposits (B2) sits (B3)	 C C C	Aquatic Invertebrat Hydrogen Sulfide Ot Dry-Season Water T Oxidized Rhizosphe (where not tille	dor (C1) able (C2) res on Living Roots (C3) ad)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (((B6) I Concave Surface (B8) (B10) Peres on Living Roots (C3)
OLOGY and Hydrolo ry indicators Surface Wa High Wate Saturation Water Mar Sediment I Drift Depo	(minimum of one required; check ater (A1) r Table (A2) 1 (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	 [[[Aquatic Invertebrat Hydrogen Sulfide Ou Dry-Season Water T Oxidized Rhizosphe (where not tille Presence of Reduce	dor (C1) able (C2) res on Living Roots (C3) ad)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (((B6) I Concave Surface (B8) (B10) Bres on Living Roots (C3) E8) In Aerial Imagery (C9)
OLOGY and Hydrolo ry indicators Surface Wi High Wate Saturation Water Mar Sediment I Drift Depo Algal Mat Iron Depo	(minimum of one required; check ater (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Imagery (B7)	 C C C	Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe (where not tilld Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows ((Saturation Visible o Geomorphic Positio	(B6) 1 Concave Surface (B8) (B10) eres on Living Roots (C3) E8) an Aerial Imagery (C9) in (D2)
sry indicators Surface Woodling Water Saturation Water Mar Sediment I Drift Depo Algal Mat Iron Depo	(minimum of one required; check ater (A1) r Table (A2) r (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Imagery (B7) ined Leaves (B9)	 	Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe (where not till) Presence of Reducet Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows ((Saturation Visible o	(B6) 1 Concave Surface (B8) (B10) eres on Living Roots (C3) E8) an Aerial Imagery (C9) in (D2)
OLOGY and Hydrolo ry indicators Surface Wa High Wate Saturation Water Mar Sediment I Drift Depo Algal Mat Iron Depo: Inundation Water Stai Observation	(minimum of one required; check ater (A1) r Table (A2) 1 (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Imagery (B7) ined Leaves (B9)	 	Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduced Thin Muck Surface Other (Explain in Re	dor (C1) able (C2) res on Living Roots (C3) ad) Il Iron (C4) marks)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows ((Saturation Visible o Geomorphic Positio	(B6) 1 Concave Surface (B8) (B10) eres on Living Roots (C3) E8) an Aerial Imagery (C9) in (D2)
OLOGY and Hydrolo ry indicators Surface Wi High Wate Saturation Water Mar Sediment I Drift Depo Algal Mat Iron Depos Inundatior Water Stai	(minimum of one required; check oter (A1) r Table (A2) r (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Imagery (B7) ined Leaves (B9) ns:		Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe (where not tille Presence of Reducet Thin Muck Surface Other (Explain in Re	dor (C1) able (C2) res on Living Roots (C3) ed) I Iron (C4)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows ((Saturation Visible o Geomorphic Positio FAC-Neutral Test (D Frost-Heave Humm	(B6) 1 Concave Surface (B8) (B10) eres on Living Roots (C3) E8) an Aerial Imagery (C9) in (D2)
OLOGY and Hydrolo ry indicators Surface Wi High Wate Saturation Water Mar Sediment I Drift Depo Algal Mat Iron Depoi Inundatior Water Stai	(minimum of one required; check ater (A1) r Table (A2) r (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Imagery (B7) ined Leaves (B9) ns: ent? Yes?		Aquatic Invertebrat Hydrogen Sulfide Od Dry-Season Water T Oxidized Rhizosphe (where not till Presence of Reduced Thin Muck Surface Other (Explain in Re	dor (C1) able (C2) res on Living Roots (C3) ed) d Iron (C4) marks)		Surface Soil Cracks Sparsely Vegetated Drainage patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows ((Saturation Visible o Geomorphic Positio FAC-Neutral Test (D Frost-Heave Humm	(B6) I Concave Surface (B8) (B10) Pres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) 5) Ocks (D7) (LRR F)

Project/Site: Liberty Trails		City/County: Justin/Denton	Sampling Date: 8/21/2019
Applicant/Owner: DR Horton, Inc.			State: TX Sampling Point: 17
		Section, Township, Range: N/	A
Landform (hillslope, terrace, etc.): hillslope		Local relief (concave, convex, none	s): none Slope %: 2
Subregion (LRR): J	Lat: 33.045918'		
Soil Map Unit Name: Sanger clay, 1 to 3 percent slopes			NWI Classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes ⊠ No 🗆] (If no, explain in R	- ' -
Are vegetation, Soil, Or hydrology	Significantly distu	- ,	rnstances" present? Yes ⊠ No □
Are vegetation, Soil, Or hydrology	☐ Naturally problem	natic? (If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map sho	wing sampling poi	nt locations transacts in	anartant faaturas atc
Hydrophytic Vegetation Present?		iii iotaiioiis, iraiisetis, iii	iportum reutores, etc.
Hydric Soil Present?	1	s the Sampled Area	
_	'	vithin a wetland? Yes	□ No ⊠
Wetland Hydrology Present? Yes L Remarks:	NO 🔼		
VEGETATION — Use scientific names of plant	t .		
OSO SCIONNE NAMES OF PLANE	•		Dominance Test worksheet:
Tree Stratum (Plot Size: 30' Radius)	Absolute % Coverage	Dominant Indicator Species? Status	Number of Dominant Species That
	Coverage	species: sidios	Are OBL, FACW, or FAC (excluding FAC-): 2 (A)
1. <u>none</u>			(excluding FAC-): 2 (A)
2.	 -		Total Number of Dominant Species Across All Strata: 3 (B)
3.			Across All Strata: 3 (B)
4		. 16	Percent of Dominant Species That
	0 = To	otal Cover	Are OBL, FACW, or FAC: 66 (A/B)
			Prevalence Index Worksheet:
1. Celtis laevigata	2	NO FAC	Total % Cover of: Multiply By:
2.			OBL species x 1 =
3.			FACW species x 2 =
4.			FAC species x 3 =
5.			FACU species x 4 =
	2 = To	otal Cover	UPL species x 5 =
Herb Stratum (Plot Size: 5' Radius)			Column Totals: (A) (B)
1. Bromus arvensis	30	YES FACU	
2. Iva annua	30	YES FAC	Prevalence Index = B/A =
3. Xanthium strumarium	30	YES FAC	'
4. Nassella leucotricha	10	NO UPL	Hydrophytic Vegetation Indicators:
5.			,
			1 - Rapid Test for Hydrophytic Vegetation
7.			X 2 - Dominance Test is > 50%
			$\frac{1}{3} - \text{Prevalence Index is } \leq 3.0^{1}$
			4 - Morphological Adaptations¹ (Provide supporting data
10.			in Remarks or on a separate sheet)
	100 = To	otal Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
		JIUI COVEI	Indicators of hydric soil and wetland hydrology must be present, unless
Woody Vine Stratum (Plot Size: 30' Radius)			disturbed or problematic.
1. none			
2.			
		. 16	Hydrophytic Vegetation Yes No
% Bare Ground in Herb	0 = To	otal Cover	Present?

,								Sampling Point: 17
	on: (Describe to the depth need	ed to document the i	ndicator or confir	m the absence of indicato	rs.)			
Depth	<u>Matrix</u>			Redox Features				
(inches)	Color (moist)		or (moist)	% Тур	<u>e¹</u>	Loc²	Texture	Remarks
0-12	7.5YR 3/1 1	100					Clay	
							<u> </u>	
		<u> </u>					<u> </u>	
		<u> </u>					<u> </u>	
							<u> </u>	
							·	
(=Concontr	ration, D=Depletion, RM=Reduced	Matrix (C=Counted or	Contad Sand Grains		ning M—Matrix		·	
	itors: (Applicable to all LRRs, u			Locuiton: TL—Fore Lii		Indicators	for Problematic Hydric S	oils³:
	Histosol (A1)			ly Gleyed Matrix (S4)			1 CM Muck (A9) (LRR I, J)	(IDDE C II)
	Histic Epipedon (A2) Black Histic (A3)		=	dy Redox (S5) oped Matrix (S6)			Coast Prairie Redox (A16) Dark Surface (S7) (LRR G)	
_	Hydrogen Sulfide (A4)		_	ny Mucky Mineral (F1)			High Plains Depressions (,
	Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H)			ny Gleyed Matrix (F2) leted Matrix (F3)			(LRR H outside of Reduced Vertic (F18)	MLRA /2 & /3)
	Depleted below Dark Surface (A11)		Redo	ox Dark Surface (F6)			Red Parent Material (TF2)	(TELO)
	Thick Dark Surface (A12) Sandy Mucky Mineral (S1)			leted Dark Surface (F7) ox Depressions (F8)			Very Shallow Dark Surface Other (Explain in Remarks)	
	2.5 cm Mucky Peat or Peat (S2) (LR			Plains Depressions (F16			ators of hydrophytic vegetat t be present, unless distribu	
	5 cm Mucky Peat or Peat (S3) (LRR (if present):	<u>r)</u>		(MLRA 72 & 73 of LRR H)		IIIUS	or ne breseiri, oilless distribu	ea or problemant.
Type: N	N/A					Hydric Soil	I Present? Yes □	No 🛛
Depth (inches)): <u>N/A</u>					,		
rks:								
	av Indicators:	l that apply)				Secondary	Indicators (minimum of two	required)
nd Hydrolog	gy Indicators: (minimum of one required; check all					S	urface Soil Cracks (B6)	
nd Hydrolog y indicators (Surface Wa	(minimum of one required; check all iter (A1)		lt Crust (B11)				parsely Vegetated Concave S	urfaco (DO)
nd Hydrolog y indicators (Surface Wa High Water	(minimum of one required; check all ster (A1) r Table (A2)	□ Aq	juatic Invertebrates					urruce (bo)
ry indicators (Surface Wa High Water Saturation Water Mark	(minimum of one required; check all ster (A1) r Table (A2) (A3) ks (B1)	☐ Aq ☐ Hy ☐ Dr	juatic Invertebrates drogen Sulfide Odor y-Season Water Tabl	(C1) le (C2)		□ D	Irainage patterns (B10) Ixidized Rhizospheres on Livi	
ry indicators (Surface Wa High Water Saturation Water Mark Sediment D	(minimum of one required; check all tter (A1) r Table (A2) (A3) ks (B1) Deposits (B2)	Aq Hy Dr Ox	juatic Invertebrates (drogen Sulfide Odor y-Season Water Tabl kidized Rhizospheres	r (C1) le (C2) s on Living Roots (C3)			Irainage patterns (B10) Ixidized Rhizospheres on Livi (where tilled)	• •
and Hydrolog ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos	(minimum of one required; check all tter (A1) r Table (A2) (A3) ks (B1) Deposits (B2)	☐ Aq ☐ Hy ☐ Dr ☐ Ox	juatic Invertebrates drogen Sulfide Odor y-Season Water Tabl	r (C1) le (C2) s on Living Roots (C3))			Irainage patterns (B10) Ixidized Rhizospheres on Livi	ng Roots (C3)
and Hydrolog ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi	(minimum of one required; check all ster (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	Aq Hy Dr Ox	Juatic Invertebrates of drogen Sulfide Odor y-Season Water Table cidized Rhizospheres (where not tilled) esence of Reduced It in Muck Surface	· (C1) le (C2) s on Living Roots (C3)) ron (C4)			rainage patterns (B10) Exidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In Jeomorphic Position (D2)	ng Roots (C3)
and Hydrolog ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi	(minimum of one required; check all toter (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)	Aq Hy Dr Ox	puatic Invertebrates drogen Sulfide Odor y-Season Water Tabl kidized Rhizospheres (where not tilled) esence of Reduced II	· (C1) le (C2) s on Living Roots (C3)) ron (C4)			rainage patterns (B10) xidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In	ng Roots (C3)
and Hydrolog ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Depos Inundation	(minimum of one required; check all ster (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) I Visible on Aerial Imagery (B7) ned Leaves (B9)	Aq Hy Dr Ox	Juatic Invertebrates of drogen Sulfide Odor y-Season Water Table (idized Rhizospheres (where not tilled) esence of Reduced It in Muck Surface	· (C1) le (C2) s on Living Roots (C3)) ron (C4)			rainage patterns (B10) Exidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In ecomorphic Position (D2) AC-Neutral Test (D5)	ng Roots (C3)
and Hydrolog ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Depos Inundation Water Stair	(minimum of one required; check all ter (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) l Visible on Aerial Imagery (B7) ned Leaves (B9)	Aq Hy Dr Ox	juatic Invertebrates i drogen Sulfide Odor y-Season Water Tabl cidized Rhizospheres (where not tilled) esence of Reduced It in Muck Surface her (Explain in Rema	· (C1) le (C2) s on Living Roots (C3)) ron (C4)			rainage patterns (B10) Exidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In ecomorphic Position (D2) AC-Neutral Test (D5)	ng Roots (C3)
ry indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Depos Inundation Observation	(minimum of one required; check all ster (A1) Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sitis (B5) I Visible on Aerial Imagery (B7) ned Leaves (B9) ns:	Aq Hy Dr Ox Pr Th	yuatic Invertebrates i drogen Sulfide Odor y-Season Water Tabl idized Rhizospheres (where not tilled) esence of Reduced In in Muck Surface her (Explain in Rema	C(C1) le (C2) s on Living Roots (C3)) ron (C4)	Wetland		rainage patterns (B10) Exidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In Seomorphic Position (D2) AC-Neutral Test (D5) rost-Heave Hummocks (D7)	ng Roots (C3) agery (C9)
y indicators (Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Water Stair Observation	(minimum of one required; check all ter (A1) r Table (A2) (A3) ks (B1) beposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Imagery (B7) ned Leaves (B9) ns: ent? Yes? N	Aq Hy Dr Ox Th Ox No? Mo?	juatic Invertebrates in drogen Sulfide Odor y-Season Water Tablicidized Rhizospheres (where not tilled) esence of Reduced It in Muck Surface her (Explain in Remander) Depth (inches):	C(C1) le (C2) s on Living Roots (C3)) ron (C4) urks)	Wetland	D O O O O O O O O O	rainage patterns (B10) Exidized Rhizospheres on Livi (where tilled) rayfish Burrows (C8) aturation Visible on Aerial In Seomorphic Position (D2) AC-Neutral Test (D5) rost-Heave Hummocks (D7)	ng Roots (C3) agery (C9)

Project/Site:	Liberty Trails						City/County:	Justin/Denton				Sampling Dat	e:	B/21/2019	
Applicant/Owner:	DR Horton								Sta	te: TX		Sampling Poi	nt:	18	
Investigator(s):	RAR						Section, Townsh	ip, Range:	N/A						
Landform (hillslope,	terrace, etc.):	swale						concave, convex, n		conca	ive	Slo	pe %:	2	
Subregion (LRR):	, , J				Lat:	33.0460		ong: -97.371			· · ·	Datum:	NAD 19		
Soil Map Unit Name:	-	1-3% Slones					·····				Classification:	N/A			
Are climatic / hydro			nr this time	of venr?	/es 🕅	No		(If no, explain i	in Remo			,			
Are vegetation,	Soil,		Or hydrology				isturbed?	Are "Normal Ci		•	t? Yes ⊠	No 🔲			
Are vegetation,	Soil,		Or hydrology		_	rally prob		(If needed, exp							
										•	•				
		· Attach s			-		oint locations	, transects,	ımp	ortant te	atures, etc	•			
Hydrophytic Vegeta			Yes		No 		Is the Sampled Area	ı							
Hydric Soil Present?			Yes		No		within a wetland?	Y	es		No 🖂				
Wetland Hydrology	Present?		Yes		No	\boxtimes									
Remarks:															
VEGETATION	— Ileo esiont	ific name	s of plan	mtc											
VEGETATION	- ose scient	iiic name:	s or pru	1115.						D	e Test worksh				
					Absolute		Dominant	Indicator			e T est worksn e Dominant Species				
<u>Tree Stratum</u>	(Plot Size:	30' Radius	_)	-	Coverag	е	Species?	Status	_	Are OBL, FA	CW, or FAC	illui			
l. <u>none</u>									_	(excluding I	FAC-):		2		(A)
2.									_	Total Numb	er of Dominant S _l	pecies			
3.									_	Across All S	trata:		3		(B)
4									_	Percent of I	Dominant Species	That			
				-	0	=	= Total Cover			Are OBL, FA	ACW, or FAC:		66		(A/B)
C	/DL + C:	1510								B I		.			
Sapling/Shrub Stratu	<u>um</u> (Plot Si:	ze: 15'Ro	iaius)								e Index Works			let I. B	
1. none									_		Total % Cover of	i:		ultiply By:	_
2.									_	OBL species			x 1 =		<u> </u>
3.									_	FACW speci			x 2 =		_
4.									_	FAC species			x 3 =		_
5.								-	_	FACU specie	-		x 4 =		
		-1		-	0	=	= Total Cover			UPL species			x 5 =		_
<u>Herb Stratum</u>	(Plot Size:	5' Radius)							Column Tot	als:		(A)		(B)
1. /va annua					50		YES	FAC	_						
	strumarium				25		YES	FAC	_	Pre	valence Index =	B/A=			
3. Bromus ar					20		YES	<u>FACU</u>	_						
4. <i>Phyla nodi</i>	flora				15		<u>NO</u>	FAC	_	Hydrophy	tic Vegetation	Indicators:			
5.									_						
6.									_		1-	Rapid Test for		-	
7.									_	X	2 -	Dominance Te			
8.								-	_		3 -	Prevalence In			
9.									_	-	4 -	Morphological in Remarks or		ns¹ (Provide sup	porting data
10.									_			III KEIIIUI KS OI	on a sepa	iule sileel)	
				-	110	=	= Total Cover					matic Hydrophy	-		
Woody Vine Stratum	(Plot Siz	e: 30 ' Ro	ndius \								itors of hydric soi rbed or problema		ydrology m	ust be present,	unless
l. none	. (1 101 312									41310	or problem				
2.									_						
					0		= Total Cover		_		tic Vegetation	Yes 🗵	1	No 🗆	
0/ Dar- C 1 :- 11	orb Ctrat			-	U	=	- IOIUI COVET			Present?			-		
% Bare Ground in H Remarks:	erb Stratum 0									1					

ile Description: (Describe to the dept Depth Matrix			Redox Featu	ires			
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-12 7.5YR 3/2	100					Clay	
	. —						
			-		-		
			<u></u> ,				
							
				.	-		
	<u> </u>						
C=Concentration, D=Depletion, RM=			s. ² Location: PL=	Pore Lining, M=Matr			
c Soil indicators: (Applicable to all	.RRs, unless otherwis	· _	1 01 14			r Problematic Hydric Sc	ils³:
☐ Histosol (A1) ☐ Histic Epipedon (A2)			andy Gleyed Matrix (S4 andy Redox (S5))		1 CM Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (IDD F C III
Black Histic (A3)			tripped Matrix (S6)			Dark Surface (S7) (LRR G)	LKK F, U, H)
Hydrogen Sulfide (A4)			oamy Mucky Mineral (F	1)		High Plains Depressions (F	16)
Stratified Layers (A5) (LRF	: F)		oamy Gleyed Matrix (F2			(LRR H outside of I	
1 cm Muck (A9) (LRR F, G			epleted Matrix (F3)			Reduced Vertic (F18)	
Depleted below Dark Surfa	:e (A11)		edox Dark Surface (F6)			Red Parent Material (TF2)	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)			epleted Dark Surface (F	-7)		Very Shallow Dark Surface Other (Explain in Remarks)	(TF12)
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat	(2) (IRR G H)		edox Depressions (F8) igh Plains Depressions	/F16			n and wetland hydrology must
5 cm Mucky Peat or Peat (S			(MLRA 72 & 73 of			sent, unless distributed or	
rictive Layer (if present):	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-	·			
Type: NA					Handata Catt D		No 🖂
Depth (inches): NA					Hydric Soil P	resent? Yes 🗌	NO 🔼
ırks:							
ırks:							
PROLOGY							
PROLOGY and Hydrology Indicators: ary indicators (minimum of one required; o	heck all that apply)					dicators (minimum of two I	equired)
PROLOGY and Hydrology Indicators: ary indicators (minimum of one required; Surface Water (A1)		Salt Crust (B11)			Surf	ace Soil Cracks (B6)	
DROLOGY and Hydrology Indicators: ary indicators (minimum of one required; Surface Water (A1) High Water Table (A2)		Aquatic Invertebrate			Surf	ace Soil Cracks (B6) rsely Vegetated Concave Su	
PROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3)	[[[Aquatic Invertebrate Hydrogen Sulfide Od	dor (C1)		Surf	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10)	rface (B8)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 [[[Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water Ta	dor (C1) able (C2)		Surf Spai Drai Oxio	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10) dized Rhizospheres on Livin	rface (B8)
OROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 [[[Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher	dor (C1) able (C2) res on Living Roots (C3))	Surf	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10) dized Rhizospheres on Livin vhere tilled)	rface (B8)
PROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water Ta	dor (C1) able (C2) res on Living Roots (C3 e d))	Surf Spa Drai Oxiu (v	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10) dized Rhizospheres on Livin	rface (B8) ig Roots (C3)
PROLOGY and Hydrology Indicators: Irry indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4))	Surt Spa Dra Oxiv (v Stray Spa	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10) dized Rhizospheres on Livin vhere tilled) vfish Burrows (C8)	rface (B8) ig Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; solutions) 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 (Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4))	Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin vhere tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5)	rface (B8) ng Roots (C3) ngery (C9)
PROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4))	Surt	ace Soil Cracks (B6) rsely Vegetated Concave Su inage patterns (B10) dized Rhizospheres on Livin vhere tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2)	rface (B8) ng Roots (C3) ngery (C9)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9)	[[[[] [] [] [] [] [] [] [] [Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water Ta Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks))	Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin vhere tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5)	rface (B8) ng Roots (C3) ngery (C9)
and Hydrology Indicators: In indicators (minimum of one required; of 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 (Water Stained Leaves (B9) Observations: Ce Water Present? Yes?		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks)		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
PROLOGY and Hydrology Indicators: Iry indicators (minimum of one required; of 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 (Water Stained Leaves (B9) Observations: ce Water Present? Yes?		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water Ta Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks)		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
DROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9) I Observations: ce Water Present? Yes?		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; and Hydrology Indicators) 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 (B3) Inundation Visible on Aerial Imagery (Water Stained Leaves (B9) d Observations: are Water Present? Yes? ration Present? Yes?		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9) d Observations: are Water Present? Yes? ration Present? Yes?		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
and Hydrology Indicators: In indicators (minimum of one required; of 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 (Water Stained Leaves (B9) I Observations: I water Present? Yes? Table Present? Yes? Algal Present? Yes? Algal Mater Office (B4) Algal Mater Off		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9) If Observations: are Water Present? Yes? artable Present? Yes? artable Present? Yes? artable Present? Yes? artable Recorded Data (stream gauge, monitor)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
Inad Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9) I Observations: Ice Water Present? Yes? Table Present? Yes? ration Present? Yes? des capillary fringe) ribe Recorded Data (stream gauge, monitor)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
OROLOGY and Hydrology Indicators: ary indicators (minimum of one required; of 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 (Water Stained Leaves (B9) I Observations: ce Water Present? Yes? r Table Present? yes? ation Present? Yes? des capillary fringe) iibe Recorded Data (stream gauge, monitor)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)
DROLOGY land Hydrology Indicators: ary indicators (minimum of one required; at 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 (Water Stained Leaves (B9) I Observations: I Observations: I Yes? I Table Present? Yes? I ation Present? Yes? I des capillary fringe)		Aquatic Invertebrate Hydrogen Sulfide Od Dry-Season Water To Oxidized Rhizospher (where not tille Presence of Reduced Thin Muck Surface Other (Explain in Rer Depth (inches): Depth (inches):	dor (C1) able (C2) res on Living Roots (C3 ed) d Iron (C4) marks) NA NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave Suinage patterns (B10) dized Rhizospheres on Livin where tilled) yfish Burrows (C8) uration Visible on Aerial Im morphic Position (D2) -Neutral Test (D5) tt-Heave Hummocks (D7)	rface (B8) ig Roots (C3) agery (C9) LRR F)

Project/Site: Liberty Trails		City/County: Ju	ustin/Denton	Sampling Date: 8/21/2019
Applicant/Owner: DR Horton, Inc.			State	
Investigator(s): RAR		Section, Township, Ro	ange: N/A	
Landform (hillslope, terrace, etc.): Swale			ive, convex, none):	Concave Slope %: 2
Subregion (LRR): J Lat	: 33.046104°		-97.371382° W	Datum: NAD 1983
Soil Map Unit Name: Sanger clay, 1 to 3 percent slopes				NWI Classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	⊠ No □] (11	f no, explain in Rema	rks.)
Are vegetation, Soil, Or hydrology	Significantly distu	rbed? A	re "Normal Circumsta	inces" present? Yes 🛛 No 🗌
Are vegetation, Soil, Or hydrology	Naturally problem	atic? (If	f needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing so	ımnlina noir	nt locations tr	ansorts imno	artant features etc
Hydrophytic Vegetation Present? Yes 🖂 No		ii iotuiioiis, iit	unscers, impe	Trum rearries, etc.
Hydric Soil Present?		s the Sampled Area	v [¬ , , ,
Wetland Hydrology Present? Yes No	□ w	rithin a wetland?	Yes [□ No ⊠
Remarks:				
VEGETATION — Use scientific names of plants.				
				Dominance Test worksheet:
	olute % verage	Dominant Species?	Indicator Status	Number of Dominant Species That
1. none		-		Are OBL, FACW, or FAC (excluding FAC-): 3 (A)
2.				
3.		_		Total Number of Dominant Species Across All Strata: 3 (B)
4.		_		,,
	0 = To	tal Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' Radius)				Prevalence Index Worksheet:
1. Celtis laevigata	2	NO	FAC	Total % Cover of: Multiply By:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	2 = To	tal Cover		UPL species x 5 =
Herb Stratum (Plot Size: 5' Radius)				Column Totals: (A) (B)
1. Iva annua	60	YES	FAC	
2. Xanthium strumarium	30	YES	FAC	Prevalence Index = B/A=
3. Panicum obtusum	20	YES	FAC	
4				Hydrophytic Vegetation Indicators:
5				
6				1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is > 50%
8.				3 - Prevalence Index is $\leq 3.0^{1}$
9				4 - Morphological Adaptations ¹ (Provide supporting data
10.				in Remarks or on a separate sheet)
	110 = To	tal Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
W. L. V. C				Indicators of hydric soil and wetland hydrology must be present, unless
Woody Vine Stratum (Plot Size: 30' Radius)				disturbed or problematic.
1. none				
2				Hydrophytic Vegetation
% Bare Ground in Herb	0 = To	tal Cover		Present?
Stratum 0				

							Sampling Point: 19
e Descripti	ion: (Describe to the depth nee	ded to document th	e indicator or confirm	the absence of indicators.)			
Depth	Matrix (Color (color))		C. L (; 1)	Redox Features	1 2		D
(inches)	Color (moist)		Color (moist)	% Type ¹	Loc ²	Texture	Remarks
)-12	7.5YR 2/1	100				Clay	-
							-
					<u> </u>		
					<u> </u>		
				<u> </u>		<u> </u>	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>		<u> </u>	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>		<u> </u>	
(=(oncent	tration, D=Depletion, RM=Reduce	d Matrix. (S=Covere	d or Coated Sand Grains	² Location: PL=Pore Lining,	M=Matrix		-
	ators: (Applicable to all LRRs,					tors for Problematic Hydric	Soils ³ :
	Histosol (A1) Histic Epipedon (A2)			Gleyed Matrix (S4) Redox (S5)		1 CM Muck (A9) (LRR I, . Coast Prairie Redox (A16	
	Black Histic (A3)		Strippe	ed Matrix (S6)	[Dark Surface (S7) (LRR (
	Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F)		= '	Mucky Mineral (F1) Gleyed Matrix (F2)			• •
	1 cm Muck (A9) (LRR F, G, H)			ed Matrix (F3)		Reduced Vertic (F18)	MLKA /2 & /3)
	Depleted below Dark Surface (A11) Thick Dark Surface (A12))		Dark Surface (F6) ed Dark Surface (F7)			
H	Sandy Mucky Mineral (S1)			Depressions (F8)		Other (Explain in Remark	
	2.5 cm Mucky Peat or Peat (S2) (LF 5 cm Mucky Peat or Peat (S3) (LRR			ains Depressions (F16 ILRA 72 & 73 of LRR H)		ndicators of hydrophytic vegeto must be present, unless distrib	
tive Laye	r (if present):	i F)	(III	LRA 72 & 73 01 LRK H)		most be present, omess distrib	orea or problemant.
уре:	N/A				Hydric	Soil Present? Yes	No 🖂
epth (inches	s): N/A				'	_	- -
(S:							
	ony Indicators						
	(minimum of one required; check a	ll that apply)			Secon	dary Indicators (minimum of tw	o required)
d Hydrolo	(IIIIIIIIIIIIIII oi oile requireu; check u.		Salt Crust (B11)			Surface Soil Cracks (B6)	
indicators Surface W	later (A1)		Aquatic Invertebrates (B			Sparsely Vegetated Concave Drainage patterns (B10)	Surface (B8)
nd Hydrold indicators Surface W High Wate	Vater (A1) er Table (A2)		Hydrogen Sulfide Odor (C	1)	11		: D : (CO)
nd Hydrolo indicators Surface W High Wate Saturation Water Mai	/ater (A1) er Table (A2) n (A3) rrks (B1)		Hydrogen Sulfide Odor (C Dry-Season Water Table	, (C2)		Oxidized Rhizospheres on Li	ving Koots (C3)
Surface W High Wate Saturation Water Man Sediment	rater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2)		Dry-Season Water Table Oxidized Rhizospheres o	, (C2)		(where tilled)	ving Koots (C3)
nd Hydrold vindicators Surface W High Wate Saturation Water Mai Sediment Drift Depo	rater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2)		Dry-Season Water Table	(C2) n Living Roots (C3)		•	, ,
indicators Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat	rater (A1) er Table (A2) n (A3) orks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iror Thin Muck Surface	(C2) n Living Roots (C3) n (C4)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I Geomorphic Position (D2)	, ,
d Hydrolo indicators Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat Iron Depo Inundation	rater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4)		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iron	(C2) n Living Roots (C3) n (C4)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I	magery (C9)
d Hydrolo indicators Surface W High Wate Saturation Water Mai Sediment Drift Depa Algal Mat Iron Depo Inundation Water Sta	rater (A1) er Table (A2) in (A3) orks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) on Visible on Aerial Imagery (B7) nined Leaves (B9)		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iror Thin Muck Surface	(C2) n Living Roots (C3) n (C4)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I Geomorphic Position (D2) FAC-Neutral Test (D5)	magery (C9)
d Hydrold indicators Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundation Water Stai	rater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) in Visible on Aerial Imagery (B7) under Leaves (B9)		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iror Thin Muck Surface	(C2) n Living Roots (C3) n (C4)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I Geomorphic Position (D2) FAC-Neutral Test (D5)	magery (C9)
d Hydrolo indicators Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundation Water Sta	rater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) oosits (B3) or Crust (B4) oistis (B5) in Visible on Aerial Imagery (B7) imed Leaves (B9) ons: sent? Yes?		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iror Thin Muck Surface Other (Explain in Remark	(C2) n Living Roots (C3) n (C4) ss)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7)	magery (C9) (LRR F)
nd Hydrolo r indicators Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundation	rater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) in Visible on Aerial Imagery (B7) ined Leaves (B9) ons: sent? Yes? '? Yes?		Dry-Season Water Table Oxidized Rhizospheres o (where not tilled) Presence of Reduced Iror Thin Muck Surface Other (Explain in Remark	(C2) n Living Roots (C3) n (C4) ss)		(where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial I Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7)	magery (C9) (LRR F)

Project/Site:	Liberty Trails						City/County:	Justin/D	Denton				Sampling Dat	te: 8	/21/2019	
Applicant/Owner:	DR Horton									State:	TX		Sampling Poi	_	0	
Investigator(s):	RAR						Section, Townsh	ip, Ranae:	N/.				1 3	_		
Landform (hillslope,	-	swale					Local relief (concave		Slo	ope %:	2	
Subregion (LRR):	J	311410			Lat:	33.0460			-97.371734		Concuro		Sit	NAD 198		
Soil Map Unit Name:		1-3% Slones				00.0100			77.071701		NWI Classifi	ration.	N/A	IIAD 17		
Are climatic / hydrol			for this time	of year?	Vac 🏻	No [/If no o	explain in Re	marke		_	11/14			
Are vegetation,	ogic continions on in Soil,		Or hydrology			ificantly d		•	•		s" present?	Yes 🖂	No 🗆			
Are vegetation,	Soil,		Or hydrology		_	urally prob					swers in Remark		L			
				•					-	-		-				
		Attach	-			<u> </u>	oint locations	, transe	ects, im	port	ant teatur	es, etc.				
Hydrophytic Vegetat	ion Present?		Yes		No		Is the Sampled Area	1								
Hydric Soil Present?			Yes		No		within a wetland?	-	Yes		No	\boxtimes				
Wetland Hydrology F	resent?		Yes		No											
Remarks:																
VEGETATION	_ lleo ecionti	ific name	s of pla	ntc												
VEGETATION	- ose scienti	inc nume	s or pru	1115.							\					
					Absolute		Dominant	Indi	icator		Dominance Test Jumber of Domina					
<u>Tree Stratum</u>	(Plot Size:	30' Radius)	-	Covera	ge	Species?	Sto	atus	Α	ire OBL, FACW, or		iiui			
1. <u>none</u>										(0	excluding FAC-):			3		(A)
2.										Т	otal Number of D	ominant Spe	cies			
3.										A	Across All Strata:			3		(B)
4.										P	ercent of Domina	nt Species Tl	hat			
				-	0	=	= Total Cover			A	are OBL, FACW, or	FAC:		100		(A/B)
C 1' /Cl 1 C4 4-	/DL + C:-	1510	\!!\							<u> </u>	· · · · I · · · · I · I · I	w. l.l.				
Sapling/Shrub Stratu	<u>m</u> (Plot Siz	:e: <u>15 K</u>	Radius)							ľ	Prevalence Inde		et:		l.: I B	
1. none								-		H		% Cover of:			Itiply By:	_
2.											DBL species			x 1 =		_
3.											ACW species			x 2 =		_
4.											AC species			x 3 =		_
5.											ACU species			x 4 =		_
		-1 - ··			0	=	= Total Cover				IPL species			x 5 =		
Herb Stratum	(Plot Size:	5' Radius)					_		1	olumn Totals:			(A)		(B)
1. Panicum ob					40		YES	-	AC							
2. Xanthium s	trumarium				30		YES	-	AC		Prevalence	Index = B/	A= _		_	
3. /va annua					20		YES		AC							
4. <i>Phyla nodii</i>	flora				10		<u>NO</u>	F	AC	H	lydrophytic Ve	getation Ir	idicators:			
5.								-								
6.													Rapid Test for		-	
7.											Х	_	Dominance Te			
8.													Prevalence In			
9.													Morphological in Remarks or		s¹ (Provide sup	porting data
10.													III Kelliui KS OI	on a sepai	uie siieei)	
					100	=	= Total Cover						atic Hydrophy	-		
Woody Vine Stratum	(Plot Siz	e. 30'R	Radius)								1 Indicators of disturbed or			ydrology mi	ıst be present,	unless
1. none	(1 101 312										213101B00 01	p. on onull				
2.																
					0		= Total Cover				lydrophytic Ve	getation	Yes 🗵	1	No 🗆	
0/ Dave Co 1 : "	orb Ctrat				U		- IVIUI COVET			P	Present?			-		
% Bare Ground in He Remarks:	erb Stratum 0									l						

le Description: (Describe to the depth n Depth Matrix			Redox Featu	res			
(inches) Color (moist)	%	Color (moist)	%	Туре	Loc2	Texture	Remarks
0-12 7.5YR 2/1	100					Clay	
			 .				
	·						
				-			
: C=Concentration, D=Depletion, RM=Red	uced Matrix (S=Co	vered or Conted Sand Grains	21 ocation. PI =	Pore Lining, M=Matri:	<u> </u>		
ic Soil indicators: (Applicable to all LRF			Locuiton. 12	roro Emmy, m - marri		r Problematic Hydric	Soils ³ :
Histosol (A1)		☐ Sai	ndy Gleyed Matrix (S4)		1 CM Muck (A9) (LRR I, .	J)
Histic Epipedon (A2)			ndy Redox (S5)			Coast Prairie Redox (A16	
Black Histic (A3)			ipped Matrix (S6)	11		Dark Surface (S7) (LRR (•
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F)			amy Mucky Mineral (F amy Gleyed Matrix (F2			High Plains Depressions (LRR H outside of	
1 cm Muck (A9) (LRR F, G, H)			pleted Matrix (F3)	1		Reduced Vertic (F18)	I MERA 72 & 73
Depleted below Dark Surface (A			dox Dark Surface (F6)			Red Parent Material (TF2)	
Thick Dark Surface (A12)			pleted Dark Surface (F	7)		Very Shallow Dark Surfac	
Sandy Mucky Mineral (S1)	(LDD C III)		dox Depressions (F8)	/F1 /		Other (Explain in Remark	s) tion and wetland hydrology must
2.5 cm Mucky Peat or Peat (S2) 5 cm Mucky Peat or Peat (S3) (☐ Hig	gh Plains Depressions MLRA 72 & 73 of)			irs ot nyaropnytic vegeta sent, unless distributed c	
rictive Layer (if present):			(,	
Type: NA					Hydric Soil P		No 🛛
Depth (inches): NA					nyaric son P	resent? Yes 🗌	NU 🔼
rks:							
rks:							
rks: ROLOGY							
ROLOGY and Hydrology Indicators:							
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec						dicators (minimum of tw	o required)
ROLOGY and Hydrology Indicators: Iry indicators (minimum of one required; chec	1	Salt Crust (B11)	(0.2)		Surf	ace Soil Cracks (B6)	
ROLOGY and Hydrology Indicators: Iry indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2)	,	Aquatic Invertebrate			Surf	ace Soil Cracks (B6) rsely Vegetated Concave	
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2) Saturation (A3)		Aquatic Invertebrates Hydrogen Sulfide Odd	or (C1)		Surf	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10)	Surface (B8)
ROLOGY and Hydrology Indicators: Iry indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2)		Aquatic Invertebrate	or (C1) ble (C2)		Surf Spai Drai Oxio	ace Soil Cracks (B6) rsely Vegetated Concave	Surface (B8)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled	or (C1) ble (C2) es on Living Roots (C3) d)		Surf Spai Drai Oxiv	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8)	Surface (B8) ving Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced	or (C1) ble (C2) es on Living Roots (C3) d)		Surl Spa Dra Oxin (v Cray	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8) uration Visible on Aerial I	Surface (B8) ving Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced Thin Muck Surface	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4)		Surl	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8) uration Visible on Aerial I morphic Position (D2)	Surface (B8) ving Roots (C3)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4)		Surl	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8) uration Visible on Aerial I morphic Position (D2) -Neutral Test (D5)	Surface (B8) ving Roots (C3) magery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced Thin Muck Surface	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4)		Surl	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8) uration Visible on Aerial I morphic Position (D2)	Surface (B8) ving Roots (C3) magery (C9)
PROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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)		Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced Thin Muck Surface Other (Explain in Rem	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4)		Surl	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Liv vhere tilled) yfish Burrows (C8) uration Visible on Aerial I morphic Position (D2) -Neutral Test (D5)	Surface (B8) ving Roots (C3) magery (C9)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Yes?	No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks)		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; check 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) Observations: ce Water Present? Yes?	No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tilled Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA		Surl	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? 'Table Present? 4es?	No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; check 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) Observations: ce Water Present? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
PROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Table Present? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
PROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Table Present? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (B8) ving Roots (C3) magery (C9) (LRR F)
PROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Table Present? Yes?	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (BB) ving Roots (C3) magery (C9) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Table Present? Yes? ation Present? Yes? des capillary fringe) the Recorded Data (stream gauge, monitoring	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (BB) ving Roots (C3) magery (C9) (LRR F)
ROLOGY and Hydrology Indicators: ry indicators (minimum of one required; chec 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) Observations: ce Water Present? Table Present? Yes? ation Present? Yes? des capillary fringe) the Recorded Data (stream gauge, monitoring	No? ⊠ No? ⊠ No? ⊠	Aquatic Invertebrate: Hydrogen Sulfide Odc Dry-Season Water Tal Oxidized Rhizosphere (where not tillet Presence of Reduced Thin Muck Surface Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) ble (C2) es on Living Roots (C3) d) Iron (C4) narks) NA NA		Surt	ace Soil Cracks (B6) rsely Vegetated Concave inage patterns (B10) dized Rhizospheres on Li where tilled) yfish Burrows (C8) oration Visible on Aerial I morphic Position (D2) -Neutral Test (D5) st-Heave Hummocks (D7)	Surface (BB) ving Roots (C3) magery (C9) (LRR F)

Project/Site:	Liberty Trails						City/County:	Justin/Denton				Sampling Date:	8/21/201	19	
Applicant/Owner:	DR Horton								State:	TX		Sampling Point	21		
Investigator(s):	RAR						Section, Townshi	p, Range: N/	/A						
Landform (hillslope,	terrace, etc.):	Hillslope					Local relief (c	oncave, convex, none)):	slope		Slop	e %: 4		
Subregion (LRR):	J				Lat:	33.044	401° N Lo	ng: <u>-97.370537</u>	7°W			Datum:	NAD 1983		
Soil Map Unit Name:	Sanger Clay, 1	I-3% Slopes					.			NWI Classific	cation:	N/A			
Are climatic / hydrol	ogic conditions on th	e site typical f	or this time	of year?	∕es ⊠	No [(If no, explain in Re	emarks.)					
Are vegetation,	Soil,		Or hydrology	у 🗆	Signif	icantly d	isturbed?	Are "Normal Circun	nstance	s" present?	Yes 🛛	No 🔲			
Are vegetation,	Soil,		Or hydrology	y 🗆	Natur	ally prob	lematic?	(If needed, explain	any an	swers in Remark	s.)				
SUMMARY OF	FINDINGS —	Attach s	ite map	showi	ng samp	ling p	oint locations,	transects, im	port	ant feature	es, etc.				
Hydrophytic Vegetati	on Present?		Yes		No	\boxtimes									
Hydric Soil Present?			Yes		No	\boxtimes	Is the Sampled Area within a wetland?	Yes		No	\boxtimes				
Wetland Hydrology P	resent?		Yes		No	\boxtimes	willing worlding:								
Remarks:							•								
VEGETATION -	– Use scienti	fic name	s of pla	nts.					1						
					Absolute %	6	Dominant	Indicator		ominance Test					
Tree Stratum	(Plot Size:	30' Radius	_)	-	Coverage		Species?	Status		umber of Domina re OBL, FACW, or		IIUI			
l. <u>none</u>									(e	xcluding FAC-):			1	(/	A)
2.									To	otal Number of Do	ominant Spe	cies			
3.									A	cross All Strata:			3	(B)
4									P	ercent of Domina	nt Species T	hat			
				-	0	=	= Total Cover		A	re OBL, FACW, or	FAC:		33	(/	A/B)
Sapling/Shrub Stratu	<u>m</u> (Plot Siz	e: 15' R	ndius /						P	revalence Inde	v Worksha	not.			
1. <i>Caltis laevi</i>	•	6. <u>13 k</u>	uuius /		2		No	FAC	'		% Cover of:		Multiply By	٧.	
2.	yuru							TAC	_	BL species	/U COVEL OI:		x 1 =	<i>i</i> -	
3.										ACW species		_	x 2 =		•
4.										AC species		-	x 3 =		•
5.										ACU species			x 4 =		
·					5	 -	= Total Cover			PL species			x 5 =		
Herb Stratum	(Plot Size:	5' Radius	١	•			10141 20701			olumn Totals:			(A)		(B)
1. Xanthium si	` -		_ ′		60		Yes	FAC							
2. Cynodon da					20		Yes	FACU		Prevalence	Index = B	/A=			
	silostaycha				20		Yes	FACU			,	_			
4. Rumex cris	,				5		No	FAC	н	ydrophytic Veg	getation Ir	ndicators:			
5.											-				
6.											1-	Rapid Test for H	ydrophytic Veget	ation	
7.												Dominance Test			
8.											3 -	Prevalence Inde	x is <u><</u> 3.01		
9.													daptations1 (Prov	ide suppor	ting data
10.													n a separate she		
					105	=	= Total Cover				Problem	natic Hydrophytic	v Vegetation1 (Exp	olain)	
				•							hydric soil	and wetland hyd	rology must be p		ess
Woody Vine Stratum	(Plot Size	e: <u>30' R</u>	adius)							disturbed or	problemati	С.			
l. <i>none</i>									-						
2.									н	ydrophytic Veg	getation	v 🗀	a. K	√ 1	
				-	0	=	= Total Cover			resent?	-	Yes 🗌	No [긔	
% Bare Ground in He Remarks:	erb Stratum 0														
ROMAN AS															

SOILS Sampling Point: 21

Drofile Description	on: (Describe to the depth n	andad to docum	ant the indicator (or confirm the absence of	indicators \			Sumpling Folin: 21
-	-	eeaea 10 aocon	ient the indicator (-			
Depth	Matrix	0/	<u> </u>	Redox Fed			.	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	7.5YR 3/2	100					Clay	
								<u> </u>
								-
								
								-
	ration, D=Depletion, RM=Red			nd Grains. ² Location: PL	.=Pore Lining, M=Matrix			
Hydric Soil indica	itors: (Applicable to all LRR	s, unless other	wise noted.)			Indicators fo	r Problematic Hydri	c Soils3:
	Histosol (A1)		_	Sandy Gleyed Matrix (S4)		1 CM Muck (A9) (LRR I,	
	Histic Epipedon (A2)			Sandy Redox (S5)			Coast Prairie Redox (A1	
	Black Histic (A3)			Stripped Matrix (S6)	(=1)		Dark Surface (S7) (LRR	
	Hydrogen Sulfide (A4)		_	Loamy Mucky Mineral			High Plains Depression	
	Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H)			Loamy Gleyed Matrix Depleted Matrix (F3)	(FZ)			of MLRA 72 & 73)
	Depleted below Dark Surface (A		_	Depleted Matrix (F3) Redox Dark Surface (F	6)		Reduced Vertic (F18) Red Parent Material (TF	2)
H	Thick Dark Surface (A12)	,		Depleted Dark Surface			Very Shallow Dark Surf	
	Sandy Mucky Mineral (S1)		_	Redox Depressions (F8	• •		Other (Explain in Remai	
	2.5 cm Mucky Peat or Peat (S2)	(LRR G, H)		High Plains Depression				ation and wetland hydrology must
_	5 cm Mucky Peat or Peat (S3) ((MLRA 72 & 73			sent, unless distributed	
Restrictive Layer	(if present):							
Type:	NA							1 . N
Depth (inches): NA					Hydric Soil P	resent? Yes] No ⊠
. ,	·							
Remarks:								
HYDROLOGY								
	. 1.1							
Wetland Hydrolo	• •							
•	(minimum of one required; chec	k all that apply)					dicators (minimum of t	vo required)
Surface Wo	, ,		Salt Crust (E				face Soil Cracks (B6)	
= "	r Table (A2)		= '	ertebrates (B13)			rsely Vegetated Concav	e Surface (B8)
Saturation				ulfide Odor (C1)		_	inage patterns (B10)	inima Barata (CO)
☐ Water Mar ☐ Sediment [ks (B1) Deposits (B2)			Water Table (C2) nizospheres on Living Roots (I	ra)		dized Rhizospheres on I where tilled)	IVING KOOTS (C3)
Drift Depo				not tilled)	13)		yfish Burrows (C8)	
	or Crust (B4)			Reduced Iron (C4)		_	yrisii burrows (Co) uration Visible on Aerial	Imagery (CQ)
☐ Iron Depos	, ,		Thin Muck S	, ,			omorphic Position (D2)	imagery (C7)
	ı Visible on Aerial Imagery (B7)			ain in Remarks)			-Neutral Test (D5)	
	ned Leaves (B9)			,		_	st-Heave Hummocks (D7) (LRR F)
Field Observation						_	,	, , ,
Surface Water Prese	ent? Yes?	No?⊠	Depth (i	nches): NA				
Water Table Present	t? Yes?	No?⊠	Danth (i	inches): NA	Wotla	ınd Hydrology Pr	esent? Yes	□ No ⊠
				-		ina nyarorogy i n		
Saturation Present?	_	No?⊠	Depth (i	inches): NA				
(includes capillary f	rınge) Data (stream gauge, monitoring			a\ :f =::=:l=bla				
Describe Recorded L	vata (stream gauge, monitoring	weii, aeriai pnoto	s, previous inspection	s), it available:				
Remarks:								