

**APPLICATION FOR LAND SUBDIVISION (PLAT)**

DATE RECEIVED: \_\_\_\_\_

CHECK ONE:  Preliminary Plat     Final Plat     Replat     Amended     Cancellation

1. PROPOSED SUBDIVISION NAME: Oak Grove    UNIT NO. \_\_\_\_\_

LOCATION DESCRIPTION/NEAREST COUNTY ROAD CR 4120, CR 1126

ACREAGE 61.5    NO. OF LOTS: EXISTING None    PROPOSED 23

REASON(S) FOR PLATTING/REPLATTING Create Residential Subdivision

2. OWNER/APPLICANT\*: Summit Ranch Investments, LTD

(\*If applicant is person other than owner, a letter of authorization must be provided from owner)

ADDRESS: P.O. Box 1249 San Marcos, TX 78667

TELEPHONE: (512) 396-5115    FAX: \_\_\_\_\_    MOBILE: \_\_\_\_\_

EMAIL: austin@tx-land.com

3. LICENSED ENGINEER/SURVEYOR: JDS Surveying

MAILING ADDRESS: 159 W. Main, Van, TX 75790

TELEPHONE: (903) 963-2333    FAX: \_\_\_\_\_    MOBILE: \_\_\_\_\_

EMAIL ADDRESS: ryan@jdssurvey.com

4. LIST ANY VARIANCES REQUESTED: None

REASON FOR REQUEST (LIST ANY HARDSHIPS): \_\_\_\_\_

5. PRESENT USE OF THE PROPERTY: Agricultural

INTENDED USE OF LOTS: (CHECK ALL THOSE THAT APPLY)

RESIDENTIAL (SINGLE FAMILY)     RESIDENTIAL (MULTI-FAMILY)

OTHER (SPECIFY) \_\_\_\_\_

6. PROPERTY LOCATED WITHIN CITY ETJ:     YES     NO

If yes, Name of City: \_\_\_\_\_

7. IS ANY PART OF THE PROPERTY IN A FLOODPLAIN?  YES     NO

WATER SUPPLY: Miller Grove WSC    ELECTRIC SERVICE: Farmers Electric Cooperative

SEWAGE DISPOSAL: OSSF    GAS SERVICE: N/A

8. Is the property subject to any liens, encumbrances, or judgments? If so, give details. (Provide separate sheet if needed) Permission from any lien holders and/or removal of any encumbrances or judgments will be necessary prior to filing of said plat with the County Clerk's Office.

9. See platting requirements. All necessary documents to reflect compliance must be complete before application will be deemed complete.

10. I agree to comply with all platting and subdivision requirements of Hopkins County, Texas. I understand that the plat will NOT be forwarded to the Commissioners' Court unless all documentation is satisfactorily filed with the County Clerk's Office correction due date.

  
Signature of Owner/Applicant

Austin Crabill Authorized Signer  
Print Name & Title

\*\*If applicant is person other than owner, a letter of authorization must be provided from owner. Signature indicates authorization for plat application and acceptance of waiver statement.

DATE: 2/16/22

**TAX CERTIFICATE**

ACCT # 65-0263-000-002-00  
 DATE 11/19/2021  
 SP



**HOPKINS COUNTY TAX OFFICE**  
 PO BOX 481  
 SULPHUR SPRINGS, TX 75483  
 (903) 438-4063

Cert# 210500  
 FEE 10.00

Property Description			
ABS: 263, TR: 2, SUR:	DOWNING GEO W	PROP TYPE-D1	PCT OWNER-100.000
TOWN -	LOCATION-	CR 1120	
ACRES -	56.925		

Values			
LAND MKT VALUE	136,170	IMPR/PERS MKT VAL	
LAND AGR VALUE	7,020	MKT. BEFORE EXEMP	7,020
EXEMPTIONS GRANTED:	NONE	LIMITED TXBL. VAL	

JUNELL DONNIE F  
 1778 FM 275 S

CUMBY TX 75433

hereby certify and otherwise guarantee that the tax levies, penalties, and attorney fees due in the current month for the above described property are as listed below.

	LEVY	P&I	ATTY FEES	AMT DUE
TAXES 2020	.00	.00	.00	.00
TAXES 2021	.00	.00	.00	.00
	-----	-----	-----	-----
	.00	.00	.00	.00
				=====
		<b>TOTAL DUE 11/2021</b>		<b>.00</b>
		<b>TOTAL DUE 12/2021</b>		<b>.00</b>

ACCT # 65-0263-000-002-00

**BREAKDOWN OF TAX DUE BY JURISDICTION**

JURISDICTION	LEVY	P&I	ATT FEES	TOTAL
COUNTY	.00	.00	.00	.00
HOSPITAL	.00	.00	.00	.00
CUMBY ISD	.00	.00	.00	.00

(CERTIFICATE MAY NOT INCLUDE ALL TAXING JURISDICTIONS)

TAX LEVY FOR THE CURRENT ROLL YEAR: COUN	41.00
TAX LEVY FOR THE CURRENT ROLL YEAR: HOSP	15.44
TAX LEVY FOR THE CURRENT ROLL YEAR: 0031	99.71
TOTAL TAX LEVY FOR THE CURRENT ROLL YEAR . . . .	156.15

\*\*\*\*\*  
 \* SUBJECT TO ROLLBACK \*  
 \* SUBJECT TO ROLLBACK \*  
 \*\*\*\*\*

REQUESTED BY:  
 SUMMIT RANCH INVESTMENTS

Debbie Mitchell SP  
 Signature of authorized officer of collecting office

RECEIPT

DATE 11/19/2021  
SP



HOPKINS COUNTY TAX OFFICE  
PO BOX 481  
SULPHUR SPRINGS, TX 75483  
(903) 438-4063

TAX CERTIFICATES	.....		AMOUNT PAID
			10.00
ACCOUNT NO	NAME	CERT #	
65-0263-000-002-00	JUNELL DONNIE F	210500	
		CHECK # 1424	-----
		<b>TOTAL PAID</b>	<b>10.00</b>

REMITTED BY: SUMMIT RANCH INVESTMENTS



2000 I-30 E - Greenville, TX 75402  
(903) 455-1715

12/2/2021

Re: Availability of Electric Service to CR 1120

Mr. Austin Crabill:

This letter certifies that Farmers Electric Cooperative is a Certified Electrical Service Provider at the above referenced property.

YES, Farmers Electric Cooperative is a Certified Electrical Service Provider at the above referenced subdivision.

NO, Farmers Electric Cooperative is not a Certified Electrical Service Provider at the above referenced subdivision.

YES, Farmers Electric Cooperative is available to each individual residential lot.

NO, Farmers Electric Cooperative is not available to each individual residential lot.

NOTE: Electrical service will be provided to the subdivision upon contractual agreement and receipt of payment of any Developer Aid to Construction cost which may be assessed. Electrical service will then be provided to each individual residential lot upon the completion of installation of new electrical infrastructure in the subdivision.

Should you have any questions, please feel free to contact me.

*NOTE: Confirmation that Farmers Electric Cooperative can service the above-mentioned property does not mean that electricity is readily available at the location. Easements from adjoining property owners may be needed to construct Farmers Electric facilities. If these easements cannot be obtained by the person requesting the service, this may hinder or prevent Farmers Electric from constructing the service lines to the property in question.*

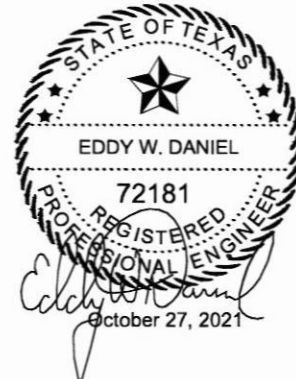
Thank you,

Patrick Covington  
Project Coordinator  
Farmers Electric Cooperative  
Office: 903-455-1715, ext. 4065  
Cell: 903-513-1331  
[pcovington@farmersselectric.coop](mailto:pcovington@farmersselectric.coop)



October 27, 2021

Mr. Mac Garrett, General Manager  
Miller Grove Water Supply Corporation  
14966 FM 1567 W  
Cumby, Texas 75433



RE: Water Utility Service to the CR 4120/ CR 1126 Development

Dear Mac:

Miller Grove Water Supply Corporation (MGWSC) has received a request for water utility service to a proposed development from Summit Ranch Investments LTD. The development is generally located on the east and west side of CR 1126 and south of CR 4120. The drawing indicates 23 lots within the development.

It appears the development is located within the certificated service area (CCN # 11279) of MGWSC and as such, MGWSC will be the retail water utility provider. There is not currently any water service to the proposed development. In order to provide adequate water service to the development, I recommend extending a minimum 4-inch waterline from the existing 4-inch waterline located at the intersection of FM 275 and CR 4120 easterly on CR 4120 to the last lot of the development. A 4-inch waterline extension will also need to be made from the existing 3-inch on CR 1126 and looped into the proposed 4-inch extension on CR 4120. The existing pump station that will serve this development have limited capacity and I recommend the Developer pay an additional \$1500.00 per lot pump station improvement fee.

The developer will be required to meet the non-standard service requirements of MGWSC and other conditions of service as may be provided in the corporation's tariff. All improvements would be at the expense of the developer. This evaluation will be valid for 6 months after which a re-evaluation may be required.

Please let me know if there are any questions.

Sincerely,

Eddy Daniel, P.E.  
Corporation Engineer

Appendix O

CERTIFICATE OF ON-SITE SEWAGE FACILITY INSPECTOR'S APPROVAL

THE STATE OF TEXAS           §

COUNTY OF HOPKINS           §

**KNOW ALL MEN BY THESE PRESENTS**, that I, the undersigned, a Licensed On-Site Sewage Facility Inspector in the State of Texas, hereby certify that I have inspected the On-Site Sewage Facilities for this plat, and the same complies with the related requirements of the Hopkins County Subdivision Regulations and the TCEQ.

*Kristy Springfield*  
On Site Inspector

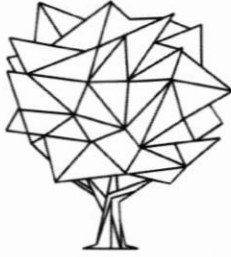
*March 7, 2022*  
Date

License No. OS0034831

Seal:



[NOTE: *The inspector may be required to be present for questioning at the presentation of the plat to the Commissioners' Court.*]



WILLCO ENGINEERING

**WillCo Engineering, PLLC**

2947 Highland Lakes Dr.

Missouri City, TX 77459

713-502-0650

[eric@willcoengineering.com](mailto:eric@willcoengineering.com)

[www.willcoengineering.com](http://www.willcoengineering.com)

# OSSF Subdivision Study Summary

## Overview

This OSSF subdivision study pertains to the proposed Oak Grove Subdivision in Hopkins County. This subdivision study follows the outline of TCEQ 285.4(c):

- A. See attached drawing package for site plan, also see the proposed plat for the overall site plan information.
- B. See attached drawing package for topographic information (provided by customer).
- C. Portions of the proposed subdivision are within FEMA Zone 'A' per the attached information and proposed plat.
- D. See attached NRCS soil data and on-site soil boring information for the soil survey.
- E. Public water service to serve proposed lots.
- F. Easements are noted in the attached drawing package and plat.
- G. Comprehensive drainage plan to be provided by other parties.
- H. See below and in attached drawing for details on types of OSSFs to be considered.
- I. Proposed subdivision does not lie within EARZ or EACZ per TCEQ GIS data.

## Soil Survey Results

The soil survey was performed using both NRCS soil data for the site and test holes bored on site using an auger. Class IV soils with are prevalent (with <30% gravel) throughout the proposed area (no season groundwater or restrictive horizons noted to depths surveyed). The results for the test hole borings area below (locations shown on attached drawing package and correspond with the numbers on this list):

- 1. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.
- 2. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.

3. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.
4. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.
5. Clay to 60". No signs of seasonal groundwater to depth.
6. Clay to 60". No signs of seasonal groundwater to depth.
7. Clay to 60". No signs of seasonal groundwater to depth.
8. Clay to 60". No signs of seasonal groundwater to depth.
9. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.
10. Clay to 60". Some gravel (<30%). No signs of seasonal groundwater to depth.

## Possible OSSF Types

Possible OSSF disposal methods with conventional treatment:

- Drip irrigation (mounding may be required)
- ET bed (mounding may be required)
- LPD bed or laterals (mounding may be required)

Possible OSSF disposal methods with aerobic treatment:

- Surface spray
- LPD bed or laterals (mounding may be required)
- Drip irrigation (mounding may be required)

Some lots may require more planning/grading work prior to building to allow for proper treatment and/or disposal. Mounding may be required where restrictive horizons exist (including hard packed gravel).

The information contained within this report and attachments are based on general information of the area and proposed layout, each lot has specific design considerations that may differ from the information provided herein and may result in different systems and/or disposal methods being used. Each lot should be reviewed individually with careful planning prior to any construction to comply with OSSF requirements.

## Additional Information

This lots within the tract as shown are adequate to support single family dwellings of typical size and an OSSF. Careful planning is required to determine feasibility of improvements, size of home, water source, and OSSF. The study considered TCEQ Ch. 285 rules governing OSSFs and local order information as on file with TCEQ. Local standards, policies, building practices, etc. will need to be reviewed for each tract as part of the design and planning process and cannot all be considered in this study.



## Attachments

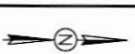
- Drawing Package
- NRCS data

1/25/2022



A handwritten signature in black ink, appearing to read "Eric Williams".

Eric Williams, P.E.  
WillCo Engineering, PLLC  
Texas Engineering Firm F-18639



**ZONING NOTES:**

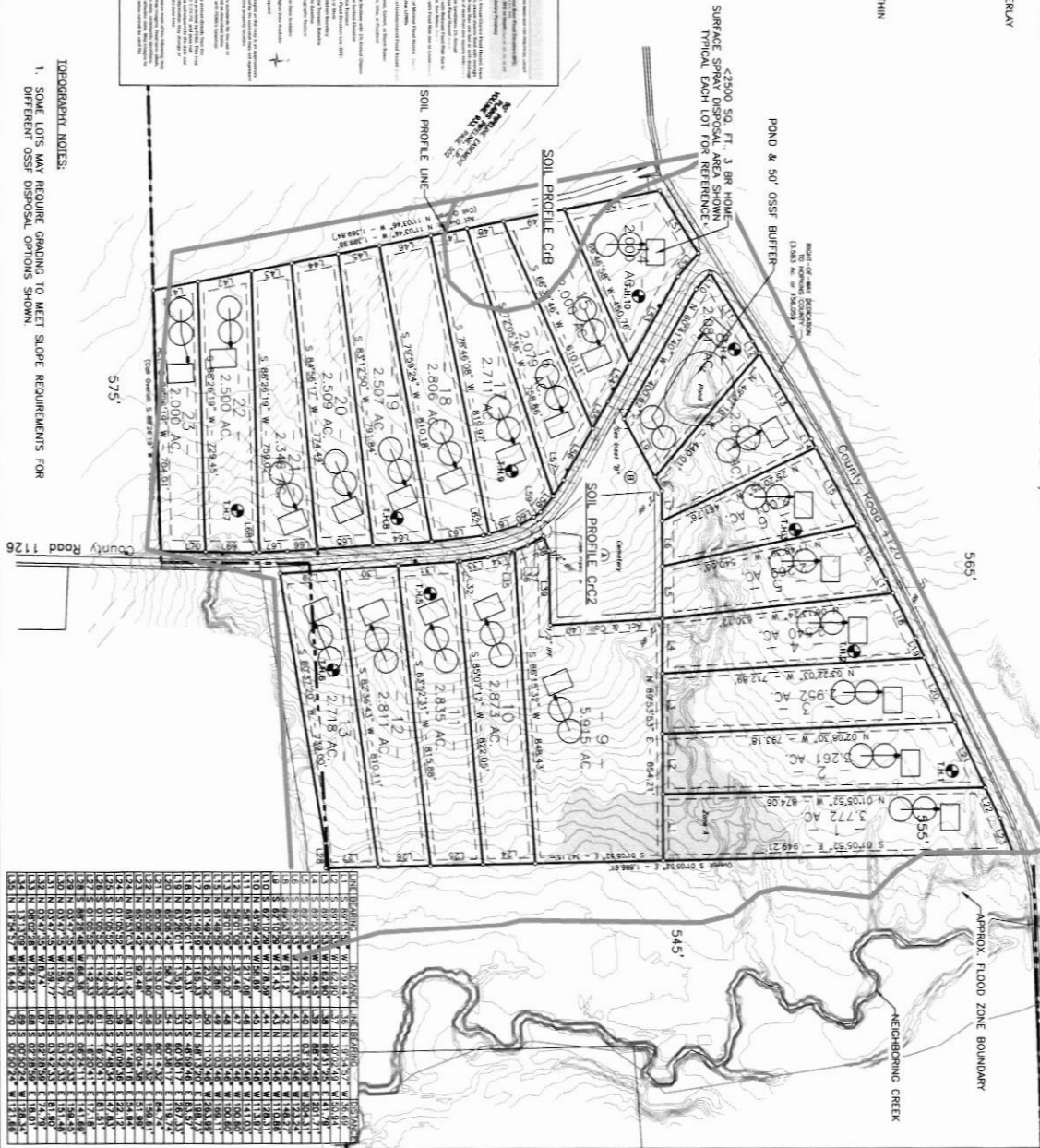
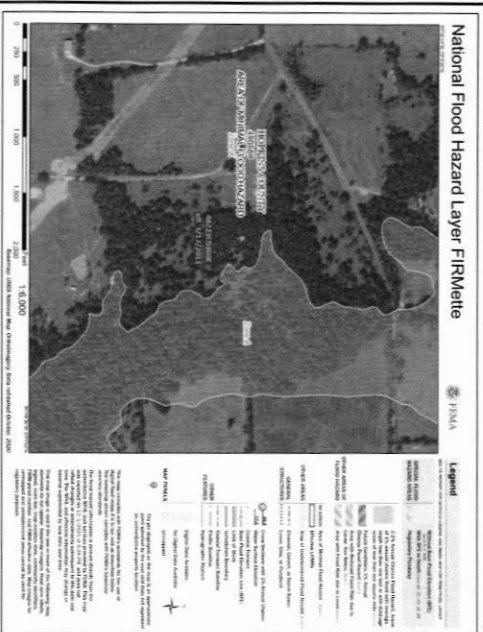
1. ITEM A: SEE SHEET 1.2, AND PROPOSED PLAT. BASED ON PROPOSED PLAT PROVIDED.
2. ITEM B: SEE SHEET 1.2. BASED ON TOPOGRAPHIC INFORMATION FROM CUSTOMER.
3. ITEM C: SEE SHEET 1 AND PROPOSED PLAT. FLOOD ZONE INFORMATION BASED ON PLAT PROVIDED - PORTIONS OF PROPOSED SUBDIVISION ARE WITHIN FEMA ZONE 'A'.
4. ITEM D: SEE ATTACHED FOR NRCGS SOIL DATA FOR SITE AS WELL AS OVERLAY SOIL INFORMATION ON SHEET 1 AND ATTACHED REPORT.
5. ITEM E: EACH HOME TO BE SERVED BY PUBLIC WATER.
6. ITEM F: SEE PROPOSED PLAT FOR EASEMENT INFORMATION.
7. ITEM G: TO BE PROVIDED BY OTHER PARTIES.
10. ITEM H: SEE ATTACHED REPORT.
11. ITEM I: N/A FOR THIS STUDY - PROPOSED PROPERTIES DO NOT LIE WITHIN EAZB OR EAGZ PER TCEQ GIS DATA.

# OSSF SUBDIVISION STUDY

PROJECT LOCATION:  
CR 4120 & CR 1126  
HOPKINS CO, TX

The public utility easement and building setback lines are defined as:

1. Thirty foot (30') wide area on the sides of each lot that share a common boundary.
2. The distance between the Public Utility easement and the sides of each lot that share a common boundary that is less than thirty feet.
3. Thirty foot (30') wide area on the sides of each lot that do not share a common boundary.
4. The distance between the Public Utility easement and the sides of each lot that do not share a common boundary.



LOT NO.	ACRES	AREA	AREA	AREA	AREA	AREA	AREA	AREA	AREA
1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
10	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
12	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
13	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
14	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
15	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
16	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
17	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
18	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
19	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
20	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
21	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
22	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
23	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
24	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
25	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
26	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
27	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
28	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
29	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
30	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
31	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
32	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
33	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
34	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
35	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
36	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
37	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
38	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
39	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
40	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
41	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
42	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
43	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
44	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
45	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
46	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
47	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
48	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
49	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
50	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1

- TOPOGRAPHIC NOTES:**
1. SOME LOTS MAY REQUIRE GRADING TO MEET SLOPE REQUIREMENTS FOR DIFFERENT OSSF DISPOSAL OPTIONS SHOWN

PRELIMINARY: RELEASED FOR PERMIT REVIEW  
PURPOSES BY ERIC WILLIAMS, PE (125763)  
ON 1/25/2022. NOT TO BE USED FOR ANY CONSTRUCTION OR ANY OTHER PURPOSE.

DRAWING TITLE:  
SITE OVERVIEW

DATE: 2022-01-25

PROJECT: 0-3770

SCALE: 1"=300'-0"

SHEET#: 1 of 2

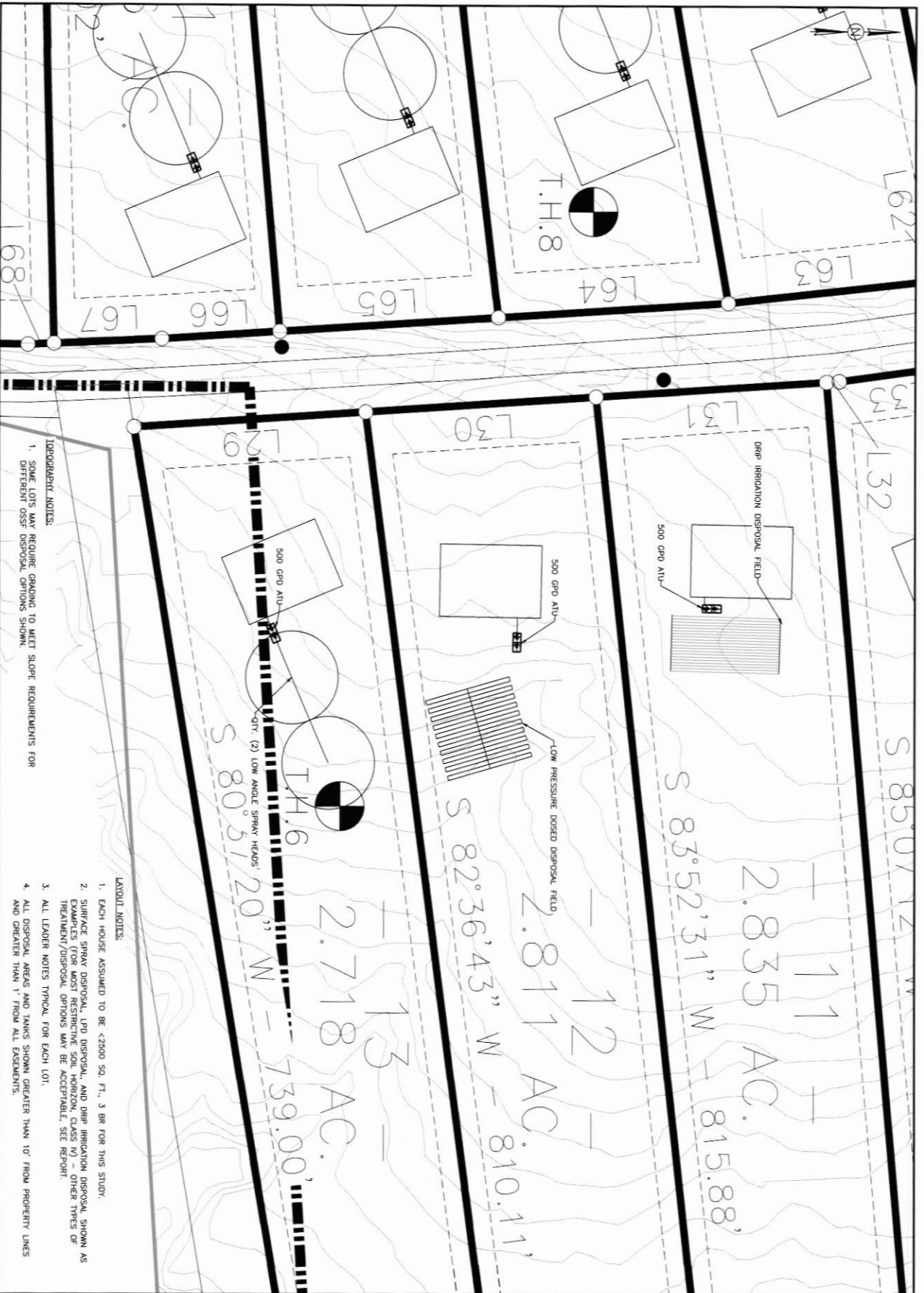
REV: 0

**WILCO ENGINEERING**  
2947 HIGHLAND LAKES DR  
MISSOURI CITY, TX 77459  
PHONE: 713-502-0650  
TEXAS FIRM #--18639

ERIC@WILCOENGINEERING.COM  
WWW.WILCOENGINEERING.COM

**CUSTOMER:**  
OMK GROVE SUBDIVISION  
CR 4120 & CR 1126  
HOPKINS CO TX

**CONTRACTOR:**

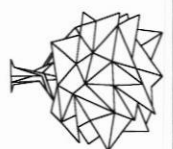


**TOPOGRAPHY NOTES:**

- SOME LOTS MAY REQUIRE GRADING TO MEET SLOPE REQUIREMENTS FOR DIFFERENT OSSF DISPOSAL OPTIONS SHOWN.

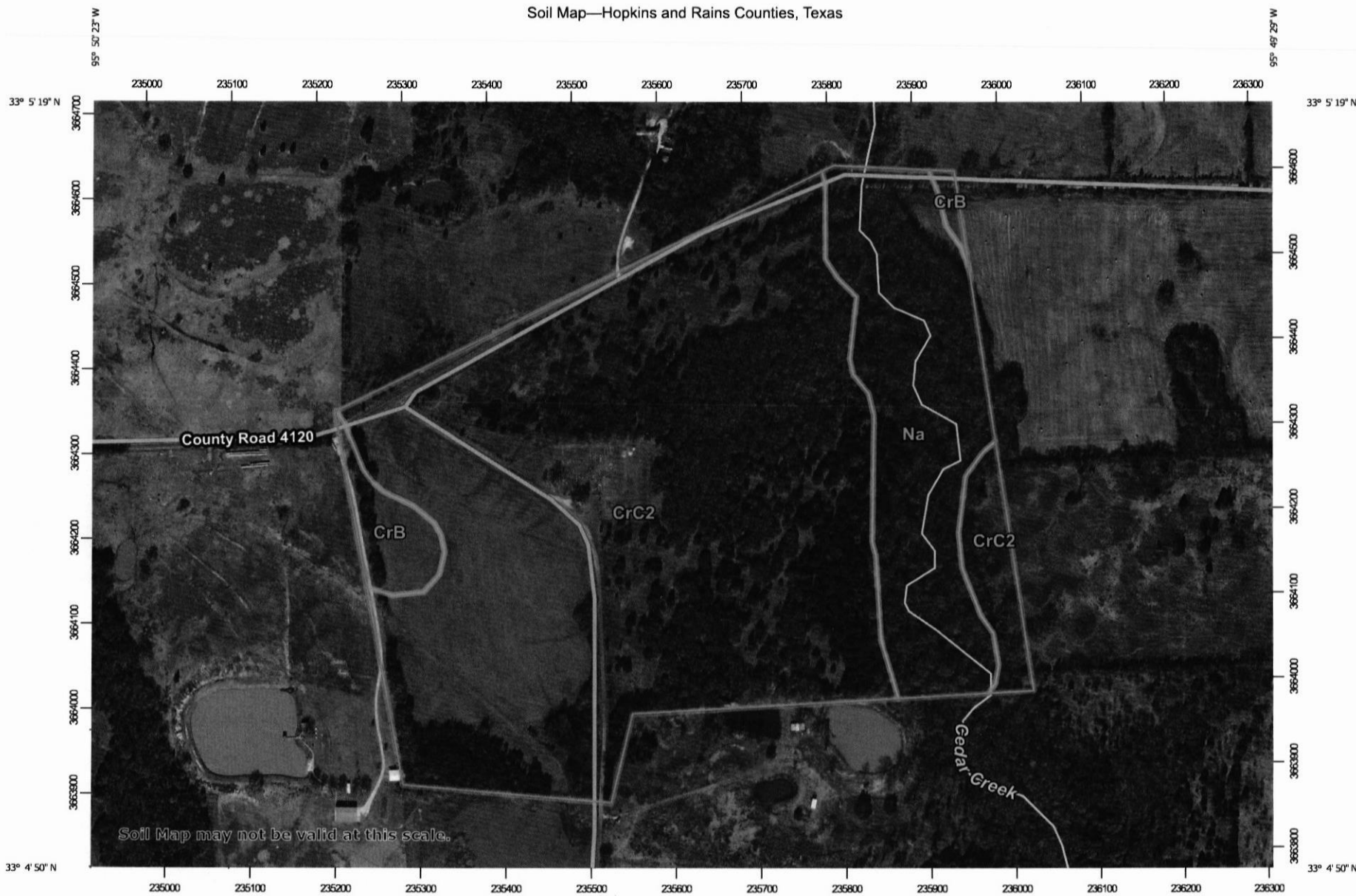
**LANDSCAPE NOTES:**

- EACH HOUSE ASSUMED TO BE <math>2900\text{ SQ. FT.}</math>, 3 BR FOR THIS STUDY.
- SURFACE SPRAY DISPOSAL, LPO DISPOSAL, AND DRIP IRRIGATION DISPOSAL SHOWN AS TYPICAL. OTHER TYPES OF DISPOSAL OPTIONS MAY BE ACCEPTABLE. SEE REPORT.
- ALL LEADER NOTES TYPICAL FOR EACH LOT.
- ALL DISPOSAL AREAS AND TANKS SHOWN GREATER THAN 10' FROM PROPERTY LINES AND GREATER THAN 1' FROM ALL OBSTACLES.

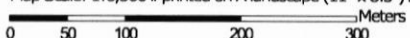
 <p><b>WILCO ENGINEERING</b>          2947 HIGHLAND LAKES DR.          MISSOURI CITY, TX 77459          PHONE: 713-902-0950          TEXAS FIRM F--18839          ERIC@WILCOENGINEERING.COM          www.wilcoengineering.com</p>	
<p><b>CUSTOMER:</b>          OAK GROVE SUBDIVISION          CR 4120 &amp; CR 1126          HOPKINS CO TX</p>	
<p><b>CONTRACTOR:</b></p>	
<p><b>PRELIMINARY - RELEASED FOR PERMIT REVIEW PURPOSES BY ERIC WILLIAMS, PE (125763) ON 1/25/2022. NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.</b></p>	
<p><b>DRAWING TITLE:</b></p>	
<p><b>EXAMPLE OSSF LAYOUTS</b></p>	
DATE:	2022-01-25
PROJECT:	0-2770
SCALE:	1"=60'-0"
SHEET#:	2 of 2
REV:	0



Soil Map—Hopkins and Rains Counties, Texas







































Map Scale: 1:6,360 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84



### MAP LEGEND

- Area of Interest (AOI)**
-  Area of Interest (AOI)
- Soils**
-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points
- Special Point Features**
-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hopkins and Rains Counties, Texas  
 Survey Area Data: Version 17, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

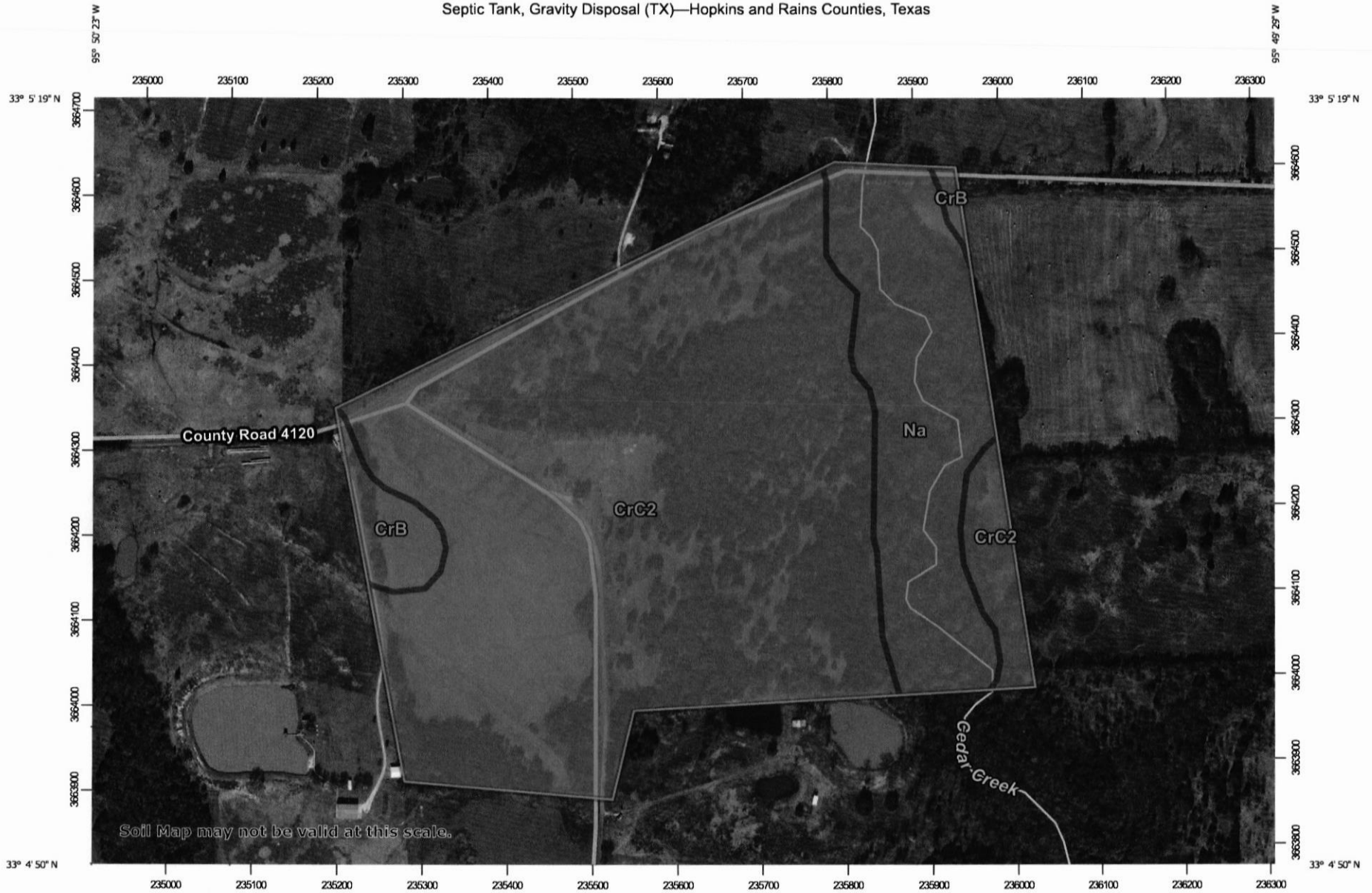
Date(s) aerial images were photographed: Nov 24, 2019—Dec 7, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

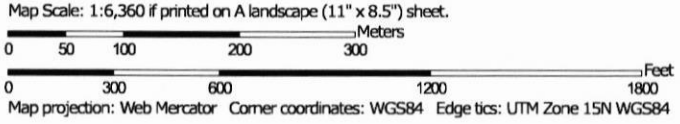
## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CrB	Crockett loam, 1 to 3 percent slopes	3.4	3.2%
CrC2	Crockett loam, 2 to 5 percent slopes, eroded	81.3	77.5%
Na	Nahatche soils, frequently flooded	20.2	19.2%
<b>Totals for Area of Interest</b>		<b>104.8</b>	<b>100.0%</b>

Septic Tank, Gravity Disposal (TX)—Hopkins and Rains Counties, Texas




Soil Map may not be valid at this scale.



## MAP LEGEND

### Area of Interest (AOI)





 Area of Interest (AOI)

### Background





 Aerial Photography

### Soils





#### Soil Rating Polygons

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available


#### Soil Rating Lines

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

#### Soil Rating Points

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hopkins and Rains Counties, Texas  
 Survey Area Data: Version 17, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 24, 2019—Dec 7, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Septic Tank, Gravity Disposal (TX)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
CrB	Crockett loam, 1 to 3 percent slopes	Very limited	Crockett (85%)	Clayey (1.00)	3.4	3.2%
				Depth to bedrock (0.10)		
CrC2	Crockett loam, 2 to 5 percent slopes, eroded	Very limited	Crockett, eroded (100%)	Clayey (1.00)	81.3	77.5%
				Depth to bedrock (0.71)		
Na	Nahatche soils, frequently flooded	Very limited	Nahatche (95%)	Flooding (1.00)	20.2	19.2%
				Depth to saturated zone (1.00)		
<b>Totals for Area of Interest</b>					<b>104.8</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Very limited	104.8	100.0%
<b>Totals for Area of Interest</b>	<b>104.8</b>	<b>100.0%</b>

## Description

The Septic Tank, Gravity Disposal (TX) interpretation is a tool for assessing soil limitations for septic systems designed to treat household effluent. Suburban dwellings and farm and ranch homesteads, outbuildings, and recreational facilities require a means to safely dispose of effluent. The ratings are not intended to substitute for or replace the need for an onsite soil investigation to determine a site's soil restrictions and suitability. The interpretation ratings simply identify limiting soil features that can be found in the soil mapping unit and that may exist on site.

The Texas Commission on Environmental Quality publishes criteria and rules governing the location and installation of Septic Tank, Gravity Disposal systems. These rules and criteria are contained in "Texas Commission on Environmental Quality - TCEQ; Chapter 285: On-Site Sewage Facilities". Onsite investigation, evaluation, and system design must be conducted by a qualified professional in compliance with TCEQ policy, rules, and design guidelines.

Septic tanks, gravity disposal are gravity absorptive drain fields or bottomless chambers that are linked together with solid walled pipe. These gravity disposal systems allow effluent to percolate through an absorptive drain field for treatment. The centerline depth is assumed to be 18 inches or deeper. Only the soil between depths of 18 and 60 inches is considered in making the ratings. Soil properties and site features considered are those that affect the absorption of the effluent, those that affect the construction and maintenance of the system, and those that may affect public health.

Soil properties and qualities that affect the absorption of the effluent are depth to a seasonal high water table, depth to bedrock, depth to a cemented pan, and susceptibility to flooding or ponding. Shallow depth to bedrock, ice, or a cemented pan interferes with installation. Excessive slope may result in lateral seepage and surfacing of the effluent in down-slope areas. In addition, soil erosion is a hazard where absorption fields are installed in steep soils.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth less than 2 feet below the distribution lines. In these soils, the absorption field may not adequately filter the effluent, particularly when the system is new; consequently, ground water supplies may be contaminated.

Ratings are both numerical and verbal. Numerical ratings or values indicate the relative severity or degree of limitation for individual soil restrictive (limiting) features. Ratings are shown for limiting soil features as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00), and the point at which the soil feature is not a limitation (0.00). Non-limiting soil features with a numerical rating of zero are not listed.

Rating class terms indicate the extent to which the soils are limited by the soil features that affect the soil interpretation. Verbal soil rating classes are based on the highest numerical rating for the most limiting soil feature(s) considered in the rating process. The "not limited" class (numerical value for the most restrictive

feature = 0) indicates that the soil has no limiting features for the specified use. The "somewhat limited" class (numerical value for the most restrictive feature .01 to .99) indicates that the soil has limiting features for the specified use that can be overcome with proper planning, design, installation, and management. The effort required to overcome a soil limitation increases as the numerical rating increases. The "very limited" class (numerical value for the most restrictive feature = 1.00) indicates that the soil has one or more very limiting features that can only be overcome with special planning, major soil modification, special design, or significant management practices.

Lesser soil restrictive features have a lower numerical value than the maximum used to rate the soil, and they are identified to provide the user with additional information about soil limitations for the specific use. Lesser soil restrictive features also need to be considered in planning, design, installation, and management.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation is needed to validate these interpretations and to confirm the identity of the soil on a given site.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

## Hopkins and Rains Counties, Texas

### CrC2—Crockett loam, 2 to 5 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* dkl1  
*Elevation:* 200 to 800 feet  
*Mean annual precipitation:* 32 to 45 inches  
*Mean annual air temperature:* 64 to 70 degrees F  
*Frost-free period:* 230 to 275 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Crockett, eroded, and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Crockett, Eroded

##### Setting

*Landform:* Ridges  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from shale of tertiary age

##### Typical profile

*H1 - 0 to 4 inches:* loam  
*H2 - 4 to 18 inches:* clay  
*H3 - 18 to 35 inches:* clay  
*H4 - 35 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 2 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 10 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 10.0  
*Available water supply, 0 to 60 inches:* Low (about 4.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated): 4e*  
*Hydrologic Soil Group: D*  
*Ecological site: R086AY003TX - Northern Claypan Prairie*  
*Hydric soil rating: No*

## **Data Source Information**

Soil Survey Area: Hopkins and Rains Counties, Texas  
Survey Area Data: Version 17, Sep 10, 2021

## Hopkins and Rains Counties, Texas

### Na—Nahatche soils, frequently flooded

#### Map Unit Setting

*National map unit symbol:* dklg  
*Elevation:* 100 to 400 feet  
*Mean annual precipitation:* 40 to 52 inches  
*Mean annual air temperature:* 64 to 70 degrees F  
*Frost-free period:* 235 to 270 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Nahatche and similar soils:* 95 percent  
*Minor components:* 5 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Nahatche

##### Setting

*Landform:* Flood plains  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Parent material:* Loamy alluvium of holocene age

##### Typical profile

*H1 - 0 to 7 inches:* clay loam  
*H2 - 7 to 65 inches:* loam  
*H3 - 65 to 80 inches:* stratified loam to silty clay loam

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* FrequentNone  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 5 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 10.0  
*Available water supply, 0 to 60 inches:* High (about 9.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* B/D

*Ecological site:* R087BY007TX - Loamy Bottomland  
*Hydric soil rating:* Yes

**Minor Components**

**Unnamed**

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Hopkins and Rains Counties, Texas  
Survey Area Data: Version 17, Sep 10, 2021

## Hopkins and Rains Counties, Texas

### CrB—Crockett loam, 1 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2ssh4

*Elevation:* 270 to 730 feet

*Mean annual precipitation:* 38 to 47 inches

*Mean annual air temperature:* 62 to 65 degrees F

*Frost-free period:* 230 to 235 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Crockett and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Crockett

##### Setting

*Landform:* Ridges

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluvium

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loamy residuum weathered from shale of Cretaceous age

##### Typical profile

*A - 0 to 8 inches:* loam

*Btss - 8 to 25 inches:* clay

*Btkss - 25 to 45 inches:* clay

*Bck - 45 to 53 inches:* clay

*Cdk - 53 to 72 inches:* clay loam

##### Properties and qualities

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* 43 to 60 inches to densic bedrock

*Drainage class:* Moderately well drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.03 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 30 percent

*Gypsum, maximum content:* 2 percent

*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 10.0



*Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 3e*

*Hydrologic Soil Group: D*

*Ecological site: R086AY003TX - Northern Claypan Prairie*

*Hydric soil rating: No*

**Minor Components**

**Normangee**

*Percent of map unit: 10 percent*

*Landform: Ridges*

*Landform position (two-dimensional): Summit, shoulder*

*Landform position (three-dimensional): Interfluve*

*Down-slope shape: Linear*

*Across-slope shape: Convex*

*Ecological site: R086AY003TX - Northern Claypan Prairie*

*Hydric soil rating: No*

**Wilson**

*Percent of map unit: 5 percent*

*Landform: Stream terraces*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Concave*

*Ecological site: R086AY003TX - Northern Claypan Prairie*

*Hydric soil rating: No*

**Data Source Information**

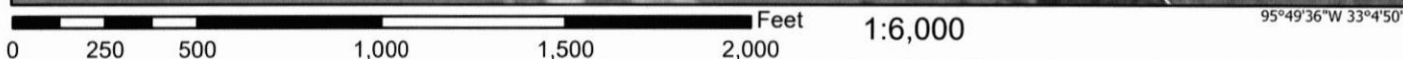
Soil Survey Area: Hopkins and Rains Counties, Texas

Survey Area Data: Version 17, Sep 10, 2021

# National Flood Hazard Layer FIRMette



95°50'14"W 33°5'20"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

<b>SPECIAL FLOOD HAZARD AREAS</b>		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
<b>OTHER AREAS OF FLOOD HAZARD</b>		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
<b>OTHER AREAS</b>		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
<b>GENERAL STRUCTURES</b>		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
<b>OTHER FEATURES</b>		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
<b>MAP PANELS</b>		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/1/2021 at 6:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DATE 03/09/2022

HOPKINS COUNTY CLERK  
128 JEFFERSON STREET, SUITE C  
SULPHUR SPRINGS TEXAS 75482

RECEIPT # 208482

TIME 08:23

FILE # M29828

RECEIVED OF: SUMMIT RANCH INVEST

FOR: OAK GROVE SUBDIVISION

DESCRIPTION: PRELIMINARY SUBDIVISION APPLICATION FEE - 23 LOTS  
W/OUT DESIGNATED FLOODPLAIN-PAID IN FULL/LC/LC

AMOUNT DUE \$1,230.00

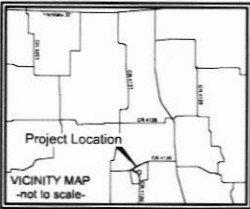
AMOUNT PAID \$1,230.00

BALANCE \$.00

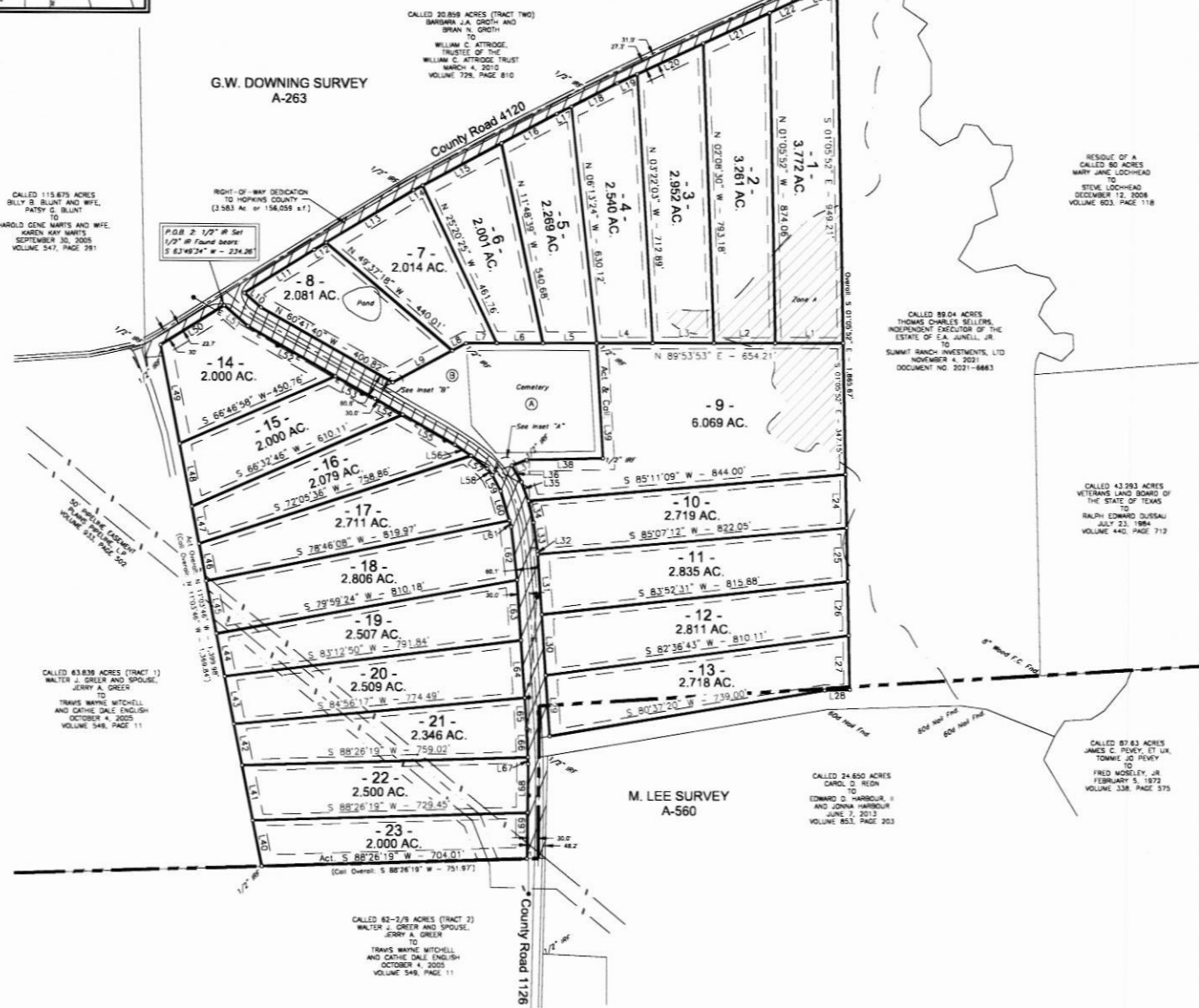
PAYMENT TYPE K  
CHECK NO 1460  
COLLECTED BY LC

OAK GROVE SUBDIVISION  
HOPKINS COUNTY, TEXAS

S.R. CHERRY SURVEY  
A-145



CALLED 20.549 ACRES (TRACT ONE)  
SANDRA JANE JORDAN  
TO  
KEVIN COOK AND WIFE  
DANN GRAY  
FEBRUARY 17, 2010  
VOLUME 177, PAGE 752



CALLLED 115.879 ACRES  
BILLY B. BLUNT AND WIFE,  
PATRY C. BLUNT  
TO  
HAROLD GENE MARTS AND WIFE,  
KAREN KAY MARTS  
SEPTEMBER 30, 2005  
VOLUME 547, PAGE 281

P.O.B. 2 1/2" R Set  
1/2" R Found bears  
N 82°48'34" W - 224.26'

CALLLED 30.889 ACRES (TRACT TWO)  
SANDRA J.A. GRIFFIN AND  
BRIAN N. GRIFFIN  
TO  
WILLIAM C. ATTRIDGE,  
TRUSTEE OF THE  
WILLIAM C. ATTRIDGE TRUST  
MARCH 4, 2010  
VOLUME 729, PAGE 810

G.W. DOWNING SURVEY  
A-263

CALLLED 89.04 ACRES  
THOMAS CHARLES BELLER,  
INDEPENDENT EXECUTOR OF THE  
ESTATE OF E.A. JANELL, JR.  
TO  
SUMMIT RANCH INVESTMENTS, LTD  
NOVEMBER 4, 2021  
DOCUMENT NO. 2021-6663

RESIDUE OF A  
CALLED 85 ACRES  
MARY JANE LOCKHEAD  
TO  
STEVE LOCKHEAD  
DECEMBER 12, 2008  
VOLUME 603, PAGE 118

CALLLED 43.293 ACRES  
VETERANS LAND BOARD OF  
THE STATE OF TEXAS  
TO  
RALPH EDWARD DUSAU  
JULY 23, 1984  
VOLUME 482, PAGE 712

CALLLED 24.560 ACRES  
CAROL D. REON  
EDWARD D. HARBOUR, II  
AND JONNA HARBOUR  
JUNE 7, 2013  
VOLUME 853, PAGE 203

M. LEE SURVEY  
A-560

CALLLED 85-1/8 ACRES (TRACT 2)  
WALTER Z. GREER AND SPOUSE,  
JERRY A. GREER  
TO  
TRAVIS WAYNE MITCHELL  
AND CATHE DALE ENGLISH  
OCTOBER 4, 2005  
VOLUME 548, PAGE 11

PRELIMINARY



**LEGEND**

- Right-of-way Dedication
- FEMA Floodplain Zone A
- Pipeline
- Overhead Electric Line
- Lot Lines
- County Road Centerline
- Existing Easement
- Proposed Utility Easement (widths as stated in notes)
- Iron Rod Found
- Iron Rod Set
- Timber Spike Found
- Public Utility Easement
- Power Pole

OWNER: SUMMIT RANCH INVESTMENTS, LTD.  
ZACH POTTS  
P.O. BOX 1248  
SAN MARCOS, TEXAS 78667  
(512) 396-2115

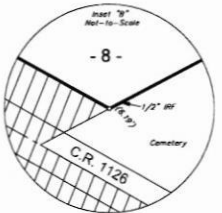
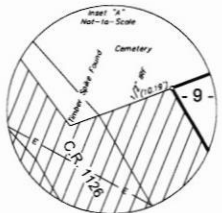
PRELIMINARY PLAT  
OAK GROVE SUBDIVISION  
G.W. DOWNING SURVEY, A-263 AND M. LEE SURVEY, A-560  
HOPKINS COUNTY, TEXAS

DRAWN BY: AJS  
SURVEYED BY: JY  
DATE: 01-24-2023  
SCALE: 1" = 200'  
SHEET 1 OF 3  
FILE NO. 2477-BUR-DWG

JDS SURVEYING, INC.  
WWW.JOSSURVEY.COM  
PROFESSIONAL SURVEYING & MAPPING  
1836 E.L.S. Time Registration No. 1019618  
138 W. Main, Van, TX 75750 - Phone: (800) 963-2333

(A)  
CALLLED 1.0333 ACRES  
E.A. JANELL AND WIFE,  
DONNIE P. JANELL  
TO  
THE LONG CEMETERY  
JULY 20, 1979  
VOLUME 378, PAGE 718

(B)  
CALLLED 11.119 ACRES  
E.A. JANELL, JR.  
TO  
THE LONG CEMETERY  
NOVEMBER 13, 2000  
VOLUME 718, PAGE 777



LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S 89°33'53" W	179.94	L36	N 30°22'49" W	50.94
L2	S 89°33'53" W	162.90	L37	N 69°31'29" E	41.78
L3	S 89°33'53" W	162.90	L38	N 88°47'46" E	201.71
L4	S 89°33'53" W	148.43	L39	N 03°12'30" W	304.31
L5	S 89°33'53" W	142.15	L40	N 11°03'46" W	123.24
L6	S 89°33'53" W	122.43	L41	N 11°03'46" W	148.27
L7	S 89°33'53" W	81.12	L42	N 11°03'46" W	110.86
L8	S 89°33'53" W	81.12	L43	N 11°03'46" W	128.31
L9	S 89°33'53" W	41.43	L44	N 11°03'46" W	113.97
L10	S 89°33'53" W	178.59	L45	N 11°03'46" W	41.03
L11	S 89°33'53" W	58.69	L46	N 11°03'46" W	100.60
L12	S 89°33'53" W	37.46	L47	N 11°03'46" W	100.60
L13	S 89°33'53" W	270.20	L48	N 11°03'46" W	189.11
L14	S 89°33'53" W	26.86	L49	N 11°03'46" W	263.99
L15	S 89°33'53" W	237.52	L50	N 81°12'20" E	198.73
L16	S 89°33'53" W	165.33	L51	N 48°59'46" E	83.57
L17	S 89°33'53" W	143.33	L52	S 60°36'17" E	267.33
L18	S 89°33'53" W	135.91	L53	S 60°36'17" E	119.24
L19	S 89°33'53" W	58.79	L54	S 60°14'32" E	84.74
L20	S 89°33'53" W	193.07	L55	S 60°14'32" E	158.61
L21	S 89°33'53" W	142.33	L56	S 60°04'38" E	51.99
L22	S 89°33'53" W	92.48	L57	S 51°48'18" E	54.94
L23	S 89°33'53" W	101.42	L58	S 36°09'36" E	22.12
L24	S 01°05'52" E	142.33	L59	S 27°48'34" E	47.83
L25	S 01°05'52" E	142.33	L60	S 16°20'41" E	81.51
L26	S 01°05'52" E	142.33	L61	S 16°20'41" E	17.18
L27	S 01°05'52" E	142.33	L62	S 06°24'11" E	141.69
L28	S 89°33'53" W	56.38	L63	S 23°47'33" E	159.53
L29	S 03°47'35" W	160.70	L64	S 03°47'33" E	151.48
L30	S 03°47'35" W	159.77	L65	S 03°47'33" E	81.50
L31	S 03°47'35" W	76.77	L66	S 02°28'59" E	74.79
L32	S 03°47'35" W	76.77	L67	S 02°28'59" E	18.03
L33	S 02°28'59" W	76.22	L68	S 00°50'24" W	128.34
L34	S 13°13'09" W	58.78	L69	S 00°50'24" W	121.66
L35	S 19°54'57" W	53.14			

