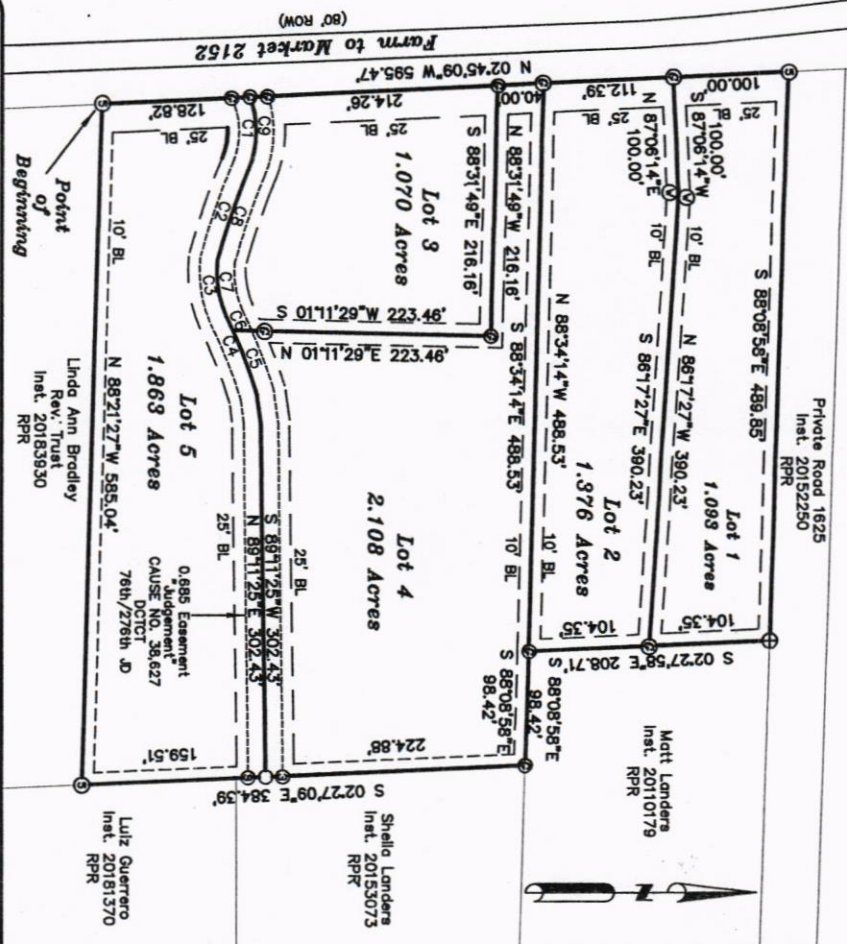




**JAMES G WEBSTER JR**  
**NOTARY PUBLIC**  
**STATE OF TEXAS**  
 MY COMM. EXP. 05/27/23  
 NOTARY ID 12457276-5

#648



Curve Data: Lot 3

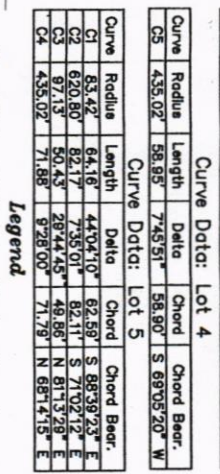
Curve	Radius	Length	Delta	Chord	Chord Bear.
C1	435.02'	12.93'	142.09°	12.83'	S 64°21'10"W
C2	620.80'	82.17'	29°44'45"	49.86'	S 61°13'29"W
C3	97.13'	50.43'	7°35'01"	82.11'	N 71°02'12"E
C4	435.02'	71.88'	142°01'10"	82.59'	N 88°39'23"W

Curve Data: Lot 4

Curve	Radius	Length	Delta	Chord	Chord Bear.
C5	435.02'	58.95'	7°45'37"	58.80'	S 69°05'20"W

Curve Data: Lot 5

Curve	Radius	Length	Delta	Chord	Chord Bear.
C1	83.42'	64.16'	44°04'10"	62.59'	S 88°39'23"E
C2	620.80'	82.17'	29°44'45"	49.86'	S 61°13'29"E
C3	97.13'	50.43'	7°35'01"	82.11'	N 71°02'12"E
C4	435.02'	71.88'	142°01'10"	82.59'	N 88°39'23"E



**Lots 1-5**  
 7.511 Acres  
 Subdivided

**CRUZ SUBDIVISION**  
 An Addition to Titus County, Texas

STATE OF TEXAS  
 COUNTY OF TITUS

**OWNERS DEDICATION:**  
 I, Alberto Cruz and Lilian Cruz, do hereby adopt this plat, designating the herein above described property as the Cruz Subdivision, and do accept this plat as my plan for dividing into lots and do dedicate to the public forever the streets, alleys and easements, if any, as shown.

Witness my hand this:  
 25 day of Oct 2021

Alberto Cruz  
 Lilian Cruz

Notary Public  
 STATE OF TEXAS  
 COUNTY OF TITUS

Approved by the Titus County Environmental Officer, this is the  
 25 day of October 2021

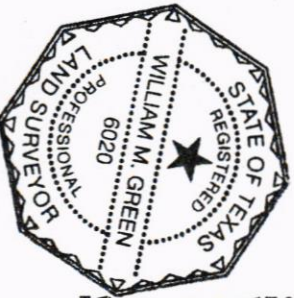
STATE OF TEXAS  
 COUNTY OF TITUS

**CERTIFICATE OF COMMISSIONERS COURT**  
 Approved by the Commissioners Court of Titus County Texas, this the  
 25 day of Oct 2021

County Judge  
 Green Lee

Notary Public  
 STATE OF TEXAS  
 COUNTY OF TITUS

Approved by the Titus County Environmental Officer, this is the  
 25 day of October 2021



**Green Land Surveying**  
 1584 CR 3318  
 Pittsburg, Texas

**DESCRIPTION OF PROPERTY SURVEYED:**

Being a 7.511 acre tract of land conveyed to Alberto and Lilian Cruz by deed recorded as Instrument No. 20171658, the same being the northwest corner of a tract of land conveyed to Linda Ann Bradley, Revocable Trust, by deed recorded as Instrument No. 20183930, RPR, this POB is also in the east right of way of Farm to Market 2152 (80' ROW).  
 THENCE: North 02 degrees 49 minutes 08 seconds West, with said road for a distance of 585.47 feet to a 5/8" Steel Rod Found for the northeast corner of this tract, same being the northeast corner of Private Road 1625 as No. 20183930, RPR.  
 THENCE: South 88 degrees 08 minutes 58 seconds East with the south line of said private road for a distance of 489.85 feet to a 1/2" Coped Steel Rod Found for the northeast corner of a tract of this tract, same being the northeast corner of a tract of land conveyed to Matt Landers by deed recorded as Instrument No. 20110176, RPR.  
 THENCE: South 02 degrees 27 minutes 58 seconds East with the west line of said Landers tract for a distance of 208.71 feet to a 1/2" Coped RPLS 6020" Steel Rod Set (SRS) for an all corner of this tract and the southeast corner of said Landers tract.  
 THENCE: South 88 degrees 08 minutes 58 seconds East with the south line of said Landers tract for a distance of 84.42 feet to a 5/8" Steel Rod Found for the northeast corner of this tract, same being the northeast corner of the north line of said Landers tract, as recorded as Instrument No. 20153073, RPR.  
 THENCE: South 02 degrees 27 minutes 09 seconds East, passing the southeast corner of a tract of land conveyed to Luiz Guerrero by deed recorded as Instrument No. 20181370, RPR, same also being the northeast corner of said Bradley tract.  
 THENCE: North 88 degrees 21 minutes 27 seconds West for a distance of 585.04 feet to the POINT OF BEGINNING.

This tract contains 7.511 acres of land.

**NOTES:**

1. Bearings are based on NAD 83 Texas North Central, as observed.
2. No Easement Records Search was made by this office.
3. This Survey was made without the benefit of a current Title Commitment and may be subject to record evidence which was not available for consideration.
4. Protective Structures for water wells are exempted from the Building Line set back (BL) requirements.
5. 25' BL Front Yard Set Backs - 10' BL Side and Back Yard

**J.J. Dew Survey**  
 Abstract No. 156  
 Titus County, Texas

**SURVEYOR'S CERTIFICATION**

I, the undersigned, hereby certify, that this plat was prepared from the findings of a Survey made on the ground and under my supervision, of the property shown. This plat was made in accordance with the procedures and practices as established by the Texas Board of Land Surveying, Practice Act, as amended.

GIVEN UNDER MY HAND AND SEAL, this July 16th, 2021.

WILLIAM M. GREEN  
 Registered Professional Land Surveyor, No. 6020



**FILED**  
AT 8:00 O'CLOCK AM

APR 19 2017

DEBRA ABSTON, CLERK, DISTRICT COURT  
TITUS COUNTY, TEXAS

*[Signature]* DEPUTY

CAUSE NO. 38,627

JOHNNY W. CROLEY  
and PEGGY CROLEY

VS.

LYNDA BRADLEY,  
SHEILA LANDERS, and  
BILLIE PARR

\*  
\*  
\*  
\*  
\*  
\*  
\*

IN THE DISTRICT COURT OF

TITUS COUNTY, TEXAS

76TH/276TH JUDICIAL DISTRICT

JUDGMENT

On the 26th day of August, 2016, the above-captioned matter came before the Court for trial, and Plaintiffs JOHNNY W. CROLEY and PEGGY CROLEY appeared by PEGGY CROLEY and by their attorney Michael P. Setty and announced ready, and Defendants LYNDA BRADLEY, SHEILA LANDERS, and BILLIE PARR appeared by their attorney Lance W. Hinson and announced ready, and Defendant DAVID CROLEY also appeared.

After presentation of the testimony, evidence and argument of Counsel, the Court finds as follows:

I. That Plaintiffs are owners of the following described real property located in Titus County, Texas:

3.977 acres (Dominant Estate)

Being a tract of land located in the Joseph J. Dew Survey, Abstract No. 156, Titus County, Texas, and being all of a called 3.981 acre tract (Tract No. 6) devised to Johnny Croley in the *Last Will and Testament of Lois Lee Croley* as found in Volume 121, Page 47 of the Probate Records of Titus County, Texas, and being more particularly described as follows:

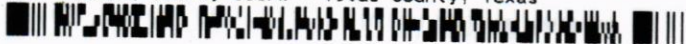
Beginning at a 5/8" iron rod found, on the south side of a 4" wooden fence corner, at the southeast corner of said Tract No. 6 and the northeast corner of a called 10 acre tract conveyed to Agustin Castanon, et al in a Deed found in Volume 1844, Page 188 of the Real Property Records of Titus County, Texas, the same lying in a west line of a called 210.843 acre tract conveyed to Mack

*Johnny W. Croley and Peggy Croley v. Lynda Bradley, Sheila Landers, and Billie Parr -*  
JUDGMENT

DISTRICT COURT OF TITUS COUNTY, TEXAS  
A TRUE COPY  
of the original hereof, I certify  
**MARCUS CARLOCK**  
District Court Clerk  
Titus County, Texas  
Title *[Signature]* of *[Signature]* 20  
By *[Signature]*  
Deputy Clerk

Page 1 of 6

20214917 EASE  
11/01/2021 03:33:40 PM Total Pages: 7 Fee: 0.00  
Joan Newman, County Clerk - Titus County, Texas



McFarland in a Deed known as Instrument No. 20152252 of the Public Records of Titus County, Texas;

Thence South 87°28'38" West, generally along a fence, along the south line of said Tract No. 6 and the north line of said 10 acre tract for a distance of 370.50 feet to a 1/2" iron rod with a cap marked 'Denney' set at the southwest corner of said Tract No. 6 and the southeast corner of a called 3.981 acre tract (Tract No. 4) described in said Will, from which a 4" wooden fence corner bears North 16°11'02" West a distance of 1.57 feet, and a 4 feet tall 5/8" iron rod found bears North 08°30'41" East a distance of 1.26 feet;

Thence North 04°00'40" West, generally along a fence, along the west line of said Tract No. 6 and the east line of said Tract No. 4, and at a distance of approximately 407.5 feet passing beside a 4" wooden fence corner, then continuing on and at a distance of 440.30 feet passing a 1/2" iron rod with a cap marked 'Denney' set at a southeast corner of a 0.685 acre Ingress/Egress Access Easement surveyed out this November 2016, then continuing on along an east line of said easement for a total distance of 455.31 feet to a 5/8" iron rod found, on the northwest side of a 1/2" iron rod found, at the northwest corner of said Tract No. 6, the northeast corner of said Tract No. 4, the southeast corner of a called 3.981 acre tract (Tract No. 5) described in said Will (the same being conveyed to Sheila K. Landers in a Deed known as Instrument No. 20153073 of the Public Records of Titus County, Texas), an ell corner of said easement and the southwest corner of a called 3.981 acre tract (Tract No. 7) described in said Will (the same being conveyed to Bennie Bradley and wife, Linda Bradley in a Deed found in Volume 1461, Page 175 of the Real Property Records of Titus County, Texas);

Thence North 87°28'38" East along the south line of said Tract No. 7, a south line of said easement and the north line of said Tract No. 6, and at a distance of 27.36 feet passing a 1/2" iron rod with a cap marked 'Denney' set at a southeast corner of said easement, then continuing on and at a distance of approximately 34 feet passing the beginning of a fence, then continuing on, generally along a fence, for a total distance of 390.82 feet to a 5/8" iron rod found at the northeast corner of said Tract No. 6 and the southeast corner of said Tract No. 7, the same lying in a west line of a called 30.000 acre tract conveyed to Mack McFarland in a Deed known as Instrument No. 20152250 of the Public Records of Titus County, Texas, from which a 5/8" iron rod found at the northeast corner of said Tract No. 7 and an ell corner of said 30.000 acre tract bears North 01°23'36" West a distance of 432.08 feet (and from this a 12" wooden fence corner bears North 08°29'36" East 8.15 feet, a 60d nail found, in or nearly in a north line of said 30.000 acre tract, bears North 01°43'23" West 49.96 feet, and a 5/8" iron rod with a cap marked 'Wright' found in a south line of said 30.000 acre tract and at a northwest corner of the remainder of said Tract No. 5 bears South 87°30'45" West 711.68 feet);

Thence South 01°27'12" East, generally along a fence, along the east line of said Tract No. 6 and a west line of said 30.000 acre tract, and at a distance of approximately 305.5 feet passing a southwest corner of said 30.000 acre tract and a northwest corner of said 210.843 acre tract, then continuing on along a west line of said 210.843 acre tract for a total distance of 455.23 feet to the place of beginning, and containing 3.977 acres of land.

2. That Plaintiffs have used the current path or roadway from their above-listed property to Greenhill Road in open, continuous and uninterrupted use for a period exceeding ten (10) years;

3. That Plaintiffs should continue to utilize that path or roadway, as their access easement, such easement to be thirty feet (30') in width centered on the existing path or roadway;

4. That the current path or roadway from Plaintiffs' above-described property is located on properties owned in part by the Defendants; and

5. That Plaintiffs should be responsible for maintenance of the easement, and shall not have the ability to fence that easement.

IT IS THEREFORE ADJUDGED that

1. Plaintiffs JOHNNY W. CROWLEY and PEGGY CROWLEY shall have an unexclusive easement from their above-described 3.977 acre tract to Greenhill Road along the following described easement:

*0.685 acre Ingress/Egress Access Easement (30' wide)*

Being a tract of land located in the Joseph J. Dew Survey, Abstract No. 156, Titus County, Texas, and being part of a called 3.981 acre tract (Tract No. 2) devised to Billie Parr in the *Last Will and Testament of Lois Lee Croley* as found in Volume 121, Page 47 of the Probate Records of Titus County, Texas, part of the called 3.981 acre tract (Tract No. 4) devised to Patricia Alford in said Will, part of the called 3.981 acre tract (Tract No. 5) devised to Sandra Cain in said Will (the same being conveyed to Sheila K. Landers in a Deed known as Instrument No. 20153073 of the Public Records of Titus County, Texas), and part of the called 3.981 acre tract (Tract No. 7) devised to David Croley in said Will (the same being conveyed to Bennie Bradley and wife, Linda Bradley in a Deed found in Volume 1461, Page 175 of the Real Property Records of Titus County, Texas) and being more particularly described as follows:

Beginning at a 1/2" iron rod with a cap marked "Denney" set in the west line of said Tract No. 2, the eastern right-of-way line of Texas State Farm to Market Road No. 2152, and the east line of an 80 feet wide strip conveyed to the State of Texas in a Deed found in Volume 206, Page 503 of the Deed Records of Titus County, Texas, from which a 5/8" iron rod found at the northwest corner of said Tract No. 2 and the southwest corner of a called 2.969 acre tract (Tract No. 3) described in said Will bears North 06°37'33" West a distance of 153.60 feet:

Thence in an easterly direction, across said Tract No. 2, 15 feet northerly of and parallel to the

centerline of a driveway, the following courses (a 1/2" iron rod with a cap marked "Denney" is set at the end of each course): (1) with a curve to the right having Radius = 98.42 feet, Delta = 40°51'40", and Long Chord = North 88°44'31" East 68.71 feet, for a distance of 70.19 feet; (2) with a curve to the left having Radius 605.80 feet, Delta = 07°20'46", and Long Chord = South 74°59'56" East 77.62 feet, for a distance of 77.67 feet; (3) with a curve to the left having Radius = 82.13 feet, Delta = 29°13'28", and Long Chord = North 77°18'19" East 41.44 feet, for a distance of 41.89 feet; (4) with a curve to the right having Radius = 450.02 feet, Delta = 09°28'00", and Long Chord = North 64°01'53" East 74.27 feet, for a distance of 74.35 feet; (5) North 77°50'40" East 30.63 feet; (6) North 84°59'03" East for a distance of 301.29 feet to a 1/2" iron rod with a cap marked "Denney" set in the east line of said Tract No. 2 and the west line of said Tract No. 5, from which a 1/2" iron rod with a cap marked "Denney" set, in said driveway, at the southwest corner of said Tract No. 5 and the northwest corner of said Tract No. 4 bears South 06°36'01" East a distance of 15.04 feet, and a 5/8" iron rod found at the northeast corner of said Tract No. 2 and the southeast corner of said Tract No. 3 bears North 06°36'01" West a distance of 122.24 feet;

Thence North 87°28'38" East across said Tract No. 5, 15 feet northerly of and parallel to the south line of said Tract No. 5 and the north line of said Tract No. 4, for a distance of 391.80 feet to a 1/2" iron rod with a cap marked "Denney" set in the east line of said Tract No. 5 and the west line of said Tract No. 7, the same lying in said driveway;

Thence in a southeasterly direction across said Tract No. 7 with a curve to the right having Radius = 15.01 feet, Delta = 48°26'31", and Long Chord = South 69°47'25" East 12.31 feet, for a distance of 12.69 feet to a 1/2" iron rod with a cap marked "Denney" set;

Thence South 60°31'46" East across said Tract No. 7 for a distance of 19.33 feet to a 1/2" iron rod with a cap marked "Denney" set in the south line of said Tract No. 7 and the north line of a called 3.981 acre Tract No. 6 devised to Johnny Croley in said Will, from which a 5/8" iron rod found at the northeast corner of said Tract No. 6 and the southeast corner of said Tract No. 7 bears North 87°28'38" East a distance of 363.46 feet;

Thence South 87°28'38" West along the north line of said Tract No. 6 and the south line of said Tract No. 7, crossing said driveway, for a distance of 27.36 feet to a 5/8" iron rod found, beside a 1/2" iron rod found, at the northwest corner of said Tract No. 6, the southwest corner of said Tract No. 7, the northeast corner of said Tract No. 4, and the southeast corner of said Tract No. 5;

Thence South 04°00'40" East along the east line of said Tract No. 4 and the west line of said Tract No. 6 for a distance of 15.01 feet to a 1/2" iron rod with a cap marked "Denney" set, from which a 1/2" iron rod with a cap marked "Denney" set at the southwest corner of said Tract No. 6 and the southeast corner of said Tract No. 4 bears South 04°00'40" East a distance of 440.30 feet;

Thence South 87°28'38" West, across said Tract No. 4, 15 feet southerly of and parallel to the south line of said Tract No. 5 and the north line of said Tract No. 4, for a distance of 390.44 feet to a 1/2" iron rod with a cap marked "Denney" set in the west line of said Tract No. 4 and the east

line of said Tract No. 2;

Thence in a westerly direction across said Tract No. 2, 15 feet southerly of and parallel to the centerline of said driveway the following courses (a 1/2" iron rod with a cap marked "Denney" is set at the end of each course): (1) South 84°59'37" West 300.37 feet; (2) South 77°50'40" West 26.21 feet; (3) with a curve to the left having Radius = 420.02 feet, Delta = 09°15'25", and Long Chord = South 63°49'01" West 67.79 feet, for a distance of 67.86 feet; (4) with a curve to the right having Radius = 112.13 feet, Delta = 31°03'56", and Long Chord = South 77°43'43" West 60.05 feet, for a distance of 60.80 feet; (5) with a curve to the right having Radius = 635.80 feet, Delta = 07°34'01", and Long Chord = North 75°05'47" West 83.91 feet, for a distance of 83.97 feet; (6) with a curve to the left having Radius = 68.42 feet, Delta = 47°50'53", and Long Chord = South 85°20'47" West 55.49 feet, for a distance of 57.14 feet to a 1/2" iron rod with a cap marked "Denney" set in the west line of said Tract No. 2 and the east line of said strip and said right-of-way, from which a 5/8" iron rod found at the southwest corner of said Tract No. 2 and the northwest corner of the remainder of a called 2.971 acre tract (Tract No. 1) described in said Will bears South 06°37'33" East a distance of 112.97 feet, and a 5/8" iron rod with a cap marked "Wright" found at the southwest corner of a called 0.289 acre tract (Access Tract) conveyed to Dennis Bradley in a Deed found in Volume 789, Page 226 of the Deed Records of Titus County, Texas, and the northwest corner of a called 1 acre tract conveyed to Bennie Bradley and wife, Lynda Ann Bradley in a Deed found in Volume 372, Page 270 of the Deed Records of Titus County, Texas bears South 06°37'33" East a distance of 304.89 feet;

Thence North 06°37'33" West along the west line of said Tract No. 2 and the east line of said strip and said right-of-way for a distance of 31.58 feet to the place of beginning, and containing 0.685 acres of land.

A plat of the above-described easement for access is attached to this Judgment, as well as Plaintiffs' above-described 3.977 acre tract is attached hereto as Exhibit "A".

2. Plaintiffs shall not fence the easement for access; however, any owners of the servient estate upon which the easement for access is located may fence the boundaries of that easement for access on their respective properties.

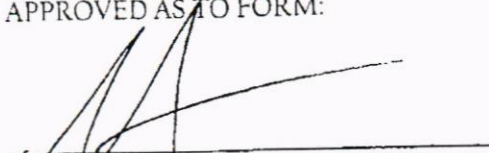
3 Plaintiffs shall be responsible for a survey of the centerline and boundaries of the easement for access.

4. Each party shall be responsible for their respective costs.

SIGNED AND ENTERED on this 18 day of <sup>April</sup>~~March~~, 2017.

  
\_\_\_\_\_  
Judge Presiding

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Michael P. Setty

\_\_\_\_\_  
Lance W. Hinson

## FILED AND RECORDED

**Instrument Number: 20214917**

Filing and Recording Date: 11/01/2021 03:33:40 PM Pages: 7 Recording Fee: \$0.00

I hereby certify that this instrument was FILED on the date and time stamped hereon and RECORDED in the PUBLIC RECORDS of Titus County, Texas.



*Joan Newman*

---

Joan Newman, County Clerk  
Titus County, Texas

ANY PROVISION CONTAINED IN ANY DOCUMENT WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE REAL PROPERTY DESCRIBED THEREIN BECAUSE OF RACE OR COLOR IS INVALID UNDER FEDERAL LAW AND IS UNENFORCEABLE.





09/01/2021

**RE: Fire Services in Titus County**

To Whom It May Concern:

Based upon the submitted plat and diagram of the proposed Cruz subdivision in five, one to two-acre plots, to be located at FM 2152 and PR 1625 the Mt. Pleasant Fire Department is aware that you are putting in a subdivision in that location.

Sincerely,

Larry McRae, Fire Chief  
Mt. Pleasant Fire Dept.

**TRI SPECIAL UTILITY DISTRICT**

300 WEST 16<sup>TH</sup>

MOUNT PLEASANT, TEXAS 75455

PH 903-572-3676 FAX 903-572-4701

October 8, 2021

Titus County Judge Brian Lee

Re: 4 water meters on FM 2152

Water service is available for the 4 meters requested if Ms. Cruz pays for the improvement(s)



Aaron Gann

# TAX RECEIPT

08/19/2021 01:52PM

TITUS COUNTY TAX OFFICE  
 110 S MADISON SUITE A  
 MOUNT PLEASANT, TX 75455

Receipt Number	
<b>3535704</b>	
Date Posted	11/30/2020
Payment Type	P
Payment Code	Full
<b>Total Paid</b>	<b>\$710.89</b>

**PAID BY:**

CRUZ ALBERTO  
 10 COUNTY ROAD 1662  
 MOUNT PLEASANT, TX 75455-8484

Property ID	Geo	Legal Acres	Owner Name and Address									
2226	00156-00000-01860	7.4500	CRUZ ALBERTO & LILIAN 10 COUNTY ROAD 1662 MOUNT PLEASANT, TX 75455-8484									
Legal Description												
DEW, JOSEPH J ABS 00156 TR 1860 7.45 AC												
Situs	DBA Name											
FM 2152												
Entity	Year	Rate	Taxable Value	Stmt #	Void	Original Tax	Discnts	P&I	Att Fees	Overage	Amount Pd	
Titus County												
Hospital	2020	0.20690	89,373	61787	N	184.91	0.00	0.00	0.00	0.00	184.91	
Titus County	2020	0.46790	89,373	61787	N	418.17	8.37	0.00	0.00	0.00	409.80	
NTX Community												
College	2020	0.13000	89,373	61787	N	116.18	0.00	0.00	0.00	0.00	116.18	
											<b>710.89</b>	
<b>Balance Due As Of 11/30/2020: .00</b>												

Operator	Batch	Total Paid
DEANNE	7303 (DEANNE 11/30/2020)	710.89

# TAX RECEIPT

08/18/2021 04:51PM

Titus County Appraisal District  
PO Box 528  
Mount Pleasant, TX 75456-0528

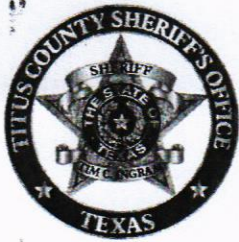
Receipt Number	
513104	
Date Posted	11/30/2020
Payment Type	P
Payment Code	Full
Total Paid	\$863.70

**PAID BY:**

CRUZ ALBERTO  
10 COUNTY ROAD 1662  
MOUNT PLEASANT, TX 75455-8484

Property ID	Geo	Legal Acres	Owner Name and Address								
2226	00156-00000-01860	7.4500	CRUZ ALBERTO & LILIAN 10 COUNTY ROAD 1662 MOUNT PLEASANT, TX 75455-8484								
Legal Description											
DEW, JOSEPH J ABS 00156 TR 1860 7.45 AC											
Situs	DBA Name										
FM 2152 TX											
Entity	Year	Rate	Taxable Value	Stmt #	Void	Original Tax	Discnts	P&I	Att Fees	Overage	Amount Pd
Harts Bluff ISD	2020	0.96640	89,373	4621	N	863.70	0.00	0.00	0.00	0.00	863.70
<b>Balance Due As Of 11/30/2020: .00</b>											

Operator	Batch	Total Paid
MARY	10468 (11/30/2020 MT)	863.70



# Titus County Sheriff's Office

304 South Van Buren, Mount Pleasant, Texas, 75455

Phone (903) 572 - 6641

Fax (903) 577 - 8038

Timothy C. Ingram, Sheriff

To: Judge Brian Lee  
From: Sgt. Clint Bain  
Ref: Cruz Subdivision

Date: 10142021

Sir,

Alberto and Lillian Cruz are proposing the subdivision of their property on FM 2152 at PR1625. The property is 7.45 acres and I believe previously existed as three parcels belonging to heirs to the Croley estate. Mr. and Mrs. Cruz have had the property surveyed and propose to divide it into 5 lots with each lot being over 1 acre. Additionally each lot will have access or frontage on FM2152 and the north most lot will also have frontage on PR1625. I will at this time note that the property has a preexisting access easement through it that extends from FM2152 eastward to the property owned by Johnny W. Croley. This easement was the result of a District Court ruling by Judge Robert Rolston and filed with the District Clerk on April 18, 2017, however it was never filed by the concerned parties or their attorneys with the County Clerk for attachment with the appropriate deeds. I reviewed the proposed survey plats and though three of the lots are boarded by the easement and will have access to it none are limited to it as the only route of ingress and egress. All fiver (5) lots will have road access along FM2152 for individual driveways. I do recommend that the commissioners' court take action to insure that the Easement is recorded on the existing deeds and those future deeds resulting from the development of this subdivision.

As to the Overall Site Plan for On-Site Sewage, Mrs. Cruz contracted Edwin E. Holt Registered Professional Sanitarian to write up the site plan. I have reviewed the plan and found that it meets the requirements listed in TAC 285.4. In addition to the access easement there is also a private well on property that will require that proper setback distances be met. Mr. Holt's report indicates that the soil of the proposed subdivision is not suitable for subsurface disposal and therefor Aerobic treatment with surface distribution is recommended for On-Site Sewage Facilities.

Respectfully,

A handwritten signature in black ink, appearing to read "Clint Bain".

Sgt. Clint Bain

Cc Commissioner Jeff Parchman



# Edwin E. Holt

File Copy

2263 County Road 33040; Brookston, Texas 75421 | 903-401-1656

R.S. 4168 • M.P. 0001723 • L.I. 0023550 • S.E. OS0025282 • Ins II OS0028348

June 12, 2021

## Subdivision:

Owners: Alberto & Lilian Cruz  
10 County Road 1662  
Mount Pleasant, Texas 75455  
Titus County

### A. Subdivision Address & Site Information:

3204 FM 2152  
Mount Pleasant, Texas 75455  
Titus County

Property ID #2226  
Survey: Joseph J. Dew  
Abstract: 00156  
Tract: 1860  
Acres: 7.45  
Geographic ID #00156-00000-01860

B. Topographic Map: See Attached

C. 100-year Flood plain Map: See Attached

### D. Soil Survey:

- 1 – See Attached General Soil Map
- 2 – See Attached OSSF Soil & Site Evaluation and Site Drawing
- 3 – Based on Table II "Criteria for Standard Subsurface Absorptions Systems", the area is unsuitable for a standard subsurface absorption system due to the presence of Class IV soils within two feet below the bottom of the excavation site. Also, redox mottling was observed at around 24" to 30".

### E. Location of Water Wells:

1. There is one private water well located just east of the current residence.
2. There are two additional water wells located north of the current residence.

### F. Easements:

There is an existing easement that provides access to the adjoining property on the east. This easement is on the southern portion of the property. See enclosed survey of the property.



# Edwin E. Holt

---

2263 County Road 33040; Brookston, Texas 75421 | 903-401-1656

R.S. 4168 • M.P. 0001723 • L.I. 0023550 • S.E. OS0025282 • Ins II OS0028348

- G. **Drainage:** The property appears to have adequate, existing drainage to the north and west sides of the property. However, attention will need to be given in designing the house pad area to prevent drainage problems.
- H. **OSSF System Recommended:** It is recommended that the type of OSSF septic system should be an aerobic treatment unit using surface application. While there are other legal systems allowed by TCEQ the aerobic unit is the most efficient and practical for this location.
- I. **Other Comments:**
  - 1. Electric and water easements may be present.

**Special Notes:**

- 1. The two surface application spray heads on the existing ATU on the residence will have to be relocated because of the new property lines. These will need to meet TCEQ regulations and approved by the Titus County D.R.
- 2. The existing aerobic unit for the existing house is approx. 40' to 45' from the water well by the residence. This needs to be checked by the Titus County D.R. also.

## Property Details

### Account

**Property ID:** 2226  
**Legal Description:** DEW, JOSEPH J ABS 00156 TR 1860 7.45 AC  
**Geographic ID:** 00156-00000-01860

### Agent:

**Type:** Real

### Location

**Address:** FM 2152 TX

**Map ID:** HBISD 16

**Neighborhood CD:** HBISD-A

### Owner

**Owner ID:** 4861

**Name:** CRUZ ALBERTO & LILIAN

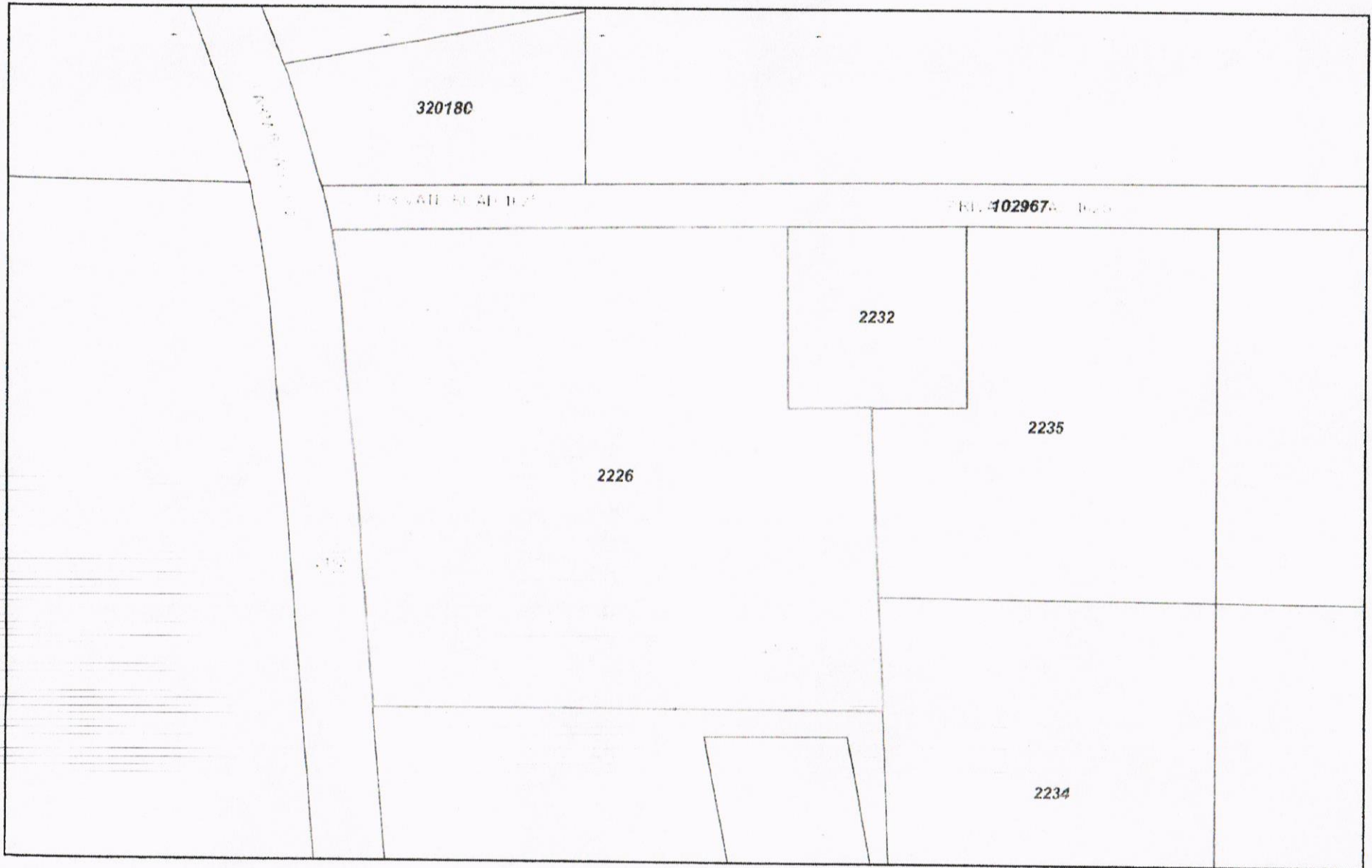
**Mailing Address:** 10 COUNTY ROAD 1662  
MOUNT PLEASANT, TX 75455-8484

**% Ownership:** 100.0%



**Exemptions:** For privacy reasons not all exemptions are shown online.

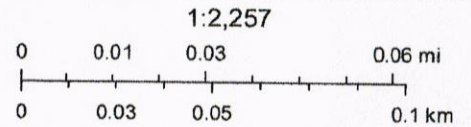


# Titus CAD Web Map



6/5/2021, 6:04:30 PM

-  Abstracts
-  Parcels



Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, EPA,

Titus County Appraisal District, BIS Consulting - [www.bisconsulting.com](http://www.bisconsulting.com)

Disclaimer: This product is for informational purposes only and has not been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of boundaries.

**Site Evaluation**  
**Soil Texture Evaluation Report Information**

**Test requested by:** Alberto & Lilian Cruz

**Date Soil Survey Performed:** May 26, 2021

**Site Location:** 3204 FM 2152; Mt. Pleasant, Texas 75455

**County:** Titus

**Proposed Excavation Depth:** Aerobic System

Soil boring Number 1				
Depth	Texture Class	Soil Texture	Restrictive Horizon	Observations
0" to 12"	II	Loamy Fine Sand	NA	NA
12" to 24"	II	Loamy Fine Sand	NA	NA
24" to 36"	III	Sandy Clay Loam	Clay	Clay
36" to 48"				
48" to 60"				

Soil Boring Number 2				
Depth	Texture Class	Soil Texture	Restrictive Horizon	Observations
0" to 12"	II	Loamy Fine Sand	NA	NA
12" to 24"	II	Loamy Fine Sand	NA	NA
24" to 36"	III	Sandy Clay Loam	Clay	Clay
36" to 48"				
48" to 60"				

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.

Edwin E. Holt, S.E. #OS0025282

Date

Holt and Sons Construction

903-249-2455

2263 CR 33040; Brookston, Texas 75421

[ed@holtandsonsconstruction.com](mailto:ed@holtandsonsconstruction.com)

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

## Site Evaluation Information

<u>Applicant Information:</u> Name: Alberto & Lilian Cruz Address: 10 County Road 1662 City: Mt. Pleasant, Texas 75455 Phone: 903-204-0876	<u>Site Evaluator Information:</u> Name: Ed Holt #OS0025282 Address: 2263 County Road 33040 City: Brookston, Texas 75421 Phone: 903-249-2455
<u>Property Location:</u> Street/Road: 3204 FM 2152 City: Mt. Pleasant, Texas 75455 County: Titus County Unincorporated Area: Yes Property Size: 7.45 Acres	<u>Installer Information:</u> Name: Business: Address: City: Phone:

### Schematic of Lot or Tract

See Attached Drawing

### Features of Site Area

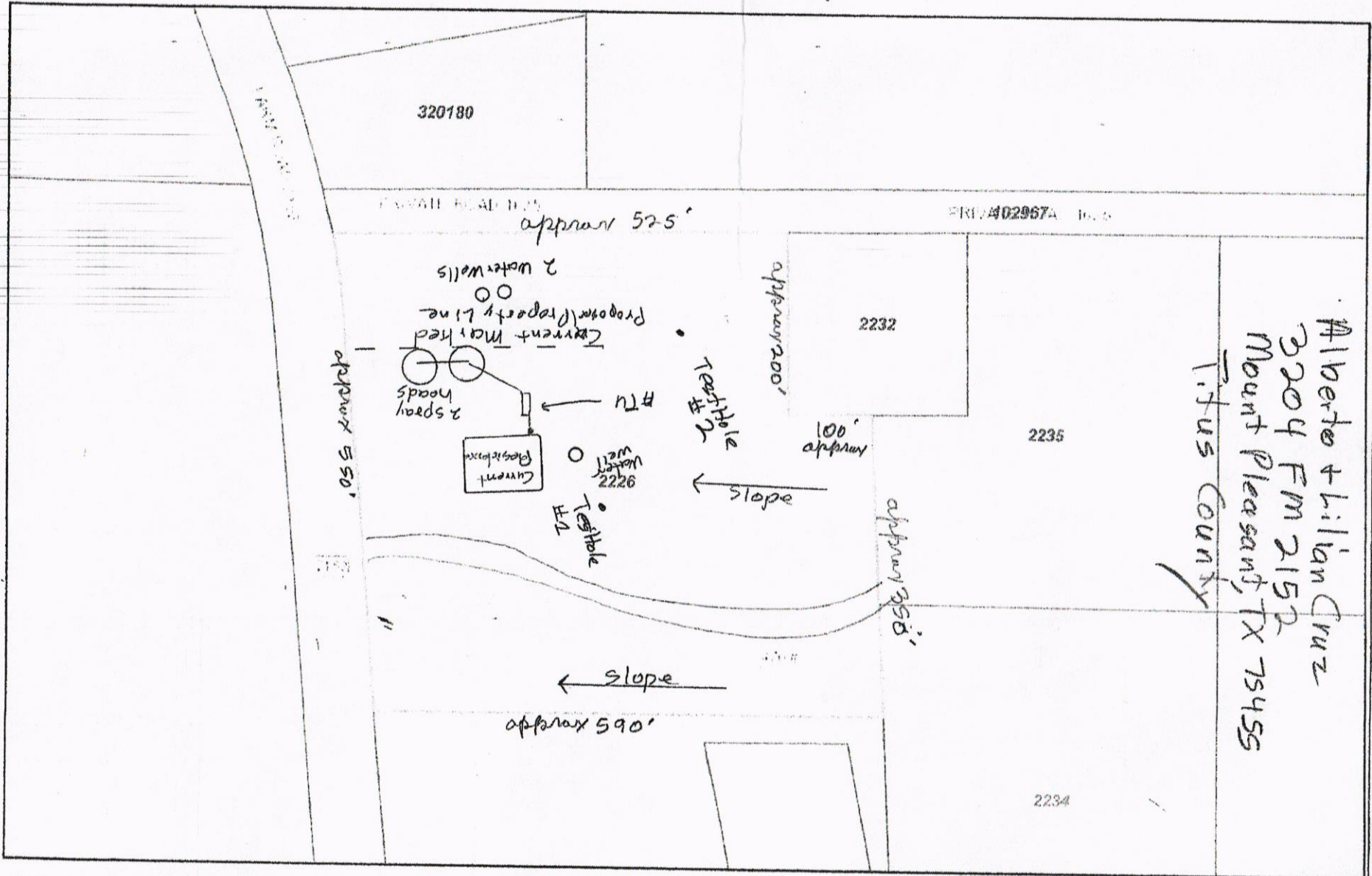
- No** Presence of 100 Year Flood Zone
- No** Presence of adjacent ponds, streams, water impoundments
- Yes** Existing or proposed water well in nearby area:
- No** Organized sewage service available to lot or tract

Edwin E. Holt, S.E. #OS0025282  
Holt and Sons Construction  
903-249-2455  
2263 CR 33040; Brookston, Texas 75421

Date

*ed@holtandsonsconstruction.com*  
*www.holtandsonsconstruction.com*

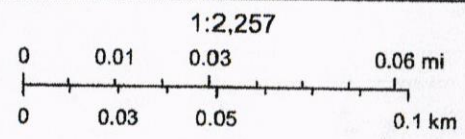
# Titus CAD Web Map



Site Evaluation: Proposed Subdivision

6/5/2021, 6:04:30 PM

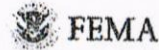
- Abstracts
- Parcels



Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, EPA,

Titus County Appraisal District, BIS Consulting - www.bisconsulting.com  
 Disclaimer: This product is for informational purposes only and has not been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of boundaries.

# National Flood Hazard Layer FIRMette



94°59'23"W 33°12'59"N



TITUS COUNTY  
481023

AREA OF MINIMAL FLOOD HAZARD  
Zone X

1514'N 077'W  
01/09/2010

Zone A

0 250 500 1,000 1,500 2,000 Feet 1:6,000

94°58'46"W 33°12'29"N

## Legend

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

- |                                    |   |
|------------------------------------|---|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  | <ul style="list-style-type: none"> <li>Without Base Flood Elevation (BFE)<br/>Zone A, V, A99</li> <li>With BFE or Depth Zone AE, AO, AH, VE, AR</li> <li>Regulatory Floodway</li> </ul>   |
| <b>OTHER AREAS OF FLOOD HAZARD</b> | <ul style="list-style-type: none"> <li>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</li> <li>Future Conditions 1% Annual Chance Flood Hazard Zone X</li> <li>Area with Reduced Flood Risk due to Levee. See Notes. Zone X</li> <li>Area with Flood Risk due to Levee Zone D</li> </ul> |
| <b>OTHER AREAS</b>                 | <ul style="list-style-type: none"> <li>NO SCREEN Area of Minimal Flood Hazard Zone X</li> <li>Effective LOMRs</li> <li>Area of Undetermined Flood Hazard Zone I</li> </ul>  |
| <b>GENERAL STRUCTURES</b>          | <ul style="list-style-type: none"> <li>Channel, Culvert, or Storm Sewer</li> <li>Levee, Dike, or Floodwall</li> </ul>   |
| <b>OTHER FEATURES</b>              | <ul style="list-style-type: none"> <li>20.2 Cross Sections with 1% Annual Chance</li> <li>17.8 Water Surface Elevation</li> <li>Coastal Transect</li> <li>Base Flood Elevation Line (BFE)</li> <li>Limit of Study</li> <li>Jurisdiction Boundary</li> <li>Coastal Transect Baseline</li> <li>Profile Baseline</li> <li>Hydrographic Feature</li> </ul>  |
| <b>MAP PANELS</b>                  | <ul style="list-style-type: none"> <li>Digital Data Available</li> <li>No Digital Data Available</li> <li>Unmapped</li> </ul> <p>The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.</p>   |

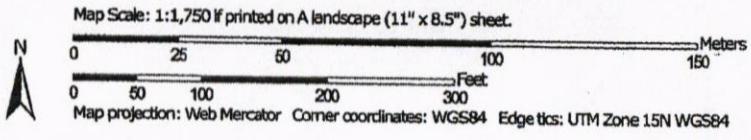
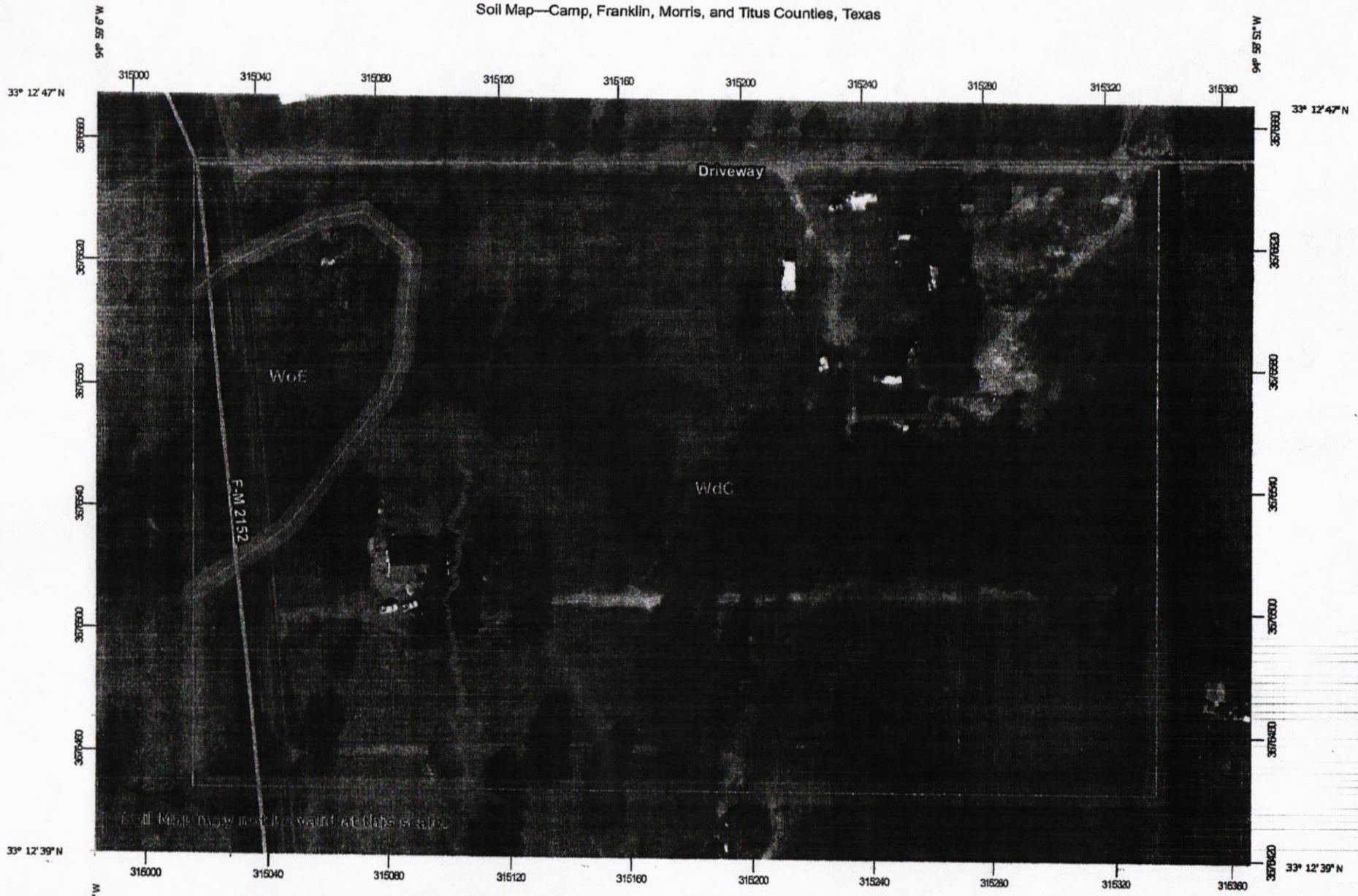


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/5/2021 at 6:46 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.

Soil Map—Camp, Franklin, Morris, and Titus Counties, Texas




## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WdC	Wolfpen loamy fine sand, 2 to 5 percent slopes	14.9	92.6%
WoE	Woodtell fine sandy loam, 5 to 20 percent slopes	1.2	7.4%
<b>Totals for Area of Interest</b>		<b>16.1</b>	<b>100.0%</b>


### 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 1:24,000.

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: Camp, Franklin, Morris, and Titus Counties, Texas

Survey Area Data: Version 17, Jun 11, 2020

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.



The Wilson soil is used mainly as improved or native pasture. In a few areas, it is used for cultivated crops, mainly small grains.

This soil is well suited to warm-season pasture plants, such as bermudagrass and bahiagrass. Ryegrass, oats, and wheat are commonly planted for cool-season grazing. Many pastures are overseeded with white clover or arrowleaf clover for additional winter forage. Fertilizer, lime, and controlled grazing increase yields.

The Wilson soil is not suited to use as woodland. The climax vegetation is native grasses and forbs; however, a few areas have scattered elm, hackberry, and post oak.

This soil is cultivated to crops, such as grain sorghum, corn, and wheat. Very slow permeability and wetness, however, are limiting features for this use. Fertilizer increases yields, and residue left on or near the surface helps to maintain organic matter and improves soil tilth.

This soil is poorly suited to most urban uses. Wetness, shrinking and swelling, and the clayey texture limit the use of this soil as sites for sanitary landfills and buildings. These limiting features are very difficult to overcome, but buildings can be placed on fill material, which increases drainage of the sites. The effects of shrinking and swelling of the soil can be reduced by treating soil material with lime and by reinforcing foundations. Corrosiveness is a limiting feature for concrete structures and steel pipe, but it can be partly overcome by treating concrete and by coating pipe to provide cathodic protection.

The Wilson soil is in capability subclass IIIw. It does not have a woodland ordination symbol.

**WdC—Wolfpen loamy fine sand, 2 to 5 percent slopes.** This soil is gently sloping and well drained. It is on ridges and interstream divides high on the landscape. The surface is plane to convex. The areas range from 20 to about 100 acres, but average about 40 acres.

Typically, the Wolfpen soil has a dark brown loamy fine sand surface layer about 11 inches thick. The next layer to a depth of 25 inches is yellowish brown loamy fine sand. The subsoil to a depth of 56 inches is yellowish brown sandy clay loam that has mottles in shades of red, gray, and brown. To a depth of 80 inches, it is mottled red, light brownish gray, and strong brown sandy clay loam. The soil is slightly acid in the upper part, medium acid in the middle part, and very strongly acid in the lower part.

Permeability is moderate, and the available water capacity is moderate. Runoff is slow. The root zone is deep, and roots move easily through the soil. A high water table is at a depth of 4 to 6 feet during the winter and spring.

Included with this soil in mapping are small areas of Bernaldo, Freestone, and Pickton soils. The Bernaldo and Freestone soils have a loamy surface layer and are lower on the landscape than the Wolfpen soil. These

soils make up 10 to 15 percent of some mapped areas. The Pickton soils are similar to the Wolfpen soil except they have a thicker surface layer and are higher on the landscape. The included soils make up less than 10 percent of the map unit.

The Wolfpen soil is used mainly as improved pasture or woodland. In some small areas, it is used for crops or orchards.

This soil is suited to warm-season pasture plants, such as coastal bermudagrass, common bermudagrass, bahiagrass, and lovegrass. Cool-season grasses, such as oats, ryegrass, and wheat, are often planted to provide winter grazing. Overseeding the pasture with arrowleaf clover, crimson clover, or hairy vetch increases forage and soil nitrogen. Proper use of fertilizer and lime is needed for high yields.

The major forest type on this soil is mixed hardwood and pine. Red oak, post oak, elm, sweetgum, and hickory are well adapted to this soil. Loblolly pine and shortleaf pine are the main commercial trees. Virginia pine is planted in some areas for Christmas tree production. Because of seasonal droughtiness and a moderate rate of seedling mortality, managing this soil for timber production is difficult. Selective cutting, removal of undesirable trees, and protection from wildfires increase yields.

The main crops on this soil are peanuts, sweet potatoes, watermelons, and corn. In some areas, this soil is used for truck crops, such as peas, beans, and cucumbers. Cover crops and high residue crops reduce erosion and help to maintain organic matter. Fertilizer and lime are needed for high yields.

This soil is suited to peach, plum, and pear orchards; however, droughtiness is a limiting feature. Fertilizer is needed for good fruit production.

This soil is suited to most urban uses. Seepage is a problem for sanitary facilities, but it can be reduced by using clay liners in sewage lagoons. Corrosion of steel and concrete structures can be reduced by coating steel and treating concrete.

The Wolfpen soil is in capability subclass IIIc. The woodland ordination symbol is 10S.

**WeC—Wolfpen-Urban land complex, 2 to 5 percent slopes.** This complex is made up of Wolfpen soil and Urban land on ridges and interstream divides high on the landscape. The Wolfpen soil is gently sloping and well drained. The areas are oblong and range from 15 to 200 acres.

This complex is 50 to 75 percent Wolfpen soil, 15 to 35 percent Urban land, and 15 percent or less other soils. Areas of the Wolfpen soil and Urban land are too intricately mixed to be mapped separately at the scale used for the maps in the back of this publication.

Typically, the Wolfpen soil has a dark brown loamy fine sand surface layer about 11 inches thick. The next layer to a depth of 25 inches is yellowish brown loamy

fine sand. The subsoil to a depth of 56 inches is yellowish brown sandy clay loam that has mottles in shades of red, gray, and brown. To a depth of 80 inches, it is mottled red, light brownish gray, and strong brown sandy clay loam. The soil is slightly acid in the upper part, medium acid in the middle part, and very strongly acid in the lower part.

Permeability is moderate, and the available water capacity is moderate. Runoff is slow. The root zone is deep. A high water table is at a depth of 4 to 6 feet during the winter and spring.

Urban land consists of areas covered by dwellings, commercial buildings, schools, churches, driveways, streets, parking lots, and railroad yards. It also includes areas of soils that have been disturbed by cutting, filling, or grading. The soils have been altered to such an extent that further classification is not possible.

Included with this complex in mapping are small areas of Pickton, Bernaldo, and Freestone soils. Pickton soils have a sandy surface layer more than 40 inches thick and are in higher positions than those of the Wolfpen soil. Bernaldo and Freestone soils have a loamy surface layer and are in lower positions.

The Wolfpen soil is suited to most urban uses. Seepage is a problem for sanitary facilities, but it can be reduced by using clay liners in sewage lagoons. Corrosiveness of steel pipe and concrete can be reduced by coating the pipe and treating the concrete.

This complex is not in a capability class, and it does not have a woodland ordination symbol.

**WoC—Woodtell fine sandy loam, 2 to 5 percent slopes.** This soil is gently sloping and moderately well drained. It is on low ridgetops and side slopes along upland streams. The areas are plane to slightly convex. They range from 15 to 80 acres, but average about 30 acres.

Typically, the Woodtell soil has a dark yellowish brown fine sandy loam surface layer about 5 inches thick. The subsoil to a depth of 27 inches is red clay that has mottles in shades of brown. To a depth of 48 inches, it is mottled light brownish gray and light olive brown clay underlain by clay loam. The substratum to a depth of 75 inches is light brownish gray and yellowish brown clay loam and shale that has mottles in shades of gray. The soil is strongly acid in the upper part, medium acid in the middle part, and neutral in the lower part.

Permeability is very slow, and the available water capacity is high. Runoff is medium. The root zone is deep, but roots are restricted by the dense clay. Erosion is a moderate hazard.

Included with this soil in mapping are small areas of Bernaldo and Freestone soils. Bernaldo and Freestone soils have a yellowish loamy subsoil and are slightly lower on the landscape than the Woodtell soil. The included soils make up no more than 10 percent of the map unit.

The Woodtell soil is used mostly as pasture or woodland. In a few areas, it is used for cultivated crops.

This soil is suited to bahiagrass, bermudagrass, arrowleaf clover, and crimson clover. Very slow permeability is the main limiting feature. Fertilizer, lime, weed control, and controlled grazing increase yields and improve the quality of the forage.

The major forest type on the Woodtell soil is mixed hardwood and pine. Loblolly pine is the principal commercial tree. Because of the clayey subsoil and very slow permeability, managing this soil for timber production is difficult. Selective harvesting, removal of undesirable trees, and protection from wildfires increase yields.

A very small acreage of this soil is used for cultivated crops, such as corn, wheat, and grain sorghum. Erosion is a hazard, and the very slow permeability is a limiting feature. Fertilizer and lime increase yields. Terraces, cover crops, and contour farming reduce erosion. Residue left on or near the soil surface helps to maintain organic matter and soil tilth.

This soil is poorly suited to most urban uses. Very slow permeability prevents satisfactory functioning of septic tank absorption fields. This can be only partly corrected by increasing the size of the absorption area. High clay content makes the operation of sanitary landfills expensive and difficult. Because of low strength and shrinking and swelling, this soil cannot satisfactorily support buildings, dwellings, or roads and streets. Sand fill and soil stabilization treatment can reduce shrinking and swelling. Strengthening or replacing the base material helps to overcome the low strength limitation.

The Woodtell soil is in capability subclass IVe. The woodland ordination symbol is 8C.

**WoE—Woodtell fine sandy loam, 5 to 20 percent slopes.** This soil is strongly sloping to moderately steep and is moderately well drained. It is on long, narrow side slopes along small streams. The surface is convex. The areas range from 20 acres to several hundred acres, but average about 100 acres.

Typically, the Woodtell soil has a dark brown fine sandy loam surface layer about 3 inches thick. The subsurface layer to a depth of 6 inches is dark yellowish brown fine sandy loam. The subsoil to a depth of 55 inches is clay that grades into clay loam in the lower part. It is red to a depth of 26 inches, yellowish brown to a depth of 38 inches, and light gray and light brownish gray below that. The substratum is stratified light gray shale and strong brown sandy clay loam. The soil is medium acid in the upper part, very strongly acid in the middle part, and strongly acid in the lower part.

Permeability is very slow, and the available water capacity is high. Runoff is rapid. The root zone is deep, but roots are restricted by the dense clay. Erosion is a severe hazard.

Included with this soil in mapping are small areas of the similar Bazette, Crockett, and Normangee soils. Bazette soils have a yellowish subsoil. Crockett soils have an eroded surface layer and are less red and less sloping than the Woodtell soil. Normangee soils have an eroded gravelly clay loam surface layer. The included soils make up no more than 15 percent of the map unit.

Woodtell soil is used mainly as woodland. Some areas have been cleared and established to improved pasture.

The native forest on this soil is commonly red oak, post oak, hickory, and shortleaf pine. Loblolly pine is planted in some areas for additional timber production and is the main commercial tree. Slope and the clayey subsoil are the main limiting features for timber production. Proper thinning and harvesting increase yields.

The Woodtell soil is suited to warm-season pasture plants, such as coastal bermudagrass, common bermudagrass, and bahiagrass. Some pastures are overseeded with arrowleaf clover or planted to cool-season wheat, ryegrass, or oats for additional forage production. Fertilizer and lime are essential for high yields.

This soil is not suited to use as cropland. Slope, very slow permeability, and the hazard of erosion make cultivation impractical.

This soil is poorly suited to most urban uses. Very slow permeability prevents satisfactory functioning of septic tank absorption fields and can only be partly overcome by increasing the size of the absorption area. High clay content makes the operation of sanitary landfills expensive and difficult. Shrinking and swelling causes soil strength to be too low to support buildings, dwellings, or roads and streets. This limitation can be reduced by adding sandy fill beneath buildings, roads, and streets, or by replacing or strengthening the base material. Corrosion can be reduced by coating steel pipe and treating concrete.

The Woodtell soil is in capability subclass VIe. The woodland ordination symbol is 8C.

**WrB—Woodtell-Raino complex, 1 to 3 percent slopes.** The soils of this complex are moderately well drained and are on gently sloping, mounded uplands. The surface is plane to weakly convex. The areas range from 20 to several hundred acres, but average about 80 acres.

This complex is made up of about 50 percent Woodtell soil, 30 percent Raino soil, and 20 percent other soils. Raino soil is on ovate mounds that protrude at random from intermound areas of Woodtell soil. Mounds are 2 to 4 feet high, 30 to 70 feet in diameter, and 40 to 200 feet apart. These soils are too intricately mixed to be mapped separately at the scale used for the maps in the back of this publication.

Typically, the Woodtell soil has a very dark grayish brown loam surface layer about 6 inches thick. The

subsurface layer is yellowish brown loam to a depth of 12 inches. The subsoil to a depth of 49 inches is clay. It is red in the upper part and grades to light olive brown in the lower part. Mottles in shades of brown are throughout the subsoil. The substratum to a depth of 60 inches is grayish brown stratified clay, shaly clay, and sandy clay loam that has mottles in shades of brown. This soil is medium acid in the upper part and very strongly acid in the lower part.

Permeability is very slow, and the available water capacity is high. Runoff is medium. The root zone is deep, but roots are restricted by the dense clay.

Typically, the Raino soil has a dark yellowish brown loam surface layer about 5 inches thick. The subsurface layer to a depth of 23 inches is strong brown loam. The subsoil extends to a depth of 69 inches. To a depth of 32 inches, it is strong brown clay loam that has mottles in shades of red and brown. Below that, the subsoil is mottled red, yellowish brown, light brownish gray, and strong brown clay. The substratum to a depth of 80 inches is light gray clay and shaly clay that has mottles in shades of brown and has black concretions. The soil is medium acid in the upper part, very strongly acid in the middle part, and neutral in the lower part.

Permeability is very slow, and the available water capacity is high. Runoff is slow. The root zone is deep. A high water table is 2 to 4 feet below the surface during the winter.

Included with this complex in mapping are small areas of Freestone, Talco, and Derty soils. Freestone soils have a yellowish subsoil and are slightly higher on the landscape than the Woodtell and Raino soils. Talco soils have a grayish loamy subsoil and are in lower positions. Derty soils have a grayish clayey subsoil and are in depressions.

The Woodtell and Raino soils are mainly used as pasture. In some areas, they are used as woodland, and small acreages are cropland.

These soils are well suited to warm-season pasture plants, such as bermudagrass, bahiagrass, and Dallisgrass. Legumes, such as arrowleaf clover, crimson clover, and vetch, are overseeded on some pastures. Many areas of these soils are planted to cool-season ryegrass, wheat, or oats for winter grazing. Fertilizer, lime, and controlled grazing increase yields.

Woodland areas of these soils consist of red oak, post oak, willow oak, hickory, and sweetgum, as well as shortleaf and loblolly pines. Commercial trees are mainly pines; however, oaks have some commercial value. The clayey subsoil is the main limiting feature. Selective cutting, removal of undesirable trees, and protection from wildfires increase yields.

The Woodtell and Raino soils are suited to crops, such as small grains, grain sorghum, and corn. Wetness and moundiness are the main limiting features, and erosion is a hazard. Terracing and contour farming help to control erosion in some areas. Residue left on or near the