KARL W. KOCH
[redacted]
Fredericksburg, TX 78624
Ph. [redacted]

5 Feb 87.

~~870300-24~~
FAA/ Wine & Beer ~~TBB~~

Norris L. Alford
Chief, Product Compliance Branch
Department of the Treasury
Bureau of Alcohol, Tobacco, and Firearms
Washington, D.C. 20226

SUBJECT: Establishment of the "Fredericksburg" Viticultural Area.

Dear Mr. Alford:

The establishment of a viticultural area and/or appellation of origin for a specified part of Gillespie County Texas including the City of Fredericksburg is requested in accordance with reference (a).

The viticultural area is delineated as only the contiguous Luckenbach-Pedernales-Heatly Soil Association which is on the Pedernales River and its tributaries at an elevation of over 1500 feet.

The area is on the Edwards Plateau which is the result of the geological uplift phenomenon. The Pedernales watershed originates due west of Fredericksburg a few miles from the Gillespie-Kerr-Kimble county line at an elevation of 2200 feet. It flows easterly to Lake Travis (below 700 feet elevation) which is a part of the Austin city water supply. See enclosure (1).

The higher elevations of the Pedernales River watershed is the source of the Alluvial Valley Soils of the delineated area.

These soils adjacent to the river, and the riverbed itself, near Fredericksburg contain an abundance of flint or chert which is hydrated silica from the ancient seabed that formed the Edwards Plateau. The Spanish word "Pedernal", from which the river derived its' name, actually means "flintstone".

The native Indian population occupied the banks of the Pedernales near todays Fredericksburg for a period of over 10,000 years, until sometime after the Meusebach Treaty with the Comanche Nation in 1847. The area's abundant flint, which was a primary tool making material, was apparently shared intermittently by a number of different tribes. Flint arrow, spear, and knife points are commonly found. (Reference (C) and (D), enclosures (5) and (6)).

The Germans who founded Fredericksburg were mostly farmers, and their story is briefly outlined in enclosure (5) and (6), and in a number of books including reference (C).

Their works, buildings of cut stone, is one of the factors that has made Fredericksburg known well throughout Texas, and, to some degree, nationally.

About three magazines a month feature Fredericksburg. In December 1986 Southern Living, Texas Homes, and Texas Highways had articles. At the time of preparation of this letter, January 15, 1987, "USA Today" newspaper mentioned Fredericksburg. (enclosure (7)) Enclosure (8) was the biggest national spread so far, 35 pages.

Fredericksburg is about 80 miles west of Austin and 70 miles northwest of San Antonio. The Gillespie county population (1980) 13,532 and the city 6,412. Agriculture (farming and ranching) is the primary business.

Farming is practiced mostly in the delineated area. Peaches are one of the main crops. See enclosure (4). Peaches are a long established industry. It is believed that wine grapes will parallel the peach industry.

All commercial peach orchards are located on "deep, sandy to loamy, gently to sloping and undulating soils on uplands" which in Gillespie county is the "Luckenbach-Pedernales-Heatly" Soil Association. See enclosure (3) and (4), and reference (B).

Fredericksburg Soil Scientist, Fred Coburn, SCS, USDA, describes this peach growing soil as a sandy loam topsoil (mostly quartz with limited organic matter) over a reddish clay (see enclosure (9)). This clay is high in the nutrients, phosphorous, potassium, and calcium, as well as other minerals. The red color is due to iron which helps peaches (and grapes) avoid a chloritic condition.

Fredericksburg peaches are known statewide. Much of the crop is sold at retail because of its perceived quality. The market is Houston and Dallas as well as nearby Austin and San Antonio.

Other factors in the Fredericksburg peach quality is the dry climate (27 inches of rainfall) which reduces disease problems.

The lack of rainfall is due to the distance north and west of the Gulf of Mexico. A result of the dry climate is an abundance of sunshine. This is a requirement for quality fruit.

The altitude of the area serves two purposes. In winter there are over 850 hours per year at below 40°F. This maintains a proper winter dormancy factor.

A second altitude benefit is that of temperature change between night and day. A difference in temperature is required to properly mature a fruit.

At elevation 1,747 feet (the City of Fredericksburg) for growing months the average daily temperature is: (See reference (B)).

	Maximum	Minimum	Difference
April (°F)	75°F	54°F	25°F
May	84.7	61.8	22.9
June	90.9	67.7	23.2
July	94.9	69.5	25.4
August	95.1	68.8	26.3

Lower altitudes do not have this temperature difference.

Most grapes are harvested in July.

A problem caused by altitude is the risk of spring frost. At too high an altitude in Gillespie County, above about 1900 feet, peaches seldom produce.

The delineated area arbitrarily sets a minimum elevation of 1500 feet as having the lowest desirable difference in temperature commensurate with proper fruit maturity.

Conclusion: The early Germans made their wine 140 years ago from native grapes (reference (C)). A Fredericksburg winery existed until prohibition.

Our own, more recent; efforts in viticulture show promise of producing a unique wine that will parallel and/or supplement the peach business.

The soil, climate, topography, and heritage of Fredericksburg are unique and well known.

We believe a designation as a viticultural area is warranted.

Please let me know what else needs to be done.

Sincerely,

[redacted]

Karl W. Koch DBA Pedernales Vineyards

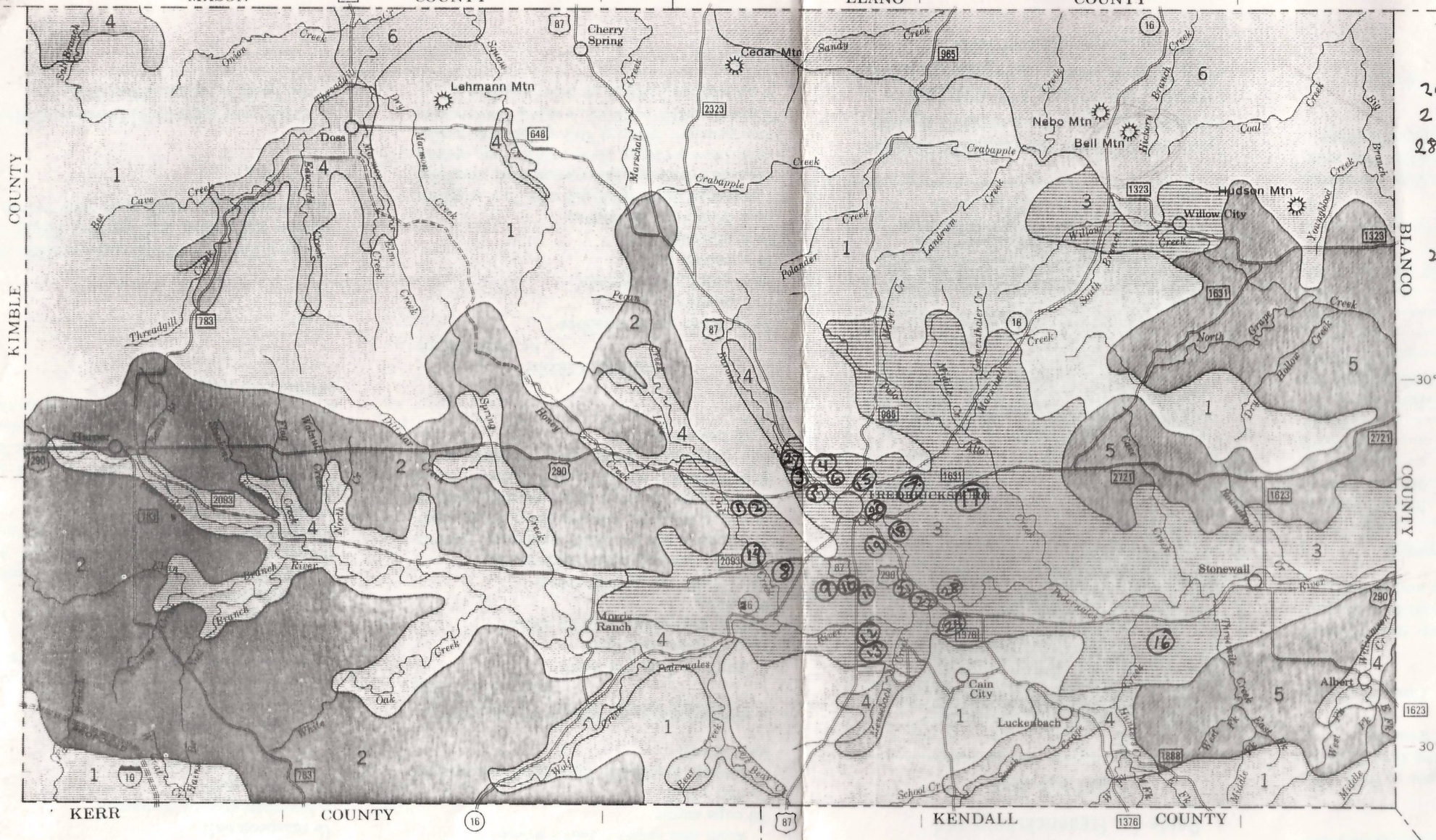
References/Enclosures: See attached

REFERENCES:

A) BATF Title 27 CFR Part. 4.25e (2).
B) "Soil Survey of Gillespie County Texas" Issued May 1975 by USDA SCS in cooperation with the Texas Agricultural Experimentation Station.
C) "The First Fifty Years - Fredericksburg, Tx" by Robert Penniger, published 1896.
D) "A Field Guide to Stone Artifacts" by Turner and Hester 1985, Texas Monthly Press.
E) "The Peach", by Dr. Earl Ray McEachern.

ENCLOSURES:

(1) US Geological Survey Topographical Map #NH 14.5. Scale 1:250,000.
(2) USDA SCS Soil Type Map from Reference (b).
(3) USDA SCS Map Showing Peach Orchards.
(4) "Hill Country Peaches" booklet by (Hill Country Fruit Council).
(5) "Historic District Tour" Booklet.
(5.1) "A Brief History of Fredericksburg" by (Fredericksburg Convention Bureau).
(6) "Gillespie County Historical Society, Inc." Booklet.
(7) "The Hill Country Grows" USA Today, January 15, 1987 Newspaper Clipping.
(8) "A German Town In Texas" "Country Living" Magazine, May 1984, Dover Publications, NYC, 45 Pages.
(9) "Pedernales Series" National Cooperative Soil Survey, April 1981.



Viticulture (See Peaches on back)

26 Pedernales Vineyards 16ac
27 Falcon Hills Vineyard 16ac
28 Zimmerman ½ acre.

20 also propagates vines

Note: Many Commercial Peach orchards now have test plantings of grapes.

Enclosure 3
Peach orchards & Vineyards in Delineated area

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
TEXAS AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP

Buying Guide

Peaches should be firm to a trifle soft, red, yellow or creamy with little or no noticeable green color. Soft peaches are good for ice cream, eating fresh or jam. Immediate processing will keep the flavor and texture from deteriorating.

Clingstones, generally ripen in May, the flesh clings to the pit and the firm flesh is very good for preserves and freezing.

Semi-freestones usually ripen in early June.

Freestones generally ripen in June and July, the flesh readily separates from the pit, is very good for eating fresh and freezing.

WHEN THEY RIPEN

Springold	May 10-20
Bicentennial	May 15-June 1
June Gold	May 25-June 5
Sentinel	June 5-15
Harvester	June 15-30
Ranger	June 14-30
Redglobe	June 5-July 10
Loring	June 15-July 10
Redskin	July 10-25
Elberta	July 10-25
Dixieland	July 10-25
Jefferson	July 12-25
Frank	July 25-August 15

◇ ◇ ◇

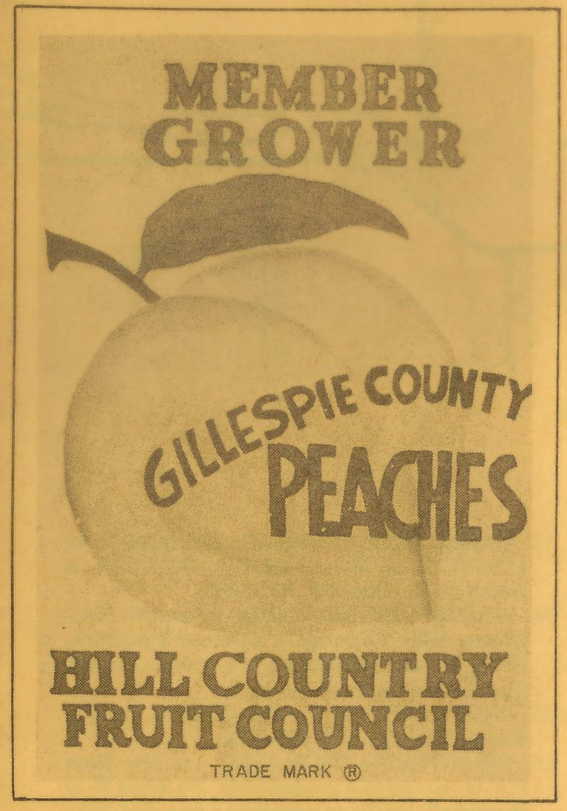
New and improved varieties are being planted regularly -- try them too. You may discover additional peaches you will enjoy.

Hill Country Fruit Council

Encl (4)

HILL COUNTRY PEACHES

Roadside Stand and Pick-Your-Own Guide for Fredericksburg and Stonewall Area



Select your peaches from a MEMBER-GROWER displaying this sign. As a member of the HILL COUNTRY FRUIT COUNCIL he subscribes to a retail CODE OF ETHICS, dedicated to building his business upon your confidence.

Favorite Peach Recipes

EASY PEACH PRESERVES

by Marion Tongin

10 lbs. defuzzed peaches (to defuzz a peach wash and wipe) -- leave whole
10 cups sugar
⅓ cup water

Simmer 3-4 hours. Pit will add an almond like flavor.

FRESH PEACH SOUR CREAM PIE

by Lucille Caffey

1 unbaked 9-in. pie shell
½ c. granulated sugar
½ c. firmly packed brown sugar
4 T. flour
1 c. (½ pt.) dairy sour cream
5-6 med. peeled fresh peach halves

Blend sugars, flour and sour cream. Arrange peaches, cut-side down, in pie shell. Pour cream mixture over peaches. Bake at 450 degrees F. for 10 minutes. Lower heat to 325 degrees F.; bake 25-30 minutes more. Cool before serving.

PEACH CRISP

by Carol Smith

3½ c. fresh sliced peaches
½ c. sugar
¾ c. quick cooking oats
½ c. brown sugar
½ c. enriched flour
⅓ c. butter or margarine

Arrange peaches mixed with ½ c. sugar in greased 8-inch square or round pan. Combine oats, brown sugar, flour and butter; spread over peaches. Bake at 350° about 30 minutes. Top with additional peach slices. Serve warm with whipped cream or other topping.

PEACH BREAD

by Mrs. Douglas (Sherrie) Zenner

3 cups sliced peaches
6 tablespoons sugar
2 cups flour
1 teaspoon baking powder
1 teaspoon soda
¼ teaspoon salt
1 teaspoon ground cinnamon
1½ cups sugar
½ cup shortening
2 eggs
1 cup chopped pecans
1 teaspoon vanilla

Blend peaches and 6 tablespoons sugar in blender and process until pureed. (Mixture should yield about 2¼ cups.)

Combine flour, baking powder, soda, salt and cinnamon - set aside.

Combine 1½ cups sugar and shortening; cream well. Add eggs and mix well. Add peaches and dry ingredients, mixing until ingredients are moistened.

Stir in nuts and vanilla.

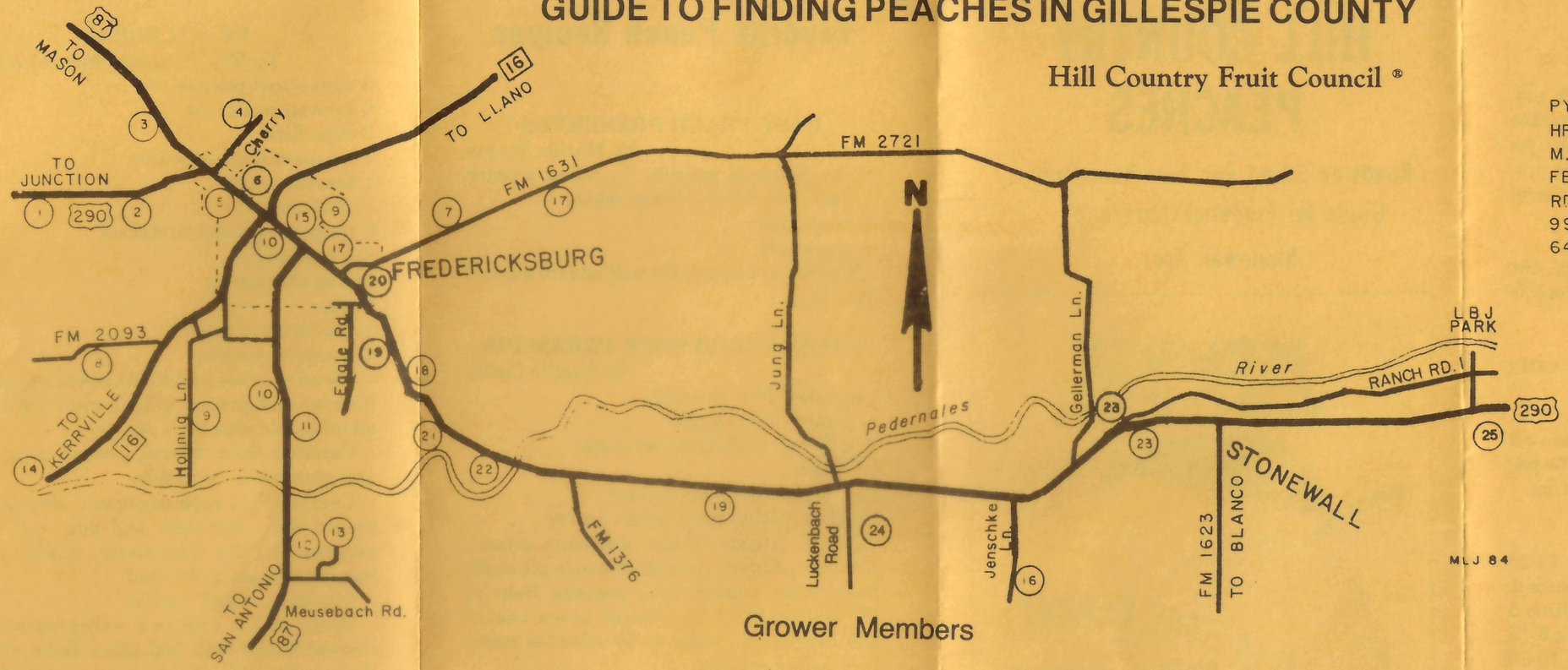
Spoon batter into two well greased and floured 9x5x3 inch loaf pans. Bake at 325 degrees for 40 to 50 minutes - or until done. Cool 10 minutes in pan; turn out onto rack and let cool completely.

Some Hill Country growers produce other fruits, vegetables and berries. Check with the members for additional information.

Enjoy your stay. Drive home carefully and come back to visit another day.

GUIDE TO FINDING PEACHES IN GILLESPIE COUNTY

Hill Country Fruit Council ®



LEGEND

PYO - PICK YOUR OWN
HRS - HOURS OPEN
M.T.W. Etc. - DAYS OPEN
FBG. - FREDERICKSBURG
RD. STAND - ROADSIDE STAND
997 - FBG. PHONE EXCHANGE
644 - STONEWALL EXCHANGE

Grower Members

1. HILLIS ORCHARD - 2½ miles W. on U.S. 290 (Harper Hwy.) 997-9463
2. PIONEER ORCHARDS - 1 mile W. of Fbg. on U.S. 290. Sign at entrance, P.Y.O. hrs. 8-7, 997-3022
3. VERNER CROFFORD ORCHARD - 0.8 mile N. on U.S. 87, at Farm Bureau sign. Hrs. 8-7, 997-8300
4. RANCHO de DURAZNO - 601 N. Cherry, ½ mile N. of Main St. (Fred Lane) 997-2075. P.Y.O. Tomatoes in season.
5. CRENWELGE'S - 617 W. Main, across from water tower, Retail & P.Y.O. Hrs. 8-6, 997-7878
6. THE PEACH BASKET - 334 W. Main, Hrs. 9-5:30, 997-4533. Natural foods - local fruit
7. HALLFORD PEACHES - Peaches, Nectarines & Blackberries P.Y.O. June & July., 1 mile E. FM 1631 (Cave Creek Rd.) Hrs. 8-6, 997-4533 or 997-3064
8. PEDERNALES VALLEY ORCHARD - Home grown tomatoes, squash & peppers. Red, Golden Plus & Granny Smith Apples. P.Y.O. & retail. May 15- Oct. 15. Hrs. 8-6, 997-4407 & 997-9142
9. WORTMAN ORCHARD - P.Y.O. Mon. - Sat. 8-6. Early fruit only. Hollmig Lane, 1 mile south of high school. Rd. stand 316 E. Austin at Christian Bookstore 997-8951
10. BARON CREEK ORCHARDS - Rd. stand 301 E. Main (Mobil Station) P.Y.O. July, 87 S to Friendship Lane West to Kermit's Garage, south across cattle guard. 997-9724 or 997-2248
11. DONALD ECKHARDT ORCHARD - 1½ miles S. on U.S. 87, Retail Sales, Daily, Hrs. 8-6, 997-2514
12. LIVING WATER ORCHARDS & GARDENS - 5 miles out 87 S. Last orchard on left before Meusebach Sch. Rd. P.Y.O. Retail, Wholesale, Sunday through Friday. Peaches, apricots, plums & tomatoes, Hrs. 9-6, 997-8986. Hybrid perch
13. MARBURGER ORCHARD - 5¼ miles S. on U.S. 87, E. on Meusebach Sch. Rd. P.Y.O. & Retail Sales. Hrs. 8-6, 997-9433
14. WHETSTONE ORCHARD - Kerrville Hwy. (Texas 16S). Four miles south of Fredericksburg at the intersection of Leyendecker Rd. (just before the roadside park)
15. ENGEL ORCHARD - 320 E. Main, next to Engel Deli. Hrs. 8-6, 997-3292
16. WHITWORTH ORCHARDS - on the farm P.Y.O., cooled and graded fruit, 2½ miles W. of Stonewall, South on Jenschke Lane. 644-2410
17. ZENNER & JUNG ORCHARDS (formerly Stoneridge) - 4 miles E. on FM 1631. Hrs. 8-6, 997-7445. 402 E. Main at Zenner's Texaco. Hrs. 8-9, 997-7914
18. ROADSIDER - 2 miles E. on U.S. 290 (Tom and Lucille Caffey) 997-8716 - Peaches, Nectarines, Plums, Berries, Tomatoes, Pecans and Pecan Cracking
19. DAN KEVER ORCHARD - 8 miles E. of Fbg. on right on U.S. 290. Fruit and vegetables, open daily. Retail 8-6, also Kever Rd. stand one mile E. on US 290, Hrs. 9-6, 997-7885
20. JACK AND CAROL'S ORCHARD - at end of Oakhaven Lane behind Gibson's Store, 8-6, peaches, vegetables and pecans in season, 997-2582
21. FREDERICKSBURG ORCHARDS, INC. - Corner of 290 E. & Industrial Loop - Wholesale & Retail, 997-9820
22. BEHRENDS BROTHERS PEACHES - 4 miles E. of Fbg. S. side of U.S. 290. Hrs. 7-7, 997-4420
23. PEDERNALES PEACHES - (Oliver Ersch) 2 locations: W. on 290 on both sides of the Hwy. near Stonewall, Wholesale & Retail, 644-2320
24. MULLER ORCHARDS - 10 miles E. on US 290, ½ mile South on Luckenbach Rd., 997-5800
25. COACH'S COUNTRY STORE - across from entrance LBJ State Park, peaches, fresh fruit & vegetables. Hrs. 8-8, 644-9249

52. WAHRMUND HOME*, 206 W. Main.

53a. LITTLE ROCK HOUSES*, 217 W. Main.

53. POST OFFICE, corner of W. Main and S. Crocket.

54. PIONEER MEMORIAL LIBRARY*, 115 W. Main.

55. MAIER BUILDINGS, 115 and 119 E. Main.

56. OLD BANK OF FREDERICKSBURG, 120 E. Main.

57. FRANK VAN DER STUCKEN BIRTHPLACE*, 123 East Main.

58. PRIESS BUILDING, 141 E. Main.

59. SCHANDUA BUILDING*, 205 E. Main.

60. DIETZ BAKERY, 218 E. Main.

61. RICHTER BUILDING*, 222 E. Main.

62. A.J. HAHNE BUILDING, 223 E. Main.

63. KLECK BUILDING, 225 E. Main.

64. WHITE ELEPHANT SALOON, 242 E. Main.

65. KEIDEL GROUP, 248, 252 and 258 E. Main.

66. BIRTHPLACE OF ADMIRAL NIMITZ*, 247 E. Main. One of Texas' most famous native sons and one of America's most beloved military leaders, Fleet Admiral Chester W. Nimitz was born in this early home, Feb. 24, 1885. The butcher shop, which was run for many years by his mother's family, stands beside it. The house was built in 1866. Admiral Nimitz died Feb. 20, 1966. This home of limestone construction has the traditional outside stairway leading to the small loft upstairs. It was designated a Texas Historical Landmark in 1968.

67. KOLMEIER HARDWARE STORE, 302 E. Main.

68. ROBERT G. STRIEGLER HOME, 310 E. Main.

69. WAHRMUND STORE*, 312 E. Main.

70. NIMITZ HOTEL, 340 E. Main. Built in 1852 by Captain Charles Nimitz, grandfather of Fleet Admiral Chester W. Nimitz. Prior to the 1870s when El Paso came of age, this was the last real hotel between here and San Diego, Calif. It was converted into a museum in 1966, which is dedicated not only to Admiral Nimitz but to all of the men and women who served under him in the Pacific, to all those who helped preserve and treasure our American Heritage. The building, recorded as a Texas Hitorical Landmark in 1964, has been restored to its original "Steamboat" shape.

71. SCHAETTER BUILDING, 327 E. Main.

72. BENDER-WEIRICH-MATHISEN HOME, 329 E. Main.

73. LARGE OAK TREE, East Main, on right.

74. KIEHNE HOUSE*, 407 E. Main.

75. KLOTH-LUDWIG HOME*, 414 E. Main.

76. RUFF HOUSE, corner of N. Elk and E. Austin.

77. OLD CITY CEMETERY, one block east on Austin, (note red granite headstones).

78. JULIUS HOLLMIG HOUSE, 107 N. Washington.

79. SCHANDUA HOME*, 111 E. Austin Street.

80. FRIEDRICH-SCHUMACHER HOUSE, 104 E. Austin.

81. ALFRED VAN DER STUCKEN-WILKE HOME, 102 W. Austin and N. Adams.

82. FELIX VAN DER STUCKEN HOUSE, 114 W. Austin.

A BRIEF HISTORY OF FREDERICKSBURG

Fredericksburg, the county seat of Gillespie County, is located 70 miles northwest of San Antonio, and 80 miles west of Austin, the state capital, at the intersection of US Highway 87 and 290 and Texas 16. Several Farm-to-Market and Ranch Roads traverse the county.

Gillespie County is on the Edwards Plateau in the heart of that section known as the Texas Hill Country.

The "hallmark" of Fredericksburg is its mile-long, clean and wide Main Street which runs through the business district. Century-old native limestone homes and store buildings stand side-by-side with new structures, depicting a true blending of the traditional and the contemporary.

HISTORICAL BACKGROUND

Fredericksburg is steeped in history. The town was founded May 8, 1846, by German immigrants under the auspices of the Society for the Protection of German Immigrants in Texas. The first colonization was of New Braunfels in 1845. A few years later, Fort Martin Scott was established southeast of Fredericksburg.

The Commissioner General of the Society, also known as the "Adelsverein," was Baron Ottfried Hans von Meusebach, a German nobleman who took the name of John O. Meusebach once settled in Fredericksburg. He was a skilled and capable man in handling the affairs of the colony, and was diplomatic in dealing with the Indians. The historic treaty he made with the Comanche Indians on the San Saba River in 1847 was hailed state-wide as the major effort in bringing about peaceful relations with the Indians on the frontier.

The City of Fredericksburg derived its name from German nobleman, Prince Frederick of Prussia, who was the highest ranking member of the "Adelsverein." This society sponsored the colonization of the Fisher-Miller Grant in Central Texas. Poor management by those who preceded Meusebach, however, defeated the original plan for colonization of larger areas north of Fredericksburg, except for those who settled in the Mason-Castell area.

During these early years, over 5,000 colonists from Germany landed at the Texas port of Indianola, also called Carlshaven. Most of them settled in Central Texas. The trip from the Gulf Coast to the site of the colony was made in two-wheeled oxcarts and on foot. Transportation was scarce due to the war between Mexico and the United States, which involved almost all available teamsters.

Sickness and lack of food took a great toll on human life. Many never reached their destination. It was told that one could almost follow the travelers' course by the graves of those who died of the dreaded cholera. With little more than determination, they set about the task of creating a new home in a new world — a land free of religious and political oppression. These sturdy colonists were confronted with many obstacles, chiefly sickness, inadequate food, and almost no money. Little, however, could be bought because there were few markets.

After a year or so the Fredericksburg colony began to prosper. Indians were as a rule peaceful during the early years of the colony, due mainly to the diplomacy of John O. Meusebach.

GILLESPIE COUNTY

Gillespie County was named after Capt. R.A. Gillespie who fought and died at Monterrey during the war with Mexico in 1846. Originally, the county was four times its present size, containing parts of Blanco, Mason, Llano and Burnet counties. Reallocation of lands began in 1852, and by 1858, through an act of the Texas Legislature, the present boundaries were established. Before Gillespie County was created, it was part of Bexar County.

Gillespie County comprises an area of 1,055 square miles. The altitude range of the county varies from 1,100 to 2,250 feet. There is a great variety of soil and vegetation in Gillespie County. Black soil covers lowlands, while other areas are mixed sandy loam, granite and sandy soils. Upland timber consists of cedar (juniper), mesquite and about six different species of oak. Lowlands have elm, hackberry, cottonwood, sycamore, willow and pecan trees. The many types of soil, adequate moisture, and moderate climate account for the diversified farming and ranching.

The County annually produces cattle (purebred and commercial), sheep, goats, hogs, horses and turkeys. Crops are oats, wheat, barley, sorghums and corn. Gillespie County ranks first in quality of many varieties of peaches grown here. Packing sheds are located in Fredericksburg and Stonewall. Other fruits, including plums, apples and pecans, are grown on a smaller scale; but fruit production rates among the major economic activities here. Also, hunting white-tailed deer and wild turkey is the leading sport of the Texas Hill Country.

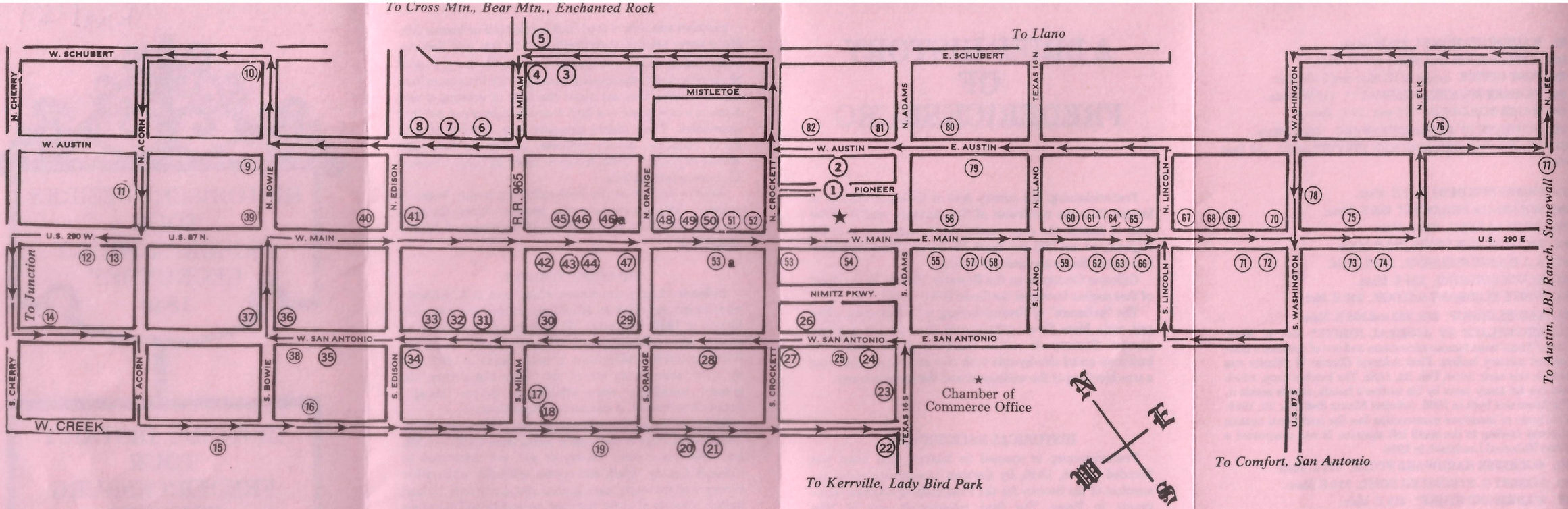
During 1986 this self-guided tour of the historical district is approved as an AVA and IVV year-round event: Pilgrimage Walk, Fredericksburg, Texas. Ask for start and check point location.

For more visitor information, please contact:
FREDERICKSBURG CONVENTION & VISITORS BUREAU,
P.O. Box 506, Fredericksburg, TX 78624
Phone: 512/997-6523

Enel (5)

HISTORISCHE BEZIRKS TOUR FRIEDRICHSBURG GEGRUNDET 1846

HISTORIC DISTRICT TOUR FREDERICKSBURG FOUNDED 1846



WILLKOMMEN! The Fredericksburg Chamber of Commerce welcomes you to Fascinating Fredericksburg. This is a self-guided tour pamphlet for the Fredericksburg Historical District. An asterisk indicates that a Texas Historical Commission Commemorative Medallion and descriptive plate is also at the site.

1. **VEREINS KIRCHE***, Pioneer Plaza. Dated 1847, was built as a church but also used as a school and community hall. The original building, which was in the middle of Main Street, was demolished in 1897. This exact replica was built in 1934-35 and set back 300 feet from the original site. "Vereins Kirche" means "Society's Church." This 8-sided structure, which was also called the "Coffee-Mill Church," was the town's first public building. For several years all church denominations used this building. It also served as protection against possible Indian attacks. Inside are relics furnished by the Gillespie County Historical Society and historical archives.

2. **PIONEER GARDEN**, located behind the Vereins Kirche.

3. **CHRISTIAN CRENWELGE HOME***, 307 W. Schubert.

4. **JOHN JOSEPH KNOPP HOUSE***, 309 W. Schubert.

5. **CHRISTIAN CRENWELGE PLACE***, 312 W. Schubert.

6. **JOHN WALTER HOME**, 408 W. Austin.

7. **STRACKBEIN-ROEDER HOME**, 414 W. Austin.

8. **THE VOGEL SUNDAY HOUSE**, 418 W. Austin.

9. **WILLIAM BIERSCHWALE HOME**, corner of N. Bowie and W. Austin.

10. **JOHN PETER TATSCH HOUSE***, corner of N. Bowie and W. Schubert. Built by John Peter Tatsch in 1856. Drawings of this home are in the Department of the Interior, Washington, D.C. Fine craftsmanship is displayed in the interior woodworking and furniture. The most outstanding feature is an immense off-set fireplace and oven, which is big enough to roast an entire ox. Recorded as a Texas Historical Landmark in 1964.

11. **WILLIAM KUNZ HOME**, 108 N. Acorn.

12 & 13. **JOHN KLINGELHOEFER HOUSE**, corner of S. Acorn and W. Main.

14. **THE HEINEMANN-MORITZ HOME**, 714 W. San Antonio.

15. **ST. BARNABAS EPISCOPAL MISSION**, 605 W. Creek.

16. **ADAM KRIEGER HOUSE**, 512 W. Creek.

17. **OLD SUNDAY HOUSE**, 209 S. Milam.

18. **AHRENS-LANGERHENNIG HOUSE**, 314 W. Creek.

19. **RESTORED VICTORIAN HOME**, 311 W. Creek.

20. **PAPE LOG CABIN***, 213 W. Creek.

21. **DANGERS STONE HOUSE**, 213 W. Creek.

22. **JORDAN-TATSCH-FINKERNAGEL HOME**, 101 West Creek.

23. **THE PETER BONN HOMES**, two houses on the left, 206 S. Adams.

24. **JOHN RUEGNER HOME**, 105 W. San Antonio.

25. **OLD JAIL***, 117 W. San Antonio.

26. **THE GAZEBO**, Courthouse Square.

27. **MEINHARDT-PFEIL HOME***, 125 W. San Antonio.

28. **AUGUST JORDAN HOUSE**, 209 W. San Antonio.

29. **MARIENKIRCHE**, CORNER OF W. San Antonio and S. Orange.

30. **OLD FIRST METHODIST CHURCH***, 312 W. San Antonio.

31-33. **SUNDAY HOUSES, Nos. 404, 408 & 410**, W. San Antonio Street on right. Sunday Houses are unique to Fredericksburg. They were small one-room structures, usually with a sleeping loft or half-story above them reached by an outside stairway, that farmers and ranchers erected in town so they would have a place to stay when they came for Sunday church services. They arrived on Saturdays to shop for needed staples, to sell their butter and eggs, and that night went visiting or dancing. Sunday evenings they returned to their homes in the country. Families often used them, too, when someone was ill and needed to be near a doctor or when children attended confirmation instruction. With the arrival of automobiles and good roads these were no longer used as Sunday Houses and many found permanent use by older residents who moved to town and turned their farm or ranch over to the young folks. (Note: All small houses are not necessarily a Sunday House.)

34. **HOFFMANN-KELLER HOUSE**, 419 W. San Antonio.

35. **OLD HOUSE**, 511 W. San Antonio St.

36. **KOLLETT HOME**, 516 W. San Antonio.

37. **WAHRMUND-WEIRICH-WEIGAND HOUSE**, corner of W. San Antonio and S. Bowie.

38. **WEIDENFELLER HOME**, corner of W. San Antonio and South Bowie St.

39. **KAMMLAH HOUSE**, 602 W. Main.

40. **LOEFFLER-WEBER HOUSE***, 506 W. Main.

41 **ZION LUTHERAN CHURCH***, corner of W. Main and N. Edison.

42-44. **PIONEER MUSEUM***, 309 W. Main. Items of all kinds belonging to early citizens of Gillespie County are on display in Pioneer Museum. Originally, it was the home of the Kammlah family, where they ran a general store. It is still sometimes referred to as the Kammlah House. It was built in 1846 and recorded as a Texas Historical Landmark in 1966. It was one of the first store-home buildings in Fredericksburg and was occupied by five generations of the Henry Kammlah family. Owned and restored by the Gillespie County Historical Society, the complex also features the B. Fassell House, the Weber Sunday House*, and the Firehouse Museum.

45. **ITZ SALOON**, 320 W. Main st.

46. **KRAUSKOPF BUILDING**, 312 W. Main.

46a. **THE GUN CAP FACTORY***, 300 W. Main.

47. **WISSERMAN-HANISCH HOME**, 301 W. Main.

48. **HOESTER-WIESER BUILDING**, corner of W. Main and North Orange.

49. **PATTON BUILDING***, 232 W. Main.

50. **OLD CENTRAL HOTEL***, 218 W. Main.

51. **SCHWARTZ BUILDING***, 214 W. Main.

50

Regency from First City

CALENDAR OF EVENTS

January 21st Increase your understanding of the new tax revisions and their impact on your personal finances. Complete with a catered luncheon, Regency presents an awareness seminar on The Implications of the New Tax Law.

March 17th Learn from a master chef the secrets to preparing exquisite Filet of Gulf Trout a'l Italienne. Chef Heinz Kugler divulges this recipe and shares more of his original culinary delights at our special cooking seminar and luncheon. The novice cook to the seasoned gourmet will savor Chef Kugler's flavorful demonstration. It's a feast to behold!

May King Ranch Let's all round up for a king-size tour of one of the world's largest ranches. We'll visit the Santa Gertrudis division where Captain King set up his first cow camp. Of course we'll stop at the Running W Saddle Shop where craftsmen tool intricate designs into custom saddles. Then the Henrietta Memorial Museum will give us a glimpse into the personalities that created the King Ranch legend. At the end of our trail, we'll feast on an old-fashioned cookout complete with beer, wine and entertainment at the historical Caesar Kleberg Camphouse. Come experience the legend at the King Ranch. Guests welcome.

June 20 -27 Alaska Escape the South Texas heat and set sail for the land of glistening glaciers on a grand 7-day tour aboard the Cunard Princess. We'll cruise the inside passage from Vancouver to Whittier with magnificent callings along the way. We'll journey into Ketchican, a quaint fishing village, to Juneau, nestled in the flanks of looming Mt. Juneau and on to the charming ports of Sitka and Skagway. Then threading our way through narrow, winding, glacier-fed fjords, we'll witness the grandeur of the star attraction — the Columbia Glacier, as well as Hubbard Glacier, the pristine waters of Prince William Sound and the College Fjord and its family of 13 tidewater glaciers. From Whittier, we'll ride the rails through scenic countryside to Anchorage, a bustling, cosmopolitan city with the friendliest people you'll meet anywhere. On this memorable sea and land cruise, you'll visit places most people will never see. Early bird discounts available through January 31, 1987. Deposit required. Guests welcome.

September California California dreamers — here's your dream come true! In eight wonderfully scenic days, we'll travel along the coast from San Francisco to Los Angeles; from Fisherman's Wharf and Ghirardelli Square, through the Muir Woods to majestic Yosemite National Park with its Bridalveil Falls. The Sierra Nevadas, San Joaquin Valley and lovely mission churches welcome us along the way to Monterrey. Next, Carmel comes into view and the private Del Monte Forest. You'll see where the mountains drop to the sea, the fabulous Hearst Castle, the Danish community of Solvang, and the Franciscan Mission in Santa Barbara. Enjoy a full day of sightseeing in the Los Angeles area, including Rodeo Drive, Hollywood and Beverly Hills. This trip's emphasis is on the scenic wonders of the California coast. Deposit required. Guests welcome.

November Open House The whirlwind of holiday parties start with a Regency gathering. Toast the season with the good company you keep as a member of Regency.

December Christmas in Fredericksburg Shop Kristkindl Market, the tiny Christmas village filled with toys, decorations, confections, handcrafted specialties, music, German food, and loads of merriment. Follow that magic with an overnight stay in an authentic Sunday House and a Candlelight Tour of historic homes. You'll be thoroughly enchanted with the Hill Country's yuletide heritage. Guests welcome.

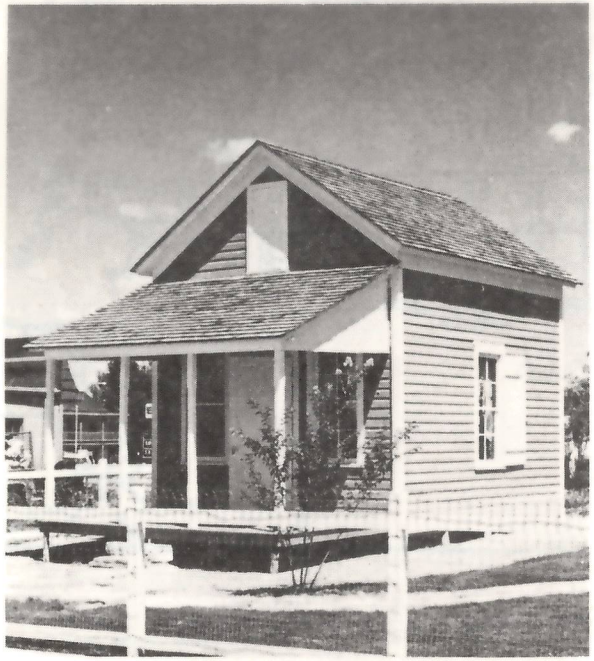
FIRSTCITY®

First City Bank of Corpus Christi

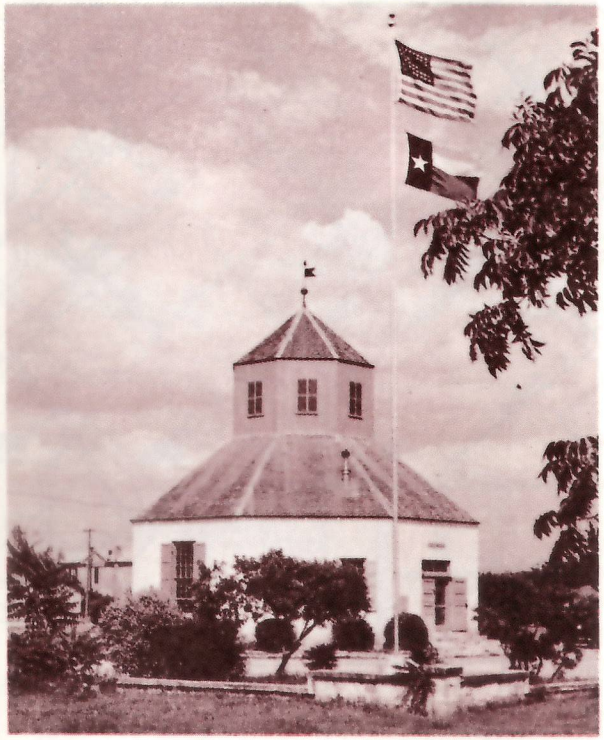
Encl (6)

Gillespie County Historical Society, Inc.

Pioneer Museum



Weber Sunday House

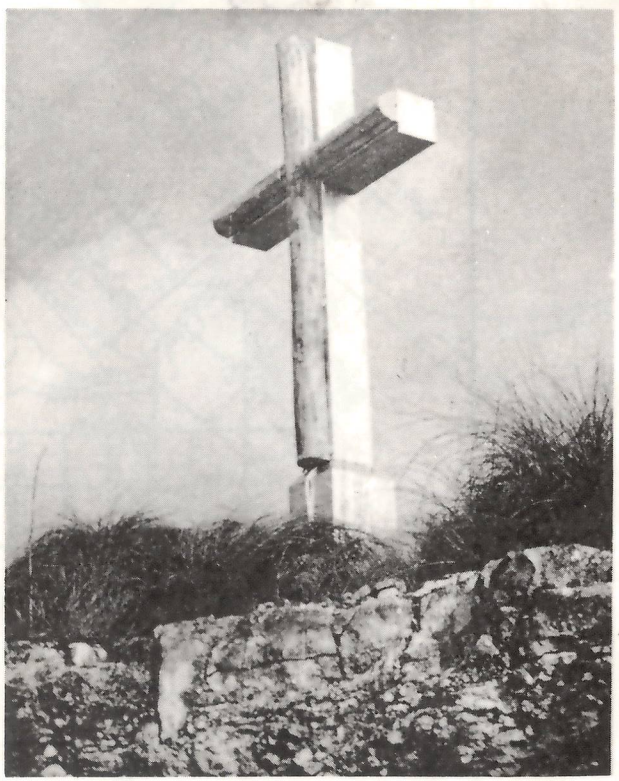


The Vereins Kirche

In The Center Of The Market Square
In The Heart Of The City

Fredericksburg, Texas

Fredericksburg, the historical gem of Texas, was founded May 8, 1846, by German immigrants under the auspices of the German Emigration Company. Seeking political freedom and economic opportunity, the colonists overcame illness, starvation, Indian depredations and other frontier and wilderness perils. An important event in Texas history was the 1847 Peace Treaty between Colonist Leader John O. Meusebach and the Comanche Nation. This unbroken treaty opened five million acres of land to colonization in Central Texas.



Cross Mountain

The Fassel House

The Gillespie County Historical Society

Gillespie County Historical Society, chartered in 1936, is dedicated to conservation and preservation of historical buildings, artifacts, customs and traditions of the Fredericksburg area. Historical properties owned by the Society are the Pioneer Museum Complex, Schandua House, Vereins Kirche and Cross Mountain, all of which are maintained for educational and cultural purposes.

Annual events sponsored by the Society include the Masken Ball (February); Founders Day (first Saturday in May); the Spring Pilgrimage of Homes; Kinderfest (Children's pre-Christmas celebration the first Saturday in December); Christmas Candlelight Tour of Homes (second Saturday in December), and the Old Fashioned Christmas Party at Pioneer Memorial Museum (Sunday after Christmas Day). An annual membership banquet is held on the third Monday in September.

The Vereins Kirche, located on Market Square, includes a fine local history collection along with archaeological finds from Gillespie County. The original octagonal building was erected in 1847 and was used for religious services, as a meeting house, school, storehouse and fort for about 50 years. It was demolished in 1897, the year following the city's Golden Jubilee. The present structure, built in 1935-1936, houses the archives of the Historical Society. Because of its shape, it is familiarly called Die Kaffee-Muehle (Coffee Mill) Church. Admission fee.

A monument honoring John O. Meusebach, founder of Fredericksburg, was erected on Market Square in 1936 by the State of Texas.

Pioneer Museum Complex

Pioneer Museum Complex, 309 W. Main Street, is open to the public daily from early spring to late fall. Hours: Monday-Saturday 10 a.m. - 5 p.m., Sunday 1 - 5 p.m. During winter months, Saturdays 10 a.m. - 5 p.m., Sundays 1 - 5 p.m. Closed weekdays. Admission fee.

The Museum is housed in the old Kammlah House which bears the Texas Historical Commission medallion and The National Historical Trust Site emblem. Constructed in 1849 of stone, it served as a pioneer home and store through the 1920's. It was restored by the Historical Society in 1955 and consists of eight furnished rooms, a wine cellar and a stone covered hof (yard), circa 1850. Of special interest are the Meusebach Room, the three pioneer kitchens with open hearths and the Nimitz family photo collection and Nimitz cradle.

Just west of the Kammlah house is the Fassel House, a small Victorian home built in several stages and enlarged about 1875. Restored by the Society, it is furnished with many fine pieces of Fredericksburg furniture.

The barn and smokehouse (tool shed) are original Kammlah buildings.

Sunday houses are a unique Fredericksburg institution and served the rural farm and ranch family as a home away from home when families came to town for church services, shopping and trading, medical attention, confirmation instruction, school attendance and special family celebrations. Within our complex is an authentic Sunday House donated by Mrs. Valeska Weber. It is furnished with many original pieces of furniture, circa 1900.

Backing the parking area is the old First Methodist Church, now the offices for the Gillespie County Historical Society. Founded in 1849 as a German mission, the 40 x 60 native stone church was built in 1855 during the pastorate of Rev. C.A. Grote. It went through three remodelings and the rear section was added after WWII.

Fire Museum

Fredericksburg Heritage Federation constructed the small museum which houses fire fighting equipment used in the early days of Gillespie County. The grounds for this museum were donated by the Historical Society.

Schandua House

Schandua House, 111 E. Austin Street, was a gift from Mr. and Mrs. Burt Joiner. The miniature rock house, built prior to 1883, has been authentically restored and furnished, without electricity, gas or running water. Open by appointment, it is known as "the house that is always ready for company."

Cross Mountain

Cross Mountain on FM 965 is a famed landmark. It is believed the first cross erected on its summit, of wood, was the work of Spanish missionaries. The second cross, a wooden replacement, was by Fr. George Menzel in 1847. In 1921, St. Mary's Catholic Church erected a substantial one, and in 1940 rebuilt the monument. In 1946 it was illuminated, and in 1951 the Historical Society acquired the Cross Mountain property. In addition to having a leading role in the Fredericksburg Easter Fires pageant and in church and community life, Cross Mountain offers a fine panoramic view of the city.

Tours

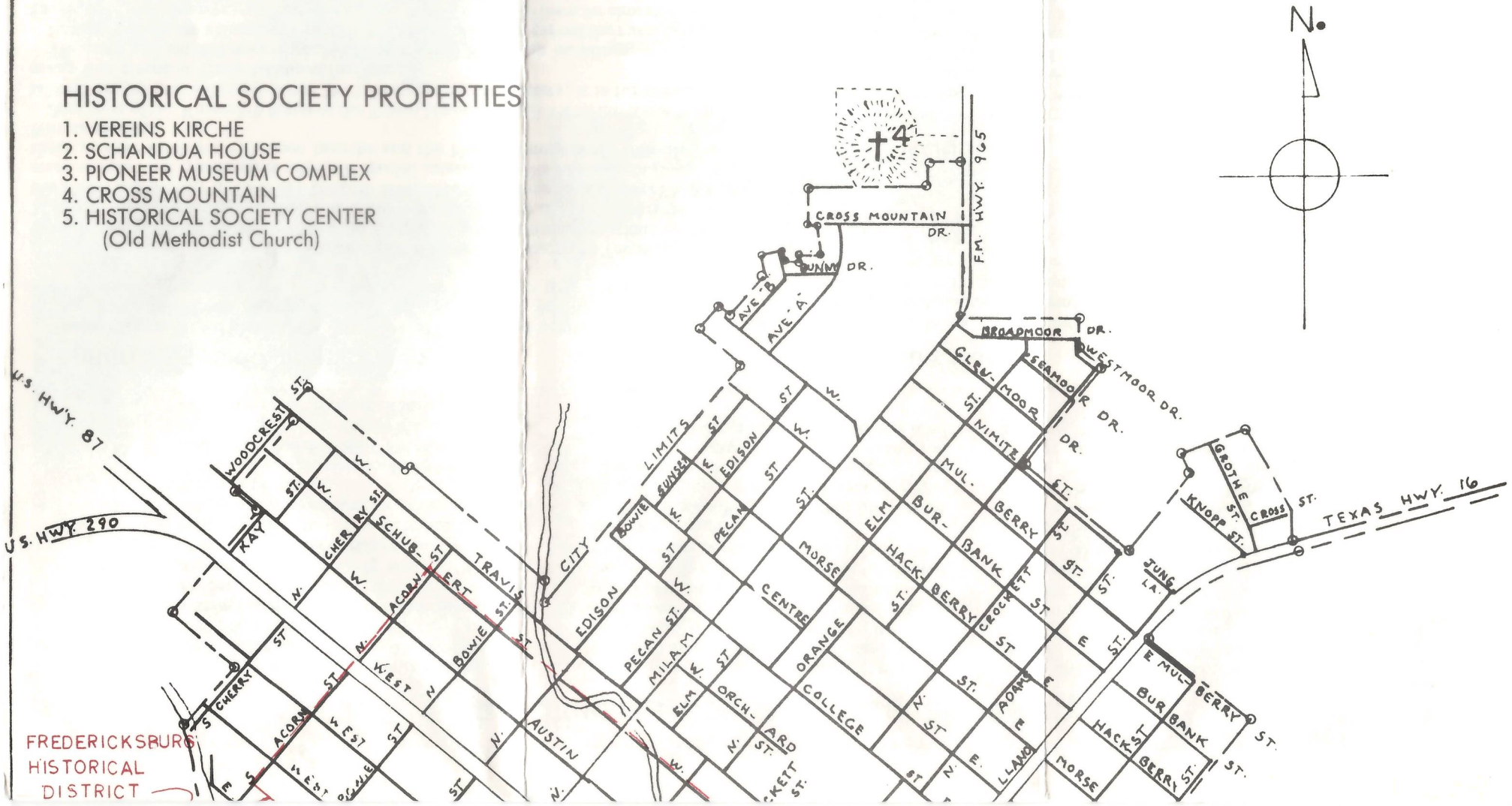
Two major tours are sponsored by the Society throughout the year - The Spring Pilgrimage of Homes and the Christmas Candlelight Tour, both of which feature historic homes and buildings of this area. We also plan and conduct home tours for groups of people. These tours are individually planned and include the Pioneer Museum complex, the Vereins Kirche and two additional old homes or unusual buildings. A bus guide is provided. Additional information is available by writing to: Gillespie County Historical Society, P.O. Box 765, Fredericksburg, Texas 78624, or by calling (512) 997-2835.

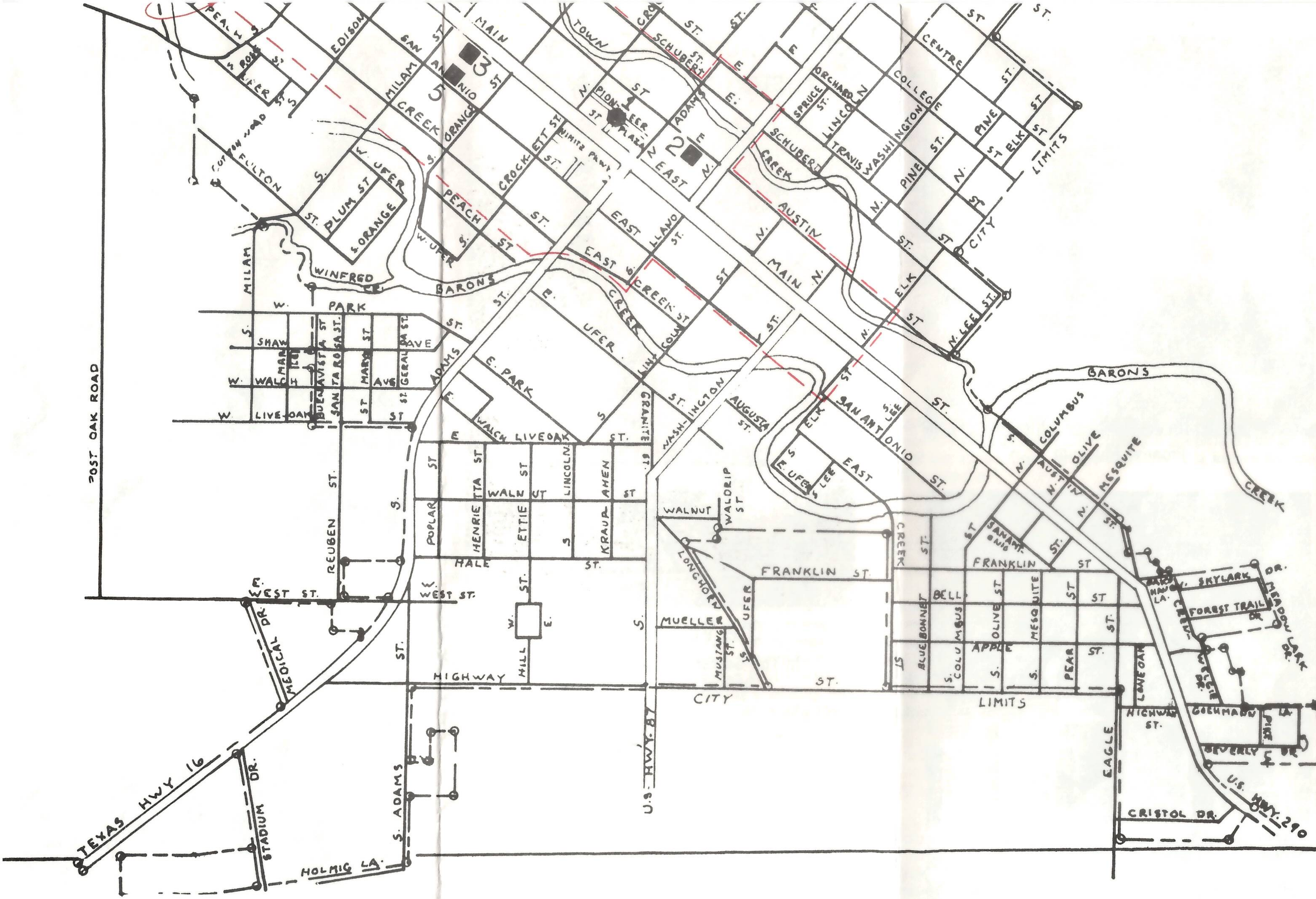
FREDERICKSBURG

GILLESPIE COUNTY HISTORICAL SOCIETY

HISTORICAL SOCIETY PROPERTIES

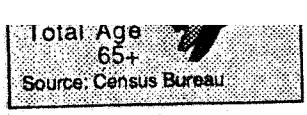
1. VEREINS KIRCHE
2. SCHANDUA HOUSE
3. PIONEER MUSEUM COMPLEX
4. CROSS MOUNTAIN
5. HISTORICAL SOCIETY CENTER
   (Old Methodist Church)





POST OAK ROAD
MAIN ST.
SAN ANTONIO ST.
EDISON
MILAM
CREEK
ORANGE
FULTON
PLUM ST.
S. ORANGE
W. UFER
PEACH ST.
CROCKETT ST.
NIMITZ PKWY.
PIONEER PLAZA
TOWN CREEK
SCHUBERT ST.
ADAMS
EAST ST.
E. SCHUBERT
SPRUCE ST.
ORCHARD
LINCOLN
TRAVIS
WASHINGTON
COLLEGE
CENTRE ST.
PINE ST.
ELK ST.
CITY LIMITS
EAST LLANO
EAST CREEK ST.
AUSTIN
N. MAIN
N. ELK ST.
N. LEE ST.
WINFRED CR.
BARONS CREEK
W. PARK
SHAW AVE
W. WALCH AVE
W. LIVE OAK ST
BUENAVISTA ST.
SANTA ROSA ST.
MARY ST.
GERALDA ST.
E. PARK
E. UFER
LIVE OAK
WALCH
LINCOLN ST.
GRANITE ST.
WASHINGTON ST.
AUGUSTA ST.
SAN ANTONIO
S. LEE
S. ELK
E. UFER
EAST ST.
N. COLUMBUS
N. OLIVE
N. MESQUITE
BARONS
CREEK
REUBEN ST.
S. ADAMS
POPLAR ST.
HENRIETTA ST.
WALNUT ST.
ETTIE ST.
LINCOLN
KRAUSKOPF
AHEN ST
HALE ST.
E. WEST ST.
W. WEST ST.
MEDICAL DR.
W. HILL ST. E.
WALNUT
WALDRIP ST.
LONGHORN
FRANKLIN ST.
UFER
S. MUELLER
MUSTANG ST.
CREEK ST.
BLUEBONNET
BELL
S. COLUMBUS
OLIVE ST.
MESQUITE
PEAR ST.
APPLE
HIGHWAY ST.
CITY LIMITS
SKYLARK DR.
FOREST TRAIL DR.
MEADOW LARK DR.
LONE OAK
HIGHWAY ST.
GOEHMANN LA.
BEVERLY DR.
EAGLE
CRISTOL DR.
U.S. HWY. 290
U.S. HWY. 87
TEXAS HWY 16
STADIUM DR.
S. ADAMS
HOLMIG LA.
1
2
3
5

ing "down the shore." The influx turned many towns, desolate in the winter, into year-round communities.



Many head to beachfront towns where old houses are charming and expensive. Others go inland several miles to planned retirement communities, which sprang up in wilderness. The planned community of Crestwood Village in Lakewood now has 18,000 houses, from $50,000 to $90,000. Residents must be at least 55.

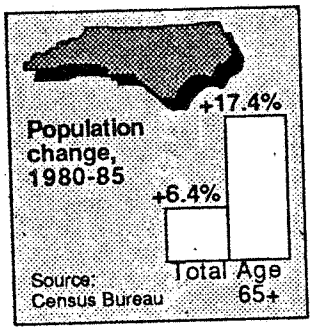
"Some don't like retirement communities. They feel there are too many old people," says Philip Rubinstein of the Ocean County Office on Aging. "But that's only a small proportion. Most love it."

Because of the popularity of places like Crestwood, seniors are 20 percent of Ocean's population of 375,000.

Year-round residents of all ages await summer with mixed feelings: it brings a return to beaches but also a crush of "benies" — short for "those who seek the beneficial rays of the sun."

North Carolina

Climate proves big drawing card



HENDERSONVILLE — Millionaire George Vanderbilt built a castle nearby in 1895 after doctors said the climate was healthy here.

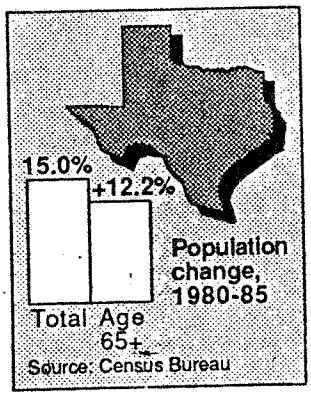
That prompted New Yorkers Harry and Marjory Prosser to investigate retiring in Hendersonville, tucked in the western mountains. Halfway between the Ohio Valley and Florida, the town has long been a popular stop for Northerners intent on fishing and swimming.

"It was 54 degrees today; 9 in Buffalo," says Marjory Prosser. "The only thing that worries us is that too many people are going to find out about it and come here."

Despite its rural location, Hendersonville has good services and amenities, including a symphony.

Texas

The 'hill country' grows 13 percent



FREDERICKSBURG — While the rest of low-lying Texas swelters most summers, "the hill country" of central Texas is tolerable. Fredericksburg, which has grown over 13 percent in the 1980s, is on a wooded plateau west of Austin.

The influence of German farmers who first settled here is evident in Fredericksburg's architecture. Lakes that first lured vacationing sportsmen now lure retiring sportsmen. Most retirees are from Texas.

Billy Ray, an engineer, lived and worked all over the world, including Hawaii and, most recently, Alaska. He and his wife, Jane, considered retiring in Hawaii, but decided it was too costly and too far from relatives. "We like the people," Ray, 66, says. The couple stumbled upon Fredericksburg a few years ago while checking out Austin as a retirement spot.

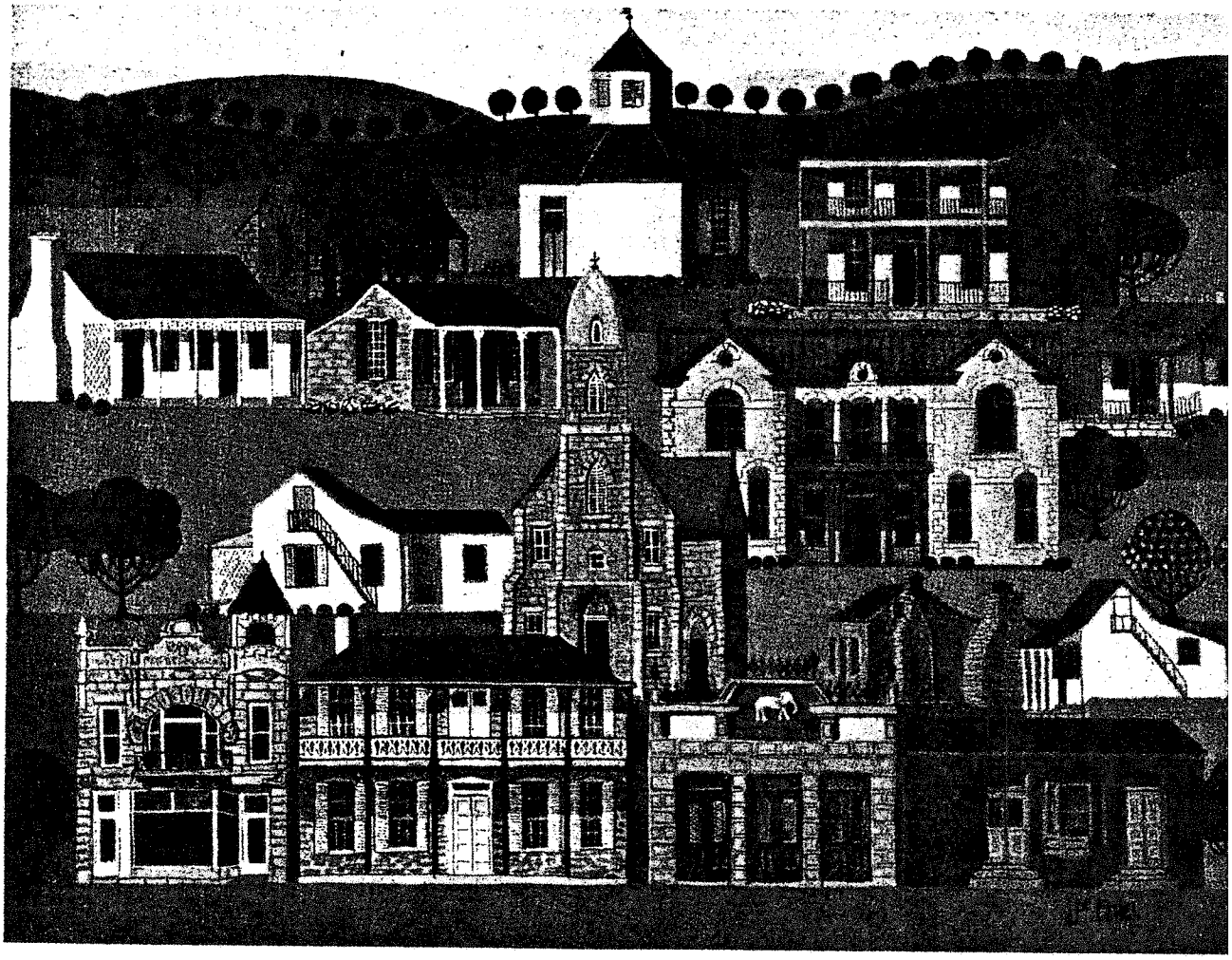
Encl 7

USA TODAY 15 Jan 1987

Encl (8)

A GERMAN TOWN IN TEXAS

This charming Hill Country town remains a monument to its German founders through its architecture, crafts, cuisine, and close-knit community spirit



Deep in the heart of modern Texas—a little more than an hour's drive west of Austin, to be exact—lies a 19th-century German village. Perhaps not what you'd expect from a state known for its oil wells and rodeos, but the tiny town of Fredericksburg is a continuing reminder of an important segment of Texas history.

Fredericksburg remains justifiably proud of the hardy German pioneers that founded it in the name of Prince Frederick of Prussia. John O. Meusebach (known in his homeland as Baron Ottfried Hans von Meusebach) led 120 men, women, and children here in 1846 as part of an emigration sponsored by the Society for the Protection of German Immigrants in Texas. Isolated, plagued by cholera, short on food and funds, these early settlers nevertheless survived to develop this industrious, creative community.

Many of the Germans who came to Fredericksburg were skilled craftsmen. By 1860, the town with a population of 1,200 had at least 10 cabinetmaker's shops—more than any other city in Texas! But then the Germans were known for their woodworking; at a time when six percent of the state's population was German-born, exactly one-third of its cabinetmakers were German.

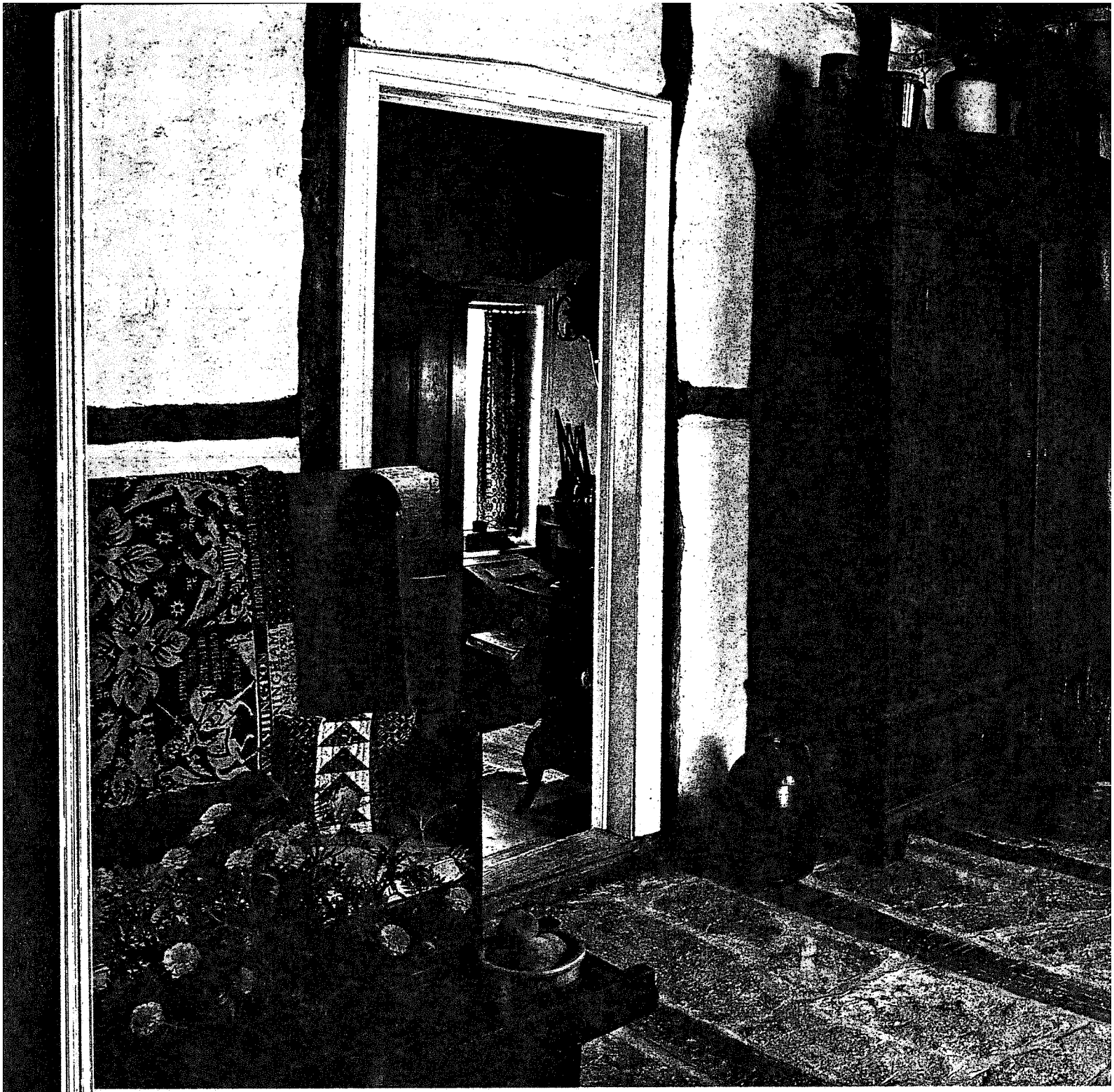
This German influence is obvious in the body of furniture that has survived from Fredericksburg's early years. The Biedermeier style, popular in 1840s Germany, shows up in the heavy framed c struction and thick beveled panels o *schrank*, or cupboard. Beds featu squared posts (sometimes topped w

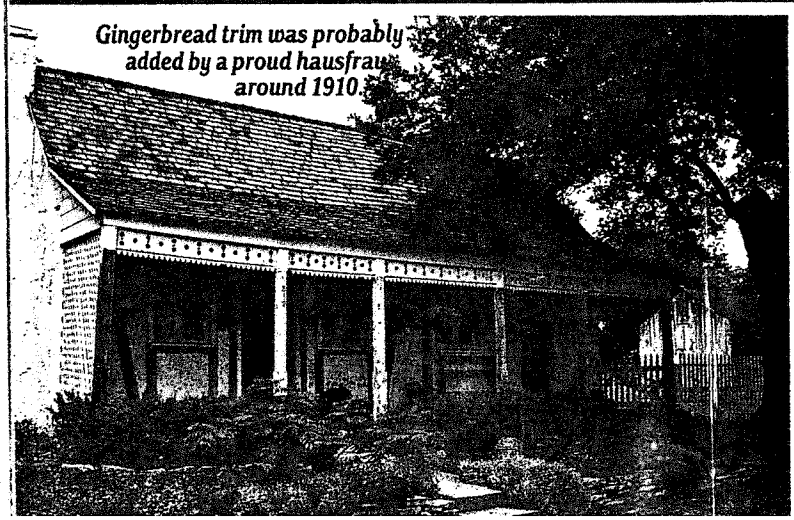
Continued on page

★1 Early log cabin. ★2 The "Peach Capita Texas," Fredericksburg holds a Peach Jambo every June. ★3 At home on the ranch. ★4 Tulip & the Bird, one of many antiques shop town. ★5 The German influence extends to st names. ★6 A favorite tour stop—the Wh Elephant Saloon on Main Street. ★7 Gard proliferate everywhere. ★8 Deer skulls creat rustic vignette. ★9 The eight-sided Vereins Kir (Society's Church) is a 1935 replica of the c munity center built in 1847. ★10 The town's churches serve 6,412 residents. ★11 Stand seam tin roof on an early limestone build ★12 Gingerbread trim was a Fredericksb fancy at the turn of the century.

May 1984.

COLOR PRINT BY LEE ETHEL; PHOTOGRAPHY BY KEITH SCOTT MORTON. SEE SHOPPING GUIDE FOR DETAILS.





Gingerbread trim was probably added by a proud hausfrau around 1910.

FREDERICKSBURG, TEXAS

"FACHWERK" HOME

German-style construction adds rustic flavor to this charming three-room cottage

Encl 9.

Established Series
Rev. WHD:CLG:JCW
4/81

PEDERNALES SERIES

The Pedernales series consists of deep, well drained, moderately slowly permeable soils formed in loamy and clayey, calcareous, limy earths. These soils are on nearly level to sloping uplands. Slopes range from 0 to 8 percent.

Taxonomic Class: Fine, mixed, thermic Udic Paleustalfs.

Typical Pedon: Pedernales fine sandy loam--cultivated.
(Colors are for dry soil unless otherwise stated.)

Ap--0 to 11 inches; reddish brown (5YR 4/4) fine sandy loam, dark reddish brown (5YR 3/4) moist; weak fine subangular blocky and granular structure; hard, friable; few fine roots; neutral; clear smooth boundary. (6 to 15 inches thick)

B21t--11 to 20 inches; red (2.5YR 5/6) sandy clay, red (2.5YR 4/6) moist; moderate medium prismatic and moderate medium blocky structure; very hard, very firm, very plastic; sticky; few fine tubes and pores; few insect casts and burrows; common clay films; mildly alkaline; gradual smooth boundary. (8 to 20 inches thick)

B22t--20 to 37 inches; red (2.5YR 5/6) sandy clay, red (2.5YR 4/6) moist; weak medium blocky structure; few fine tubes and pores; common clay films; mildly alkaline; gradual smooth boundary. (10 to 20 inches thick)

B3ca--37 to 43 inches; yellowish red (5YR 5/6) sandy clay loam, yellowish red (5YR 4/6) moist; weak coarse blocky structure; hard, firm, sticky; estimated 10 to 15 percent by volume of soft masses of $CaCO_3$; calcareous; moderately alkaline; clear smooth boundary. (6 to 20 inches thick)

Cca--43 to 63 inches; light reddish brown (5YR 6/4) sandy clay loam, reddish brown (5YR 5/4) moist; massive; hard, firm, sticky; estimated 25 percent by volume of soft masses of $CaCO_3$; few weakly cemented limestone fragments; calcareous; moderately alkaline.

Type Location: Gillespie County, Texas; 2.5 miles southwest of County Courthouse in Fredericksburg; 50 feet southeast of State Highway 16 and 125 feet southwest of intersection of Highway 16 and FR 2093.

Range in Characteristics: Solum thickness ranges from 35 to 60 inches. Secondary carbonates are at depths of 28 to 50 inches.

The A horizon has hues of 5YR through 10YR, values of 4 through 6, and chromas of 3 through 6. Texture is loamy fine sand or fine sandy loam. Some pedons have A2 horizons that are 1 to 2 units of value higher than the A1 horizon. The A horizon is slightly acid through mildly alkaline.

The Bt and B3ca horizons have hues of 2.5YR through 7.5YR, values of 4 through 6, and chromas of 4 through 8. Some pedons have the color red (10R 5/6). Some pedons have yellowish and brownish mottles in the lower part of the Bt horizon. Texture is sandy clay, clay loam, or sandy clay loam. The clay content of the Bt horizons ranges from 35 to 55 percent and decreases with depth. The Bt horizon is slightly acid through mildly alkaline and some pedons are moderately alkaline in the lower part.

The Cca horizon has hues of 2.5YR through 10YR, values of 5 through 8, and chromas of 2 through 6. The Cca horizon is sandy clay loam, clay loam, or sandy clay that, in some places, contain thin strata of soft limestone. The Cca horizon contains from 5 to 30 percent by volume calcium carbonate in the form of concretions and soft powdery masses. The amount of calcium carbonate does not decrease with depth.

Competing Series: They are the Callisburg, Hamby, Minwells, Truce, Voca, Winthorst and Winters series. Callisburg, Hamby, and Winters soils have sola more than 60 inches thick. Minwells soils have gravelly substrata below 40 inches. Truce soils are underlain by clayey shale at depths of 40 to 60 inches. Voca soils are 40 to 60 inches thick over weathered granite. Winthorst soils lack calcic horizons.

Geographic Setting: Pedernales soils are in broad, nearly level to moderately sloping valleys flanked by receding limestone scarps. Slopes are mainly about 2 percent and range from 0 to 8 percent. The soil formed in sandy loam, sandy clay loam, clay and limy earth of Lower Cretaceous age, and contains some sand and silt and a small amount of soft limestone and siliceous pebbles. The climate is dry subhumid. Mean annual precipitation is 26 to 30 inches, annual Thornthwaite P-E indices of 36 to 46, and mean annual temperature ranges from 65° to 68° F.

Geographically Associated Soils: They are the Brackett, Hext, and Menard series. Brackett and Hext soils are limy and lack argillic horizons and occur at higher elevations on adjoining areas over limestone or calcareous sandstone. Menard soils occur on similar surfaces and have less than 35 percent clay content in the upper Bt horizon.

Drainage and Permeability: Well drained; medium runoff, moderately slow permeability.

Use and Vegetation: Largely cultivated and used mainly for growing grain sorghums, small grain, and peaches. Native vegetation is post oak, mid and tall grasses.

Distribution and Extent: Mainly in the Central Basin and Eastern part of the Edwards Plateau of Texas. The series is of moderate extent.

Series Established: Reconnaissance Soil Survey of South Central Texas; 1913.

Remarks: The Pedernales series was formerly classified in the Reddish Prairie great soil group.

National Cooperative Soil Survey
U. S. A.

TX0139

SOIL INTERPRETATIONS RECORD

MLRA(S): 82, 85, 84
REV. CLG,JCW, 4-81
UDIC PALEUSTALFS, FINE, MIXED, THERMIC

PEDERNALES SERIES

THE PEDERNALES SERIES CONSISTS OF DEEP, WELL DRAINED, NEARLY LEVEL TO MODERATELY SLOPING SOILS OF UPLANDS. THIS SOIL FORMED IN LOAMY AND LIMY MATERIALS. IN A REPRESENTATIVE PROFILE, THE SURFACE LAYER IS A REDDISH BROWN FINE SANDY LOAM ABOUT 11 INCHES THICK. THE SUBSOIL IS RED SANDY CLAY IN THE UPPER 26 INCHES AND YELLOWISH RED SANDY CLAY LOAM IN THE LOWER 6 INCHES. BELOW 43 INCHES IS LIGHT REDDISH BROWN SANDY CLAY LOAM. SLOPE GRADIENTS RANGE FROM 0 TO 8 PERCENT.

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	LIQUID LIMIT	PLASTICITY INDEX
0-11	FSL	SM, ML, CL-ML, SM-SC	A-4, A-2-4	0	95-100	90-100	75-100	33-55	<25	NP-7
0-11	LFS	SM	A-2-4	0	95-100	90-100	75-95	15-33	<25	NP-3
11-37	SC, C	CH, CL, SC	A-7, A-6	0	90-100	90-100	80-100	45-75	38-60	20-36
37-63	SCL, CL, SC	SC, CL, CH	A-6, A-7	0-5	90-100	90-100	80-100	36-75	32-55	13-30

DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-11	5-20	-	0.6-2.0	0.12-0.17	6.1-7.8	-	LOW	.32	5	3	<1	HIGH	LOW
0-11	2-12	-	2.0-6.0	0.07-0.11	6.1-7.8	-	LOW	.20	5	2	<1		
11-37	35-55	-	0.2-0.6	0.15-0.20	6.1-7.8	-	MODERATE	.28					
37-63	20-50	-	0.2-0.6	0.15-0.20	7.9-8.4	-	MODERATE	.28					

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		>60		-	-	C	-

SANITARY FACILITIES (B)

SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY
SEWAGE LAGOON AREAS	0-2%: SLIGHT 2-7%: MODERATE-SLOPE 7+%: SEVERE-SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-TOO CLAYEY
SANITARY LANDFILL (AREA)	FSL: SLIGHT LFS: SEVERE-SEEPAGE
DAILY COVER FOR LANDFILL	POOR-TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL (B)

ROADFILL	POOR-LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	FSL: FAIR-THIN LAYER LFS: FAIR-TOO SANDY,THIN LAYER

WATER MANAGEMENT (B)

POND RESERVOIR AREA	SLIGHT
EMBANKMENTS DIKES AND LEVEES	MODERATE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	0-3% FSL:\SOIL BLOWING 3+% FSL: SOIL BLOWING,SLOPE 0-3% LFS: FAST INTAKE,SOIL BLOWING 3+% LFS: FAST INTAKE,SOIL BLOWING,SLOPE
TERRACES AND DIVERSIONS	SOIL BLOWING
GRASSED WATERWAYS	FAVORABLE

BUILDING SITE DEVELOPMENT (B)

SHALLOW EXCAVATIONS	MODERATE-TOO CLAYEY
DWELLINGS WITHOUT BASEMENTS	MODERATE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	MODERATE-SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	0-4%: MODERATE-SHRINK-SWELL 4-8%: MODERATE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SLIGHT

REGIONAL INTERPRETATIONS

KARL W. KOCH
[redacted]
Fredericksburg, TX 78624
Ph. [redacted]

April 20, 1987

Mr. Richard A. Mascola
Chief, FAA, Wine and Beer Branch
Bureau of Alcohol, Tobacco, and Firearms
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20226

Dear Mr. Mascola:

This concerns your March 19, 1987 response to my request for the establishment of the "Fredericksburg" Viticultural Area.

A. Name: I can understand how the name "Fredericksburg" could mean a different place for people outside Texas. To people in Texas, however, it means "that little German town in the hill country". Any of the following, in descending order of preference, would be acceptable:

1) Fredericksburg of the Texas Hill Country.
2) Fredericksburg in the Texas Hills.
3) Fredericksburg, Texas.

B. & C. Boundaries and Maps: In my original letter I had described the proposed viticultural area's boundaries as: "the contiguous Luckenbach-Pedernales-Heatly Soil Association which is on the Pedernales River and its tributaries at an elevation of over 1500 feet."

Most of this area, including the town of Fredericksburg, lies to the North of the Pedernales River. The headwaters of the Pedernales River, and its many tributaries within the proposed area, lie in the hills which surround this area.

What we have is a "bowl" shaped area that is filled with the Luckenbach-Pedernales-Heatly Soil Association as shown by the USDA Soil Conservation Service on their "General Soil Map" for Gillespie County (Reference B and Enclosure 2). The sides of the "bowl" do not show on the soil map, but are represented by the close contour lines on Enclosure 1 which shows the rapid increase in elevation.

It is the relatively flat bottom of the "bowl", ie the Luckenbach-Pedernales-Heatly Soil Association, that is suitable for farming, and peaches are a crop for which Fredericksburg is know. This makes Fredericksburg unique. There is no similar farming area for at least 100 miles West of Austin and San Antonio. Most of the surrounding area is ranching, not crops and orchards.

The "General Soil Map" (Scale 1:253,440) was superinposed on the USGS Map (Scale 1:250,000). I did not feel that this slight (1%) distortion altered the boundaries significantly. The boundary North and South of the Pedernales River on the down-stream or East end of the proposed area used the 1500 foot contour line. This made for rather complex drawing.

The problem in submitting an area such as this is to a degree political - to keep everybody happy, if possible. There is a lot of interest in viticulture, particularly as an alternative crop for the area's peach growers. Realtors are selling local land for "Vineyards" (enclosure 10) and the State is promoting (enclosure 11) the wineries. Fredericksburg's very active Chamber of Commerce promotes tours of Peach Orchards (enclosure 4) and is interested in a local viticultural area. At the same time there is a similar marketing effort by the Stonewall (LBJ Ranch) area peach growers who seem to be reluctant to cooperate with the Fredericksburg area growers. Stonewall lies below 1500 feet elevation directly on the Pedernales River enroute from Fredericksburg to Austin.

The use of the 1500 foot minimum elevation and the tillable Luchenbach-Pedernales-Heatly Soil Association seemed to be the best, albeit difficult to describe, boundary from the standpoint of keeping the most people happy.

I would appreciate your advice on the following alternatives:

1. Use the courthouse of Fredericksburg as the center of an 8 mile radius circle. This would incorporate almost all the appropriate soil type and still maintains almost all the area over the 1500 feet elevation.

   An 8 mile radius has the advantage of simplicity. It has the disadvantage of incorporating a wider range of soil types (mostly unsuitable) on the steep hills, making the area much larger (201 square mile area) and appearing more arbitrary. See enclosure 12.

2. Make the eastern boundary a North-South road going from the junction of FM1631 and FM 2721 to Bluementhal, thence east on US Rd. 290 to the road South to Luckenbach, and then follow the soil types. See enclosure 13.

3. Use the originally proposed soil type - elevation combination, but with the elimination of the areas not contiguous, ie drop the soil type areas on the eastern part of the watershed that are not within the soil type - 1500 foot elevation loop. See enclosure 14.

Regarding the use of a 1:24000 scale: transposing the soil types to these large scale maps could be done, but with difficulty. Also, since Fredericksburg is near the corner of 4 of these USGS maps, and is actually in 2 of the maps, at least 4 and possible 6 of these maps would be required.

Please advise me of which of the above alternatives, and on which scale, would meet your requirements.

D. Historical Evidence: Present day technology has made viticulture a more practical venture than a century or so ago. Enclosures 15, 16, and 17, mention this. Page 141 of enclosure 15 mentions a Fredericksburg Winery and Hill Country of Texas Grapes. Enclosure 15 is probably my best reference for now. Others are available.

E. Distinguishing Geographical Features: The early Germans considered this area "the rim of the desert. (page 177, enclosure 15).

   Page 69 of enclosure 18 mentions the cooler Gillespie County temperature. Page 48 is a rainfall map for summer rains.

   Page 77 of enclosure 19 mentions the 4°-5° cooler Fredericksburg temperature and

other climatic factors. Pages 75 and 76 discuss geology. 78 and 79 cover temperature and precipitation. Page 76 states 1747 foot elevation.

Pages 7 and 14 of enclosure 19 show examples of the hills that surround the Luckenbach-Pedernales-Heatly Soil series in the described area.

Enclosure 1 (resubmitted to support geological features) contour - elevation lines indicate the radical increase in elevation for the area outside the proposed viticultural area. Gillespie County elevations vary from 1500 feet to 2100 feet.

Enclosure 20 shows the proposed area to be located at departure or change point from surrounding areas for temperature (20a)., precipitation (20b)., and humidity (20c). 20e indicates the cooler nature of the area and supports the information on page 60 of enclosure 18.

Our extension agent is on vacation at the time of writing, so I do not have an exact number of vineyards and acreage. I would estimate that there are about 8 vineyeards (seriously devoted to wine grapes) with a total of about 50 acres under cultivation. Additionally, there are many commercial peach growers with test plantings of grapes. Peach growers are showing a great deal of interest in wine grapes as an alternative crop, particularly since they lost most of their 86 and 87 yields. Enclosure 21 was marked several months ago by our county extension agent.

Please let me know how best to submit the required maps and what else I should do.

My apologies for not replying sooner, but in early April IRS takes precedence over BATF.

Thank you for your patience.

Sincerely,

[redacted]

Karl W. Koch

Enclosures

KARL W. KOCH
[redacted]
Fredericksburg, TX 78624
Ph. [redacted]

July 8, 1987

Richard A. Mascola
Chief, FAA, Wine and Beer Branch
Department of the Treasury
Bureau of Alcohol, Tobacco, and Firearms
Washington, D.C. 20226

Dear Mr. Mascola:

This is in response to your letter of May 28,1987.

Name: I discussed the matter of the "Fredericksburg" name with the Fredericksburg Chamber of Commerce, the owner of the yet to be bonded Falcon Hills Vineyard, and with members of the Peach Growers. The name "Fredericksburg in the Texas Hill Country" is the unanimous choice. The name "Fredericksburg, Texas" would, however, be acceptable.

Boundaries: The approach used in drawing the boundaries for the area is a combination of soil types and elevations, and is consistent with my previous letters' statements concerning climate, topography, and soil types. The Luckenbach-Pedernales-Heatly Soil Association which makes viticulture a practical pursuit generally follows the contour.

Description: I have taken the liberty of using the format from your copy of the Federal Register:

9,016 Fredericksburg in the Texas Hill Country.

(A) Name. The name of the viticultural area described in this section is "Fredericksburg In The Texas Hill Country."

(B) Approved maps. The appropriate maps for determining the boundary of the Fredericksburg In The Texas Hill Country are the following U.S.G.S. topographical maps of the 7.5 minute series:
(1) "Stonewall, Texas Quadrangle" edition of 1961.
(2) Fredericksburg East, Texas Quadrangle" edition of 1967; photo-revised 1982.
(3) "Frederickdsburg West, Texas Quadrangle" edition of 1967; photo-revised 1982.
(4) "Lady Bird Johnson Park, Texas Quadrangle" edition of 1964; photo-inspected 1979.
(5) "Cain City, Texas Quadrangle" edition of 1963.
(6) "Cave Creek School, Texas Quadrangle" edition of 1961.

(C) Boundary. The Fredericksburg In The Texas Hill Country viticultural area is located in Gillespie County in the state of Texas. The boundary is as follows:
(1) Beginning on the "Stonewall, Texas Quadrangle" map at a point on U.S. Route 290, approximately .12 mile East of Blumenthal at the junction of Jung Road, the boundary proceeds on Jung road north by northwest across the Pedernales River.
(2) Then northwesterly .6 mile along Jung road as it parallels the Pedernales River.
(3) Then north approximately 3.77 miles to a point where Jung Road meets Texas Ranch Road 2721.
(4) Then westerly approximately .1 mile on Texas Ranch Road 2721 to a point where it meets Texas Ranch Road 1631.
(5) Then northeasterly approximately 1.1 miles to a point where Texas Ranch Road 1631 crosses the 1800 foot contour line.
(6) Then northwesterly in a meandering line along the 1800 foot contour line for approximately 10 miles to a point approximately 4 miles north of Fredericksburg.
(7) Then southerly in a meandering line along the 1800 foot contour line to a point approximately one-half mile to the East of Fredericksburg.
(8) Then northwesterly in a meandering line along the 1800 foot contour line to a point approximately 3 miles west of Fredericksburg.
(9) Then southerly in a meandering line along the 1800 foot contour line to a point on Hayden Ranch Road about 50 yards north of Texas Ranch Road 2093.
(10) Then 50 yards south on Hayden Ranch Road to Texas Ranch Road 2093 to an unimproved southbound gravel county road known as "Beverly Gold's" road.
(12) Then approximately 2.5 miles south on this gravel and dirt road to a point where it joins Texas State Route 16.
(13) Then 1.5 miles northeast on State Route 16 to a county road known as Bear Creek Road.
(14) Then south and east approximately 1 mile along Bear Creek Road to the point where the road crosses the 1700 foot contour line.
(15) Then easterly for approximately 10 miles to a point where the 1700 foot contour line crosses Texas Ranch Road 1376.
(16) Then approximately 2.5 miles southeast along Texas Ranch Road 1376 to Kunz-Klien Road at Lukenbach.
(17) Then 1 mile east along Kunz-Klien Road. (Also known as Luckenbach Road).
(18) Then 2.5 miles north on Luckenbach Road to U.S. Route 290.
(19) Then west .2 mile on U.S. route 290 to the point of beginning.

Please let me know what else is needed to support this application.

Sincerely,

[redacted]

Karl W. Koch

Enclosure 10: "Texas Wine Country" by Texas Department of Agriculture.

11: Real Estate Ad Sample (April 16, 1987).

12: USGS Copy With 8 Mile Radius Area.

13: USGS Using N-S Road.

14: USGS Copy With Non Contiguous Areas Eliminated.

15: "German Seed in Texas Soil" Jordan UT Press 1966. Selected Pages.

16: "Second Fatherland" Max Armadeus and Paulus Krueger 1976. Selected Pages.

17: "The First 50 Years" Robert Penniger 1876.

18: "A Feasibility Study for Grape Production". Selected Pages.

19: Selected Pages From REference A.B.

20: CP&L Industrial Data File.

21: Peach Map Marked By Extension Agent For Vineyards.

Encl 10

April 29, 1987

Texas WINE COUNTRY

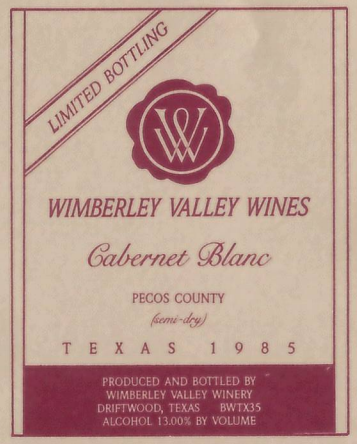
TOUR

G·U·I·D·E

Oberhellmann Vineyards

Llano Route, Box 22
Fredericksburg, Texas 78624
(512) 685-3297

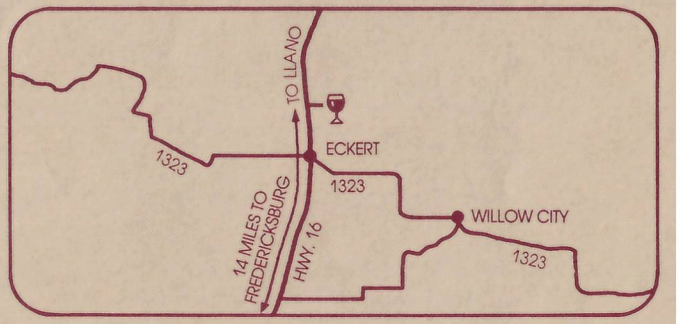
Bob Oberhellman, Owner
Tastings, Tours, Sales



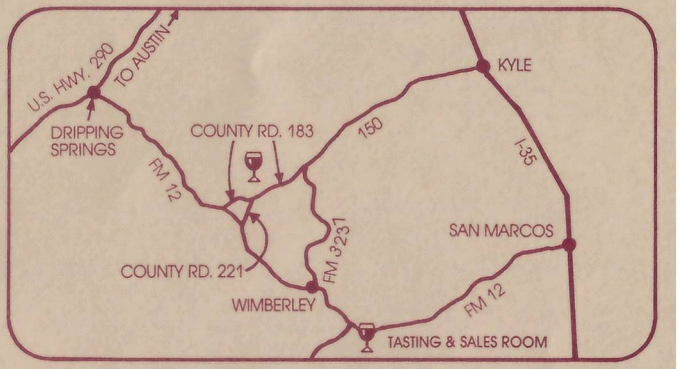
Wimberley Valley Winery

Driftwood, Texas
Office: Fredericksburg Rt., Box 634
Harper, Texas 78631
(512) 669-2440

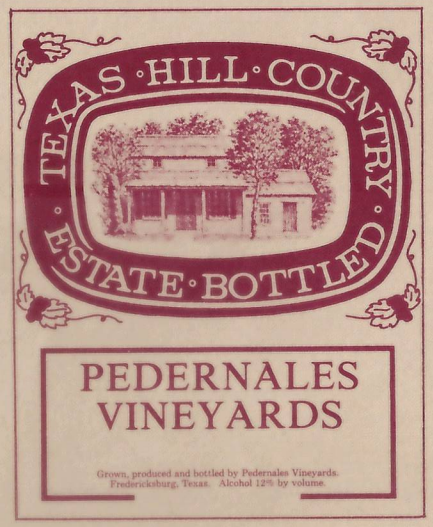
Wimberley Valley Wines, Inc., Owner
No tours



Just outside Fredericksburg, Oberhellmann Vineyards, like the historic old town, reflect a strong Old World flavor. A chateau-like winemaking building and tasting room sit on the edge of the vineyards and Christmas tree groves. Wines made here by owner/winemaker Bob Oberhellman include Chardonnays, Rieslings, and Pinot Noir, and many are private reserve estate varieties. In spring and early summer this part of the state is awash in peach blooms or fresh native fruit. Bud break at the vineyards is mid-spring. Open for tours, tasting and sales each Saturday, May through mid-December from 10 a.m. to 5 p.m.

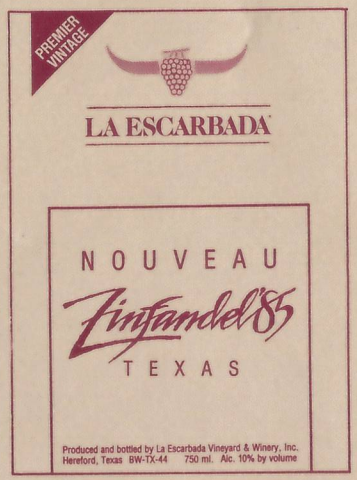


Set among centuries-old live oaks, designed and built under the direction of the winemaker, Wimberley Valley is one of the youngest yet fastest growing wineries in Texas. Wines made include Cabernet Sauvignon, Sauvignon Blanc, and Chenin Blanc from the Jeff Davis Mountains; Chardonnay, Johannisberg Riesling, Chenin Blanc, and Texas Cabernet from the High Plains surrounding Lubbock; and Nouveau Cabernet and blush wines from Ft. Stockton and El Paso. The tasting room is on Ranch Road 12 about 10 miles west of San Marcos and is open on weekends and holidays from 10 a.m. to 5 p.m.



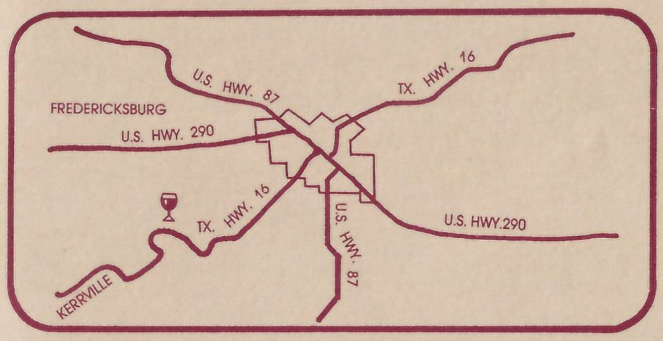
Pedernales Vineyards

Kerr Route 70AA
Fredericksburg, Texas 78624
(512) 997-8326
Karl and Judy Koch, Owners

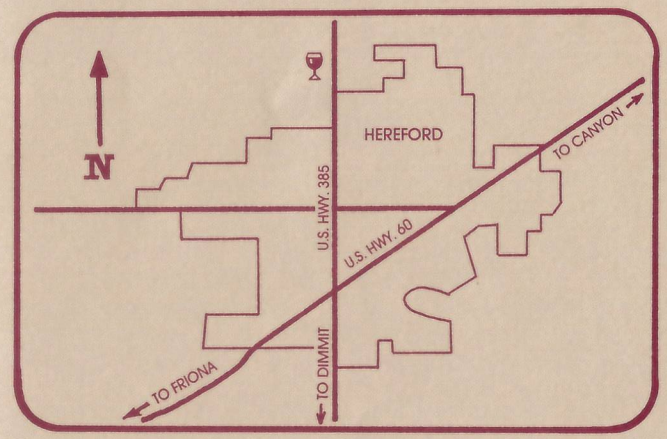


La Escarbada XIT Winery

P. O. Box 1070
Hereford, Texas 79045
La Escarbada XIT Vineyard & Winery, Inc., Owner
Tours, Tastings, Sales



The winery and vineyards overlook the Pedernales River just South of Fredericksburg on the Kerrville Highway (SH 16). What started in 1962 as a hobby became a bonded winery in 1986 with its first release (1986 vintage) about October 1987. Featured will be Cabernet Sauvignon and Sauvignon Blanc wines from grapes grown by Karl and Judy Koch on their 240-acre ranch. Plans for tours, tasting, and on premise sales will be established once the winery is finished and in full operation.



Located in the center of the historic XIT Ranch on the La Escarbada Division, primarily Deaf Smith Co., is the La Escarbada XIT Winery. Since the pioneering days of the 1880s, the rich soils and arid climate of this region have produced vast acreages of agricultural products. The winery was established in 1985 producing Chenin Blanc and Zinfandel. As the vineyards mature other French and German varietals are to be added. Winery hours are Monday through Friday 11 a.m. to 2 p.m. and 4 p.m. to 7 p.m., and Saturday noon - 6 p.m. Tours by appointment only.

MLS

409 EAST MAIN
FREDERICKSBURG, TEXAS 78624
(512) 997-3354 or 997-7331

REALTOR®

FOR RENT: Very nice 3 bdrm, 2 b home adjacent to city limits on 12 ac. Has garden & orchard area.
RETAIL/COMMERCIAL space available on East Main. Call for details.

HOMES

BASSE BLOCK HOUSE to be restored. Call for details.
2B/1B HOME, screened in porch - peach trees - REDUCED TO $34,500.
GREAT BUY 2B/1B house, newly painted. REDUCED TO $28,000.
VERY NEAT - 3 BR 1 B home, flagstone, built-ins, CH/A, $44,950.00
CLOSE TO SCHOOL - 2B/1B, CH/A. Fenced yard. Zoned for Business.
ROCK HOUSE - 2 story 4 bdrm 2 B, rock tank house, barns, Barons Creek & Hi-way frontage, on 25.9 ac. near town. REDUCED TO $249,500.00
NICE STARTER HOME 2B/1B - large fenced yard. REDUCED - $42,500
3 B/2 B HOME - with a country flavor & many extras - $149,500.
DUPLEX, good investment income. Both units 1 bdr. $43,900.
MOBILE HOME, 2 bdr, 1b on ½ ac. No city taxes. REDUCED TO $25,000
NEW - 2 BR 2 B, CHA, fireplace, 2 car garage $49,950.

HOMES WITH ACREAGE

4B/3B NEW HOME on 201.2 acres. Palo Alto Creek, good deer hunting. 85 ac. suitable for peach orchard or vineyard. On Cave Creek FM 1631 4½ mi. E. of Fbg. $2750.00 ac.
ROCK & FRAME HOUSE on 1.87 ac. to restore, outbuildings. $42,500.
ROCK HOUSE on 80 to 120 ac. with 3300' of riverfront off 290 East.
RESTORED 2 story rock house on 47 acres with creek on 2 sides, near town. Guest house, & numerous outbuildings. $268,500

ACREAGE

3 ACRE - building site with county road frontage. $17,500.
5 to 20 ACRES with fantastic views of Palo Alto Valley.
12.3 ACRES wooded land with seasonal creek. Paved road frontage. Owner financing. Minimal restrictions. $2950 ac.
15.5 ACRES on Barons Creek, good well, large metal barn, many liveoaks with building sites, some coastal. Close to city limits.
16.59 AC - New Listing - Blanco Co.-Highway frontage, can be divided. $2800 AC.
35-44 AC. secluded tracts @ $1995/ac.
39.84 ACRES on Barons Creek approx. 1½ mi. out. Views.
56+ ACRES cabin, spring fed lake, coastal, out Hwy. 16 N.
74 +AC. @ Hilltop w/FM 648 front, well, pump, pen, hunting. REDUCED.
85.94 AC. W/2000 FT. PEDERNALES RIVER FRONTAGE - 1300 ft. Hwy. 290 E. frontage 11 miles from Fbg. All or ½
80+ or 500+ AC. in Cherry Springs area. Good productive ranch, some field, 2 wells, good fences, county road front. $1795-$1995/ac.
140 + ac. PEDERNALES RIVER PROPERTY. 1000' river front, 1100' frontage on Hwy. 290 East. 8 miles from Fbg. Includes Basse block house & long barn. Assumable note. Will sell all or ½.
161 AC w/mobile home & well. Good hunting, good fences. $1650/ac.
161.5 ACRES wooded, good hunting. On paved road. $1495 p/a
201.2 ACRES with 4 B/3B new home 4½ mi. E. of Fbg. on Cave Creek FM 1631 Rd. Palo Alto Creek, 85 ac. suitable for orchard or vineyard, good hunting. $2750.00 per acre.
209 AC. 4 mi. E. Wooded & improved range. 3 wells. Can divide.
235 AC. off 16 S., view to Fbg. 2 earth tanks. 1 well. Deer. All or part.
460 ACRE RANCH NW of Fbg. Good tree cover, good hunting, cabin. Priced to sell @ $1175/ac. Can be divided into 5 tracts.

COMMERCIAL

PRICE REDUCED close to 1 city block (12 lots) fronting 5 streets including E. Main Street. Possible C-1 zoning.
3 BDR. 1B HOME - ZONED RETAIL on major highway. $44,950.
PRICE REDUCED - Industrial Lot 70 x 200 w/ Highway frontage.
6500 SQ. FT. BLDG. on .8 acres with 127.35' Highway front.
12.77 AC. in industrial area near town. Some wooded.
MODERN APTS. 8 units 1 & 2 Bdr. w/appl. CH/A, storage, W/D.
ATTRACTIVE DUPLEX, CH/CA
BUSINESS & RESIDENCE on W. Main St. ½ acre lot.

RESIDENTIAL LOTS

LOT AT CANYON LAKE - Priced to sell at only $3,950.
LARGE LOT at Canyon Lake, treed. REDUCED TO $4,250.00
CITY LOT - 70' x 150'.
CITY LOTS in new subdividion w/all utilities. Near schools & hospital. Priced to sell.
PRICE REDUCED 2.1 ACRES with well & septic tank. Wooded & Restricted. $20,975
SCENIC LOTS, some wooded in various sizes in desirable areas.

HAROLD B. KNEESE Owner 997-5357 — **HARRY DANZ 997-5367**
EDWARD STROEHER 997-2661 — **LA VERNE OTTMERS 997-5671**
TED STEHLING 997-3845 — **CAROL CORNEHL 997-3380**

Encl 11

Used Mobile Home Center
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and hunting ranch
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acre, 10 year finc
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21
At

Reduced To $1975 per acre

776 acres 13 miles W of Blanco on FM
hills and valleys, lots of water. Spanis
pecan but no cedar. Two new 700 sq
pens, plenty of game. Tremendous pot
gain at $1975 per acre.

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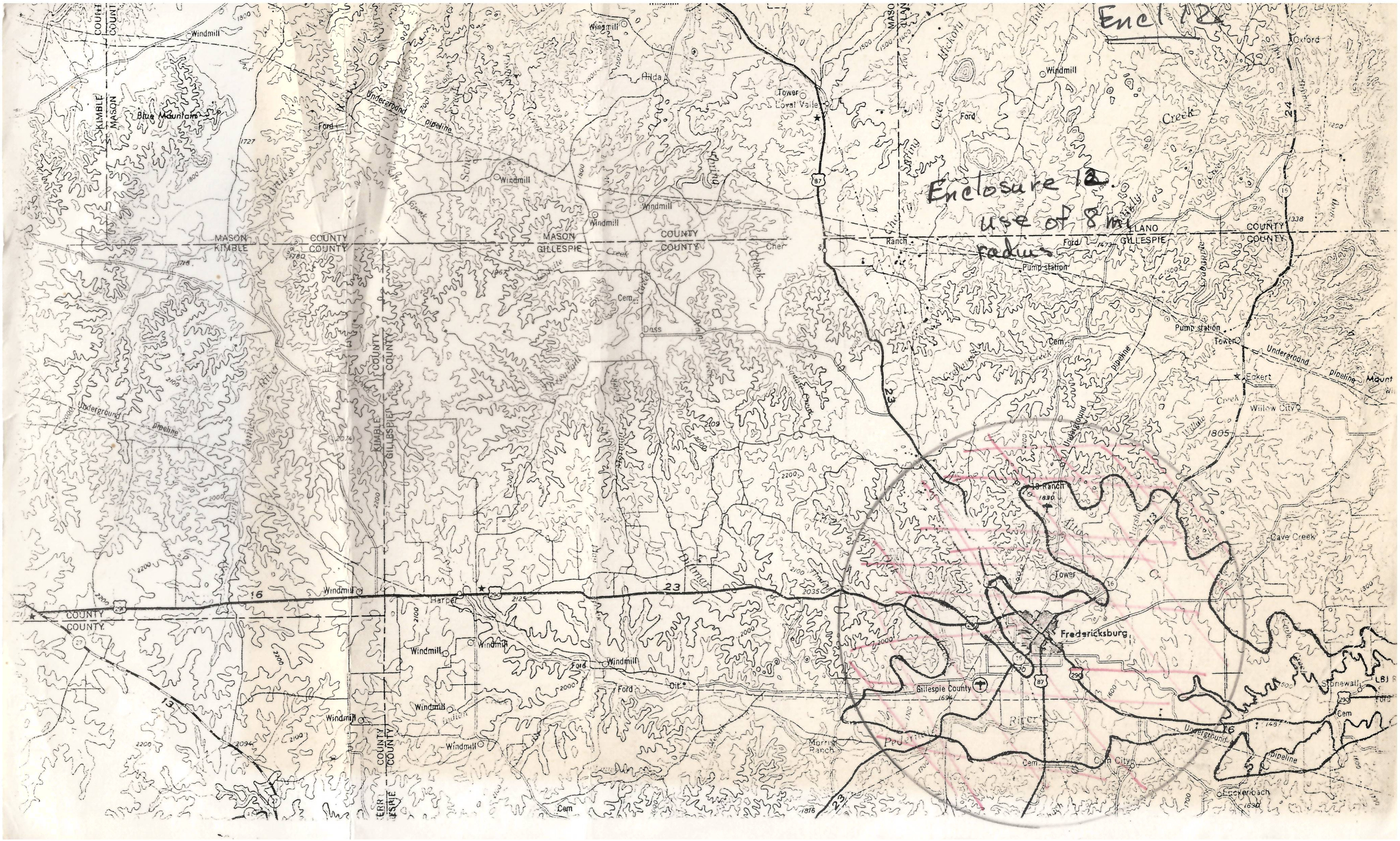
hood, lots of storage & closet space $43,000.
LARGE CORNER LOT, 3 bdrm, central heat & ai
den, $49,000.
NEAR SCHOOL, 3 bdrm on large lot in establish
carpet & linoleum $54,000.
SQUEEZE YOUR DOLLARS, SOLD 1½ lots, fi
GIVE YOUR KIDDIES A CHANCE TO ROMP, la
2 bath, large carpeted den with fireplace $67,900 P
LOTS OF TREES, WINDOWS & ROOM. 3 bdrm, 2
Hardwood floors, cellar, patio, BBQ, garden $77,50(

ONE ACRE with fruit trees & garden spot, 2 bdrm,
$29,500.
VAULTED CEILING with open beams in sunke
dining room, garden room, fruit trees, fireplace, 3.9
OVERLOOKING FBG., 2 or 3 bdrm, 1½ bath, 4.2 a
$110,000.

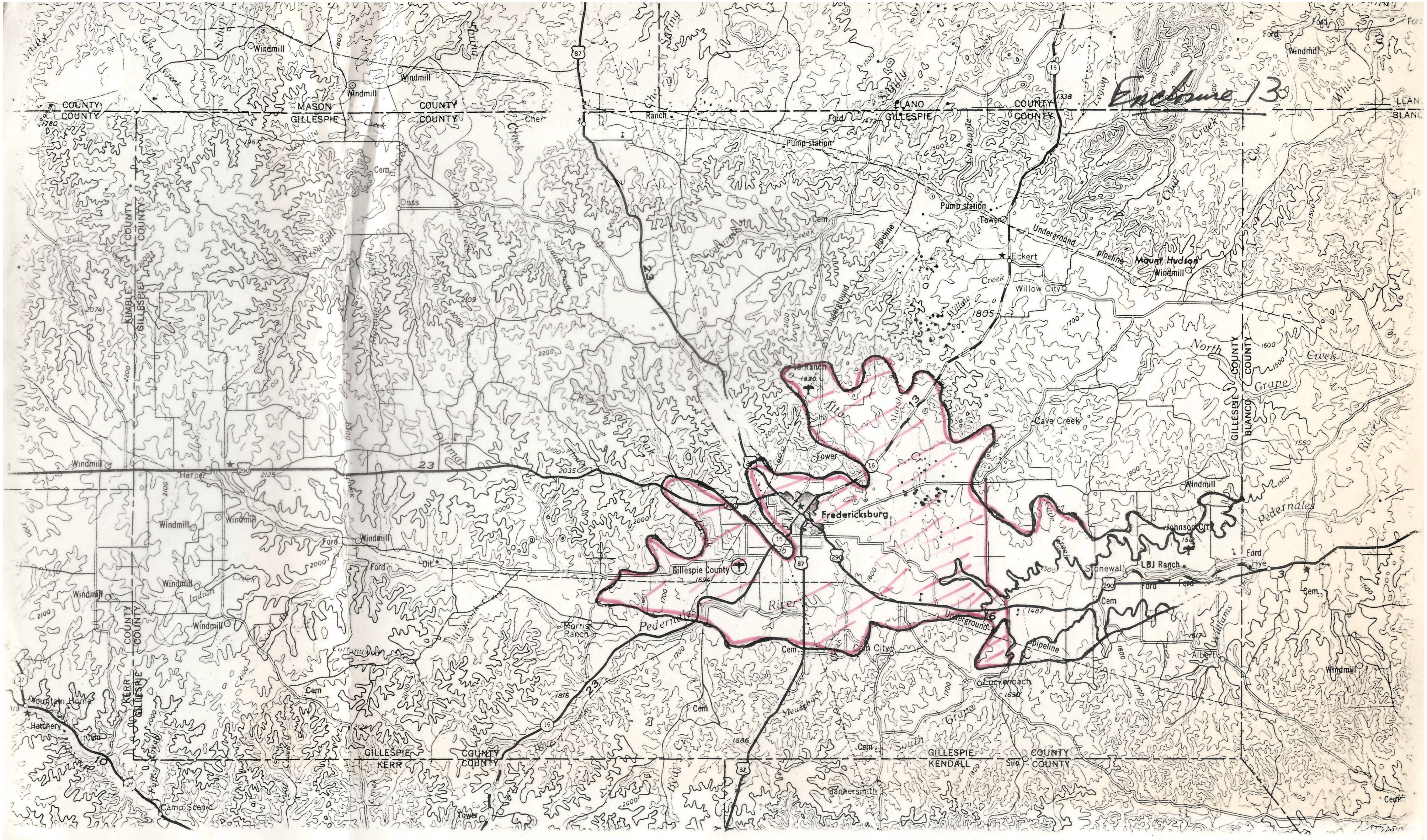
COMMERCIAL LOTS, 1.2 miles from city limits,
6 UNIT APT COMPLEX, all electric, $150,000.
10 AC edge of city limits, paved road frontage $15,(
14 AC, water & sewer available near hospital, Zoned (

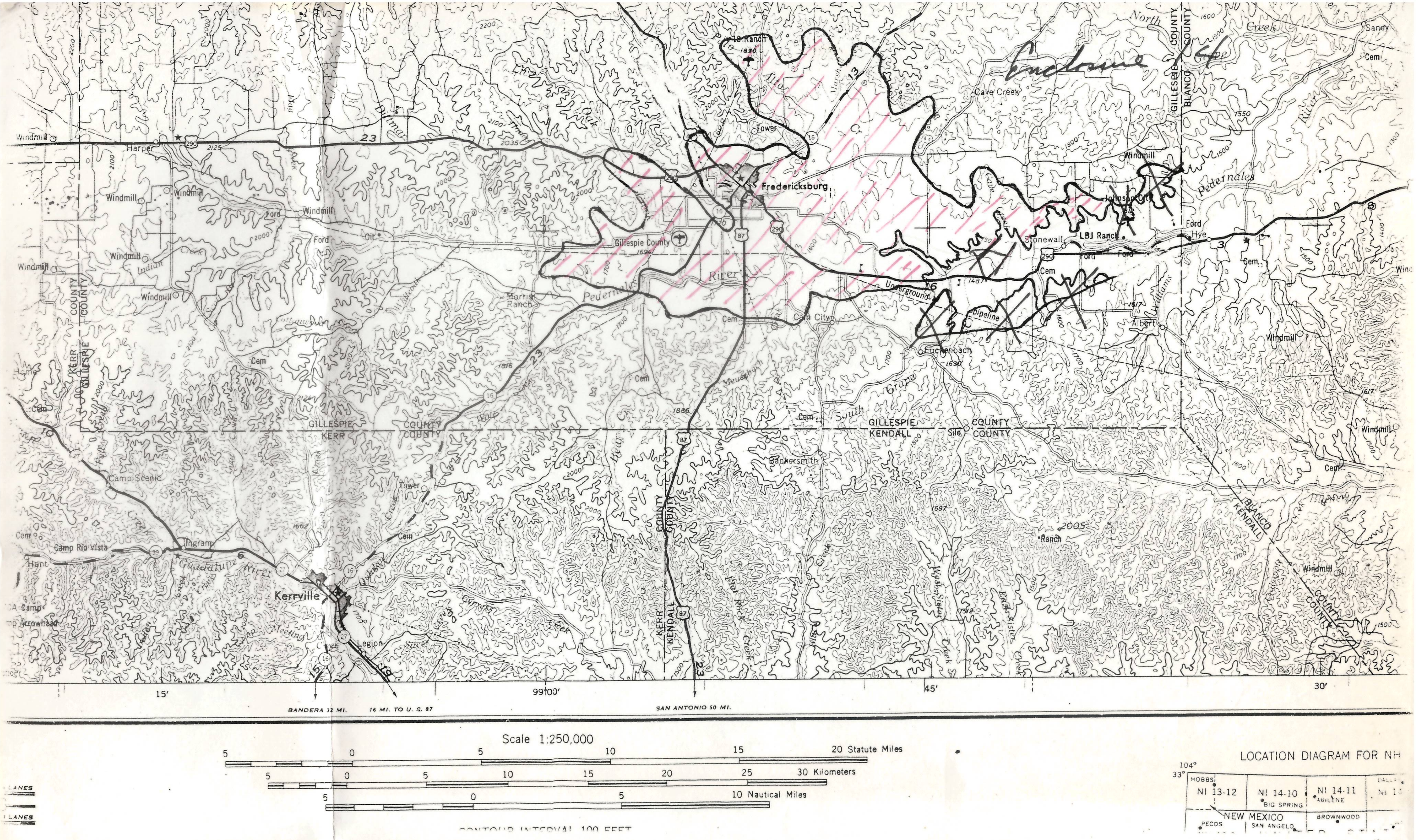
LOTS in city limits, starting at $15,500
1.65 AC, well, creek, 3 miles from town, $17,000
2.5 AC, near town, $15,000.

27 AC, electricity hookup nearby, abundant wildlife,
trees $2,450/ac
2.92 AC, river front property, cleared & fenced, wel
182 AC, flowing Williams Creek & seasonal creel
several barns $2,995/ac **owner finance.**

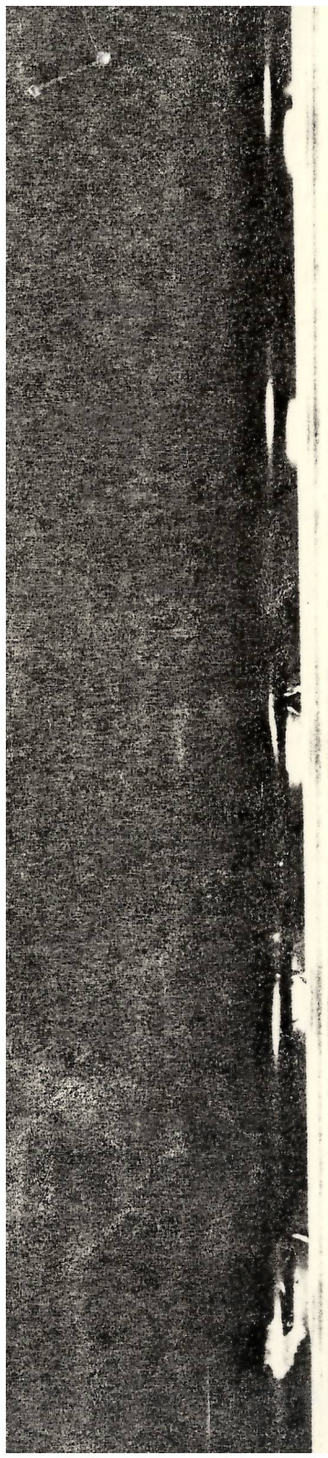


Encl 12
Enclosure 12.
use of 8 mi radius
KIMBLE COUNTY
MASON COUNTY
GILLESPIE COUNTY
LLANO COUNTY
Blue Mountain
Underground pipeline
Windmill
Tower
Loyal Valley
Hilda
Ford
Ranch
Pump station
Cem
Doss
Oxford
Eckert
Willow City
Cave Creek
13 Ranch
Fredericksburg
Gillespie County
Harper
Morris Ranch
Cain City
Stonewall
LBJ R
Eckerbach
Pedernales River
Creek


Enclosure 13
MASON COUNTY
GILLESPIE COUNTY
LLANO COUNTY
KIMBLE COUNTY
KERR COUNTY
KENDALL COUNTY
BLANCO COUNTY
Windmill
Ranch
Ford
Pump station
Tower
Underground pipeline
Cem
Doss
Eckert
Mount Hudson
Willow City
Cave Creek
Harper
Fredericksburg
Gillespie County
Johnson City
Stonewall
LBJ Ranch
Hye
Albert
Morris Ranch
Cain City
Luckenbach
Bankersmith
Silo
Mountain Home
Hatchery
Camp Scenic
Pedernales
River
North Grape Creek
South Grape
Oil



Enclosure 14
Fredericksburg
Kerrville
Gillespie County
Harper
Windmill
Ford
Oil
Indian
Pedernales
River
Morris Ranch
Cem
Camp City
Cave Creek
Tower
10 Ranch
Stonewall
LBJ Ranch
Johnson City
Hye
Albert
Underground
Pipeline
Luckenbach
South Grape
Bankersmith
Ingram
Camp Rio Vista
Camp Scenic
Hunt
Legion
Ranch
Sandy
North
Creek
Guadalupe River
GILLESPIE COUNTY
KERR COUNTY
KENDALL COUNTY
BLANCO COUNTY
15′
99°00′
45′
30′
BANDERA 32 MI.
16 MI. TO U. S. 87
SAN ANTONIO 50 MI.
Scale 1:250,000
20 Statute Miles
30 Kilometers
10 Nautical Miles
CONTOUR INTERVAL 100 FEET
LOCATION DIAGRAM FOR NH
NI 13-12
NI 14-10
NI 14-11
HOBBS
BIG SPRING
ABILENE
NEW MEXICO
PECOS
SAN ANGELO
BROWNWOOD



peaches and figs as early as the 1830's,[64] and there was much discussion of tree crops among the members of the Cat Spring Agricultural Society.[65] One German in Washington County even engaged in mulberry-silk production,[66] though this was certainly unusual. Several references indicate that tree-culture was neglected by the Anglo-Americans in eastern Texas,[67] while frequent mention is made of orchards among the Germans.[68] Some modern scholars have credited the European immigrants, in particular F. Ernst of Industry, with being largely responsible for establishing orchardry in Texas.[69] Factual evidence is too fragmentary to support such claims. The census enumerators were lax in reporting the value of orchard products, making comparisons of dubious value, but perhaps it is significant that virtually the same proportion of Germans and southern whites in Austin and Waller counties listed orchards in 1880[70] (Table 12). It is possible that the lack of a tradition of locational stability among the southern Anglo-Americans resulted in the neglect of tree-culture, for orchards take years to establish, but there is no factual evidence to support this assumption. The very fact that Germans in the eastern settlements adopted fruit trees typical of the Gulf South, such as the peach and fig, suggests that orchards were rather common among the southerners, since otherwise diffusion would not have occurred so promptly. Mid-latitude fruits, including apples, pears, and cherries, did not thrive in the warm climate, and their culture was largely abandoned by the Germans.

Viticulture and Wine-Making

Vineyards were confined to a very small number of Germans in the eastern settlements (Table 12). This is not surprising, since most of

[64] Wrede, *Lebensbilder*, p. 132; Ottilie Fuchs Goeth, *Was Grossmutter erzaehlt*, p. 33.

[65] [Cat Spring Agricultural Society], *Century of Agricultural Progress*, pp. 5, 7, 10, 18, 41, 46, 85, 95.

[66] Albert Schütze, *Schütze's Jahrbuch für Texas . . . für 1883*, p. 110.

[67] William A. McClintock, "Journal of a Trip through Texas and Northern Mexico in 1846–1847," *Southwestern Historical Quarterly*, 34 (1929–1930), 150–151, and Horace Greeley, as quoted in Sweet, *Texas . . . or the Immigrants' Handbook*, p. 120.

[68] Regenbrecht, "German Settlers of Millheim," p. 30. See also footnotes 64 and 65.

[69] Hedrick, *History of Horticulture*, pp. 361–362.

[70] Manuscript census schedules of agriculture and population, Austin and Waller counties, 1880.

TABLE 12

Eastern Counties: Possession of Orchards, Wine-Making, and Processing of Hay, by Origins of the Population

ITEM	YEAR	GERMANS German-born, no slaves	GERMANS All Germans[a]	SOUTHERN ANGLO-AMERICANS Southern whites no slaves	SOUTHERN ANGLO-AMERICANS Southern whites 1–5 slaves	SOUTHERN ANGLO-AMERICANS Southern whites over 5 slaves	SOUTHERN ANGLO-AMERICANS All southern whites	NEGROES
Orchards,	1850	0%	0%	0%	0%	0%	0%	------
percentage	1860	2%	2%	8%	0%	8%	6%	------
of farms	1870	10%	------	6%[b]	12%[c]		8%	1%
reporting	1880	17%	17%	------	------		26%	4%
Wine,	1850	0%	0%	0%	0%	0%	0%	------
percentage	1860	2%	2%	2%	0%	6%	4%	------
of farms	1870	2%	------	0%[b]	0%[c]		0%	0%
reporting	1880	1%	1%	------	------		1%	0%
Hay, tons	1850	1.6(24%)	1.8(24%)	2.0(21%)	2.0(29%)	4.3(41%)	2.9(29%)	------
per farm and	1860	---(6%)	---(6%)	---(8%)	---(5%)	---(12%)	---(9%)	------
percentage of	1870	---(78%)	------	---(41%)[b]	---(50%)[c]		---(44%)	---(44%)
farms reporting	1880	6.0(31%)	6.0(30%)	------	------		4.9(8%)	0(0%)

Compiled from the manuscript schedules of the United States Census. The sample counties were: 1850, Austin and Fayette; 1860 and 1870, Austin; 1880, Austin and Waller. The sample taken within the counties was 100 percent for 1850 and 1860; 50 percent for 1870; 20 percent for 1880.

[a] For 1850 and 1860, a few German-born slaveowners were included; in 1880, a small number of native-born farmers of German-born fathers was included.

[b] The figure for 1870 was obtained using those farmers in the sample who had had no slaves in 1860.

[c] The figure for 1870 was obtained using those farmers in the sample who had owned slaves in 1860.

the immigrants came from northern Germany, where the culture of the grape is impossible due to the cold climate, and beer is the major beverage. The few vineyards which were established often drew favorable comments from observers, who foresaw a great future for this agricultural specialty. It was reported, for example, that one German near Houston had planted seven thousand grapevines,[71] while a Rhinelander in Fayette County produced an average of a thousand barrels of wine each year,[72] and still another farmer allegedly introduced a species of German grape into Colorado County.[73] One German even exported vine clippings to France.[74] The meetings of the German agricultural society at Cat Spring occasionally contained discussions of viticulture,[75] and one of its members for many years raised Herbemont grapes.[76] Viticulture was almost totally lacking in the agricultural heritage of the southern Anglo-Americans, and only a very few reported wine in the census.

More common was the practice of making wine from wild grapes, principally the variety known as the Mustang, which was found in abundance in the valleys of the Colorado, San Antonio, and Guadalupe rivers and their tributaries. The *Texas Almanac* acknowledged the Germans as the leading wine-makers in the state,[77] and those settled on Coleto Creek, a tributary of the lower Guadalupe, received special mention.[78] In adjacent DeWitt County, eleven farmers, all of them Germans, reported wine in 1860, ranging in quantity from 1 to 280 barrels.[79] Nearby, wine-making from wild grapes was reported among the Germans around Gonzales.[80] The practice seems to have been

[71] Schütz, *Texas*, p. 204.

[72] A. J. Rosenthal, "Fayette County," *Schütze's Jahrbuch für Texas . . . für 1883*, pp. 42–43. The farmer, C. Niederauer, wrote an article entitled "Weinbau" which appeared on pp. 71–72 of *Schütze's Jahrbuch für Texas . . . für 1884*.

[73] M. Whilldin (ed.), *A Description of Western Texas . . .*, p. 26.

[74] [The South Western Immigration Company], *Texas: Her Resources and Capabilities . . .*, p. 113.

[75] [Cat Spring Agricultural Society], *Century of Agricultural Progress*, pp. 7, 15, 43, 68, 69, 71, 108, 116.

[76] *The Austin County Times*, July 10, 1886, p. 3, col. 3.

[77] *The Texas Almanac for 1870*, p. 89, repeated in the 1873 edition, p. 139.

[78] A. S. Thurmond, "Goliad County," *The Texas Almanac for 1867*, p. 111. German wine-making in the Coleto settlements is also mentioned in Eichholz, "Die deutschen Ansiedlungen," p. 86.

[79] Manuscript census schedules of agriculture and population, DeWitt County, 1860. For an additional reference to wine-making in DeWitt County, see Moelling, *Reise-Skizzen*, p. 362.

[80] Olmsted, *Journey through Texas*, p. 236.

more common in the lower Guadalupe Valley, including the Coleto settlements, than in the older eastern settlements between the lower Brazos and Colorado rivers, probably because the wild grapes were found in greater abundance and because more Germans from the wine-making areas of Hesse and Nassau had settled there.

The process of making wine from the wild Mustang grape was quite different from that associated with vineyard grapes, and involved the addition of extremely large amounts of sugar after the preliminary fermentation. Many German farmers were very secretive about the processes they used, and there surely were methods that died with those who practiced them. One German, however, left a detailed description of his wine-making art.[81]

Small Grains

Small grains had played key roles in German agriculture in Europe, similar to that played by Indian corn in southern Anglo-America, providing both bread and livestock feed. Rye and oats were of particular importance in the areas of northwestern and north-central Germany which supplied most of the emigrants for the eastern settlements. Among southern farmers, oats were widely grown, especially in eastern Tennessee, where wheat was also important, but rye was uncommon and barley virtually unknown.

It is not surprising that immigrants from the lands of "eternal" rye culture in Oldenburg and the Münsterland attempted to raise this grain in Texas, but to judge from the imperfectly-reported census returns, only a small measure of success was achieved (Table 13). In 1860, over one-eighth of the German-born farmers in Austin County mentioned rye as one of their crops, as opposed to only 4 percent of all southern whites. Difficulties with climate and disease, however, hampered rye production, and in the 1880's Germans in one part of the county complained that the crop did not grow one year in five and had never been raised successfully in the area.[82] Even less success was obtained with wheat (Table 13). The Cat Spring Agricultural Society obtained from the United States Department of Agriculture samples of wheat from many varied parts of the world in an effort

[81] A. Weilbacher, "Zubereitung von Wein aus der Mustang-Traube," *Schütze's Jahrbuch für Texas . . . für 1884*, pp. 187–193.

[82] *The Austin County Times*, 1883, as quoted in [Cat Spring Agricultural Society], *The Cat Spring Story*, p. 160.

Vineyards and Wine-Making

Source materials dealing with the early German settlements in the West give frequent references to the possibilities offered by viticulture, which is understandable because a large number of the immigrants came from the vine regions of Nassau, Hesse, and Alsace. The abundance of wild grapes convinced the early settlers that domesticated types would also thrive, and vine clippings brought from Europe were planted by Germans in the very first year at New Braunfels[99] and shortly thereafter around Castroville.[100] Prince von Solms-Braunfels advised in his guidebook in 1846 that the warm Texas climate allowed the cultivation of grapes on flat land,[101] but the German tradition of hillside viticulture, which is even expressed in their word for vineyard, *Weinberg* or "vine hill," was still evident in the following decade, when someone suggested that the hills on the north side of Fredericksburg would be excellent for vineyards.[102] Experiments continued for a number of years in the western German settlements,[103] but in the end it was realized that the imported European vines would not grow properly in Texas,[104] and viticulture was, with few exceptions,[105] abandoned. In the early 1880's, a San Antonio German complained that grape culture was little more than a *Spielerei*, a hobby, among his countrymen in Texas.[106] Cultural relics, in the form of a few old grape vines which grew from European clippings brought with the immigrants of the last century, can be observed occasionally today, all that remains of an agricultural specialty once believed to have a great future.

The failure of viticulture did not stop the Germans of the western settlements from making wine by using the native wild grapes and berries. Only eight days after Castroville was founded in 1844, a German in the colony reportedly set about the job of producing two casks of wine, which he sold upon completion for twelve cents a bottle.[107] The

[99] Solms-Braunfels, *Texas*, p. 14.
[100] Bracht, *Texas im Jahre 1848*, pp. 149, 285.
[101] Solms-Braunfels, *Texas*, p. 99.
[102] *Neu-Braunfelser Zeitung*, March 11, 1853, p. 3, col. 1.
[103] Ostermayer, *Tagebuch einer Reise*, pp. 92, 110; Kordül *Der sichere Führer*, pp. 290, 298–299.
[104] *Neu-Braunfelser Zeitung*, January 28, 1853, p. 1, col. 6; August 10, 1866, p. 2, col. 5; Waugh, *Castro-ville*, p. 53.
[105] *Neu-Braunfelser Zeitung*, September 17, 1869, p. 3, col. 1; McDanield and Taylor, *The Coming Empire*, p. 194.
[106] Siemering, *Texas*, p. 27.
[107] Diary of Henri Castro, as cited in Waugh, *Castro-ville*, p. 21.

settlers at New Braunfels were also quick to utilize the wild grape,[108] though many of them felt that only vinegar could be produced from such unimproved varieties.[109] Once they had mastered the technique of adding large amounts of sugar,[110] the Germans began making wine quite commonly in all parts of the western settlements.[111] The quantity made was generally modest, intended for home consumption, but the *Texas Almanac* reported in 1867 that some of the farmers around Fredericksburg were sending "as much as ten to twenty barrels of wine" to market,[112] and a traveler in the middle of the following decade was told that fifty thousand gallons were produced in one season alone around Boerne in Kendall County.[113] In drought years, such as 1859 and 1879, the crop of wild grapes was too small to allow large quantities of wine to be made, and as a result the production sometimes varied greatly from year to year.

Wine-making among the Germans of the western counties can certainly be attributed to their European agricultural heritage, but admittedly this activity never played a very important role in the rural economy. It is true that a commercial winery existed as late as the post-World War II period in Fredericksburg, selling products made from wild grapes and berries, but the wine was made primarily for home use, to satisfy a cultural beverage preference. In making this wine they had to abandon both the domesticated grapes and the wine-making methods they knew in Germany, for the gatherers of wild grapes in the Hill Country of Texas had little in common with the commercial vineyard keepers of the Rhine, the Mosel, and the Main.

Haymaking

The census returns indicate that haymaking was more common among the Germans than the southern Anglo-Americans, as would be expected in view of their respective agricultural heritages, though the

[108] Stählen, *Neueste Nachrichten*, second unnumbered page.
[109] Kordül, *Der sichere Führer*, pp. 298–299.
[110] The method used by H. Hoerster of Mason County is described in Murray, "Home Life on Early Ranches of Southwest Texas," *The Cattleman*, 26, no. 7 (1939), p. 36.
[111] *Neu-Braunfelser Zeitung*, February 10, 1854, p. 2, col. 6; January 21, 1859, p. 3, col. 4; Lohmann, *Comfort*, p. 33; McDanield and Taylor, *The Coming Empire*, p. 177; Henry B. Dielmann, "Emma Altgelt's Sketches of Life in Texas," *Southwestern Historical Quarterly*, 63 (1959–1960), 377.
[112] *The Texas Almanac for 1867*, p. 110.
[113] McDanield and Taylor, *The Coming Empire*, p. 138.

whole gamut of children, from four to fourteen, are coming in from work."[302] German women did much of the cotton-picking, and could also be found building stone fences.[303] To judge from the surprised comments of visitors to the German settlements, white females and children were not often seen doing field work among the Anglo-Americans.

Hired Labor

In spite of the fact that most farm labor was supplied by the immediate family, hired help played an important role as early as 1850, when laborers at New Braunfels were paid from fifty cents to one dollar a day, or even as little as eight to fifteen dollars a month.[304] As the capital resources of the immigrants increased, hired labor became more common, and by 1870 a much higher percentage of Germans reported employment of farm workers than the Anglo-Americans, although the average wage was much lower, not equalling that of the Americans until a decade later (Table 51). Not only were Germans active as employers, but also as employees. In a duplication of the procedure observed in the eastern settlements, newly arrived immigrants often worked for several years on the farms of Germans already well established, thereby accumulating both capital and experience. Their tasks were varied, including cutting fence wood, digging gardens, or tending flocks of sheep. Some of the immigrants hired out to George W. Kendall, the Anglo-American sheep-raiser, who had all extra labor on his ranch done by Germans.[305] In 1880 German-born hired workers were observed by census takers in the cotton fields of Gillespie, Medina, Blanco, Bexar, and Comal counties—that is, in nearly all of the western settlements.[306]

Farm Implements and Machinery

In 1846 Prince von Solms-Braunfels advised prospective settlers in Germany who were considering coming to his colony to bring along

[302] King, *The Southern States,* p. 144.
[303] [Ottmers Reunion Committee], *History*, pp. 60, 68; Ostermayer, *Tagebuch einer Reise*, p. 92.
[304] Ostermayer, *Tagebuch einer Reise*, p. 87; Kromer, *Die Amerikafahrt*, p. 41; Olmsted, *A Journey through Texas*, p. 180.
[305] Olmsted, *A Journey through Texas*, p. 183.
[306] Loughridge (ed.), "Report on the Cotton Production of the State of Texas," p. 161.

TABLE 51

Employment of Farm Laborers in the Western Counties, 1870 and 1880, by Origins of the Population

Group	Average wages per farm in previous year	Percentage of farms reporting hired help	Average wages per farm in previous year	Percentage of farms reporting hired help
German-born	$ 63	57%	$86	31%
Natives of German-born fathers	--------	--------	$44	36%
All Germans	--------	--------	$77	32%
Southern Anglo-Americans	$147	27%	$77	13%

Source: Manuscript census schedules of agriculture and population, Gillespie, Llano, Mason, Blanco, and Kerr counties, 1870; Gillespie, Llano, and Mason counties, 1880.

wagons, all instruments needed for garden and vineyard cultivation, complete harness outfits, plows, and harrows. Both heavy plows, such as were used in northern Germany, to break the prairie sod, and light plows for subsequent use were recommended.[307] An early settler at New Braunfels echoed the sentiments of the prince, and suggested that his friends in Germany bring plowshares, scythes, sickles, hoes, manure forks—in short, everything they possibly could, to avoid having to rely on American-made implements, which he condemned for their poor quality.[308] Still, the space restrictions on most immigrant ships did not allow large-scale importation of farm tools, and the new settlers had to purchase most of what they needed after arriving. One colonist wrote in the first year that he had bought a wagon for sixty dollars and a plow for ten.[309] Among the immigrants were many who were skilled as craftsmen, and it was not long before they were manufacturing farm implements in the new homeland. By the late 1840's typical German *Leiterwagen*, farm wagons with ladder-like sides, could be seen in the streets of Fredericksburg,[310] and several years later New Braunfels

[307] Solms-Braunfels, *Texas,* pp. 97, 110–111.
[308] Kordül, *Der sichere Führer,* pp. 291–292.
[309] *Ibid.,* p. 287.
[310] Such a wagon was depicted by an artist who visited the town in 1849: Eastman, *Sketchbook,* p. 55.

. . . . *Chapter Six* . . . .

Conclusion: The Importance of Cultural Heritage in the Agricultural Systems of Immigrant Groups

The comparative study of German and non-German farmers in two portions of nineteenth-century Texas has revealed a number of striking differences and similarities. One of the principal conclusions derived from the preceding two chapters is that the systems of agriculture established by German immigrants were different in some important ways from those of the southern Anglo-Americans and their cultural kinsmen, the Negroes. In both the eastern and western settlements, in the Cotton Kingdom and on the rim of the desert, this distinctiveness was based largely upon certain aspects of the European agricultural heritage which survived in the new homeland. A second, and equally important conclusion is that many imported farming traits did not survive the transplanting and were replaced, often quite rapidly, by practices common to southern agriculture. The result was a blend of adopted and imported traits, a partial assimilation, which caused the Texas Germans to differ not only from southern Anglo-American farmers, but also from their countrymen back in Europe.

In outward appearance, the agricultural systems established by the immigrants bore a much closer resemblance to those of their adopted countrymen in Texas than to their European counterparts. One can only be impressed by the rapidity with which the Germans accepted the gross traits of southern farming—crops, livestock, and settlement pattern. Outwardly, in what might best be called the "visible agriculture," the German farmers showed, with a few exceptions, only minor differences from their Anglo-American counterparts, even as early as

1850. It was in the more subtle aspects of the agricultural systems that major and persistent differences were detected, differences not always manifested in the cultural landscape, but important nonetheless.

The distinctiveness of the Germans rested largely on a number of traits which were observed in both eastern and western settlements throughout the period under study. These included the greater intensity, productivity, and locational stability of the German farmers, as well as their higher rate of landownership. All of these major differentiating factors are closely interrelated, in that the more intimate attachment to the land, which was manifested in the greater locational stability and avoidance of tenancy, was associated with the fact that the German put more into the land in the form of labor and capital and got more from it in terms of produce. On this basis, one is tempted to conclude that the Germans were *superior* as farmers in Texas, a temptation rather natural for observers in the conservation-minded twentieth century. However, when viewed in the context of ante- and postbellum times, the concept of superiority seems much less valid. There is no reason to suppose that greater intensity, productivity, and locational stability were more desirable, economically or otherwise, as far as the nineteenth-century southern farmer was concerned. Extensive methods, when coupled with the abundance and cheapness of land and the possibility of moving with ease from place to place, offered a comfortable living at a minimum of expense and labor. Only in retrospect, as a citizen of an over-populated world, in which an ever-higher value is placed on the soil which nourishes man, can one view the Germans as superior farmers.

Persistent divergences were also detected in other aspects of the respective agricultural systems. The German immigrant farmers were apparently more active in market gardening, inasmuch as they were the leaders in supplying vegetables and fruit for Galveston, Houston, and San Antonio, the three major towns in Texas during the period under study, and they devoted more attention to wine-making and the production of white potatoes. In both western and eastern settlements, the Germans showed greater interest than the southerners in the cultivation of small grains, though their efforts to raise rye and wheat in the area between the lower Brazos and Colorado rivers failed due to the recurrence of rust and blight. Other differences were noted which, while quite significant, were unlike those mentioned previously in that they tended to disappear during the course of the forty or fifty years under study. One example was the smaller scale of operation which char-

acterized the German farms in ante-bellum times, and another was the lesser tendency of the immigrants to own slaves.

Curiously enough, there were several differences observed in both eastern and western areas which were precisely the opposite of what might have been expected. For example, the Germans dominated the production of tobacco, in spite of the presence in the same areas of large numbers of farmers from the Upper South, and the same was true of cotton-raising in the ante-bellum eastern settlements and post-bellum western counties. By the same token, the Germans, who had a heritage of semisubsistence farming, operated on a higher level of commercialization than the Americans before the Civil War. In addition, the adoption of the mule as a draft animal after 1865 was apparently more common among the Germans.

In general, greater contrasts were noted between the immigrant Germans and native southern farmers in the western counties. For example, the Hill Country Germans had a more diversified crop economy and, in ante-bellum times, a distinctly higher number of oxen in proportion to horses than the Americans in adjacent areas, while at the same time they utilized imported construction methods and even attempted to establish the farm-village system. In contrast, the Germans of the eastern settlements adopted an undiversified crop association dominated by corn and cotton like that of their Anglo-American neighbors, made no effort to introduce Old World settlement forms or construction methods, and had an ox/horse ratio almost identical to that of the southern yeomen.

While it is true that the present study provides support for the general idea of German distinctiveness in nineteenth-century Texas agriculture, it does not follow that all such claims have been verified. No basis was found for the contention that Germans devoted more attention to kitchen gardening and tree culture than the southerners, and certainly statistical evidence refutes the notion that they were superior in milk and butter production. Identification of the Germans with the cause of abolitionism was found to be a fallacy, heightened by the ownership of slaves by a significant percentage of immigrants in the eastern settlements. The claim that the Germans, as a group, were unionists seems to be quite without foundation. It is true that unionism was strong in some German counties, but it is wrong to assert that all immigrants were so inclined. In fact, the percentages of Germans and Anglo-Americans voting against secession in the western counties were about equal.

Germans cannot be credited with the introduction into Texas of any major crops or livestock. Claims made by various scholars and contemporary observers that Germans brought gardening, orchard-keeping, dairying, and geese into the state have no evidential bases. Every major crop raised by the Germans was produced in greater volume elsewhere in Texas by southern Anglo-Americans.

The similarities observed between farmers of German and southern origin were, in many ways, even more striking than the differences. Corn, cotton, and sweet potatoes, the three major crops of the South, attained widespread and rapid acceptance among the immigrant farmers, as did the native fruit trees and breeds of livestock. Typically southern farmstead architecture and settlement pattern, including the open-range system, were likewise adopted. Dunging of fields, winter housing of livestock, and stall feeding were never introduced by the immigrants. In all these major respects, and in other less important ways, the Germans became southerners almost from the very first.

On the basis of the findings presented in chapters IV and V, the various aspects of the imported agricultural systems of an immigrant group can be divided into four classes with respect to their survival tendencies:

1. Traits which never took root in the new homeland because little or no attempt was made by the immigrant group to perpetuate them. These would include the dunging of fields, the cultivation of barley, and the provision of winter quarters for livestock.

2. Traits which were introduced but, often despite persistent attempts, failed to succeed and were discarded. These were represented by such items as viticulture, European fruit trees, small grain production in the eastern settlements, and the farm-village plan and communal herding in the western colonies.

3. Traits which were introduced, either through the desire of the immigrants or through financial necessity, and survived for about one generation. Included would be a small scale of operation, typified by smaller farms, fewer livestock, lower volume of crop production, and lower value of farm production than the Anglo-Americans; and German construction methods for farmstead structures in the western settlements. In this respect, there is good evidence that the free-labor system of the Germans was beginning to break down after about twenty years in the eastern settlements, as many

settlers who had been in Texas for several decades were purchasing slaves. It would have been interesting to observe what would have happened in another twenty years had slavery not been abolished.

4. Traits which were successfully introduced and, often in a modified form, acquired a lasting place in the agricultural system in the new homeland. As indicated previously, these would include such important items as intensive methods, high productivity, a locationally stable rural population, a high rate of landownership, and the cultivation of small grains in the western settlements. In addition, less significant traits, such as wine-making, the raising of white potatoes, and cheese production would also fit into this category.

A number of factors worked in combination to help decide the fate of any given aspect of the imported agricultural system—to determine which of the four categories claimed it. The first of these was the *physical environment* and its evaluation by the immigrant group. Certainly, Texas as a whole presented some great contrasts to Germany in this respect, perhaps most notably in climate, but the immigrants who settled the western counties had the greatest environmental adjustment to make. The partial assimilation which occurred in the eastern German areas can be attributed in large part to cultural contacts and economic pressures, but in the western counties, which was an empty, untested land at the time of the Germans' arrival, it was their evaluation of the physical environment that prompted many changes. On the rim of the desert, the question was not merely one of economic viability, but also one of ecological suitability. This was a land best served by experiment, by improvisation, in which cultural baggage survived or was discarded through the process of trial and error. In the eastern settlements environmental difficulties of a different nature were encountered, in the form of rust and blight, for example, which were frequent visitors in wheat and rye fields of the Germans. In both areas, the warm climate was an advantage, in that it made unnecessary many of the precautions which were taken in preparation for the winter season in higher latitudes. The following practices were apparently discarded or never introduced at least partially because they were ecologically unsuitable or unnecessary:

1. winter housing of livestock
2. large farmstead structures
3. viticulture
4. dunging of fields

5. farm villages
6. mid-latitude fruit trees
7. small grains (in eastern settlements)
8. crop-livestock association dominated by crops (in western settlements)
9. close planting of crops (in western settlements)
10. small scale of operation (in western settlements).

Such was not the fate, however, of all practices which were plagued by ecological difficulties or which were of minimal value in the new homeland. Persistent attempts to overcome environmental problems associated with the raising of white potatoes were finally rewarded with success after several decades, and this crop attained a place of lasting importance in the German kitchen gardens. Haymaking, which was deemed unnecessary by a consensus of contemporary spokesmen, nevertheless persisted among the Germans.

The second major factor affecting the survival of imported agricultural traits was the *cultural-economic milieu* and the manner in which it was viewed by the immigrant farmers. In this respect also, the Germans in the two parts of Texas were faced with quite different situations. Those in the eastern settlements found themselves in an area which was already at the time of their arrival a social and economic part of the South, with the basic procedures of the southern agricultural system well established, an area where a proven, viable rural economy was pre-existent. In such a case, once the immigrant group has made the decision to participate competitively in the production of goods for market and not to remain aloof in the isolation of folk-islands, the cultural and economic pressures to conform agriculturally are very great. The Germans in the western counties, on the other hand, were the almost sole occupants of a frontier area, isolated in colonies composed exclusively of their European countrymen, and cultural contacts with native southerners were accordingly much less frequent than was the case farther east. But even there, on the rim of the desert, the economic pressure to conform existed, for once the Germans chose to engage in the production of crops and livestock for market, they obligated themselves to supply the items which were in demand.

An evaluation of their cultural-economic milieu prompted the Germans to discard, either at once or after some years, many agricultural practices known in Europe, either because they were detrimental to

the economic viability of the system of farming in the new homeland or because practices observed among the native southerners appeared in their eyes to be better. Included would be:

1. low degree of commercialization
2. small scale of operation
3. stall feeding of livestock
4. supervised herding of livestock.

Reason, of course, does not always govern the actions of mankind, and imported farming practices which proved to be ecologically suitable were not always perpetuated or discarded after a strictly logical evaluation of the new cultural-economic milieu. Some survived apparently for little more than sentimental reasons, while others persisted because they were perhaps too deeply ingrained in the culture to be abandoned once they were found to be no longer economically necessary. In this category would fall such diverse items as:

1. intensive farming methods
2. high productivity
3. locational stability of the rural population
4. wine and cheese making
5. European construction methods (in western settlements)
6. white potatoes

It is of significance, however, that none of these *interfered* with or endangered the economic viability of the agricultural systems. The more intensive farming methods meant, in mid-nineteenth century Texas, only that the Germans were perhaps putting more labor and capital into their land than was necessary to assure a comfortable living. Locational stability only saddled them with the obligation to care for the land in order that their descendants could inherit it in good condition.

Most of the imported agricultural traits which survived were modified somewhat to meet local conditions. The production of wheat and rye in the western areas came, in time, to serve primarily forage functions; haymaking was adapted to utilize the unimproved prairie grasses; the intensive application of labor and capital was channeled in directions unknown in Germany, toward the purchase of farm machinery, the double-cropping of garden vegetables, the careful picking of cotton, and the perfection of dry-farming methods; wine-making was changed to be applied to wild grapes; kitchen orcharding was modified to utilize trees uncommon in northwestern Europe; the traditional stability of the rural population was directed toward the purchase of land and fencing of the open range; and German construction methods were adapted to local architectural styles and building materials.

An interesting phenomenon was observed concerning those imported traits which survived either permanently or for at least a generation. In almost every case, these traits were absent in the first years of settlement, only to appear five, ten, and even twenty or thirty years later, in what might be called "cultural rebound." In the western settlements, for example, significant wheat cultivation was first established about seven to ten years after initial occupancy of the land, German construction methods after about five years, rye only after a quarter of a century, oats and white potatoes not before the 1870's. That is to say, fewer imported German agricultural traits could be observed in the first years of settlement than in the period that followed.

Cultural rebound is difficult to prove, unless it involves something as striking as half-timbered construction. It might well be argued, for example, that the rise of wheat cultivation among the western Germans was a response to local conditions of market and climate rather than an expression of Old World grain preferences. For some supposedly imported traits to have become established only after two decades or more in the new homeland was so remarkable as to create doubt whether such belated attention actually constituted cultural rebound or merely adaptations and borrowings not associated with the European heritage. The evidence is usually circumstantial, in that some trait which had been known in Europe appeared after a number of years among the immigrant farmers but not among native agriculturists.

Still, cultural rebound would not be too unexpected, for the initial pioneer years were difficult ones, and the settlers temporarily did without many things which were not absolutely essential. In addition, many of the German immigrants had been carefully instructed in the methods of American pioneering by reading the better guidebooks, which included, in some cases, detailed directions for the construction of log cabins, and recommendations for corn as the best crop to plant initially. The leader of the Verein colony, Prince von Solms-Braunfels, anticipated the process of cultural rebound when he suggested that attention might be devoted to German crops and the construction of more pretentious houses in the second or third year of settlement, while advising the immigrants under his supervision that log cabins and corn

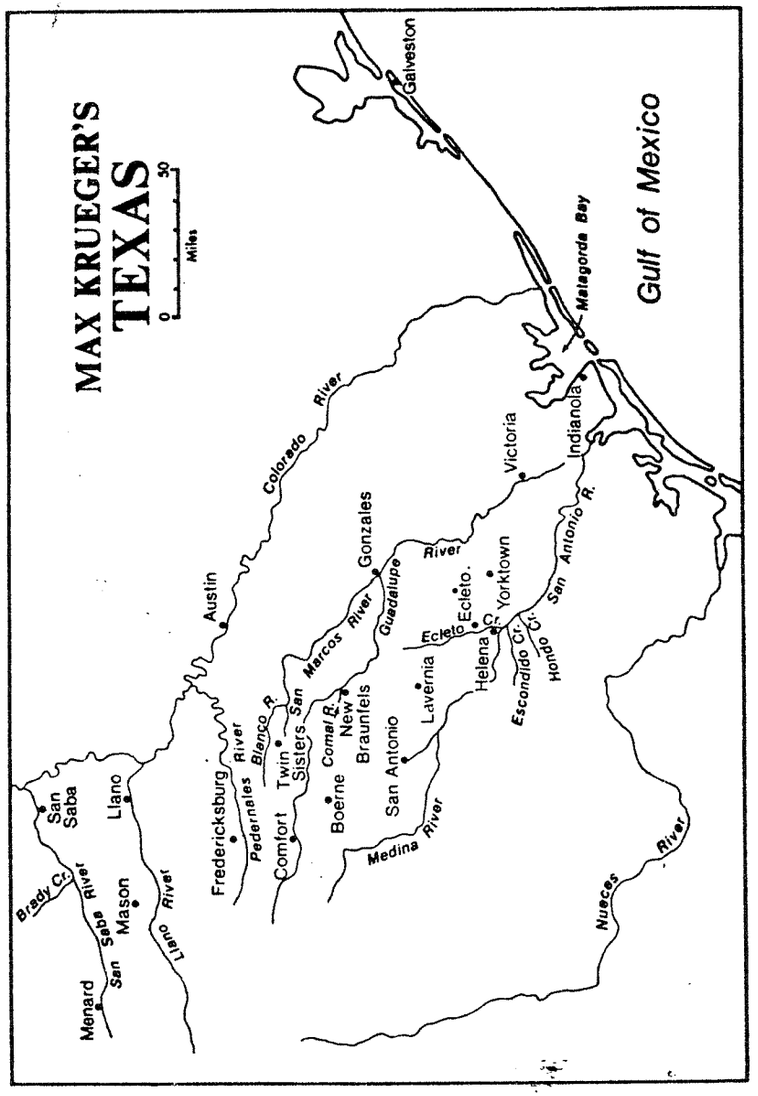
Second Fatherland
Life + Fortunes of a German Immigrant
by Max Amadeus Paulus Krueger 1936

Encl 16

Guadalupe

The river had risen more than fifty feet during the night and had washed the ferry boat away. I met a half-dozen people from various places on the river bank who were in the same plight I was in. Since we had hardly any provisions and, according to the opinion of some of the more experienced fellow-sufferers, could not expect the river to fall for several days, we decided to construct a small raft and risk the passage. The river banks throughout Texas are thickly wooded, so, after finding two good axes in a deserted Negro hut, we soon felled a half-dozen trees whose trunks we tied together in the form of a raft with tough grapevines. At the weakest points we replaced the vines with our lassoes, and with incredible pains we dragged this product of our first efforts at shipbuilding half a mile up the stream, undressed, fastened our clothes on our saddles, and, taking a firm hold of the raft, left it to the mercy of the current. Our horses, led by our lassoes, were swimming to the rear of the raft. At our starting point the Guadalupe made a decided bend and we observed that the trend of the main current was toward the opposite bank. Upon this fact we based our calculation, for indeed about half a mile below the town the current carried us near the opposite bank from which we had set out. Our horses having covered a distance of about a mile by swimming now seemed to be on the verge of exhaustion, but they no sooner noticed the approaching bank than they instinctively renewed their efforts, and swimming as they now were in front of our raft, they helped us materially to effect a safe landing. Some of the inhabitants of the town who had witnessed our exertions received us hospitably, and after we had been provided with dry clothing, we soon recovered from our hardships.

My journey from Indianola to Victoria, a distance of about fifty miles, led me across one of the most extensive prairie regions in Texas, on which I could not discover a tree or even a bush. Near the Gulf I encountered only the coarse sage-grass, containing much salt and little nourishment; therefore, it is unfit for pasturage. But as I traveled small patches of a finer grass appeared, and sometimes even the excellent mesquite grass was in evidence, and though short it is not equalled in nourishment by any other kind of grass and sustains cattle even during the winter season. It is called mesquite grass because it can be found wherever the mesquite tree grows,



4

Texas Scenes

HAVING rested my horse for several days, I continued my trip into the interior. There was not, as far as I can remember, in 1868, a single bridge across the western rivers after the flood of that year. I had to go far out of my way to find a shallow place or ford. When crossing a deep river we cowboys used to push our horses from a high bank into the water and gain the opposite bank by holding on to their tails. Vehicles, generally drawn by six or eight yoke of oxen, had to wait on the banks until the water had receded. As there were neither highways nor even passable country roads in those days, it happened very often after a rain that the heavy wheels of the oxcart would sink into the mud up to the axles. We then had to wait till the ground was dry in order to continue our journey. I likewise made slow progress on my journey, but the change of scenery kept me interested throughout and reconciled me to my tardy advance. In place of the open prairie with its black soil I now encountered stretches of deep sand. Large tracts were covered with postoak trees and here and there a patch of blackjacks. These trees were seldom larger than two or three feet in diameter and never reached a height greater than thirty feet. They were used only for firewood by the settlers. Later, as these regions became more thickly settled, the trunks were split into fence rails and used to enclose the small fields so as to protect them from the wild cattle.

It was on these prairies that I first saw the chaparral bushes. They generally grew in dense clusters, forming compact thickets. During the long days of spring and summer the chaparral blossoms exhale an exceedingly sweet odor, and I know of no artificial perfume that can favorably compare with the fragrancy of those chaparral blossoms. For miles around they attract the bees, which come in swarms to reap a harvest of the sweetest honey, which commands an especially high price in the markets because it retains all the natural aroma of the blossoms.

The chaparral thickets are the favorite resort of thousands of rabbits. Here I also met with numerous flocks of Texas and Mexican partridges. But the most interesting feathered inhabitant of these parts was the tiny hummingbird, buzzing like a butterfly from flower to flower to drink in with its long bill the sweets contained in their cups. Here too I found for the first time the so-called bird-of-paradise. Its beautful tail feathers adorn many a lady's hat of the present day. Wild pigeons, field larks, red cardinals, and bluebirds which are met with almost everywhere in Texas embellished and enlivened the scenery. But before I conclude my description of the sandy country which I traversed, I desire to call attention to the stately evergreen liveoak trees which are indigenous to those sections of the country. Their wood is almost as hard as iron; their trunks attain more than six feet in diameter and an age of from three to six hundred years, as the rings on the trees proved when I examined them. With their long and heavy branches they cover a space approximating a hundred feet square, enabling man as well as animals to enjoy their cool shade during the hot hours of the day. The comforts of this shade are made more enticing by the many mustang grapevines that generally creep up the trunks of liveoak trees and cover their tops with luxuriant foliage. The mustang vine seems to be of indestructible hardiness. Near the ground I frequently found these vines to be more than eight inches thick. The shade of the evergreen liveoak affords the grapevine protection from the scorching rays of the sun, while the sandy soil, permitting its roots to reach a considerable depth, enhances its fertility, so that each year the liveoaks are loaded down by a marvelous crop of wild grapes. Not even during my later travels through tropical countries, especially Brazil, which is famous for its grand forests, have I ever enjoyed a sight that would equal in beauty the one presented by those gigantic Texas oaks covered with the verdant canopy of the mustang vine.

The sky in this latitude is ever blue and serene; the tempera-

THE FIRST FIFTY YEARS - FREDERICKSBURG, TX
ROBERT PENNIGER PUBLISHED 1896

Encl 17.

free himself from all suspicion he had the other family ordered to leave. Once I was directed to accompany a family that had been ordered to leave as far as the Pedernales.

If Captain Gunst had not committed suicide Schubert would have continued to provoke him until he, too, would have been ordered to leave. He had already made good initial efforts, but I and several of my friends who understood the circumstances kept Schubert from resorting to such punitive action.

Another incident from the times of our most serious suffering! When the deaths resulting from scorbut occurred in great numbers a two-wheeled dray drawn by a yoke of oxen was constantly in use carrying the deceased to the burial ground. At that time the citizens employed a cow hand who would drive the cows out in the mornings and bring them back in the evenings. One morning the driver of the dray, Mr. Schnautz, had three corpses on the cart. One of the corpses was that of a tall man who wore long woolen stockings and his legs were dangling from the cart. Mr. Schnautz stopped the cart on Main Street to attend to some business matters just at the time the cow hand was driving the cattle out for the day. When the oxen saw this they followed the cows, pulling the cart along and lost all three corpses, the one with the woolen stockings first.

While the epidemic was spreading in Fredericksburg, a Mr. Rette, who assisted Dr. Roemer in Braunfels came to us. A young girl (later my wife) was sick with fever and under Dr. Schubert's care. Mr. Rette visited the young girl and noted the medicine Schubert had prescribed. "Pour that stuff out", he said, "I'll prescribe a different medicine. First of all, go to the Society's store and get some wine to strengthen the patient." Mrs. Nebig, later my mother-in-law, went to the store and heard loud laughter and shouting. She opened the door and saw Bickel and several women seated at the table. She asked Bickel to come out and let her have some wine and charge it to her account. She had considerable credit deposits with the Society. Bickel shrugged his shoulders and informed her that she could not have the wine because he did not have enough on hand. Mrs. Nebig told him that there was apparently no shortage of wine in the store. Briefly, she did not get any and went to Mr. Rette's home to report the refusal to him. Mr. Rette calmed Mrs. Nebig by saying: "I shall furnish you the wine tomorrow." The next morning he brought three bottles of wine to the Nebig home and also some good medicine which brought about a complete recovery.

Schubert and his associates frequently celebrated with such disorderly drunken revelries.

THE FIRST YEARS IN THE NEW COLONY OF FREDERICKSBURG

(Notes compiled by Mr. B. Blum)

After the administrators of the Immigration Society had erected the storehouse on the chosen site and the settlers had built their log houses, the struggle for survival began.

It is not difficult to realize that it was a rough, pioneer life replete with privations to which these people, as unaccustomed as they were to such frontier experiences, had to adjust. The homes were necessarily very primitive and provided during the rainy winters very meager protection against the elements. The provisions furnished by the Society were adequate in the beginning, but, due to poor financial management, the supply became progressively more inadequate.

Since there was almost a complete lack of vegetables and people ate mostly cornbread and meat, a diet to which they were not accustomed, sickness was not uncommon. Many of the immigrants who arrived later carried with them the diseases which raged among the immigrants on the coast and soon an epidemic raged here and in New Braunfels. The sickness was "scorbut", a scurvy type disease associated with diarrhea. Its victims were many and under prevailing conditions no effective resistance could be effected.

The death toll grew so large that the two-wheel Mexican cart with which the corpses were carried to the Society's burial ground (now the town cemetery) made the sad journey day after day almost without interruption. Due to the shortage of lumber for coffins, bodies were wrapped in old cloths or covers and were committed without any burial rites.

No pen can describe the heartache and despair which the helpless survivors suffered. Conditions were frightful and it is not surprising that the colonists held the Immigration Society responsible for their plight, and rightly so. The Society's local administrators were, therefore, in an uncomfortable situation, even though they, with the exception of a few unscrupulous individuals such as Schubert and his cohorts, could not change the conditions for which the brainless Society in Germany was responsible.

The necessities of life were very expensive and frequently could not even be bought, because all supplies had to be brought here from the coast and transport wagons were practically not to be had because of the war with Mexico. For example one dollar in cash (the Society's credit certificates were

ABOVE OCCURRED 1849

unprofitable contract the Society could have purchased in Texas more than 100,000 acres of good and accessible land. But without seeking the advice of Prince Solms, who was still in Texas, concerning the Fisher-Miller Grant, they relied completely on the statements of the seller whose only interest was to dispose of his half-expired contract as soon as possible. They accepted his statement that with 200,000 Gulden ($80,000.00) it was possible to colonize 6000 famililes and also meet all the promises to the settlers; an undertaking that would have required a minimum of half a million dollars.

While the time limit for the introduction of the first one-third of the required number of families was extended by the state's legislative body on January 29, 1845 to March 1, 1846, the colonization project, even with this favorable consideration, remained an impossibility because of previously mentioned reasons.

The following published announcement illustrates the misconception that prevailed among the gentlemen concerning their business transaction:

"Announcement: Since the Congress of Texas has declared that Bourgois D'Orvanne's contract had expired, the Society has made another contract with H. Fisher through which the Society has acquired extraordinarily fertile and fruitful land which lies more northerly along the right bank of the Colorado River."

December 11, 1844 The Directors

"The Llano River flows through rolling terrain which has an abundance of water, timber and grass. In so far as the climate and the fertility of the soil are concerned there is probably no other region in Texas that is more suitable for German colonization than the region along the Colorado between the Llano and the San Saba rivers. The 200 English-mile course of the latter traverses a valley six to twenty-five miles wide, of unsurpassed beauty and fertility. It is a part of the territory acquired by the Society for the German colonists. On the maps it is designated as "Fisher & Comp." since the Society has purchased it from Fisher." (Taken from the "Handbook for German Emigrants" published in 1845).

Fisher and Miller never owned any land in Texas. The contract, after the extension of the time limit, stipulated that one-third of the 6000 families had to be settled on this territory; that they be settled on separated sections of land; that only one-twelfth of the land be occupied; that the sections lying between were to be surveyed at the expense of the Society but remain the property of the government. A further stipulation required that the immigrant live on his property for three consecutive years, fence and cultivate not less than fifteen acres of land before he would receive a title to his property. A family would then receive a gift of 640 acres from the state and a single man 320 acres. For every 100 families settled the contractors were to receive ten sections of land and for every 100 single men ten one-half sections. Later the government changed the stipulation, requiring that only any portion of the land had to be under cultivation before the owner could file claim for its possession.

Thus the state maintained possession of the land until these conditions were met and neither Fisher and Miller nor the Society of Noblemen had any legal claim to it. Consequently, the latter could not have given any land to the settlers, as they erroneously guaranteed in the following announcements.

PROGRAM
of the
Society for the Protection of German Immigrants in Texas as published in the "Handbook for German Emigrants", issued in the year 1845 in Bremen:

The directors of the Society make the following public announcement for the benefit of those who desire to join the Society's colonization project in Texas. It sets forth the necessary procedure for joining and the obligations that have to be met, as well as the opportunities and advantages it offers. A description of the location, the nature of the soil and the climate of the land to be settled is given in detail.

Texas, located between the United States, Mexico and the gulf, because of its climate and fertility of soil, offers the industrious husbandman and farmer such overwhelming advantages that the society has selected this particular land as the most desirable for German colonization. The many conflicting reports concerning the advantages of this new land, some due to foreign influence and others purely imaginary, have confused the emigrant because he does not know what to believe. Therefore, the Society desires to present briefly an authentic statement based on years of observation by Germans who made personal evaluations and judgements on the spot.

The lowlands along the sea and the mouths of the rivers and the entire regions along the rivers are richly blessed by nature with deep alluvial soil, but because of the hot, humid climate which results in excessive perspiration, this region is not conducive to good health for the German immigrant. The northern regions, although healthy and fertile and

crossed by mountains whose oak and pine groves will soon yield important commercial products, are too remote from areas already settled to permit a rapidly developing German colony to blossom forth with a degree of security. On the other hand, the central regions of the country, the so-called high plains of the west and northwest, which, because of their fertile soils and favorable climate are found to be ideal for nourishing and sustaining German inhabitants. Corn, cotton, tobacco, as well as all field and garden products of Germany thrive there. It is a wonderful grazing area, broken only here and there by high forests, and provides excellent grazing for live stock during winter and summer. There are numerous creeks and navigable rivers which provide adequate water power for industrial purposes and safe transport for its products. Here German diligence and enterprising spirit find the opportunity and the means for a prosperous future. It is true that many Germans have already perished in that beautiful country, but why? Could these individual families, relying solely on their own efforts, without protection and advice, without knowledge of the land, without roof, subject to the extremes of the weather and climate, without the means to cultivate the soil and be assured of a harvest; could these families, even with hard labor expect anything else? The failure was not due to unfavorable conditions of the country, but due to erroneous and misdirected effort. The Society has made adequate preparations to prevent such misfortunes. The attaining of his most cherished goal depends entirely on the determination, diligence and well ordered life of the immigrant. Not only will he be assured of his own well-being but also that of the entire community. This increase in the prosperity of the community and in the value of the land will also offer the Society an opportunity, through the land which it has retained, to receive compensation for the labor and capital which such an undertaking requires.

The immigrant is advised to take along linens, summer and winter clothes, shoes, beds, easily transported home and kitchen wares of iron and copper, new leather for harnesses, and also favorite garden seeds because the purchase of these items on the spot will be difficult and costly and the pleasantness of domestic comforts would be delayed. (It is preferred that these items be packed in small chests). All necessary equipment for the cultivation of the soil, especially farm implements that are different from ours, can best be purchased in the colony. The delivery cost of these items, of provisions and of live stock cannot be indicated because of the constantly changing business conditions, but the Society will keep a watchful eye on prices and through purchases in large quantities make these available at the lowest possible fixed prices. Because of the free hunting privileges and the abundance of wild life in Texas, it is desirable to have a good rifle or fowling piece.

Relying on the authentic information herewith presented and with the assurance of the successful continuation of this endeavor, the Society requests those who desire to be added to the list of emigrants to send post prepaid an application with the following information:

1) Baptismal and marriage certificates.

2) Baptismal certificates of children.

3) Official evidence concerning business, profession or trade and place of residence.

4) Name and place of birth of parents.

5) A certified copy of an emigration certificate from the government.

6) A certificate of good conduct from the congregation.

7) Official information concerning his financial status. Each single emigrant must possess 300 florins and each family 600 florins upon arrival at the port of embarkation. This sum, 300 florins and 600 florins, respectively, will be deposited with the directors at Mainz, or with the banker of the Society, Mr. L. H. Flersheim, at Frankfort or with the Society's agent at Bremen. For this amount the Society will provide transportation from Bremen to the port of entry which will amount to about 60 florins per person, free land transportation from the port of entry to the colony for persons and their belongings on wagons and in tents of the Society for approximately ten florins per person; furthermore, the Society will build a home in the colony (unless the owner prefers to build his own) at a cost of about 60 florins; hand each single man in Bremen 20 florins and each family 50 florins for incidental expenditures; for the balance of the deposit, which will vary according to the number of members in each family, the agent will issue a receipt in the name of the Society which will be honored in the colony as cash. The colonists may also use this credit for the purchase of equipment, materials and live stock as well as for provisions for sustenance at the lowest prevailing prices from the commissary until his established credit has been exhausted.

Encl 18

a Feasability Study for Grape Production in Texas

Perry & Bowen Texas A&M 1974

management and proper varietal selection, European grapes can be grown. Growers should be prepared for a crop loss about one in five to seven years over the long run with partial losses more frequently. Although of good quality if use continues at the present rate, the water supply in the high plains is projected to decline from 4.13 million acre-feet to 95,000 acre-feet by 2015 (69).

Region II

Region II encompasses the High Plains and Edward's Plateau. The high plains area has a high spring freeze, hail and midwinter low temperatures frequency. However, it does have the low disease and cooler growing season temperatures of Region I. The Edwards Plateau area has higher heat accumulation than that of Region I and also increased disease incidence.

A small area within the Edward's Plateau, encompassing portions of Kimble, Edward's, Real, Bandera, Gillespe, and Kerr counties is cooler (5100-5200 units) than the surrounding counties and regions. The relative humidity in this area is significantly highest in the eastern section. Due to its proximity to the Gulf Coast, Pierce's disease could be present in the more humid southeastern portion of this area.

Region III

Region III is the largest region comprising portions of the Trans-Pecos, Edward's Plateau, Rolling Plains and Cross

Timbers where the heat accumulation ranges from 5300 to 5800 degree days.

There are small areas in this large region which may have as much potential for growing wine grapes as in Regions I and II. For example, due to elevation the coolest growing season temperatures in Texas are found in the Davis Mountain region. Spring freeze frequency and low midwinter temperatures are less severe for Alpine than for Lubbock and Seminole However, the lack of a source of large volumes of water seriously decreases this area's potential. High heat accumulation generally is the major limiting factor adversely influencing wine grape quality. Local climate should be stressed in site selection.

Supplemental irrigation would be of increasing importance in counties west of the 20 inch annual rainfall line. High total salts and lack of ground water in some areas would reduce their desirability.

Possible presence of Pierce's disease as well as high heat accumulation reduces the potential of the southern region. Some cold injury and hail damage maybe expected in the more northern portion of the region. Special consideration should be given to site selection in attempting to avoid cotton root rot. Excellent soil conditions occur in some areas such as in Eastland and Commanche counties

Foliage disease problems which would increase maintenance costs would be of increasing importance east of the 20 inch rainfall line.

the growing season is beneficial in limiting foliage and fruit disease infestations. September rains occurring in many areas of Texas may hamper harvesting of late ripening varieties. In western Texas where rains are infrequent, 60 to 70 percent of the annual total occurs during the crop-growing season.

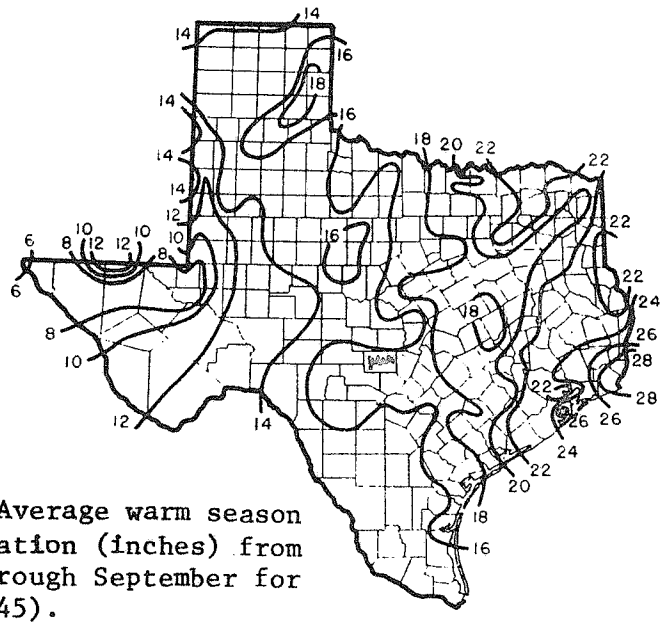


Fig. 25 Average warm season precipitation (inches) from April through September for Texas (145).

Relative humidity strongly affects differences in diurnal temperatures. The lower the relative humidity; the more rapidly soil absorbs and releases heat increasing the daily maximum and minimum differential. Cool nights during the growing season in Western Texas are caused by arid climate and higher land elevations (127,151). Temperatures decrease 1°F for each 300 foot elevation increase. Daytime relative humidity in July ranges from 30 percent in the Northwest Texas to 75 percent along the eastern Gulf coast (145).

Rainfall and high relative humidity during the growing season usually increases disease injury and reduces fruit quality (40,159). Summer humidity, fog, and precipitation favors the development of fungal diseases such as black rot, anthracnose, downey, and powdery mildew (159). Such conditions increase vector populations which increase incidence of bacterial and vine diseases (63).

Humid conditions promote fruit cracking providing entrance for fungi and insects (45,130,143,159).

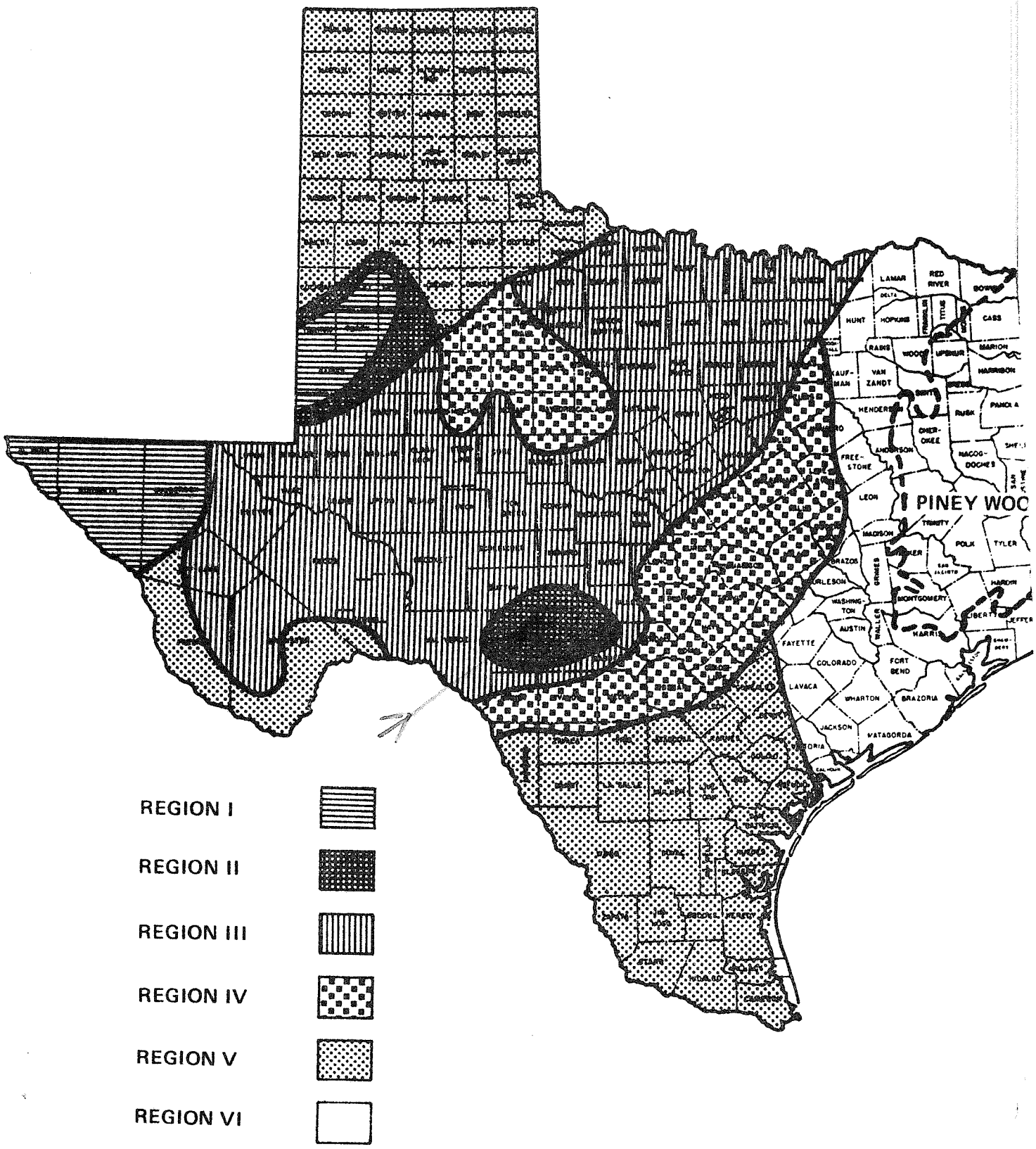
Generally, European cultivars are most susceptible to fungus diseases, while Muscadines are the most tolerant (143, 149,158). American and French Hybrids are intermediate and vary amoung cultivars in disease resistance.(143). In applying this information to Texas, European grapes will best adapt to the arid western sections; American and French Hybrids in Central and North Texas; and Muscadine and some disease resistant bunch grape cultivars are recommended for East and Southeast Texas.

Trellis height should be increased to provide adequate air drainage for vines located in areas of high rainfall.

DISEASES AND INSECTS

In all but the more arid regions, a rigid disease and insect control program will be necessary to prevent excessive injury to vines. However, no feasible control has yet been found to control Pierce's disease and root rot.

FIG. 28 PRIORITY REGIONS IN TEXAS FOR WINE GRAPE PRODUCTION POTENTIAL.



TEXAS PRIORITY REGIONS FOR GROWING WINE GRAPES

The authors have divided Texas into priority regions for growing wine grapes as indicated in Figure 28. Primary consideration was given to climatic conditions and disease incidence relative to producing higher quality wine grapes. Area within regions should be selected on availability of suitable soils and water.

Region I

This region is thought to have the greatest potential for producing high quality wine, with the least amount of climatic interference. It consists of the western section of the Trans-Pecos areas and of the Southern High Plains. These areas have the arid climate, low disease incidence, low number of degree days and a wide range in diurnal temperatures. Of particular importance is the expected low incidence of cotton root rot and Pierce's disease. This region also provides the most suitable conditions in Texas for European varieties from which the highest quality wine is produced. As noted earlier a wine grape industry once occurred in the El Paso valley indicating that wine grapes can be grown there. Just across the Mexican border, the Zaragosa Winery near Juarez, Mexico is presently being supported by a locally grown vineyard (39).

The high expected frequency of spring freezes, mid winter low temperatures and hail occurrences in the South Plains are substantial hazards of this area, but with judicious vine

Relief

Topography, or relief, affects soil formation through its influence on drainage, erosion, plant cover, and soil temperature. The topography of Gillespie County ranges from nearly level to steep.

Soils that formed on the nearly level to gently sloping uplands are underlain by deposits of calcium carbonates because water entered the soil and leached the carbonates so that they accumulated in the lower horizons. These soils are Blanket, Luckenbach, and Pedernales.

Shallow soils are on the steeper slopes, and geologic erosion has kept pace with the rate of soil formation. The lesser slopes and concave slopes have deeper soils because soil formation is faster than geologic erosion.

Time

Time, usually a long time, is required for the formation of soils that have distinct horizons. The differences in length of time that parent materials have been in place are commonly reflected in the degree of development of the soil profile.

The soils in Gillespie County range from young to old. The younger soils have little profile development, and the older soils have well-expressed soil horizons. Some of the soils along the Pedernales River are examples of young soils. They are still receiving sediments as the river floods.

Such soils as Altoga and Lewisville are older than the flood-plain soils. These soils developed in older alluvium washed from higher lying uplands. Plant roots formed some soil structures; carbonates have accumulated in the form of very fine concretions, films, and threads in the lower layers. Soils that are older, such as the Castell, Luckenbach, and Pedernales, have well-defined horizon development that indicates they have been there for a long time.

Classification of Soils

Soils are classified so that we may more easily remember their significant characteristics, assemble knowledge about them, see their relationships to one another and to the whole environment, and develop principles that help us understand their behavior and response to manipulation. First through classification and then through use of soil maps we can apply our knowledge of soils to specific fields and other tracts of land.

The current system of classification defines classes in terms of observable or measurable physical properties of soils. The properties chosen are primarily those that permit grouping of soils that are similar in genesis. Genesis, or mode of soil origin, does not appear in the definitions of the classes; it lies behind the classes. The classification is designed to accommodate all soils. It employs a unique nomenclature that is both connotative and distinctive.

The system of soil classification discussed in this subsection (*7*) is that adapted as standard for all soil surveys in the United States, effective January 1, 1965 (*4*). It replaces the classification of Baldwin, Kellogg, and Thorp (*2*) as revised by Thorp and Smith (*5*).

The classification has six categories. Beginning with the most inclusive, the categories are the order, suborder, great group, subgroup, family, and series. The placement of some soil series in the current system of classification, particularly in families, may change as more precise information becomes available.

The classification of the series into families, subgroup, and order in Gillespie County is shown in table 8. The five soil orders in Gillespie County are Alfisols, Entisols, Inceptisols, Mollisols, and Vertisols.

Alfisols are soils containing a clay-enriched B horizon that has high base saturation.

Entisols are recent soils that do not have natural genetic horizons or that have only the beginnings of genetic horizons.

Inceptisols are beginning soils that are most often found on young but not recent land surfaces.

Mollisols have dark-colored surface horizons, have a high base saturation, have moderate to strong structure, are not hard when dry, and have a high content of organic matter.

Vertisols crack when dry and swell when wet, and a natural churning or inversion takes place because the soils have a high content of clay.

Additional Facts About the County

The present boundaries of Gillespie County were established in 1858. The population of the county grew rapidly until about 1930, but then decreased from 11,020 in 1930 to 10,520 in 1950, and to 10,048 in 1960.

Fredericksburg, the county seat, was founded by John O. Meusebach on May 8, 1846. The population of Fredericksburg is 5,326, according to the 1970 census; those of Harper and Stonewall, two other towns in the county, are 1,107 and 198, respectively.

The economy of the county is based on livestock, wildlife, and field crops.

The 1965 census showed 1,161 farms and ranches in the county. More than 90 percent of the farms and ranches in the county are owner operated and range in size from 100 to 4,000 acres. Among the major crops are oats, wheat, barley, grain sorghum, and peaches.

Industries in the county are peach packing sheds, a purse factory, a turkey processing plant, a gypsum mine, a serpentine mine, and a wood milling factory.

Points of interest in the county and nearby are Balanced Rock, Langes Mill, Nimitz Museum, Sunday Houses, the LBJ Ranch, LBJ State Park, Lady Bird Johnson Municipal Park, Pioneer Museum (Kammlah House), and Vereins Kirche.

Geology

Many kinds of rock, ranging in date of origin from Precambrian to Cenozoic, are in Gillespie County, which is on the south flank of the Llano Uplift. The Llano Uplift was formed by an upward bulging of the earth that brought to the surface rocks normally covered by several miles of younger rocks. These rocks exposed by uplift are Precambrian, a billion years or so old, as well as rocks a half billion years old and younger (*3*). The exposed rocks in the range of a billion years old are re-

TABLE 8.—*Soil series classified by higher categories*

[Current as of November, 1970]

Series	Family	Subgroup	Order
Altoga	Fine-silty, carbonatic, thermic	Typic Ustochrepts	Inceptisols
Bastrop	Fine-loamy, mixed, thermic	Udic Paleustalfs	Alfisols.
Blanket	Fine, mixed, thermic	Pachic Argiustolls	Mollisols.
Bonti	Fine, mixed, thermic	Ultic Paleustalfs	Alfisols.
Brackett	Loamy, carbonatic, thermic, shallow	Typic Ustochrepts	Inceptisols
Castell	Fine, mixed, thermic	Ultic Paleustalfs	Alfisols.
Click	Loamy-skeletal, mixed, thermic	Udic Haplustalfs	Alfisols.
Cobb	Fine-loamy, mixed, thermic	Udic Haplustalfs	Alfisols.
Demona	Clayey, mixed, thermic	Aquic Arenic Paleustalfs	Alfisols.
Denton	Fine, montmorillonitic, thermic	Vertic Haplustolls	Mollisols.
Doss	Clayey, carbonatic, thermic, shallow	Typic Calciustolls	Mollisols.
Eckert	Loamy-skeletal, mixed, thermic	Lithic Haplustolls	Mollisols.
Frio	Fine, mixed, thermic	Cumulic Haplustolls	Mollisols.
Guadalupe	Coarse-loamy, mixed, thermic	Fluventic Ustochrepts	Inceptisols.
Harper	Clayey, montmorillonitic, thermic	Lithic Vertic Haplustolls	Mollisols.
Heatly	Loamy, mixed, thermic	Arenic Paleustalfs	Alfisols.
Hensley	Clayey, mixed, thermic	Lithic Rhodustalfs	Alfisols.
Katemcy	Fine, mixed, thermic	Udic Haplustalfs	Alfisols.
Keese	Loamy, mixed, thermic	Lithic Ustochrepts	Inceptisols.
Krum	Fine, mixed, thermic	Vertic Haplustolls	Mollisols.
Lewisville	Fine-silty, carbonatic, thermic	Typic Haplustolls	Mollisols.
Ligon	Loamy, mixed, thermic, shallow	Udic Rhodustalfs	Alfisols.
Lindy	Fine, mixed, thermic	Udic Haplustalfs	Alfisols.
Luckenbach	Fine, mixed, thermic	Typic Argiustolls	Mollisols.
Nebgen	Loamy, mixed, nonacid, thermic, shallow	Typic Ustorthents	Entisols.
Oben	Loamy, mixed, thermic, shallow	Udic Haplustalfs	Alfisols.
Pedernales	Fine, mixed, thermic	Udic Paleustalfs	Alfisols.
Purves	Clayey, montmorillonitic, thermic	Lithic Vertic Haplustolls	Mollisols.
Renick	Clayey, montmorillonitic, thermic	Ruptic-Entic Lithic Haplustolls	Mollisols.
Speck	Clayey, mixed, thermic	Lithic Argiustolls	Mollisols.
Tarrant	Clayey-skeletal, montmorillonitic, thermic	Lithic Haplustolls	Mollisols.
Tobosa	Fine, montmorillonitic, thermic	Typic Chromusterts	Vertisols.
Topia	Very fine, mixed, thermic	Vertic Argiustolls	Mollisols.
Vashti	Fine-loamy, mixed, thermic	Aquic Haplustalfs	Alfisols

crystallized as a result of high pressure and temperature during their deep burial beneath other rocks. Also, local melting produced granite and various other types of igneous rock.

Rocks of the Precambrian Era in this county are Town Mountain Granite (Click and Keese soils), Red Mountain Granite (Castell soils), Packsaddle Schist (Katemcy and Ligon soils), and Coal Creek Serpentine (Renick soils).

The rocks of the Paleozoic Era in the county are Hickory Sandstone (Bonti, Cobb, Nebgen, Oben, and Vashti soils) and Cap Mountain and Ellenburger Limestones (Eckert and Harper soils).

The rocks of the Mesozoic Era in the county are Edwards Limestone (Hensley, Lindy, Purves, Speck, Tarrant, and Topia soils) and Glen Rose Limestone (Brackett, Denton, and Doss soils).

Those materials of the Cenozoic Era from which soils have formed are mainly of the Pleistocene and Recent Epochs, and are not further divided here. Altoga, Krum, Lewisville, and Tobosa soils formed in old outwash from limestone. Demona and Heatly soils formed in old outwash from sandstone. Bastrop, Blanket, Luckenbach, and Pedernales soils formed in ancient materials derived from a mixture of limestones and sandstones. Frio and Guadalupe soils formed in recent stream alluvium.

Climate [5]

Gillespie County consists of plateaus and hills covered with cedar, oak, and other timber, and broken by the spring-fed Pedernales River. Elevations range from 1,1[illegible] to 2,250 feet above sea level.

Gillespie County, at latitude 30° north, is far enough south to escape harsh winters. At an elevation of 1,[illegible] feet and a distance of more than 200 miles inland from the coast, Gillespie County escapes the hot, humid summers characteristic of many southern climates. Summer temperatures are more characteristic of the High Plains than of southern Texas. Smog is unkown, and severe storms are very rare.

Total annual precipitation averages 27.11 inches. Yearly amounts have ranged from 48.22 inches in 1[illegible] to only 11.29 inches in 1956. Prevailing winds are southerly during all months. Relative humidity is fairly uniform throughout the year, but varies considerably during the day. The mean annual relative humidity is 79 percent at 6 a.m., 52 percent at noon, and 47 percent at 6 p.m., Central Standard Time. The area receives about 62 percent of the total possible sunshine annually.

[5] By ROBERT B. ORTON, State climatologist, U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, Austin, Texas.

Winter temperatures are mild. When polar air masses move through the area, they give the climate a continental flavor and disrupt briefly the prevailing southerly flow. These colder air masses undergo considerable warming by the time they reach the Hill Country, so that the average daily maximum in January is 60° F., or sufficiently mild for most outdoor activities. Winter is not marked by any prolonged periods of cold weather, rather by short spans lasting 1 or 2 days. Often there is considerable cloudiness in the morning, but the overcast ordinarily breaks up about noon, and sunshine and warmer temperatures prevail in the afternoon. Winter is a comparatively dry season. Precipitation is often in the form of light rain or drizzle. Snowfall is usually of little or no consequence. It often melts as rapidly as it falls.

Spring weather changes rapidly during March and becomes more uniform during April and May as fewer cold fronts penetrate the Texas Hill Country. Rainfall increases significantly in April, as thundershowers are then more frequent. The early morning cloudiness, typical of winter, begins to break up earlier, so that skies are usually sunny throughout the late morning and afternoon. The profusion of wildflowers creates a riot of color in spring.

The summer climate in Gillespie County is characterized by the warm days and cool nights typical of the Southern High Plains. Day-to-day weather is rather uniform, except for an occasional afternoon or evening thundershower. Total monthly rainfall decreases in midsummer, and July is one of the drier months. Summer nights at Fredericksburg average 4° to 5° F. cooler than at lower elevations east of the Hill Country.

Daytime fall temperatures continue warm in September, and few cold fronts reach the area. Precipitation increases significantly during the month as weather disturbances occasionally move eastward from the Gulf of Mexico across the Hill Country. Cold fronts are more frequent after mid-October, and the variation in weather increases. November is normally a dry month. The combination of moderate temperatures, low wind velocities, and the frequent intrusions of mild, dry, polar air masses makes fall a pleasant season in the Hill Country.

The growing season (freeze-free period) in Gillespie County averages 219 days. The average date of the last occurrence of 32° in spring and the first occurrence in fall are April 1 and November 6, respectively. Significant departures from these values exist locally because of differences in topography, exposure, soil condition, and plant cover. The average annual lake evaporation is 62 inches. Table 9 gives the temperature and precipitation data recorded at Fredericksburg, Tex.

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Glossary

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates such as crumbs, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Soil material, such as sand, silt, or clay, that has been deposited on land by streams.

Association, soil. A group of soils geographically associated in a characteristic repeating pattern.

Available water capacity. The amount of water a soil can hold and make available to plants. It is the numerical difference between the percentage of water at field capacity and the percentage of water at the time plants wilt. The rate is expressed as inches of water per inch of soil depth.

Badlands. Areas of rough, irregular land where most of the surface is occupied by ridges, gullies, and deep channels. Land hard to traverse.

Base saturation. The degree to which material that has base-exchange properties is saturated with exchangeable cations other than hydrogen, expressed as a percentage of the cation-exchange capacity.

Broad-base terrace. A ridge-type terrace 10 to 20 inches high and 15 to 30 feet wide that has gently sloping sides, a rounded crown, and a dish-shaped channel along the upper side. This kind of terrace controls erosion by diverting runoff along the contour at a nonscouring velocity. It may be nearly level or have a grade toward one or both ends.

Caliche. A more or less cemented deposit of calcium carbonate in many soils of warm-temperate areas, as in the Southwestern States. The material may consist of soft, thin layers in the soil or of hard, thick beds just beneath the solum, or it may be exposed at the surface by erosion.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay film. A thin coating of clay on the surface of a soil aggregate. Synonyms: clay coat, clay skin.

Climax vegetation. The stabilized plant community on a particular site; it reproduces itself and does not change so long as the environment does not change.

Complex, soil. A mapping unit consisting of different kinds of soils that occur in such small individual areas or in such an intricate pattern that they cannot be shown separately on a publishable soil map.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrations of compounds, or of soil grains cemented together. The composition of some concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are examples of material commonly found in concretions.

Consistence, soil. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

TABLE 9.—*Temp...*

[All data from Fredericksburg, Tex. Elevation ...]

Month	Temperature [1]				Precipitation			
	Average daily maximum	Average monthly maximum	Average daily minimum	Average monthly minimum	Probability, in percent, of receiving selected ...			
					Average total [1]	0 inch or trace	0.50 inch or more	1.00 ... or more
	°F	°F	°F	°F	*Inches*			
January	60. 4	78. 9	35. 8	16. 0	1. 21	<1	30	
February	64. 4	81. 9	39. 9	20. 8	1. 90	<1	90	
March	71. 7	87. 5	45. 6	25. 7	1. 37	<1	83	
April	79. 0	91. 8	54. 6	37. 1	2. 85	<1	92	
May	84. 7	94. 5	61. 8	47. 5	3. 06	<1	99	
June	90. 9	97. 9	67. 7	58. 7	3. 17	<1	90	
July	94. 9	101. 0	69. 5	63. 2	1. 47	<1	82	
August	95. 1	102. 2	68. 8	61. 6	2. 69	1	76	
September	88. 6	98. 4	64. 2	50. 9	3. 61	<1	90	
October	80. 2	90. 7	55. 0	37. 3	3. 00	4	81	
November	69. 2	84. 2	44. 2	25. 5	1. 57	<1	80	
December	62. 9	78. 7	38. 0	20. 9	1. 54	4	90	
Year	78. 5	90. 6	53. 8	38. 8	27. 44			

[1] Based on a 29-year period of record.
[2] Based on a 12-year period of record.

Loose.—Noncoherent; does not hold together in a mass.
Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.
Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.
Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.
Sticky.—When wet, adheres to other material, and tends to stretch somewhat and pull apart, rather than to pull free from other material.
Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.
Soft.—When dry, breaks into powder or individual grains under very slight pressure.
Cemented.—Hard and brittle; little affected by moistening.

Deferred grazing. The practice of delaying grazing until range plants have reached a definite stage of growth, in order to increase the vigor of the forage and to allow the desirable plants to produce seed. Contrasts with continuous grazing and rotation grazing.

Diversion, or diversion terrace. A ridge of earth, generally a terrace, that is built to divert runoff from its natural course and, thus, to protect areas downslope from the effects of such runoff.

Erosion. The wearing away of the land surface by wind (sandblast), running water, and other geological agents.

Fallow. Cropland left idle in order to restore productivity, mainly through accumulation of water, nutrients, or both. Summer fallow is a common stage before cereal grain in regions of limited rainfall. The soil is tilled for at least one growing season to control weeds, to aid decomposition of plant residues, and to encourage the storage of moisture for the succeeding grain crop.

Fertility, soil. The quality of a soil that enables it to provide compounds, in adequate amounts and in proper balance, for the growth of specified plants, when other growth factors such as light, moisture, temperature, and the physical condition of the soil are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has been allowed to drain away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *... capacity.*

Flood plain. Nearly level land, consisting of stream sediments, borders a stream and is subject to flooding unless ... artificially.

Gravelly soil material. From 15 to 50 percent of material, by ... consists of rounded or angular rock fragments that ... prominently flattened and are as much as 3 inches in ...

Gully. A miniature valley with steep sides cut by running ... and through which water ordinarily runs only after ... The distinction between gully and rill is one of depth ... generally is an obstacle to farm machinery and is ... be obliterated by normal tillage; a rill is of lesser ... can be smoothed over by ordinary tillage. V-shaped ... result if the material is more difficult to erode with ... whereas U-shaped gullies result if the lower material is ... easily eroded than that above it.

Horizon, soil. A layer of soil, approximately parallel to the ... that has distinct characteristics produced by soil-forming ... esses. These are the major horizons:

A horizon.—The mineral horizon at the surface or just ... O horizon. This horizon is the one in which living org... are most active and therefore is marked by the accumul... of humus. The horizon may have lost one or more of ... salts, clay, and sesquioxides (iron and aluminum ...

B horizon.—The mineral horizon below an A horizon. The ... horizon is in part a layer of change from the overlying ... the underlying C horizon. The B horizon also has (1) ... tive characteristics caused by accumulation of clay, ... oxides, humus, or some combination of these; (2) by ... matic or blocky structure; (3) by redder or stronger ... than the A horizon; or (4) by some combination of ... Combined A and B horizons are usually called the ... true soil. If a soil lacks a B horizon, the A horizon ... the solum.

C horizon.—The weathered rock material immediately ... the solum. In most soils this material is presumed to ... that from which the overlying horizons were formed. If ... material is known to be different from that in the ... Roman numeral precedes the letter C.

R layer.—Consolidated rock beneath the soil. The rock ... underlies a C horizon but may be immediately beneath ... or B horizon.

and precipitation data

Period of record, 1939–67. The symbol < means less than]

Precipitation—Continued									
Probability, in percent, of receiving selected amounts—Continued					Average [2] number of days in which precipitation will equal or exceed—			Snow, sleet	
2.00 inches or more	3.00 inches or more	4.00 inches or more	5.00 inches or more	6.00 inches or more	0.10 inch	0.50 inch	1.00 inch	Average total [1]	Maximum [1]
								Inches	*Inches*
35	22	11	7	3	3	([3])	([3])	0.5	5.0
43	20	10	6	2	4	1	1	.8	6.0
40	21	11	5	2	2	1	([3])	.1	3.0
61	42	24	15	11	4	2	1	([4])	1.2
82	62	44	31	11	4	2	1	0	0
54	35	24	16	11	3	2	1	0	0
40	25	14	10	6	2	1	([3])	0	0
36	22	14	8	6	3	1	1	0	0
60	50	40	30	20	5	2	1	0	0
50	31	21	20	11	4	2	1	0	0
30	10	4	2	1	4	1	([3])	.2	4.5
43	23	10	5	2	3	1	([3])	.1	1.5
					41			1.7	6.0

[3] Less than one-half day.
[4] Less than one-half inch.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state. In engineering, a high liquid limit indicates that the soil has a high content of clay and a low capacity for supporting loads.

Loam. Soil material that contains 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

Miscellaneous land type. A mapping unit for areas of land that have little or no natural soil; or that are too nearly inaccessible for orderly examination; or that occur where, for other reasons, it is not feasible to classify the soil.

Mottled. Irregularly marked with spots of different colors that vary in number and size. Mottling in soils usually indicates poor aeration and lack of drainage. Descriptive terms are as follows: Abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent.* The size measurements are these: *fine,* less than 5 millimeters (about 0.2 inch) in diameter along the greatest dimension; *medium,* ranging from 5 millimeters to 15 millimeters (about 0.2 to 0.6 inch) in diameter along the greatest dimension; and *coarse,* more than 15 millimeters (about 0.6 inch) in diameter along the greatest dimension.

Munsell notation. A system for designating color by degrees of the three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with a hue of 10YR, a value of 6, and a chroma of 4.

Narrow-base terrace. A terrace similar to a broad-base terrace except for the width of the ridge and channel. The base of a narrow-base terrace is ordinarily 4 to 8 feet wide.

Natural soil drainage. Refers to the conditions of frequency and duration of periods of saturation or partial saturation that existed during the development of the soil, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven different classes of natural drainage are recognized.

Excessively drained soils are commonly very porous and rapidly permeable and have a low water-holding capacity.

Somewhat excessively drained soils are also very permeable and are free from mottling throughout their profile.

Well-drained soils are nearly free from mottling and are commonly of intermediate texture.

Moderately well drained soils commonly have a slowly permeable layer in or immediately beneath the solum. They have uniform color in the A and upper B horizons and have mottling in the lower B and the C horizons.

Imperfectly or somewhat poorly drained soils are wet for significant periods but not all the time and, in Podzolic soils, commonly have mottlings below 6 to 16 inches, in the lower A horizon, and in the B and C horizons.

Poorly drained soils are wet for long periods and are light gray and generally mottled from the surface downward, although mottling may be absent or nearly so in some soils.

Very poorly drained soils are wet nearly all the time. They have a dark-gray or black surface layer and are gray or light gray, with or without mottling, in the deeper parts of the profile.

Ped. An individual natural soil aggregate, such as a crumb, a prism, or a block, in contrast to a clod.

Permeability. The quality of a soil horizon that enables water or air to move through it. Terms used to describe permeability are as follows: *very slow, slow, moderately slow, moderate, moderately rapid, rapid,* and *very rapid.*

Phase, soil. A subdivision of a soil, series, or other unit in the soil classification system made because of differences in the soil that affect its management but do not affect its classification in the natural landscape. A soil type, for example, may be divided into phases because of differences in slope, stoniness, thickness, or some other characteristic that affects its management but not its behavior in the natural landscape.

pH value. A numerical means for designating relatively weak acidity and alkalinity in soils. A pH value of 7.0 indicates precise neutrality; a higher value, alkalinity; and a lower value, acidity.

Plowpan. A compacted layer formed in the soil immediately below the plowed layer.

Poorly graded. A soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles in poorly graded soil material, density can be increased only slightly by compaction.

Profile, soil. A vertical section of the soil through all its horizons and extending into the parent material.

Range condition. The state of health or productivity of both soil and forage in a given range, in terms of what productivity could or should be under normal climate and the best practical management. Condition classes generally recognized are—*excellent, good, fair,* and *poor.* The classification is based on

Granite Outcrop

Granite outcrop (Gn) consists of granite bedrock that appears as low domes in the landscape (fig. 5). Mapped areas range from 15 to 560 acres in size.

Included with Granite outcrops in mapping are areas of Keese soils mostly less than 0.2 acre in size.

Granite outcrop has little value as range because the vegetation is sparse. It is suitable for recreation. Live oak trees grow in cracks in the rock. Granite for monuments is quarried from one of the areas of this outcrop. Capability unit VIIIs–1; not in a range site or in a pasture and hayland suitability group.

Guadalupe Series

The Guadalupe series consists of deep, calcareous soils along major streams. These soils formed in calcareous loamy and sandy stream alluvium. Slopes are nearly level to gently sloping and undulating, and convex.

In a representative profile, the surface layer is brown, calcareous, and about 17 inches thick. The upper part is loam, and the lower part is fine sandy loam. The next layer extends to a depth of 37 inches. It is brown loam that contains thin lenses of organic stains in the upper 14 inches and brown, calcareous fine sandy loam in the lower part. Below this is brown loamy sand (fig. 6).

Guadalupe soils are used mostly for range, but some are in crops. These soils are well drained, and their permeability is moderately rapid. Runoff is slow.

Representative profile of Guadalupe loam, 3.2 miles southeast of the Fredericksburg Courthouse by way of U.S. Highway 290, then 2.3 miles south by Old San Antonio Road, and 1.3 miles east in pasture.

Ap—0 to 7 inches, brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; single grain; slightly hard, very friable, slightly sticky; common fine and medium roots, tubes, and pores; few very fine calcium carbonate fragments; calcareous; moderately alkaline; clear, smooth boundary.

A1—7 to 17 inches, brown (10YR 5/3) fine sandy loam, dark brown (10YR 4/3) moist; weak, fine and medium, subangular blocky structure; slightly hard, very friable, slightly sticky; common fine and medium roots, tubes, and pores; few insect burrows; calcareous; moderately alkaline; gradual, smooth boundary.

B21—17 to 31 inches, brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; weak, medium, subangular blocky structure; hard, friable, sticky; few fine and medium roots, tubes, and pores; few insect burrows; few thin strata of lighter colored soil; thin horizontal lenses of organic stains; calcareous; moderately alkaline; gradual, smooth boundary.

B22—31 to 37 inches, brown (10YR 5/3) fine sandy loam, dark brown (10YR 4/3) moist; weak, fine, subangular blocky structure; soft, very friable; few fine roots; few very fine calcium carbonate fragments; calcareous; moderately alkaline; clear, smooth boundary.

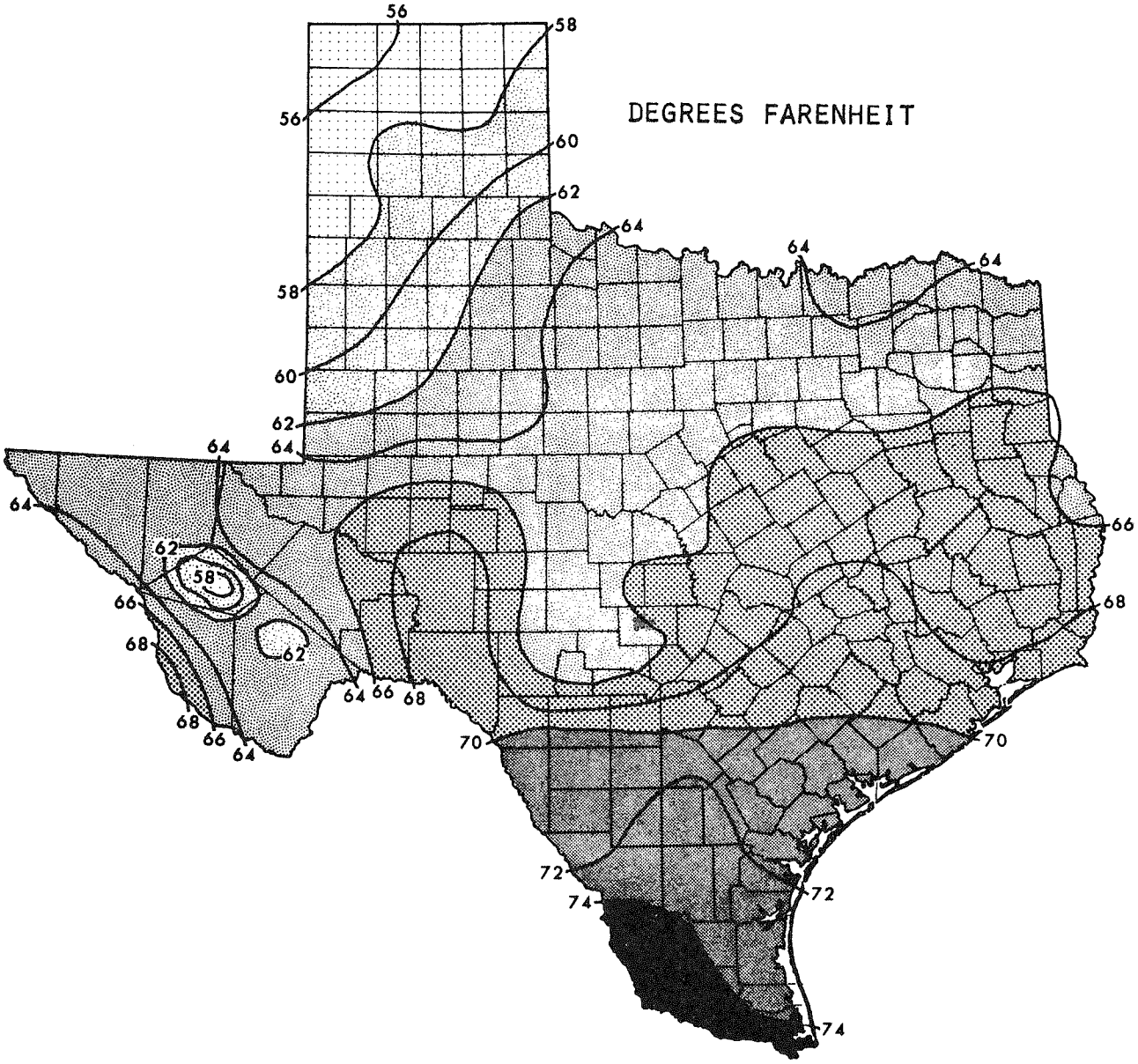
C—37 to 63 inches, brown (7.5YR 5/4) loamy sand, dark brown (7.5YR 4/4) moist; single grain; loose, very friable, nonsticky; few thin strata of fine sandy loam; calcareous; moderately alkaline.

The A horizon ranges from brown to pale brown in color and from 17 to 22 inches in thickness. It is loam or fine

Figure 5.—An area of Granite outcrop.

Encl 20 a.

MEAN ANNUAL TEMPERATURE



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Encl 20b

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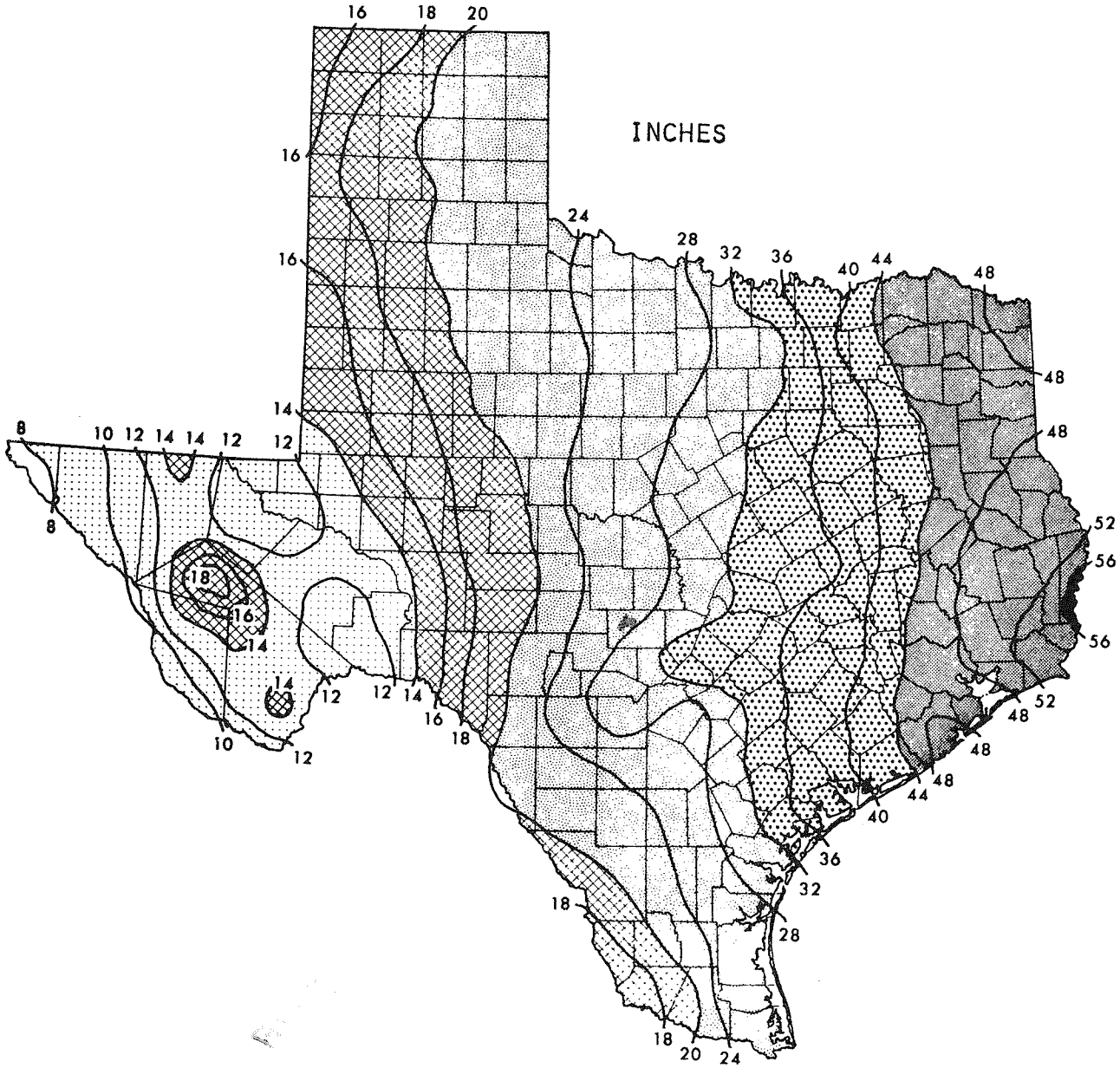

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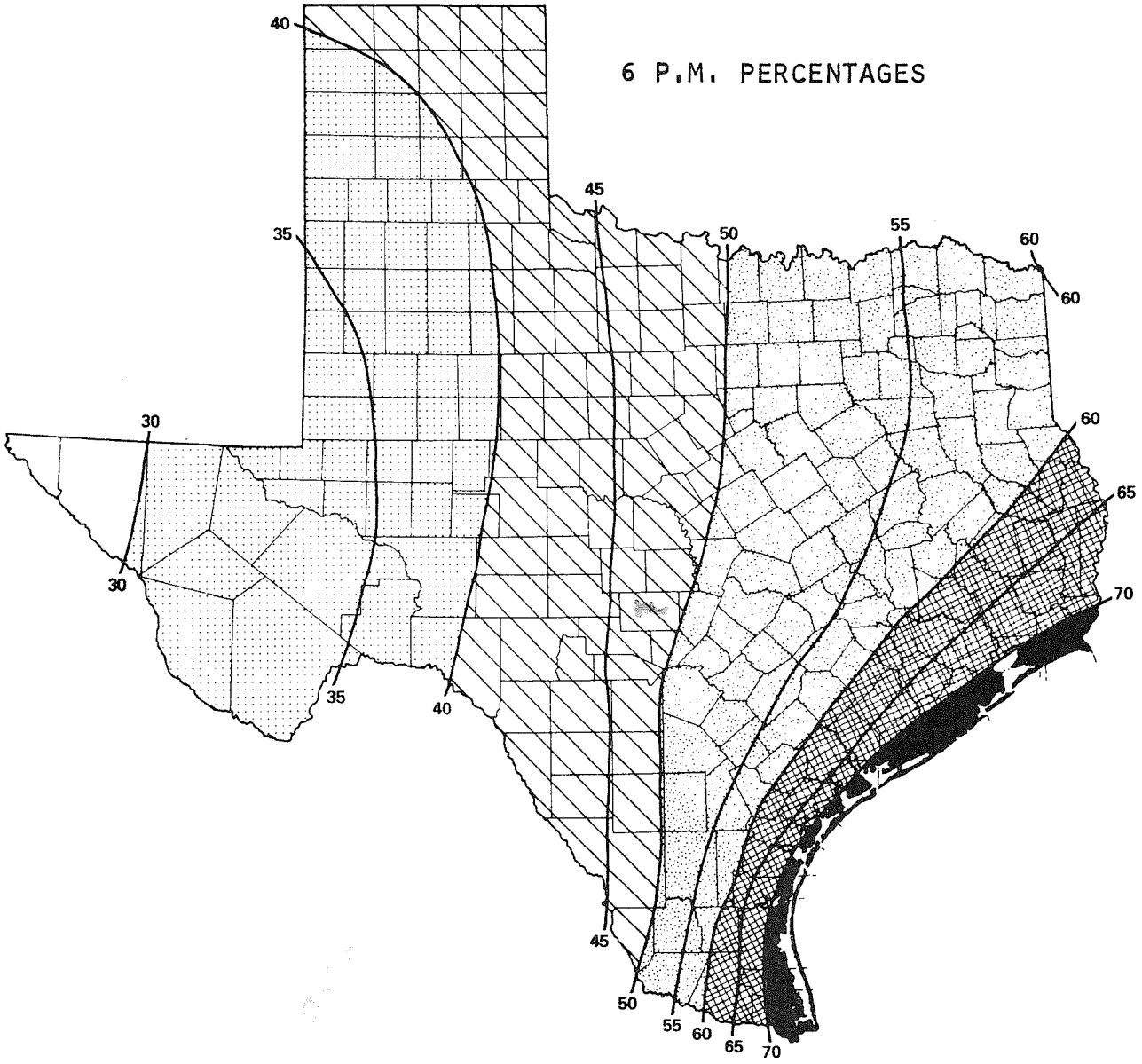
20c

MEAN ANNUAL RELATIVE HUMIDITY



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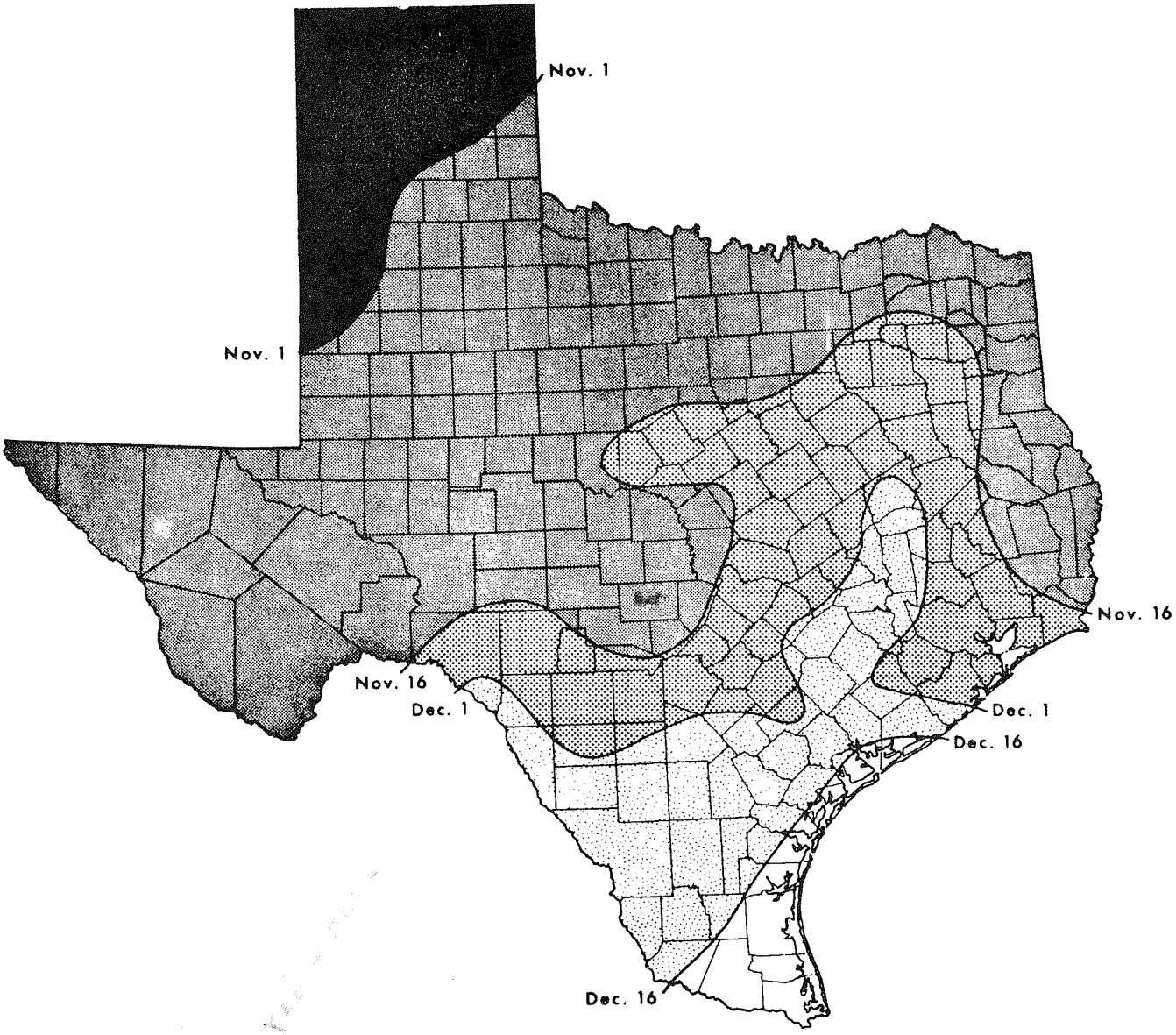
MEAN DATES OF FIRST 32-DEGREE TEMPERATURE



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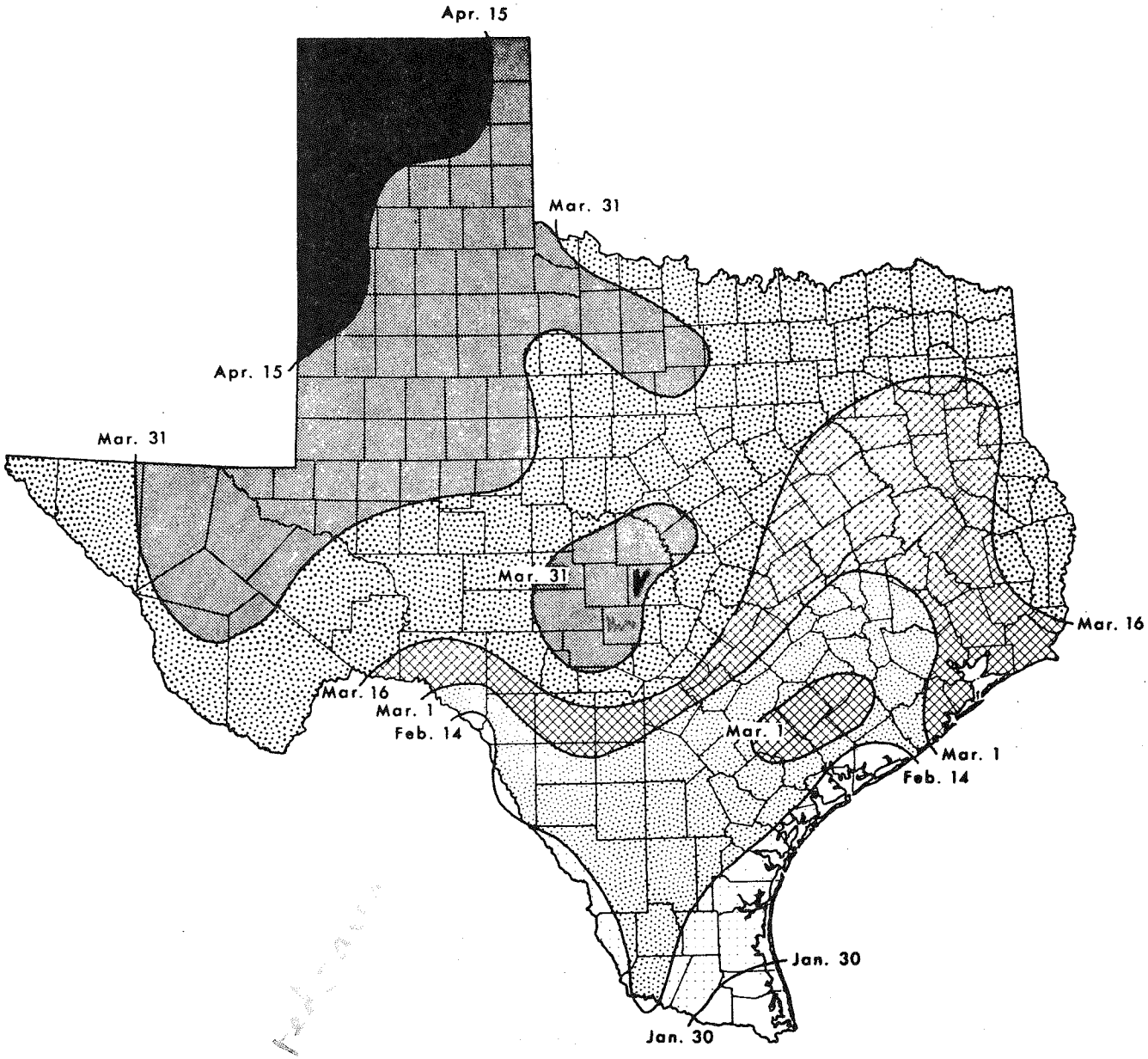
Encl 20e.

MEAN DATES OF LAST 32-DEGREE TEMPERATURE



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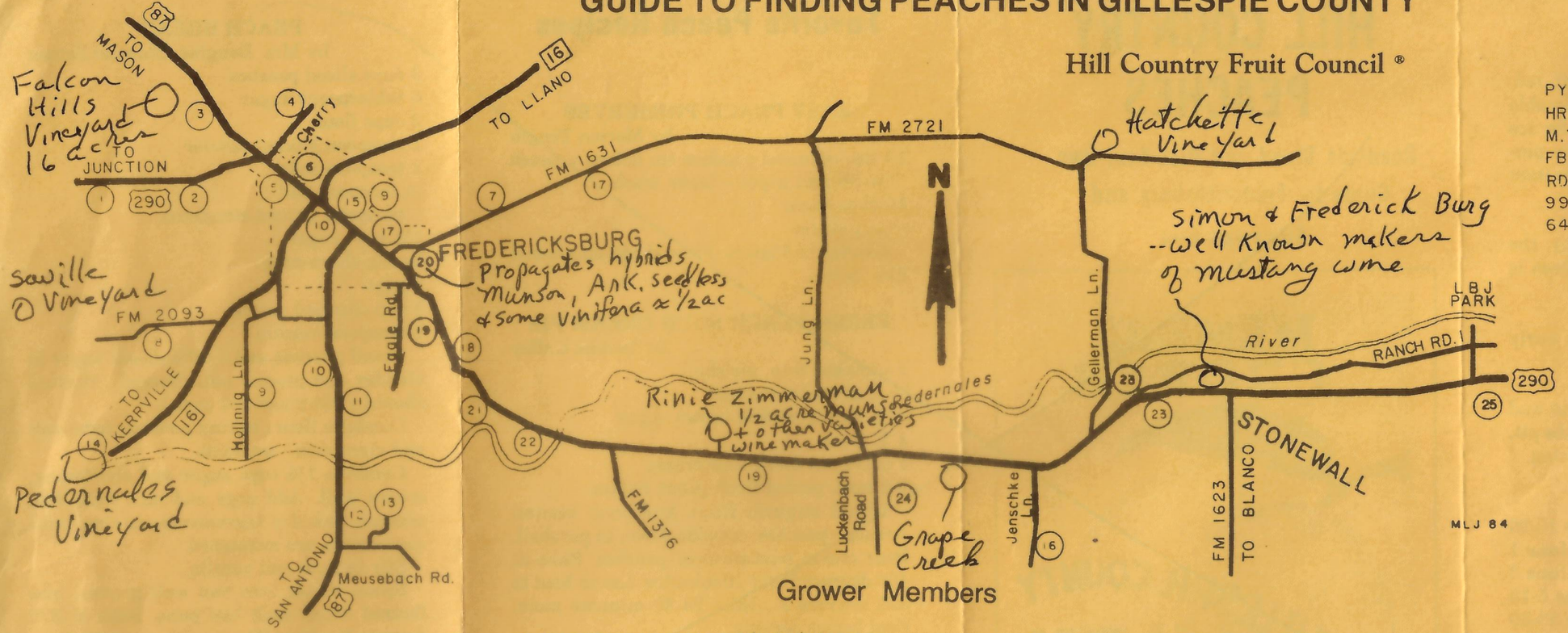
GUIDE TO FINDING PEACHES IN GILLESPIE COUNTY

Hill Country Fruit Council ®

Encl 21



LEGEND

PYO – PICK YOUR OWN
HRS – HOURS OPEN
M.T.W. Etc. – DAYS OPEN
FBG. – FREDERICKSBURG
RD. STAND – ROADSIDE STAND
997 – FBG. PHONE EXCHANGE
644 – STONEWALL EXCHANGE

Grower Members

1. HILLIS ORCHARD - 2½ miles W. on U.S. 290 (Harper Hwy.) 997-9463
2. PIONEER ORCHARDS - 1 mile W. of Fbg. on U.S. 290. Sign at entrance, P.Y.O. hrs. 8-7, 997-3022
3. VERNER CROFFORD ORCHARD - 0.8 mile N. on U.S. 87, at Farm Bureau sign. Hrs. 8-7, 997-8300
4. RANCHO de DURAZNO - 601 N. Cherry, ½ mile N. of Main St. (Fred Lane) 997-2075. P.Y.O. Tomatoes in season.
5. CRENWELGE'S - 617 W. Main, across from water tower, Retail & P.Y.O. Hrs. 8-6, 997-7878
6. THE PEACH BASKET - 334 W. Main, Hrs. 9-5:30, 997-4533. Natural foods - local fruit
7. HALLFORD PEACHES - Peaches, Nectarines & Blackberries P.Y.O. June & July., 1 mile E. FM 1631 (Cave Creek Rd.) Hrs. 8-6, 997-4533 or 997-3064
8. PEDERNALES VALLEY ORCHARD - Home grown tomatoes, squash & peppers. Red, Golden Plus & Granny Smith Apples. P.Y.O. & retail. May 15- Oct. 15. Hrs. 8-6, 997-4407 & 997-9142
9. WORTMAN ORCHARD - P.Y.O. Mon. - Sat. 8-6. Early fruit only. Hollmig Lane, 1 mile south of high school. Rd. stand 316 E. Austin at Christian Bookstore 997-8951
10. BARON CREEK ORCHARDS - Rd. stand 301 E. Main (Mobil Station) P.Y.O. July, 87 S to Friendship Lane West to Kermit's Garage, south across cattle guard. 997-9724 or 997-2248
11. DONALD ECKHARDT ORCHARD - 1½ miles S. on U.S. 87, Retail Sales, Daily, Hrs. 8-6, 997-2514
12. LIVING WATER ORCHARDS & GARDENS - 5 miles out 87 S. Last orchard on left before Meusebach Sch. Rd. P.Y.O. Retail, Wholesale, Sunday through Friday. Peaches, apricots, plums & tomatoes, Hrs. 9-6, 997-8986. Hybrid perch
13. MARBURGER ORCHARD - 5¼ miles S. on U.S. 87, E. on Meusebach Sch. Rd. P.Y.O. & Retail Sales. Hrs. 8-6, 997-9433
14. WHETSTONE ORCHARD - Kerrville Hwy. (Texas 16S). Four miles south of Fredericksburg at the intersection of Leyendecker Rd. (just before the roadside park)
15. ENGEL ORCHARD - 320 E. Main, next to Engel Deli. Hrs. 8-6, 997-3292
16. WHITWORTH ORCHARDS - on the farm P.Y.O., cooled and graded fruit, 2½ miles W. of Stonewall, South on Jenschke Lane. 644-2410
17. ZENNER & JUNG ORCHARDS (formerly Stoneridge) - 4 miles E. on FM 1631. Hrs. 8-6, 997-7445. 402 E. Main at Zenner's Texaco. Hrs. 8-9, 997-7914
18. ROADSIDER - 2 miles E. on U.S. 290 (Tom and Lucille Caffey) 997-8716 - Peaches, Nectarines, Plums, Berries, Tomatoes, Pecans and Pecan Cracking
19. DAN KEVER ORCHARD - 8 miles E. of Fbg. on right on U.S. 290. Fruit and vegetables, open daily. Retail 8-6, also Kever Rd. stand one mile E. on US 290, Hrs. 9-6, 997-7885
20. JACK AND CAROL'S ORCHARD - at end of Oakhaven Lane behind Gibson's Store, 8-6, peaches, vegetables and pecans in season, 997-2582
21. FREDERICKSBURG ORCHARDS, INC. - Corner of 290 E. & Industrial Loop - Wholesale & Retail, 997-9820
22. BEHRENDS BROTHERS PEACHES - 4 miles E. of Fbg. S. side of U.S. 290. Hrs. 7-7, 997-4420
23. PEDERNALES PEACHES - (Oliver Ersch) 2 locations: W. on 290 on both sides of the Hwy. near Stonewall, Wholesale & Retail, 644-2320
24. MULLER ORCHARDS - 10 miles E. on US 290, ½ mile South on Luckenbach Rd., 997-5800
25. COACH'S COUNTRY STORE - across from entrance LBJ State Park, peaches, fresh fruit & vegetables. Hrs. 8-8, 644-9249