2022 Mass Appraisal Report

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Chief Appraiser

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Fairfield TX 75840

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May 24, 2022

Members of the Freestone County Appraisal Review Board
218 N Mount Street
Fairfield TX

In accordance with the laws of the State of Texas and Uniform Standards of Professional Appraisal Practices (USPAP), I, with the assistance of my staff, have performed a diligent inquiry to ascertain all property subject to appraisal by the Freestone Central Appraisal District. Those properties have been appraised and listed on the appraisal rolls for each of the taxing jurisdictions within the district.

This report summarizes the appraisal considerations and opinions of me and my staff.

The market and taxable values presented in this report are representative of the values included on the Notices of Appraised Values delivered to property owners in April 2022.

Final values will be certified to all taxing jurisdictions once you have heard substantially all property owner protests and taxing unit challenges on or before July 25, 2022.

Don Awalt, RPA/CTA
Chief Appraiser

1.00 Introduction

The purpose of this report is to summarize the methods and techniques utilized by the Freestone Central Appraisal District (here after referred to as FCAD) in the valuation and revaluation of taxable property within Freestone County. This report is prepared in accordance with Standard 5 of the Uniform Standards of Professional Appraisal Practice, effective as of January 1, 2022.

The values reported herein have not been challenged or adjusted as the result of taxpayer filed protests before the Appraisal Review Board. Final values will be certified by the Chief Appraiser by July 25, 2022, and after the Appraisal Review Board has made final determinations on protested properties that comprise at lease ninety-five percent (95%) of the appraisal roll.

FCAD is a central appraisal district formed by the Texas Legislature in 1979 and is charged with the appraisal of all taxable property within the taxing entities within the district's boundaries. It is responsible for providing appraised values for portions of taxing jurisdictions which are situated in Freestone County.

The district appraises all taxable property for the following taxing authorities:

- Freestone County,
- City of Fairfield,
- City of Teague,
- City of Wortham,
- Dew I. S. D.,
- Teague I. S. D., and
- Teague Hospital District

Additionally, the district provides appraisals of taxable property within Freestone County for the following entities whose territory extends into more than one county.

- City of Streetman,
- Buffalo I. S. D.,
- Fairfield I. S. D.,
- Oakwood I. S. D.,
- Corsicana I. S. D.,
- Wortham I. S. D.,
- Mexia I. S. D., and
- Fairfield Hospital District

The Texas Property Tax Code governs the legal, statutory, and administrative requirements of the appraisal district. It is governed by a board of directors appointed by the taxing units within its boundaries. The chief appraiser, appointed by the board of directors, is the chief administrator and chief executive officer of the appraisal district.

The appraisal district is responsible for local property tax appraisal and exemption administration for the fifteen taxing units situated in whole or in part within the county. Each taxing unit adopts its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. The CAD also determines eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and charitable and religious organizations.

Section 23.01(b) requires the appraisal district to determine market value of property according to generally accepted appraisal methods and techniques. Mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice (USPAP).

The definition of market value as established by the State Property Tax code differs from the definition

established by USPAP, therefore, a ***jurisdictional exception*** applies.

The following definition of market value, Section 1.04 of the Texas Property Tax Code, means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- both the seller and the purchaser know all of the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use; and,
- Both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

All taxable property is appraised at its market value as of January 1st unless it qualifies for a special valuation (i.e. open space agricultural, timber, or wildlife management). Inventory owners may request to have their property valued as of September 1 if the taxpayer files an application by July 31.

The purpose of and intended use of the appraisal performed by the Freestone Central Appraisal District is to estimate the market value for ad valorem tax purposes for the taxing entities located within the boundaries of FCAD as of January 1, 2022, which is the effective date of this appraisal.

FCAD's goal is to provide professional service to the tax paying public and the taxing entities. Thru its Chief Appraiser, the district promotes and adheres to the professional standards and ethics as set forth by:

- The Texas Department of Licensing (TDLR),
- The Property Tax Assistance Division of the Texas State Comptroller's Office (PTAD),
- The Uniform Standards of Professional Practices (USPAP), and
- The International Association of Assessing Officers (IAAO).

2.00 Area Analysis

The universe of properties appraised by the Freestone Central Appraisal District falls within the physical boundaries of Freestone County's 873 square miles.

The county is situated in east central Texas with its seat of Fairfield being situated approximately 90 miles south of Dallas, 150 miles north of Houston, and 60 miles east of Waco.

The majority of the land is rural with agricultural production the main use, making farming/ranching a notable occupation in the county. *(Source: Fairfield Industrial Development Corp.)*

Improvements can generally be classified as:

- Single family residences,
- Mobile homes,
- Commercial buildings and personal property,
- Industrial buildings and personal property, and
- Farm/ranch associated buildings (sheds, barns, etc.).

Most areas of the county are un-zoned with the exception of areas where developers have established minimum and maximum building type and size requirements. The City of Fairfield has ordinances for the future placement of mobile homes relating to the quality and age of mobile homes permitted within the city limits.

The district's topography is mostly comprised of low rolling hills in the south and eastern portion of the county turning to mostly flat land in the northern and western parts of the county. The land in Freestone County is located in three dominant eco-regions:

- The Blackland Prairie in the western section,
- The Post Oak Savannah in the central section, and
- The East Texas Timberlands in the eastern section.

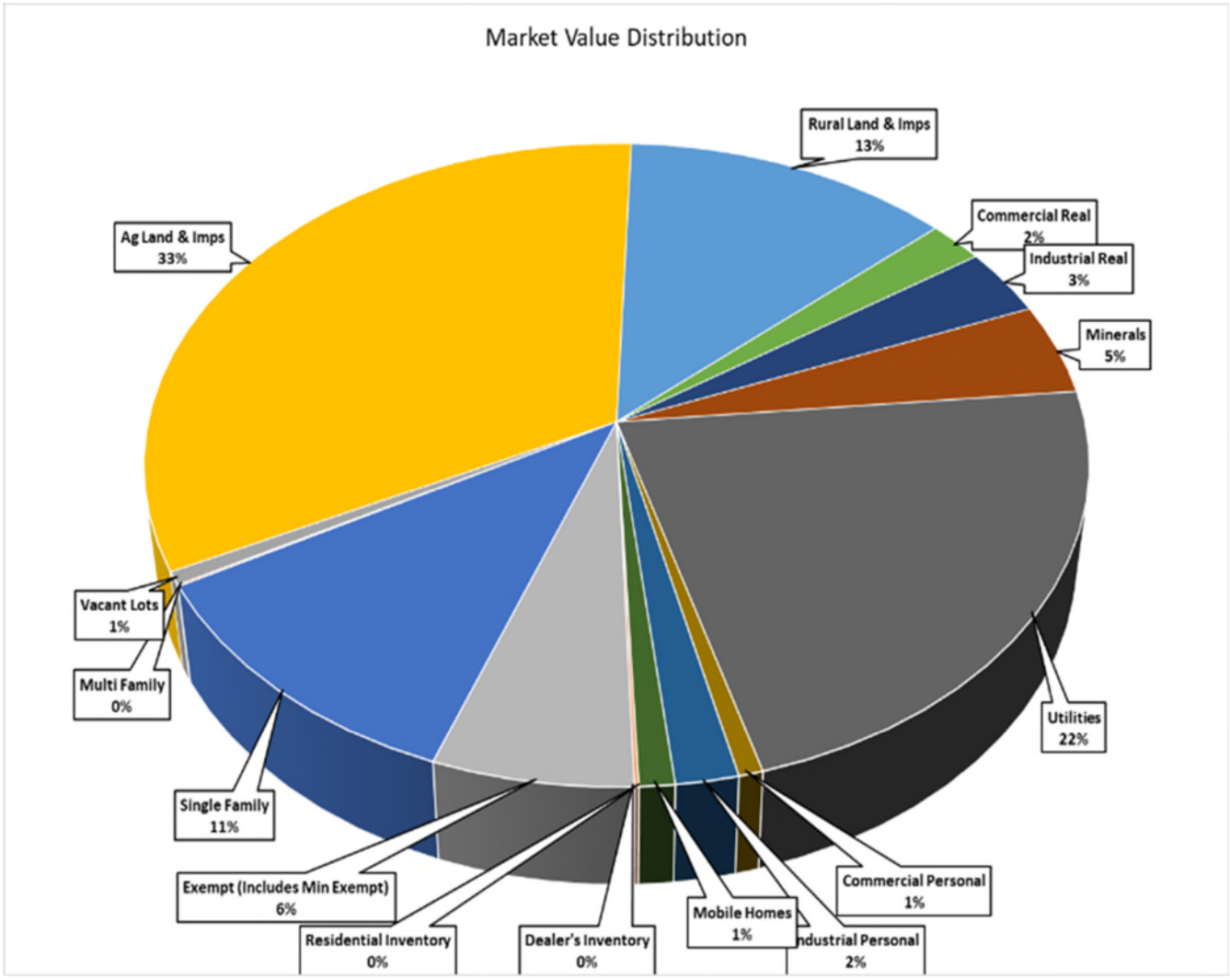
The district is responsible for establishing and maintaining appraisal records for 202,093 real, personal, mineral, and industrial property records within the district. A total of $45,227,846 was added to the appraisal roll as:

- $39,500,760 in new improvements,
- $5,658,836 in new personal property, and
- $68,250 in new mineral/utility/industrial property.

The 2022 appraisal roll as of this report date has a total market value of $5,682,031,851, an increase of $1,485,042,967 as compared to the certified value of $4,196,988,884 for 2021.

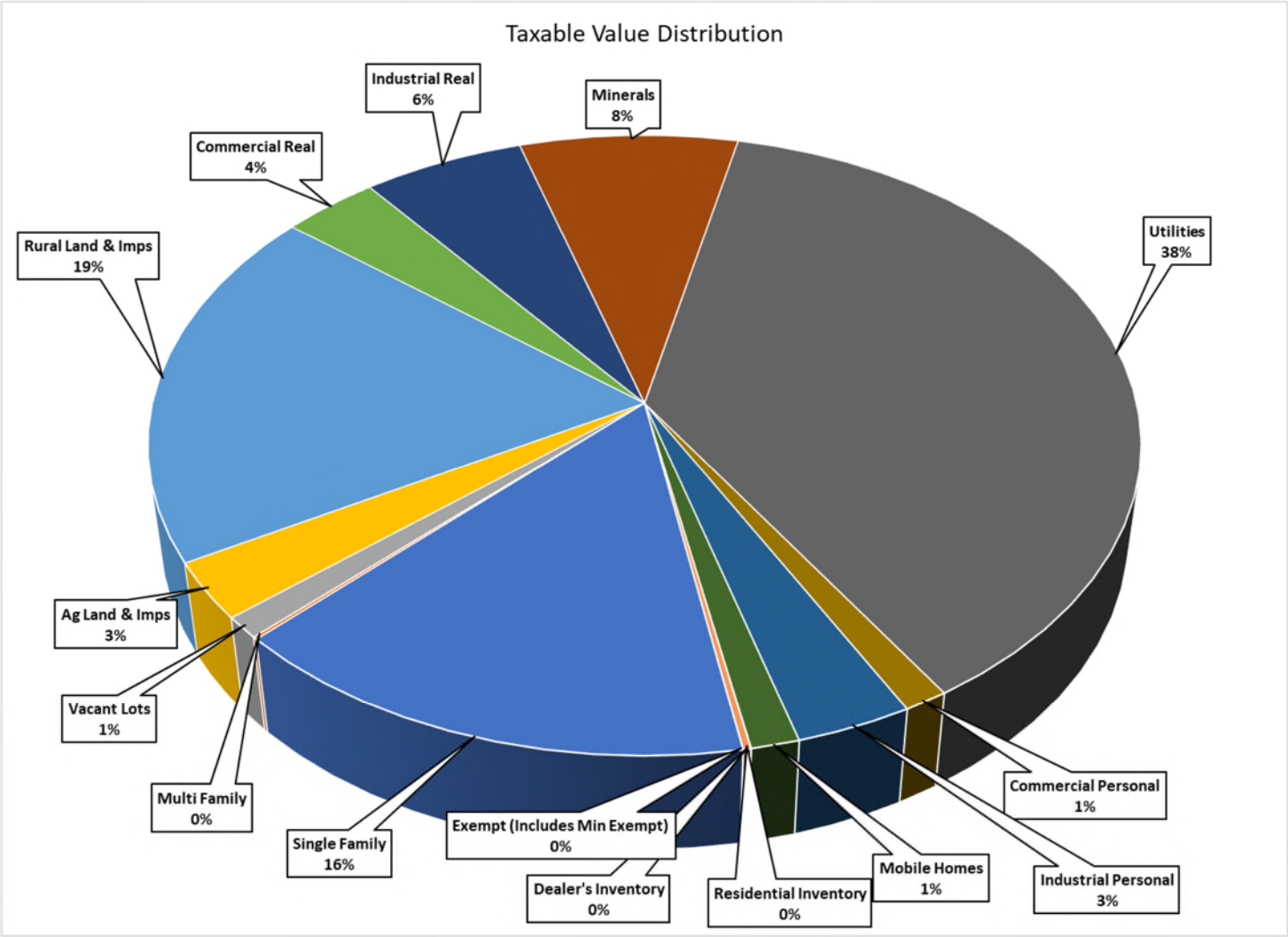
The various properties in the county are classified, with total market value by class, as:

Category	Market
Single Family	644,370,037
Multi Family	4,492,738
Vacant Lots	36,464,167
Ag Land & Imps	1,872,468,697
Rural Land & Imps	724,970,661
Commercial Real	121,465,719
Industrial Real	192,748,343
Minerals	260,584,910
Utilities	1,259,884,218
Commercial Personal	41,940,574
Industrial Personal	108,454,620
Mobile Homes	61,073,151
Residential Inventory	328,473
Special Inventory	7,047,550
Exempt (Includes Min Exempt)	345,737,993
Total	**5,682,031,851**



The Taxable Value Distribution below illustrates taxable values (for Freestone County) by property classification.

Category	Taxable
Single Family	495,105,140
Multi Family	4,286,249
Vacant Lots	35,683,788
Ag Land & Imps	94,763,739
Rural Land & Imps	609,304,018
Commercial Real	114,594,953
Industrial Real	191,850,563
Minerals	259,456,240
Utilities	1,202,661,415
Commercial Personal	41,295,007
Industrial Personal	108,452,180
Mobile Homes	44,788,427
Residential Inventory	328,473
Special Inventory	7,047,550
Exempt (Includes Min Exempt)	254,233
Total	**3,209,871,975**



The table that follows effects the total market and taxable values for each jurisdiction within the district as of the April 18, 2022:

Jurisdiction	Market	HS Cap Loss	Exemption & Special Valuation Adjustments	Taxable	Parcels
County	5,682,031,851	75,158,158	2,397,001,717	3,209,871,976	202,093
Fairfield City	398,285,879	7,878,739	130,669,464	259,737,676	4,791
Streetman City	15,517,597	1,780,041	2,258,611	11,478,945	401
Teague City	241,472,904	8,661,874	80,957,409	151,853,621	7,496
Wortham City	68,202,644	3,743,533	21,466,861	42,992,250	963
Buffalo ISD	244,823,094	1,854,707	132,532,174	110,436,213	4,986
Fairfield ISD	2,676,978,383	43,962,699	1,222,274,727	1,410,740,957	53,368
Oakwood ISD	227,407,281	1,354,787	91,631,401	134,421,093	1,709
Corsicana ISD	21,686,028	49,691	7,642,509	13,993,828	47
Dew ISD	428,127,100	3,665,344	162,441,866	262,019,890	32,866
Teague ISD	1,640,403,699	17,218,225	613,401,889	1,009,783,585	119,434
Wortham ISD	440,043,890	7,038,416	189,407,517	243,597,957	3,498
Mexia ISD	2,545,146	14,289	106,589	2,424,268	14
Fairfield Hospital	2,676,978,383	43,962,699	1,137,183,273	1,495,832,411	53,368
Teague Hospital	1,640,403,699	17,218,225	557,584,076	1,065,601,398	119,434

3.00 Reappraisal Plan

While reappraising property, the Chief Appraiser, with the approval of the Board of Directors, is required to develop policy and procedure necessary to guide his staff in the performance of their duties in a manner that is compliant with state laws and adopted appraisal standards.

3.10 Plan Requirements

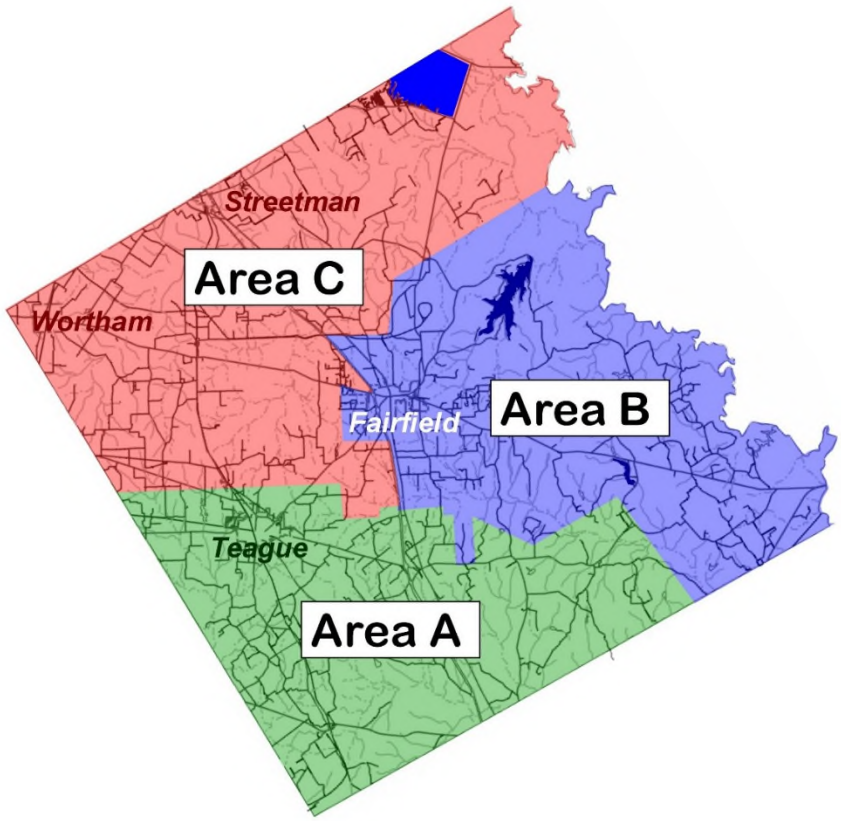
Section 6.05(i) of the Property Tax Code requires the board of directors to adopt a reappraisal plan outlining the district's planned activities biennial appraisal activities by September 15 of even numbered years.

The Chief Appraiser submitted a proposed reappraisal plan to the board for consideration and, after conducting a public hearing on September 9, 2020, the plan was adopted for the 2021 and 2022 appraisal years.

Generally, the plan requires the Chief Appraiser to:

- Reappraise approximately one-third of the county each year in order to meet the statutory reappraisal requirements,
- Calibrate appraisal models (cost schedules) annually using available sales data so to achieve an acceptable appraisal level according to the requirements of the Standard on Ratio Studies adopted by the International Association of Assessing Officers (IAAO) and the Property Tax Assistance Division of the Texas Comptroller of Public Accounts (PTAD),
- Administer the application and granting of state approved special valuations and exemptions, and
- Maintain and enhance the district's mapping system.

For 2022, the district was charged with the responsibility of reappraising "Area C" which included areas in the northern and western part of the county and included the cities and communities of Wortham, Streetman, Kirvin, and the Richland-Chambers Lake area. Other rural areas illustrated in the following map:

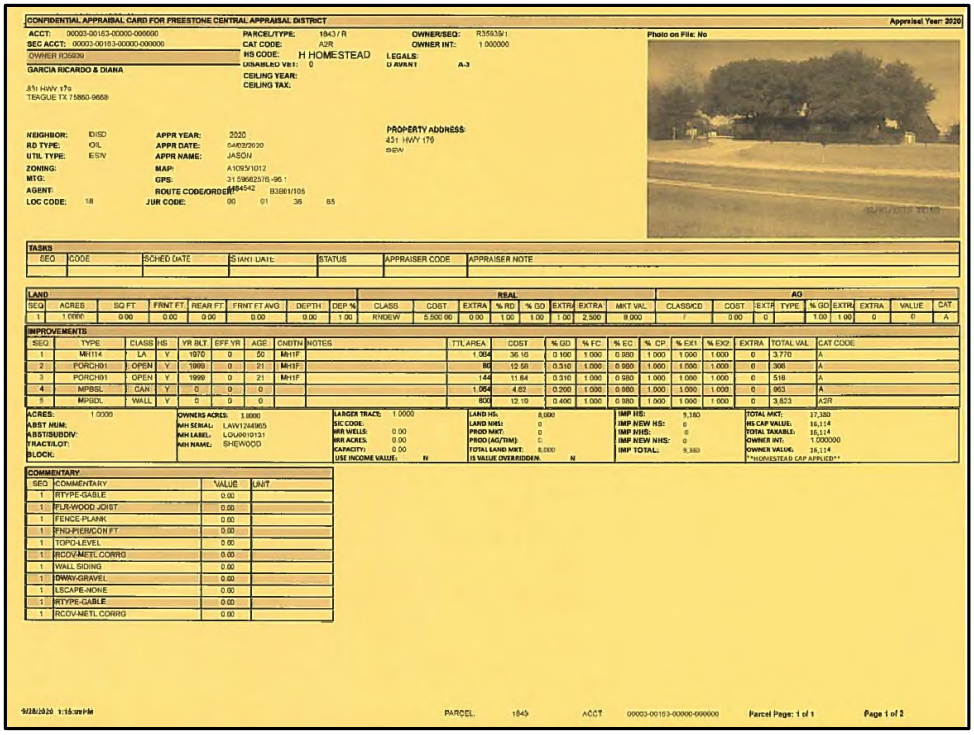


3.20 Plan Performance

The Chief Appraiser and his staff were able to complete the appraisal assignment as required by the reappraisal plan as adopted and amended by the board of directors.

During the scheduled reappraisals and on-site property inspections, appraisers validated all information and property characteristics listed on the property record cards and made updates as necessary.

Following is an example of the field record utilized by staff real estate appraisers in their on-site inspections:



CONFIDENTIAL APPRAISAL CARD FOR FREESTONE CENTRAL APPRAISAL DISTRICT — Appraisal Year: 2020

ACCT: 00003-00183-00000-000000 | PARCEL/TYPE: 1843 / R | OWNER/SEQ: R35935 / 1
SEC ACCT: 00003-00183-00000-000000 | CAT CODE: A2R | OWNER INT: 1.000000
OWNER R35935 | HS CODE: H HOMESTEAD | LEGALS:
GARCIA RICARDO & DIANA | DISABLED Yrs: 0 | D AVANT A-3
451 HWY 179 | CEILING YEAR:
TEAGUE TX 75860-9668 | CEILING TAX:

Photo on File: No

NEIGHBOR: DISD | APPR YEAR: 2020 | PROPERTY ADDRESS:
RD TYPE: OIL | APPR DATE: 5/4/2020 | 451 HWY 179
UTIL TYPE: ESW | APPR NAME: JASON | SEW
ZONING: | MAP: A1057-1012
MTG: | GPS: 31.59662576,-96.1
AGENT: | ROUTE CODE/ORDER: 1804542 B3861/105
LOC CODE: 18 | JUR CODE: 00 01 35 65

TASKS

SEQ	CODE	SCHED DATE	START DATE	STATUS	APPRAISER CODE	APPRAISER NOTE

LAND

SEQ	ACRES	SQ FT	FRNT FT	REAR FT	FRNT FT AVG	DEPTH	DEP %	CLASS	COST	EXTRA	% RD	% GD	EXTRA	EXTRA	MKT VAL
1	1.0000	0.00	0.00	0.00	0.00	0.00	1.00	RNDEW	5,500.00	0.00	1.00	1.00	1.00	2,500	8,000

REAL

CLASSCD	COST	EXTR	TYPE	% GD	EXTRA	EXTRA	VALUE	CAT
F	0.00	0		1.00	1.00	0	0	A

AG

IMPROVEMENTS

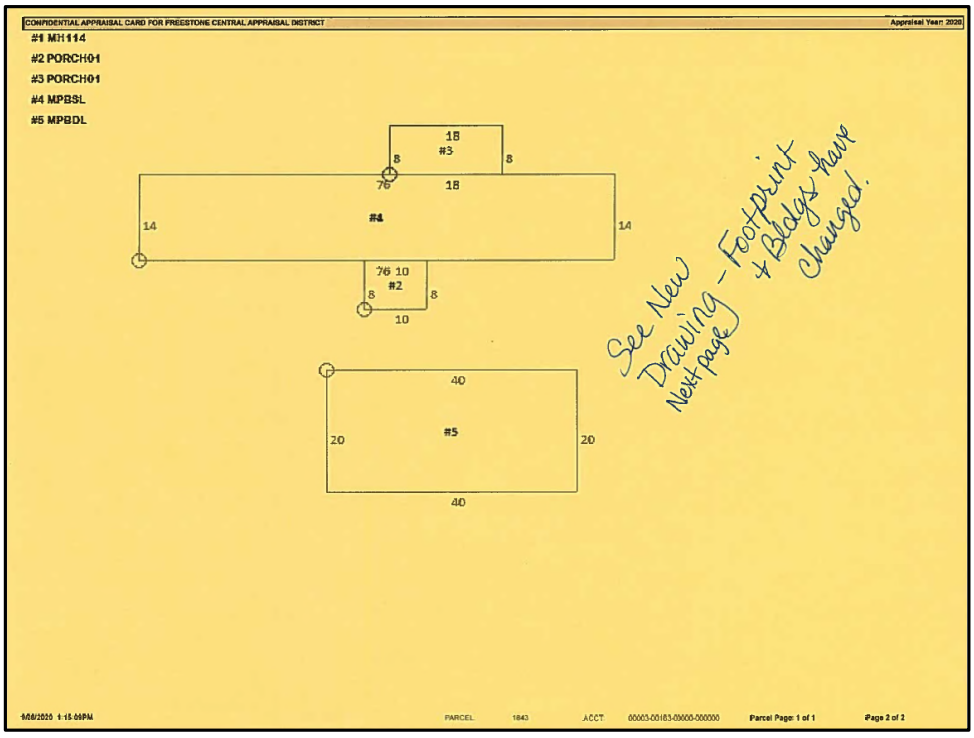
SEQ	TYPE	CLASS	HS	YR BLT	EFF YR	AGE	CNDTN	NOTES	TTL AREA	COST	% GD	% FC	% EC	% CP	% EX1	% EX2	EXTRA	TOTAL VAL	CAT CODE
1	MH114	LA	Y	1970	0	50	MH1F		1,064	36.16	0.100	1.000	0.980	1.000	1.000	1.000	0	3,770	A
2	PORCH01	OPEN	Y	1999	0	21	MH1F		92	12.58	0.310	1.000	0.980	1.000	1.000	1.000	0	308	A
3	PORCH01	OPEN	Y	1999	0	21	MH1F		144	11.64	0.310	1.000	0.980	1.000	1.000	1.000	0	518	A
4	MPBSL	CAN	Y	0	0	0			1,064	4.63	0.200	1.000	0.980	1.000	1.000	1.000	0	963	A
5	MPBDL	WALL	Y	0	0	0			800	12.19	0.400	1.000	0.980	1.000	1.000	1.000	0	3,823	A2R

ACRES: 1.0000 | OWNERS ACRES: 1.0000 | LARGER TRACT: 1.0000 | LAND HS: 8,000 | IMP NEW HS: 0 | TOTAL MKT: 17,380
ABST MUN: | MH SERIAL: LAW1244965 | SIC CODE: | LAND NHS: 0 | IMP HS: 9,380 | HS CAP VALUE: 16,114
ABST/SUBDIV: | MH LABEL: LOU0919131 | WR WELLS: 0.00 | PROD MKT: 0 | IMP NEW NHS: 0 | TOTAL TAXABLE: 16,114
TRACT/LOT: | MH NAME: SHEWOOD | WR ACRES: 0.00 | PROD (AG/TIM): 0 | IMP NHS: 0 | OWNER INT: 1.000000
BLOCK: | | CAPACITY: 0.00 | TOTAL BAND MKT: 8,000 | IMP TOTAL: 9,380 | OWNER VALUE: 16,114
| | USE INCOME VALUE: N | IS VALUE OVERRIDDEN: N | **HOMESTEAD CAP APPLIED**

COMMENTARY

SEQ	COMMENTARY	VALUE	UNIT
1	RTYPE-GABLE	0.00	
1	PLR-WOOD JOIST	0.00	
1	FENCE-PLANK	0.00	
1	FND-PIER/CON FT	0.00	
1	TOPO-LEVEL	0.00	
1	RCOV-METL CORRG	0.00	
1	WALL SIDING	0.00	
1	DWAY-GRAVEL	0.00	
1	LSCAPE-NONE	0.00	
1	RTYPE-GABLE	0.00	
1	RCOV-METL CORRG	0.00	

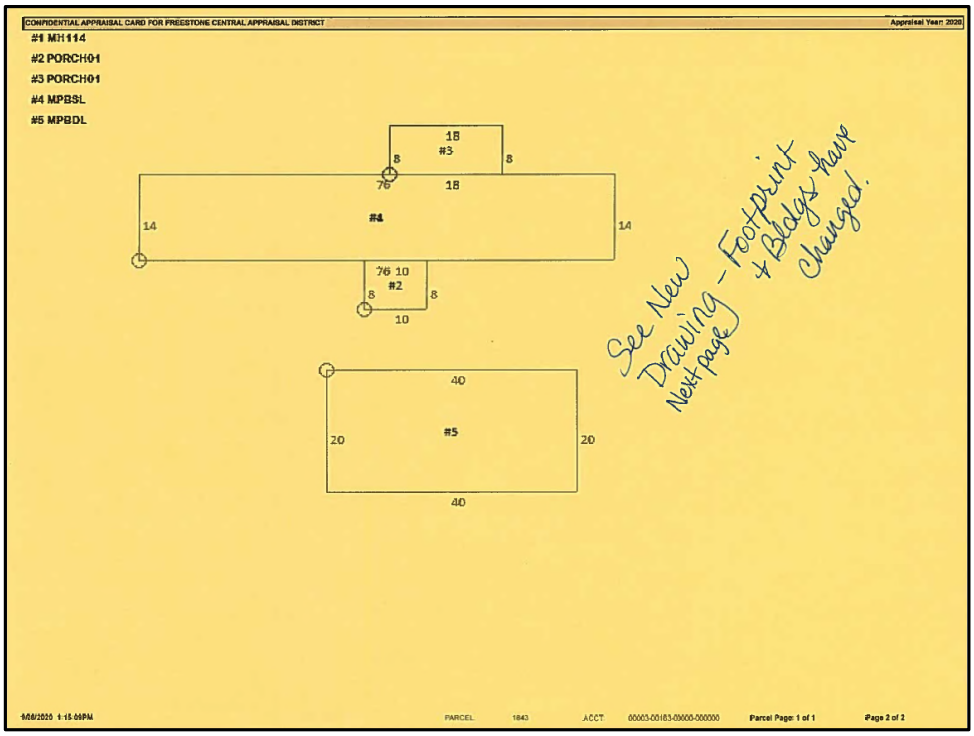
9/28/2020 1:15:09PM — PARCEL 1843 — ACCT 00003-00183-00000-000000 — Parcel Page: 1 of 1 — Page 1 of 2

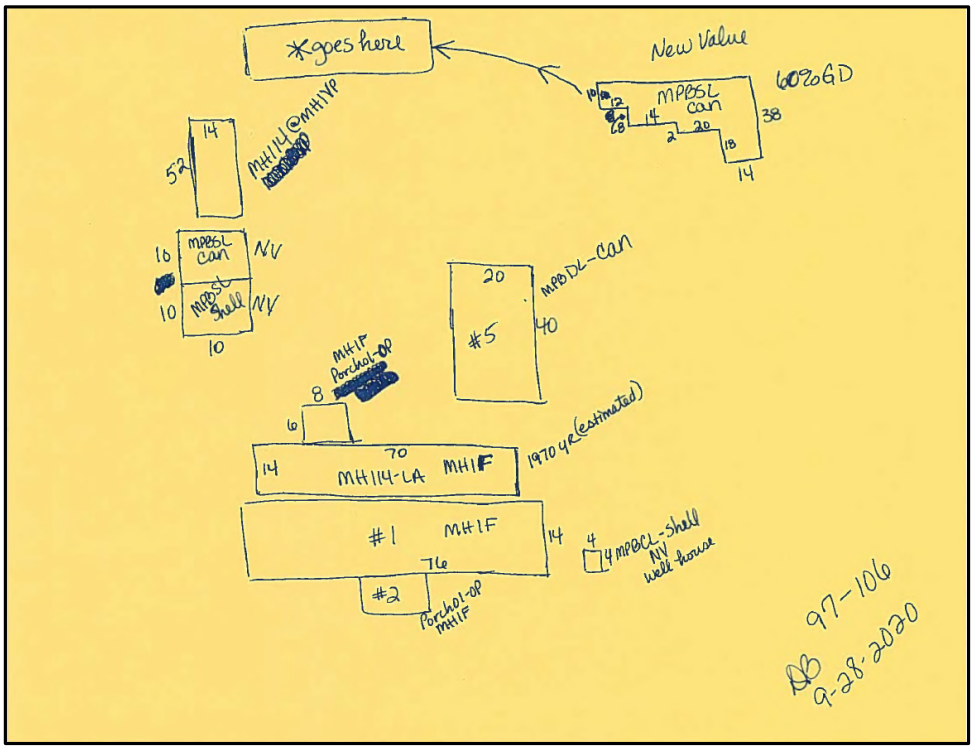


CONFIDENTIAL APPRAISAL CARD FOR FREESTONE CENTRAL APPRAISAL DISTRICT — Appraisal Year: 2020

#1 MH114
#2 PORCH01
#3 PORCH01
#4 MPBSL
#5 MPBDL

9/28/2020 1:15:09PM — PARCEL 1843 — ACCT 00003-00183-00000-000000 — Parcel Page: 1 of 1 — Page 2 of 2





After completion of the inspection pictures are taken (and appended to the worksheet prior to its archival) to document the observations of the appraiser. Pictures include a representation of the front view, back view, and

any other buildings. Pictures are also taken of characteristics for which an appraiser may make an adjustment.

New properties were discovered from:

- City building permits,
- Material and Mechanic Liens filed in the County Clerk's Official Records,
- Mobile home installation reports (from Texas Department of Transportation),
- Utility connection reports,
- 911 address assignments,
- Septic system permits,
- Advertisements, and
- Renditions.

Land records of properties in the scheduled reappraisal area were reviewed by utilization of the most recent versions of aerial photography available from the Unites States Department of Agriculture (USDA), Google Earth, and Ortho & Oblique images purchased by the district form Eagleview/Pictometry. During this review, land records were updated to include:

- Soil classification (according to the Natural Resource Conservation Service (NRCS);
- Calculated acreages for ground cover;
- Calculated acreages affected by gas well pads and pipeline/electric transmission rights of way.

All business personal property (personal property used for the production of income) was scheduled for

an on-site inspection. During these inspections, ownership of all property located a business location, and its ownership were verified and/or listed in the appraisal records. Inspections included the classification of inventories, furniture, and fixtures according to their quality and density so that the accuracy of owner rendition statements could be verified when received.

Appraisal models were updated to reflect Marshall Swift's Valuation Guidelines for residential, multi-purpose, and commercial buildings and appurtenances.

Final appraisal model calibration was performed in March and April prior to the preparation of notices of appraised values to ensure that the recently updated appraisal models (from Marshall Swift) were reflective of the local markets in Freestone County. Throughout the appraisal cycle, letters requesting sales information were sent to both buyers and sellers as ownership records were changed in the CAMA system. Additional sales information was obtained from the district's MLS subscription. Occasionally, sales information was received from closing statements and title policies provided by the property owners. This information was entered into the district's sales database in its CAMA system where sales ratio reports were run to identify areas and property classes that needed review and adjustment.

Exemption and special use valuation applications were mailed to taxpayers in January with explanations regarding the need to re-file applications. Throughout the year, parcels where the ownership or use had changed were flagged for the removal of the exemption/special valuation. Properties that had received an exemption for more than ten years were flagged for owners to file an updated application to verify the continued qualification for the exemption/special valuation.

Applications received by the district were reviewed for qualifications by staff appraisers. Taxpayers were notified by certified mail when the application was denied or was applied partially to the property for which the application was made.

Documents received from the Texas Commission on Environmental Quality (TCEQ) were reviewed as received. Exemptions were granted on these properties when application was filed with and approved by the commission.

Available resources and staffing are discussed under the heading of ***Resources*** later in this report. ***The district's mapping system*** was updated weekly to reflect the most recent property ownership information in the district's CAMA system. The mapping department was responsible for obtaining necessary documents to make ownership changes to the mapping and appraisal records from the Freestone County Clerk's Office and from property owners.

4.00 Valuation Approach Requirements

General requirements for appraisals are found in Section 23.01 of the Texas Property Tax Code (PTC). Other requirements for special valuations for property (i.e., "ag" value, developer's residential inventory, dealer's special inventory, and others) are found in various other sections of the PTC.

This section of PTC says that "*…all taxable property is appraised at its market value as of January 1."* PTC Section 23.01(a)

The district must employ generally accepted appraisal techniques as recognized in the Uniform Standards of Professional Appraisal Practice (USPAP) (published by The Appraisal Foundation). As required by state law, polices and operational procedures must be developed and compliant with appraisal standards, theory, and methodology established by the International Association of Assessing Officers (IAAO) and the State Comptroller's Property Tax Assistance Division (PTAD).

All property should be appraised at its highest and best use. For real estate, this is defined as the most reasonable and probable use of land that will generate the highest return to the property over a period of time. The use must be legal, physically possible, economically feasible and the most profitable of the potential uses. An appraiser's identification of a property's highest and best should be considered a statement of opinion and never a statement of fact.

In order to complete the highest and best use analysis of a property, an appraiser must estimate its highest and best use as if the land were vacant, ignoring the value and restrictions created by existing improvements and remembering that it is the highest value the land could have if it were available for any legal, physically possible and economically feasible kind of development.

State law requires the appraisal district to appraise the land and improvements of residence homestead parcels solely on the basis of their value as a residence homestead regardless of highest and best use. *A jurisdictional exception from the USPAP standard applies to the appraisal of residential homestead properties.*

In a mass appraisal system, values should most often be determined by the application of a series of appraisal models for replacement cost and depreciation that have been tested against current market data; however, PTC section 23.0101 requires the district's appraisers to consider the most appropriate of the three approaches to value when determining a property's value:

- Cost Approach,
- Market (or Sales Comparison) Approach, and
- Income Approach.

Generally, land in the district should be appraised by the Market Approach but may be appraised by the Income Approach if the property is marketable as an income producing investment (i.e., rv parks, etc.).

Improvements should be generally appraised using the district's appraisal models. (Determining a value in this method, creates a blending of the cost and market approaches to value.) Generally, the replacement cost new of a structure should be estimated and adjusted for:

- Age and condition of the property,
- Location (neighborhoods), and
- Observed functional or economic obsolescence.

However, the income approach to value may be the most appropriate approach considered for properties in which the most attractive reason for ownership is the production of income. This approach should be considered

for properties such as hotels, motels, rv parks, self-storage units, warehouses, etc.

Business personal property should be appraised according to field observations and rendition reports filed by property owners. When original cost data is available, furniture, fixtures, machinery, and equipment should be valued by indexing the original cost to a current replacement cost then applying appropriate accrued depreciation according to the remaining economic life of the items. Inventories may be valued as rendered if the rendered value is reasonable when compared to field observations of quality and density. When no rendition is filed, appraisal models should be used to estimate value per square foot of business area according to quality and density ratings. Section 23.12 (a) of the Property Tax Code defines the market value of an inventory as the price for which it (inventory) would sell as a unit to a purchaser who would continue the business.

Oil, gas, utilities, and industrial properties are valued by an outside appraisal firm contracted to perform such services. The firm is contractually responsible for appraising these properties according to generally accepted appraisal techniques.

In the valuation of these properties, general considerations include:

- Projected production life of wells,
- Historical average gas prices and operating expenses,
- Current division orders (for current ownership and interest information), and
- The Comptroller's Price Adjustment Factor

(NOTE: A jurisdictional exception from the USPAP standard is taken in the application of the Price Adjustment Factor which limits the appraiser's opinion of market value.)

5.00 Valuation Requirements Applied

In order to assign values to properties that were representative of the local market, the district employed generally accepted appraisal techniques as outlined in the ***Valuation Requirements Section*** of this report.

In a mass appraisal system, values are typically determined by the application of an appropriate appraisal model and adjusted to certain individual characteristics of a property.

Residential and commercial properties were appraised utilizing appraisal models (cost schedules) based upon the Marshall Swift Valuation Service's published guidelines. Marshall Swift is a nationally recognized appraisal guide that is utilized by appraisers both in the private sector and in an ad valorum taxation environment. In order for these appraisal models to accurately represent the local market, they were tested and evaluated to validate their ability to generate values that meet the required standards. Adjustments to the models were made via the application of "neighborhood factors" that drive decreases/increases in the appraisal model for the various school districts, cities, and subdivisions in the district.

FCAD land appraisal models were developed from local market data obtained from buyer/seller letters and MLS reports.

Business personal property appraisal models were based upon those prepared by the Property Tax Division of the Texas Comptroller of Public Accounts. Values were estimated on the local level by incorporating modifiers by neighborhood (as defined earlier in this report) to adjust the cost to the local market.

The district also collected information regarding rental rates for commercial properties to develop its appraisal modes for various income producing properties.

Primary steps involved in the reappraisal process included:

- The gathering of sales information,
- Performance of local sales ratio studies,
- Review of most recent Property Value Studies performed by PTAD,
- Appraisal model calibration (testing of schedules),
- Field review of property,
- Administration of exemptions and special valuations,
- Notification of the taxpayer, and
- Certification of the appraisal roll to the taxing entities.

5.10 Performance Testing

In the calibration of the district's appraisal models, the Chief Appraiser and his staff performed a series of statistical tests in accordance with the Standard for Ratio Studies as adopted by the International Association of Assessing Officers (IAAO). The final report titled *FCAD Internal Appraisal Ratio Study for Appraisal Model Calibration as of January 1, 2022,* is attached as *Addendum 1* of this report.

Sales ratio studies were used to evaluate the district's mass appraisal performance. These studies not only provided a measure of performance but also were an excellent means of improving mass appraisal performance. FCAD used ratio studies not only to aid in the revaluation of properties, including the calibration of appraisal models, but also to test the results of the Property Tax Division's *Property Value Study.*

5.11 Independent Performance Tests

Under the authority of Chapter 5 of the Texas Property Tax Code and Section 403.302 of the Texas

Government Code, the State Comptroller's Property Tax Division (PTD) conducts a property value study (PVS) of each Texas school district and each appraisal district bi-annually. As a part of this annual study, the Property Tax Division of the Texas State Comptroller's Office is required to:

- use sales and recognized auditing and sampling techniques;
- review each appraisal district's appraisal methods, standards and procedures to determine whether the district used recognized standards and practices (MAP Review);
- test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and,
- determine the level and uniformity of property tax appraisal in each appraisal district.

The methodology used in the property value study includes stratified samples to improve sample representativeness and techniques or procedures of measuring uniformity. This study utilizes statistical analysis of sold properties (sales ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by state category (i.e. A, B, C, D, and F1 are directly applicable to real property).

Eight independent school districts are situated in whole or part in Freestone Central Appraisal District for which appraisal rolls are annually developed. The preliminary results of this study are released in January in the year following the year of appraisement. The final results of this study will be certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year for the year of appraisement. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions.

PTAD conducted a limited Property Value Study (PVS) in the district in 2020 for Fairfield and Wortham ISDs because the district's values were found to be outside of PTAD's confidence interval (95% - 105% weighted mean of appraisal/sale ratio) during the 2019 study. The preliminary PVS results reported that the appraisal levels in both school districts were within the agency's confidence interval and that local values will be reported to TEA for 2020.

5.12 Pilot Studies

Pilot studies were utilized to test new or existing procedures or valuation modifications in a limited area (a sample of properties) of the district and were also considered whenever substantial changes were made. These studies, which included ratio studies, were performed to reveal whether the new system was producing accurate and reliable values or whether procedural modifications were required.

FCAD coordinated its discovery and valuation activities with adjoining appraisal districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts were conducted to ensure compliance with state statutes.

5.13 Valuation Analysis (Model Calibration)

Model calibration involves the process of periodically adjusting the mass appraisal formulas, tables, and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year. The basic structure of a mass appraisal model can be valid over an extended period of time, with trending factors utilized for updating the data to the current market conditions. However, at some point, if the adjustment process becomes too involved, the model calibration technique can mandate new model specifications or a revised

model structure. FCAD updated its appraisal models for residential and commercial improvements to those values published by Marshall Swift Valuation Service for January 1, 2020 because the previous models were last updated in 2008 (commercial) and 2016 (residential).

Sales ratio studies are conducted which record the appraisal summary statistics before and after model modification. These statistics, including but not limited to the median, mean, and weighted mean, standard deviation, and coefficient of dispersion, provide the district's appraisers a tool by which to determine both the level of and uniformity of appraised value on a stratified basis. The level of appraised values is determined by the weighted mean for individual properties within an area. Review of the standard deviation and coefficient of dispersion discerns appraisal uniformity within and between stratified neighborhoods.

Each neighborhood is reviewed annually by the district through sales ratio analysis. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the district an excellent means of judging the present level of appraised value and uniformity of the sales. The appraisal staff, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood needs to be updated, or whether the level of market value in a neighborhood is at an acceptable level.

5.14 Market Adjustments or Trending Factors

Neighborhood (market adjustment) factors are developed from appraisal statistics provided from ratio studies and are used to ensure that estimated values are consistent with the market. The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not specified in the cost model.

Market, or location adjustments (neighborhood and/or economic) were applied uniformly within neighborhoods to account for location variances between market areas. Once the market-trend factors were applied, a second set of ratio studies were generated that compares recent sales prices with the proposed appraised values. From this set of ratio studies, the staff judged the appraisal level and uniformity for neighborhoods, school districts, and the appraisal district as a whole.

The cost approach to value was applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models were typically developed based on the Marshall Swift Valuation Service. Cost models included the derivation of replacement cost new (RCN) of all improvements. These included comparative base rates, per unit adjustments and lump sum adjustments. This approach also employs the sales comparison approach in the valuation of the underlying land value.

Appraisal models were modified by these factors utilizing the following formula:

$$MV = (LV * RF * OLA) + (AIV * NH)$$

where:

MV	Represents the market value of the whole property
LV	Represents the unadjusted value of the land as determined by applying the appropriate land appraisal model to the parcel's land area.
RF	Represents the modification factor (applied to land only) typically assigned for

location or topography adjustments

OLA Represents a modification factor (applied to land only) assigned at the appraiser's discretion to make further adjustments as a "cost to cure" the condition.

AIV Represents adjusted improvement value as determined by the model formula for improvement valuation (discussed further in the valuation of improvements section below)

NH Represents the neighborhood location factor that adjusts the value of the improvements only for location.

5.15 Final Valuation Models

Based on the market data analysis and review discussed previously, models are calibrated and finalized. The calibration results were keyed into the model schedule tables in the CAMA system for utilization on all parcels in the district. Results of the internal property value study conducted by FCAD appraisal staff are attached to this report in *Addendum 4.*

5.20 Valuation of Real Estate

5.21 Land

The district's methodology for determining land values includes the adjustment of the appraisal model for each parcel according to its:

- Location (neighborhood),
- Outside influences affecting property,
- Physical characteristics that deviate from the expected appraisal model,
- Tract size,
- Utility availability, and
- Other deviations that are observed by the appraiser that have an effect on the application of the appraisal model.

Appraisal models for land were divided into neighborhoods according to geographic location based upon market sales analysis. FCAD has identified areas where the market indicated delineation from the otherwise typical price per acre. The county's three distinct eco-regions have definite characteristics that affect not only the soil productivity but also affect the element of "eye appeal" to potential buyers. Sales of property in the Post Oak Savannah and East Texas Timberland portions of the county are more plentiful than those in the Blackland Prairie section. It appears that the sections of the county where varieties of pine, and oak and other evergreen and hardwood trees either scatter or cover tracts are more desirable to the non-resident property owners (usually from metropolitan areas of the state) for recreational purposes such as hunting or hobby farming.

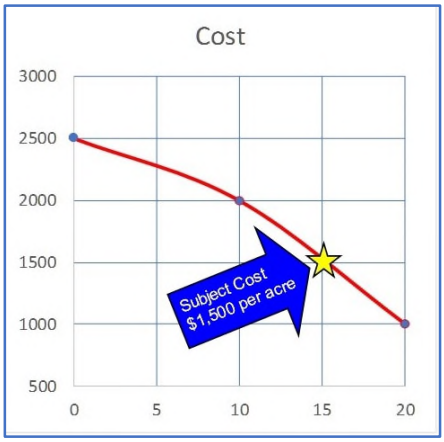
Appraisal models for the valuation of land were divided into classifications according to geographic location. Land was priced according to this schedule unless it fell into another pricing area that was more specific to that geographic location, i.e. a pricing table for a specific subdivision. FCAD maintained and published its land appraisal models in its *Appraisal Manual for the Appraisal of Land* on its local intranet. Color keyed maps provided definitions of general area and specific neighborhood price codes and costs.

Special consideration was given to land that has outside influences that affect it. For example, property that was located inside or near one of the towns usually was given a higher price per acre because of its highest and best use consideration as were properties where commercial influences were present.

When property characteristics deviated from the expected appraisal model, appraisers made adjustments

for those characteristics that affected a property's usefulness such as severe erosion, lack of public access, and other physical or economic factors. Standard adjustments were suggested by the district's schedules for deviation also published in FCAD's *Manual for the Appraisal of Land* as published on its in-house local intranet. Other variations from the pricing schedules were made via "flat value". Calculations for estimating the flat value and proper notation supporting the deviation from the appraisal model were attached by appraisers to the property record as maintained in the district's CAMA system.

The mathematical function of interpolation (the process of estimating the outcomes in between sampled data points) in the valuation of "typical land" was used in the CAMA system to determine unique costs based upon exact tract sizes. In using this function, parcels would only use the posted schedule cost when the acreage (or larger tract acreage) was an exact match to the acreage stored in the cost table. In all other instances, the CAMA system calculated exactly what the estimated cost was based upon the acreage ranges and costs stored in the table. For example, if a land cost for 10 acres was $2,000/acre and the land cost for 20 acres was $1,000, then the appraised cost for a 15-acre tract was estimated at the interpolated cost of $1,500/acre (because it was exactly halfway between the two data points).



Home-site property that were situated outside of city boundaries had an additional flat cost of $2,500 added to the land value for contributory value added for the presence of utilities including water, telephone, and septic systems.

Occasionally, additional adjustments were made from property characteristics observed by the appraisers. Such adjustments and deviations from the appraisal model were made typically after collective collaboration between the appraisers as to the amount of deviation adjustment necessary to compensate for the loss of or increase in property value.

5.22 Improvements

FCAD valued improvements (buildings and other improvements on and to land) via a series of appraisal models that categorized structures according to construction type, quality, and intended use. These appraisal models were developed based upon Marshall Swift Valuation Guidelines as published for January 1, 2020 and modified for local markets (neighborhoods) using various sources, including local sales information.

General categories include schedules for:

- Site Built Single Family Homes
- Mobile Homes
- Multi-Purpose Storage Buildings
- Commercial Buildings
- Miscellaneous Improvement schedules
- Business Personal Property

In the valuation of these properties, appraisers must consider the effects of

- Construction Quality
- Accrued Depreciation (based upon effective age and condition ratings)
- Economic Neighborhoods
- Functional Obsolescence, and
- Other observed deviations from the appraisal model.

The district also maintained percent good tables to estimate depreciation on structures based on their age (or effective age) and condition as rated by physical inspection by reviewing staff appraisers.

Additional consideration was sometimes given for a loss of value due to external economic factors which have an adverse effect on the property (i.e. garbage dump next door). These allowances for economic or functional obsolescence were made on a case-by-case basis and were the expressed professional opinion of the reviewing appraiser. Likewise, additional consideration was sometimes given to structures that were incomplete. The district developed a schedule that estimates the degree of completion based upon the presence/absence of various building components. Reasons for the extra allowances were noted on the parcel record in the district's CAMA system.

The basic formula for estimating market value that was used is:

$$MV = LV + (SF * C * WH * \%GD * \%FC * \%EC * NH)$$

Where:

- MV represents market value,
- LV is the cost of land, valued as if vacant and at its highest and best use,
- SF is the square footage of the area type,
- C indicates the area cost from the district's appraisal model,
- WH represents a factor to be applied when the wall height exceeds that which is typical for the construction type. %GD represents an age and condition rating from field evaluation,
- %FC represents any functional obsolescence found in the property, making it less physically desirable by design, and,
- %EC is the appraiser's estimate of value lost due to economic conditions that may exist outside the property. Market or location adjustments (neighborhood factors) are applied uniformly within neighborhoods to account for location variances between market areas in the NH field.

Following are summaries of some of the significant considerations in the valuation of the cited appraisal models.

5.23 Single Family Homes

Residential Valuation Appraisal Models are divided into six dominate construction types:

- Frame,
- Brick,
- Plywood,
- Synthetic Plaster,
- Steel, and
- Log.

Each of these construction types was further divided into nine different quality types with Type 1 being the lowest quality and Type 9 being the highest quality. These appraisal models were used universally throughout the district. An extensive review and revision of the residential appraisal models was performed for 2020 and deemed to be valid for use in 2022. Data characteristics of newly constructed and recently sold residential properties were compared to the cost guidelines of *Marshall & Swift Valuation Service*. The results of this comparison were analyzed using statistical measures, including stratification by quality and construction type as well as review of estimated

building costs plus land to sales prices. As a result of the analysis, appraisal models for these properties were adjusted.

To further refine the appraisal mode for these properties, *market area (or neighborhood) factors* were reviewed and adjusted to reflect the effect of property location more accurately in regard to the appraisal mode. These codes were statistically reviewed in the district's 2016 internal ratio study and adjusted in compliance with the state legislative mandates determining market value as well as uniformity of appraisal while remaining within the required confidence interval.

The mathematical function of interpolation (the process of estimating the outcomes in between sampled data points) was implemented in the valuation of site built residential property. In using this function, building records would only use the posted appraisal model cost per unit when the total square footage for the building class was an exact match to the footage stored in the cost table. In all other instances, the CAMA system calculated exactly what the estimated cost should be based upon the square footage ranges and costs stored in the table. For example, if the total living area (LA) of a type 3 brick house (RB03) was 1350 square feet and the district's cost tables record cost for 1300 square feet living area at $53.81 and 1400 square feet at $53.01, then the appraised cost for 1350 square feet of living area was estimated at the interpolated cost of $53.41 (because it was exactly halfway between the two data points).

Residential appraisal models were cost-based tables modified by actual data from the county. The cost reflected actual replacement cost new of the subject. Market research indicated that the common unit of comparison for new residential construction as well as sales of existing housing was the price paid per square foot. The value of extra items (fireplaces, swimming pools, etc.) was based upon its contributory value to the property. This value was estimated by the price per square foot or a value of the item as a whole. This data was extracted from the market by paired sales analysis when data was available, and through conversations with local appraisers and brokers.

FCAD depreciation tables were divided into eight different condition ratings with a percentage loss of value assigned according to the "effective age" of the structure. (Effective age differs from the chronological age in that effective age considers the additional life that a structure has gained from remodeling or extensive repair. For example, a house that was built in 1922 may have an effective age of 1990 after extensive repair has been done to the foundation, roof repair, and the addition of a modern kitchen and bathrooms and central heat and air.) The eight condition ratings range from *excellent condition* where all items that can normally be repaired or refinished have recently been corrected to *unsound* where the building is definitely unsound and practically unfit for use. The interior condition of a structure was assumed to be like the exterior. When requested by a property owner, an interior inspection was made by appointment.

Foundation failure occurs in varying degrees and values were adjusted (by schedule) after an appraiser's inspection. Allowances were made, based upon the cost to cure, for foundation problems that adversely affect the property.

Incomplete improvements were listed on the appraisal records according to their degree of completion, according to the district's schedule for such.

Other allowances for economic or functional obsolescence were made on a case-by-case basis.

5.24 Treatment of Residence Homesteads

Texas law mandates limits of taxable value increases on property that receives a residence homestead

exemption. While the market value may be increased according to the local real estate market, the taxable value of the property is subject to limitation *(homestead cap)* beginning in the second year a property receives the exemption. The value for tax purposes (appraised value) of a qualified residence homestead will be the lesser of:

- the market value; or,
- the preceding years appraised value:
    - plus, ten percent for each year since the property was re-appraised;
    - plus, the value of any improvements added since the last appraisal.

Values of capped properties were recomputed. When a capped property sold, the cap automatically expired on January 1st and was removed from the parcel. The home was reappraised at its market value for 2019 to bring its appraisal into uniformity with other properties.

As required by state law, the appraisal district appraised the land and improvements of residence homestead parcels solely upon the basis of their value as a residence homestead regardless of highest and best use.

When rendered as such, contiguous properties owned by developers that were unoccupied and never produced income for the owner were appraised as residential inventory. Properties receiving this special valuation in 2021 that were sold prior to January 1, 2022 were appraised at market value without the benefit of the special valuation.

FCAD includes and maintains appraisal models, along with scheduled adjustments to the appraisal model (age/condition/depreciation tables, percent complete guidelines, etc.) for single-family homes in its *Manual for the Appraisal of Single-Family Residences* on its local intranet.

5.25 Mobile Homes

FCAD mobile home appraisal models were based upon *Marshall & Swift Valuation Service's* cost guidelines and were set to reflect the values reported by this source.

As a means of testing accuracy of the values, the district also used *NADA Mobile Home Cost Guide* as a reference.

The appraisal model for mobile homes was divided into four dominate construction classes with Class 1 being the lowest quality and Class 4 being the highest quality. Appraisal models include costs for both the mobile home main (living) areas and tag along units.

The mathematical function of interpolation was applied to these appraisal models in the same manner is that of single-family homes discussed above, allowing for an adjusted cost based upon the total living area of these properties.

Depreciation schedules based upon the three construction quality ratings were applied to the estimated replacement costs for these properties. Appraisers assigned a condition rating ranging from good to poor, to adjust values for exceptional or deferred maintenance. In some cases, the effect of depreciation was speed up or slowed down by the adjustment of the effective age of the structure.

Other allowances for economic or functional obsolescence were made on a case-by-case basis.

Mobile homeowners that qualified the structure as a residence homestead were allowed the same value increase limitation as site-built single family homestead properties.

The district maintains its appraisal models in its *Manual for the Appraisal of Mobile Homes* and publishes it on its local intranet.

5.26 Multi-Purpose Buildings

The district's appraisal model for multi-purpose buildings includes structures with a primary purpose of storage of miscellaneous items, such as equipment, hay, or other items.

FCAD classified multi-purpose utility buildings on three dominant factors:

- **Construction orientation –** considering whether the structure is site-built or constructed from a prefabricated building kit;
- **Construction material quality –** considering the quality of the type of material used in the construction of the structure (ranging from cheap or economy to good materials); and,
- **Quality of workmanship –** considering whether the structure was constructed in an amateur or professional grade manner.

These structures range from amateur constructed pole barns and sheds with one (or no) wall of low-quality material to professionally constructed metal buildings with 26-gauge metal siding on all walls. In determining the market value of multi-purpose utility buildings, FCAD developed and maintained an appraisal model based upon the conditions of the local market.

Value was estimated on these properties by appraiser through:

- Classification of the property according to its relationship to the defined appraisal model (i.e. quality of construction),
- Consideration of any size factors (i.e., square footage and height),
- Adjustments for any deviation from the defined appraisal model:
    - missing or added components,
    - accrued depreciation (based upon age and observed condition ratings),
    - any functional obsolescence,
    - identification of neighborhood location and influences.

FCAD includes and maintains appraisal models, along with scheduled adjustments to the appraisal model) for these structures in its *Manual for the Multi-Purpose Buildings* on its local intranet.

5.27 Commercial (Generally)

Properties where the motivation to own the property was based upon the property's ability to generate income were typically appraised considering the income approach to value as described in Section 5.28 of this report.

In instances where income/expense data was not available or applicable to the property the district utilized its appraisal models and/or *Marshall & Swift Commercial Estimator Software*.

FCAD's appraisal model for these properties was divided into three dominate construction types:

- Masonry,
- Steel frame, and
- Wood frame.

Classes were further refined by identifying the exterior finish of the structure as masonry, steel, or wood. Each of these construction types was divided further according to quality of construction:

- Cheap
- Low
- Average, or
- Good

Buildings in this category typically include an appraisal model for:

- Main areas that are typically enclosed, and
- Canopy areas that may or may not be supported by posts.

The mathematical function of interpolation was applied to the main areas of these appraisal models, allowing for an adjusted cost based upon the total area of these properties.

Depreciation schedules were based upon life expectancy guidelines for the various construction and building types, including tables for adjustments for life expectancies ranging from 15 to 50 years, and further adjusted for condition ratings from excellent to very poor.

Other allowances for economic or functional obsolescence were made on a case-by-case basis.

5.28 Income Producing Commercial Property

FCAD estimated the whole market value of properties by the income approach to value when sufficient data was available for consideration.

Typically included in this group are:

- Hotels/motels,
- RV parks,
- Self-Storage Units, and
- Other commercial properties typically associated with triple-net leases.

Use of the income approach in property valuation allowed the district to consider the effects of the local economy and the economic benefits (or liabilities) of owning a property whose primary purpose was to generate income.

Generally, the basic formula for determining a value by the income approach is:

$$\frac{\text{Net Income}}{\text{Rate}} = \text{Value}$$

Where:

- Net Income is the gross potential income that has been adjusted for vacancy and collection losses as well as other acceptable operating expenses.
- Rate is the capitalization rate (of return) on the real estate investment based upon the income that the property is expected to generate. This rate can either be developed using the local market (when adequate sales of property type are available for analysis) or from subscription services that have been deemed as reliable.

5.29 Miscellaneous Improvements

The district's miscellaneous appraisal models included value tables for structures such as decks, retaining walls (bulkheads), piers, boat slips, pools, greenhouses, sheds, barns, parking areas, and other assorted improvements that are typical to the area.

While these items are subject to loss of value due to age and condition, the reviewing field appraiser typically was allowed the discretion of assigning a percent of value lost due to physical wear and tear.

Appraisal models were based upon professional labor supervised by a contractor or job foreman. For non-professional workmanship, the value was typically reduced by 15 to 30 percent.

When no appraisal model existed in the FCAD cost tables for an improvement, the district typically relied upon *Marshall & Swift Valuation Guide*. Costs from the guide were modified to reflect the local market via the applicable neighborhood code. When this manual method of estimating value was used, appraisers attached their calculations to the parcel record, clearly discussing in detail the assumptions and modifications used to estimate the value. Values of this nature are "flat values" in the district's CAMA system.

5.30 Valuation of Business Personal Property

The business personal property appraiser reviewed all renditions as they were filed and performed field reviews of new and un-rendered businesses.

In establishing values for business personal property, the appraiser considered the intended use of the property (held for resale or used in the operation of the business). Additionally, the appraiser considered the level of trade in which the property was held. Level of trade is determined prior to the appraisal of inventory because the value of the inventory varies depending on the level of trade:

- primary producer,
- manufacturer,
- wholesaler,
- retailer.

5.31 Machinery, Equipment, Furniture & Fixtures

When original cost information was available for machinery, equipment, furniture and fixtures used in connection with businesses, the original cost was indexed forward to reflect the current replacement cost for the items, using the following formula:

*(Present Index/Former Index) * Known Cost = Present Cost*

Once the current replacement cost new was estimated, the appraiser estimated the appropriate depreciation to the item according to its age and expected service life. The district's life expectancy guidelines are those adopted by the Texas Property Tax Assistance Division (PTAD). These tables are maintained along with the cost index factors in its CAMA system and in the district's cost manuals.

In instances where no value was rendered or the rendered value was clearly lower than field observed quality and density ratings, the appraiser used the district's appraisal models to estimate values for these items based upon those ratings. These appraisal models were adapted by the district from the PTAD Field Appraiser's Guide and have had local modifiers applied to them to make them representative of the local market.

5.32 Inventory

Inventories were appraised according to rendered values when those values were reasonable when compared to field observations of appraisers for quality and density of the inventory. In instances where the rendered value was clearly lower than field observed quality and density ratings, the appraiser used the district's appraisal models to estimate values for inventories based upon those ratings. These appraisal models were adapted by the district from the PTAD Field Appraiser's Guide and have had local modifiers applied to them to make them representative of the local market.

5.33 Dealer's Special Inventory Property

Dealer's inventories that qualify for valuation as a special inventory were appraised based upon the monthly sales reports submitted and certified by the County Tax Assessor.

As provided by law, the market value of such an inventory on January 1 is the average of monthly sales for the preceding year.

5.40 Valuation of Mineral, Utilities, & Industrial Real & Personal Property

The district has a contract with Pritchard & Abbott, Inc. for the appraisal and valuation of all mineral, utility, and industrial parcels as specified in the districts 2021-2022 Reappraisal Plan.

6.00 Resources

In order to accomplish the requirements of the laws of the state and the district's adopted reappraisal plan, adequate resources that meet the profession's professional standards must be provided by the district.

Generally, those resources are classified as:

- Staffing,
- CAMA system,
- GIS mapping system, and
- Other miscellaneous resources including
  - National Automobile Dealers Association (NADA) Mobile Home Cost Guide,
  - Marshall & Swift Valuation Guides (Commercial & Residential),
  - Realty Rates.Com, and
  - LexisNexis.

6.10 Staffing

To accomplish the requirements of the laws of the state and the district's adopted reappraisal plan, an adequate staff with appropriate tools is necessary.

Staff resources are generally categorized as:

- Administrative,
- Appraisal,
- Taxpayer Assistance,
- Mapping, and
- Records Management.

6.11 Administrative Staff

The administrative staff of the appraisal district was responsible for oversight and supervision of all aspects of the daily operation.

Until October 31, 2021***, Bud Black, RPA/RTA/CTA*****,** served as the district's Chief Appraiser. Mr. Black is certified by the Texas Department of Licensing (TDLR) as a Registered Professional Appraiser and a Registered Texas Assessor. Additionally, he is designated as a Certified Tax Administrator by the Institute of Certified Tax Administrators, an entity of the Texas Association of Assessing Officers. Mr. Black employed and directed the district's staff, oversaw all aspects of the appraisal district's operations, and performed either directly or through the district's staff a variety of operations. On November 1, 2021, ***Don Awalt, RPA/CTA***, took over the duties of Chief Appraiser for the district.

The Chief Appraiser's responsibilities include:

- discovering, listing and appraising properties;
- determining exemption and special use requests:
- organizing periodic reappraisals; and,
- notifying taxpayers, taxing units and the public about matters that affect property values.

Additionally, the Chief Appraiser was responsible for adherence to appraisal standards adopted by the Property Tax Assistance Division (PTAD), the International Association of Assessing Officers (IAAO) and the Uniform Standard Professional Appraisal Practices (USPAP) as well as the laws of the State of Texas as codified in the Property Tax Code and the Texas Constitution.

Until October 31, 2021***, Don Awalt, RPA/CTA*****,** served in the capacity of Deputy Chief Appraiser, assisted the Chief Appraiser in the administration of the district. Mr. Awalt was responsible for model analysis and calibration

(cost schedules, neighborhoods, etc.) and was the author of the district's annual ratio study report for 2022. As of November 1, 2021, Mr. Awalt assumed the duties of Chief Appraiser for the District.

Mr. Awalt was assisted by ***Jason Moore*** in the maintenance and verification of property sales data received by the district for model calibration.

Mr. Awalt also served as the district's Mapping Coordinator.

Carol Clark, as the Chief Appraiser's Administrative Assistant was responsible for the maintenance of the district's:

- financial records,
- personnel records, and
- Board of Director's records,
- Appraisal Review Board records,
- Ag Advisory Records, and
- All other administrative records.

6.12 Appraisal Staff

FCAD staff appraisers were responsible for the valuation of all real and personal property accounts. The property types appraised included commercial, residential, agricultural, and business personal property. All appraisers, including those whose services were contracted to the district, were required to designate (or working toward designation) as Registered Professional Appraisers with the Texas Department of Licensing.

Jason Moore, RPA, served as the district's Senior Appraiser until March 2022 and thereafter has served as Deputy Chief Appraiser. He was responsible for the scheduled review and inspection of all land and agricultural/timber/wildlife management properties. He utilized the district's GIS system to correctly classify land according to its eco-region and ground cover type. Additionally, Mr. Moore assisted Mr. Awalt in appraisal model calibration by reviewing and analyzing sales information received by the district.

Tina Gilley-Lee, Level I Appraiser, was responsible for the appraisal of all business personal property located in the district. Titled as the Business Personal Property Appraiser, her duties included on-site inspections and review of all rendition reports filed with the district by owners of personal property used for the production of income.

Debbie Bowden, Level III Appraiser, and ***Coltin Bottoms, Level II Appraiser,*** were responsible for on-site inspections of improved real properties as assigned in the reappraisal plan. They also conducted informal hearings with property owners who were responding to appraisal notices. Additionally, they will be preparing and presenting evidence before the Appraisal Review Board during the 2022 protest season.

Joe Barrow, Trent Neely, and ***Lettie Hightower***, in their capacities as an appraiser's assistants, accompanied and assisted the appraisers in the performance of on-site property inspections. They also help preview upcoming properties scheduled for inspection via Oblique and Ortho imagery.

Gala Pickett, an appraiser's assistant, performed data entry in the CAMA system, verified the correct usage of appraisal models, and prepared property owner correspondence as needed.

The appraisal and valuation of minerals, utilities, and industrial properties is performed under the contracted services of the ***Pritchard & Abbott, Inc,*** a firm specializing in the appraisal of complex properties.

6.13 Taxpayer Assistance Staff

Rachel Ethridge was the first person the public met when contacting the district either in person or by telephone. She provided general information to the public, guided them in access to the district's public records, and assisted them in the filing of various applications and reports required by the district.

6.14 Mapping Staff

Melissa Marberry is the district's mapper. She is responsible for all cadastral mapping functions and maintenance of the district's digital mapping system. Additionally, Ms. Marberry is responsible for maintenance of ownership records in the CAMA system and the mapping system.

6.15 Records Management

The Chief Appraiser is the district's designated custodian of records and is responsible for the preservation of the district's records according to its adopted Records Management Plan.

Desiree Frasier served as the Records Management Coordinator and was responsible for the daily electronic preservation of the district's records. Ms. Frasier is responsible for responding to open records requests and for the recording of the district's documents in its electronic archival system.

6.20 Computer Resources

Each employee's workstation has a networked personal computer for access to the district's appraisal database (CAMA), and geographic database (GIS). Forms received (and generated) by the district are maintained in an electronic format on the district's computer server as the district is moving toward a paperless environment.

6.21 Computer Assisted Mass Appraisal System (CAMA)

The district is currently licensing Pritchard & Abbott's PC Appraisal Software to aid in its computer assisted appraisal system (CAMA). The software allows the district to perform mathematical value calculations based upon used defined property classifications. Age and condition tables allow for automated uniform depreciation of improvements based upon appraiser field observations. In addition, the software stores all current cost schedules, photographs, and documents relating to a parcel.

6.22 Geographic Information Systems (GIS)

The district is currently maintaining its digital mapping data in ESRI mapping software, which provides viewing capabilities for the staff and public. Mapping data includes NRCS soil capability maps for:

- Pasturelands,
- Timberlands, and
- Croplands/Orchards.

The district also acquired overhead oblique and ortho imagery from EagleView Pictometry for 2022. Imagery was flown exclusively for Freestone CAD, digitally rectified to the Texas State Plane Coordinate System at a nine inch (per pixel) resolution.

6.23 Other Resources

The district' website (freestonecad.org) makes information available to the public via the internet including detail property characteristic data, various district forms, general information about the district, and a link to the Property Tax Division' pamphlet *Taxpayer's Rights, Remedies, and Responsibilities.*

Appraisal manual and schedules developed and utilized by the district are maintained and published on a local intranet hosted by the personal computer network.

7.00 Limiting Conditions & Certification

The appraised value estimates provided by the district are subject to the following conditions:

- The appraisals were prepared exclusively for ad valorem tax purposes;
- The property characteristic data upon which the appraisals are based is assumed to be correct: Exterior inspections of the property appraised were performed by staff resources as time allowed.
- Validation of sales transactions were attempted through questionnaires to the sellers and buyers, realtors, fee appraisers, and personal interviews with buyers and sellers;
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions;
- I have no present or prospective interest in the properties that are subject of this report other than my interests in my residence (parcel 55581), agricultural property (parcel 8225), and various producing royalty interests (listed under owner ID 18980)
- My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the taxing jurisdiction, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal;
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP), Property Tax Assistance Division of the Texas State Comptroller of Public Accounts (PTAD), the Texas Department of Licensing (TDLR), and the International Association of Assessing Officers (IAAO);
- My staff appraisers have made a physical inspection of each property located in the county according to the district's plan for periodic reappraisal as well as those parcels for which a property owner has requested an inspection, or which reflect a new improvement value;
- I have attached a list of staff providing significant mass appraisal assistance to me in Addendum *2.*

I, Don Awalt, Chief Appraiser for the Freestone Central Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the district subject to appraisal by me, and that I have included in the records all property of which I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by the laws of the State of Texas.

May 24, 2022

Don Awalt, RPA/CTA
TDLR # 69620
Chief Appraiser
Freestone Central Appraisal District

Date

Addendum Index

1 FCAD Internal Ratio Study

2 List of Individuals Providing Significant Mass Appraisal Assistance to Preparer

Addendum 1

FCAD Internal Ratio Study Analysis Report
For Values Appraised as of January 1, 2022

The information which follows is based upon recaps of value as they appeared after all lawfully required Notices of Appraised Value were delivered to property owners by the Chief Appraiser.

"If the property tax is to be fair and provide adequate revenue for local government, mass appraisal must produce accurate appraisals and equitable assessments. The primary tool used to measure mass appraisal performance is the ratio study." *IAAO, Property Appraisal and Assessment Administration.*

FCAD has performed this internal ratio study to test and calibrate our mass appraisal models, and to ensure that the level of appraisal within the district meet acceptable standards of accuracy. This study is based on appraised values, sale price data, and other property data collected by the district. Sales data used in the study span the 15-month period, January 2021 through the 1st quarter of 2022.

> "Local jurisdictions should use ratio studies as a primary mass appraisal testing procedure and their most important performance analysis tool. The ratio study can assist such jurisdictions in providing fair and equitable assessment of all property. Ratio studies provide a means for testing and evaluating mass appraisal valuation models to ensure that value estimates meet attainable standards of accuracy. Ratio study reports are typically included as part of the written documentation used to communicate results of a mass appraisal and to comply with Standard Rule 5-7(b.) of the Uniform Standards of Professional Appraisal Practice (USPAP). *IAAO, Standard on Ratio Studies – 2013, Part 1, Sec. 2.4*
>
> *USPAP 2018-2019*
> *Standards Rule 5-7*
> *In reconciling a mass appraisal an appraiser must:*
> *(a) Reconcile the quality and quantity of data available and analyzed within the approaches used and the applicability and relevance of the approaches, methods and techniques used; and*
> *(b) Employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.*
>
> *Comment: It is implicit in mass appraisal that, even when properly specified and calibrated mass appraisal models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy. However, appraisers engaged in mass appraisal have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy. This responsibility requires appraisers to evaluate the performance of models, using techniques that may include but are not limited to, goodness-of-fit statistics, and model performance statistics such as appraisal-to-sale ratio studies, evaluation of hold-out samples, or analysis of residuals.*

The overall level of appraisal of Freestone Central Appraisal District is stated as follows:

		95% Confidence Interval	
		Lower	Upper
Mean	0.98	0.96	1.00
Median	0.98	0.95	1.00
Weighted Mean	0.94		
Coefficient of Dispersion	16.31		
Price-related Differential	1.04		
Absolute Deviation	68.42		
Standard Deviation	0.20		
Number of Sales	428		
Overall Ratio taken form PA PC Ratio Recap Report			
All Classes of Property			

Data Assembly
The chief appraiser and staff of FCAD continually collect and analyze sales data of properties that have sold within the district. Sales are screened as valid or invalid based upon the *IAAO Standard on the Verification and Adjustment of Sales* as guidance. Sales that do not meet the test of an "arm's length" transaction are not marked as "valid", and therefore are not included in the study. An exception being foreclosure sales of residential properties. Typically, foreclosure sales, where a bank or lending institution is the seller, are not considered to be "arm's length" transactions. Pursuant to Texas Property Tax Code section 23.01(c), a Chief Appraiser, in appraising residence homesteads, may not exclude from consideration the value of neighboring properties simply because they were subject to a foreclosure sale.
Sources of sales information include;

- Sales letters to buyers and sellers of property.
- Owner's closing statements or other real estate transaction documentation
- Information from real estate brokers and agents and independent appraisers.
- The district also subscribes to and receives sales information from the Metrotex Association of Realtors' Multiple Listing Service.

Methodology
Ratio studies are the primary means by which appraisal performance is measured. In a ratio study, appraised values are compared against indicators of market value, usually sales prices. If appraisal performance is good, appraised values should be closely related to sales prices.

Ratio = Appraised Value ÷ Sale Price

Ideally the middle (median) or average (mean) ratio should be near 1.00, and the individual ratios should be relatively uniform or consistent.

> "In analyzing appraisal level, ratio studies attempt to measure statistically how close appraisals are to market value on an overall basis. While theoretically desired level of appraisal is 1.00, an appraisal level between 0.90 and 1.10 is considered acceptable for any class of property (* Appraisal level for each type of property shown should be between .90 and 1.10, unless stricter local standards are required). However, each class of property must be within 5 percent of the overall level of appraisal of the jurisdiction." *IAAO Standard on Ratio Studies, Part 1, Sec. 9.1*

Price Trend Analysis
After all sales information has been entered into the district's database, the chief appraiser and staff analyzes the local market trends indicated by the sales to determine the need, if any, for time adjustments to the sales data. Price trends were developed using sales ratio trend analysis. In the method, sales prices over the time frame selected for analysis are compared against appraised values for the most recent appraisal year. Since the appraisal reflects a common, fixed date, and the sales prices reflect transaction dates, an upward trend in sale/appraisal (S/A) ratios indicates price appreciation and a downward trend indicates price deflation. The graphs in *exhibit 1* show the direction and magnitude of the trends for the property categories analyzed.

Treatment of Outliers
A common issue in ratio studies is the treatment of outliers, which are atypically low or high ratios that have the potential to distort a number of appraisal performance measures.
In addition to eliminating extremely low or high ratios, IAAO outlier trimming guidelines were used in determining ratio trim points based upon the inter-quartile range, which represents the difference between the 75^{th} and 25^{th} percentiles of a distribution. With these guidelines in mind, trim points for each property category with sufficient sales were determined by an examination of ratio distributions. The percentage of sales excluded as ratio outliers is discussed in conjunction with the ratio analysis in *exhibit 2*.

Stratification
Stratifying, or dividing properties within the scope of the study into two or more groups helps identify the level of appraisal between property groups. Properties are stratified based upon:

Total value range;
Neighborhood;
Property use;
Land cover type;
Improvement quality of construction and construction type;
And any other grouping that would facilitate a completer and more detailed picture of appraisal performance.

Stratified analysis of appraisal performance is discussed in detail in *exhibit 5*.

Statistical Analyses

There are two primary aspects of appraisal performance: level and uniformity. Appraisal level or, central tendency, relates to how close overall appraisals are to market value. Uniformity or, variability, relates to the consistency or equity of appraised values.

Measures of Central Tendency

"Estimates of appraisal level are based on measures of central tendency. They should be calculated for each stratum and for such aggregations of strata as may be appropriate. Several common measures of appraisal level should be calculated in ratio studies, including the median ratio, mean ratio, and weighted mean ratio." *IAAO Standard on Ratio Studies-2013 Part 1, Sec. 5.3*

Mean = average of the ratios. It is calculated by summing the ratios and dividing by the number of ratios.

Median = the middle ratio when the ratios are arrayed in order of magnitude. The median always divides the data into two equal parts and is less affected by extreme ratios than the other measures of central tendency. The median is the generally preferred measure of central tendency for evaluating overall appraisal level.

Weighted Mean = the value-weighted average of the ratios in which the weights are proportional to the sales prices. The weighted mean gives equal weight to each dollar of value in the sample, whereas the median and mean give equal weight to each parcel.

Confidence Interval = consists of two numbers (upper and lower limits) that bracket a calculated measure of central tendency for the sample. A 95 percent confidence interval would mean, for example, that one can be 95 percent confident that the population parameter (measure of central tendency) falls in the indicated range.

Measures of Variability

"Measures of dispersion or variability relate to the uniformity of the ratios and should be calculated for each stratum in the study. In general, the smaller the measure of variability, the better the uniformity." *IAAO, Standard on Ratio Studies -2013, Part1, Sec.5.4*

Coefficient of Dispersion (COD) = the most generally useful measure of variability or uniformity is the COD. The COD measures the average percentage deviation of the ratios from the median ratio.

Price-related Differential (PRD) = a statistic for measuring regressively (high-value properties under appraised) or progressivity (high-value properties over appraised)

The International Association of Assessing Officers Standard on Ratio Studies – 2010, table 1-3, indicates the acceptable range of COD's as follows:

Type of property – General	Type of property – Specific	COD Range
Single-family residential	Newer or more homogeneous areas	5.0 to 10.0
Single-family residential	Older or more heterogeneous areas	5.0 to 15.0
Other residential	Rural, seasonal, recreational, manufactured housing	5.0 to 20.0
Vacant Land	All types	5.0 to 25.0

FCAD is primarily a rural district with most single-family residential neighborhoods falling in the heterogeneous category due to differences in age and quality of construction. The standard also states that "PRDs for each type of property should be between .98 and 1.03 to demonstrate vertical equity.

Final reconciliation of the data indicates that FCAD's overall level of appraisal, indicated by the measures of central tendency, is acceptable and within the mandated 95% confidence interval. Also, the level of variability (uniformity) is acceptable as indicated by the measures of variability.

The following exhibits further document the testing and analysis of the level of appraisal performed by the Chief Appraiser and staff in conducting a ratio study of the appraised values of classes and categories of properties within the districts jurisdiction with sufficient data for reliable testing.

Exhibit Table of Contents

Exhibit 1	Recap of all sales
Exhibit 2	Time adjustment and sales trend analysis
Exhibit 3	Outlier analysis and trimming
Exhibit 4	Effect of foreclosure sales on ratios
Exhibit 5	Stratified Ratio Analyses
Exhibit 6	Overall Ratio Distribution

Exhibit 1

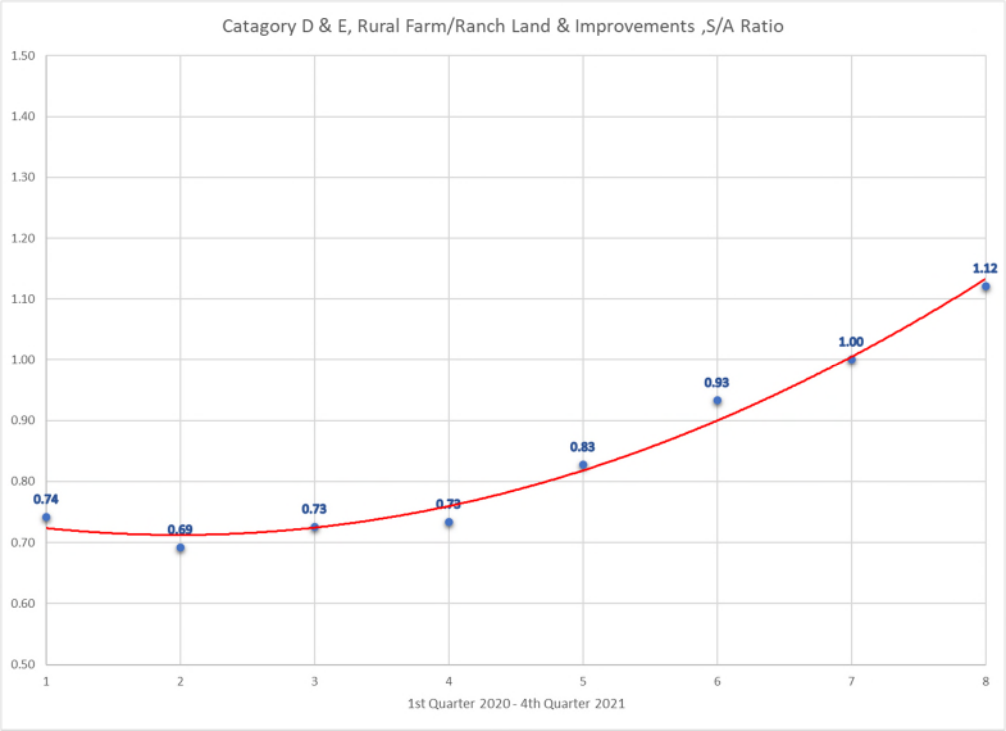
Sale Ratio Recap Summary

Description	Current	Sale	
Sum of Current Ratio	419.8288	298.4895	Sum of Sale Ratio
Total Number Sales	428	428	
Low Ratio	0.5057	0.0358	
Highest Ratio	1.5000	1.9044	
Range	0.99	1.87	
Mean	0.9809	0.6974	
Median	0.9801	0.6983	
Absolute Deviation	68.4228	83.3401	
Average Deviation	0.1599	0.1947	
Standard Deviation	0.2003	0.2571	
Coefficient of Dispersion	16.3112	27.8848	
Total Sale Prices	121,305,650	121,305,650	
Total Mkt Value	113,865,066	82,774,433	
Weighted Mean	0.9387	0.6824	

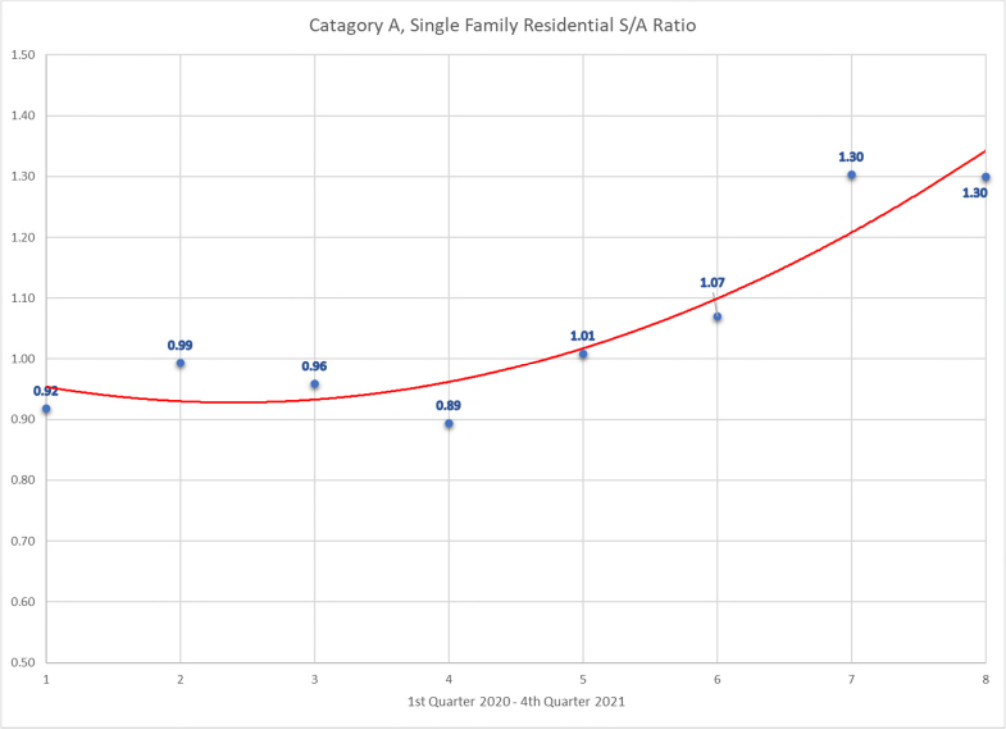
Sales of all categories of properties between January 1st, 2021, through the first quarter of 2022. This recap shows that at the time of sale, these properties were appraised at a median of .6983 or 69.83% of what they sold for. The preliminary valuations for 2022 show a current median of .9801 or 98.01%.

Exhibit 2

Sales Trend Analysis
1st Quarter 2020 through 4th Quarter 2021



Rate of change is 1.12-.74=.38 or 38% over 24 months. The rate over 12 months is 1.12-.83=.29 or 29%



Rate of change is 1.30-.92=.38 or 38% over 24 months. The rate over 12 months is 1.30-1.01=.29 or 29%

Median ratios are the least affected by outliers when comparing ratios. This indicates a trend of increasing sale prices of approximately 1.58% per month over 24 months and 2.45% per month over 12 months for both Rural Land & Improvements and Single-Family residential properties.

Exhibit 3

Outlier Analysis and Trimming

Rural Land & Improvements - All Valid Sales

Outlier Calculation overall sales	
Mean	1.23
Median	1.02
Wt Mean	0.93
Standard Dev.	0.91
Upper Quartile	1.25
Lower Quartile	0.85
Inter Quartile Range	0.41
Lower Boundry	0.24
Upper Boundry	1.86

# of Sales	215
# of Outlier	24
% Trimed	11%

The lower quartile minus (1.5 times the IQR)

(1.5 time the IQR) plus the upper quartile

Outliers were identified using the quartile function. Sales with an appraisal to sale ratio less than.24 or more than 1.86 were identified as outliers in the study. This would result in 11% of observations being discarded.

Category A, Single Family - All Valid Sales

Outlier Calculation overall sales	
Mean	1.10
Median	0.99
Wt Mean	0.96
Standard Dev.	0.82
Upper Quartile	1.06
Lower Quartile	0.86
Inter Quartile Range	0.20
Lower Boundry	0.56
Upper Boundry	1.35

# of Sales	208
# of Outlier	27
% Trimed	13%

The lower quartile minus (1.5 times the IQR)

(1.5 time the IQR) plus the upper quartile

Outliers were identified using the quartile function. This indicated that sales with ratios less than .56 or higher than 1.35 could be possible outliers. This would result in 13% of the observations being discarded.

Other category and groups of properties had insufficient samples to reliably test for outliers.

Exhibit 4

Effect of Foreclosure Sales

Foreclosure sales, or sales where a bank or lending institution is the seller, are identified and studied to determine their effect on the market. Typically, "REO" (Real Estate Owned) or "foreclosure" sales are not considered "arm's length" sales, or sales between a willing buyer and a willing seller. But, in some instances when there is sufficient volume of foreclosure sales, these sales have great influence on defining the market in that area. Furthermore, pursuant to Texas Property Tax Code section 23.01(c)

> "Notwithstanding Section 1.04(7) (C), in determining the market value of a residence homestead, the chief appraiser may not exclude from consideration the value of other residential property that is in the same neighborhood as the residence homestead being appraised and would otherwise be considered in appraising the residence homesteads because the other residential property:
>
> > (1) was sold at a foreclosure sale conducted in any of the three years preceding the tax year in which the residence homestead is being appraised and was comparable at the time of sale based on relevant characteristics with other residence homesteads in the same neighborhood; or
> > (2) has a market value that has declined because of a declining economy."

Freestone CAD has identified and studied the effect of these sales on the overall market, and to verify and document adherence to law.

FORECLOSURE COMPARISON

	All Sales	Exclude Foreclosure Sales
Mean	0.98	0.98
Median	0.98	0.98
Weighted Mean	0.94	0.94
COD	14.6373	14.6373
# Observations	187	187

After statistical outliers were removed, there were no foreclosure sales included.

Exhibit 5

Stratified Ratio Analyses

Stratified by Property Use Category Code

Property Use Category	Description	Observations	Mean	Median	Wt. Mean	PRD	Standard Deviation	COD	95% Confidence Lower & Upper Limits	
A	Single Family Residential	187	0.98	0.98	0.94	1.04	0.1817	14.6373	0.95	1.00
B	Multi Family									
C	Vacant Lots	47	1.00	1.00	0.95	1.05	0.1952	13.887	0.94	1.05
D & E	Farm & Ranch Land and Improvements	177	0.99	0.97	0.94	1.05	0.2117	18.2769	0.96	1.02
F	Commercial	12	0.91	0.93	0.97	0.94	0.2223	17.7045	0.78	1.04
L	Business Personal Property									

* Some classes of property with insufficient data for a reliable test

Stratified by Building Type

Only building types with sales shown

CAD						
Bldg Type	Observations	Mean	Med	WM	COD	PRD
RB03	27	0.96	0.93	0.91	17.1096	1.05
RB04	44	1.02	1.00	1.00	11.3012	1.01
RB05	14	1.03	1.04	0.95	13.0653	1.08
RB06	5	1.02	1.04	0.99	11.4852	1.03
RB07	3	0.89	0.83	0.88	7.2865	1.00
RB08	1	0.88	0.88	0.88	0	1.00
RF02	19	0.99	0.96	0.95	16.9459	1.04
RF03	20	1.05	1.00	1.03	14.3588	1.02
RF04	6	1.00	1.01	0.98	8.9955	1.02
RF05	4	0.90	0.87	0.89	12.1735	1.01
RF06	3	0.81	0.86	0.79	9.2382	1.03
RF07	1	1.11	1.11	1.11	0	1.00
RS03	1	0.88	0.88	0.88	0	1.00
MH1	7	0.97	0.99	0.98	18.61	0.99
MH2	13	0.97	0.93	0.93	22.0134	1.04
MH3	7	0.89	0.88	0.83	13.373	1.06
MH4	1	0.88	0.88	0.88	0	1.00

Stratified by Value Range

Category A Stratification Detail

		Value From	Value To	Number of Sales	Mean	Median	COD	Weighted Mean	PRD	Appraised Value	Indicated Value
Fairfield ISD	Strata 1	0	57,132	12	1.00	1.04	16.46	1.03	0.97	22,682,402	22,004,659
	Strata 2	57,133	148,676	43	1.00	0.99	16.66	0.95	1.05	107,752,313	113,578,911
	Strata 3	148,677	255,822	31	0.96	0.98	13.51	0.93	1.04	107,754,824	116,416,188
	Strata 4	255,823	591,578	23	0.95	0.95	13.76	0.91	1.04	107,825,614	118,359,620
	Strata 5	591,579	3,427,210	4	0.97	0.94	12.13	0.94	1.02	108,098,185	114,498,660
	All			113	0.98	0.99	15.06	0.93	1.05	454,113,338	484,858,038
								Stratified Weighted Mean for All			**0.94**
								Price Related Diferential			**1.04**

		Value From	Value To	Number of Sales	Mean	Median	COD	Weighted Mean	PRD	Appraised Value	Indicated Value
Teague ISD	Strata 1	0	35,517	5	0.89	0.86	25.05	0.87	1.02	6,957,526	7,967,849
	Strata 2	35,518	90,366	12	0.93	0.92	13.03	0.89	1.05	33,145,092	37,195,704
	Strata 3	90,367	135,698	15	1.04	1.04	15.07	1.00	1.03	33,170,842	33,074,925
	Strata 4	135,699	205,035	16	0.98	0.95	13.15	0.96	1.02	33,080,091	34,494,360
	Strata 5	205,036	746,373	9	1.10	1.06	10.84	1.08	1.02	33,415,065	30,925,558
	All			57	1.00	0.96	16.06	0.99	1.00	139,768,616	143,658,396
								Stratified Weighted Mean for All			**0.98**
								Price Related Diferential			**1.02**

		Value From	Value To	Number of Sales	Mean	Median	COD	Weighted Mean	PRD	Appraised Value	Indicated Value
Wortham ISD	Strata 1	0	32,565	1	0.63	0.63	0.00	0.63	1.00	1,894,831	3,004,807
	Strata 2	32,566	80,981	2	0.78	0.78	6.26	0.78	1.00	8,954,413	11,422,902
	Strata 3	80,982	111,282	3	0.95	0.94	2.33	0.96	0.99	9,004,180	9,370,569
	Strata 4	111,283	157,441	4	0.96	0.98	3.81	0.96	1.00	8,914,473	9,277,212
	Strata 5	157,442	369,000	4	1.03	1.00	5.57	1.01	1.01	9,144,157	9,031,266
	All			14	0.93	0.97	8.89	0.97	0.96	37,912,054	42,106,756
								Stratified Weighted Mean for All			**0.92**
								Price Related Diferential			**1.01**

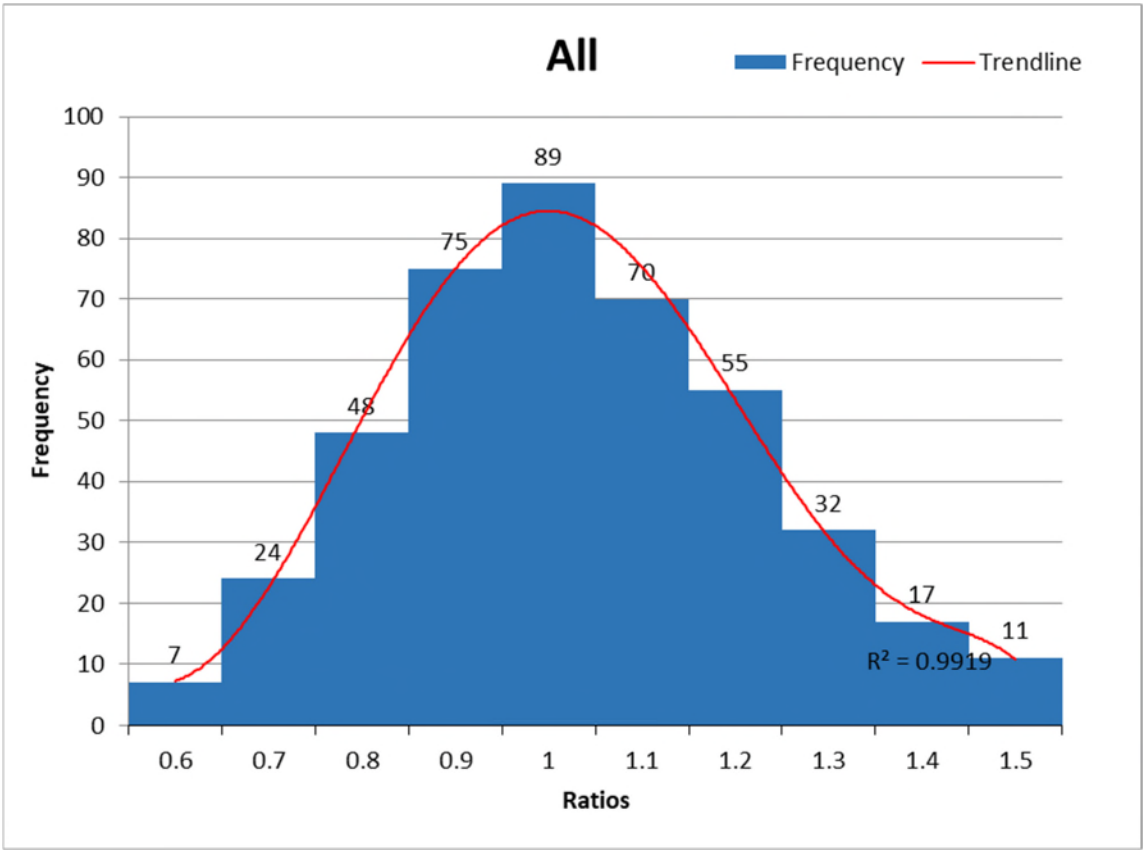
		Value From	Value To	Number of Sales	Mean	Median	COD	Weighted Mean	PRD	Appraised Value	Indicated Value
Dew, Buffalo, Oakwood ISD's (Combined-DISD Strat)	Strata 1	0	34,578	1	1.07	1.07	0.00	1.07	1.00	316,084	295,710
	Strata 2	34,579	90,938	1	0.88	0.88	0.00	0.88	1.00	1,503,939	1,717,806
	Strata 3	90,939	132,607						1.00	1,503,426	1,503,426
	Strata 4	132,608	197,719	1	0.93	0.93	0.00	0.93	1.00	1,326,642	1,425,883
	Strata 5	197,720	321,557	1	1.04	1.04	0.00	1.04	1.00	1,801,530	1,739,936
	All			4	0.98	0.98	7.59	0.98	0.99	6,451,621	6,682,761
								Stratified Weighted Mean for All			**0.96**
								Price Related Diferential			**1.02**

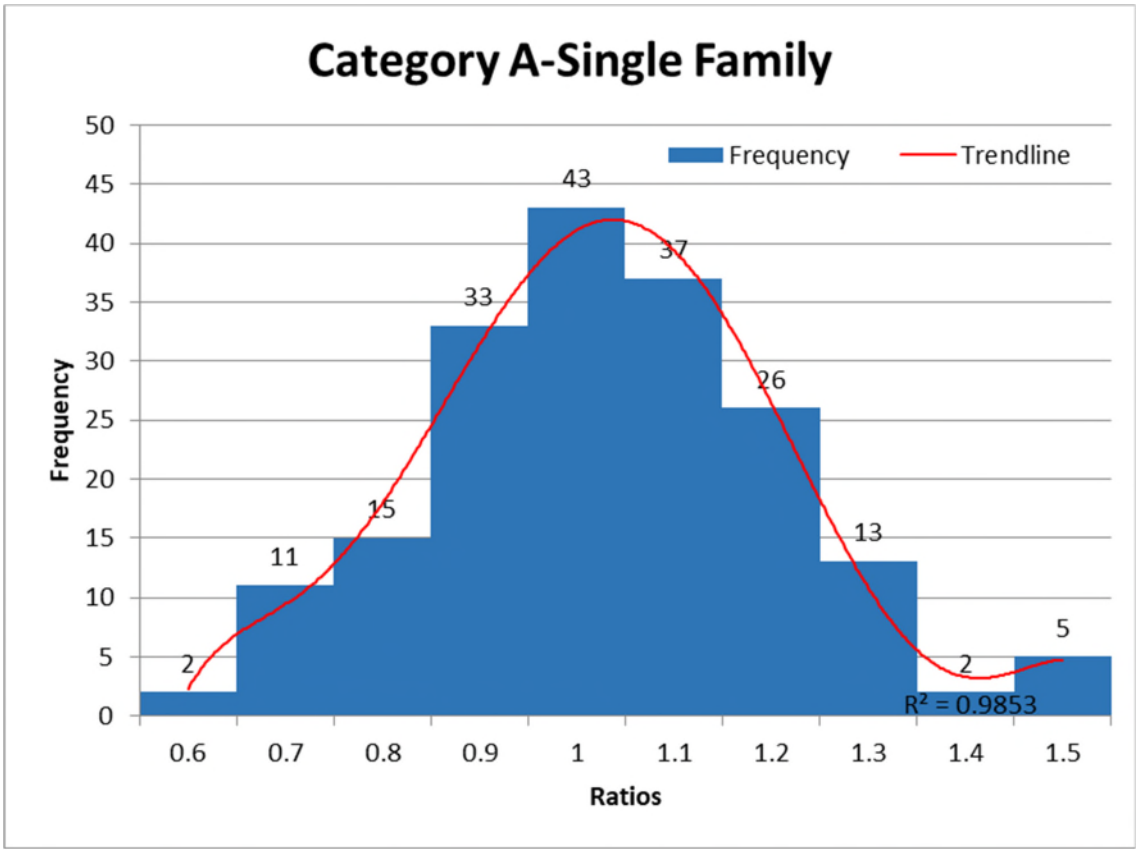
Stratified by Neighborhood

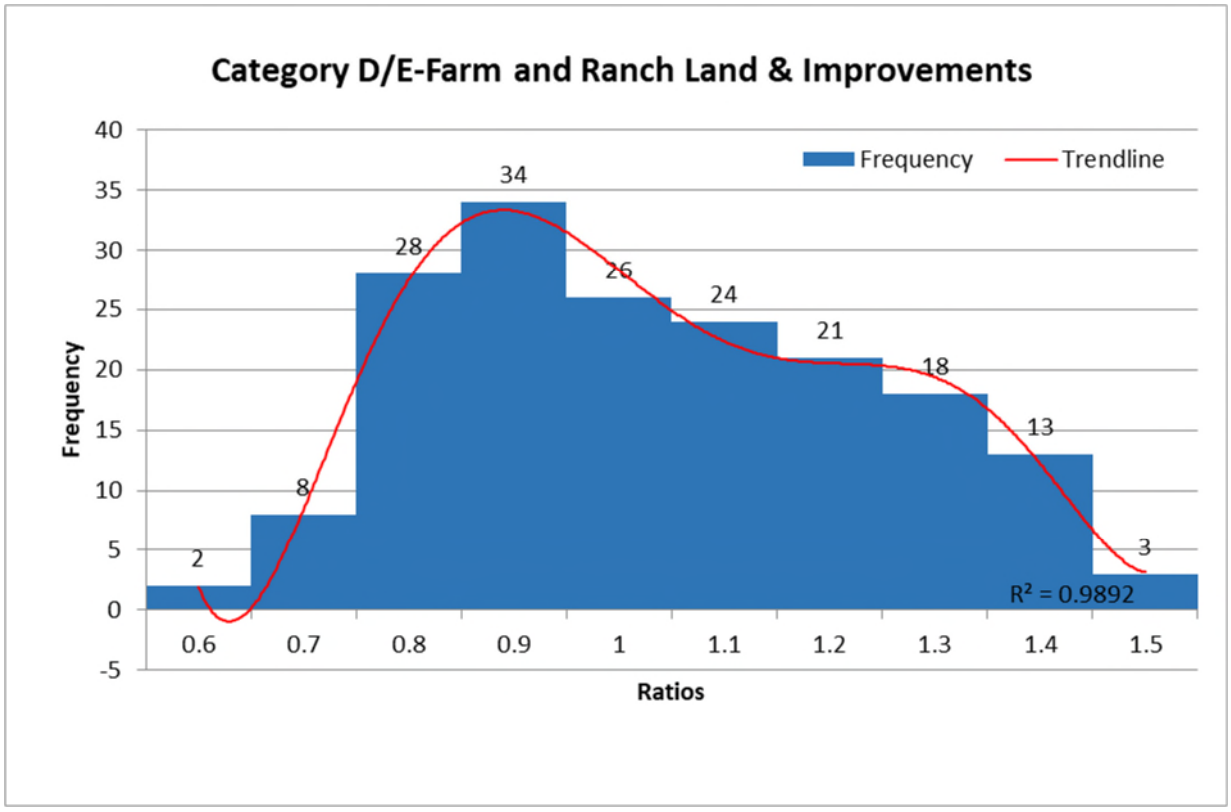
Code	Type	Neighborhood	Observations	Mean	Median	COD	Weighted Mean	PRD
Rural School District\Rural Subs (Category A*,D*,E* - with HS Improvements)								
BISD	Residential/Farm & Ranch	RURAL BISD	5	0.82	0.84	8.47	0.80	1.03
DISD	Residential/Farm & Ranch	RURAL DISD	10	0.91	0.88	12.89	0.89	1.02
OISD	Residential/Farm & Ranch	RURAL OISD	2	1.08	1.08	17.54	0.98	1.09
DBO COMBINED	**Residential/Farm & Ranch**	**RURAL DISD,BISD,OISD COMBINED**	**12**	**0.94**	**0.89**	**14.22**	**0.91**	**1.03**
FISD	Residential/Farm & Ranch HS IMPRO	RURAL FISD	45	1.01	0.97	20.61	0.93	1.08
WILD	Residential/Farm	WILDWOOD	12	0.95	0.88	19.73	0.94	1.02
WESTR	Residential/Farm	WESTWOOD RESTRICTED	1	0.98	0.98		0.98	1.00
WESTU	Residential/Farm	WESTWOOD UNRESTRICTED	8	0.99	0.94	18.66	0.97	1.02
WEST*	**Residential**	**WESTWOOD COMBINED**	**9**	**0.99**	**0.97**	**16.18**	**0.97**	**1.01**
TISD	Residential/Farm & Ranch A&E	RURAL TISD -INCLUDES MISD	25	0.99	1.04	20.84	0.92	1.08
WISD	Residential/Farm & Ranch	RURAL WISD- INCLUDES CISD	7	0.96	0.94	10.93	0.96	1.00
Fairfield Area Residential (Category A*)								
FRES	Residential	FAIRFIELD CITY RESIDENTIAL	20	1.05	1.09	17.79	0.99	1.06
TOAKS	Residential	THOUSAND OAKS SUBDIVISION	11	1.01	0.99	12.94	0.97	1.04
CHILD	Residential	CHILDS ADDN (MEADOWBROOK,NW,WC	8	1.03	1.03	14.87	1.01	1.03
TOAKS-CHILD	**Residential**	**THOUSAND OAKS-CHILDS ADDN COMBINED**	**19**	**1.02**	**0.99**	**14.05**	**0.99**	**1.04**
EASTV	Residential	EASTVIEW ADDN	1	1.06	1.06		1.06	1.00
FWOOD	Residential	FRIENDSWOOD	2	0.96	0.96	11.59	0.96	1.00
GAM	Residential	GREEN ACRES/MOREHEAD/GOLDEN CONDO	4	1.05	1.05	5.46	1.04	1.00
LWOOD	Residential	LAKEWOOD	2	0.91	0.91	17.51	0.89	1.03
LOTT	Residential	LOTT VILLAGE ADDN	1	1.00	1.00		1.00	1.00
OAK	Residential	OAKFOREST FAIRFIELD	4	0.93	0.86	13.45	0.92	1.02
WILLO	Residential	WILLOW CREEK FARMS						#DIV/0!
OAK-WILLO	**Residential**	**OAKFOREST-WILLOW CREEK COMBINED**	**4**	**0.93**	**0.86**	**13.45**	**0.92**	1.01
RLAKE	Residential	REDS LAKE	3	0.94	0.93	2.89	0.94	1.01
BLAKE	Residential	BURLESON LAKE						#DIV/0!
Teague Area Residential (Category A*)								
TRES	Residential	TEAGUE CITY RESIDENTIAL	44	1.00	0.97	15.05	1.00	1.00
LOVPK	Residential	LOVERS LANE/PARKWOOD ADDN	1	0.95	0.95	0.00	0.95	1.00
CEAST	Residential	COUNTRY EAST ADDN	2	0.98	0.98	6.37	0.99	0.99
TLAKE	Residential	TEAGUE HUNTING & FISHING CLUB	2	1.04	1.04	9.29	1.00	1.04
Streetman/Wortham Area Residential (Category A*)								
SRES	Residential	STREETMAN CITY RESIDENTIAL	3	0.97	1.02	17.86	0.96	1.02
WRES	Residential	WORTHAM CITY RESIDENTIAL	13	0.92	0.97	7.94	0.95	0.96
RC Lake Area Residential (Category A*)								
RCRES	Residential	OFF WATER RESIDENTIAL RICHLAND AREA	8	0.99	1.05	9.06	0.99	1.00
SOAK	Residential	SOUTHERN OAKS	8	1.02	0.96	18.11	0.98	1.04
WAT1	Residential	BEST WATERFRONT RICHLAND CHAMBERS	4	1.00	1.06	12.59	1.00	1.00
WAT2	Residential	GOOD WATERFRONT RICHLAND CHAMBERS	4	0.81	0.75	21.59	0.79	1.03
WAT3	Residential	CHANNELVIEW RICHLAND CHAMBERS	1	0.75	0.75		0.75	1.00
WAT*	**Residential**	**WAT1-WAT2-WAT3 Combined**	9	0.89	0.85	21.41	0.88	1.01
SS1	Residential	SEPT SOUND BEST WTR						#DIV/0!
SS2	Residential	SEPT SOUND GOOD WTR						#DIV/0!
SS3	Residential	SEPT SOUND CHANNEL						#DIV/0!
WNES1	Residential	WILDERNES BEST WATERFRONT	3	0.90	0.88	6.75	0.89	1.02
WNES2	Residential	WILDERNES GOOD WATERFRONT						#DIV/0!
WNES3	Residential	WILDERNESS WATERVIEW	2	0.59	0.59		0.59	1.01
Commercial Category (F*)								
FCOM	Commercial	FAIRFIELD COMMERCIAL	4	0.92	0.75	35.86	0.74	1.25
RCCOM	Commercial	COMMERCIAL RICHLAND CHAMBERS AREA						#DIV/0!
RRCOM	Commercial	RURAL COMMERCIAL	4	0.89	0.83	0.34	0.82	1.09
SCOM	Commercial	STREETMAN COMMERCIALCOMMERCIAL						#DIV/0!
TCOM	Commercial	TEAGUE COMMERCIAL	3	0.98	1.00	8.23	0.98	1.01
TCOTS	Commercial	TEAGUE COMMERCIAL - OTS	1	0.98	0.98		0.98	1.00
WCOM	Commercial	WORTHAM COMMERCIAL	1	1.60	1.60		1.60	1.00

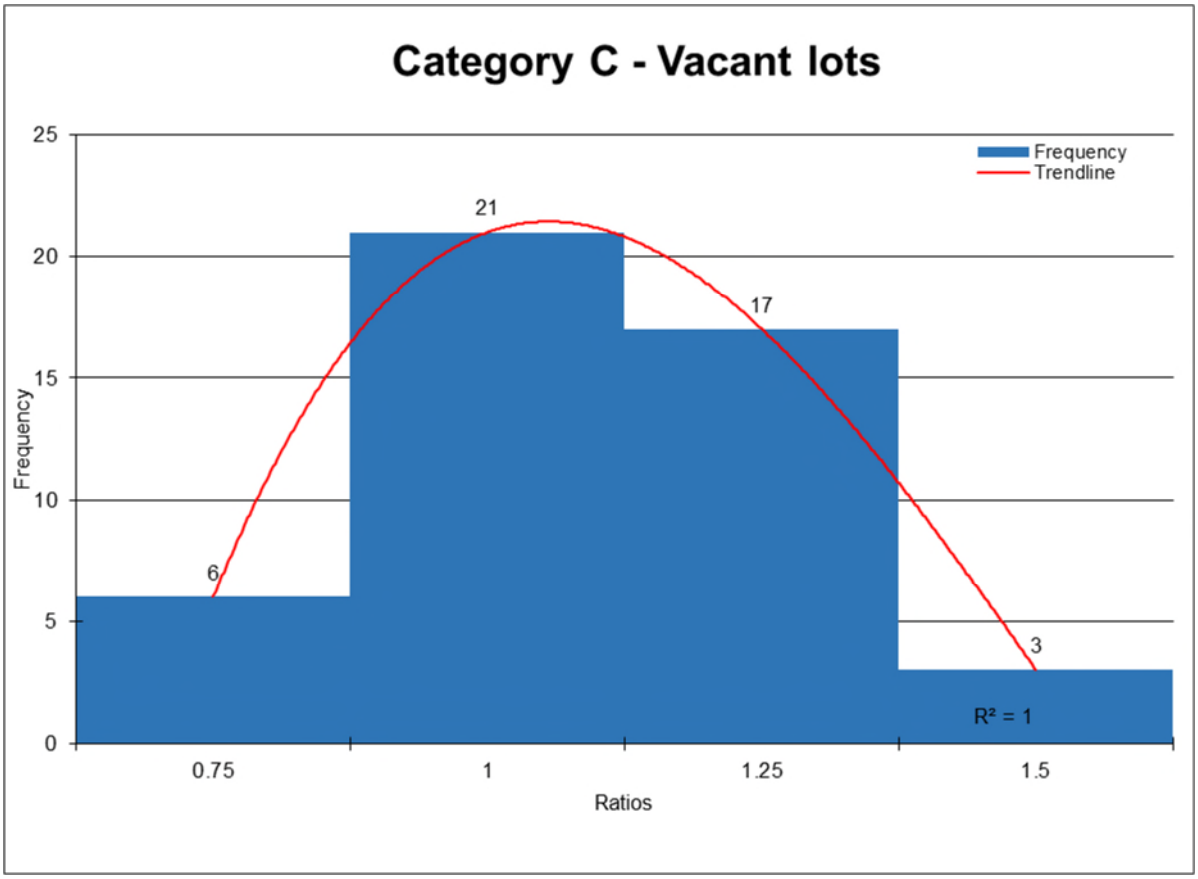
Exhibit 6

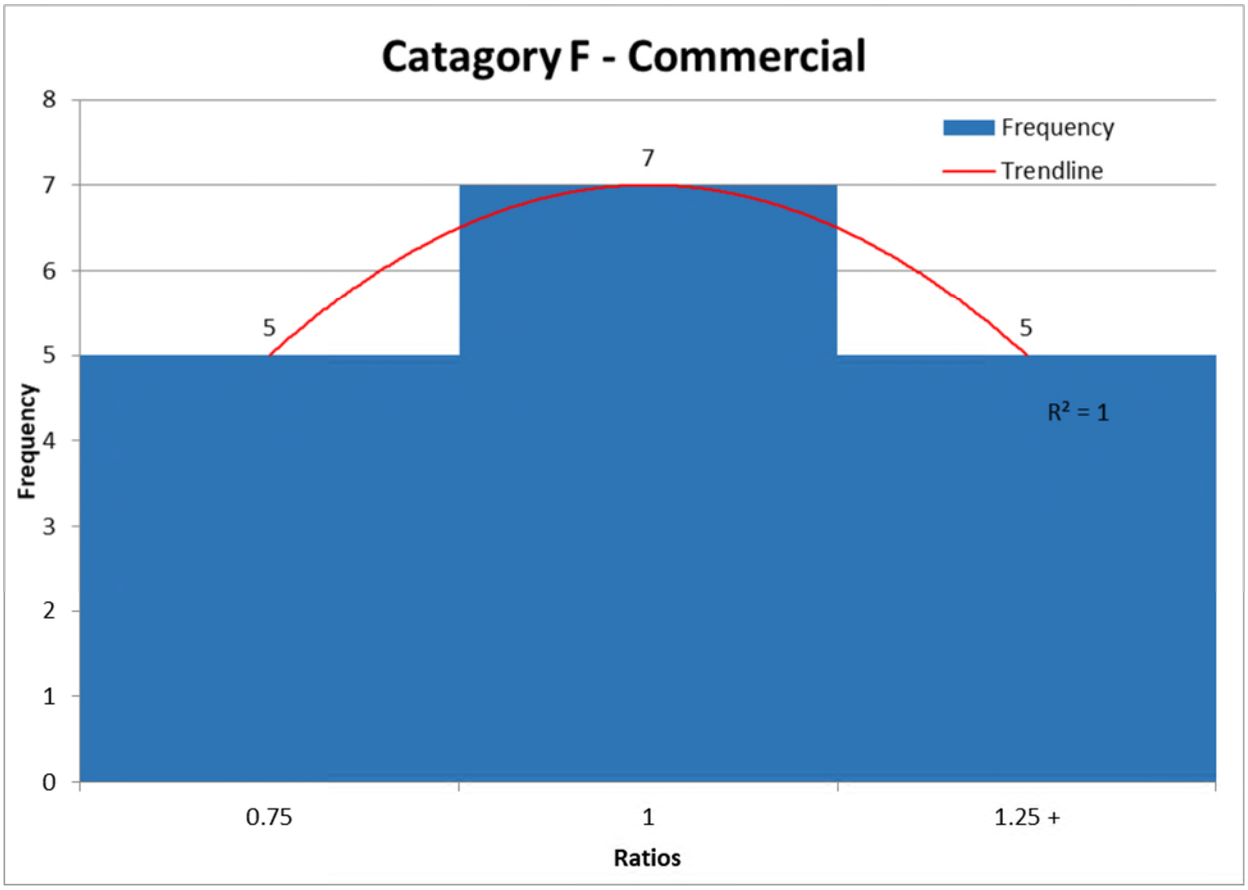
Ratio Distribution






Category D/E-Farm and Ranch Land & Improvements
Frequency
Trendline
Frequency
Ratios
40
35
30
25
20
15
10
5
0
-5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
2
8
28
34
26
24
21
18
13
3
R² = 0.9892


Category C - Vacant lots
Frequency
Trendline
Frequency
Ratios
25
20
15
10
5
0
0.75
1
1.25
1.5
6
21
17
3
R² = 1



A frequency distribution shows how often each different value in a set of data occurs. A histogram is the most used graph to show frequency distributions.

All graphs indicate normal distributions of the Appraisal / Sale Ratios in the categories tested. Other categories, with limited sales for credible analysis, not displayed.

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Addendum 2

Individuals Providing Significant Mass Appraisal Assistance

Name	Type of Assistance
Deputy Chief Appraiser Don Awalt RPA/CTA TDLR # 69620 Until October 31, 2021 **Chief Appraiser** November 1,2021-Present	• Analyzed sales information in preparation for appraisal model calibration (cost schedules, neighborhoods, etc.) • Assisted staff in application of appraisal practices and laws governing exemptions and special valuations. • Performed appraisals on income producing properties when cost approach to value was considered. • Supervised GIS development and maintenance. • Assisted appraisers in providing explanations to property owners for proposed appraised values and made adjustments as needed based upon observations. • Reviewed appraisal adjustment reports generated from property owner inquiries as needed to ensure legitimacy of adjustments.
Senior Appraiser August 2021 – March **Deputy Chief Appraiser** March-Present Jason Moore RPA TDLR # 75365	Ensured that on-site inspection schedule was completed according to reappraisal schedule. • Performed on-site inspections of improved properties. • Analyzed sales to assist with appraisal model calibration. • Reviewed results of staff on-site inspections for proper application of appraisal models. • Performed reviews of land records through examination of CAD GIS maps, USDA Soil Survey Maps, and available aerial photography. • Reviewed applications for Open Space Land Valuation for pasture, cropland, timberland, and wildlife management for completeness and qualifying activities. • Corresponded with applicants as needed to process open space applications. • Made on-site inspections of properties of open-space qualifications • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.

Name	Type of Assistance
Business Personal Tina Gilley Class I Appraiser TDLR # 76691	• Performed on-site inspections of business personal property parcels. • Reviewed rendition statements from property owners to ensure that all personal property used for the production of income was properly listed on the appraisal roll. • Assisted appraiser and their assistants on proper application of the appraisal model for real estate parcels. • Reviewed exemption applications for qualifications and supervised correspondence when additional information was needed for approval, modification or denial. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.
Real Improvements Debbie Bowden Class III Appraiser TDLR # 75538 Coltin Bottoms Class II Appraiser TDLR # 76519	• Performed on-site inspections of improved parcels as assigned. • Performed CAMA data entry to modify records as a result of inspections. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.
Mineral/Utility/Industrial Pritchard & Abbott Contracted Professional Valuation Firm	• Appraised all mineral, utility, industrial, and utility properties in the district in accordance with their reappraisal plan activities outlined in *Addendum 5* of this report. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.