

# **Zavala County Appraisal District**

## **Reappraisal Plan 2015-2016**

---

### **INTRODUCTION**

#### **Scope of Responsibility**

The Zavala County Appraisal District has prepared and published this reappraisal plan and appraisal report with the goal to provide our Board of Directors, citizens and taxpayers with a better understanding of the district's responsibilities and activities. This report has several parts: a general introduction and then, several sections describing the appraisal effort by the appraisal district.

The Zavala County Appraisal District (CAD) is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Property Tax Code govern the legal, statutory, and administrative requirements of the appraisal district. A member Board of Directors, appointed by the taxing units within the boundaries of Zavala County, constitutes the district's governing body. 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 6 jurisdictions or taxing units in the county.

The County of Zavala, Crystal City ISD, La Pryor ISD, City of Crystal City, Southwest Texas Junior College and Wintergarden Groundwater Conservation District.

Each taxing unit, such as the county, a city, school district, etc., sets 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. Property appraisals and estimated values by the appraisal district allocate the year's tax burden on the basis of each taxable property's market value. We also determine eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, charitable or religious organizations and special appraisal (agricultural productivity) valuation.

Except as otherwise provided by the Property Tax Code, all taxable property is appraised at: its fair "market value" as of January 1<sup>st</sup>. Under the tax code, "market value" 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 buyer know of all 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 buyer, seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

The Property Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), agricultural productivity or open-space land (Sec. 23.41), real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocation of interstate property (Sec. 23.03). The owner of real property inventory may elect to have the inventory appraised at its market value as of September 1<sup>st</sup> of the year proceeding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1<sup>st</sup>.

The Texas Property Tax Code, under Sec. 23.51 sets the standards for determining whether land qualifies for open-space land, which means land that is currently devoted principally to agricultural use to the degree of intensity generally accepted in the area. To qualify for land agricultural appraisal, the property owner must provide the chief appraiser all the information he needs to determine whether the land qualifies. The property owner must also inform the chief appraiser of any changes in the status of the land. Zavala CAD follows the 1-d-1 application process:

The property owner must file a completed application to qualify land for agricultural appraisal.

An application must be filed in our district and in every appraisal district where the owner's property is located.

Where the applicant owns several parcels of property within one appraisal district, he may file a single application form covering all the parcels. The deadline for filing an application form is April 30th.

The chief appraiser may extend the deadline 30 days. The applicant must request an extension & must show good cause for extending his deadline.

Good cause is generally a reason not within the applicant's control that prevents timely filing.

Late application may be filed any time before the appraisal review board approves records for that year. Late applications are subject to a penalty.

Failure to file an application before the records are approved for the year makes the land ineligible for agriculture appraisal in that tax year.

After the land is approved for agriculture appraisal, no other application is necessary unless the chief appraiser requests one or changes occur in the status of the property.

Change of use, change in the class of use, and change of ownership requires a new application.

If the land is taken entirely out of agriculture use, the land is ineligible for agriculture appraisal.

If the property erroneously receives agriculture appraisal, it is subject to "back assessment" and a penalty.

Failure to notify the appraisal district of a change in agricultural use subjects the property to a penalty, but not a "back assessment."

When the chief appraiser receives an application he/she must review it and take one of the three actions: he/she may approve; ask for additional information, or may deny the application. The chief appraiser must approve or deny all timely applications before May 15 and must notify the applicant, in writing, of the denial with an explanation. The denial letter must be mailed to a property owner, via certified mail.

The Texas Property Tax Code, under Sec. 25.18, requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. The district's current policy is to conduct a general reappraisal of taxable property every third year. Appraised values are reviewed annually and are subject to change. Business personal properties, minerals and utility properties are appraised every year.

The appraised value of real estate is calculated using specific information about each property. Using computer-assisted mass appraisal programs, and recognized appraisal methods and techniques, we compare that information with the data for similar properties, and with recent cost and market data. The district follows the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable.

### **Personnel Resources**

The office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The administration department's function is to plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities and postal services. The appraisal department is responsible for the valuation of all real and personal property accounts. The property types appraised include commercial, residential, business personal, mineral, utilities, and industrial. The district's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Department of Licensing & Registration. Support functions including records maintenance, information and assistance to property owners, and hearings are coordinated by personnel in support services.

The appraisal district staff consists of 9 employees with the following classifications:

- 1 – Chief Appraiser/Administrator (CCA, RPA, RTA,)
- 1 – Administrative Assistant (RTC -Tax Collector)
- 1 – Financial Officer (RTA - Registered Tax Assessor/Collector)
- 2 – Tax Collectors (1-RTC–Registered Tax Collector and 1-Level 1 Registered Tax Collector)
- 4 – Appraisers (2-RPA Certificates, 2-Level 1 Registered Professional Appraisers)
- 1 – Receptionist/Data Entry Clerk (Appraisal & Collections Departments)

### **Staff Education and Training**

All personnel that are performing appraisal work are registered with the Texas Department of Licensing and Regulations and are required to take appraisal courses to achieve the status of Registered Professional Appraiser within five years of employment as appraisers. After they are awarded their license, they must receive additional training of a minimum of 30 hours of continuing education units every two years. Failure to meet these minimum standards results in the termination of the employee.

Additionally, all appraisal personnel receive training in data gathering processes including data entry onto appraisal cards used in field work and statistical analyses of all types of property to ensure equality and uniformity of appraisal of all types of property. On-the-job training is delivered by lead appraisers for new appraisers and managers meet regularly with staff to introduce new procedures and regularly monitor appraisal activity to ensure that standardized appraisal procedures are being followed by all personnel.

### **Data**

The district is responsible for establishing and maintaining approximately 18,500+/- real, personal property and mineral accounts covering 1,302 square miles within Zavala County. Portions of Zavala County overlaps with Uvalde ISD, which is the Batesville area and includes properties within this number of accounts. This data includes property characteristics, ownership, and exemption information. Property characteristic data on new construction is updated through an annual field effort; existing property data is maintained through a field review. Sales are routinely validated during a separate field effort; however, numerous sales are validated as part of the new construction and field inspections. General trends in employment, interest rates, new construction trends, Cost and Market data are acquired through various sources, including internally generated questionnaires to buyer and sellers, and real estate market data agencies and vendors.

## **Information Systems**

BIS Consulting manages and maintains the districts Information Technology (IT) and they run the daily backups for the software. True Automation provides the software services for both appraisal and collections and they also host the districts website: [www.zavalcad.com](http://www.zavalcad.com). The Mainframe hardware/system software is Dell Power Edge T610. The user base is networked through the mainframe using Windows NT Server.

## **SHARED APPRAISAL DISTRICT BOUNDARIES**

The district established procedures whereby ownership and property data information are routinely exchanged within over-lapping jurisdictional boundaries. Appraisers from adjacent appraisal districts discuss data collection and valuation issues to minimize the possibility of differences in property characteristics, legal descriptions, and other administrative data. Under current State law, all appraisal values on properties overlapping between Uvalde CAD and Zavala CAD will be the responsibility of Zavala CAD who provides all appraisal and ownership data to Uvalde CAD thru electronic format.

## **INDEPENDENT PERFORMANCE TEST**

According to Chapter 5 of the TPTC and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts Performance Audits of the appraisal district. This audit is called the property value study (PVS) of each Texas school district and each appraisal district. As part of this study, the code requires the Comptroller 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 analyses of sold properties (sale 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, and within 25% of the median, for price-related differential (PRD) for properties overall and by state category.

There are 2 independent school districts in Zavala CAD for which appraisal rolls are annually developed. The preliminary results of this study are released February 1 in the year following the year of appraisement. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) the following July of each year. This outside (third party) ratio study provides additional assistance to the CAD in determining areas

of market activity or changing market conditions.

## Appraisal Activities

---

### INTRODUCTION

#### Appraisal Responsibilities

The field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and personal property by any method requires a comprehensive physical description of personal property, and land and building characteristics. This appraisal activity is responsible for administering, planning and coordinating all activities involving data collection and maintenance of all commercial, residential and personal property types located within the boundaries of Zavala County and the jurisdictions of this appraisal district. The data collection effort involves the field inspection of real and personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to periodically field inspect improved residential properties every three (3) years and personal & commercial properties every year in Zavala County. Meeting this goal is dependent on budgetary constraints.

#### Appraisal Resources

- **Personnel** - The appraisal activities are conducted by 3 appraisers and one data entry clerk.
- **Data** - The data used by field appraisers includes the existing property characteristic information contained in CAMA (Computer Assisted Mass Appraisal System) from the district's computer system. The data is printed on a property record card (PRD), or personal property data sheets. Other data used includes maps, sales data, electrical and septic permits, building permits, photos and actual cost and market information. Sources of information are gathered using excellent reciprocal relationships with other participants in the real estate market place. The district cultivates sources and gathers information from both buyers and sellers participating in the real estate market.

#### Appraisal Frequency and Method Summary

- **Residential Property-** Residential property is physically examined every three years noting condition of the improvement and looking for changes that might have occurred to the property since the last on-site check. In some subdivisions where change of condition is frequent, homes are examined annually. Every subdivision is statistically analyzed annually to ensure that sales that have occurred in the subdivision during the past 12 months are within a +/-3% range of appraised value. If the sales do not indicate that range, adjustments are made to

the subdivision using a process outlined in detail in the Residential Appraisal section of this report.

- **Commercial Property-** Commercial and industrial real estate is observed annually to verify class and condition. The inspection occurs as Business Personal Property appraisers are checking BPP accounts. Real estate accounts are analyzed against sales of similar properties in Zavala CAD as well as surrounding areas that have similar economies. The income approach to value is also utilized to appraise larger valued commercial properties such as apartment, office buildings, restaurants, motels and hotels, and other types of property that typically sell based on net operating income.
- **Business Personal Property-** Business personal property is observed annually with appraisers actually going into businesses to develop quality and density observations. A rendition is mailed or left for new businesses to complete. Similar businesses to a subject are analyzed annually to determine consistency of appraisal per square foot. Businesses are categorized using SIC codes. Rendition laws provide additional information on which to base values of all BPP accounts.
- **Minerals-** Zavala CAD has a professional service contract with Pritchard & Abbott, Inc. They appraise annually, all working and royalty interests of producing oil and gas wells. The most recent production data is available from the Texas Railroad Commission and is downloaded into appraisal software that estimates economically recoverable reserves. Those reserves are then valued based upon State mandated pricing using the previous year's average of oil or gas values. A discount is applied over the anticipated life of the well in order to consider the value of money over time to recover those reserves. Each producing lease is valued as a unit and then that value is divided according to the various owners of the lease listed in division orders.
- **Utilities and Pipelines-**The CAD has a professional service contract with Pritchard & Abbott, Inc. They appraise annually, all utility companies and pipelines by using a unit value developed using all three approaches to value. For example, a utility company's total value in the State is estimated using cost, market, and income approaches to value and then the entire value is allocated using the components of that utility company that have situs in the various tax units of Zavala CAD. Components include such things as miles of transmission lines, miles of distribution lines, substations and the like for an electric utility.
- **Note: At the end of this report is the 2015-2016 Reappraisal Plan of Pritchard & Abbott, Inc.**

## **PRELIMINARY ANALYSIS**

### **Data Collection/Validation**

Data collection of real property involves maintaining data characteristics of the property on CAMA (Computer Assisted Mass Appraisal). The information contained in CAMA includes site characteristics, such as land size and topography, and improvement data, such as square foot of living area, year built, quality of construction, and condition. Field appraisers are required to use a property classification system that establishes uniform procedures for the correct listing of real property. All properties are coded according to a classification system. The approaches to value are structured and calibrated based on this coding system and property description and characteristics. The field appraisers use property classification references during their initial training and as a guide in the field inspection of properties. The type of information contained in the BPP file includes personal property such as business inventory, furniture and fixtures, business vehicles, machinery and equipment, with details such as cost and location. The field appraisers conducting on-site inspections use a personal property classification system during their initial training and as a guide to correctly list all personal property that is taxable.

### **Sources of Data**

The sources of data collection are through property inspection, new construction field effort, data review/relist field effort, data mailer questionnaires, hearings, sales validation field effort, commercial sales verification and field effort, newspapers and publications, and property owner correspondence by mail or via the Internet. A principal source of data comes from building permits received from taxing jurisdictions that require property owners to take out a building permit. Paper permits are received and matched manually with the property's tax account number for data entry. Area and regional real estate brokers and managers are also sources of market and property information. Data surveys of property owners requesting market information and property description information is also valuable data. Soil surveys and agricultural surveys of farming and ranching property owners and industry professionals are helpful for productivity value and calibration. The Texas Railroad Commission is the source for mineral production data and leasing information. Crude and gas pricing is taken from Plains Marketing, a regional commodity gatherer and purchaser. Improvement cost information is gathered from local building contractors and Marshall and Swift Valuation Service. Various income and rental surveys are performed by interviewing property managers and operators to determine operating income and expenses for investment and income producing real property.

Data review of entire neighborhoods is generally a good source for data collection. Appraisers inspect entire neighborhoods to review the accuracy of our data and identify properties that have to be relisted. The sales validation effort in real property pertains to the collection of market data for properties that have sold. In residential, the sales validation effort involves on-site inspection by field appraisers to verify the accuracy of the property characteristics and



confirmation of the sales price. In commercial, the commercial sales group is responsible for contacting sales participants to confirm sales prices and to verify pertinent data.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides reliable data to allow correction of records without having to send an appraiser on-site. As the district plans to have information available on the Internet, property owners have the opportunity to review information on their property and forward corrections via e-mail. For the property owner without access to the Internet, letters are sometimes submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at the earliest opportunity. Accuracy and validity in property descriptions and characteristics data is the highest goal and is stressed throughout the appraisal process from year to year. Appraisal opinion quality and validity relies on data accuracy as its foundation.

### **Data Collection Procedures**

The appraisers are assigned specific areas throughout the district to conduct field inspections. These geographic areas of assignment are maintained for several years to enable the appraiser assigned to that area to become knowledgeable of all the factors that drive values for that specific area. Real estate and Business personal property appraisers conduct field inspections and record the information on a field card that holds the data dealing with the property and allows for the entry of corrections and additions that the appraiser may find in his or her field inspection.

The quality of the data used is extremely important in estimating market values of taxable property. While work performance standards are established and upheld for the various field activities, quality of data is emphasized as the goal and responsibility of each appraiser. New appraisers are trained in the specifics of data collection and the classification system set forth and recognized as "rules" to follow. Experienced appraisers are routinely re-trained in listing procedures prior to major field projects such as new construction, sales validation or data review. A quality assurance process exists through supervisory review of the work being performed by the field appraisers. Quality assurance supervision is charged with the responsibility of ensuring that appraisers follow listing procedures, identify training issues and provide uniform training throughout the field appraisal staff.

### **Data Maintenance**

The field appraiser is responsible for the data entry of his/her fieldwork into the computer file. This responsibility includes not only data entry, but also quality assurance. The majority of the data collected in the field is inputted by each appraiser with supervision by the chief appraiser or the administrative assistant. Data updates and file modification for property descriptions and input accuracy is conducted as the responsibility of each field appraiser.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### **Field Review**

The date of last inspection and the CAD appraiser responsible are listed on the CAMA record or property card. If a property owner or jurisdiction disputes the district's records concerning this data during a hearing, via a telephone call or other correspondence received, the record may be corrected based on the evidence provided or an on-site inspection may be conducted. Typically, a field inspection is requested to verify this information for the current year's valuation or for the next year's valuation. Every year a field review of real property located in certain areas or neighborhoods in the jurisdiction is done during the data review/re-list field effort. A field review is performed on all personal property accounts, with available situs, each year.

### **Office Review**

Office reviews are completed on properties where update information has been received from the owner of the property and is considered accurate and correct. Data mailers, sent in mass, or at the request of the property owner, frequently verify some property characteristics or current condition of the property. When the property data is verified in this manner, and considered accurate and correct, field inspections may not be required. The personal property appraiser mails property rendition forms in January of each year to assist in the annual review of the property.

## **PERFORMANCE TEST**

The property appraisers are responsible for conducting ratio studies and comparative analysis. Ratio studies are conducted on property located within certain neighborhoods or districts by appraisal staff. The sale ratio and comparative analysis of sale property to appraised property forms the basis for determining the level of appraisal and market influences and factors for the neighborhood. This information is the basis for updating property valuation for the entire area of property to be evaluated. Field appraisers, in many cases, may conduct field inspections to insure the accuracy of the property descriptions at the time of sale for this study. This inspection is to insure that the ratios produced are accurate for the property sold and that appraised values utilized in the study are based on accurate property data characteristics observed at the time of sale. Also, property inspections are performed to discover if property characteristics had changed as of the sale date or subsequent to the sale date. Sale ratios should be based on the value of the property as of the date of sale not after a subsequent or substantial change was made to the property after the negotiation and agreement in price was concluded. Properly performed ratio studies are a good reflection of the level of appraisal for the district.

## **Residential Valuation Process**

---

### **INTRODUCTION**

#### **Scope of Responsibility**

The appraisers are responsible for estimating equal and uniform market values for residential improved and vacant property. There are approximately 9,300+/- real property accounts in Zavala County and includes accounts in the adjoining over-lapping jurisdictional areas.

#### **Appraisal Resources**

- **Personnel** - The appraisal staff consists of 4 appraisers. One data entry clerk  
**Enrique Mata, John Tapia, Ricardo Hernandez, Vacant Position**

All appraiser's, appraise - Residential, Commercial, Agricultural Land, and Mobile Homes and all work on deeds, process sales letters and BPP renditions and Mapping as part of their duties.

The data entry clerk processes the appraisal data entry such as permits, pictures, account coding, ARB scheduling and other assigned duties as requested by the Chief Appraiser .

**Data** - An individualized set of data characteristics for each residential dwelling and multiple family units in this district are collected in the field and data entered to the computer. The property characteristic data drives the application of computer-assisted mass appraisal (CAMA) under the Cost, Market, and Income Approaches to property valuation.

### **VALUATION APPROACH**

#### **Land Analysis**

Residential land valuation analysis is conducted prior to neighborhood sales analysis. The value of the land component to the property is estimated based on available market sales for comparable and competing land under similar usage. A comparison and analysis of comparable land sales is conducted based on a comparison of land characteristics found to influence the market price of land located in the neighborhood. The most common characteristic in sales of vacant lots is square footage. Computerized land tables file stores the land information required to consistently value individual parcels within neighborhoods, given known land characteristics. Specific land influences are considered, where necessary, and depending on neighborhood and individual lot or tract characteristics, to adjust parcels outside the neighborhood norm for such factors as access, view, shape, size, and topography. The appraisers use abstraction and allocation methods to insure that estimated land values best reflect the contributory market value of the land to the overall property value.

## **Area Analysis**

Data on regional economic forces such as demographic patterns, regional locational factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources and provide the field appraiser a current economic outlook on the real estate market. Information is obtained from real estate publications and sources such as continuing education in the form of IAAO and TAAD classes.

## **Neighborhood (Market) Analysis**

Neighborhood analysis involves the examination of how physical, economic, governmental policies, social forces and other influences affect property values. These factors have an impact on the value of properties within groups and in turn on properties being appraised. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of properties in the appraisal district. These subsets are commonly known as market areas but sometimes referred to as neighborhoods.

Accurately identifying market areas is integral to appraising real property but especially residential properties and vacant land. Identifying shared traits that influence market values is the first step in market analysis. A "neighborhood" for analysis purposes is defined as the largest geographic grouping of properties where the property's physical, economic, governmental and social forces are generally similar and uniform. These factors have an impact on the value of properties within this grouping and, in turn, on tax appraisals.

Once a neighborhood with similar characteristics has been identified, the next step is to define its boundaries. This process is known as "delineation". Some factors used in neighborhood delineation include location, sales price range, lot size, age of dwelling, quality of construction and condition of dwellings, square footage of living area, and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work is neighborhood specific in Zavala County. Each residential neighborhood is assigned a name based on observable aspects of homogeneity between neighborhoods. Sometimes Zavala County groups neighborhoods to accumulate cost-derived data in areas of limited or no sales, or use in direct sales comparison analysis. Neighborhoods are field inspected and delineated based on observable aspects of homogeneity and delineation is reviewed twice during reappraisal years—once before beginning field work to determine if new delineations are necessary and then after completing the field work to verify accurate delineations.

Few neighborhoods are fixed in character and appraisal district staff recognize that as part of the neighborhood analysis is considering discernible patterns of growth that might influence a neighborhood's individual market. Each neighborhood may be characterized as being in a stage of growth, stability or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shift from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability. Zavala County has experienced very little growth since the last 2 reappraisals as evidenced by the stability in the total number of parcels and slight change in market value since the 2011 reappraisal.

Drilling for oil and gas in the portion of the Eagle Ford shale in Zavala County has intensified in recent years. It is anticipated that the economic impact associated with this drilling activity will have a positive impact on the local real estate market; however, the trends show the impact will not occur until the 2013 tax year at the earliest. For the 2011 and 2012 tax years, residential and land values remain constant. Since tax year 2013, the impact of the oil and gas showed an indication that the Eagle Ford had gradually arrived in Zavala County, due to the increase number of accounts. Today, tax year 2014, the Eagle Ford oil and gas activity has definitely made an impact in Zavala County, but not so much, that the rise in taxable value comes only from the Minerals, Industrial, Utility and Pipeline activity that is affecting Zavala County.

Sales are a strong indication of market forces in Zavala County and are interpreted by the appraisers to determine market price ranges and indications of the contributory value of property components. Arm's length sales seldom occur in Zavala County and the Zavala CAD rarely obtains sales data from real estate professionals and, instead, collects deed (transactions) from the Zavala County Clerk every other month. The appraisal district then sends sales confirmation and verification letters to the grantor and grantee in each transaction. It is important to note, however, that approximately 35% of all property transactions in Zavala County involve heirs or gift deeds.

Even though arm's length sales in Zavala County are few in number, sales remain the most objective indication of market value. Appraisers use sale data to verify the accuracy of market are delineations and the consistency of appraised values in each market area. The appraisal district will conduct ratio studies twice annually beginning with the 2014 tax year. Ratio studies will be used to verify appraisal levels and appraisal equity. The staff will perform separate ratio studies in each of the market areas as well as a county wide study. In addition, the staff will stratify residential and vacant land by values and conduct ratio studies within each value strata.

Appraisers will focus on appraisal medians and means to analyze appraisal levels. Coefficients of dispersion will be examined to determine whether tax appraisals are equitable.

Over the past 3 years the local real estate market in Zavala County has been slightly increasing. It is, therefore, likely that older (than 12 months) property sales will need to be used in the ratio studies. Of course appraisers will adjust the older sales prices for time and financing, if necessary, to insure the values represent current market values. In addition, because of the relatively small number of sales, appraisers may consider appraisals performed by fee appraisers in the local market analyses.

The Cost and Market Data approaches to estimate value are the basic techniques Zavala CAD uses to interpret sales and determine tax values. Zavala County does, however, consider and use the Income Approach to value for investment and multi-family residential property. Analysis of the market activity over the last 3 years indicates several distinct market areas in the county. The analysis of market activity and homogeneity of properties has led to the identification of these distinct market areas.

The market areas in Crystal City primarily are delineated by social and geographic factors. Hacienda Estates Market Area contains the most desirable residential properties in the County. This area consists primarily of one subdivision east of downtown Crystal City but other properties with similar construction are also included. This market has the highest quality construction and most expensive homes in Zavala County. Privacy and exclusivity are the major influences on values in this market area.

The Central Market Area is located within a 1 mile radius of the center of Crystal City. Values in this market area are influenced by paved streets, drainage and sewers, convenient access to the center of the city where citizens can easily take advantage of access to government, financial services, medical services and retail shopping and entertainment.

The Barrio, Campo Santo and the Chico Market Area are the least desirable of the Crystal City markets. These areas are marked by problems with drainage, a lack of paved streets, uninhabitable houses and homes of lower quality construction. The market area consists of 3 residential subdivisions: one located northwest of downtown Crystal City, another west of downtown and the other southeast of downtown Crystal City.

Vacant lots in each of the market areas in Crystal City are valued on a square foot basis as lot sales, prices in each market area are based on a price per square footage. It is anticipated that the increase in market activity due, in part, to drilling in the Eagle Ford shale will result in future vacant lot sales prices by the square foot, hence the appraisal district will value those and similar properties by the same method.

Properties in La Pryor comprise the fourth market area. Sales in La Pryor had been extremely rare, but ever since the Eagle Ford, the vacant lot sales in La Pryor have been increasing. Values are likely influenced by the government, medical and retail shopping between La Pryor

and the surrounding communities of Crystal City, Uvalde, and Eagle Pass. Therefore, La Pryor would still be considered one market area

The Batesville area, though unincorporated, comprises another market area, sales here are rare. Distance from Crystal City and its services and the lack of nearby schools are major influences on value. Children in this area must ride buses to attend schools in La Pryor or Uvalde Independent School Districts.

### Acreage

Most of the acreage tracts in Zavala County are either native/brush pastureland or dry land cropland. The history of land sales indicates that the price per acre throughout the county for similar land is the same. There are separate market areas for cropland tracts and dry land tracts.

The northern border of Zavala County is located about 100 miles southwest of San Antonio. The county is primarily rural and agricultural is a major industry. More than 95% of the area in Zavala County is devoted to agriculture. About 98% of this land is used for grazing livestock, primarily cattle.

Zavala CAD contracts with Eagle Appraisal firm to perform local agricultural use studies to identify agricultural land usages and typical agricultural practices in the county. Also by contract, the firm uses this information to develop (agricultural) net-to-land values. The net-to-land values represent the value per acre based on its agricultural productivity, that is, the income an acre of land is expected to produce based on its agricultural use.

The Texas Comptroller's Manual for the Appraisal of Agricultural Land describes the proper procedures and requirements for developing net to land values. This manual includes all of the requirements of the law that govern agricultural land appraisal. Eagle Appraisal firm adheres to the requirements and procedures included in this manual.

### Zavala County Property Characteristics

Zavala County is located in the southwestern part of Texas near the Texas-Mexico border. Crystal City, which is located near the southern border of the county, is the largest population center in Zavala County. It had a population of 7,138 which was approximately 65% of the county's total population at the 2010 Census. Crystal City is also the Zavala County seat and home to most of the commercial activity in the county. La Pryor, the other population center in the county is located near the northern county boundary—about 20 miles north of Crystal City-- and is approximately 100 miles southwest of San Antonio. La Pryor had roughly 1,600 people at the 2010 Census.

United States Census Bureau figures indicate very little population growth in Zavala County over the last 10 years. According to the Census, the population over the 10 year period 2000-

2010, grew by about 100 people. An examination of the 1980 and 1990 Censuses, show the county's population has been steady, with roughly the same number of residents in 1980 as in 2010.

The per capita income in Zavala County was about \$20,000 in 2012. Median household income was about \$25,000. The unemployment rate in the county has not changed and still remains stable at about 15%. Almost 37% of the county's population lives below the poverty line and roughly 50% of the county's residents under the age of 18 live in poverty.

About 80% of the county's population resides in Crystal City and La Pryor but most of the county's area is comprised of rural land. Roughly 814,000 acres—about 98% of the total land area in the county are acreage tracts. Most of this rural land is devoted to pastureland and ranching. Less than 1% of the acreage in the county is used for farming.

The average tax appraised value of single family residences in the county is \$30,000. The median tax appraised value is \$35,500. About 70% of single-family residences are owner-occupied and approximately 60% are classified as the lowest quality classification for appraisal purposes. The typical age of single-family residences exceeds 50 years and new construction in Zavala County has been minimal in the last decade. There have been less than 50 building permits for new single family homes since 2010.

The most important property characteristics affecting the values of residential and commercial real property in Zavala County are property age, property condition, and location. More specifically, the location's impact on value in Zavala County refers to a property's proximity to water drainage systems, paved streets, and access to government, medical and retail services. Properties located on paved streets with drainage that are close to the center of Crystal City tend to have higher values while those without these services and located further than a 1 mile radius from the center of Crystal City, tend to have lower values.

Most of the commercial activity in the county is in Crystal City. Most businesses are locally-owned and the business owners also own the real property. Many of the commercial improvements in the downtown area of Crystal City are at least 70 years old. Newer commercial properties are located on the outskirts of Crystal City along State Highway 83. By contrast, businesses located along State Highway 83 average 30 years in age. There are less than 25 active commercial accounts in La Pryor and a total of 52 commercial real accounts including vacant improvement's and land.

A portion of the Eagle Ford shale is located in Zavala County. As a result, drilling for gas in the county has intensified since 2010. The drilling activity has resulted in an increase in the number of commercial personal property accounts and a small rise in the number of commercial real accounts. It is anticipated that the Eagle Ford shale drilling will also result in residential growth and new construction. This growth, however, will be reflected for the first time in the 2013 or 2014 values.



Zavala County Appraisal District operates on a 3 year reappraisal cycle. Although some properties' values change annually, the district only updates its base appraisal schedules every 3 years. The schedule update results in new base unit prices being applied to each property resulting in a reappraisal.

Appraisers "work", that is, physically review one-third of the county each year so that by the end of the 3 year cycle--which coincides with the reappraisal year--the appraisers will have physically reviewed each property in the county at least once. The property inspection work schedule divides the county by geographic areas. Appraisers work the properties within the city limits of Crystal City and the large ranches within the county during the cycle's first year. Large ranches are defined as those over 700 acres. During the second year, appraisers work the town of Batesville and the county's rural subdivisions. In the last year of the cycle, appraisers work the city of La Pryor, and the abstracts that contain Zavala Land and Water and Cross S Ranch Subdivisions. The purpose of these physical inspections is to verify each property's characteristics which appraisers use to make appraisal judgments and to complete their appraisals.

During the inspections appraisers look for property additions and other physical changes such as signs of additional deterioration or (deterioration) cures. The appraisers take pictures of the properties and record all changes on field note cards. The changes are subsequently uploaded to the master property record database to insure property characteristics such as classification, size, and condition are the most current. This insures the current property characteristics are applied to the appropriate base unit prices in the appraisal schedule.

Zavala CAD is responsible for annually appraising all property at its market value. Zavala CAD operates on a 3 year reappraisal cycle, but to keep values current, some properties are reappraised more often. If Zavala CAD has reason to suspect that a property's market value has changed in a year other than the reappraisal year, it will reappraise the property and send the appropriate notices.

The appraisal district collects deed transactions from the Zavala County Clerk's office bimonthly. Zavala CAD regularly sends sales confirmation/verification letters to the grantor and grantee in each deed transfer but the district has also determined that careful inspection of the information contained in these deed transfers sometimes provide an indication of changes in property characteristics and, hence, its value. In addition, the appraisal district collects building permits from Crystal City and Zavala County on a monthly basis. The fact that new construction or improvements have been approved is a strong indication that a property's characteristics have or will change. Weekly research of the local newspaper also helps identify properties subject to changes and additions. Appraisers use the deed transfers, permits and research to create a list of properties that must be physically inspected in addition to those regularly scheduled for inspection in a particular year. These additional property inspections help appraisers keep each property's characteristics current which insures that appraisers apply the correct appraisal

schedules and appraisal judgments to the most current property characteristics; thereby, improving the chance that properties will be appraised annually at their market value.

### **Highest and Best Use Analysis**

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses. Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic misimprovements, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

## **VALUATION AND STATISTICAL ANALYSIS (Model Calibration)**

### **Cost Schedules**

All residential parcels in the district are valued with a replacement cost estimated from identical cost schedules based on the improvement classification system using a comparative unit method. The district's residential cost schedules are estimated from Marshall and Swift, a nationally recognized cost estimator service. These cost estimates are compared with sales of new improvements and evaluated from year to year and indexed to reflect the local residential building and labor market. Costs may also be indexed for neighborhood factors and influences that affect the total replacement cost of the improvements in a smaller market area based on evidence taken from a sample of market sales. The cost schedules are reviewed regularly as a result of recent state legislation requiring that the appraisal district's cost schedules be within a range of plus or minus 10% from nationally recognized cost schedules.

A review of the residential cost schedule is performed annually. As part of this review and evaluation process of the estimated replacement cost, newly constructed sold properties representing various levels of quality of construction in district are considered. The property data characteristics of these properties are verified and photographs are taken of the samples. CAD replacement costs are compared against, Marshall & Swift, a nationally recognized cost estimator, and the indicated replacement cost abstracted from these market sales of

comparably improved structures. The results of this comparison are analyzed using statistical measures, including stratification by quality and reviewing of estimated building costs plus land to sales prices. As a result of this analysis, a new regional multiplier or economic index factor and indications of neighborhood economic factors are developed for use in the district's cost process. This new economic index is estimated and used to adjust the district's cost schedule to be in compliance with local building costs as reflected by the local market.

### **Sales Information**

A sales file for the storage of "snapshot" sales data at the time of sale is maintained for real property. Residential vacant land sales, along with commercial improved and vacant land sales are maintained in a sales information system. Residential improved and vacant sales are collected from a variety of sources, including: district questionnaires sent to buyer and seller, field discovery, protest hearings, various sale vendors, builders, and realtors. A system of type, source, validity and verification codes has been established to define salient facts related to a property's purchase or transfer and to help determine relevant market sale prices. The effect of time as an influence on price was considered by paired comparison and applied in the ratio study to the sales as indicated within each neighborhood area. Neighborhood sales reports are generated as an analysis tool for the appraiser in the development and estimation of market price ranges and property component value estimates. Abstraction and allocation of property components based on sales of similar property is an important analysis tool to interpret market sales under the cost and market approaches to value. These analysis tools help determine and estimate the effects of change, with regard to price, as indicated by sale prices for similar property within the current market.

Monthly time adjustments are estimated based on comparative analysis using paired comparison of sold property. Sales of the same property were considered and analyzed for any indication of price change attributed to a time change or influence. Property characteristics, financing, and conditions of sale were compared for each property sold in the pairing of property to isolate only the time factor as an influence on price.

### **Statistical Analysis**

The residential valuation appraisers perform statistical analysis annually to evaluate whether estimated values are equitable and consistent with the market. Ratio studies are conducted on each of the residential valuation neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy--level and uniformity of value. Appraisal statistics of central tendency generated from sales ratios are evaluated and analyzed for each neighborhood. The level of appraised values is determined by the weighted mean ratio for sales of individual properties within a neighborhood, and a comparison of neighborhood weighted means reflect the general level of appraised value between comparable neighborhoods.

The appraiser, through the sales ratio analysis process, reviews every neighborhood annually. 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 appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, 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.

### **Market and Cost Reconciliation and Valuation**

Neighborhood analysis of market sales to achieve an acceptable sale ratio or level of appraisal is also the reconciliation of the market and cost approaches to valuation. Market factors are developed from appraisal statistics provided from market analyses and ratio studies and are used to ensure that estimated values are consistent with the market and to reconcile cost indicators. 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 particularly specified in a purely cost model.

The following equation denotes the hybrid model used:

$$MV = LV + (RCN - AD)$$

Whereas, in accordance with the cost approach, the estimated market value (MV) of the property equals the land value (LV), plus the replacement cost new of property improvements (RCN) less accrued depreciation (AD). As the cost approach separately estimates both land and building contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales. Thus, demand side economic factors and influences may be observed and considered. These market, or location adjustments, may be abstracted and applied uniformly within neighborhoods to account for locational variances between market areas or across a jurisdiction. Whereas, in accordance with the Market Approach, the estimated market value (MV) of the property equals the basic unit of property, under comparison, times the market price range per unit for sales of comparable property. For residential property, the unit of comparison is typically the price per square foot of living area or the price indicated for the improvement contribution. This analysis for the hybrid model is based on both the cost and market approaches as a correlation of indications of property valuation. A significant unknown for these two indications of value is determined to be the rate of change for the improvement contribution to total property value. The measure of change for this property component can best be reflected and based in the annualized accrued depreciation rate. This cost related factor is most appropriately measured by sales of similar property. The market approach, when improvements are abstracted from the sale price, indicates the depreciated value of the improvement component, in effect, measuring

changes in accrued depreciation, a cost factor. The level of improvement contribution to the property is measured by abstraction of comparable market sales, which is the property sale price less land value. The primary unknown for the cost approach is to accurately measure accrued depreciation affecting the amount of loss attributed to the improvements as age increases and condition changes. This evaluation of cost results in the depreciated value of the improvement component based on age and condition. The evaluation of this market and cost information is the basis of reconciliation and indication of property valuation under this hybrid model.

When the appraiser reviews a neighborhood, the appraiser reviews and evaluates a ratio study that compares recent sales prices of properties, appropriately adjusted for the effects of time, within a delineated neighborhood, with the value of the properties' based on the estimated depreciated replacement cost of improvements plus land value. The calculated ratio derived from the sum of the sold properties' estimated value divided by the sum of the time adjusted sales prices indicates the neighborhood level of appraisal based on sold properties. This ratio is compared to the acceptable appraisal ratio, 96% to 100%, to determine the level of appraisal for each neighborhood. If the level of appraisal for the neighborhood is outside the acceptable range of ratios, adjustments to the neighborhood are made.

If reappraisal of the neighborhood is indicated, the appraiser analyzes available market sales, appropriately adjusted for the apparent effects of time, by market abstraction of property components. This abstraction of property components allows the appraiser to focus on the rate of change for the improvement contribution to the property by providing a basis for calculating accrued depreciation attributed to the improvement component. This impact on value is usually the most significant factor affecting property value and the most important unknown to determine by market analysis. Abstraction of the improvement component from the adjusted sale price for a property indicates the effect of overall market suggested influences and factors on the price of improvements that were a part of this property, recently sold. Comparing this indicated price or value allocation for the improvement with the estimated replacement cost new of the improvement indicates any loss in value due to accrued forms of physical, functional, or economic obsolescence. This is a market driven measure of accrued depreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales that indicate the trending of this rate of change over certain classes of improvements within certain neighborhoods. Based on this market analysis, the appraiser estimates the annual rate of depreciation for given improvement descriptions considering age and observed condition. Once estimated, the appraiser recalculates the improvement value of all property within the sale sample to consider and review the effects on the neighborhood sale ratio. After an acceptable level of appraisal is achieved within the sale sample, the entire neighborhood of property is recalculated utilizing the indicated depreciation rates taken from market sales. This depreciation factor is the basis for trending all improvement values and when combined with any other site improvements and land value, brings the estimated property value through the cost approach closer to actual market prices as evidenced by recent sale prices available within a

given neighborhood. Therefore, based on analysis of recent sales located within a given neighborhood, estimated property values will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The estimated property values calculated for each update neighborhood are based on market indicated factors applied uniformly to all properties within a neighborhood. Finally, with all the market-trend factors applied, a final ratio study is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both update and non-update neighborhoods and verifies appraised values against overall trends as exhibited by the local market, and finally, for the school district as a whole.

### **TREATMENT OF RESIDENCE HOMESTEADS**

Beginning in 1998, the State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under that law, beginning in the second year a property receives a homestead exemption. Increases in the assessed value of that property are "capped." The value for tax purposes (assessed value) of a qualified residence homestead will be the LESSER of:

- the market value; or
- the preceding year's appraised value;  
PLUS 10 percent for each year since the property was re-appraised;  
PLUS the value of any improvements added since the last re-appraisal.

Assessed values of capped properties must be recomputed annually. If a capped property sells, the cap automatically expires as of January 1<sup>st</sup> of the year following sale of the property and the property is appraised at its market value. An analogous provision applies to new homes. While a developer owns them, unoccupied residences may be partially complete and appraised as part of an inventory. This valuation is estimated using the district's land value and the percentage of completion for the improvement contribution that usually is similar to the developer's construction costs as a basis of completion on the valuation date. However, in the year following changes in completion, occupancy, or sale, they are appraised at market value.

### **INDIVIDUAL VALUE REVIEW PROCEDURES**

#### **Field Review**

The appraiser identifies individual properties in critical need of field review through sales ratio analysis. Sold properties are field reviewed on a monthly and periodic basis to check for accuracy of data characteristics.

As the district's parcel count has increased through new home construction, and the homes constructed in the boom years of the late 70's and early 80's experience remodeling, the appraisers are required to perform the field activity associated with transitioning and high

demand neighborhoods. Some sales activity has also resulted in a more substantial field effort on the part of the appraisers to review and resolve sales outliers. Additionally, the appraiser frequently field reviews subjective data items such as quality of construction, condition, and physical, functional and economic obsolescence, factors contributing significantly to the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for comparability and consistency of values.

### **Office Review**

Once field review is completed, the appraiser conducts a routine valuation review of all properties as outlined in the discussion of ratio studies and market analysis. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. The percentage of value difference are noted for each property within a delineated neighborhood allowing the appraiser to identify, research and resolve value anomalies before final appraised values are released. Previous values resulting from a hearing protest are individually reviewed to determine if the value remains appropriate for the current year.

Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within his area of responsibility, the estimates of value go to noticing.

## **PERFORMANCE TESTS**

### **Sales Ratio Studies**

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios are generated for each neighborhood to allow the appraiser to review general market trends within their area of responsibility, and provide an indication of market appreciation over a specified period of time. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A, Single-Family Residences property.

### **Management Review Process**

Once the proposed value estimates are finalized, the appraiser reviews the sales ratios by neighborhood and presents pertinent valuation data, such as weighted sales ratio and pricing trends, to the appraisal department and the Chief Appraiser for final review and approval. This review includes comparison of level of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values have met preset appraisal guidelines appropriate for the tax year in question.

## **Commercial and Industrial Property Valuation Process**

---

### **INTRODUCTION**

#### **Appraisal Responsibility**

This mass appraisal assignment includes all of the commercially described real property which falls within the responsibility of the commercial valuation appraisers of the Zavala County Appraisal District and located within the boundaries of this taxing jurisdiction. Commercial appraisers appraise the fee simple interest of properties according to statute and court decisions. However, the affect of easements, restrictions, encumbrances, leases, contracts or special assessments are considered on an individual basis, as is the appraisal of any non exempt taxable fractional interests in real property (i.e. certain multi-family housing projects). Fractional interests or partial holdings of real property are appraised in fee simple for the whole property and divided programmatically based on their prorated interests.

#### **Appraisal Resources**

**Personnel** - The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse and special use (i.e. hotels, hospitals and, nursing homes).

**Data** - The data used by the commercial appraisers includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraisers includes actual income and expense data (typically obtained through the hearings process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data obtained from specific properties, market data publications are also reviewed to provide additional support for market trends.

### **PRELIMINARY ANALYSIS**

#### **Market Study**

Market studies are utilized to test new or existing procedures or valuation modifications in a limited sample of properties located in the district and are also considered and become the basis of updating whenever substantial changes in valuation are made. These studies target certain types of improved property to evaluate current market prices for rents and for sales of commercial and industrial real property. These comparable sale studies and ratio studies reveal whether the valuation system is producing accurate and reliable value estimates or whether procedural and economic modifications are required. The appraiser implements this methodology when developing cost approach, market approach, and income approach models.



Zavala CAD coordinates its discovery and valuation activities with adjoining appraisal districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts have been conducted to ensure compliance with state statutes. In addition, Zavala CAD administration and personnel interact with other assessment officials through professional trade organizations including the International Association of Assessing Officers, Texas Association of Appraisal Districts and its subchapter Texas Metropolitan Association of Appraisal Districts and the Texas Association of Assessing Officers. District staff strives to maintain appraisal skills and professionalism by continuing education in the form of courses that are offered by several professional associations such as International Association of Assessing Officers (IAAO), Texas Association of Assessing Officers (TAAO), and Texas Association of Appraisal Districts (TAAD) courses and in office webinars offered by the districts, software vendor or other organizations.

## **VALUATION APPROACH**

### **Land Value**

Commercial land is analyzed annually to compare appraised values with recent sales of land in the market area. If appraised values differ from sales prices being paid, adjustments are made to all land in that region. In Zavala County commercial property is generally appraised on a price square foot basis. Factors are placed on individual properties based on corner influence, depth of site, shape of site, easements across site, and other factors that may influence value. The land is valued as though vacant at the highest and best use.

### **Area Analysis**

Area data on regional economic forces such as demographic patterns, regional locational factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources.

### **Neighborhood Analysis**

The neighborhood and market areas are comprised of the land area and commercially classed properties located within the boundaries of this appraisal jurisdiction. These areas consist of a wide variety of property types including commercial and industrial properties. Neighborhood and area analysis involves the examination of how physical, economic, governmental and social forces and other influences may affect property values within subgroups of property locations. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. In the mass appraisal of commercial and industrial properties these subsets of a universe of properties are generally referred to as market areas, neighborhoods, or economic areas.

Economic areas are defined by each of the improved property use types (apartment, office,

retail, warehouse and special use) based upon an analysis of similar economic or market forces. These include but are not limited to similarities of rental rates, classification of projects (known as building class by area commercial market experts), date of construction, overall market activity or other pertinent influences. Economic area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income model valuation (income approach to value estimates) is economic area specific. Economic areas are periodically reviewed to determine if redelineation is required. The geographic boundaries as well as income, occupancy and expense levels and capitalization rates by age within each economic area for all commercial use types and its corresponding income model have been estimated for these properties.

There are 2 commercial markets in Crystal City. The downtown market consists of older and owner-occupied properties. Age and the condition of the improvements in this area are major factors that influence value. The market is located to the east and the west of the railroad tracks. The other commercial market is along State Highway 83. Traffic volume and access for customers are the biggest influences on value in this area.

### **Highest and Best Use Analysis**

The highest and best use is the most reasonable and probable use that generates the highest net to land and present value of the real estate as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and maximally productive. For improved properties, highest and best use is evaluated as improved and as if the site were still vacant. This perspective assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, is excess land, or a different optimum use if the site were vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to: office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis insures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived.

On the other hand, value in use represents the value of a property to a specific user for a specific purpose. This perspective for value may be significantly different than market value, which approximates market price under the following assumptions: (i) no coercion or undue influence over the buyer or seller in an attempt to force the purchase or sale, (ii) well-informed buyers and sellers acting in their own best interests, (iii) a reasonable time for the transaction to take place, and (iv) payment in cash or its equivalent.

## **Market Analysis**

A market analysis relates directly to examining market forces affecting supply and demand. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Current market activity including sales of commercial properties, new construction, new leases, lease rates, absorption rates, vacancies, allowable expenses (inclusive of replacement reserves), expense ratio trends, capitalization rate studies are analyzed to determine market ranges in price, operating costs and investment return expectations.

## **DATA COLLECTION / VALIDATION**

### **Data Collection Manuals**

Data collection and documentation for Commercial/Industrial property is continually updated, providing a uniform system of itemizing the multitude of components comprising improved properties. All properties located in Zavala CAD's inventory are coded according to a specific classification system and the approaches to value are structured and calibrated based on this coding system.

Annually, after the sales of property have been researched, verified, keyed into the database, and quality control has been completed, the sales data is summarized and produced into list form. The confirmed sales reports, known as the Commercial Improved and Vacant Land sales listings categorize the sales by property and use type, and sort the data by location and chronological order. Many of these sales are available to the public for use during protest hearings, and are also used by the Zavala CAD appraisers during the hearings process.

### **Sources of Data**

In terms of commercial sales data, Zavala CAD receives a copy of the deeds recorded in Zavala County and adjoining counties that convey commercially classed properties. These deeds involving a change in commercial ownership are entered into the sales information system and researched in an attempt to obtain the pertinent sale information. Other sources of sale data include the protest hearings process and local, regional and national real estate and financial publications.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to purchaser of the transaction. If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. If no information is provided, verification of many transactions is then attempted via phone calls to parties thought to be knowledgeable of the specifics of the sale. Other sources contacted are the brokers involved in the sale, property managers or commercial vendors. In other instances, sales verification is obtained from local

appraisers or others that may have the desired information. Finally, closing statements are often provided during the hearings process. The actual closing statement is the most reliable and preferred method of sales verification.

## **VALUATION ANALYSIS**

Model calibration involves the process of periodically adjusting the mass appraisal formula, 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.

### **Cost Schedules**

The cost approach to value is applied to 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 local comparable properties whenever possible. Cost models are typically developed based on the Marshall Valuation Service which indicates estimated hard or direct costs of various improvement types. Cost models include the derivation of replacement cost new (RCN) of all improvements represented within the district. These include comparative base rates, per unit adjustments and lump sum adjustments for variations in property description, design, and types of improvement construction. This approach and analysis also employs the sales comparison approach in the evaluation of soft or indirect costs of construction. Evaluating market sales of newly developed improved property is an important part of understanding total replacement cost of improvements. What total costs may be involved in the development of the property, as well as any portion of cost attributed to entrepreneurial profit can only be revealed by market analysis of pricing acceptance levels. In addition, market related land valuation for the underlying land value is important in understanding and analyzing improved sales for all development costs and for the abstraction of improvement costs for construction and development. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period of time. Because a national cost service is used as a basis for the cost models, locational modifiers and estimates of soft cost factors are necessary to adjust these base costs specifically for various types of improvements located in Zavala County. Thusly, local modifiers are additional cost factors applied to replacement cost estimated by the national cost service. Estimated replacement cost new will reflect all costs of construction and development for various improvements located in Zavala CAD as of the date of appraisal.

Accrued depreciation is the sum of all forms of loss affecting the contributory value of the improvements. It is the measured loss against replacement cost new taken from all forms of

physical deterioration, functional and economic obsolescence. Accrued depreciation is estimated and developed based on losses typical for each property type at that specific age. Depreciation estimates have been implemented for what is typical of each major class of commercial property by economic life categories. Estimates of accrued depreciation have been calculated for improvements with a range of variable years expected life based on observed condition considering actual age. These estimates are continually tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in the CAMA system. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. Effective age estimates are considered and reflected based on five levels or rankings of observed condition, given actual age.

Additional forms of depreciation such as external and/or functional obsolescence can be applied if observed. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to a specific condition adequacy or deficiency, property type or location and can be developed via ratio studies or other market analyses.

The result of estimating accrued depreciation and deducting that from the estimated replacement cost new of improvements indicates the estimated contributory value of the improvements, adding the estimated land value, as if vacant, to the contributory value of the improvements indicates a property value by the cost approach. Given relevant cost estimates and market related measures of accrued depreciation, the indicated value of the property by the cost approach becomes a very reliable valuation technique.

### **Income Models**

The income approach to value is applied to those real properties which are typically viewed by market participants as "income producing", and for which the income methodology is considered a leading value indicator. The first step in the income approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from actual rent data furnished by property owners and from local market surveys conducted by the district and by information from area rent study reviews. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and local market survey trends. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. This feature may also provide for a reasonable lease-up period for multi-tenant properties, where applicable. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an indication of estimated annual effective gross rent to the

property.

Next, a secondary income or service income is considered and, if applicable, calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to effective gross rent to arrive at an effective gross income, when applicable.

Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of prudent management. An allowance for non-recoverable expenses such as leasing costs and tenant improvements may be included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Relevant expense ratios are developed for different types of commercial property based on use and market experience. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for all operating expenses, such as ad valorem taxes, insurance, and common area and property maintenance. In comparison, a general office building is most often leased on a base year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. As a result, expense ratios are implemented and estimated based on observed market experience in operating various types of commercial property.

Another form of allowable expense is the replacement of short-lived items (such as roof or floor coverings, air conditioning or major mechanical equipment or appliances) requiring expenditures of lump sum costs. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized basis as stabilized expenses. When performed according to local market practices by commercial property type, these expenses when annualized are known as replacement reserves. For some types of property, typical management does not reflect expensing reserves and is dependent on local and industry practices.

Subtracting the allowable expenses (inclusive of non-recoverable expenses and replacement reserves when applicable) from the annual effective gross income yields an estimate of annual net operating income to the property.

Return rates and income multipliers are used to convert operating income expectations into an estimate of market value for the property under the income approach. These include income multipliers, overall capitalization rates, and discount rates. Each of these multipliers or return rates are considered and used in specific applications. Rates and multipliers may vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market for individual income property types and uses. These procedures are supported and documented based on analysis of market sales for these property types.

Capitalization analysis is used in the income approach models to form an indication of value. This methodology involves the direct capitalization of net operating income as an indication of market value for a specific property. Capitalization rates applicable for direct capitalization method and yield rates for estimating terminal cap rates for discounted cash flow analysis are derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived and estimated from the built-up method (band-of-investment). This method relates to satisfying estimated market return requirements of both the debt and equity positions in a real estate investment. This information is obtained from available sales of property, local lending sources, and from real estate and financial publications.

Rent loss concessions are estimated for specific properties with vacancy problems. A rent loss concession accounts for the impact of lost rental income while the building is moving toward stabilized occupancy. The rent loss is calculated by multiplying the rental rate by the percent difference of the property's stabilized occupancy and its actual occupancy. Build out allowances (for first generation space or retrofit/second generation space as appropriate) and leasing expenses are added to the rent loss estimate. The total adjusted loss from these real property operations is discounted using an acceptable risk rate. The discounted value (inclusive of rent loss due to extraordinary vacancy, build out allowances and leasing commissions) becomes the rent loss concession and is deducted from the value indication of the property at stabilized occupancy. A variation of this technique allows a rent loss deduction to be estimated for every year that the property's actual occupancy is less than stabilized occupancy.

### **Sales Comparison (Market) Approach**

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized not only for estimating land value but also in comparing sales of similarly improved properties to parcels on the appraisal roll. As previously discussed in the Data Collection / Validation section of this report, pertinent data from actual sales of properties, both vacant and improved, is pursued throughout the year in order to obtain relevant information which can be used in all aspects of valuation. Sales of similarly improved properties can provide a basis for the depreciation schedules in the Cost Approach, rates and multipliers used in the Income Approach, and as a direct comparison in the Sales Comparison Approach. Improved sales are also used in ratio studies, which afford the appraiser an excellent means of judging the present level and uniformity of the appraised values.

### **Final Valuation Schedules**

Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models in the CAMA system for utilization on all

commercial properties in the district. Market factors reflected within the cost and income approaches are evaluated and confirmed based on market sales of commercial and industrial properties. The appraisers review the cost, income, and sales comparison approaches to value for each of the types of properties with available sales information. The final valuation of a property is estimated based on reconciling these indications of value considering the weight of the market information available for evaluation and analysis in these approaches to value.

### **Statistical and Capitalization Analysis**

Statistical analysis of final values is an essential component of quality control. This methodology represents a comparison of the final value against the standard and provides a concise measurement of the appraisal performance. Statistical comparisons of many different standards are used including sales of similar properties, the previous year's appraised value, audit trails, value change analysis and sales ratio analysis.

Appraisal statistics of central tendency and dispersion generated from sales ratios are calculated for each property type with available sales data. These summary statistics including, but not limited to, the weighted mean, provide the appraisers an analytical tool by which to determine both the level and uniformity of appraised value of a particular property type. The level of appraised values can be determined by the weighted mean for individual properties within a specific type, and a comparison of weighted means can reflect the general level of appraised value.

The appraisers review every commercial property type annually through the sales ratio analysis process. The first phase involves ratio studies that compare the recent sales prices of properties to the appraised values of the sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the appraised values. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverables and replacement reserves), net operating income and capitalization rate and multipliers are continuously reviewed. Income model estimates and conclusions are compared to actual information obtained on individual commercial and industrial income properties during the protest hearings process, as well as with information from published sources and area property managers and owners.



## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### **Field Review**

The date of last inspection, extent of that inspection, and the Zavala CAD appraiser responsible are listed in the CAMA system. If a property owner disputes the District's records concerning this data in a protest hearing, CAMA may be altered based on the credibility of the evidence provided. Normally, a new field check is then requested to verify this information for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file for review

Commercial appraisers are somewhat limited in the time available to field review all commercial properties of a specific use type. However, a major effort is made by appraisers to field review as many properties as possible or economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or wide variations in sale prices. Field review of real property accounts is accomplished while business personal property is reviewed and inspected in the field. Additionally, the appraisers frequently field review subjective data items such as building class, quality of construction (known as cost modifiers), condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values.

### **Office Review**

Office reviews are completed on properties subject to field inspections and are performed in compliance with the guidelines required by the existing classification system. Office reviews are typically limited by the available market data presented for final value analysis. These reviews summarize the pertinent data of each property as well as comparing the previous value to the proposed value conclusions of the various approaches to value. These evaluations and reviews show proposed value changes, income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, and a three years sales history (USPAP property history requirement for non residential property). The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district policies. This review is performed after preliminary ratio statistics have been applied. If the ratio statistics are generally acceptable overall the review process is focused primarily on locating skewed results on an individual basis. Previous values resulting from protest hearings are individually reviewed

to determine if the value remains appropriate for the current year based on market conditions. Each appraiser's review is limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land).

Once the appraiser is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type.

## **PERFORMANCE TESTS**

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market prices. In a ratio study, market values (value in exchange) are typically represented with the range of sale prices, i.e. a sales ratio study. Independent, expert appraisals may also be used to represent market values in a ratio study, i.e. an appraisal ratio study. If there are not enough examples of market price to provide necessary representativeness, independent appraisals can be used as indicators for market value. This can be particularly useful for commercial or industrial real property for which sales are limited. In addition, appraisal ratio studies, can be used for properties statutorily not appraised at market value, but reflect the use-value requirement. An example of this are multi-family housing projects subject to subsidized rent provisions or other governmental guarantees as provided by legislative statutes (affordable housing) or agricultural lands to be appraised on the basis of productivity or use value.

Zavala CAD has adopted the policies of the IAAO STANDARD ON RATIO STUDIES, circa July 1999 regarding its ratio study standards and practices. Ratio studies generally have six basic steps: (1) determination of the purpose and objectives, (2) data collection and preparation, (3) comparing appraisal and market data, (4) stratification, (5) statistical analysis, and (6) evaluation and application of the results.

### **Sales Ratio Studies**

Sales ratio studies are an integral part of estimating equitable and accurate market values, and ultimately property assessments for these taxing jurisdictions. The primary uses of sale ratio studies include the determination of a need for general reappraisal; prioritizing selected groups of property types for reappraisal; identification of potential problems with appraisal procedures; assist in market analyses; and, to calibrate models used to estimate appraised values during valuation or reappraisal cycles. However, these studies cannot be used to judge the accuracy of an individual property appraised value. The Zavala County Appraisal Review Board may make individual value adjustments based on unequal appraisal (ratio) protest evidence submitted on a case-by-case basis during the hearing process.

Overall sales ratios are generated by use type semi-annually (or more often in specific areas) to allow appraisers to review general market trends in their area of responsibility and for the Property Value Study (PVS) from the Property Tax Assistance Division (PTAD) of the

Comptroller's Office. In many cases, field checks may be conducted to insure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics. These ratio studies aid the appraisers by providing an indication of market activity by economic area or changing market conditions (appreciation or depreciation).

### ***Comparative Appraisal Analysis***

The commercial appraiser performs an average unit value comparison in addition to a traditional ratio study. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Appraiser's average unit prices of sales and average unit appraised values of the same parcels and the comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various economic areas. In this way, overall appraisal performance is evaluated geographically, by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These sales and equity studies are performed prior to final appraisal and to annual noticing.

## **Business Personal Property Valuation Process**

---

### **INTRODUCTION**

#### **Appraisal Responsibility**

There are four different personal property types appraised by the district's personal property section: Business Personal Property accounts; leased assets; vehicles and aircraft; and multi-location assets.

- **Data** - A common set of data characteristics for each personal property account in Zavala CAD is collected in the field and data is entered on the districts computer software. The property characteristic data drives the computer-assisted personal property appraisal (CAPPA) system. The personal property appraisers collect the field data and maintain property files making updates and changes gathered from field inspections, newspapers, property renditions, sales tax permit listing and interviews with property owners.

### **VALUATION APPROACH**

#### **Highest and Best Use Analysis**

The highest and best use of property is the reasonable and probable use that supports the greatest income and the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of personal property is normally its current use.

## **DATA COLLECTION/VALIDATION**

### **Data Collection Procedures**

Personal property data collection procedures are published and distributed to all appraisers involved in the appraisal and valuation of personal property. The appraisal procedures are reviewed and revised to meet the changing requirements of field data collection.

### ***Sources of Data***

#### **Business Personal Property**

The district's property characteristic data was collected through a massive field data collection effort coordinated by the district over the recent past and from property owner renditions. From year to year, reevaluation activities permit district appraisers to collect new data via an annual field inspection. This project results in the discovery of new businesses, changes in ownership, relocation of businesses, and closures of businesses not revealed through other sources. Tax assessors, city and local newspapers, and the public often provide the district information regarding new personal property and other useful facts related to property valuation.

#### **Vehicles**

The Texas Department of Transportation (TxDOT) Title and Registration Division records are utilized to determine ownership and jurisdiction. Other sources of data include property owner renditions, vehicle value guide books and field inspections.

#### **Leased and Multi-Location Assets**

The primary source of leased and multi-location assets is property owner renditions of property. Other sources of data include field inspections.

## **VALUATION AND STATISTICAL ANALYSIS (model calibration)**

### **Cost Schedules**

Cost schedules are developed based on the SIC code by the Property Tax Assistance Division of the Comptroller's Office and by district personal property valuation appraisers. The cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot

format, but some exception, are in an alternate price per unit format, such as per room for hotels.

### ***Statistical Analysis***

Summary statistics including, but not limited to, the median, weighted mean, and standard deviation provide the appraisers an analytical tool by which to determine both the level and uniformity of appraised value by SIC code. Review of the standard deviation can discern appraisal uniformity within SIC codes.

### ***Depreciation Schedule and Trending Factors:***

#### **Business Personal Property**

Zavala CAD's primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either developed from property owner reported historical cost or from CAD developed valuation models. The trending factors used by the CAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by Zavala CAD are also based on published valuation guides. The index factors and percent good depreciation factors are used to develop present value factors (PVF), by year of acquisition, as follows:

$$\text{PVF} = \text{INDEX FACTOR} \times \text{PERCENT GOOD FACTOR}$$

The PVF is used as an "express" calculation in the cost approach. The PVF is applied to reported historical cost as follows:

$$\text{MARKET VALUE ESTIMATE} = \text{PVF} \times \text{HISTORICAL COST}$$

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market and reflect current economic pressures of supply and demand.

#### **Vehicles**

Value estimates for vehicles are provided by an outside vendor and are based on NADA Trade in book values, and there are also considerations available for high mileage. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

#### **Leased and Multi-Location Assets**

Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then NADA Trade in book values are used. Assets that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Office Review***

#### **Business Personal Property**

A district valuation computer program exists in a mainframe environment that identifies accounts in need of review based on a variety of conditions. Property owner renditions, accounts with field or other data changes, accounts with prior hearings, new accounts, and SIC cost table changes are all considered. The accounts are processed by the valuation program and pass or fail preset tolerance parameters by comparing appraised values to prior year and model values. The appraisers review accounts that fail the tolerance parameters.

#### **Neighborhood Analysis**

Commercial personal property accounts are associated with the businesses located in the 2 business districts: central business or downtown Crystal City and the business district along Highway 83. These accounts represent inventory, furniture, and fixtures. They are valued similarly using schedules appropriate to the classification of the type of business. The same technique also applies for commercial personal property accounts in La Pryor and Batesville communities.

## **PERFORMANCE TESTS**

### **Ratio Studies**

Every other year, the Property Tax Assistance Division (PTAD) of the state comptroller's office conducts a property value study (PVS). The PVS is a ratio study used to gauge appraisal district performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative personal property values. These values are then compared to Zavala CAD's personal property values and ratios are indicated.

## **Minerals (Oil and Gas Reserves) Valuation Process**

---

### **INTRODUCTION**

#### **Appraisal Responsibility**

Minerals-in-place (oil and gas reserves) are real property. Appraisal of minerals, oil and gas reserves, is based on estimating the present value of the economically recoverable reserves of oil and gas. Mineral rights are property rights and may be separable property interests from the land surface property rights. Minerals being produced are a tangible asset and are appraised for

ad valorem taxation. The valuation of minerals-in-place is based on estimating the discounted net present value of the oil and gas production over the economic life of the well(s). Basically, this method of valuation is an income approach using discounted cash flow analysis methodology. Oil and Gas Properties are also marketed based on proven reserves and the unit of comparison in this market is considered in barrels of oil or in cubic feet of natural gas. The market approach is based on sales of property based on barrels of proven reserves.

Mineral interests are commonly divided into property interests known as working interests and royalty interests. The valuation of this property begins with the valuation of the mineral lease and is divided into the property interests according to division orders for each lease. It is the goal and purpose of the CAD to identify every producing mineral property interest within the district and estimate the market value of each property interest listed on the roll.

### **Appraisal Resources**

- CAD has a professional service contract with Pritchard & Abbott, Inc.

Pritchard & Abbott, Inc. provides all the information to Zavala CAD

- Data – A common set of data characteristics for each mineral property account in Zavala CAD is collected from the Texas Railroad Commission Records and data provided to Pritchard & Abbott, Inc., The Railroad Commission records are searched to discover new leases as of January 1 of the year and legal descriptions are gathered to determine the location of the lease within Zavala CAD jurisdictional boundaries. Records are also reviewed for changes in production for existing wells and for abandoned wells with salvage value for equipment, tanks, and tubular goods. Production history for each mineral lease is gathered from IHS Energy production records and from the Texas Railroad Commission. Division Orders on each lease are requested annually from lease operators and checked against the appraisal roll for accuracy of owner name, address, and ownership percentage interest. To assist with operating information, an annual Confidential Lease Operating Expense Survey is mailed to the operator of each, active lease requesting lease-specific operating information on oil and gas pricing, operating expenses, and possible market sales of leases.

To assist with the economic parameters influencing these properties, general economic data is gathered for the valuation process. The method of appraisal for minerals-in-place is the discounted cash flow method which looks at the net present value of operating the lease. Current interest rates, market rates of return and levels of discounting the investment are factors to consider when evaluating the returns necessary to attract investment capital for this type property. Capitalization rates are estimated based on data from the general market for oil and gas property. West Texas Intermediate Crude product prices are tracked on a daily basis from Plains Marketing, a regional product gathering and marketing company and the primary buyer for oil and gas produced in the area. Other capital market information and return rates for investors participating in the

oil and gas market is taken from the Oil and Gas Journal, Ibbotson's SBBI Valuation Edition, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, and Value Line Investment Survey "Ratings and Reports".

## **VALUATION AND STATISTICAL ANALYSIS (model calibration)**

### **Pricing, Operating Expenses and Reserve Analysis**

Crude oil and natural gas prices are important information in the valuation of mineral property because these prices help determine income to the lease and are a significant factor in determining the economic life of the production from the lease. Price analysis and estimates for crude oil and natural gas produced is based on the previous year's average price as per Texas Property Tax Code (Sec. 23.175). Prices paid for production for each lease is analyzed and averaged to evaluate the estimated average for the area.

Lease operating expenses are estimated based on rendered information and actual operating cost and expense from surveys of lease operators in Zavala CAD. Decline curve analysis estimates the rate of production decline and is formulated using past production operating expenses and recent operating parameters such as water production, lease repairs, and secondary recovery efforts. Current operating income and expenses for the lease are considered and estimated in a discounted cash flow model to allow the appraiser to evaluate and estimate the net present value of producing oil and gas from the lease. Capitalization rates and discounting return rates are estimated for each lease based upon the particular risks inherent with production of oil and gas from that property. These risks may vary considerably from one lease to another depending several factors influencing the production from that particular lease. The discounted cash flow model method will allow the appraiser to evaluate current market value of the lease based on the estimated recoverable reserves. This methodology is approved and recommended by the Property Tax Assistance Division (PTAD) of the Comptroller's Office and is a recognized method of appraisal by industry standards. We have utilized the discounted cash flow model to estimate the market value of each lease located in Zavala CAD.

### **Value Review Procedures**

The method of value review for this type of property is based on the review of the factors estimated within the discounted cash flow analysis methodology such as the discount rate, product prices, and operating expenses. Evaluation and verification of these economic factors as to their validity within current economic times and based on current capital requirements for investment in this type property is re-confirmed and reviewed for reasonableness. Sales of mineral properties are considered but adequate sale data is usually not available due to difficulty in confirming sales. The market for this type of property is neither an active nor an efficient market, there are very few participants and pricing information is mostly confidential. There is no central source for tracking these transactions and property owners are reluctant to



reveal market information concerning prices paid or terms of the transaction. Because of a lack of market sales on mineral property, appraised values are regularly compared to similar properties within the same production field, field of exploration, strata of formation, or production history and expense level.

Ratio studies are a source of comparison to evaluation level and uniformity of appraisal. When market sales are available the ratio study is based on a comparison of the appraised value to the sale price. For mineral property, which lacks available market sales, a ratio study is a comparison of another appraisal opinion with the opinion of the district to determine level and uniformity of appraisal. The Property Tax Assistance Division (PTAD) of the Comptroller's Office conducts an annual ratio study of selected mineral properties to gauge the districts appraisal performance. The PTAD utilizes the same valuation methodology to appraise individual mineral properties. This opinion of value is then utilized as market evidence with the same significance as if the property sold for that value. The estimated value of the property by Zavala CAD is compared to the appraisal by the PTAD to calculate the ratio and the indicated level of appraisal. This study indicates the median and mean levels of appraisal for mineral property and is considered reliable as a review and evaluation tool.

## **Utility Property Valuation Process**

---

### **INTRODUCTION**

#### **Appraisal Responsibility**

Utility properties are the tangible assets of various businesses including electric production, transmission, and distribution companies, railroads, petroleum product gathering and delivery pipelines, telephone and communication providers and others. The valuation of these properties is considered to be complex due to the involvement of both tangible and intangible property elements that comprise these businesses and due to the size of some of the utilities that are regional and national companies. The appraisal of these companies becomes complex when considering the valuation of the property as a unit in place, evaluating the property by the approaches to value at the company level. Once the estimated value of the unit is estimated, the estimated market value is allocated based on the tangible property assets that are located within Zavala CAD.

#### **Appraisal Resources**

- CAD has a professional service contract with Pritchard & Abbott, Inc.  
**Pritchard & Abbott, Inc. (P & A) provides all information to Zavala CAD**

Data - A common set of data characteristics for each utility property account in Zavala CAD is collected from the various government regulatory agency records, field inspections, and property owner renditions. This data is provided to P & A for their workup. Individual company financial information is gathered through industry specific governmental filings such as Federal Energy Regulatory Commission Reports, Securities and Exchange Commission 10-k filings, and Public Utility Commission publications. Other company information is gathered from annual reports, internal appraisals, and other in-house and industry publications. Property owner renditions are requested to document and list property owned and located in our particular jurisdictions (i.e.: track mileage, number of meters, pipeline size and mileage, substation and transmission capacity, etc.). The property characteristic data drives the computer-assisted appraisal of the property.

The appraisal of utility property utilizes three-approach analysis to form an opinion of value for the property. Financial and capital market information is pertinent to understanding factors affecting valuation of complex property. Gathering financial data to attempt to understand investor and corporate attitudes for capital return expectations giving considering return components such as current interest rates, capital debt structure, bond market rates, and capital supply and demand trends. These financial factors result in overall return rates and capital structure for these companies and affects capitalization rates. The weighted average cost of capital is the most commonly used method of estimating capitalization rates for utility properties. Capitalization rates are estimated using capital return expectations from various publications: Ibbotson's SBBI Valuation Edition, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, Value Line Investment Survey "Ratings and Reports". Industry specific information is also gathered from web sites, publications, periodicals, and reference manuals. Zavala CAD utilizes the weighed average cost of capital to estimate the capitalization rate for utility appraisal under the income approach.

## **VALUATION AND STATISTICAL ANALYSIS (model calibration)**

### **Approaches to Valuation, Reconciliation**

Valuation of tangible assets for utility companies relies primarily on indications of value based on the cost and income approaches to value under the unit value approach. This methodology involves developing and estimating market value considering the entirety of the company's tangible assets and resolving an allocated value for that portion of specific tangible assets located in particular tax jurisdictions. The valuation opinion is based on three approach analysis utilized for the indicated unit appraisal of all company tangible assets, then an estimated allocation of unit value for only assets located in the district and particular jurisdictions. This methodology is approved and recommended by the Property Tax Assistance Division (PTAD) of the Comptroller's Office and is an accepted standard within the industry and appraisal community.

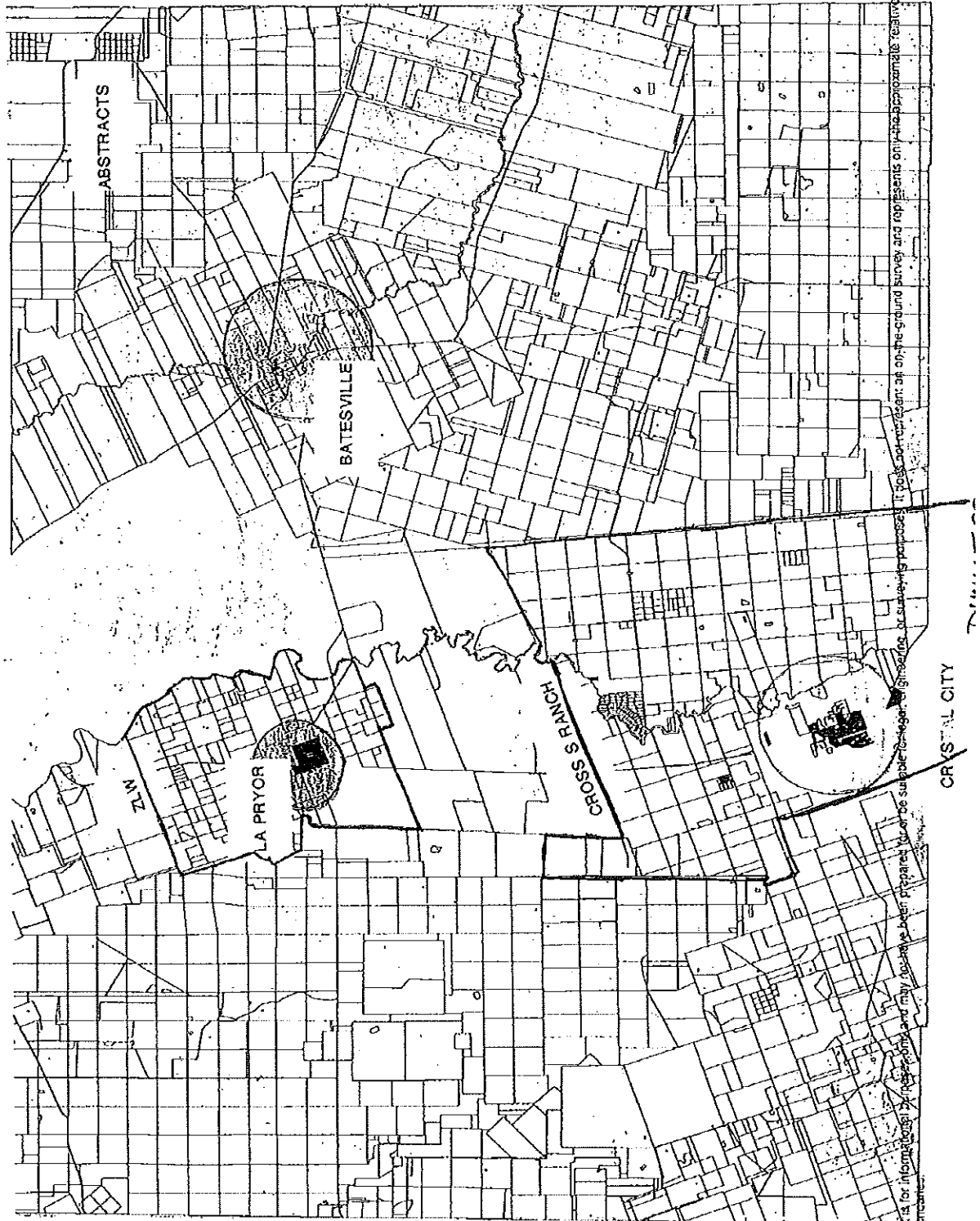
## **Value Review Procedures**

Review of the valuation of utility property is based on verifying economic and financial factors utilized in the methodology as relevant to current capital markets and that these factors reflect current return expectations. Market sales of utility properties do occur and are a good source for comparison and review when the price of the tangible assets can be abstracted or allocated from the selling price. Typically, the sale of utility companies involve significant intangible property assets such as customer base, goodwill, favorable contracts, name recognition, etc. and the contributory value and allocation of these assets is subjective and unknown. In Texas, intangible property assets are exempt from taxation and must not be included on the appraisal roll as taxable property. Therefore, because of the lack of specific market information on sales of utility properties, appraised value is regularly compared to the valuation of similar property within the same set of property characteristics, business type and size. More of comparison for equity concerns on valuation rather than the full recognition of a market level certainty about appraisal level. Of course, the estimated value is based on recognized methodology for considering the valuation of these tangible assets, but true market confirmation of these factors may not be possible due to minimal market knowledge and experience.

Ratio studies are also a method of review for relevance of appraisal valuation to market value. Again, in the absence of full disclosure of prices paid and without the abstraction of prices paid for the tangible asset components from recent utility property acquisitions or sales, market based analysis and review is not possible. Ratio studies for utility property must rely on a comparison of one appraisal opinion as the basis for the reasonable property valuation with the district's appraised value to determine the ratio for level and uniformity of appraisal. The PTAD conducts the annual ratio study of selected utility properties to gauge the appraisal district's performance. The PTAD utilizes the same valuation methodology to estimate appraisal valuations of utility properties and the results, when compared to the appraisal valuation estimated by Zavala CAD for these properties yield ratios. This ratio study of certain utility properties indicates the level and uniformity of appraisal for this category of property.

Zavala County 3-year Re-appraisal cycle

Reappraisal Plan  
Central Appraisal District of ZAVALA COUNTY APPRAISAL DISTRICT  
Page 44



City of Crystal City subdivisions are appraised in the 1<sup>st</sup> year of the re-appraisal cycle, along with permits and rechecks etc. The abstract accounts are on-going within the three (3) year reappraisal cycle, due to lack of entrance by owners.

Appraised September 2013- April 2014

Towns of Batesville and La Pryor subdivisions are re-appraised in the 2<sup>nd</sup> year along with building permits, re-checks and any county subdivisions.

Appraised September 2014 – April 2015

The larger abstract/county subdivisions (ZL&W and Cross S-Ranch) are in the last re-appraisal cycle and those are re-appraised in the 3<sup>rd</sup> year along with permits and re-checks etc.

Appraised September 2015 – April 2016

Business Personal Property is appraised every year, Mobile Home accounts are appraised at the same time that the real property account is appraised. Accounts that have certain appraisal - Property Group Code, are also reviewed and or appraised on a yearly basis.

**ZAVALA CAD ANNUAL WORK PLAN**  
**2015-2016**

**SEPTEMBER, 2014**

1. Appraiser's begin on-site inspections for the 2015 appraisal year
2. Appraiser's work on ownership changes, mail sales letters and make any address corrections (This process is on going up to the time we send out the notices of value).
3. Data Entry is backed up on a daily basis ( Includes System Backup)
4. Appraisal data is maintained by each appraiser as ZCAD is a small district with limited staff where departments are not designated.
5. Supplemental changes are done by each appraiser and updated by the Tax collection department ( This process is also on-going as these changes are done).
6. Hold monthly BOD meetings as scheduled. (ZCAD is an appraisal and collections office).
7. Provide assistance to property owners and the general public by answering phone calls and assisting with walk in customers, real estate agents, landmen etc.
8. Maintain records management
9. Publicize and Hold Budget Hearings and budget approval
10. BOD must adopt following year's budget before September 15.

**OCTOBER 2014**

- 1 2014 Tax Collections Begin
2. Work on PTAD Short Form reports for submission

**MID DECEMBER, 2014**

1. Begin planning sales ratio studies for all areas within the CAD.
2. Gather current sales data from sales confirmation letters, deed records and other sources.

**JANUARY TO MARCH 2015**

1. Mail homestead applications, special-use valuation applications, Personal Property renditions, exemption applications and other required forms
2. Complete field inspections as provided by the reappraisal plan
3. Begin running sales ratio reports. (CAD values and sales information).
4. Identify necessary schedule adjustments.
5. Begin update of USPAP report (Mass Appraisal Report).
6. Begin working renditions.
7. Submit the Electronic Property Transaction Submission to the

- PTAD by February 1st.
8. Publish Ad's on availability of exemptions, rendition requirements, special appraisals and tax deferrals on local newspaper
  9. Obtain "cap rate" to be used in 2015 appraisals.
  10. Work with Eagle Appraisal firm to determine dates for AG Advisory Council meetings and schedule those meetings
  11. Schedule ARB members for mandatory PTAD trainings are met and make sure that certificates of completion are on file.

### **MARCH THRU APRIL 2015**

1. Continue sales ratio reports
2. Refine sales analysis and mass appraisal schedules.
3. Statistically test schedules.
4. Complete data entry of all reappraised changes
5. Assist field appraiser's with reappraisal functions
6. Finalize all field work and appraisal data collection activities.
7. Execute mass appraisal /maintenance activities as required.
8. Prepare for mailing 2015 Notices of Value.
9. Mail appropriate letters concerning homesteads, special-use appraisals, etc.
10. Continue working renditions
11. Publish Ad's on protest procedures and deadlines in local newspaper
12. Provide preliminary estimated values to taxing entities on all Real Property, Personal Property and Mineral accounts.

### **MAY THRU JUNE 2015**

1. Mail notices of value
2. Hold informal hearings
3. Respond to property owners' inquiries, protests and questions from notice mailings.
4. Mail notices of ARB hearing appointment letter
5. Hold ARB hearings
6. Mail ARB certified change/no change orders.
7. Mail appropriate ARB pending decision letters.
8. Mail penalty letters on non-rendered personal property.
9. Present preliminary budget to BOD.

### **JULY 2015**

1. Complete the process of mailing certified ARB orders.
2. Enter into computer all changes as ordered by ARB.
3. ARB approval of appraisal records by July 20th.

4. Certification of appraisal records and values to taxing units by July 25th.

### **AUGUST 2015**

1. Submit the Electronic Property Transaction Submission and the Electronic Appraisal Roll Submission to the PTAD by August 1st.
2. Appraisal staff request vacation time and prepare their children to attend another school year
3. Compile all necessary information for calculating Effective and Rollback tax rates for the calculation process.
4. Publish 1/4 page Ad's in the local newspaper regarding the Tax Rate calculations

### **SEPTEMBER 2015**

The next 2016 appraisal year process begins and the above schedule is followed again. However, the appraisal areas changes in accordance to the ZCAD 3 (Three) year appraisal cycle.



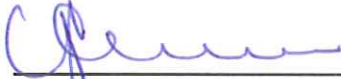
**LIMITING CONDITIONS:**

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

1. The appraisals were prepared exclusively for ad valorem tax purposes.
2. The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the property appraised were performed as staff resources and time allowed. Some interior inspections of property appraised were performed at the request of the property owner and required by the district for clarification purposes and to correct property descriptions.
3. Validation of sales transactions was attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential sales data obtained from vendors was considered reliable.

***Certification Statement:***

"I, Yolanda Cervera, Chief Appraiser for the Zavala County 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 that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law."



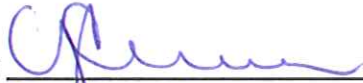
Yolanda Cervera, CCA, RPA, RTA  
Zavala CAD - Chief Appraiser

PUBLIC MEETING HELD ON : \_\_AUGUST 18, 2014\_\_

APPROVED BY: ZAVALA COUNTY APPRAISAL DISTRICT  
BOARD OF DIRECTORS

PRESENTED BY: YOLANDA CERVERA  
ZAVALA CAD - CHIEF APPRAISER

CHIEF APPRAISER:



BOARD CHAIRMAN:





**PRITCHARD & ABBOTT, INC.**  
**VALUATION CONSULTANTS**

---

4900 OVERTON COMMONS COURT / FT. WORTH, TEXAS 76132-3687 / PHONE: (817) 926-7861 / FAX: (817) 927-5314

July 1, 2014

RECEIVED

JUL 19 2014

Zavala CAD

To: Appraisal Services Clients

Re: Reappraisal Plan For Tax Years 2015 and 2016

Enclosed is a copy of the Reappraisal Plan for Tax Years 2015 and 2016; and, this is required by S.B. 1652 passed in May 2005. This Senate Bill enacted by the Legislature of the State of Texas requires the Board of Directors of an Appraisal District to develop, biennially, a written plan for periodic reappraisal of all property within the District bound areas according to requirements of the Tax Code Section 25.18.

Since our firm provides appraisal services to you for certain property types, we are providing you with a copy of information that addresses all of the complex property services we provide. The enclosed Reappraisal Plan includes these services: mineral interest, industrial, utility and personal property appraisal and appraisal-related materials for your plan. Appraisal services for some of these property types may not be applicable to your Appraisal District.

Should you want to discuss the content of this report, please call Engineering Services at our Fort Worth Office toll-free number which is 1.800.880.7861.

Very truly yours,

Victor W. Henderson, P.E.  
Manager/Engineering Services

VWH/jh

Enclosure



**PRITCHARD & ABBOTT, INC.**  
**VALUATION CONSULTANTS**

## **S.B. 1652\* BIENNIAL REAPPRAISAL PLAN**

**FOR THE ANNUAL APPRAISAL FOR  
AD VALOREM TAX PURPOSES OF  
MINERAL, INDUSTRIAL, UTILITY AND  
RELATED PERSONAL PROPERTY**

**For Tax Years:**

**2015 and 2016**

**Originally Printed: July 1, 2014**

\*Senate Bill 1652 passed by the Texas Legislature, 79th Regular Session in 2005, amending Section 6.05 of the Texas Property Tax Code, by adding Subsection (i).

TABLE OF CONTENTS

<u>Item</u>	<u>Page</u>
P&A POLICY STATEMENT .....	2
PREAMBLE .....	4
ETHICS RULE .....	5
RECORD KEEPING RULE .....	8
SCOPE OF WORK RULE .....	9
JURISDICTIONAL EXCEPTION RULE .....	11
MASS APPRAISAL (USPAP STANDARD 6) .....	12
REAPPRAISAL OF MINERAL PROPERTY .....	15
REAPPRAISAL OF INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY .....	21

POLICY STATEMENT OF PRITCHARD & ABBOTT, INC., ON THE  
REAPPRAISAL OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY

In 2005, the Texas Legislature, in 79<sup>th</sup> Regular Session, authorized in S.B. 1652 the amending of section 6.05 of the Texas Property Tax Code by adding Subsection (i), as follows:

*"Requires the board of directors of an appraisal district (board), to ensure adherence with generally accepted appraisal practices, to develop biennially a written plan for the periodic appraisal of all property within the boundaries of the district according to the requirements of 25.18 (Periodic Reappraisals) and requires the board to hold a public hearing to consider the proposed plan. Requires the secretary of the board, not later than the 10th day before the date of the hearing, to deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time, and place for the hearing. Requires the board, not later than September 15 of each even-numbered year, to complete its hearings, make amendments, and by resolution finally approve the plan. Requires copies of the approved plan to be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date." (Bill Analysis per Senate Research Center)*

Pritchard & Abbott, Inc., (P&A), a privately held company engaged primarily, but not wholly, in the ad valorem tax valuation industry endorses Uniform Standards of Professional Appraisal Practice (USPAP) as the basis for the production of sound appraisals. Insofar as the statutory requirement to appraise groups (or a "universe") of real and personal property within an established period of time using standardized procedures--and subjecting the resulting appraisals to statistical measures--is the definition of mass appraisal, P&A subscribes to USPAP Standard 6 (Mass Appraisal, Development and Reporting) whenever applicable in the development and defense of values. When circumstances clearly dictate the use of single property appraisal procedures, P&A adheres to the spirit and intent of the remaining USPAP Standards within all appropriate, practical, and/or contractual limitations or specifications.

The USPAP definition of "appraiser" is one who is expected to perform valuation services competently and in a manner that is independent, impartial, and objective. USPAP Advisory Opinion 21 states that this expectation (by clients and intended users of appraisal reports) is the basis that creates an ethical obligation to comply with USPAP, even if not legally required.

The majority of property types that P&A typically appraises for ad valorem tax purposes are categorized as unique, complex, and/or "special purpose" properties (mineral interests, industrial, utility, and related personal property). These categories of properties do not normally provide sufficient market data of reliable quality and/or quantity to support the rigorous use of all USPAP-prescribed mass appraisal mandates (Standard 6), particularly with regards to some, but not all, of the model calibration and statistical performance testing confines. However, P&A does employ elements of mass appraisal techniques with regards to the definition and identification of property characteristics and model specification and application.

Residential real estate property appraisers most frequently apply mass appraisal methods within the sales comparison (market) approach to value. Through the use of standardized data collection (i.e., actual market sales), specification and calibration of mass appraisal models, tables, and schedules are possible. Through ratio study analysis and other performance measures, a cumulative summary of valuation accuracy can thus be produced in order to calibrate the appraisal model(s). Where sufficient data of reliable quality exists, mass appraisal is also used for other types of real estate property such as farms, vacant lots, and some commercial uses (e.g., apartments, offices, and small retail).

P&A will clearly state or otherwise make known all extraordinary assumptions, limiting conditions, hypothetical assumptions, and/or jurisdictional exceptions in its appraisals as they are conveyed to our clients. The client and all intended users should be aware the appraisals are by definition "limited" versus "complete." In addition, all appraisal reports, unless otherwise contracted for by the client, will be of a "summary" nature vs. "self-contained" whereas concise explanations of appraisal methods and results are emphasized for purpose of transparency, brevity and clarity. The use of limited appraisals in conjunction with summary reports in no way implies non-compliance with USPAP. P&A believes, with its vast experience and expertise in these areas of appraisal, that all values rendered are credible, competent, uniform and consistent; and most importantly for ad valorem tax purposes, achieved in a cost-efficient and timely manner.

Per previous ASB comments under Standard 6-2(b) [*scope of work... special limiting conditions*]:

*"Although appraisers in ad valorem taxation should not be held accountable for limitations beyond their control, they are required by this specific requirement to identify cost constraints and to take appropriate steps to secure sufficient funding to produce appraisals that comply with these standards. Expenditure levels for assessment administration are a function of a number of factors. Fiscal constraints may impact data completeness and accuracy, valuation methods, and valuation accuracy. Although appraisers should seek adequate funding and disclose the impact of fiscal constraints on the mass appraisal process, they are not responsible for constraints beyond their control."*

In any event, however, it is not P&A's intent to allow constraints, fiscal or otherwise, to limit the scope of work to such a degree that the mass appraisal results are not credible within the context of the intended use(s) of the appraisal.

## PREAMBLE

The purpose of USPAP is to establish requirements and conditions for ethical, thorough, and transparent property valuation services. Valuation services pertain to all aspects of property value and include services performed by appraisers and other professionals including attorneys, accountants, insurance estimators, auctioneers, or brokers. Valuation services include appraisal, appraisal review, and appraisal consulting. The primary intent of these Standards is to promote and maintain a high level of public trust in professional appraisal practice.

It is essential that professional appraisers develop and communicate their analyses, opinions, and conclusions to intended users of their services in a manner that is meaningful and not misleading. The importance of the role of the appraiser places ethical obligations upon those who serve in this capacity. These USPAP Standards reflect the current standards of the appraisal profession.

These Standards are for both appraisers and users of appraisal services. To maintain a high level of professional practice, appraisers observe these Standards. However, these Standards do not in themselves establish which individuals or assignments must comply. The Appraisal Foundation nor its Appraisal Standards Board is not a government entity with the power to make, judge, or enforce law. Compliance with USPAP is only required when either the service or the appraiser is obligated to comply by law or regulation, or by agreement with the client or intended users. When not obligated, individuals may still choose to comply.

USPAP addresses the ethical and performance obligations of appraisers through DEFINITIONS, Rules, Standards, Standards Rules, and Statements. USPAP Standards deal with the procedures to be followed in performing an appraisal or appraisal review and the manner in which each is communicated. A brief description of the USPAP Standards are as follows:

- **Standards Rules 1 and 2:** establish requirements for the development and communication of a real property appraisal.
- **Standards Rule 3:** establishes requirements for the development and communication of an appraisal review.
- **Standards Rules 4 and 5:** retired in 2014.
- **Standards Rule 6:** establishes requirements for the development and communication of a mass appraisal.
- **Standards Rules 7 and 8:** establish requirements for the development and communication of a personal property appraisal.
- **Standards Rules 9 and 10:** establish requirements for the development and communication of a business or intangible asset appraisal.

Section 23.01(b) [Appraisals Generally] of the Texas Property Tax Code states:

*"The market value of property shall be determined by the application of generally accepted appraisal methods and techniques. If the Appraisal District determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice...." (underline added for emphasis)*

Consequently, USPAP Standards Rule 6 is assumed to be the applicable standard for ad valorem tax purposes in Texas, if mass appraisal practices are in fact being used to appraise the subject property. USPAP Advisory Opinion 32 suggests several USPAP standards other than Standard 6 can or should apply in ad valorem tax work. However, it appears that an appraiser engaged in ad valorem tax work in Texas is not specifically required by law to follow these USPAP standards if in fact mass appraisal practices have not been used to appraise the subject property. In this case it could be deemed appropriate to invoke the Jurisdictional Exception Rule which is applicable when there is a contradiction between the requirements of USPAP and the law or regulation of a jurisdiction. Please see the P&A Policy Statement on USPAP as provided elsewhere in this report for a more detailed discussion regarding this matter.



## ETHICS RULE

Because of the fiduciary responsibilities inherent in professional appraisal practice, the appraiser must observe the highest standards of professional ethics. This Ethics Rule is divided into three sections:

- Conduct;
- Management;
- Confidentiality.

This Rule emphasizes the personal obligations and responsibilities of the individual appraiser. However, it should be noted that groups and organizations *which are comprised of individual appraisers engaged in appraisal practice* effectively share the same ethical obligations. To the extent the group or organization does not follow USPAP Standards when legally required, individual appraisers should take steps that are appropriate under the circumstances to ensure compliance with USPAP.

Compliance with these Standards is required when either the service or the appraiser is obligated by law or regulation, or by agreement with the client or intended users, to comply. Compliance is also required when an individual, by choice, represents that he or she is performing the service as an appraiser.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice.

Honesty, impartiality, and professional competency are required of all appraisers under USPAP Standards. To document recognition and acceptance of his or her USPAP-related responsibilities in communicating an appraisal, appraisal review, or appraisal consulting assignment completed under USPAP, an appraiser is required to certify compliance with these Standards.

### CONDUCT

An appraiser must perform assignments with impartiality, objectivity, and independence, and without accommodation of personal interests.

An appraiser must perform ethically and competently in accordance with USPAP and not engage in conduct that is unlawful, unethical, or improper. An appraiser who could reasonably be perceived to act as a disinterested third party in rendering an unbiased appraisal, review, or consulting service must perform assignments with impartiality, objectivity, and independence and without accommodation of personal interests; in short, the appraiser must not perform an assignment with bias.

An appraiser must not advocate the cause or interest of any party or issue, or accept an assignment that includes the reporting of predetermined opinions and conclusions.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice, must not engage in criminal conduct, and must not perform an appraisal assignment in a grossly negligent manner.

An appraiser is required to avoid any action that could be considered misleading or fraudulent. In particular, it is unethical for an appraiser to use or communicate a misleading or fraudulent report or to knowingly permit an employee or other person to communicate a misleading or fraudulent report.

An appraiser must not use or rely on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value.

If known prior to accepting an assignment, and/or if discovered at any time during the assignment, an appraiser must disclose to the client, and in each subsequent report certification:

- any current or prospective interest in the subject property or parties involved; and
- any services regarding the subject property performed by the appraiser within the three year period immediately preceding acceptance of the assignment, as an appraiser or in any other capacity.

The appraiser can agree with the client to keep the mere occurrence of a prior appraisal assignment confidential. If an appraiser has agreed with the client not to disclose that he or she has appraised a property, the appraiser must decline all subsequent assignment that fall with the three year period. In assignments in which there is no report, only the initial disclosure to the client is required.

Presumably all parties in an ad valorem tax appraisal will be aware of the ongoing yearly nature of the appraisal assignments performed by valuation consulting firms like Pritchard & Abbott, Inc.--i.e., it will not be confidential-- so that this particular conduct instruction is more or less a moot point (regarding the three year period discussed) if the prior service is in fact the ad valorem tax appraisals performed in previous tax years.

#### MANAGEMENT

The payment of a fee, commission, or a thing of value by the appraiser in connection with the procurement of an assignment must be disclosed. This disclosure must appear in the certification and in any transmittal letter in which conclusions of value are stated; however, the disclosure of the amount paid is not required. Intra-company payments to employees of groups or organizations involved in appraisal practice for business development do not require disclosure.

It is unethical for an appraiser to accept compensation for performing an assignment when it is contingent upon the reporting of a predetermined result, a direction in assignment results that favors the cause of the client, the amount of a value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the appraiser's opinions and specific to the assignment's purpose.

Advertising for or soliciting assignments in a manner that is false, misleading, or exaggerated is unethical. Decisions regarding finder or referral fees, contingent compensation, and advertising may not be the responsibility of an individual appraiser, but for a particular assignment it is the responsibility of the individual appraiser to ascertain that there has been no breach of ethics, that the assignment consulting assignment has been prepared in accordance with USPAP Standards, and that the report can be properly certified when required by USPAP Standards Rules 2-3, 3-3, 5-3, 6-9, 8-3, or 10-3.

An appraiser must affix, or authorize the use of, his or her signature to certify recognition and acceptance of his or her USPAP responsibilities in an appraisal, appraisal review, or appraisal consulting assignment. An appraiser may authorize the use of his or her signature only on an assignment-by-assignment basis.

In addition, an appraiser must not affix the signature of another appraiser without his or her consent. An appraiser must exercise due care to prevent unauthorized use of his or her signature. However, an appraiser exercising such care is not responsible for unauthorized use of his or her signature.

#### CONFIDENTIALITY

An appraiser must protect the confidential nature of the appraiser-property owner relationship.

An appraiser must act in good faith with regard to the legitimate interests of the client in the use of confidential information and in the communication of assignment results.

An appraiser must be aware of, and comply with, all confidentiality and privacy laws and regulations applicable in an assignment.

An appraiser must not disclose confidential factual data obtained from a property owner to anyone other than:

1. The client;
2. Persons specifically authorized by the client;

3. State appraiser regulatory agencies;
4. Third parties as may be authorized by due process of law; or
5. A duly authorized professional peer review committee except when such disclosure to a committee would violate applicable law or regulation.

It is unethical for a member of a duly authorized professional peer review committee to disclose confidential information presented to the committee.

When all confidential elements of confidential information are removed through redaction or the process of aggregation, client authorization is not required for the disclosure of the remaining information, as modified.

## RECORD KEEPING RULE

An appraiser must prepare a workfile for each appraisal, appraisal review, and consulting assignment. The workfile must include the identity, by name and type, of any intended users; true copies of any written reports, summaries of any oral reports or testimony, and all other data, information, and documentation necessary to support the appraiser's opinions and conclusions and to show compliance with this rule and all other applicable USPAP Standards.

A workfile preserves evidence of the appraiser's consideration of all applicable data and statements required by USPAP and other information as may be required to support the findings and conclusions of the appraiser.

A photocopy or an electronic copy of the entire actual written appraisal, review, or consulting report sent or delivered to a property owner or review committee satisfies the requirements of a true copy. Care should be exercised in the selection of the form, style, and type of medium for written records, which may be handwritten and informal, to ensure they are retrievable by the appraiser throughout the applicable retention period.

A workfile must be in existence prior to and contemporaneous with the issuance of a written or oral report. A written summary of an oral report must be added to the workfile within a reasonable time after the issuance of the oral report.

A workfile must be made available by the appraiser when required by due process of law. An appraiser must have custody of his or her workfile, or make appropriate workfile retention, access, and retrieval arrangements with the party having custody of the workfile. An appraiser having custody of a workfile must allow other appraisers with workfile obligations related to an assignment appropriate access and retrieval for the purpose of:

- submission to state appraiser regulatory agencies;
- compliance with due process of law;
- submission to a duly authorized professional peer review committee; or
- compliance with retrieval arrangements.

An appraiser who willfully or knowingly fails to comply with the obligations of this Record Keeping Rule is in violation of the Ethics Rule.

## SCOPE OF WORK RULE

For each appraisal, appraisal review, and appraisal consulting assignment, an appraiser must:

1. Identify the problem to be solved;
2. Determine and perform the scope of work necessary to develop credible assignment results; and
3. Disclose the scope of work in the report.

An appraiser must properly identify the problem to be solved in order to determine the appropriate scope of work. The appraiser must be prepared to demonstrate that the scope of work is sufficient to produce credible assignment results.

Scope of work includes, but is not limited to:

- the extent to which the property is identified;
- the extent to which tangible property is inspected;
- the type and extent of data researched; and
- the type and extent of analyses applied to arrive at opinions or conclusions.

Appraisers have broad flexibility and significant responsibility in determining the appropriate scope of work for an appraisal, appraisal review, and appraisal consulting assignment. Credible assignment results require support by relevant evidence and logic. The credibility of assignment results is always measured in the context of the intended use.

### PROBLEM IDENTIFICATION

An appraiser must gather and analyze information about those assignment elements that are necessary to properly identify the appraisal, appraisal review or appraisal consulting problem to be solved. The assignment elements necessary for problem identification are addressed in the Standards Rule 6-2:

- client and any other intended users;
- intended use of the appraiser's opinions and conclusions;
- type and definition of value;
- effective date of the appraiser's opinions and conclusions;
- subject of the assignment and its relevant characteristics; and
- assignment conditions.

This information provides the appraiser with the basis for determining the type and extent of research and analyses to include in the development of an appraisal. Similar information is necessary for problem identification in appraisal review and appraisal consulting assignments. Assignment conditions include:

- assumptions;
- extraordinary assumptions;
- hypothetical conditions;
- laws and regulations;
- jurisdictional exceptions; and
- other conditions that affect the scope of work.

### SCOPE OF WORK ACCEPTABILITY

The scope of work must include the research and analyses that are necessary to develop credible assignment results. The scope of work is acceptable when it meets or exceeds:

- the expectations of parties who are regularly intended users for similar assignments; and
- what an appraiser's peers' actions would be in performing the same or a similar assignment.

Determining the scope of work is an ongoing process in an assignment. Information or conditions discovered during the course of an assignment might cause the appraiser to reconsider the scope of work. An appraiser must be prepared to support the decision to exclude any investigation, information, method, or technique that would appear relevant to the client, another intended user, or the appraiser's peers.

An appraiser must not allow assignment conditions to limit the scope of work to such a degree that the assignment results are not credible in the context of the intended use. In addition, the appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

#### DISCLOSURE OBLIGATIONS

The report must contain sufficient information to allow intended users to understand the scope of work performed. Proper disclosure is required because clients and other intended users may rely on the assignment results. Sufficient information includes disclosure of research and analyses performed or not performed.

## JURISDICTIONAL EXCEPTION RULE

If any applicable law or regulation precludes compliance with any part of USPAP, only that part of USPAP becomes void for that assignment. When compliance with USPAP is required by federal law or regulation, no part of USPAP can be voided by a law or regulation of a state or local jurisdiction. *When an appraiser properly follows this Rule in disregarding a part of USPAP, there is no violation of USPAP.*

In an assignment involving a jurisdictional exception, an appraiser must:

- identify the law or regulation that precludes compliance with USPAP;
- comply with that law or regulation;
- clearly and conspicuously disclose in the report the part of USPAP that is voided by that law or regulation; and
- cite in the report the law or regulation requiring this exception to USPAP compliance.

The purpose of the Jurisdictional Exception Rule is strictly limited to providing a saving or severability clause intended to preserve the balance of USPAP if one or more of its parts are determined as contrary to law or public policy of a jurisdiction. By logical extension, there can be no violation of USPAP by an appraiser who disregards, with proper disclosure, only the part or parts of USPAP that are void and of no force and effect in a particular assignment by operation of legal authority.

It is misleading for an appraiser to disregard a part or parts of USPAP as void and of no force and effect in a particular assignment without identifying the part or parts disregarded and the legal authority justifying this action in the appraiser's report.

"Law" includes constitutions, legislative and court-made law, and administrative rules (such as from the Office of the Texas Comptroller of Public Accounts) and ordinances. "Regulations" include rules or orders having legal force, issued by an administrative agency. Instructions from a client or attorney do not establish a jurisdictional exception.

A jurisdictional exception prevalent in Texas is that appraisers are seeking to establish "fair market value" as defined by the Texas Property Tax Code instead of "market value" as found in the USPAP definitions section.

## MASS APPRAISAL, DEVELOPMENT AND REPORTING (General Discussion)

In developing a mass appraisal, an appraiser must be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce and communicate credible mass appraisals.

Standard 6 applies to all mass appraisals of real and personal property regardless of the purpose or use of such appraisals. It is directed toward the substantive aspects of developing and communicating competent analyses, opinions, and conclusions in the mass appraisal of properties, whether real property or personal property. Mass appraisals can be prepared with or without computer assistance. The Jurisdictional Exception Rule may apply to several sections of Standard 6 because ad valorem tax administration is subject to various state, county, and municipal laws. The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for purposes of ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes:

- identifying properties to be appraised;
- defining market areas of consistent behavior that applies to properties;
- identifying characteristics (supply and demand) that affect the creation of value in that market area;
- developing a model structure that reflects the relationship among the characteristics affecting value in the market area;
- calibrating the model structure to determine the contribution of the individual characteristics affecting value;
- applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- reviewing the mass appraisal results.

*The Jurisdictional Exception Rule may apply to several sections of Standard 6 because ad valorem tax administration is subject to various state, county, and municipal laws.*

As previously stated in the P&A Policy Statement (pages 2 and 3 of this report), it may not be possible or practicable for all the mass appraisal attributes listed above to be rigorously applied to the many types of complex and/or unique properties that P&A typically appraises. Often there are contractual limitations on the scope of work needed or required. More prevalently, these types of properties do not normally provide a reliable database of market transactions (or details of transactions) necessary for statistically supportable calibration of appraisal models and review of appraisal results. Generally these two functions are effectively accomplished through annual extended review meetings with taxpayers (and clients) who provide data, sometimes confidentially, that allows for appraisal models to be adjusted where necessary. Nevertheless, and notwithstanding whether P&A implicitly or explicitly employs or reports all attributes listed above, in all cases P&A at the minimum employs tenants of "generally accepted appraisal methods" which are the genesis of USPAP Standards.

Per USPAP guidelines, P&A will make known all departures and jurisdictional exceptions when invoked (if an appraisal method or specific requirement is applicable but not necessary to attain credible results in a particular assignment).

The various sections of Standard 6 are briefly summarized below:

- **Standard 6-1:** Establishes the appraiser's technical and ethical framework. Specifically, appraisers must recognize and use established principles, methods and techniques of appraisal in a careful manner while not committing substantial errors of fact or negligence that would materially affect the appraisal results and not give a credible estimate of fair market value. To this end appraisers must continuously improve his or her skills to maintain proficiency and keep abreast of any new developments in the real and personal property appraisal profession. This Standards Rule does not imply that competence requires perfection, as perfection is impossible to attain. Instead, it requires appraisers to employ every reasonable effort with regards to due diligence and due care.
- **Standard 6-2:** Defines the introductory framework requirements of developing a mass appraisal, focusing on the identification and/or definition of: client(s), intended users, effective date, scope of work, extraordinary assumptions,



hypothetical conditions, the type and definition of value being developed (typically “fair market value” for ad valorem tax purposes), characteristics of the property being appraised in relation to the type and definition of value and intended use, the characteristics of the property’s market, the property’s real or personal attributes, fractional interest applicability, highest and best use analysis along with other land-related considerations, and any other economic considerations relevant to the property.

- **Standard 6-3:** Defines requirements for developing and specifying appropriate mass appraisal data and elements applicable for real and personal property. For real property, the data and elements include: existing land use regulations, reasonably probable modification of such regulations, economic supply and demand, the physical adaptability of the real estate, neighborhood trends, and highest and best use analysis. For personal property, the relevant data and elements include: identification of industry trends, trade level, highest and best use, and recognition of the appropriate market consistent with the type and definition of value.
- **Standard 6-4:** Further defines requirements for developing mass appraisal models, focusing on development of standardized data collection forms, procedures, and training materials that are used uniformly on the universe of properties under consideration. This rule specifies that appraisers employ recognized techniques for specifying and calibrating mass appraisal models. Model specification is the formal development of a model in a statement or mathematical equation, including all due considerations for physical, functional, and external market factors as they may affect the appraisal. These models must accurately represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics. Models may be specified incorporating the income, market, and/or cost approaches to value and may be tabular, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics. Model calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model.
- **Standard 6-5:** Defines requirements for collection of sufficient factual data, in both qualitative and quantitative terms, necessary to produce credible appraisal results. The property characteristics collected must be contemporaneous with the effective date of the appraisal. The data collection program should incorporate a quality control procedure, including checks and audits of the data to ensure current and consistent records. This rule also calls for calls for an appraiser, in developing income and expense statement and cashflow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction. Terms and conditions of any leases should be analyzed, as well as the need for and extent of any physical inspection of the properties being appraised.
- **Standard 6-6:** Defines requirements for application of a calibrated model to the property being appraised. This rule calls for: the appraiser to recognize methods or techniques based on the cost, market, and income approaches for improved parcels; the appraiser the value sites by recognized methods or techniques such as allocation method, abstraction method, capitalization of ground rent, and land residual; the appraiser to develop value of leased fee or leasehold estates with consideration for terms and conditions of existing leases, and, when applicable by law, as if held in fee simple whereas market rents are substituted for actual contract rents; the appraiser to analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the appraiser to analyze anticipated public or private improvements located on or off the site, and analyze the effect on value, if any, of such anticipated improvements to the extent they are reflected in market actions.
- **Standard 6-7:** Defines the reconciliation process of a mass appraisal. Specifically, appraisers must analyze the results and/or applicability of the various approaches used while ensuring that, on an overall basis, standards of reasonableness and accuracy are maintained with the appraisal model selected (underline added for emphasis). It is implicit in mass appraisal that, even when properly specified and calibrated models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy.
- **Standard 6-8:** Defines requirements of a mass appraisal written report (elements of which are further detailed in the next three sections of this report that discuss P&A appraisal procedures with regards to specific categories of property).
- **Standard 6-9:** Defines requirements for appraiser certification of the mass appraisal written report.

The following sections of this report discuss in detail the various elements of the mass appraisal written report as required by USPAP Standard 6-8, with regards to P&A appraisal of Mineral Interests, Industrial-Utility-Personal Property, and Real Estate.

## REAPPRAISAL OF MINERAL INTERESTS

*Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "summary" nature versus "self-contained," whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.*

## INTRODUCTION

**Definition of Appraisal Responsibility (Scope of Effort):** The Mineral Valuation Department of Pritchard & Abbott, Inc. ("P&A" hereinafter), is responsible for developing credible values for mineral interests (full or fractional percentage ownership of oil and gas leasehold interest, the amount and type of which are legally and/or contractually created and specified through deeds and leases, et al.) associated with producing (or capable of producing) leases. Mineral interests are typically considered real property because of their derivation from the bundle of rights associated with original fee simple ownership of land. Typically all the mineral interests that apply to a single producing lease are consolidated by type (working vs. royalty) with each type then appraised for full value which is then distributed to the various fractional decimal interest owners prorata to their individual type and percentage amount.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

Intended users of our reports are typically the client(s) for which we are under direct contract and taxpayers or their agents who own and/or represent the subject property being appraised. Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

*This section of P&A's Biennial Reappraisal Plan is not applicable to any mineral or mineral interest property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall Biennial Reappraisal Plan should be referenced.*

P&A makes the Extraordinary Assumption that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

P&A is typically under contract to determine current market value or "fair market value" of said mineral interests. Fair market value is typically described as the price at which a property would sell for if:

- exposed in the open market with a reasonable time for the seller to find a purchaser;
- both the buyer and seller know of all the uses and purposes to which the property is, or can be, adapted and of the enforceable restrictions on its use; and

- both the buyer and seller seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other. [Exigencies are pressing or urgent conditions that leave one party at a disadvantage to the other.]

For ad valorem tax purposes the effective date is usually legislatively specified by the particular State in which we are working - for example, in Texas the lien date is January 1 per the Texas Property Tax Code. For ad valorem tax purposes, the date of the appraisals and reports are typically several months past the effective date, thereby leaving open the possibility that a retrospective approach is appropriate under limited and prescribed circumstances (information after the effective date being applicable only if it confirms a trend or other appraisal condition that existed and was generally known as of the effective date).

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

Legal and Statutory Requirements: In Texas, the provisions of the Texas Property Tax Code and other relevant legislative measures involving appraisal administration and procedures control the work of P&A as an extension of the Appraisal District. Other states in which P&A is employed will have similar controlling legislation, regulatory agencies, and governmental entities. P&A is responsible for appraising property on the basis of its fair market value as of the stated effective date (January 1 in Texas) for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All mineral properties (interests) are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a Jurisdictional Exception supercedes the definition of "market value" as found in USPAP definitions.

NOTE: IN TEXAS, P&A BELIEVES THE PROPERTY BEING APPRAISED AND PLACED ON THE TAX ROLL IS THE INTEREST AND NOT THE OIL OR GAS MINERAL ITSELF, PER PROPERTY TAX CODE SECTION 1.04(2)(F). WHILE OIL AND GAS RESERVES CERTAINLY HAVE VALUE, THE FACT IS THAT IT IS THE INTERESTS IN THESE MINERALS THAT ARE BOUGHT AND SOLD, NOT THE MINERALS THEMSELVES. THE SALE OF MINERALS AS THEY ARE EXTRACTED FROM THE SUBSURFACE OF THE LAND WHERE THEY RESIDE AS MINERALS IN PLACE "MONETIZES" THE INTEREST AND THUS GIVES THE INTEREST ITS VALUE. WHENEVER P&A REFERS TO "MINERAL PROPERTIES" IN THIS REPORT OR IN ANY OTHER SETTING, IT IS THE MINERAL INTEREST, AND NOT THE MINERAL ITSELF, THAT IS THE SUBJECT OF THE REFERENCE.

Administrative Requirements: P&A endorses the principals of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A also endorses, and follows when possible, the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). In all cases where IAAO and/or USPAP requirements cannot be satisfied for reasons of practicality or irrelevancy, P&A subscribes to "generally accepted appraisal methods and techniques" so that its value conclusions are credible and defensible. P&A submits annual or biannual contract bids to the Appraisal District Board of Directors or the Office of the Chief Appraiser and is bound to produce appraisal estimates on mineral properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined or allowed through IAAO or USPAP requirements are specified by the Texas Property Tax Code or at the specific request or direction of the Office of the Chief Appraiser.

### Appraisal Resources

Personnel: The Mineral Valuation Division staff consists of competent Petroleum Engineers, Geologists, and Appraisers. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation within the allowable time frames prescribed by the Texas Department of Licensing and Regulation (TDLR) and/or other licensing and regulatory agencies as applicable.

Data: For each mineral property a common set of data characteristics (i.e. historical production, price and expense data) is collected from various sources and entered into P&A's mainframe computer system. Historical production data and price data is available through state agencies (Texas Railroad Commission, Texas Comptroller, et al.) or private firms who gather, format and repackage such data for sale commercially. Each property's characteristic data drives the computer-assisted mass appraisal approach to valuation.

Information Systems: The mainframe systems are augmented by the databases that serve the various in-house and 3<sup>rd</sup>-party applications on desktop personal computers. In addition, communication and dissemination of appraisals and other information is available to the taxpayer and client through electronic means including internet and other phone-line connectivity. The appraiser supervising any given contract fields many of the public's questions or redirects them to the proper department personnel.

## VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of oil and gas properties is not an exact science, and exact accuracy is not attainable due to many factors. Nevertheless, standards of reasonable performance do exist, and there are usually reliable means of measuring and applying these standards.

Petroleum properties are subject to depletion, and capital investment must be returned before economic exhaustion of the resource (mineral reserves). The examination of petroleum properties involves understanding the geology of the resource (producing and non-producing), type of reservoir energy, the methods of secondary and enhanced recovery (if applicable), and the surface treatment and marketability of the produced petroleum product(s).

Evaluation of mineral properties is a continuous process; the value as of the lien date merely represents a "snapshot" in time. The potential value of mineral interests derived from sale of minerals to be extracted from the ground change with mineral price fluctuation in the open market, changes in extraction technology, costs of extraction, and other variables such as the value of money.

### Approaches to Value for Petroleum Property

Cost Approach: The use of cost data in an appraisal for market value is based upon the economic principle of substitution. The cost approach typically derives value by a model that begins with replacement cost new (RCN) and then applies depreciation in all its forms (physical depreciation, functional and economic obsolescence). This method is difficult to apply to oil and gas properties since lease acquisition and development may bear no relation to present worth. Though very useful in the appraisal of many other types of properties, the cost approach is not readily applicable to mineral properties. [Keep in mind that the property actually being appraised is the mineral interest and not the oil and gas reserves themselves. Trying to apply the cost approach to evaluation of mineral interests is like trying to apply the cost approach to land; it is a moot point because both are real properties that are inherently non-replaceable.] As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., does not employ the cost approach in the appraisal of mineral interests.

Market Approach: This approach may be defined as one which uses data available from actual transactions recorded in the market place itself; i.e., sales of comparable properties from which a comparison to the subject property can be made. Ideally, this approach's main advantage involves not only an opinion but an opinion supported by the actual spending of money. Although at first glance this approach seems to more closely incorporate the aspects of fair market value per its classical definition, there are two factors that severely limit the usefulness of the market approach for appraising oil and gas properties. First, oil and gas property sales data is seldom disclosed (in non-disclosure states such as Texas); consequently there is usually a severe lack of market data sufficient for meaningful statistical analysis. Second, all conditions of each sale must be known and carefully investigated to be sure one does have a comparative indicator of value per fair market value perquisites.

Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets in addition to oil and gas reserves are involved; this further complicates the analysis whereby a total purchase price must be allocated to the individual components - a speculative and somewhat arbitrary task at best. In the case of oil and gas

properties, a scarcity of sales requires that every evidence of market data be investigated and analyzed. Factors relative to the sale of oil and gas properties are:

- current production and estimated declines forecast by the buyer;
- estimated probable and potential reserves;
- general lease and legal information which defines privileges or limitation of the equity sold;
- undeveloped potential such as secondary recovery prospects;
- proximity to other production already operated by the purchaser;
- contingencies and other cash equivalents; and
- other factors such as size of property, gravity of oil, etc.

In the event that all these factors are available for analysis, the consensus effort would be tantamount to performing an income approach to value (or trying to duplicate the buyer's income approach to value), thereby making the market approach somewhat moot in its applicability. As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of mineral interests.

Income Approach: This approach to value most readily yields itself to the appraisal of mineral interests. Data is readily available whereby a model can be created that reasonably estimates a future income stream to the property. This future income may then be converted (discounted) into an estimate of current value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield. If the land or improvements are of any residual value after the cessation of oil and gas production, that value should also be included (if those components are also being appraised).

The relevant income that should be used is the expected future net income. Assumptions of this method are:

- Past income and expenses are not a consideration, except insofar as they may be a guide to estimating future net income.
- That the producing life as well as the reserves (quantity of the minerals) are estimated for the property.
- Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the income approach to value in the appraisal of mineral interests.

## DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data is data from the Railroad Commission of Texas as reported by operators. As a monthly activity, the data processing department receives data tapes or electronic files which have updated and new well and production data. Other discovery tools are fieldwork by appraisers, financial data from operators, information from chief appraisers, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new wells and other useful facts related to property valuation.

Another crucial set of data to obtain is the ownership of these mineral interests. Typically a mineral lease is fractionated and executed with several if not many owners. This information is typically requested (under a promise of confidentiality concerning owners' personal information) from pipeline purchasers and/or other entities (such as operators) who have the responsibility of disbursing the income to the mineral interest owners. Another source of ownership information is through the taxpayers themselves who file deeds of ownership transfer and/or correspond with P&A or the appraisal district directly.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures for mineral properties are generally accomplished globally by the company; i.e., production and price data for the entire state is downloaded at one time into the computer system. Appraisers also

individually gather and record specific and particular information to the appraisal file records, which serves as the basis for the valuation of mineral properties. P&A is divided into four district offices covering different geographic areas. Each office has a district manager, appraisal and ownership maintenance staff, and clerical staff as appropriate. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser.

## VALUATION ANALYSIS (MODEL CALIBRATION)

Appropriate revisions and/or enhancements of schedules or discounted cash flow software are annually made and then tested prior to the appraisals being performed. Calibration typically involves performing multiple discounted cash flow tests for leases with varying parameter input to check the correlation and relationship of such indicators as: Dollars of Value Per Barrel of Reserves; Dollars of Value Per Daily Average Barrel Produced; Dollars of Expense Per Daily Average Barrel Produced; Years Payout of Purchase Price (Fair Market Value). In a more classical calibration procedure, the validity of values by P&A's income approach to value is tested against actual market transactions, if and when these transactions and verifiable details of these transactions are disclosed to P&A. Of course these transactions must be analyzed for meeting all requisites of fair market value definition. Any conclusions of this analysis are then compared to industry benchmarks for reasonableness before being incorporated into the calibration procedure.

## INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process. P&A's discounted cashflow software dynamically generates various benchmark indicators that the appraiser reviews concurrent with the value being generated. These benchmarks often prompt the appraiser to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are dollars of value per barrel of oil reserve, years payout, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values, either before or after Notices of Appraised Value are prepared. Operators routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as individual lease operating expense and reserve figures. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as an extension of the Office of the Chief Appraiser.

## PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for mineral properties. School jurisdictions are given an opportunity to appeal any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

## CALENDAR OF EVENTS/DELIVERABLES TO CLIENT

As an appraisal contractor, the calendar of events and/or deliverables is largely dependent upon the client's needs and requirements. That said, P&A generally follows the property tax calendar as promulgated by the Property Tax Assistance Division (PTAD) whereas certain work activities must be accomplished by certain deadlines as specified by the Property Tax Code. P&A's contracts typically involve compensation being received from the client only after completion of certain events or deliverables. For example, the CAD may make quarterly payments per the following schedule:

- February, after completion of personal property field inspections;
- May, after completion and mailing of Notices of Appraised Value;
- August, after completion of Appraisal Review Board hearings; and

- November, after Certification of values.

The timetable regarding the sections described above is generally as follows:

- **Data Collection/Validation** occurs beginning in the Fall (October) prior to a tax year and continues into the Spring of that same tax year;
- **Valuation Analysis (Model Calibration)** occurs in the Spring (March - May) of a tax year and continues into the Summer (June - August) of that same tax year;
- **Individual Value Review Procedures** occurs concurrent, more or less, with Valuation Analysis; and
- **Performance Tests** occurs later in the tax year after certification of values.



## REAPPRAISAL OF INDUSTRIAL, UTILITY, AND RELATED PERSONAL PROPERTY

*Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "summary" nature versus "self-contained," whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.*

### INTRODUCTION

**Definition of Appraisal Responsibility:** The Engineering Services Department of Pritchard & Abbott, Inc. (P&A) is responsible for developing fair and uniform market values for industrial, utility and personal properties.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

Intended users of our reports are typically the client(s) for which we are under direct contract and taxpayers or their agents who own and/or represent the subject property being appraised. Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

*This section of P&A's Biennial Reappraisal Plan is not applicable to any Industrial, Utility, or related Personal Property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall Biennial Reappraisal Plan should be referenced.*

P&A makes the **Extraordinary Assumption** that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

**Legal and Statutory Requirements:** The provisions of the Texas Property Tax Code and relevant legislative measures involving appraisal administration and procedures control the work of P&A as a subcontractor to the Appraisal District. P&A is responsible for appraising property on the basis of its market value as of January 1 for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All industrial, utility and personal

properties are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a **Jurisdictional Exception** supercedes the definition of "market value" as found in USPAP definitions.

Administrative Requirements: P&A follows generally accepted and/or recognized appraisal practices and when applicable, the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A, when applicable, also subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). P&A submits annual or biannual contract bids to the Office of the Chief Appraiser and is bound to produce appraisal estimates on industrial, utility and personal properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined through IAAO or USPAP requirements are specified by the Texas Property Tax Code and/or at the specific request or direction of the Office of the Chief Appraiser.

### Appraisal Resources

Personnel: The Engineering Services Department and P&A's appraisal staff consists of appraisers with degrees in engineering, business and accounting. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation as prescribed by the Texas Department of Licensing and Regulation (TDLR).

Data: A set of data characteristics (i.e. original cost, year of acquisition, quantities, capacities, net operating income, property description, etc.) for each industrial, utility and personal property is collected from various sources. This data is maintained in either hard copy or computer files. Each property's characteristic data drives the appropriate computer-assisted appraisal approach to valuation.

Information Systems: P&A's mainframe computer system is composed of in-house custom software augmented by schedules and databases that reside as various applications on personal computers (PC). P&A offers a variety of systems for providing property owners and public entities with information services.

### VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of industrial, utility and personal properties is not an exact science, and exact accuracy is not attainable due to many factors. These are considered complex properties and some are considered Special Purpose properties. Nevertheless, standards of reasonable performance do exist, and there are reliable means of measuring and applying these standards.

The evaluation and appraisal of industrial, utility and personal property relies heavily on the discovery of the property followed by the application of recognized appraisal techniques. The property is subject to inflation and depreciation in all forms. The appraisal of industrial and personal property involves understanding petroleum, chemical, steel, electrical power, lumber and paper industry processes along with a myriad of other industrial processes. Economic potential for this property usually follows either the specific industry or the general business economy. The appraisal of utility properties involves understanding telecommunications, electrical transmission and distribution, petroleum pipelines and the railroad industry. Utility properties are subject to regulation and economic obsolescence. The examination of utility property involves the understanding of the present value of future income in a regulated environment.

The goal for valuation of industrial, utility and personal properties is to appraise all taxable property at "fair market value". The Texas Property Tax Code defines Fair Market value as 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 of all 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.

### Approaches to Value for Industrial, Utility, and Personal Property

**Cost Approach:** The use of cost data in an appraisal for market value is based upon the economic principle of substitution. This method is most readily applicable to the appraisal of industrial and personal property and some utility property. Under this method, the market value of property equals the value of the land plus the current cost of improvements less accrued depreciation. An inventory of the plant improvements and machinery and equipment is maintained by personally inspecting each facility every year. As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the cost approach to value in the appraisal of industrial, utility, and personal property.

**Market Approach:** This approach is characterized as one that uses sales data available from actual transactions in the market place. There are two factors that severely limit the usefulness of the market approach for appraising industrial, utility and personal properties. First, the property sales data is seldom disclosed; consequently there is insufficient market data for these properties available for meaningful statistical analysis. Second, all conditions of sale must be known and carefully investigated to be sure one does have a comparative indicator of value. Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets and intangibles in addition to the industrial, utility and personal property are involved. The complexity of these sales presents unique challenges and hindrances to the process of allocation of value to the individual components of the transaction.

In the case of industrial, utility and personal properties, a scarcity of sales requires that all evidence of market data be investigated and analyzed. Factors relative to the sale of these properties are:

- plant capacity and current production; terms of sale, cash or equivalent;
- complexity of property;
- age of property;
- proximity to other industry already operated by the purchaser; and
- other factors such as capital investment in the property.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of industrial, utility, and personal property.

**Income Approach:** This approach to value most readily yields itself to all income generating assets, especially utility properties. Data for utility properties is available from annual reports submitted to regulatory agencies whereby future income may be estimated, and then this future income may be converted into an estimate of value. The valuation of an entire company by this method is sometimes referred to as a Unit Value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value estimate is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield.

The relevant income that should be used in the valuation model is the expected future net operating income after depreciation but before interest expense (adjustments for Federal Income Taxes may or may not be required). Assumptions of this method are:

- Past income and expenses are a consideration, insofar as they may be a guide to future income, subject to regulation and competition.
- The economic life of the property can be estimated.
- The future production, revenues and expenses can be accurately forecasted. Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., employs the income approach in the appraisal of industrial and utility property only when quantifiable levels of income are able to be reliably determined and/or projected for the subject property. P&A does not employ the income approach in the appraisal of personal property.

#### DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data for industrial and personal property is through fieldwork by the appraisers and commercially/publicly available schedules developed on current costs. Data for performing utility appraisals is typically provided by the taxpayer or is otherwise available at various regulatory agencies (Texas Railroad Commission, Public Utilities Commission, FERC, et al.). Other discovery tools are financial data from annual reports, information from chief appraisers, renditions, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new industry and other useful facts related to property valuation.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures have been established for industrial and personal properties. Appraisers gather and record information in the mainframe system, where customized programs serve as the basis for the valuation of industrial, utility and personal properties. P&A is divided into multiple district offices covering different geographic zones. Each office has a district manager and field staff. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser. Additionally, P&A's Engineering Services Department provides supervision and guidance to all district offices to assist in maintaining uniform and consistent appraisal practices throughout the company.

#### VALUATION ANALYSIS (MODEL CALIBRATION)

The validity of the values by P&A's income and cost approaches to value is tested against actual market transactions, if and when these transactions and verifiable details of the transactions are disclosed to P&A. These transactions are checked for meeting all requisites of fair market value definition. Any conclusions from this analysis are also compared to industry benchmarks before being incorporated in the calibration procedure. Appropriate revisions of cost schedules and appraisal software are annually made and then tested for reasonableness prior to the appraisals being performed.

#### INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process: P&A's industrial, utility, personal property programs and appraisal spreadsheets afford the appraiser the opportunity to review the value being generated. Often the appraiser is prompted to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are original cost, replacement cost, service life, age, net operating income, capitalization rate, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values either before or after Notices of Appraised Value are prepared. Taxpayers, agents and representatives routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as investment costs and capitalization rate studies. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as a representative of the Office of the Chief Appraiser.

#### PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for utility properties. School jurisdictions are given an opportunity to appeal

any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

#### CALENDAR OF EVENTS/DELIVERABLES TO CLIENT

As an appraisal contractor, the calendar of events and/or deliverables is largely dependent upon the client's needs and requirements. That said, P&A generally follows the property tax calendar as promulgated by the Property Tax Assistance Division (PTAD) whereas certain work activities must be accomplished by certain deadlines as specified by the Property Tax Code. P&A's contracts typically involve compensation being received from the client only after completion of certain events or deliverables. For example, the CAD may make quarterly payments per the following schedule:

- February, after completion of personal property field inspections;
- May, after completion and mailing of Notices of Appraised Value;
- August, after completion of Appraisal Review Board hearings; and
- November, after Certification of values.

The timetable regarding the sections described above is generally as follows:

- **Data Collection/Validation** occurs beginning in the Fall (October) prior to a tax year and continues into the Spring of that same tax year;
- **Valuation Analysis (Model Calibration)** occurs in the Spring (March - May) of a tax year and continues into the Summer (June - August) of that same tax year;
- **Individual Value Review Procedures** occurs concurrent, more or less, with Valuation Analysis; and
- **Performance Tests** occurs later in the tax year after certification of values.