



San Patricio County Appraisal District

Reappraisal Plan For

Tax Years 2019 & 2020

(adopted by SPCAD Board of Directors on August 21, 2018)

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EXECUTIVE SUMMARY

TAX CODE REQUIREMENT

Section 23.01 of the Texas Property Tax Code, Appraisals Generally (b) 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 (USPAP). The same or similar appraisal methods and techniques shall be used in appraising the same or similar kinds of property; however, each property shall be appraised based upon the individual characteristics that affect the property’s market value”. Passage of S. B. 1652 amended the Tax Code to require a written biennial reappraisal plan. The following details the changes to the Tax Code:

The Written Plan

Section 6.05, Tax Code, is amended by adding Subsection (i) to read as follows:

(i) To ensure adherence with generally accepted appraisal practices, the Board of directors of an appraisal district shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10th day before the date of the hearing, the secretary of the board shall 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 of the hearing. Not later than September 15 of each even numbered year, the Board shall complete its hearings, make any amendments, and by resolution finally approve the plan. Copies of the approved plan shall 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.

Plan for Periodic Reappraisal

Subsections (a) and (b), Section 25.18, Tax Code, are amended to read as follows:

(a) Each appraisal office shall implement a plan for periodic reappraisal of all property approved by the board of directors under Section 6.05 (i).

(b) San Patricio CAD will provide the following reappraisal activities for all real in the district at least once every two years, Business Personal Property and Mineral/every year and:

(1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches;

- (2) Identifying and updating relevant characteristics of each property in the appraisal records;
- (3) Defining market areas in the district;
- (4) Identifying property characteristics that affect property value in each market area, including:
 - (A) The location and market area of the property;
 - (B) Physical attributes of property, such as size, age, and condition;
 - (C) Legal and economic attributes; and
 - (D) Easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances, or legal restrictions;
- (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determines the contribution of individual property characteristics;
- (6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- (7) Reviewing the appraisal results to determine value.

REVALUATION DECISION (REAPPRAISAL CYCLE)

The San Patricio CAD by policy adopted by the Board of Directors reappraises all property in the district every two years with the exception of industrial, mineral, and personal property accounts, which are appraised annually. The CAD makes every attempt to perform an appraisal / inspection of property at least once every two years and recalibrates schedule rates for all categories of properties on an annual basis. The extent of properties that are visited may vary and is completely dependent on the amount of staffing, time and funding the CAD has available during the year. With respect to new items, demolitions, and deletions; which shall refer to new construction, new personal property, and any property previously omitted or demolitions of construction and removal of personal property by closure and relocation, the Board shall allow for deviation of the annual reappraisal plan into those school districts (or geographic areas) not specifically scheduled for reappraisal in the given year for the appropriate assessment of all new items, demolitions, and deletions, while emphasizing completion of the scheduled planned reappraisal areas first. The CAD has also out-sourced the appraisal of unique properties to Pritchard & Abbott, Inc., these being mineral, industrial, refineries, etc. A rotational appraisal of areas will be performed to assure that school districts (our geographic areas) are reappraised. The school districts or geographic areas scheduled for reappraisal for 2019 and 2020 are:

2019	Sinton ISD	2020	Aransas Pass ISD
	Odem ISD		Ingleside ISD
	Taft ISD		Sinton ISD
	Corpus Christi ISD		Skidmore ISD
	Skidmore ISD		Corpus Christi ISD
	Mathis ISD		
	Banquete ISD		

Note: Due to Hurricane Harvey which struck our region in August of 2018, our 2018 reappraisal required an adjustment. Accordingly, in 2018 we reappraised the hardest hit School Districts. As a result of this un-planned change, Gregory-Portland ISD will be reappraised in the third year (2021). Gregory-Portland will still be worked based on sales and permit activities in the same manner as the other School District with in San Patricio County on an annual basis.

REAPPRAISAL CYCLE YEAR'S ACTIVITIES

1. Performance Analysis – the equalized values from the previous tax year are analyzed with the performance of internal ratio studies to determine the appraisal accuracy and appraisal uniformity overall and by market area within property reporting categories. Ratio studies are conducted in compliance with the current *Standard on Ratio Studies* of the International Association of Assessing Officers.
2. Analysis of Available Resources – staffing and budget requirements for the 2019 tax year are detailed in the 2019 Budget as adopted by the board of directors and attached to the written biennial plan by reference. Existing appraisal practices, which are continued from year to year, are identified and methods utilized to keep these practices current are specified. Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled by Pritchard & Abbott, Inc., the CAD's software provider. Existing maps and data requirements are specified, and updates scheduled by AIMS and ESRI, the CAD's software provider.
3. Planning and Organization – a calendar of key events with critical completion dates is prepared for each major work area. This calendar identifies all key events for appraisal, clerical, customer service, and information systems. A calendar is prepared for tax years 2019 and 2020. Production standards for field activities are calculated and incorporated in the planning and scheduling process.
4. Mass Appraisal System – Computer Assisted Mass Appraisal (CAMA) system revisions required are specified and scheduled with Information Systems. All computer forms and IS procedures are reviewed and revised as required.
5. Data Collection Requirements – field and office procedures are reviewed and revised as required for data collection. Activities scheduled for each tax year include new construction, demolition, remodeling, re-inspection of problematic

market areas, re-inspection of the universe of properties on a specific cycle, and field or office verification of sales data and property characteristics.

6. Pilot study by tax year – new and/or revised mass appraisal models are tested each tax year. Ratio studies, by market area, are conducted on proposed values each tax year. Proposed values on each category are tested for accuracy and reliability in randomly selected market areas.
7. Valuation by tax year – using market analysis of comparable sales and locally tested cost data, valuation models are specified and calibrated in compliance with supplemental standards from the International Association of Assessing Officers and the Uniform Standards of Professional Appraisal Practice. The calculated values are tested for accuracy and uniformity using ratio studies.
8. The Mass Appraisal Report – each tax year the tax code required Mass Appraisal Report is prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar (on or about May 15th). The Mass Appraisal Report is completed in compliance with STANDARD RULE 6 – 8 of the *Uniform Standards of Professional Appraisal Practice*. The signed certification by the Chief Appraiser is compliant with STANDARD RULE 6 – 9 of *USPAP*. This written reappraisal plan is attached to the report by reference.
9. Value defense – evidence to be used by the appraisal district to meet its burden of proof for market value and equity in both informal and formal appraisal review board hearings is specified and tested.

PERFORMANCE ANALYSIS

In each tax year 2019 and 2020 the previous tax year's equalized values are analyzed with sales ratio studies to determine appraisal accuracy and appraisal uniformity overall and by market area within state property reporting categories. These studies not only provide a measure of performance, but also are an excellent means of improving mass appraisal performance and also to test the State Comptroller's Property Tax Division Annual Property Value Study results. Ratio studies are conducted in compliance with the current *Standard on Ratio Studies* from the International Association of Assessing Officers. Mean, median, and weighted mean ratios are calculated for properties in each reporting category to measure the level of appraisal (appraisal accuracy). The mean ratio is calculated in each market area to indicate the level of appraisal (appraisal accuracy) by property reporting category.

ANALYSIS OF AVAILABLE RESOURCES

Staffing, time and budget requirements for tax year 2019 are detailed in the 2019 appraisal district budget, as adopted by the board of directors and attached to the written biennial plan by reference. This reappraisal plan is adjusted to reflect the available staffing in tax year 2019 and the anticipated staffing for tax year 2020. Staffing will impact the cycle of real property re-inspection and personal property on-site review that can be accomplished in the 2019 – 2020 time period. With respect to new items, demolitions, and deletions; which shall refer to new construction, new personal property, and any property previously omitted or demolitions of construction and removal of personal property by closure and relocation, the Board shall allow for deviation of the annual reappraisal plan into those school districts (or geographic areas) not specifically scheduled for reappraisal in the given year for the appropriate assessment of all new items, demolitions, and deletions, while emphasizing completion of the scheduled planned reappraisal areas first.

Existing appraisal practices, which are continued from year to year, are identified and methods utilized to keep these practices current are specified. Each year real property appraisal depreciation tables and cost new tables are tested against verified sales data to ensure they represent current market data. The capitalization rate study by commercial real property type is updated from current market data and market rents are reviewed and updated from local published data when available. Personal property density schedules are tested and analyzed based on rendition and prior year hearing documentation and compared to schedule information provided by the Comptroller of Public Accounts.

Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled and performed primarily by Pritchard & Abbott, Inc. (P&A), the CAD's software vendor. Computer generated forms are reviewed for revisions based on year and reappraisal status. Legislative changes are scheduled for completion and testing by P&A. Existing maps and data requirements are specified and updates scheduled with assistance by out-sourced vendors.

PLANNING AND ORGANIZATION

A calendar of events with critical completion dates is prepared for each major work area. This calendar identifies all key events for appraisal, clerical, mapping, and information systems. A separate calendar is prepared for tax years 2019 and 2020 and provided to the CAD by the Comptroller of Public Accounts (CoPA). Production standards for field activities are calculated and incorporated in the planning and scheduling process.

July 2018	
July 26, 2018	<ul style="list-style-type: none"> • Begin preparing for 2019 Tax Appraisal Year
August 2018 - 2019 Tax Year	
	<ul style="list-style-type: none"> • Deadline for Electronic Appraisal Roll Submission (EARS) to PTD • Deadline for Export Property Transaction Submission Media Information (EPTS) to PTD • Begin 2019 appraisal process • Management Plan Year Begins • Begin working "Percent Complete" permits • ARB meeting for 2018 hearings and approves supplements • TAAO 2018 Annual Conference
September 2018	
Sept. 3, 2018 Sept. 15, 2018 Sept. 15, 2018	<ul style="list-style-type: none"> • Input 2018 tax rates into PACS system • ARB meeting for 2018 hearings and approves supplements • Statutory appraisal date for certain inventory properties (23.12) • Labor Day • Deadline for BOD to approve Biennial 2019-2020 Reappraisal Plan • Deadline for BOD to adopt the 2019 Budget
October 2018	
	<ul style="list-style-type: none"> • ARB meeting for 2018 hearings and approves supplements
November 2018	
Nov. 12, 2018 Nov. 22-23, 2018	<ul style="list-style-type: none"> • ARB meeting for 2018 hearings and approves supplements • Veterans Day • Thanksgiving Holiday
December 2018	
Dec. 24-25, 2018	<ul style="list-style-type: none"> • Perform end of year functions in PACS System • ARB meeting for 2018 hearings and approves supplements • Print Business Personal Property Renditions • Christmas Holiday
January 2019	
Jan. 1, 2019 Jan. 1, 2019	<ul style="list-style-type: none"> • Assessment Date • New Year's Day • ARB meeting for 2018 hearings and approves supplements • Analyze sales areas and prepare for Mass Appraisals analysis • Mail exemption applications
Jan. 4, 2019	<ul style="list-style-type: none"> • Advertise Business Personal Property Rendition requirements in the Caller Times Newspaper
Jan 14, 2019	<ul style="list-style-type: none"> • Martin Luther King Day Holiday

February 2019	
Feb. 1, 2019	<ul style="list-style-type: none"> • Get bids from vendors for preparation and mailing of the Appraisal Notices • ARB meeting for 2018 hearings and approves supplements • TAAD 2019 Annual Conference • Receive preliminary findings of the 2018 Property Value Study from PTD • Deadline for Electronic Property Transaction submission to PTD
March 2019	
	<ul style="list-style-type: none"> • Approval/Award of contract for 2017 Appraisal Notices • ARB meeting for 2018 hearings and approves supplements • Deadline to submit protest appeal of 2018 Property Value Study
April 2019	
<p>April 1, 2019</p> <p>April 1, 2019</p> <p>April 1, 2019</p> <p>April 15, 2019</p>	<ul style="list-style-type: none"> • Submit 2018 Preliminary Budget to the DOB • Real Property Field Cycle ends for 2017 • Data entry cut-off for 1st mailing of Appraisal Notices (Real Property) • Requisition supplies needed for the Certification of the Appraisal Rolls • ARB cycle for Real Property begins • ARB training for appraisal personnel • Begin informal settlements with Tax Payers • 1st Mailing of Appraisal Notices • Mail Homestead Exemption Applications with Notices • Deadline for filing renditions and requests for BPP rendition extensions • Good Friday Holiday
May 2019	
<p>May 1, 2019</p> <p>May 27, 2019</p> <p>May 30, 2019</p>	<ul style="list-style-type: none"> • Public hearing on Preliminary 2018 Budget • ARB accepts Real Property Appraisal records • ARB meetings begin for 2019 hearings and approves supplements • Data entry cut-off for 2nd mailing of Appraisal Notices (Real Property) • 2nd Mailing of Appraisal Notices • Protest deadline for 1st mailing of Appraisal Notices • Memorial Day Holiday • 3rd Mailing of Appraisal Notices
June 2019	
	<ul style="list-style-type: none"> • ARB meeting for 2019 hearings and approves supplements • Protest deadline for 2nd mailing of Appraisal Notices • Protest deadline for 3rd mailing of Appraisal Notices
July 2019	

<p>July 4, 2019 July 19, 2019 July 25, 2019</p>	<ul style="list-style-type: none"> • Verification and file cleanup • ARB meeting for 2019 hearings and approves 2018 supplements • Data entry cut-off for certification • Independence Day Holiday • ARB submits 2019 Appraisal records to Chief Appraiser for certification • Chief Appraiser certifies Appraisal Roll • Begin preparing for the 2020 appraisal process
August 2019 - 2020 Tax Year	
	<ul style="list-style-type: none"> • Deadline for Electronic Appraisal Roll Submission (EARS) to PTD • Deadline for Export Property Transaction Submission Media Information (EPTS) to PTD • Begin 2020 appraisal year process • Management Plan Year Begins • Begin working "Percent Complete" permits • ARB meeting for 2019 hearings and approves supplements • TAAO 2019 Annual Conference
September 2019	
<p>Sept 2, 2019 Sept 15, 2019</p>	<ul style="list-style-type: none"> • Input 2019 Tax Rates into PACS system • Statutory appraisal date for certain inventory properties (23.12) • ARB meeting for 2019 hearings and approves supplements • Labor Day Holiday • Deadline for BOD to adopt the 2020 budget
October 2019	
	<ul style="list-style-type: none"> • ARB meeting for 2019 hearings and approves supplements
November 2019	
<p>Nov. 11, 2019 Nov. 23-24, 2019</p>	<ul style="list-style-type: none"> • ARB meeting for 2019 hearings and approves supplements • Veterans Day • Thanksgiving Holiday
December 2019	
<p>Dec. 14, 2019 Dec. 25-26, 2019</p>	<ul style="list-style-type: none"> • Perform year end function in PACS System • ARB meeting for 2019 hearings and approves supplements • Print & mail Business Personal Property Renditions • Christmas Holiday
January 2020	
<p>Jan. 1, 2020 Jan. 3, 2020</p>	<ul style="list-style-type: none"> • ARB meeting for 2019 hearings and approves supplements • Analyze sales areas and prepare for Mass Appraisal analysis • New Year's Day Holiday • Advertise Business Personal Property Rendition requirements in the Local Papers
February 2020	

Feb. 3, 2020	<ul style="list-style-type: none"> • Get bids from vendors for preparation and mailing of the Appraisal Notices • ARB meeting for 2019 hearings and approves supplements • TAAD Annual Conference • Deadline for Electronic Property Transaction submission to the Comptroller's PTD
March 2020	
April 10, 2020	<ul style="list-style-type: none"> • Approval/Award of contract for 2020 Appraisal Notices • ARB meeting for 2019 hearings and approves supplements • Good Friday Holiday
April 2020	
April 10, 2020 April 15, 2020	<ul style="list-style-type: none"> • Submit 2019 Preliminary Budget to the DOB • Real Property Field Cycle ends for 2020 • Data entry cut-off for 1st mailing of Appraisal Notices (Real Property) • ARB meeting for 2019 hearings and approves supplements • Requisition supplies needed for the Certification of the Appraisal Rolls • ARB cycle for Real Property begins • ARB training for appraisal personnel • 1st Mailing of Appraisal Notices • Begin informal settlements with tax payers • Good Friday • Deadline for filing renditions and request for BPP rendition extensions
May 2020	
May 28, 2020	<ul style="list-style-type: none"> • Public hearing on Preliminary 2019 Budget • ARB accepts Real Property Appraisal records • ARB meetings begin for 2020 hearings and approves supplements • 2nd Mailing of Appraisal Notices • 3rd Mailing of Appraisal Notices • Protest deadline for 1st mailing of Appraisal Notices • Memorial Day Holiday
June 2020	
	<ul style="list-style-type: none"> • ARB meetings for 2020 hearings and approves supplements • Protest deadline for 2nd mailing of Appraisal Notices • Protest deadline for 3rd mailing of Appraisal Notices
July 2020	

<p>July 4, 2020 July 17, 2020 July 24, 2020</p>	<ul style="list-style-type: none"> • Verification and file cleanup • ARB meetings for 2019 hearings and approves supplements • Data entry cut-off for certification • Independence Day Holiday • ARB submits 2020 Appraisal Records to Chief Appraiser for certification • Chief Appraiser Certifies Appraisal Rolls • Begin preparing for the 2021 appraisal process
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MASS APPRAISAL SYSTEM

The Computer Assisted Mass Appraisal (CAMA) system revisions are specified and scheduled with Information Systems. All computer forms and IS procedures are reviewed and revised as required by the third-party software vendor. The following details these procedures as it relates the 2019 and 2020 tax years:

REAL PROPERTY VALUATION

Revisions to cost models, income models, and market models are specified, updated and tested each tax year and may be limited based on the amount of data available to perform revisions.

Cost schedules are tested with market data (sales) to ensure that the appraisal district is in compliance with Texas Property Tax Code, Section 23.011. Replacement cost new tables as well as depreciation tables are tested for accuracy and uniformity using ratio study tools and compared with cost data from recognized industry leaders, Marshall & Swift Valuation Service is currently the valuation guide the CAD uses for this testing.

Land tables are updated using current market data (sales) and then tested with ratio study tools. Value modifiers are developed for property categories by market area and tested on a pilot basis with ratio study tools.

Income, expense, and occupancy data is updated in the income models for each market area and cap rate studies are completed using current sales data. The resulting models are tested using ratio study tools.

PERSONAL PROPERTY VALUATION

Density schedules are updated using data received during the previous tax year from renditions, information received from the CoPA and hearing documentation. Valuation procedures are reviewed, modified as needed, and tested.

NOTICING PROCESS

25.19-appraisal notice forms are reviewed and edited for updates and changes signed off on by appraisal district management. Updates include the latest copy of Comptrollers *Taxpayers rights, remedies, and responsibilities*.

HEARING PROCESS

Protest hearing scheduling for informal and formal Appraisal Review Board (ARB) hearings is reviewed and updated as required. Standards of documentation are reviewed and amended as required. The appraisal district hearing documentation is reviewed and updated to reflect the current valuation process. Production of documentation is tested and compliance with HB 201 is insured.

DATA COLLECTION REQUIREMENTS

Field and office procedures are reviewed and revised as required for data collection. Activities scheduled for each tax year include new construction, demolition, remodeling, re-inspection of problematic market areas, and re-inspection of the universe of properties.

DEFINING MARKET AREAS

Market areas are defined by physical, economic, governmental, and social forces that influence property values. The effects of these forces were used to identify, classify, and stratify or delineate similarly situated properties into smaller, more comparable and manageable subsets for valuation purposes. Delineation can involve the physical drawing of neighborhood boundary lines on a map, or it can also involve statistical separation of stratification based on attribute analysis. These homogeneous properties have been delineated into school district and valuation neighborhoods for residential property, agricultural category / operation type and school district for rural property, and economic class for commercial property, but because there are discernible patterns of growth that characterize a neighborhood or market segment, appraisal staff will annually evaluate the neighborhood boundaries or market segments to ensure homogeneity of property characteristics. The appraisal staff will assign neighborhood codes to comparable properties conforming to the definition of a market area; giving specific consideration to market characteristics and the specific life cycle of the neighborhood in compliance with USPAP Standards. For the purposes of the CAD's two-year re-inspection cycle, market areas are first defined by school districts, then by valuation neighborhoods, operation type, and economic class; in addition, reappraisals will be determined by delineated neighborhoods based on concentration of protest and / or sales.

NEW CONSTRUCTION / DEMOLITION

New construction field and office review procedures are identified and revised as required. Field production standards are established and procedures for monitoring tested. Source of building permits is confirmed, and system input procedures are identified. Process of verifying demolition of improvements is specified. This critical annual activity is projected and entered on the key events calendar for each tax year. With respect to new items, demolitions, and deletions; which shall refer to new construction, new personal property, and any property previously omitted or demolitions of construction and removal of personal property by closure and relocation, the Board shall allow for deviation of the annual reappraisal plan into those school districts (or geographic areas) not specifically scheduled for reappraisal in the given year for the appropriate assessment of all new items, demolitions, and deletions, while emphasizing completion of the scheduled planned reappraisal areas first.

REMODELING

Market areas with extensive improvement remodeling are identified, verified and field activities scheduled to update property characteristic data. Updates to valuation procedures are tested with ratio studies before they are finalized in the valuation modeling. This field activity when entered in the key events calendar must be monitored carefully.

RE-INSPECTION OF PROBLEMATIC MARKET AREAS

Real property market areas, by property classification, are tested for: low or high protest volumes; low or high sales ratios; or high coefficient of dispersion. Market areas that fail any or all these tests are determined to be problematic. Field reviews are scheduled to verify and/or correct property characteristic data. Additional sales data is researched and verified. In the absence of adequate market data, neighborhood delineation is verified, and neighborhood clusters are identified.

RE-INSPECTION OF THE UNIVERSE OF PROPERTIES

The International Association of Assessing Officers, *Standard on Mass Appraisal of Real Property* specifies that the universe of properties should be re-inspected on a cycle of 3 years. The re-inspection will be completed using a combination of field inspections, which includes the re-measurement of at least two sides of each improved property, and office review. Office review of properties will include, but is not limited to, the examination of property sketches, existing property characteristics, any digital imaging photos or aerials, and any other information the district may have obtained specific to a neighborhood or properties. The annual re-inspection requirements for tax years 2019 and 2020 are identified by property type and property classification and scheduled on the key events calendar.

FIELD AND / OR OFFICE VERIFICATION OF SALES DATA AND PROPERTY CHARACTERISTICS

Sales information must be verified and property characteristic data contemporaneous with the date of sale captured. The sales ratio tools require that the property that sold must equal the property appraised in order that statistical analysis results will be valid.

PILOT STUDY

New and/or revised mass appraisal models are tested on randomly selected market areas. These modeling tests (sales ratio studies) are conducted each tax year. Actual test results are compared with anticipated results and those models not performing satisfactorily are refined and retested. The procedures used for model specification and model calibration are in compliance with *Uniform Standards of Professional Appraisal Practice*, STANDARD RULE 6.

VALUATION BY TAX YEAR

Valuation by tax year – using market analysis of comparable sales and locally tested cost data, market area specific income and expense data, valuation models are specified and calibrated in compliance with the supplemental standards from the International Association of Assessing Officers and the *Uniform Standards of Professional Appraisal Practice*. The calculated values are tested for accuracy and uniformity using ratio studies. Performance standards are those as established by the *IAAO Standard on Ratio Studies*. Property values in all market areas are updated each reappraisal year.

RESIDENTIAL REAL PROPERTY

Cost Approach

The District uses a hybrid cost-market approach when valuing residential properties. The comparative unit, also known as the square-foot method, will be used to develop an indication of the basic cost of structure. Adjustments will then be made for amenities of individual properties based upon characteristics that affect value in the market. The District's cost tables are based upon information obtained from the Marshall and Swift Valuation Service. These cost figures are adjusted to the local market to reflect current local labor and material costs. Neighborhood Market Adjustment factors will be developed from appraisal statistics developed by ratio studies to ensure that estimated

values reflect both the supply and demand side of the market in each specific neighborhood. The following equation denotes the hybrid cost approach model used:

$$MV = LV + (RCN - AD) \times Q \times LA$$

Whereas, in accordance with the hybrid approach, the estimated market value (MV) of the property equals the land value (LV) plus the replacement cost new of the improvements (RCN) less accrued depreciation (AD), multiplied by the quality of workmanship (Q), and multiplied by the local adjustment multiplier (LA). The cost approach separately estimates both the land and the building contributory values (depreciated replacement costs) based on the cost tables. While cost tables reflect only the supply or availability part of the market, it is expected that adjustments to the cost tables may be needed to bring the level of appraisal to an acceptable standard as indicated by the market sales data. The adjustment (LA) of the cost tables will allow for the observation and consideration of economic factors and influences. These markets, or local adjustments (LA), may be abstracted and applied uniformly within neighborhoods to account for specific variances between market areas across a jurisdiction. In accordance with the Market Approach, the estimated market value (MV) of the property equals the basic unit of property, under comparison, multiplied by 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 has been determined to be the rate of change for the improvement's contribution to total property value. The primary unknown for the cost approach is to accurately measure accrued depreciation (AD) affecting the amount of loss attributed to the improvements as age increases and condition changes. Evaluation of property using the Cost Approach relies on the depreciated value of the improvement component based on age and condition. The measure of change for this component can best be reflected in the annualized accrued depreciation table. The level of improvement contribution to the property is measured by abstraction of comparable market sales and subtracting the land value from the sale price to develop a residual land value. This cost adjustment factor (LA) is most appropriately measured by sales of similar property. In the Market Approach, when the improvements are abstracted from the sale price, the resulting number indicates the depreciated value of the improvement component and the economic forces. The reconciliation of both the market and cost information is the basis of an indication of the property value 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, within a delineated neighborhood. The value of the properties' used in the study is 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 sales prices indicates the neighborhood level of appraisal based on sold properties. These ratio studies are used 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. An overall appraisal ratio between the ranges of 96% to 100% is considered to be acceptable.

If reappraisal of the neighborhood is indicated, the appraiser analyzes available market sales. The abstraction of property components allows the appraiser to focus on the rate of change for the improvement contribution. Abstraction of the improvement value provides a basis for calculating accrued depreciation / appreciation attributed to the improvement component. In the years when new improvement cost schedules are loaded into the system, the analysis is focused mainly on development of the depreciation factor. In the years when the system has not been updated with new cost schedules, the analysis is focused on the appreciation component. This is usually the most significant factor affecting property value and the most important unknown factor to be determined by market analysis. Abstraction of the land component from the sale price indicates the effect of overall market influences and factors on the price of improvements that were a part of recently sold property. Comparing this indicated price or value allocation for the improvement with the estimated replacement cost new of the improvement indicates any loss/gain in value due to accrued forms of physical, functional, or economic forces. This is a market driven measure of accrued depreciation/appreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales. The multiple sales can 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 / appreciation for the improvements based on the 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 / appreciation rates taken from market sales. This factor is the basis for trending all improvement values within a quality, size, age and / or class of residences. When combined with any other site improvements and land value, the estimated property value using the Hybrid Cost Approach reflects appraisal estimates being closer to actual market prices in a 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 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 considers the appraisal level and uniformity in both updated and non-updated neighborhoods and verifies appraised values against overall trends as exhibited by the local market, and finally, for the school district as a whole.

Sales Comparison Approach

As indicated in *Property Assessment Valuation* (IAAO 2010), in the absence of a sale of the subject property, sales prices of comparable properties are usually considered the best evidence of market value. The sales comparison approach mimics the behavior of the market by comparing the properties being appraised with comparable properties that have recently sold. Their sales prices will then be adjusted for differences from the subject and a market value for the subject is estimated from the adjusted sales prices of comparable properties.

Income Approach

The income approach is based on the principle that the value of an investment property reflects the quality and quantity of the income it is expected to generate over its economic life. In other words, value is the estimated present value of future benefits. The appraiser must estimate income from a property and capitalize the income into an estimate of current value.

The model used to estimate the present value of income expected in the future is represented by the following formulas known as IRV.

$$\text{Value} = \text{Income} / \text{Rate}$$

The income approach is most suitable for types of properties frequently purchased and held for the purpose of producing income, such as apartments, commercial buildings, and office buildings. It is not conducive to the valuation of single-family residential properties as these properties are purchased by consumptive users and therefore, do not routinely generate an income stream.

Inventory Residential Property

Residential improved and vacant property is appraised in compliance with Section 23.12(a) of the Texas Property Tax Code (TPTC).

In general, the District uses its land value estimates and the actual itemized construction, labor, and material costs, plus other soft or indirect costs to estimate market value as the appraisal date to estimate the value of improved inventory. The market values of improved inventory will be reviewed annually, and inventory adjustments will be eliminated when ownership transfers from the developer or builder.

Vacant residential inventory will be valued using a discounted cash flow formula that considers value relative to the income or cash flow, an appropriate discount rate, and the amount of time that the property is likely to be held or lots sold out of inventory. Since there is no legal requirement that developers or builders render their inventory, a preliminary estimate of inventory value may be difficult to estimate.

COMMERCIAL AND MULTIFAMILY REAL PROPERTY

Cost Approach

The cost approach to value will be applied using the comparative unit, or square foot method of cost estimating. The following is the basic model that the District utilizes when employing the cost approach:

$$MV=RCNLD+LV$$

This methodology involves the use of national sources of cost data as well as actual cost information gathered from the local market whenever possible. Cost models utilized by the District are based on data obtained from the Marshall and Swift Valuation Service. These costs include comparative base rates, per unit adjustments, and lump sum adjustments as appropriate and necessary to account for the specific factors affecting value. Time and location modifiers will be applied as necessary to adjust cost data to reflect conditions in a specific market as well as changes in costs over a period of time. A cost estimate will be generated by the appraisal staff based upon the cost schedules as they are applied to the specific characteristics of the subject property of the appraisal.

Depreciation schedules have been implemented for economic lives and condition that is typical of each major class of commercial property-by-property use. The schedules utilized by the District are developed using recognized sources and mirror the Marshall and Swift. These schedules will be tested annually to ensure they will be reflective of current market conditions. The actual and effective ages of improvements are judged by the appraiser and noted in the improvement records contained within each property record. Effective age estimates will be based on the utility of the improvements relative to the improvement's total economic life, condition, and its competitive position in the marketplace. These adjustments are generally determined during field operations.

Certain adjustment factors such as external and / or functional obsolescence will be applied to properties as applicable based upon market data. These adjustments will typically be applied to a specific property type or location and will be developed through ratio studies or other market analysis. Accuracy in the development of the cost schedules, condition ratings, and depreciation schedules usually minimize the necessity of this type of an adjustment factor. The sum total of depreciation, also expressed as the loss in value from all causes, is subtracted from the replacement cost new less depreciation (RCNLD).

The cost approach requires the District to value the land utilizing one of the four accepted methods of land valuation; the sales comparison approach, allocation by abstraction, allocation by ratio, or the capitalization of ground rent. Once the land is valued by the method deemed most appropriate in terms of the data available, the resulting land value is added to the RCNLD of the improvements to yield an estimate of market value by the cost approach. Any estimate of value completed by the cost approach will be made in accordance with Section 23.011 of the TPTC.

Sales Comparison Approach

Pertinent data from actual sales of properties will be obtained throughout the year and the appraisal staff will analyze the relevant information. This data will be utilized in all aspects of the appraisal process.

Sales of similarly improved properties will provide a basis for the test of depreciation schedules used in the cost approach, rates and multipliers used in the income approach, and as a direct comparison in the sales comparison approach. Improved sales will also be used in ratio studies, which afford the appraiser a means of judging the present level and uniformity of the appraised values. The ratio studies used follow the current IAAO *Standard on Ratio Studies*.

Based on the market data gathered and analyzed by the appraisal staff, the cost and income models will be calibrated annually. The calibration results will be added to the schedules and models in the CAMA system to apply to all commercial properties in the District as appropriate. Any estimate of value completed by the sales comparison approach will be made in accordance with Section 23.013 of the TPTC.

Income Approach

The income approach to value will be applied to those real properties that are typically viewed by market participants as income producing. Income producing properties are those that are bought and sold based on the property's ability to produce an income; therefore, the price paid for a property is directly related to the amount of income the property is capable of producing. The appraisal staff utilizes income and expense data furnished by the property owners; data collected by staff and information from local market study publications. Income models by property use and neighborhood / market area are developed and deployed for use in valuation.

The following model is the basis for commercial property valuation by the income approach:

$$\text{NOI} \div \text{Cap Rate} = \text{EFMV}$$

Or More Specifically:

$$[(\text{PGR} - \text{V\&C}) + (\text{SI}) - (\text{AE} + \text{RFR})] \div \text{Cap Rate} = \text{IFMV}$$

Where: PGR=Potential Gross Rent
V&C=Vacancy & Collection Losses
SI= Secondary Income
AE= Allowable Expenses
RFR=Reserve for Replacement
NOI=Net Operating Income
CAP RATE=Capitalization Established by CAD
IFMV=Indicated Fair Market Value

This income model reflects the normalization of an income stream from Potential Gross Rent (PGR) at 100% occupancy to an indication of Net Operating Income (NOI). The process involves estimating the rental producing capacity of the subject property under prudent management (PGR). Market derived vacancy and collections (V&C) losses are subtracted from the potential gross rent to arrive at effective gross rent (EGR). Any net income from secondary property uses (vending income or parking income, etc) (SI) are added to the effective gross rent to yield an estimate of effective gross income (EGI).

Allowable expenses are the expenses that are recurring annual expenses necessary to operate the property sufficiently to achieve the projected level of effective gross income. These vary by property type and are researched by the commercial appraisal staff. Once identified or projected, the allowable expenses are subtracted from the effective costs of replacing certain building components whose economic lives are shorter than total economic life of the improvement (carpets, roof cover, air conditioning, etc.). Generally, these are calculated by either dividing the replacement cost new of the item by its economic life, a flat reserve amount per unit justified by the market, or a percentage of EGI; whichever is deemed appropriate. Once all allowable expenses and reserves have been identified or calculated, these amounts are subtracted from the effective gross income to yield an estimate of net operating income (NOI).

Rates and multipliers will be used to convert the income stream into an estimate of market value. These include gross income multipliers, overall capitalization rates, and discount rates. Each of these is used in specific applications. Rates and multipliers also vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers will be based on a thorough analysis of the market.

Direct Capitalization will be used in the income approach models. This methodology involves dividing the net operating income by the appropriate capitalization rate to arrive at an indication of market value for a specific property. Capitalization rates utilized will be derived from the market as to estimate what a market participant would require from an investment as of the date of appraisal. Additionally, overall capitalization rates may be derived from the summation method, band-of-investments, debt coverage ratio, or obtained from published sources for similar properties. The capitalization rates utilized will relate directly to satisfying the market return requirements of both the debt and equity positions of a real estate investment.

In valuing property by the income approach, the District will consider the income characteristics of all properties, as they are available. Adjustments will be made as necessary and appropriate and the models, schedules, and value indications developed will be made pursuant to Section 23.012 of the TPTC.

UTILITIES, RAILROADS, PIPELINES, AND MINERAL INTEREST

The San Patricio Appraisal District contracts with Pritchard & Abbott, Inc., an appraisal firm with specific expertise for the valuation of utility, railroad, pipelines properties, and

mineral interest. These properties will be reappraised per the reappraisal plan of Pritchard & Abbott, Inc. using recognized methods and techniques as required by USPAP Standards. The appraisal models considered in the valuation of these properties will be:

$$MV = RCN - D$$

And
Allocated Unit Appraisal

Each of the values produced by these models will be considered and the property value will be allocated to the taxing entities based upon the method that is deemed most appropriate by property type.

Pritchard & Abbott, Inc. will consider all factors affecting value, conduct physical inspections as necessary, research information from published sources, and receive copies of renditions from property owners in the development of their appraisal. Based upon the information gathered in these processes, data characteristics of these properties will be updated annually in accordance with tax code requirements.

The appraisal firm will utilize a form of yield capitalization of the income approach called the Discount Cash Flow Analysis (DCF) in order to accurately value mineral interest. The factors affecting the value of mineral interests include reserve estimates, production volume and pattern, production prices, operator expenses, and the discount rates applied to discount future income into an indication of present worth.

As mineral reserves are subsurface in nature, this makes specific physical inspection unavailable as a method of collecting data. Pritchard & Abbott, Inc. will collect data from the Texas Railroad Commission, Comptroller of Public Accounts, and renditions from owners, published sources, and data services to identify characteristics affecting value. All the information gathered will be considered in the estimation of the value of mineral interests.

VALUATION OF SPECIAL-USE PROPERTIES

The valuation of special-use properties, such as agricultural and wildlife management land, shall be done in compliance with the Comptroller's Manual for the Appraisal of Agricultural Land. This publication prescribes that the cash lease and the share lease methods of appraisal are appropriate when developing productivity value estimates.

The cash method is a modified income approach using the lease amount (income per acre) minus expenses (land owner) to yield the "net-to-land" value per acre. "Net-to-land" values will be averaged for a five-year period to give an average "net-to-land" factor that is divided by the appropriate capitalization rate for the year to give a value per class of agricultural production. The district will collect lease data from owners, lessees, and the Comptroller's office on an ongoing basis in order to develop "net-to-land" figures by agricultural classification.

BUSINESS AND INDUSTRIAL TANGIBLE PERSONAL PROPERTY

General

These property types will be valued each appraisal year by the district's appraisal staff. The appraisal staff engages in an annual field review to identify new businesses to be added to the roll, movement of existing businesses to different locations or business closings, and data review of current property characteristics in property records. Once pertinent data is updated in the field, property rendition forms will be sent to owners in order that they may declare their taxable personal property according to current law. The information obtained from renditions will be utilized by the district to develop an estimate of market value.

Cost Approach

The primary approach to the valuation of business and industrial personal property will be the cost approach. Cost indexes and schedules will be developed by the district's staff and applied to specific business SIC codes. These schedules will be reviewed and updated annually to conform to changing market conditions.

Valuation index factors will be created and refined using actual original cost data obtained from renditions to derive the replacement cost new (RCN) per applicable unit for a specific category of assets. The data obtained will be compiled for review and models and / or factors will be built or adjusted as necessary. The revised models / factors will be tested in accordance to accepted methods and techniques.

These model values will be used specifically to estimate the value of new accounts and / or accounts for which no property owner's rendition is filed. The models will also be utilized to test renditions filed by property owners or their agents. In the event that property rendition information falls significantly outside of a statistical tolerance from the model, further review of the property may be conducted.

The depreciation factors utilized will be based on the depreciation schedules for furniture, fixtures, and equipment as developed by the Comptroller's office and tested against Marshall and Swift. This mass appraisal depreciation schedule is used to ensure that estimated values are uniform and consistent with the market. RCN and depreciation will be utilized to develop value estimates using the following formula:

$$MV = RCNLD \times \text{Index Factor}$$

Leased equipment and multi-location assets may be valued using original cost, depreciation, and index factors mentioned above.

Sales Comparison Approach

Business personal property is typically sold as part of the business as a whole, which makes this approach less suitable for valuing most personal property. This approach is generally suitable for the valuation of certain types of vehicles and heavy equipment.

Value estimates for vehicles will be based on data furnished by recognized sources such as NADA among others. Any sales of personal property will be considered, and appropriate weight will be given based upon individual circumstances.

Income Approach

The income approach has limited use in the appraisal of machinery, equipment, furniture, fixtures, and leasehold improvements because of the difficulty in estimating future net benefits. The exception to this is in the case of leased equipment. When reliable data on equipment leases is available, the income approach may be used to estimate the fair market value of the equipment.

THE MASS APPRAISAL REPORT

Each tax year the tax code required Mass Appraisal Report is prepared and certified by the Chief Appraiser at the conclusion of the appraisal phase of the ad valorem tax calendar (on or about May 15th). The Mass Appraisal Report is completed in compliance with STANDARD RULE 6-8 of the *Uniform Standards of Professional Appraisal Practice*. The signed certification by the Chief Appraiser is compliant with STANDARD RULE 6-9 of *USPAP*. This written reappraisal plan is attached to the Mass Appraisal Report by reference.

VALUE DEFENSE

The Appraisal District has the burden of proof for market value and equity in both formal and informal Appraisal Review Board hearings. The evidence used in these hearings is specified and tested.

A variety of evidence is utilized by the district depending on the property type of the subject of the protest. In addition, the district updates the evidence supplied to an owner, agent, or the Appraisal Review Board to be contemporaneous with the valuation procedures utilized. Examples of evidence that may be used include, but are not limited to:

1. Property sales information,
2. Property sales adjustment grids,
3. Property equity adjustment grids (as applicable),
4. Gross Rent / Income Multiplier data (as applicable),
5. Proforma and actual income data (as applicable),
6. Property characteristics data including photos (as applicable),
7. Aerial photography (as applicable),
8. Cost approach reports (as applicable),
9. Property renditions (as applicable),
10. Published reports regarding cost, market or income data
11. Schedules and / or models utilized, and / or
12. Any other information collected by the district.