

Hidalgo County Appraisal District

Re-Appraisal Plan

2015 – 2016



Approved By:

Hidalgo County Appraisal District

Board of Directors

August 13, 2014

HIDALGO COUNTY APPRAISAL DISTRICT

ADMINISTRATION
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August 15, 2014

Texas Comptroller of Public Accounts
Attn: Ms. Liz Alvarado
PO Box 13528
Austin, TX 78711-3528

Dear Ms. Alvarado:

Pursuant to Section 6.05(i) of the Texas Property Tax Code, attached you will find a copy of the biennial 2015-2016 Re-Appraisal Plan for periodic reappraisals for Hidalgo County Appraisal District. The Hidalgo County Appraisal District Board of Directors approved the plan on August 13, 2014.

If you have any questions in reference to the 2015-2016 Re-Appraisal Plan, please do not hesitate to contact me at (956) 381-8466.

Sincerely,

Rolando Garza, RPA
Chief Appraiser

RG:pa



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EXECUTIVE SUMMARY

INTRODUCTION

Section 6.05 of the Texas Property Tax Code requires Appraisal Districts to develop a biennial written reappraisal plan and hold a public hearing to consider the plan. No later than September 15th of each even-numbered year, the Appraisal District Board of Directors must finally approve the reappraisal plan and distribute copies to the taxing units and the Comptroller within 60 days of board approval. This document serves as the biennial written reappraisal plan described above.

HCAD is responsible for the appraisal of all classes of taxable property located within its jurisdictional boundaries. The boundaries include all property located in Hidalgo County. HCAD is responsible for the appraisal of approximately 299,391 real property parcels; 12,189 mineral accounts; and 22,817 business and other personal property accounts. The District serves 50 taxing units. Those taxing units consist of 16 independent school districts, 20 cities, 1 county, 1 community college district, and 12 special use districts, such as drainage, irrigation, and emergency services. HCAD employs an outside appraisal firm to appraise minerals, oil and gas, utilities, and various other complex properties. Contract appraisers are also guided by the principles set forth in USPAP and a copy of this firm's valuation methodology is included in the district's appraisal manual.

In mass appraising property for the purpose of ad valorem taxation, HCAD subscribes to the Standards established by the International Association of Assessing Officers. In addition, HCAD is guided by the principles set forth in The Appraisal Foundation's "Uniform Standards of Professional Appraisal Practice" (USPAP). USPAP Standards and Statements are included in this Appraisal Plan. In appraising property for ad valorem tax purposes, HCAD employs generally accepted appraisal methods and techniques. Our analysts conduct mass appraisal utilizing the three approaches to value: the cost, market, and income approaches.

Section 6.05(i), of the Texas Property Tax Code, Tax Code reads 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 have 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

Texas Property Tax Code Sec. 25.18. Periodic Reappraisals.

- (a) Each appraisal office shall implement a plan for periodic reappraisal of property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:
 - (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;

HCAD receives listings of all deeds filed with the Hidalgo County Clerk's office. Deeds are read and abstracted by clerical staff in the deed department of HCAD. Information is recorded in the computer assisted mass appraisal system (CAMA) software including grantor, grantee, date of recording, volume and page. Property identification numbers are assigned to each parcel of property.

Business personal property is located by canvassing the county street by street, using data sources such as yellow pages, sales tax permit holder lists and other business listing publications to ensure that all property owners are located. All businesses are mailed a rendition about January 1 of each year. Owners are required by law to list all their business personal property. Failure to render results in an automatic 10% penalty and a possible 50% penalty if a false rendition

is filed. Lists of commercial vehicles are also purchased annually and these vehicles are tied to appropriate business accounts. Renditions are also required of utility companies, railroads and pipelines.

Oil and gas wells are discovered using Texas Railroad Commission records. Production records are processed by a contracted appraisal firms. Ownership is determined by records known as division orders.

HCAD utilizes a highly developed geographic information system (GIS) that show ownership lines for all real estate. Aerial photography is interfaced with the GIS for an Additional layer of vital information.

(2) identifying and updating relevant characteristics of each property in the appraisal records;

All real estate is physically reviewed once every three years. HCAD's 16 school districts are reappraised on a three year rotation. In 2015 Edinburg CISD, Edcouch-Elsa ISD, La Joya ISD, La Villa ISD, Lyford ISD, and Monte Alto ISD will be inspected. In 2016 Hidalgo ISD, McAllen ISD, Mission, Sharyland ISD and Valley View ISD will be inspected. See Exhibit A of this plan for the proposed 2015 and 2016 work schedules. A category breakdown of properties to be appraised within each school district is also included. Appraisers drive the county and gather data about each home, commercial business or vacant tract. The appraisers walk from property to property measuring the structures and noting the condition of the property and noting any changes to the property since the last physical inspection. Pictures are taken to capture the property's current quality and condition. The appraiser notes the date of the physical inspection on the field card and that information along with any property changes is entered in the CAMA system. The pictures are stored in the CAMA system and used to assist the appraiser in making decisions in the office. Other data stored in the CAMA system includes an exterior sketch of the improvement which allows for the calculation of square footage for the building and its components such as, garages, porches, patios, and other structures not attached to the main improvement. Other property characteristics maintained in the CAMA systems are components found within the building such as bathrooms, fireplaces, air conditioning, roof type, wall heights and exterior finish. New property is discovered using building permits, utility hook up permits and driving the county.

Rural acreage is inspected to verify existing agricultural use. New applications for agricultural use are inspected annually.

Business personal property is physically inspected annually. The quality and density of inventories are determined as of January 1 and the age and condition of furniture, fixtures, machinery and other equipment is noted. If the appraiser's observation differs from

that of the rendition filed by the business owner, additional information is requested from the business owner and sometimes a value that differs from the rendered value may be assigned.

HCAD contracts with an appraisal firm that specializes in the appraisal of oil and gas properties, utilities, railroads and pipelines. Specialized software is used to determine well production, decline and economically recoverable reserves. The reserves are appraised discounting for the time it will take to recover them from the earth. Utility companies, railroad and pipelines are appraised using the income approach, where the net income is capitalized and allocating the resulting value to the various taxing entities in the county.

(3) defining market areas in the district;

Annually, appraisers combine similar types of properties into "neighborhoods". These neighborhoods or "market areas" typically have improvements of similar construction and type. Market sales are used define market areas and improvement and land schedules are developed accordingly. Apartments and commercial properties are categorized by market demand. Trade areas with similar rents, quality and age are combined to analyze sales and rental data. Economic factors weigh heavily when defining market areas. In some instances, large geographic areas of mixed use property types can be viewed as a single market area because of location, such as property along the Texas/Mexico border, or because of the effects of a natural disaster, such as hurricanes and droughts. (See Exhibit B for list of HCAD neighborhoods/market areas and area map).

Market areas are also developed for land. Adjustments are determined based on location, size, topography and other characteristics recognized by market sales.

(4) Identifying property characteristics that affect property value in each market area, including:

(A) the location and market area of 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;

Each parcel of property has detailed information recorded in the CAMA system. Land attributes consist of legal description, dimensions, zoning, size, utilities, road access and any other special,

unique or legal characteristics are noted and used for developing schedules and defining market areas. Each improvement record consists of a current sketch with measurements, a photograph of the improvement and individual property characteristics such as class, construction quality, year of construction, roof covering and style, exterior finish, number of bathrooms, fireplaces, heating and air conditioning, pools, out buildings and other attributes specific to the improvement.

- (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;

HCAD's computer assisted mass appraisal (CAMA) system utilizes 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. The model uses the cost approach to value to estimate the original cost of each building component. Market sales are studied for improvement contributions in each market area and adjustments to cost schedules are applied to each improvement via depreciation and market adjustment factors.

Similar models are used when appraising apartments, commercial and industrial properties, but market sales and income data are key components of the valuation process for these properties.

- (6) applying the conclusions reflected in the model to the characteristics of the properties being appraised; and

HCAD uses conclusions reflected in appraisal model results to construct and maintain property classification guides identifying minimum property characteristics typical for each property class. By utilizing sales data for each neighborhood and market area, conclusions concerning age, quality, condition, construction components, depreciation and other variables are tested against the model's results.

- (7) reviewing the appraisal results to determine value.

HCAD tests the results of its appraisal model values (appraisals) against market data (sales) to determine the accuracy and level of appraisal, as well as to monitor the integrity of the appraisal model (CAMA). Ratio study results are used to maintain and update

appraisal schedules to achieve market value appraisals. Sales ratios are performed for each neighborhood and market area to determine if values assigned by the model fall within a 95% - 105% confidence interval level.

REVALUATION DECISION (REAPPRAISAL CYCLE)

HCAD by policy adopted by the Chief Appraiser and Board of Directors reappraises all property in the district at least once every three years, as required by Section 25.18, Property Tax Code. The District has been divided into three equal geographic areas defined by school district boundaries. HCAD's 16 school districts are reappraised on a three year rotation. A reappraisal rotation will be administered to ensure that all three geographic areas are reappraised within the three-year period. School Districts or geographic areas scheduled for reappraisal for 2015 and 2016 are as follows:

2015

Edinburg ISD
Edcouch-Elsa ISD
La Joya ISD
La Villa ISD
Monte Alto ISD
Lyford ISD

2016

Hidalgo ISD
McAllen ISD
Mission ISD
Sharyland ISD
Valley View ISD

The reappraisal year is a complete appraisal of all properties in the geographic area; therefore both years covered by this plan are reappraisal years.

REAPPRAISAL YEAR ACTIVITIES

1. Performance Analysis - The equalized values from previous appraisal year are analyzed with ratio studies to determine appraisal accuracy and appraisal uniformity overall and by market area within property 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 appraisal year 2015 are detailed in the 2015 appraisal district budget, as adopted by the Board of Directors. Existing appraisal practices, which are these practices current will be specified by district management. Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled as necessary. Existing maps and data requirements are specified and updates scheduled as required.
3. Planning and Organization – A calendar of key events with critical completion dates is prepared for the district. This calendar identifies the key events for the preparation of the appraisal roll. A calendar is prepared and included for appraisal years 2015 and 2016. Production standards for field activities are calculated and incorporated in the planning and scheduling process in order to reach goals set by both district management and the Tax Code.
4. Mass Appraisal System – Computer Assisted Mass Appraisal (CAMA) system revisions required are specified and scheduled with Information Systems and the district's software vendor. 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 appraisal 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 appraisal year – New and/or revised mass appraisal models/schedules are tested each appraisal year. Ratio studies, by market area, are conducted using proposed values each appraisal year. Proposed values in each category are tested for accuracy and reliability using standardized testing procedures and ratio study statistics.

7. Valuation by appraisal year - Using market analysis of comparable sales and locally tested cost data, valuation models will be 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 will be tested for accuracy and uniformity using ratio studies
8. The Mass Appraisal Report – Each appraisal year the required Mass Appraisal Report will be 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 Practice*. The signed certification of the Chief Appraiser is compliant with STANDARD RULE 6 – 9 of USPAP.
9. Value Defense – Evidence to be used by the appraisal district to meet its burden of proof for market value and appraisal equity in both informal and formal hearings if specified and tested as applicable.

PERFORMANCE ANALYSIS

In each appraisal year, the previous year appraisal year's equalized values are analyzed with ratio studies to determine appraisal accuracy and appraisal uniformity overall. In its annual procedures, the district tests values by market area within state property reporting categories. Ratio studies are conducted in compliance with the current Standard on Ratio Studies from the International Studies from the International Association of Assessing Officers. Mean, median, and weighted mean ratios are calculated as measures of central tendency for properties in each reporting category to measure the level of appraisal (appraisal accuracy). The median ratio is the primary measure of central tendency analyzed in each market area to indicate the level and accuracy of appraisal performance. The district also calculated the coefficient of dispersion and price related differential in each market area to indicate the uniformity or equity of existing appraisals.

ANALYSIS OF AVAILABLE RESOURCES

Staffing and budget requirements for tax year 2015 are detailed in the 2015 appraisal district budget, as adopted by the Board of Directors. This reappraisal plan is adjusted to reflect the available staffing for appraisal year 2015 and the anticipated staffing in appraisal year 2016. Staffing will impact the cycle of real property re-inspection and personal property on-site review that can be accomplished in this time period.

APPRAISAL RESOURCES

The HCAD staff consists of the chief appraiser, deputy chief appraiser, directors, an accountant, senior appraisers, appraisers, customer service, GIS, data processing, secretarial, and other support type personnel. HCAD currently employs 45 registered professional appraisers. The HCAD Board of Directors employs a taxpayer liaison officer. At this time HCAD does not provide collection services; however, the CAD does provide technical support to the taxing units it serves.

HCAD appraisers are actively involved in the discovery, listing, and appraisal of all types of property. Properties are grouped by location, type, use, quality, and a variety of other quantitative data elements. A common set of data characteristics on each specific type of property is observed, listed, and collected during field inspection. Each appraiser is trained in the use of the District's appraisal manual, appraisal techniques, and methodology in the use of this information.

COMPUTER RESOURCES

Data is collected in the field and keypunch entered to the computer. The appraisal records are maintained on data base servers. The primary storage media: power edge data base servers. The District also employs the CD-ROM storage media on some projects. The HCAD appraisal software is a CAMA system (computer assisted mass appraisal). This system contains cost and depreciation schedules that utilize common data elements to assist in creating base values.

HCAD contracts with True Automation Inc. for appraisal administration software. HCAD employs the use of a server based computer network with personal computers to form the CAD computer system. Further, the entire HCAD database is available to the public via the Internet at www.hidalgoad.org. This service provides instant access to individual property information including homestead, ownership, address, and some related appraisal data. This information includes square foot of living area, land size, age, class, construction type, and a variety of other useful information.

MAPPING RESOURCES

HCAD utilizes a Geographic Information System (GIS) to maintain parcel data and maps for all of Hidalgo County. All GIS files are stored on a server and ARC/GIS version 9.2 is the current operating software. The District purchases aerial Imaging Software (Pictometry) is available on all desktops. Appraisers and other staff members can perform virtual property inspections or reviews. The software's capability allows us to locate, identify and better understand taxable properties in our jurisdictions.

INFORMATION SOURCES

HCAD appraisal staff and administration collect data on local and regional economic forces that may affect value. Locational forces are carefully observed as we find location to be the most significant factor in determining the market value of property in our geographic area. General trends in employment, interest rates, availability of vacant land, and new construction trends are closely monitored. HCAD obtains information from local realtors, mail surveys, brokers, appraisers, and a variety of other sources, such as Marshall & Swift.

THE DATABASE

The District's database was constructed from property data obtained originally from Hidalgo County in 1982. Data received was on-site field-inspected and revised to create the foundation for our current database. Since the inception of the HCAD, this data-base has been continually updated to recognize the current status of the property records. A variety of programs designed to discover changes that may occur to data elements are maintained. Property inspections or drive-outs occur as the result of information gathered during various forms of analysis. Building permits, field review, renditions, reports of value, local news publications, tax offices, and the public are but a few of the sources of information considered by staff analysts during the discovery phase of the appraisal process. Information from building permits is compiled from local taxing units, sorted, and keypunched into our computer-assisted building permit system.

Data collection in the field requires preparation of maps, computer generated appraisal cards, and coordination of staff. Properties are grouped by type, location, and neighborhood prior to the start of the fieldwork. State Property Tax Assistance Division (PTAD) property types include Residential, Multi-Family, Commercial, Industrial, Farm and Ranch, Vacant Land and Acreage, Oil, Gas, and Mineral, Utilities, Business Personal Property, and other Special Inventory types.

Properties are also grouped by location within each of our sixteen (16) school districts. Within each school district are neighborhoods, or market areas, defined by the IAAO as the environment of a subject property that has a direct and immediate effect on value. The neighborhood concept is used in the grouping of all taxable property located in HCAD with the exception of some special use properties.

Existing appraisal practices, which are continued from year to year, are identified and district staff is appropriately trained in order to keep their skills current. In each reappraisal year, real property appraisal cost new tables and depreciation tables are updated and based upon cost data obtained from the Marshall Valuation Service (also known as *Marshall and Swift*). The preliminary values produced by these updates are tested against verified sales data and adjustments are made as necessary to fit the local market area. Income studies by commercial real property use type are conducted and models are updated

from current market data. This includes a review of economic rents and capitalization rates from the local market, data obtained through the ARB hearing process, and information from published sources. Personal property density schedules are analyzed, tested, and updated based on cost data obtained by rendition and ARB hearing documentation.

Information Systems (IS) support is detailed with year specific functions identified and system upgrades are scheduled with the district's software vendor. Computer generated forms are reviewed for revisions based on year and reappraisal status. Legislative changes are scheduled for completion and also tested through coordination between the districts IS department in order to make these tools available to the appraisal staff.

HCAD, as well as all appraisal districts in Texas, is specifically hindered when valuing property due to the lack of mandatory sales disclosure. The lack of mandatory sales disclosure restricts the information that is available to CAD's when using the Sales Comparison Approach, especially on the high end of the value spectrum of residential property and with regard to most non-residential real property. The lack of mandatory sales price disclosure also impacts values developed via the income approach by restricting the type of data necessary to calculate an overall capitalization rate from sole comparable properties. Should mandatory sales price disclosure become law; the district will have an additional tool, with which to value property, which will foster further accuracy and equity in appraisals.

PLANNING AND ORGANIZATION

A calendar of key events with critical completion dates is prepared for the district. This calendar identifies the key events for developing the appraisal roll. A separate calendar is prepared for appraisal years 2015 and 2016. Production standards for field activities are calculated and incorporated in the planning and scheduling process. This plan encompasses the normal processes carried out for each year by the district; therefore catastrophic events or significant legislative action may have a detrimental effect to the district's operation and require changes to this plan.

CALENDAR OF KEY EVENTS

2015 APPRAISAL YEAR		
Event	Beginning Date	Ending Date
Process Exemptions and Special Use Applications	9/1/2014	To Certification
Create 2013 Year layer in CAMA System	9/2/2014	2/9/2015
Field Operations/Discovery Process – Appraisal Departments	9/5/2014	2/9/2015
Adopt Biennial Reappraisal Plan Covering 2015 and 2016	9/15/2014	9/15/2014
Adopt 2015 Appraisal District Budget	9/15/2014	9/15/2016
TDLR Education Courses RPA tract as necessary	10/2/2014	3/31/2015
Personal Property Renditions Mailed	12/15/2014	12/15/2016
Statutory Date of Appraisal (Unless Sept 1 granted for Inventory)	1/1/2015	1/1/2015
Preliminary Property Value Study Released	1/31/2015	1/31/2015
Full Valuation Effort-Model Specification/Calibration Included	2/12/2015	3/30/2015
PVS Protest Deadline if necessary	3/11/2015	3/11/2015
Valuation Review/Error Reports Cleanup	3/30/2015	4/13/2015
Send First Batch of 25.19 Appraisal Notices	4/24/2015	4/24/2015
Create Future Year Layer for GIS 2010 Plats and Deeds	4/27/2015	4/27/2016
Certified Estimates of Value Due to School Districts	4/27/2015	4/27/2015
Mail Mineral Notices	5/15/2015	5/15/2015
Turn Over Records to ARB	5/19/2015	5/19/2015
Send Subsequent Batches of Appraisal Notices as Necessary	5/21/2015	7/13/2015
Primary Protest Deadline	5/31/2015	5/31/2015
Formal Hearings Scheduled – Depending on Volume	6/9/2015	9/28/2015
Mineral Import from Vendor	7/16/2015	7/16/2015
Certification of the Appraisal Roll	7/25/2015	7/25/2015
Regular Scheduled Meetings: Board of Directors ARB Meetings	2 nd Wednesday Of The Month 3 rd Tuesday Of The Month	

CALENDAR OF KEY EVENTS

2016 APPRAISAL YEAR		
Event	Beginning Date	Ending Date
Process Exemptions and Special Use Applications	9/1/2015	To Certification
Create 2014 Year layer in CAMA System	9/2/2015	9/4/2015
Field Operations/Discovery Process – Appraisal Departments	9/5/2015	2/9/2016
Adopt Biennial Reappraisal Plan Covering 2015 and 2016	9/15/2014	9/15/2014
Adopt 2016 Appraisal District Budget	9/15/2015	9/15/2015
TDLR Education Courses RPA tract as necessary	10/2/2015	3/31/2016
Personal Property Renditions Mailed	12/15/2015	12/15/2016
Statutory Date of Appraisal (Unless Sept 1 granted for Inventory)	1/1/2016	1/1/2016
Preliminary Property Value Study Released	1/31/2016	1/31/2016
Full Valuation Effort-Model Specification/Calibration Included	2/12/2016	3/30/2016
PVS Protest Deadline if necessary	3/11/2016	3/11/2016
Valuation Review/Error Reports Cleanup	3/30/2016	4/13/2016
Send First Batch of 25.19 Appraisal Notices	4/24/2016	4/24/2016
Create Future Year Layer for GIS 2010 Plats and Deeds	4/27/2016	4/27/2016
Certified Estimates of Value Due to School Districts	4/27/2016	4/27/2016
Mail Mineral Notices	5/15/2016	5/15/2016
Turn Over Records to ARB	5/19/2016	5/19/2016
Send Subsequent Batches of Appraisal Notices as Necessary	5/21/2016	7/13/2016
Primary Protest Deadline	5/31/2016	5/31/2016
Formal Hearings Scheduled – Depending on Volume	6/9/2016	9/28/2016
Mineral Import from Vendor	7/16/2016	7/16/2016
Certification of the Appraisal Roll	7/25/2016	7/25/2016
Regular Scheduled Meetings: Board of Directors ARB Meetings	2 nd Wednesday Of The Month 3 rd Tuesday Of The Month	

MASS APPRAISAL SYSTEM

Computer Assisted Mass Appraisal (CAMA) system revisions are specified by the district management team and scheduled with Information systems and the district's software vendor. The district currently, and for the foreseeable future contracts with True Automation Software services. All automated forms and IS procedures are reviewed routinely and revised as required. The following details these procedures as it relates to the 2015 and 2016 appraisal years

REAL PROPERTY VALUATION

Revisions to cost models, income models, and market models are specified, updated, and tested each appraisal year. Market area boundaries are reviewed and adjusted as indicated by growth patterns and market preferences. Deeds are processed on an ongoing basis to transfer ownership, establish the basis for land size, and assign account numbers to newly platted lots as an addition to the appraisal roll. The district will also update and process exemption and special use appraisal applications as necessary and applicable.

Cost schedules are tested with market data (sales) to insure 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 based on cost data from the Marshall Valuation Service (also known as Marshall and Swift). The resulting schedules are tested for accuracy and uniformity using ratio study tools.

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

Income, expense, and occupancy data is updated in the income models for each property use category and market area. Cap rate studies are completed using current sales data when available and published sources are also utilized. The resulting models are tested using ratio study tools.

PERSONAL PROPERTY VALUATION

All income-producing business personal property located within District boundaries is subject to tax. Business use vehicles are also listed in the appraisal records and subject to ad valorem taxation. Personal property schedules are used to value business furniture, fixtures, equipment, and inventory. Additionally, personal property values are obtained by some other sources.

Business owners are required by Texas Law to render their business personal property each year. The appraiser considers rendered values during the appropriate phase of valuation analysis. Rendered values are often used as the basis for the CAD value if the value rendered is reasonable for the type of business and within acceptable ranges when compared to the HCAD/PTD or Marshall & Swift personal property schedules. Should the property owner choose not to render the property, or if the rendered amount does not fit acceptable ranges, then the HCAD/PTD schedule or the Marshall & Swift schedule is used to value the property.

Depreciation of the property is determined by the age of the property and its expected life. Valuation and depreciation schedules are included in the HCAD appraisal manual. Business vehicles are valued based on NADA Used Car Guide trade-in value for the particular make, model, and age of the vehicle. The Appraisal District uses a report obtained from Texas Motor Vehicle Listings to determine ownership, make, model, and vehicle characteristics to determine NADA trade-in value. This report along with the aforementioned renditions and physical observations are used to discover and list vehicles that are taxable. When adverse factors, such as high mileage, are known, appropriate adjustments are made.

The U. S. Coast Guard and the Texas Parks and Wildlife Department provide lists to the CAD regarding taxable watercraft. The ownership, make, name, and type of watercraft are provided on these lists. Fair market value estimate of taxable watercraft is based on the same techniques used to value other business personal property.

NOTICING PROCESS

Section 25.19 appraisal notice forms are reviewed, edited for updates, and the appraisal district management team approves changes. These revisions include updates from the Comptroller's Property Tax Division as well as specific legislative changes as required. Updates also include the latest copy of the Comptroller's *Taxpayers Rights and Remedies*.

HEARING PROCESS

Protest hearing scheduling for informal and formal Appraisal Review Board hearings is reviewed and updated as required by protest load in order to certify by July 25 according to law. Standards of documentation are reviewed and amended as required. The appraisal district hearing documentation is reviewed and updated to reflect the current valuation process and legal requirements.

DATA COLLECTION REQUIREMENTS

IDENTIFICATION AND UPDATE OF RELEVANT CHARACTERISTICS AFFECTING VALUE

Field and office procedures are reviewed and revised as required for the data collection process. Activities scheduled for each appraisal year include the review of new construction, demolition, remodeling, re-inspection of problematic market areas, and re-inspection of the universe of properties on a specific cycle (3 years per District's policy).

NEIGHBORHOOD ANALYSIS Defining Market Areas

Initially, property is considered based on its location within particular boundaries. The most common boundary used to define location is the school district boundary. In all types of property, valuation analysis and neighborhood analysis is conducted on school districts. The IAAO defines a neighborhood as the environment of a subject property that has a direct and immediate effect on value. For our purposes, the neighborhood boundary is the environment of the subject property. The neighborhood concept is used in the grouping of all taxable property located in HCAD with the exception of some special use properties.

According to The Appraisal of Real Estate 12th Edition, a market area is "the defined geographic area in which the subject property competes for the attention of market participants." The district staff group's properties by market area, which are considered to be "Neighborhoods" for the purposes of valuation and analysis. The district 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.

The chart below shows the current number of neighborhoods or market areas determined by market analysis for the school districts included in HCAD's 2015–2016 reappraisal plan. **Exhibit B** of this report shows those market areas receiving market adjustments to land and/or improvement schedules based on market research.

Number of Designated Neighborhoods by Market Areas By School District in HCAD 2015 Reappraisal Year						
ISD	Edinburg	Edcouch-Elsa	La Villa	La Joya	Lyford	Monte Alto
#Nbhds Mkt Areas	1,673	189	38	870	3	51

Source: Hidalgo CAD

Number of Designated Neighborhoods or Market Areas By School District in HCAD 2016 Reappraisal Plan					
ISD	Hidalgo	McAllen	Mission	Sharyland	Valley View
#Nbhds Mkt Areas	140	1,651	734	1,025	120

Source: Hidalgo CAD

NEW CONSTRUCTION /DEMOLITION

New construction field and office review procedures are identified and revised as required in order to complete the data collection phase. Field production standards are established and procedures for monitoring tested to meet field review deadlines. Sources of building permit data is confirmed and system input procedures are identified. The process of verifying the demolition or new construction of improvements is specified by each department. Building plans and or blueprints are obtained and dimensions are entered into the system by data collections staff. The appraisal staff checks the accuracy of the measurements in the field during data review. This critical annual activity is projected and entered on the key events calendar for each appraisal year.

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 being finalized in valuation modeling. This field activity is also posted to the key events calendar and is monitored carefully to finish by the established deadlines.

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 coefficients of dispersion. Market areas that fail any or all of these tests are determined to be potentially problematic. Field reviews are scheduled to verify and/or correct property characteristic data and review neighborhood delineation. Additional sales data is researched and verified as applicable. In the absence of adequate market data, clusters of comparable neighborhoods are identified for use in valuation and defense.

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 4-6 years. The re-inspection includes the use of photography and imagery to augment an individual onsite visit. The annual re-inspection requirements for appraisal years 2015 and 2016 are identified by property type or property classification and scheduled on the key events calendar as part of the field operation.

FIELD OR OFFICE VERIFICATION OF SALES DATA AND PROPERTY CHARACTERISTICS

Sales information must be verified and property characteristic data contemporaneous with the date of sale is captured in the sale record. The sales ratio tools require that the property that sold must equal the property appraised in order that statistical analysis results will be valid. In the event that these are not equal, the sale is usually excluded from the observation pool in the ratio study.

OFFICE AUDIT

The sales ratio analysis and associated individual property value audit or review is conducted in the office on a year around basis. As stated above, properties that do not fit a homogenous statistical profile are set aside for review by a senior appraiser. In all classes of property, a number of different reports are generated on our computer to provide information on statistical measures, i. e. percent of increase, increase from prior year, percent of change to land value, percent of change to improvement value, etc. This type of information along with the other forms of analysis described in this report often helps locate areas or property types in need of reappraisal.

MARKET ADJUSTMENT

The Ratio Study Procedures provide accurate information regarding the level of appraisal of the various classes and categories of properties. For the purpose of valuing residential property, the CAD approach to value is described by the IAAO as a hybrid cost-sales comparison approach. This commonly accepted mass appraisal technique considers local influences not always accounted for in the cost approach. The following equation explains this theory: $MV = MA (RCN - D) + LV$.

Where MV equates to market value, MA equals market adjustment, RCN-D is the replacement cost new of the dwelling, less depreciation, and LV is the estimate of land value based on highest and best use. Market value equals market adjustment times RCNLD + land.

In areas where the sales ratio indicates that the property located within a given neighborhood is not being appraised at the legally permissible level of appraisal, the market adjustment process described in the previous paragraph is conducted. Base cost estimates are compared to sales and a ratio is derived. The ratio is divided into a target ratio, and a neighborhood adjustment factor is determined. Each homogenous parcel in that given neighborhood is programmatically adjusted according to the factor derived from the process. This adjustment factor is keypunched to a computer program and each parcel is adjusted programmatically. Ongoing neighborhood analysis and delineation ensures the accuracy of this process.

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 appraisal 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 APPRAISAL YEAR

Using market analysis of comparable sales and locally tested cost data, specific income and expense data, and information gathered from renditions, 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 by market area and property category. Performance standards utilized are those as established by the *IAAO Standard on Ratio Studies*. Property values in all market areas are reviewed each reappraisal year and updated as indicated by existing market data.

The following details the planned valuation methods by department and or property type:

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 a 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, and will continue to be, based upon information obtained from the Marshall Valuation Service, also known as *Marshall and Swift*. 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 provided 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 is the hybrid model used by the district:

$$MV = [RCNLD] MA + LV$$

In the formula above, the replacement cost new less depreciation (RCNLD) of the improvements are multiplied by the appropriate neighborhood market adjustment factor (MA) to arrive at a current improvement value. The current improvement value is added to the land value (LV) to arrive at an estimate of

market value (MV). Market adjustments will be applied uniformly within neighborhoods to account for market preferences affecting value in each location throughout the district.

Residential land values will be estimated using the base lot method, square foot method, or acreage method of appraisal. The individual method utilized in each neighborhood is designed to mirror the market in that area. As such, the chosen method for each individual neighborhood will be selected based upon how properties are selling or which method best accounts for perceived differences among the universe of properties. There are four accepted methods of land valuation; the comparable sales approach, allocation by abstraction, allocation by ratio, and the capitalization of ground rent. The district will utilize elements of all of these land valuation methods depending upon market area and availability of market data. In areas where insufficient vacant land sales exist, the district will utilize the allocation methods to establish land values in a neighborhood. The appraisers will develop a base lot or primary land rate and assign land tables to each neighborhood. Land adjustments will be applied to individual properties, where necessary, to adjust for such influences as view, shape, size, and topography, and any other characteristic that affects value in a neighborhood.

If neighborhood statistics indicate that values need to be updated, the appraiser will employ cost calibration to bring the initial values closer to what the market indicates values should be in that area. This process involves comparing the initial depreciated cost figures for properties that sold to the sale contributory improvement values of those properties (Sale Price – Land Value). An adjustment factor is calculated for each property in the data pool and statistics are calculated for the indicated adjustments. The factor that best represents the acceptable range of market value is selected for each neighborhood. The sales used to determine the market adjustment factor will reflect the market influences and conditions for the specified neighborhood, thus producing more representative and supportable values. The market adjustment factor calculated for each neighborhood will be applied uniformly to all properties within that neighborhood and a second set of ratio study statistics will be generated to compare the level and uniformity of values in the neighborhood as adjusted.

Sales Comparison Approach

As Indicated in *Property Appraisal and Assessment Administration* (IAAO, 1990), 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.

At present, the district does not develop estimates of value for single-family properties using the traditional sales comparison approach in mass for valuation purposes. The district's software package allows for the creation of sales comparison grids that adjust for characteristic differences among properties, but the district has yet to value entire neighborhoods through this application of the market approach. The sales grids that are generated are utilized most frequently during the appeals process, but may be utilized for valuation more widely in the future as time and available data permit.

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.

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

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.

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 of 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 to 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. In these cases, inventory discounts will be applied as a result of an appeal.

LAND ANALYSIS

Land analysis is conducted generally by our experienced market analysts. Highest and best use determinations generally occur at this time. Base lot square footage rates, acreage rates, primary and residual price rates, and hard code unit prices are established during this phase of the appraisal operation. A computerized land table containing the necessary information by ISD and neighborhood, and any other pre-specified area, assist the analyst in consistently valuing land based on its location, size, configuration, and topography elements. When possible, the sales comparison approach is used to assist in the development of unit prices. The land appraisal techniques of allocation by abstraction and allocation by ratio are used to best reflect the value of the land as vacant in areas where build-out has occurred or in areas where vacant land sales are not available.

APPRAISAL OF RURAL LAND

This section provides general guidelines to assist appraisers in the market valuation of rural lands. Appraised values based on market valuation must be established for all taxable land in each taxing jurisdiction, regardless of whether the land qualified, or would qualify, for productivity valuation under either Article VIII, Section I-d of Section I-d-1 of the Texas Constitution. Market values so determined must be submitted to the Appraisal Review Board for determination of protests for all taxable land in each jurisdiction, including land that qualifies for productivity valuation. In addition, appraised values based on market valuation must be retained for land receiving productivity valuation for rollback purposes.

The rural land market can best be understood by dividing it into three distinct types of markets—the production, investment, and consumptive land markets--each based on the principal factor which influences value.

Discussion of these market influences and common examples of each are presented below.

The Production Land Market

The principle factor influencing value of rural land in the production land market is the income potential associated with agricultural production. In the production land market, land values will reflect the productive capacity of soils, the availability of irrigation water, and the topographic features which influence the ability of a producer to use the land for agricultural purposes. Most areas of the Texas Rio Grande are still dominated by production-market influences.

The Investment Land Market

The principal factor influencing the market value of rural land in the investment land market is the appreciation potential of land investments. The investment land market is not composed strictly of speculators who purchase land with the intent to make a quick profit by resale, but also includes individuals who purchase land for conversion into subdivisions or for other types of development. In addition, the investment land market includes individuals who purchase land as a means of preserving their capital for a later use, or as a hedge against inflation. Although investment-market influences exist in all areas of the state, they are the principal market influences in suburban areas.

The Consumptive Land Market

The principal factor influencing the market value of rural land in the consumptive land market is the satisfaction that land ownership provides. The consumptive land market is often characterized by the purchase of small tracts of land to be used for recreational purposes. For instance, an individual who lives in a city or town may purchase a 10-acre tract of land in a rural area to visit on weekends with his family. Generally, the value of land located within 200 miles of major population centers is most heavily affected by consumption-market influences.

The most distinctive features of the rural land market are that all three types of market influences, in combination with supply, establish market values. For this reason, it is important that the appraiser be knowledgeable of the key factors that influence value and of the relative influence each of these factors has upon value when establishing procedures for the valuation of rural land in a jurisdiction.

ANALYSIS OF LOCAL MARKET

From a practical standpoint, using a fee-appraisal approach to appraise each individual tract of land in a jurisdiction is not possible. Fee appraisers make detailed appraisals of individual parcels by obtaining comparable sales of other land in the jurisdiction and adjusting each comparable sale to the subject property to estimate the value of the subject property. In this way, fee appraisers allow market transactions that have occurred regarding other properties to define the market value of the subject property. Common types of adjustments made by fee appraisers to comparables in estimating market values of subject properties include adjustments for date of sale, for size of tract, for productivity factors, for improvement value, and for special amenities.

Central appraisal district appraisers must also use market transactions to define factors that influence rural land values in their jurisdictions. However, unlike fee appraisers, these appraisers cannot compare each tract individually to each market transaction identified to make adjustments because of the volume of properties to be appraised. Appraisal office appraisers must, therefore, incorporate the factors indicated by market transactions into general standards

or schedules of value. Such schedules are normally comprised of per acre prices that will be multiplied by the number of acres in an individual tract to develop an estimate of the value of the tract. Schedules of this kind should be divided into as many categories or classes as are necessary to reasonably reflect market values when applied to individual tracts of land found in the jurisdiction.

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 by the Marshall Valuation Service also known as *Marshall and Swift*. 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 *Marshall and Swift*. These schedules will be tested annually to ensure they will be reflective of current market conditions in Hidalgo County. 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 analyses. 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 of the structure to arrive at a 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 Texas Property Tax Code.

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 are in compliance with 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 Texas Property Tax Code.

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 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:

$$\begin{array}{r} \text{PGR} \\ - \text{V\&C} \\ \hline \text{EGR} \\ + \text{SI} \\ \hline \text{EGI} \\ - \text{Allowable EXP} \\ - \text{Reserves for Replacement} \\ \hline \text{NOI} \end{array}$$

$$\text{Value} = \text{NOI/CAP Rate}$$

This income model reflects the normalization of an income stream from Potential Gross Rent at 100% occupancy to an indication of Net Operating Income. 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 gross income. Reserves for replacement are estimated by considering the amortized 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-investment, 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 Texas Property Tax Code.

UTILITIES, RAILROADS, AND PIPELINES

HCAD will contract with an appraisal firm with specific expertise for the valuation of utility, railroad, and pipeline properties. These properties will be reappraised annually by the firm using recognized methods and techniques as required by the *Uniform Standards of Professional Appraisal Practice*. The appraisal models considered in the valuation of these properties will be:

$$\begin{aligned} MV &= RCN - D \\ &\text{And} \\ &\text{Allocated Unit Appraisal} \end{aligned}$$

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.

The appraisal firm(s) will consider all factors affecting value, conduct physical inspection 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.

MINERAL INTERESTS

HCAD will also contract with an appraisal firm with specific expertise in the appraisal of oil and gas properties to value mineral interests. The appraisal firm will reappraise these properties annually.

The appraisal firm(s) will utilize a form of yield capitalization of the income approach called Discounted Cash Flow Analysis (DCF) in order to accurately value these interests. The factors affecting the value of mineral interests include reserve estimates, production volume and pattern, product 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 situation makes specific physical inspection unavailable as a method of collecting data. The appraisal firm(s) 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 of the information gathered will be considered in the estimation of the value of mineral interests

SPECIAL VALUATION PROPERTIES

HCAD values agricultural and wildlife management land 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 lease method is a modified income approach using the lease amount (income per acre) minus expenses (landowner) 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 will be divided by the appropriate capitalization rate for the year to give a value per class of agricultural production. The agriculture appraisal staff will collect lease data from owners and lessees on an ongoing basis in order to develop "net-to-land" figures by agricultural classification.

BUSINESS AND INDUSTRIAL TANGIBLE PERSONAL PROPERTY

These property types will be valued each appraisal year by the district's appraisal staff. The Personal Property Department engages in an annual canvas 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. Generally, estimates of value developed for industrial and personal property will be produced by mid to late May of each appraisal year. The notices of appraised value for these property types are generally mailed in early to mid-June.

Cost Approach

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

Valuation models 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 will be built and or adjusted as necessary. The revised models will be tested in accordance to accepted methods and techniques.

These model values will be used specifically to estimate the value of new 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 percent good depreciation factors utilized will be based on the depreciation schedules for furniture, fixtures, and equipment as developed by district staff tested against *Marshall and Swift*. This mass appraisal percent good depreciation schedule is used to ensure that estimated values are uniform and consistent within the market. RCN and percent good depreciation factors will be utilized to develop value estimates using the following formula:

$$MV = RCN \times \text{PERCENT GOOD FACTOR}$$

Leased equipment and multi-location assets may be valued using original costs and percent good depreciation schedules 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 circumstance.

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 appraisal year the required Mass Appraisal Report will be 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 will be compliant with STANDARD RULE 6-9 of *USPAP*.

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 annually.

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. Some examples of the 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
4. Gross Rent / Income Multiplier data
5. Proforma and actual income data
6. Property characteristics data including photos as applicable
7. Aerial photography
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
12. Any other information collected by the district

Exhibit A

HIDALGO CAD 2015 RE-APPRAISAL PLAN WORK TIMELINE (PROPOSED)

August thru September

Work 1st – 2nd quarter permits

Work Rechecks (Revisions)

Discover new subdivisions

Reappraisal efforts (Real Property Inspections) for Edinburg, Edcouch-Elsa,, La Joya,, La Villa Lyford & Monte Alto ISD's

Data Entry

October thru December

4rd quarter building permits

Continue reappraisal efforts for Edinburg, Edcouch-Elsa, La Joya, La Villa Lyford & Monte Alto ISD's

Review and analyze cost table and compare new construction cost from all residential properties

Quality Control

Sate Clerical Report

Review problem areas (discovered from conference hearings and current sales reports)

Data Entry

January thru March

Begin personal property inspections for all jurisdictions

Drive out new construction areas

Work 4th Quarter building permits

Work rechecks

Complete reappraisal efforts for Edinburg, Edcouch-Elsa, La Joy, La Villa Lyford & Monte Alto ISD's by March 31

Redefine neighborhoods if necessary

Quality control

Perform Sales Analysis/Sales Data

Test results of neighborhood adjustments with sales ratios

Audit Final Values

April thru July

Data Entry Prepare final sale reports and maps for protest season

Informal/Formal procedures

*****See Network for all weekly production report*****

HIDALGO CAD 2016 RE-APPRAISAL PLAN WORK TIMELINE (PROPOSED)

August thru September

Work 1st – 2nd quarter permits
Work Rechecks (Revisions)
Discover new subdivisions
Reappraisal efforts (Real Property Inspections) for Hidalgo, McAllen, Mission, Sharyland & Valley View ISD's
Data Entry

October thru December

4rd quarter building permits
Continue reappraisal efforts for for Hidalgo, McAllen, Mission, Sharlyand & Valley View ISD's
Review and analyze cost table and compare new construction cost from all residential properties
Quality Control
Sate Clerical Report
Review problem areas (discovered from conference hearings and current sales reports)
Data Entry

January thru March

Begin personal property inspections for all jurisdictions
Drive out new construction areas
Work 4th Quarter building permits
Work rechecks
Complete reappraisal efforts for for Hidalgo, McAllen, Mission, Sharlyand & Valley View ISD's by March 31
Redefine neighborhoods if necessary
Quality control
Perform Sales Analysis/Sales Data
Test results of neighborhood adjustments with sales ratios
Audit Final Values

April thru July

Data Entry Prepare final sale reports and maps for protest season
Informal/Formal procedures

*****See Network for all weekly production report*****

**Hidalgo CAD 2015 Re-Appraisal Plan
Estimated Parcel By ISD**

		2015 Edinburg	2015 Edcouch Elsa	2015 La Joya	2015 La Villa	2015 Lyford	2015 Monte Alto
A	Single Family Residence						
B	Multi-Family Residence						
C	Vacant Lot						
D	Agricultural						
E	Farm or Ranch Improvement						
F	Commercial Ranch						
G	Oil & Gas						
J	Industrial						
L	Commercial Personal						
N	Tangible Property						
O	Residential Inventory						
S	Special Inventory						
X	Totally Exempt Property						

**Hidalgo CAD 2016 Re-Appraisal Plan
Estimated Parcel By ISD**

		2016 Hidalgo	2016 McAllen	2016 Mission	2016 Sharyland	2016 Valley View
A	Single Family Residence					
B	Multi-Family Residence					
C	Vacant Lot					
D	Agricultural					
E	Farm or Ranch Improvement					
F	Commercial Ranch					
G	Oil & Gas					
J	Industrial					
L	Commercial Personal					
N	Tangible Property					
O	Residential Inventory					
S	Special Inventory					
X	Totally Exempt Property					

HIIDALGO CAD ANNUAL EVENTS CALENDAR

January	Event	Dept./Staff	Comments:
	*Source-Property Tax Calendar		*Property Tax Code
1	New Appraisal Year – Depts. begin working on:		
	Accounts flagged for review, 4th quarter building permits, and pick-up of new construction continues	Appraisal	
	Sales Ratio Analysis begins	Appraisal	
	New businesses, work sales permits, renditions & Mobile Home Park tenant lists	Personal Prop	
	Mail & process Homestead Exemptions for new owners	Taxpayer Info	
	Continue setting up new subdivision plats & ownership updates & map projects	Mapping	
	*Date that values and qualification for certain exemptions are determined (except for inventories appraised Sept. 1)		*Sections 11.42,23.01, 23.12
2	*Date rendition period begins; continues through April 15 th		*Section 22.23
	Print & Mail BPP Renditions- businesses, watercraft & aircraft	Personal Property	
	Submit Ad to newspapers- Low Income Apartment Cap Rate	Admin/Comm. Apr.	*Sec.11.1825
	Administer Oath of Office to newly elected Board of Directors (chosen in uneven yrs.) & ARB members (every year-staggered terms)	Admin/ARB Dept.	BOD-at scheduled meeting ARB At Scheduled meeting
	Board of Directors Approve: Taxpayer Liaison Officer, Investment Policy & Agricultural Advisory Board	BOD	BOD-at scheduled meeting
	Accountant submits District's Investment Policy for approval by CAD's BOD.	Accounting	At scheduled BOD meeting
31	*Deadline-Texas Comptroller's Preliminary Property Value Study.	Appraisal	*Section 403.302
	*Last day for chief appraiser to deliver applications for agricultural designation and exemptions requiring Annual applications	Appraisal	*Section 11.44 , 23.43
31	*Last day for appraisal district to give public notice of capitalization rate used to appraise property with low and moderate income housing exemption.	Appraisal	*Sec.11.1825

February	Event	Dept./Staff	Comments
1	Second Quarter Allocation letters sent to entities	Accounting	
	Neighborhood Adjustments begin	Appraisal	
15	Exemption verification letters mailed to entities	Administration	
17	Submit Ads to newspapers- Taxpayer Rights & Exemptions	Administration	
28	*Last day to request cooperative housing appraisal.		*Section 23.19
March	Event	Dept./Staff	Comments:
1	Test results of Neighborhood Adjustments with Sales Ratios	Appraisal	
14	*Deadline to file written appeal of PVS findings with the State Comptroller		*Section 403.303
	Audit Appraisal work-clerical & market data	Appraisal	
18	Submit Ad to newspapers- Protest & Appeals Procedures	Administration	*Section 41.41,41.70
23	Submit Letter to Tax-Assessor Collectors regarding form which rolls are provided	Administration	*Section 26.01(a) *by April 1st
31	*Last day for qualified community housing development corporations to file listing of property Acquired or sold during the past year with Chief Appraiser		*Section 11.182
April	Event	Dept./Staff	Comments:
	NOTICES ARE MAILED. Informal Hearings begin the next day.	All Departments	Set up Phone Bank
	***Appraisal Review Board Members attend training classes ***	ARB	*Section 5.041
1	*Last day (or as soon as practicable thereafter) for chief appraiser to mail Notices of Appraised Value for single family residence homestead properties	CA/Data Process/IT	*Sections 25.19, 1.07-1.11
	*Last day for the chief appraiser to notify the taxing units of the form in which the appraisal roll will be provided to them		*Section 26.01(a)
15	*Last day or property owners to file to file personal property renditions and property information reports unless they request a filing extension in writing.		*Section 22.23
30	*Last day for chief appraiser to certify estimate of school district's preliminary taxable value for school districts, counties & cities and send notification letters of values to each entities tax assessor collector	Chief Appraiser	*Section 26.01 *Mail Letters For delivery Before April 30 th

May	Event	Dept./Staff	Comments:
1	Operations Survey - sent by PTAD to be returned in 60 days	All Departments	
	Third Quarter Allocation letters sent to entities	Accounting	
2	*Last day for property owners to file these applications or reports with the CAD:		*Section 11.43
	•Some exemption applications		
	•Notice property no longer entitled to an exemption not requiring annual application		*Section 11.43
	•Property no longer qualifies for 1-d & 1-d-1 Ag Use & other special uses properties		*Sec. 23.43, 23.54, 23.75
	•Railroad Rolling Stock reports		*Sec. 24.32
	•Requests for separate listing of separately owned land & Imps.		*Sec. 25.08
	•Requests for proportionate taxing of a planned unit development property		*Sec. 25.09
	•Request for separate listing of undivided interests		*Sec. 25.11
	•Request for joint taxation of separately owned mineral interests		*Sec. 25.12
2	*Last day (or as soon as practicable thereafter) for chief appraiser to mail notices of appraised value for Properties other than single-family residence homestead		*Section 25.19
16	Formal Hearings Begin	ARB/Support Staff	
	*Last day for property owners to file renditions and property information reports if they requested an extension in writing (can be extended 15 days for good cause)		*Section 22.23
	*Last day (or as soon as practicable thereafter) for chief appraiser to mail notices of appraised value denial of exemptions and denial of special appraisals	CA	*Sec. 11.45, 23.44, 23.57
	*Date (or as soon as practicable thereafter) for chief appraiser to prepare appraisal records & submit to ARB	CA	*Sec. 25.01, 25.22
19	*Last day for chief appraiser to count taxing units' resolutions to change CAD's finance method		*Section 6.061
24	*Last day for chief appraiser to notify taxing units of change in the CAD's finance method		*Section 6.061
31	*Last day for taxing units to file challenges with ARB (or within 15 days after ARB receives appraisal records, whichever is later)		*Section 41.04
	*Last day for property owners to file protest with ARB (or by 30th day after notice of appraised value is delivered, whichever is later)		*Section 41.44

June	Event	Dept./Staff	Comments:
1	*Last day for religious organizations to amend charters and file new applications for Section 11.20 exemption		*Section 11.20 & 11.421
14	*Last day for chief appraiser to submit recommended budget to CAD board and taxing units (unless taxing units have changed CAD's fiscal year)	Accounting/CA	*Section 6.06 "before June 15 th "
16	*Beginning date that CAD board may pass resolution to change CAD finance method, subject to taxing unit's unanimous approval. Period ends August 15 th .		*Section 6.061
30	*Last day for private schools to amend charters to conform with Section 11.21 & file new applications for exemptions (or within 60 days of exemption denial, whichever later).		*Section 11.422
	*Last day for CAD's to report formation of reinvestment zones and tax abatement Agreements to the Texas Comptroller.		*Section 312.005
	Reappraisal Plan submitted to Board Directors *	Appraisal/CA	
July	Event	Dept./Staff	Comments:
1	*Last day for ARBs to complete review of railroad rolling stock values for submission to Texas Comptroller (or as soon as practicable thereafter).	ARB	*Section 24.35
	Of total appraised value remains under protest. The board of directors of a CAD with a population of 1 million or more may postpone the deadline to August 30 th .		
20	*Date ARB must approve appraisal records, but may Not do so if more than 5% of total appraised value remains under protest. The board of directors of a CAD with a population of 1 million or more may postpone the deadline to August 30 th .		Section 41.12
25	*Last day for Texas Comptroller to certify apportionment of railroad rolling stock value to counties, with supplemental records after that date.		*Section 24.38
	*Last day for chief appraiser to certify appraisal roll to each taxing unit.	CA	*Section 26.01
	The chief appraiser also shall certify the district appraisal roll to the comptroller	IT	
25	Secretary of CAD board of directors sends written notification to all entities of public hearing about Reappraisal Plan.* (10 days prior to BOD meeting)	BOD	*even yrs. (2012,2014) Section 6.06(b)

August	Event	Dept./Staff	Comments:
	Appraisers begin field reviews & pick-up of new construction for new year	Appraisal	
1	*Last day for property owners to apply for September 1 inventory appraisal for the next year		*Section 23.12
	Fourth Quarter Allocation letters sent to entities.	Accounting	
	Electronic Appraisal Report Submission (EARS) to Comptroller (after Supp. 1-annually)	Commercial Appr./IT	*Section 5.07
	Comptroller will send back report in Sept-Oct. -CAD mails Report of Prop Val to entities by November 1st.		
9	Board of Directors Elections -Odd yrs. - CA notifies entities of election process.	CA	Nomination forms sent
	(*Mail early in month so entities can include on September Agendas)		
15	Mail Approved Reappraisal Plan to entities. (Every 2 years)	Administration	
	*Last day for CAD board to pass resolution to change CAD finance method, subject to taxing entities consent		*Section 6.061
	*Last day for CAD board to pass resolution to change number of directors, method for appointing or both for appointing or both, and deliver to each taxing unit.		*Section 6.031
31	Submit Ad-Public Hearing for CAD Budget at Board of Directors Meeting	Administration	*Section 6.062 *10 days prior to BOD meeting
31	Secretary of CAD Board of Directors sends entities written notification of Budget Hearing during September's Board of Directors meeting	BOD	10 days prior to Public Hearing
	*Last day for property owner to give, in writing, correct address to CAD for tax bill (penalties & interest waived if the bill is not sent to correct address 21 days before delinquency date).		*Section 33.011
	*Last day taxing units may file resolutions with the CAD board to oppose proposed change in the CAD finance method.		*Section 6.061
	*Last day taxing unit entitled to vote for appointment of CAD directors to file a Resolution opposing a change by the CAD board in selection of directors.		*Section 6.031

<u>September</u>	Event	Dept./Staff	Comments:
1	*The following year's taxable value of inventories may be determined as of this date at property owner's written option.		*Section 23.12
15	*Last day for CAD Board of Directors to adopt budget unless a district has changed its fiscal year. BOD approves budget at scheduled meeting.	BOD	*Section 6.06
	*Last day for CAD board to notify taxing units in writing if a proposal to change the number or method of selecting CAD directors if rejected by a voting taxing unit.		*Section 6.031
16	Approved CAD Budget is mailed to entities	Administration	
16	Submit Ad to newspaper for Appraisal Review Board Applicants for next Year	Administration	
20	Submit Ad to newspaper for Auditor (even yrs.) Depository (odd yrs.). BOD approves in October & November meetings. * For Oct. 1 st publication	Accounting Administration	Auditor Section 6.063 Depository Section 6.29
<u>October</u>	Event	Dept./Staff	Comments:
1	CAD Board of Directors Elections - Before October 15, eligible voting entities may nominate by resolution one candidate for each position on the board.*		*Odd Yrs. (2015, 2017, Etc.)
12	Valuation Service Contract approval scheduled at Monthly BOD meeting*	BOD	*Odd Yrs. (2105, 2017, Etc.)
	Board of Directors interview and select new Appraisal Review Board members*	BOD	*At scheduled meeting
15	Mail copy of approved audit report to presiding officers of each taxing entity	Administration	Section 6.063(b)
27	CAD Board of Directors Elections-Before October 30, Chief Appraiser prepares ballots & mails to the presiding officers of each taxing entity*	C/A	*Deadline to return December 16
<u>November</u>	Event	Dept./Staff	Comments:
1	First Quarter Allocation letters sent to entities	Accounting	
	Mail Report of Property Values to Entities TAC's & Comptroller (receive in Oct from Comptroller)	Appraisal Administration	Mailed 1 st Week of November
<u>December</u>	Event	Dept./Staff	Comments:
15	Mail Dealer Declaration Forms (motor vehicles vessels, Manufactured homes, heavy equipment, etc.)	Taxpayer Information	Mail Before January 1
	Before December 15 th all governing bodies shall submit their votes for the new CAD Board of Directors*		*Odd Yrs. (2015, 2017, Etc.)
	*Source Texas Property Tax Code		

Exhibit B

RE-APPRAISAL

- 2015_RE-APPRAISAL
- 2016_RE-APPRAISAL
- 2017_RE-APPRAISAL



