EL PASO CENTRAL APPRAISAL DISTRICT

Professionals Putting People First

MASS APPRAISAL REPORT

SEPTEMBER 2023

EPCAD | 5801 Trowbridge Drive   El Paso, TX 79925

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1.0 INTRODUCTION

1.1 SCOPE OF RESPONSIBILITY

The El Paso Central Appraisal District (CAD) has prepared and published this report to provide our citizens and taxpayers with a better understanding of the CAD's responsibilities and activities.

The CAD is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Tax Code govern the legal, statutory, and administrative requirements of the CAD. A nine-member board of directors, appointed by the taxing units with voting entitlement within the boundaries of El Paso County, constitutes the CAD's governing body. The Executive Director/Chief Appraiser, appointed by the board of directors, is the chief administrator and chief executive officer of the CAD.

The CAD is responsible for local property tax appraisal and exemption administration for forty-four (44) jurisdictions or taxing units in the county. Each taxing unit such as the county, city, school district, municipal utility district, etc. sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. CAD appraisals allocate the year's tax burden based on each taxable property's January 1 market value. We also determine eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and exempt organizations.

The CAD appraises all taxable property at its "market value" as of January 1 except as otherwise provided by the Tax Code. Under Tax Code Section 1.04, "market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

   a) exposed for sale in the open market with a reasonable time for the seller to find a purchaser;

   b) both the seller and the purchaser know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use; and

   c) both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

The Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), agricultural productivity value (Sec. 23.41), real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocation of interstate property (Sec. 21.03). The owner of real property inventory may elect to have the inventory appraised at its market value as of September 1 of the year proceeding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1.

The Texas Tax Code, under Sec. 25.18, requires each appraisal board to adopt a written plan each even-numbered year for the periodic reappraisal of all property within the boundaries of the appraisal district. The written plan must provide for the update of appraised values for all real property and personal property in the appraisal district at least once every three years. The CAD's current policy is to conduct a general reappraisal every three years. However, appraised values are reviewed annually and are subject to change for purposes of equalization.

CAD uses specific information about each property to calculate the appraised value of real estate. We compare that information with the data for similar properties, and with recent market data using computer-assisted appraisal programs, and recognized appraisal methods and techniques. The CAD follows the standards of the International Association of Assessing Officers (IAAO) regarding its mass appraisal practices and procedures and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable. In cases where the CAD contracts for professional valuation services, the contract that is entered into by the appraisal firm requires adherence to similar professional standards.

1.2 PERSONNEL RESOURCES

The Office of the Chief Appraiser is responsible for overall planning, organizing, staffing, coordinating, and controlling of CAD operations. The Administration Department's function is to plan, organize, direct, and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities, and postal services. The appraisal departments are responsible for the valuation of all real and business personal property accounts. The appraised property types include commercial, residential, business personal, and industrial.

The CAD's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Department of Licensing and Regulation. The Deeds and Exemptions department administers ownership and exemptions. The Mapping and GIS department maintains property identification and legal descriptions. These departments also provide support functions including records maintenance and assistance to property owners. The CAD also provides support staff for the Appraisal Review Board. The appraisal district staff consists of 151 employees with the following classifications:

Executive (6)		Appraisers & Technicians (55)	
Executive Director/Chief Appraiser	1	Training Facilitator	2
Deputy Chief Appraiser	1	Appraiser II	27
Director of Administrative Services	1	Appraiser III	1
Director of Appraisal Services	1	Entry Appraiser IV	2
Chief Financial Officer	1	Appraiser IV	8
Chief People Officer	1	Lead Appraiser IV	8
Managers and Supervisors (24)		GIS Specialist I	2
Business Personal Property Manager	1	GIS Specialist II	4
Business Personal Property Asst. Manager	1	Lead GIS Specialist	1
Commercial Manager	1	**Administrative Support (47)**	
Commercial Property Assistant Manager	1	Accounting Clerk	1
Residential Manager	1	Fleet Facilities Maintenance Lead	1
Residential Assistant Manager	1	Fleet Facilities Maintenance II	1
GIS Manager	1	Environmental Services	1
Assistant GIS Manager	1	Customer Service Representative I	1
IT Manager	1	Customer Service Representative II	1
Assistant IT Manager	1	HR Generalist	1
Application Support Manager	1	Administrative Specialist I	15
Application Support Assistant Manager	1	Administrative Specialist II	12
Assistant Chief People Officer	1	Lead Administrative Specialist	4
ARB Manager	1	Fiscal Clerk II	2
ARB Assistant Manager	1	Fiscal Clerk I	1
Value Manager	1	Executive Assistant	1
Value Assistant Manager	1	Field Specialist	2
Compliance Manager	1	Financial Specialist	1
Compliance Assistant Manager	1	Legal Assistant	1
Call Center/Archives Manager	1	Receptionist II	1
Deeds & Exemptions Manager	1	**Information Systems (5)**	
Deeds & Exemptions Assistant Manager	1	Application Support Operations Specialist	1
People Engagement Manager	1	Application Support Specialist I	1
Office Manager	1	Application Support Specialist II	1
Professional (14)		Desktop Support Technician II	1
Data Analyst	3	IT PC Technician II	1
Senior Software Engineer	1		
Software Developer	2		
Value Analyst	5		
Systems Security Administrator	1		
Programmer/Analyst	1		
Taxpayer Liaison	1		

1.3 DATA

The CAD is responsible for establishing and maintaining approximately 440,773 real and business personal accounts covering 1,054 square miles within El Paso County. This data includes property characteristics, ownership, and exemption information. Appraisers update property characteristic data on new construction through an annual field effort. Field review priorities depend on existing property data of the last field inspection date. CAD staff routinely validates sales during a separate field effort. However, numerous sales are validated as part of the new construction and data review field activities. CAD acquires general trends in employment, interest rates, new construction trends, and cost and market data through various sources, including internally generated questionnaires to buyers and sellers, university research centers, and market data centers and vendors.

The CAD has a geographic information system (GIS) that maintains cadastral maps and various layers of data, including zip code, facet, and aerial photography. The CAD's website makes a broad range of information available for public access, including but not limited to detailed information on the appraisal process, property characteristics data, certified values, protests and appeal procedures, property maps, and a tax calendar. Downloadable fields of related tax information and appraisal district forms, including exemption applications and business personal property rendition forms are also available.

1.4 INFORMATION SYSTEMS

The Information Systems department designs, builds, operates, and maintains its information systems including but not limited to:

- *Data processing*
- *Software applications*
- *Public website*
- *Geographical Information Systems (GIS)*
- *Custom applications*

CAD's CAMA (Computer Assisted Mass Appraisal) system is a high-availability client/server environment. CAD's productivity suite is Microsoft Office 365, available for all computer systems. We use Microsoft SQL Enterprise edition for databases. All professional personnel have access to 1 Gbps high-speed internet and all employees have access to the district intranet.

CAD uses a Next Generation - Zero Trust Firewall to control and protect network access. Proximity cards and video surveillance controls physical access. The Windows active directory controls computer and application access. In addition, each individual application has a proprietary access control. For example, the CAMA system has an internal access control feature to manage proper user access.

CAD uses Intrusion detection and protection systems for SQL databases and other applications to maintain data security outside the CAMA solution. On the same token, the CAMA software maintains a controlled and adequate set of tools that allows for the granting and denial of user rights to system modules and updating, viewing, and running features, and utilities within the modules. It also maintains a change log of inserts, updates, and deletions in appraisal records. The system records each transaction with a unique change ID, the name of the machine used to implement the transaction, the logged-on user, date time stamp, affected roll year, transaction type, field, and before and after values.

The CAMA software is Harris Govern/True Automation's PACS release 8.1.48.0018. The GIS systems software is ESRI's ArcGIS Enterprise 11 with ArcGISPRO 3.0 and ArcGIS Desktop 10.8.2. The CAD has also introduced SHI/Apple iPad Pro 12.9 tablets for use in the field by Residential and Business Personal Property appraisers that allows them to view and update property records.

2.0 INDEPENDENT PERFORMANCE TEST

According to Chapter 5 of the Texas Tax Code and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts a bi-annual property value study (PVS) of each Texas school district and each appraisal district. As a part of this bi-annual study, the code also requires the Comptroller to:

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

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

There are nine independent school districts in El Paso County for which appraisal rolls are annually developed. The preliminary results of this study are released in January after the appraisal year. The results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in July after the appraisal year. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions.

In addition to the PVS, the CAD is subject to a state audit of our governance, taxpayer assistance programs, operating and appraisal standards and methodologies known as the Methods and Assistance Program Review (MAP). An audit is currently taking place for the tax year (2023) for which results will be released next year.

In September 2012, the International Association of Assessing Officers (IAAO) awarded CAD the Certificate of Excellence in Assessment Administration. The IAAO required an extensive submission of descriptions of all facets of the operation with supporting documentation. We recertified in September 2018, and are currently preparing submission documents for the recertification of this designation in 2024.

3.0 APPRAISAL ACTIVITIES

3.1 INTRODUCTION

3.1.1 APPRAISAL RESPONSIBILITIES

The appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and business personal property by any method requires a physical description of business personal property as well as land and building characteristics. The appraisal departments are responsible for administering, planning, and coordinating all activities involving data collection and maintenance of all commercial, residential, and business personal property accounts located within the boundaries of El Paso County. The data collection effort involves the field inspection of real and business personal property accounts, as well as data entry of all data collected into the existing CAMA system. The goal is to inspect residential and commercial properties periodically, where necessary, in El Paso County once every three (3) years, and business personal properties every year.

3.1.2 APPRAISAL RESOURCES

- **Personnel** - *The four appraisal departments consist of four (4) Managers, four (4) Assistant Managers, two (2) Training Facilitators, forty-six (46) Appraisers, two (2) Field Specialists and seven (7) Administrative Specialists.*

➜ **Data** - *The data used by field appraisers includes the existing property characteristic information contained in CAMA. The data is printed on a property record card, business personal property data sheet, or can be viewed on one of the departments' assigned IPADs. Other data used includes maps, sales data, income and expense data, fire and damage reports, building permits, photos, actual cost information, imagery via Pictometry.*

3.2 PRELIMINARY ANALYSIS

3.2.1 DATA COLLECTION/VALIDATION

Data collection of real property involves maintaining data characteristics of the property in CAMA. The information contained in CAMA includes site characteristics, such as land size, shape, zoning, location, access, and topography, along with improvement data, such as square foot of living area, year built, quality of construction, and condition.

Appraisers use listing manuals that establish uniform procedures for the correct listing of real property and coding of all properties. The CAD uses these manuals and coding systems to structure and calibrate the approaches to value. The appraisers use these manuals during their initial training and as a guide in the field inspection of properties. Manuals are reviewed annually and are available on the CAD intranet. If a property owner/agent wants a copy of the listing procedural manual, a written request should be made to the chief appraiser.

Data collection for business personal property involves maintaining information in PACS. The type of information contained in PACS includes business inventory, furniture and fixtures, machinery and equipment, vehicle, cost, and location. The appraisers conducting on-site inspections use the business personal property manual during their initial training and as a guide to correctly list all business personal property that is taxable.

3.2.2 SOURCES OF DATA

The sources of data collection are through the new construction field effort, data review/relist field effort, data mailers, protest hearings, sales validation field effort, commercial sales verification, newspapers, publications, and property owner correspondence. A principal source of data comes from building permits and zoning changes received from taxing jurisdictions that require property owners to take out a building permit. Where available, permits are received electronically. Otherwise, staff receive and manually match paper permits with the property's tax account number for data entry. Additional sources of data are:

- *Dodge Reports*
- *CoStar, TransUnion and CoreLogic*
- *LoopNet*
- *Marshall & Swift*
- *Taxing entities*
- *Publications such as TREPP, Real Capital Analytics and Axiometrics*
- *Property owner correspondence via returned sales questionnaires*

Data review of entire neighborhoods is generally a good source for data collection. Appraisers drive entire neighborhoods to review the accuracy of our data and identify properties that must be reviewed. Appraisers use GIS and similar applications to help verify property characteristics. The sales validation effort in real property pertains to the collection of data of properties that have sold. In residential, the sales validation effort involves on-site inspection by appraisers to verify the accuracy of the property characteristics data and confirmation of the sales price. In commercial, appraisers are responsible for contacting the grantee or grantor to confirm sales prices and to verify pertinent data.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides sufficient data to allow correction of records without having to send an appraiser on-site. As the CAD increases the amount of information available on the internet, property owner's requests to correct data inconsistencies will also increase. For the property owner without access to the internet, letters are often submitted notifying the CAD of inaccurate data. Properties identified in this manner are added to a work file and inspected at our earliest opportunity.

3.2.3 DATA COLLECTION PROCEDURES

Field data collection requires organization, planning and supervision of the field effort. Data collection procedures have been established for residential, commercial, and business personal property. The appraisers are assigned throughout El Paso County to conduct field inspections and record information either on a property record card, on a business personal property data sheet, or an assigned IPAD.

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

3.2.4 DATA MAINTENANCE

The appraisers are responsible for the verification of data entry of his/her fieldwork. This responsibility includes not only verification of data entry, but also quality assurance.

4.0 INDIVIDUAL VALUE REVIEW PROCEDURES

4.1 FIELD REVIEW

The date of the last inspection, extent of that inspection, and the CAD appraiser responsible are all listed on the CAMA system record. The data in CAMA may be altered based on the evidence provided during a hearing. In addition, CAD uses the change finder features of Pictometry to identify possible changes to properties. Typically, a field inspection is requested to verify this evidence for the current year's valuation or for the next year's valuation. Every year a field review of certain areas or neighborhoods and certain property categories in the jurisdiction is done during the data review/re-list field effort. A concerted effort to inspect all business personal property is conducted annually.

4.2 OFFICE REVIEW

Office reviews are completed on properties where information has been received from the owner of the property. At the request of the property owner, a property card is mailed and is used to verify the property characteristics and condition of the property. Appraisers review the properties using aerial photography and Pictometry to compare property data with the property records and make appropriate corrections. When the property data is verified in this manner, field inspections are not required. In addition, any property protested that has had an informal hearing or a hearing before the ARB, is considered to have been reviewed because of the nature of such hearings and the evidence reviewed during the process.

4.3 PERFORMANCE TEST

Appraisal staff and/or Compliance staff are responsible for conducting ratio studies and comparative analysis. Each department's performance testing is described in the applicable department's chapter.

In many cases, appraisers may conduct field inspections to ensure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics.

5.0 RESIDENTIAL VALUATION PROCESS

5.1 INTRODUCTION

5.1.1 SCOPE OF RESPONSIBILITY

The Residential Valuation appraisers and/or Compliance staff are responsible for developing equal and uniform market values for residential improved, mobile home and residential vacant property accounts. There are approximately 383,302 such accounts in El Paso County.

5.1.2 APPRAISAL RESOURCES

- **Personnel** - *The Residential department staff consists of the Manager, Assistant Manager, Training Facilitator, twenty (20) appraisers, two (2) field specialists and three (3) Administrative Specialists. The Compliance department staff consists of the Manager, Assistant Manager, and two (2) appraisers.*

- **Data** - *A common set of data characteristics for each residential dwelling in El Paso County is collected in the field and data is entered to the computer or assigned IPAD.*

5.2 VALUATION APPROACH (MODEL SPECIFICATION)

5.2.1 AREA ANALYSIS

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, trends in property prices, interest rates, availability of land, and construction costs are collected from private vendors and public sources that provide a current economic outlook on the real estate market. Sources such as continuing education from the International Association of Assessing Officers (IAAO), Texas Association of Assessing Officers (TAAO), Texas Association of Appraisal Districts (TAAD), Property Tax Education Coalition (PTEC) and the Texas A & M University – Real Estate Center.

5.2.2 NEIGHBORHOOD AND MARKET ANALYSIS

The CAD uses neighborhood analysis to examine how physical, economic, governmental, and social forces affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on each of the political entities known as Independent School Districts (ISD).

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A "neighborhood" is defined as the largest geographic grouping of properties where the physical, economic, governmental, and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood has been identified, the next step is to define its boundaries. This process is known as "delineation". Some factors used in neighborhood delineation include location, sales price range, lot size, age, quality of construction, condition, square footage of living area, and story height of the dwelling. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market.

Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability, decline or revitalization. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shifts from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation are the cornerstones of the residential valuation system. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field-inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is reviewed periodically to determine if further neighborhood delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales or use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on a neighborhood basis and in soft sale areas on a neighborhood group basis.

5.2.3 HIGHEST AND BEST USE ANALYSIS

Tax Code Section 23.01(d) states the following: "The market value of a residence homestead shall be determined solely on the basis of the property's value as a residence homestead, regardless of whether the residential use of the property by the owner is considered to be the highest and best use of the property."

The highest and best use of a property is the reasonable and probable use that supports the highest value as of the date of the appraisal. The highest and best use must be physically possible, legally permissible, financially feasible, and derives maximum production. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses.

Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and decides regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest, and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic mis-improvements, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

5.3 VALUATION AND STATISTICAL ANALYSIS (MODEL CALIBRATION)

5.3.1 VALUE SCHEDULES

All residential parcels in the CAD are valued from construction cost guidelines using a comparative unit method. The CAD's residential value schedules, originally adopted from a private mass appraisal firm, have been modified to fit El Paso County's local residential building and labor market. The value schedules are reviewed regularly due to state legislation requiring the CAD value schedules be within a range of plus or minus 5% from market value.

The CAD performed a countywide review of the residential value schedules for the 2023 tax year. As part of this process, approximately 1,955 newly constructed sold properties at various levels of quality of construction in El Paso County were reviewed. The property data characteristics of these properties were verified, and photographs were taken of the samples. Of these properties, 1,722 samples were selected for use in the CAD value schedule review.

The CAD dwelling values were compared against Marshall & Swift, a nationally recognized cost estimator. This process included correlation of quality of construction factors from CAD and Marshall & Swift. The results of this comparison were analyzed using statistical measures, including stratification by quality, and reviewing estimated building costs plus land to sales prices. As a result of this analysis, we determined that it was necessary to positively adjust most existing models by an average of 12%. The CAD determined no need for a new regional multiplier in the development of our cost process. In addition to the value schedules, applications have been created to address unique appraisal situations, such as different levels of remodeling and atypical housing features not normally accounted for in the mainframe benchmark value system.

5.3.2 SALES INFORMATION

A sales file is maintained for the storage of sales data. Residential vacant land sales, along with commercial improved and vacant land sales are maintained in a separate sales information system. Residential improved and vacant sales are collected from a variety of sources, including CAD questionnaires sent to buyers and sellers, interviews with property owners during field inspections, protest hearings, various sale vendors, builders, and realtors. A system of type, source, validity, and verification codes exists to define salient facts related to a property's purchase or transfer. School district or neighborhood sales reports are generated as an analysis tool for the appraiser in the development of value estimates.

5.3.3 LAND ANALYSIS

Residential land analysis is conducted by each of the residential land appraisers. The appraisers develop a base lot, primary rate, and assign each unique neighborhood to a land table. The square foot land table is designed to systematically value the primary and residual land based on a specified percentage of the primary rate. A computerized land table file stores the land information required to consistently value individual parcels within neighborhoods. Specific land influences are used,

where necessary, to adjust parcels outside the neighborhood norm for such factors as view, shape, size, and topography, among others. The appraisers use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value.

5.3.4 STATISTICAL ANALYSIS

The Compliance staff perform statistical analysis annually to evaluate whether values are equitable and consistent with the market. EPCAD has divided the county into fifteen market areas designated in CAMA as regions and shown in Figure 5.1.

FIGURE 5.1 MARKET AREAS

A	West Area	J	Clint ISD
B	Upper Valley Area	K	Fabens
C	Northeast Area	L	San Elizario ISD
D	Central Area	M	Tornillo ISD
E	East Area	N	City of Socorro
F	Lower Valley	P	Socorro ISD Outside El Paso City Limits
G	Anthony ISD	R	City of Horizon
H	Canutillo		

The letter in front of each market area will be the first character in the GEO identification number for a property. EPCAD further delineates properties by neighborhoods.

Ratio studies are conducted on each of the residential valuation neighborhoods and school districts in El Paso County to judge the two primary aspects of mass appraisal accuracy--level and uniformity of value. The central tendency and dispersion generated from sales ratios are available for each stratified neighborhood within an ISD and summarized by year. These summary statistics including, but not limited to, the weighted mean, median, standard deviation, coefficient of variation, and coefficient of dispersion provide the appraisers a tool by which to determine both the level and uniformity of appraised value on a stratified neighborhood basis. The level of appraised values is determined by the weighted mean for individual properties within a neighborhood, and a comparison of neighborhood weighted means reflects the general level of appraised value between comparable neighborhoods. Review of the standard deviation, coefficient of variation, and coefficient of dispersion discerns appraisal uniformity within and between stratified neighborhoods.

Every neighborhood is reviewed annually by the appraiser through the sales ratio analysis process. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood needs to be updated in an upcoming reappraisal, or whether the level of market value in a neighborhood is at an acceptable level. (See Attachment B for Appraisal Ratios by Market Area, Appraisal Ratios by Neighborhoods, and Appraisal Ratios by School District)

5.3.5 MARKET ADJUSTMENT OR TRENDING FACTORS

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

The following equation denotes the hybrid model used:

MV = LV + [(RCN-D) * MA]

Whereas the market value (MV) equals the land value (LV) plus replacement cost new (RCN) of any improvements minus normal depreciation (D) times the market adjustment factor (MA). As the cost approach separately estimates both land and building values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values are needed to bring the level of appraisal to an acceptable standard. Market or location adjustments are applied uniformly within neighborhoods to account for locational variances between market areas or across a jurisdiction.

If a neighborhood is to be updated, the appraiser uses a cost ratio study that compares recent sales prices of properties appropriately adjusted for the effects of time within a delineated neighborhood with the properties' actual cost value. The calculated ratio derived from the sum of the sold properties' cost value divided by the sum of the sales prices indicates the neighborhood level of value based on the unadjusted cost value for the sold properties. This cost-to-sale ratio is compared to the appraisal-to-sale ratio to determine the market adjustment factor for each neighborhood. This market adjustment factor is needed to trend the values obtained through the cost approach closer to the actual market evidenced by recent sales prices within a given neighborhood. The sales used to determine the market adjustment factor will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The market adjustment factor calculated for each updated neighborhood is applied uniformly to all properties within a neighborhood.

Monthly time adjustments are developed using the paired sales analysis method. For each school district, ratios based on unadjusted cost values were stratified on a quarterly basis. Statistics produced from the quarterly market data include measures of central tendency (mean and median) that represent the level of appraised values, and measures of uniformity (coefficient of dispersion and coefficient of variation) that represent the consistency of appraised values within and between strata. The resulting quarterly medians were graphically plotted for examination and analysis. Analysis was then performed on each school district sample to determine the appropriate yearly time adjustment to be employed, or if a time adjustment was even warranted. For this year, a time adjustment was not warranted.

Once the market-trend factors are applied, a second set of ratio studies is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both updated and non-updated neighborhoods, and finally, for the school district.

5.4 TREATMENT OF RESIDENCE HOMESTEADS

The State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under the law, a property owner who acquires property after Jan. 1 may receive the residence homestead exemption for the applicable portion of that tax year immediately on qualification of the exemption, if the previous owner did not receive the same exemption for the tax year.

Once the residence homestead exemption is applied, increases in the value of that property are "capped." The value for tax purposes of a qualified residence homestead will be the lesser of:

1) *The market value of the property for the most recent tax year that the market value was determined by the appraisal office; or*

2) *The sum of:*

   a. *10 percent of the appraised value of the property for the preceding tax year;*

   b. *The appraised value of the property for the preceding tax year; and*

   c. *The market value of all new improvements to the property.*

The value of capped properties must be recomputed annually. If a capped property sells, the cap automatically expires as of January 1st of the following year. In that following year, that home is reappraised at its market value to bring its appraisal into uniformity with other properties. An analogous provision applies to new homes. While a developer owns them, unoccupied residences are appraised as part of an inventory using the CAD's land value and the developer's construction costs as of the valuation date. However, in the year following the sale, they are reappraised at market value.

Additionally, The Texas Property Tax Code addresses the valuation of residential homestead properties under Section 23.01 (c) and (d) as follows:

Sec. 23.01. Appraisals Generally.

(c) Notwithstanding section 1.04(7)(C), in determining the market value of a residence homestead, the chief appraiser may not exclude from consideration the value of other residential property that is in the same neighborhood as the residence homestead being appraised and would otherwise be considered in appraising the residence homestead because the other residential property:

(1) was sold at a foreclosure sale conducted in any of the three years preceding the tax year in which the residence homestead is being appraised and was comparable at the time of sale based on relevant characteristics with other residence homesteads in the same neighborhood; or

(2) has a market value that has declined because of a declining economy.

(d) The market value of a residence homestead shall be determined solely on the basis of the property's value as a residence homestead, regardless of whether the residential use of the property by the owner is considered to be the highest and best use of the property".

5.5 INDIVIDUAL VALUE REVIEW PROCEDURES

5.5.1 FIELD REVIEW

The appraiser identifies individual properties in critical need of field review through sales ratio analysis. Sold properties with a high variance in sales ratios are field reviewed on a regular basis to check for accuracy of data characteristics.

As the CAD's parcel count increases through new home construction, and homes constructed in 70's and 80's experience remodeling, the appraisers are required to perform the field activity associated with transitioning and high demand neighborhoods. Increased sales activity has also resulted in a more substantial field effort on the part of the appraisers to review and resolve sales outliers. Additionally, the appraisers frequently field review subjective data items such as quality of construction, condition, and physical, functional, and economic obsolescence, factors significantly affecting the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser can physically inspect both sold properties and unsold properties for comparability and consistency of values.

5.5.2 OFFICE REVIEW

Given the ample resources and time required to conduct a routine field review of all properties, homogeneous properties consisting of tract housing with a low variance in sales ratios and other properties having a recent field inspection date are value reviewed in the office. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. The dollar amount and percentage of value difference are noted for each property within a delineated neighborhood allowing the appraiser to identify, research and resolve value anomalies before final appraised values are released. Previous values resulting from a protest hearing are individually reviewed to determine if the value remains appropriate for the current year.

Using Pictometry (aerial photography software) allows the staff to view properties and compare them with the appraisal records. If there is no significant change between the record and the aerial view, then staff will indicate that the property was reviewed and not changed. If there is a significant change between the record and the aerial view, then staff will either make the changes in the office or indicate that the property was changed, or the staff will indicate that a field check is required. This depends upon the circumstances of each account and is on a case-by-case basis.

Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within their area of responsibility, the estimates of value are released for Notices of Appraised Value.

5.6 PERFORMANCE TESTS

5.6.1 SALES RATIO STUDIES

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The CAD ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall, sales ratios are generated for each ISD by quarter to allow the appraiser to review general market trends within their area of responsibility and provide an indication of market appreciation over a specified period. The neighborhood descriptive statistic, along with frequency distributions and scatter diagrams are reviewed for each neighborhood being updated for the current tax year. In addition to the mainframe sales ratios by school district and neighborhood, quarterly sales ratios are generated from a PC-based statistical application in PACS. Reported in the sales ratio statistics for each school district is a level of appraisal value and uniformity profile by land use, sales trends by quarter and 12-month period, and appraisal value ranges. The PC-based ratio studies are designed to emulate the findings of the state comptroller's bi-annual property value study for Category A property. A complete summary is found in Attachment B.

FIGURE 5.2 SINGLE FAMILY RATIOS REPORT BY MARKET AREA, JULY 2023

Market Area	Count	Median	Mean	Wtd. Mean	IQR	SD	COD	COV	PRD
A West Area	758	0.9811	0.9875	0.9795	0.1091	0.091	7.069	9.2167	1.0082
B Upper Valley Area	274	0.9752	0.9885	0.9749	0.1304	0.0964	7.8380	9.7561	1.0140
C Northeast Area	986	1.0323	1.0366	1.0324	0.1255	0.0935	7.2180	9.0207	1.0040
D Central Area	211	0.9975	1.0097	1.0012	0.1708	0.1138	9.2240	11.2680	1.0085
E East Area	2,274	1.0192	1.0321	1.0281	0.1211	0.0904	7.1370	8.7603	1.0039
F Lower Valley	356	1.0000	1.0130	1.0070	0.1534	0.1024	8.2590	10.1042	1.0059
G Anthony	19	1.0578	1.0591	1.0555	0.0913	0.0518	3.8900	4.8942	1.0033
H Canutillo	92	1.0265	1.0420	1.0319	0.1135	0.0905	7.1410	8.6830	1.0098
J Clint	46	1.0252	1.0379	1.0419	0.1346	0.0977	7.5750	9.4171	0.9962
K Fabens	6	1.0597	1.0675	1.0650	0.1130	0.0625	4.8350	5.8509	1.0024
L San Elizario	17	1.0219	1.0399	1.0276	0.0605	0.0933	5.9000	8.9767	1.0120
M Tornillo	1	1.2312	1.2312	1.2312	0.0000		0.0000		1.0000
N City of Socorro	275	1.0709	1.0581	1.0514	0.1245	0.0879	6.7920	8.3080	1.0063
P Socorro	883	1.0214	1.0329	1.0262	0.1292	0.0962	7.5410	9.3093	1.0065
R City of Horizon	225	1.0288	1.0378	1.0328	0.1098	0.0888	6.8010	8.5571	1.0049
Total	6,423	1.0143	1.0256	1.0169	0.1301	0.0933	7.519	9.0934	1.0086

5.6.2 MANAGEMENT REVIEW PROCESS

Once the proposed value estimates are finalized, the Compliance Manager reviews the sales ratios by neighborhood and presents pertinent valuation data, such as, history of hearing protest, sale-to-parcel ratio, and level of appraisal to the Director of Appraisal Services and the Chief Appraiser for final review and approval. This review includes comparison of levels of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values meet or exceed PTAD requirements appropriate for the tax year in question.

Our analysis indicates the following:

- *Most neighborhoods are within tolerances. Many outside tolerances will be corrected with adjustments to improvement classification, depreciation and/or land value.*

- As illustrated in Figure 5.3, thirty-six (36) neighborhoods may need upward market adjustments to be within tolerances. Most of the neighborhoods (21) are in market area A (West) while the remainder are spread throughout the county.

- On the other hand, eight (24) neighborhoods may need downward market adjustments to be within tolerances. One (1) neighborhood in market area B (Upper Valley Area), Four (4) neighborhoods in market area C (Northeast), Seven (7) neighborhoods in market area E (East), One (1) neighborhood in market area H (Canutillo), Two (2) neighborhoods in market area N (City of Socorro), Four (4) neighborhoods in market area P (Socorro), and Five (5) neighborhoods in market area R (City of Horizon).

FIGURE 5.3 NEIGHBORHOODS TO REVIEW

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
A West Area	AB20105500	4	0.9447	0.9507	0.9510	0.0657	0.0360	2.3680	3.7906	0.9997
A West Area	AC34008280	3	0.8944	0.9035	0.9008	0.1043	0.0527	3.8860	5.8354	1.0029
A West Area	AC34013450	6	0.9999	1.0055	0.9627	0.3013	0.1748	14.9710	17.3839	1.0444
A West Area	AC34014500	4	0.9263	0.9817	0.9661	0.2227	0.1332	8.7560	13.5678	1.0162
A West Area	AC80911215	11	0.9920	0.9742	0.9635	0.1298	0.0815	6.3700	8.3692	1.0111
A West Area	AC80916210	4	0.9236	0.9452	0.9409	0.1427	0.0778	6.0960	8.2355	1.0046
A West Area	AC81811230	16	0.9400	0.9646	0.9612	0.1619	0.0930	8.0200	9.6450	1.0036
A West Area	AC81816230	9	0.8844	0.9624	0.9384	0.2667	0.1593	13.9280	16.5467	1.0256
A West Area	AC83412440	6	0.9236	0.9510	0.9370	0.1962	0.1286	10.2540	13.5220	1.0150
A West Area	AF16917325	8	0.9618	0.9415	0.9405	0.1505	0.0800	6.9250	8.5001	1.0010
A West Area	AF60908650	14	0.9368	0.9382	0.9353	0.0761	0.0511	4.3630	5.4415	1.0031
A West Area	AF60910800	12	0.9648	0.9715	0.9679	0.0792	0.0622	4.7920	6.4017	1.0037
A West Area	AF60914700	18	0.9726	0.9714	0.9666	0.0916	0.0842	5.9680	8.6698	1.0050
A West Area	AP32716860	4	0.9368	0.9458	0.9449	0.0797	0.0430	3.6850	4.5460	1.0009
A West Area	AP32718850	7	0.9190	0.9828	0.9496	0.2600	0.1407	11.3760	14.3215	1.0350
A West Area	AR45727175	4	0.9462	0.9280	0.9141	0.2497	0.1307	10.6900	14.0812	1.0153
A West Area	AR46014340	6	0.9667	0.9793	0.9688	0.1820	0.1068	8.0820	10.9070	1.0108
A West Area	AT20810575	6	0.9557	0.9762	0.9679	0.1024	0.0867	5.5780	8.8761	1.0086

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
A West Area	AT21313350	7	0.9248	0.9427	0.9398	0.1519	0.0720	6.0900	7.6420	1.0031
A West Area	AT28115265	7	0.9651	0.9600	0.9549	0.1285	0.0901	7.1980	9.3818	1.0053
A West Area	AW14509325	29	0.9719	0.9677	0.9636	0.0904	0.0696	5.5970	7.1880	1.0042
B Upper Valley Area	BC16731155	3	0.9171	0.9118	0.9110	0.0424	0.0217	1.5400	2.3770	1.0008
B Upper Valley Area	BC67527180	3	0.9868	0.9551	0.9474	0.1663	0.0876	5.6190	9.1699	1.0081
B Upper Valley Area	BL76917130	4	0.8967	0.9151	0.9136	0.1304	0.0706	5.7890	7.7149	1.0016
B Upper Valley Area	BR57611385	8	1.0608	1.0785	1.0761	0.1571	0.0965	6.8760	8.9476	1.0022
B Upper Valley Area	BS68832215	3	0.9494	0.9341	0.9256	0.1472	0.0748	5.1680	8.0057	1.0091
B Upper Valley Area	BT23000000	16	0.9542	0.9624	0.9641	0.1184	0.0909	6.9460	9.4493	0.9982
B Upper Valley Area	BW13506535	5	0.9902	0.9649	0.9656	0.1440	0.0768	5.8190	7.9602	0.9993
B Upper Valley Area	H00919450	10	0.9428	0.9449	0.9401	0.0750	0.0584	4.3650	6.1850	1.0051
C Northeast Area	CB35109145	4	0.9112	0.9199	0.9207	0.0879	0.0466	3.7530	5.0619	0.9992
C Northeast Area	CM88909175	7	1.0550	1.0599	1.0560	0.1394	0.0986	6.4310	9.2987	1.0037
C Northeast Area	CP08207350	10	1.1084	1.0901	1.0830	0.1359	0.1012	6.5490	9.2821	1.0066
C Northeast Area	CP32414155	5	0.8852	0.9148	0.9095	0.1366	0.0971	6.1710	10.6161	1.0058
C Northeast Area	CP86308275	6	1.0975	1.0789	1.0731	0.1836	0.0893	6.3600	8.2806	1.0054
C Northeast Area	CS13707550	52	1.0547	1.0634	1.0592	0.0926	0.0763	5.5350	7.1719	1.0040
D Central Area	DC61926085	5	0.9582	0.9709	0.9623	0.1531	0.0803	6.3920	8.2701	1.0090
E Eastside Area	EE06612190	4	0.9197	0.9327	0.9193	0.2177	0.1135	9.6360	12.1661	1.0146
E Eastside Area	EE22216265	3	0.8985	0.9201	0.9169	0.1111	0.0586	4.1220	6.3716	1.0034
E Eastside Area	EG12812700	7	1.0096	0.9702	0.9621	0.1379	0.0662	4.4920	6.8186	1.0085
E Eastside Area	EG19507700	22	1.0928	1.0760	1.0793	0.1633	0.1005	7.6020	9.3424	0.9970
E Eastside Area	EH80505550	11	1.0789	1.0817	1.0738	0.1992	0.0988	7.8500	9.1315	1.0073
E Eastside Area	EI25607300	12	1.0364	1.0547	1.0545	0.1677	0.0975	8.1070	9.2403	1.0002

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
E Eastside Area	EI25806300	9	1.0890	1.0851	1.0775	0.1904	0.1103	7.8670	10.1676	1.0071
E Eastside Area	EP13314240	9	1.0797	1.0702	1.0571	0.1220	0.0984	6.1590	9.1968	1.0124
E Eastside Area	ES54106480	12	1.0652	1.0751	1.0730	0.1248	0.0798	5.8510	7.4182	1.0020
E Eastside Area	ES81208260	5	1.1350	1.1004	1.0839	0.2358	0.1215	8.3090	11.0392	1.0153
E Eastside Area	EV89713300	7	0.9356	0.9517	0.9549	0.1395	0.1143	8.2400	12.0099	0.9967
F Lower Valley	FV89311310	5	0.9706	0.9674	0.9693	0.1973	0.1006	8.1310	10.3984	0.9980
H Canutillo	HC10217547	6	1.1041	1.0806	1.0707	0.2409	0.1471	11.2930	13.6102	1.0092
N City of Socorro	NJ18710355	11	1.0697	1.0799	1.0779	0.0641	0.0484	3.3550	4.4834	1.0018
N City of Socorro	NS98608617	5	1.1344	1.1073	1.1066	0.0958	0.0553	3.3790	4.9898	1.0007
P Socorro	PE74217400	7	1.0231	1.0697	1.0592	0.1386	0.1011	7.0820	9.4546	1.0099
P Socorro	PE74706520	5	1.1038	1.0701	1.0599	0.3201	0.1612	11.6000	15.0640	1.0097
P Socorro	PS50506570	9	1.0438	1.0671	1.0702	0.1364	0.0953	6.9260	8.9345	0.9971
P Socorro	PT20006600	25	1.0519	1.0635	1.0649	0.0806	0.0773	5.3010	7.2690	0.9986
R City of Horizon	R220R09536	4	1.1582	1.0888	1.0786	0.3127	0.1855	9.3310	17.0409	1.0094
R City of Horizon	RD45709430	6	1.0655	1.0886	1.0807	0.1982	0.1169	7.5760	10.7399	1.0073
R City of Horizon	RE07509265	5	1.1292	1.1265	1.1292	0.1011	0.0641	3.5820	5.6870	0.9976
R City of Horizon	RH77010250	4	1.0618	1.0759	1.0640	0.1584	0.0834	5.9250	7.7525	1.0112
R City of Horizon	RP78908410	4	1.0391	1.0688	1.0658	0.1086	0.0667	3.7680	6.2437	1.0028

	Low ratio, values need to be raised.
	High ratio, values need to be lowered.

FIGURE 5.4 MARKET AREAS MAP

Market Areas

Market Area B

- (A)-WEST
- (B)_UPPERVALLEY
- (C)-NORTHEAST
- (D)-CENTRAL
- (E)-EAST
- (F)-LOWER VALLEY
- (G)-ANTHONY
- (H)-CANUTILLO
- (J)-CLINT
- (K)-FABENS
- (L)-SAN ELIZARIO
- (M)-TORNILLO
- (N)-CITY OF SOCORRO
- (P)-SOCORRO
- (R)-HORIZON
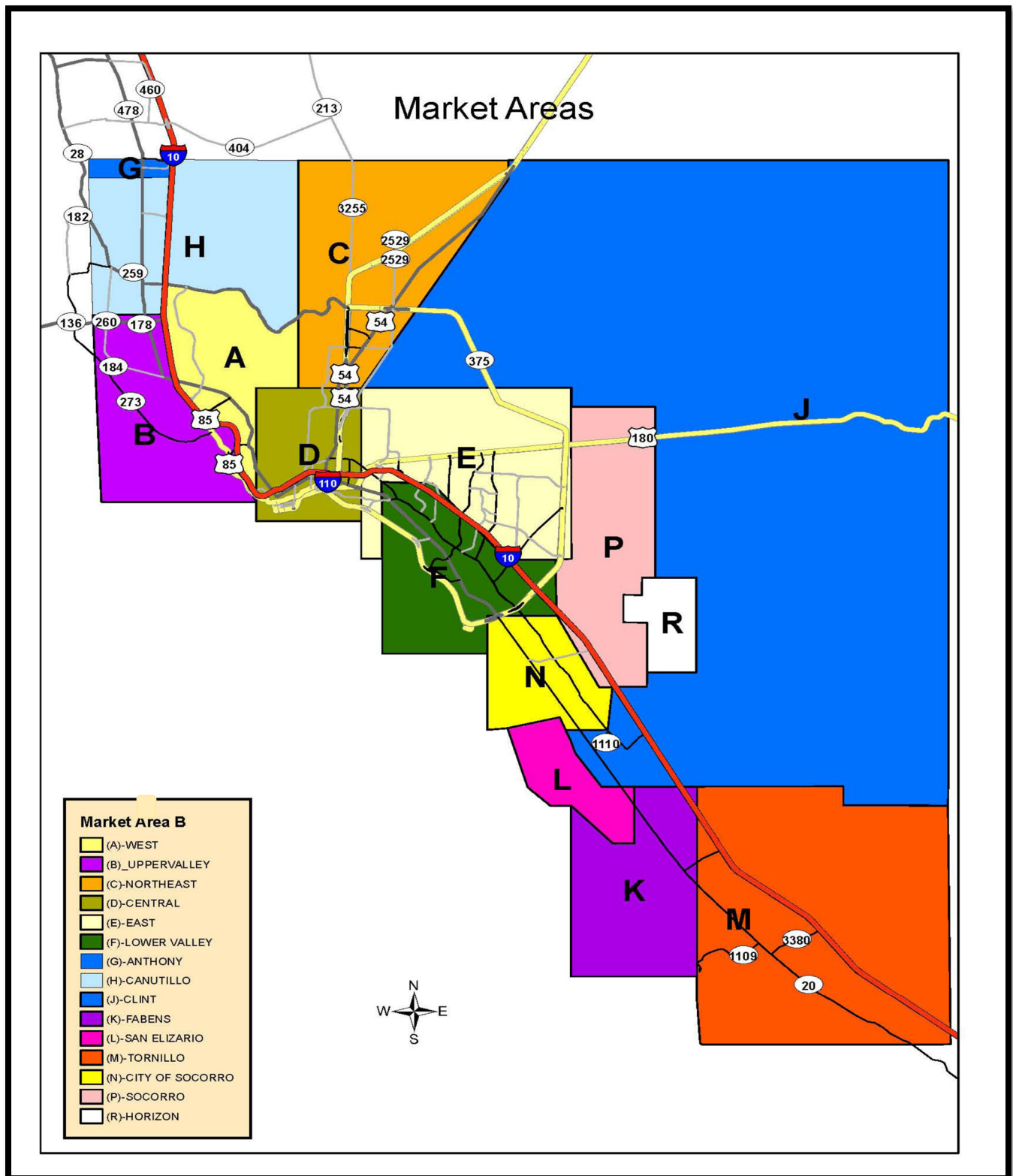
6.0 COMMERCIAL VALUATION PROCESS

6.1 INTRODUCTION

6.1.1 APPRAISAL RESPONSIBILITY

This mass appraisal assignment includes all the commercially classed real property which falls within the responsibility of the commercial valuation appraisers of EPCAD and is located within the boundaries of this taxing jurisdiction. The commercial appraisers are responsible for developing equal and uniform market values for commercial real and vacant property accounts. There are approximately 16,314 such accounts in El Paso County.

The CAD's appraisal roll displays and identifies each parcel of real property individually. Commercial appraisers appraise the fee simple interest of properties according to statute. However, the effect of easements, restrictions, encumbrances, leases, contracts, or special assessments are considered on an individual basis, as is the appraisal of any non-exempt taxable fractional interests in real property (i.e., certain multi-family housing projects). Fractional interests or partial holdings of real property are appraised as fee simple for the whole property and divided programmatically, whenever possible, based on their prorated interests. Otherwise, separate accounts are created with values reflecting fractional interest.

6.1.2 APPRAISAL RESOURCES

- **Personnel** - *The Commercial department staff consists of the Manager, Assistant Manager, Training Facilitator, eight (8) Appraisers and one Administrative Specialist.*

- **Data** - *A common set of data characteristics for each commercial property in El Paso County is collected in the field and data entered to the computer.*

The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse, light industrial and special use (i.e., hotels, hospitals, and nursing homes). The commercial appraisal staff is multi-task oriented as certain appraisers have multiple responsibilities including valuation of improved commercial property types and land valuation. Model building and testing is the responsibility of the commercial appraisal staff and/or the compliance appraisal staff. Commercial appraisal staff are responsible for analyzing apartment complexes. The Commercial Manager and Compliance Manager are supervised by the Director of Appraisal Services.

Data - *The data used by the commercial appraiser includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraiser includes actual income and expense data (typically obtained through the appeals process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data obtained from specific properties, market data publications are also reviewed to provide additional support for market trends. Pictometry has become an important data collection tool that allows the commercial appraiser to verify measurements and identify physical characteristics of individual parcels.*

6.2 PRELIMINARY ANALYSIS

6.2.1 PILOT STUDY

Pilot studies are used to test new or existing procedures or valuation modifications in a limited area (a sample of properties) of the CAD and are considered whenever substantial changes are made. These studies, which could include ratio studies where there is sufficient data, reveal whether the system is producing accurate and reliable values or whether procedural modifications are required. The commercial staff appraisers and/or the compliance appraisal staff use this methodology when developing both the cost approach and income approach models.

Survey of Similar Jurisdictions: El Paso CAD coordinates its discovery and valuation activities with similar appraisal districts. Numerous field trips, interviews and data exchanges with similar appraisal districts have been conducted to ensure compliance with state statues. In addition, the CAD administration and personnel interact with other assessment officials through professional trade organizations including the IAAO, TAAD and its subchapter Texas Metropolitan Association of Appraisal Districts and TAAO.

6.3 VALUATION APPROACH (MODEL SPECIFICATION)

6.3.1 AREA ANALYSIS

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

6.3.2 NEIGHBORHOOD ANALYSIS

A neighborhood is a geographical area that is defined by physical, economic, political, and social boundaries. Analysis of neighborhoods involves identifying properties that are similarly affected by these factors. Along with proper classification of properties, this process furthers the goal of appraisal uniformity and equity in mass appraisal models.

Neighborhood analysis involves the examination of how physical, economic, governmental, and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods.

6.3.3 HIGHEST AND BEST USE ANALYSIS

The highest and best use is the most reasonable and probable use that generates the highest value of the real estate as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and derives maximum production. For improved properties, highest and best use is evaluated as improved and as if the site were still vacant. This assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, excess land, or a different optimum use if the site were vacant. All land unless specified by the code is as if vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses that include, but are not limited to office, retail, multifamily, industrial, special purpose, or interim use. In many instances, the property's current use is the same as its highest and best use. This analysis ensures that an accurate estimate of market value is derived.

6.3.4 MARKET ANALYSIS

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

6.4 DATA COLLECTION / VALIDATION

6.4.1 DATA COLLECTION MANUALS

The primary manual pertinent to data collection and documentation is the Commercial Department Appraisal Manual. This manual is continually updated, providing a uniform system of itemizing the multitude of components comprising improved properties. All properties located in the CAD's inventory are coded according to this manual and the approaches to value are structured and calibrated based on this coding system. The listing manual is reviewed annually.

Data validation is done annually, prior to the equity phase and after the sales have been researched, verified, keyed into the database, and quality control has been completed. The confirmed sales reports are digital files that categorize the sales by property and use type and sort the data by location and chronological order. Income data is also stored in digital files. These files are available to the public for use during hearings and are used by the appraisers during the hearings process. Data is available to the public upon request.

6.4.2 SOURCES OF DATA

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

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction (Grantor and Grantee). If a questionnaire is not returned within thirty days, a second questionnaire is mailed. If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. If no information is provided, verification is then attempted via phone calls to both parties. If the sales information is still not obtained, other sources are contacted such as the brokers involved in the sale, property managers or commercial vendors. In other instances, sales verification is obtained from local appraisers or others that may have the desired information. Finally, closing statements are often provided during the hearings process. The actual closing statement is the most reliable and preferred method of sales verification.

6.5 VALUATION ANALYSIS (MODEL CALIBRATION)

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

6.5.1 COST SCHEDULES

The cost approach to value is applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models are typically developed based on the Marshall & Swift Valuation Service. Cost models include the derivation of replacement cost new (RCN) of all improvements. These include comparative base rates, per unit adjustments and lump sum adjustments. This approach also employs the sales comparison approach in the valuation of the underlying land value. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period. Because a national cost service is used as a basis for the cost models, locational modifiers are necessary to adjust these base costs specifically for El Paso County. The national cost service provides these modifiers.

Depreciation schedules are developed based on what is typical for each property type at that specific age. Depreciation schedules have been implemented for what is typical of each major class of commercial property by economic life categories. Schedules have been developed for improvements with 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, and 70 year expected life. These schedules are then tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in CAMA. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. Effective age estimates are based on quality of construction, types of amenities, and quality of maintenance.

Market adjustment factors such as external and/or functional obsolescence can be applied if warranted. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to a specific property type or location and can be developed via ratio studies or other market analyses. Accuracy in the development of the cost schedules, condition ratings and depreciation schedules will usually minimize the necessity of this type of adjustment factor.

6.5.2 INCOME MODELS

The income approach to value is applied to those real properties typically considered by market participants as income producing and for which the income approach is considered the leading value indicator. Typically, commercial properties will be analyzed under 6.3.2 and 6.3.3 prior to application of income models.

The income approach requires analysis of income data from property owners and market comparables to arrive at an appropriate rent, vacancy, and expense ratio for use in the following formula:

Net Operating Income (NOI) = (Potential Gross Rent - Vacancy Allowance) x (1-Expense Ratio)

The NOI is then applied in the formula: **Value = NOI / Cap Rate**

There are several methods for deriving cap rates, and each involves in-depth analysis of the market and its participants. The CAD contracted an MAI appraiser to conduct analysis of pertinent commercial cap rates for tax year 2023. The cap rates applied to the income models were within the limits of the analysis.

6.5.3 SALES COMPARISON (MARKET) APPROACH

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

For improved commercial properties, the most common approaches used are the income approach and the cost approach due to a limited pool of sales data. However, the commercial land tables are built from sales. Neighborhood, zoning, size, frontage, and influence are some delineating factors. Paired sales analysis is used in deriving any time adjustments.

6.5.4 FINAL VALUATION SCHEDULES

Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models on the mainframe CAMA system for utilization on all commercial properties in the CAD. The schedules and models are summarized in the Commercial Department Appraisal Manual. This manual is provided to appraisers and is made available to the public in an easy-to-understand format.

6.5.5 STATISTICAL ANALYSIS

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

Appraisal statistics of central tendency and dispersion generated from sales ratios are available for most property types. The summary statistics provide the appraisers or statistical analyst a tool by which to determine both the level and uniformity of appraised value of a particular property type. The level of appraised values can be determined by the median/weighted mean for individual properties within a specific type, and a comparison of median/ weighted means can reflect the general level of appraised value. Review of the standard deviation and the coefficient of variation can discern appraisal uniformity within a specific property type.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverable expenses and replacement reserves), net operating income and capitalization rate and multipliers are continuously reviewed utilizing frequency distribution methods or other statistical procedures or measures. Income model conclusions are compared to actual information obtained on individual commercial properties during the protest hearings process as well as information from published sources and area vendors.

6.6 INDIVIDUAL VALUE REVIEW PROCEDURES

6.6.1 FIELD REVIEW

The date of last inspection, extent of that inspection, and the commercial CAD appraiser responsible are listed in the CAMA system record. A field review may include a review using Pictometry. If a property owner disputes the CAD's records concerning this data in a protest hearing, CAMA may be altered based on the credibility of the evidence provided. Typically, a new field check is then requested to verify this evidence for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file. Finally, although not every property can be inspected each year, each appraiser typically designates certain segments of their area of responsibility to conduct field checks.

Commercial appraisers are limited in the time available in the field to review all commercial properties of a specific use type. A major effort is made by appraisers to field review as many properties as possible or economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or wide variations in sale prices. Additionally, the appraisers frequently field review subjective data items such as quality of construction and physical, functional, and economic obsolescence factors contributing significantly to the market value of the property. In some cases, field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values. Oblique and ortho photos via Pictometry are also used when available.

6.6.2 OFFICE REVIEW

Office reviews are completed on properties not subject to field inspections and are performed in compliance with the guidelines contained in the Commercial Department Appraisal Manual.

Office reviews are typically limited by the data presented in final value reports. These reports summarize the pertinent data of each property as well as comparing the previous values (two-year value history) to the proposed value conclusions of the various approaches to value. These reports show proposed percentage value changes, income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, prior year litigation and a three-year sales history (USPAP property history requirement for non-residential property).

The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and CAD policies. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions. Each appraiser's review is limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land).

Once the appraiser is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type. If one of the parcel's component values, land value, improvement value or total value exceeds the permissible change in value range it fails the value edits. In this case, the parcel does not shift to noticing, but it is placed on a rework list. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits and rework lists enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

6.7 PERFORMANCE TESTS

The appraisers utilize desktop applications such as Microsoft Access and Excel to evaluate subsets of data by economic area or other specific data item. On the desktop, this may be customized and performed by building class and age basis.

6.7.1 COMPARATIVE APPRAISAL ANALYSIS

Commercial appraisers perform average per unit value comparisons. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail and warehouse usage or special use). The objective of this evaluation is to determine appraisal performance of sold and unsold properties. Appraisers average the unit sales amounts and unit-appraised values for the same parcels creating a comparison of average value changes of sold and unsold properties, when available. These studies are conducted on substrata such as building class and on properties

located within various economic areas. In this way, overall appraisal performance is evaluated geographically by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These horizontal equity studies are performed prior to annual noticing.

7.0 INDUSTRIAL VALUATION PROCESS

7.1 INTRODUCTION

7.1.1 APPRAISAL RESPONSIBILITY

The industrial appraisers and/or contract appraisers of the El Paso Central Appraisal District are responsible for developing fair, uniform market values for industrial properties. The industrial contract appraiser is also responsible for the valuation of all tangible general industrial business personal property in El Paso County. There are approximately 560 parcels of industrial real property and business personal property accounts in El Paso County of which approximately 323 are personal property.

Wardlaw Appraisal Group appraises approximately 667 parcels of real industrial, personal, and utility properties. The Wardlaw Appraisal Group Mass Appraisal Report is included in Attachment C.

7.1.2 APPRAISAL RESOURCES

- **Personnel** – *The El Paso CAD contracts with the Wardlaw Appraisal Group Appraisal firm to value properties for which the CAD does not have the available personnel or resources. See attached Mass Appraisal summary submitted by Wardlaw Appraisal Group for a list of personnel.*

- **Data** – *The contract appraisal staff inspects their assigned properties to obtain information about buildings, site improvements, process and shop equipment, and various items of business personal property. The individual characteristics of the property being appraised are the primary factors that drive the appraised value.*

7.2 VALUATION APPROACH (MODEL SPECIFICATION)

7.2.1 AREA ANALYSIS

The scope of market forces affecting industrial products and the capital goods used in the production process tends to extend beyond regional considerations. The effects of information and transportation technology are such that most industrial market forces are measured globally. One exception to this general concept is the market for industrial land. The pricing of land tends to be closely tied to possible alternative uses in the area. For this reason, appraisers assigned to land valuation analyze market forces for specific areas and adjust land value schedules appropriately.

7.2.2 NEIGHBORHOOD ANALYSIS

Neighborhood analysis of the type of properties valued by the industrial appraiser is not meaningful. Industrial properties do not have the type of generic "sameness" that is appropriate for neighborhood models.

7.2.3 HIGHEST AND BEST USE ANALYSIS

The highest and best use of real or business personal property is the most reasonable and probable use of the property on the date of appraisal that is physically possible, financially feasible, legally permissible, and that derives maximum production from the property. Usually, the current use of the property is the highest and best use of that property. Industrial facilities are mostly located in areas that support industrial use. In areas where mixed use does occur, the highest and best use of the property is examined by the appraiser to estimate the effect of this factor.

7.2.4 MARKET ANALYSIS

Market analysis is the basis for finalizing value estimates on properties for which the industrial appraiser has responsibility. Even though many industrial properties are unique in nature, the market for this type of property is analyzed to see how the values of similar or similar as possible properties are affected by market forces. Industrial properties, such as machine shops, have many similar facilities that can be compared to the subject property in terms of type and size of equipment, type of property fabricated or serviced at the subject facility, and other factors. Those similarities help the appraiser estimate the value of the subject property. However, some facilities, such as specialty chemical plants, are so unique in nature that the appraiser must use the closest available plant in terms of output quantity, type of product manufactured, and other factors to estimate the value of the subject property. Many industrial properties use the same type of building and, depending on the type of business, may use the same type of manufacturing or service equipment. The way the entire business operation is put together makes that facility unique.

The CAD uses information from similar businesses to examine the real and business personal property values at a particular business, but the individual characteristics of the business being reviewed determine the value estimation. Many of the buildings encountered at industrial facilities are generic in construction, such as pre-engineered metal buildings. The cost per square foot to construct these type structures can be used to estimate values at facilities that have similarly constructed buildings but will also have differences that must be considered when estimating the final value of the property being reviewed.

A similar analysis is used for business personal property. Many items of business personal property, such as furniture and fixtures, computers, and even machinery and equipment are generic in construction, but individual characteristics that affect value, such as usage, environment where used, and level of care will influence the final value estimation. When cost data for this type of property is available and considered reliable, it is used for value estimation purposes at other plant facilities. On-site inspection and information provided by the property owner will affect the final value.

7.3 DATA COLLECTION/VALIDATION

7.3.1 DATA COLLECTION MANUALS

An extended range of variations may exist within the same class of industrial property, and there is a multitude of property types within the industrial category. For this reason, effective data collection procedures would be very difficult to organize in a single comprehensive manual. Industrial business personal property also consists of many different classes of assets with a wide range of variation within each class.

7.3.2 SOURCES OF DATA

The original real and business personal property data used by El Paso CAD was supplied to the contract appraisers. Since that time, the contract appraisal personnel have updated that information based on field review. As new facilities are built, the contract appraisal personnel collect all the real and business personal property data necessary to value the property initially and thereafter update the information when the property is again visited. The CAD receives building permit information from the cities and from the county when a facility is being built outside an incorporated city.

7.3.3 DATA COLLECTION PROCEDURES

The contract appraisal personnel annually or periodically visit assigned plants. The frequency of the visit is determined by the nature of the business conducted at each facility. For example, refineries and chemical plants are continually changing or adding to processes to extract greater efficiencies or make new products, but machine shops may not add or remove equipment over a period of two or more years.

The appraisers take with them the historical data on the buildings and site improvements and the previous listing of business personal property at the facility being visited. Changes to the existing structures and business personal property are noted and that information is used for value estimation purposes. If cost information for the real or business personal property is supplied later, the field data can be compared to that information to judge the accuracy of the information.

7.4 VALUATION ANALYSIS (MODEL CALIBRATION)

7.4.1 FINAL VALUATION SCHEDULES

See Attachment C: Mass Appraisal Summary submitted by Wardlaw Appraisal Group.

7.5 INDIVIDUAL VALUE REVIEW PROCEDURES

7.5.1 FIELD REVIEW

The CAD's personnel periodically review their assigned real and business personal property accounts where there is evidence of change at a particular facility and when there is not, these accounts are revisited on a two to three-year cycle. Certain properties are reviewed annually due to past experiences that show changes are occurring continually in the real or business personal property at that facility. Properties assigned to contract appraisal firms are reviewed annually because changes also occur regularly at these facilities.

The results of prior year protest hearings and indications of building permits being issued are another source of required field visits. Many times, during hearings, issues are presented that cause a value adjustment. Those issues must be field checked to see if these influences will be ongoing and warrant permanent value adjustment or are transitory and permanent adjustment is not warranted. This information needs to be recorded so the appraiser will be better able to estimate the property value. Building permits must be field checked to see what effect these have on existing structures. Any new construction is noted and the information necessary to value the structure is recorded. Additionally, any structure demolition is noted so the improvement value can be adjusted accordingly.

Part of the field review includes noting any land characteristics that would affect the land value. The CAD values all land for the properties within its jurisdiction, including those properties assigned to contract appraisal firms. The contract appraisal firms must advise the CAD of any characteristics that would affect the value of the land associated with that assigned facility.

7.5.2 OFFICE REVIEW

All properties not subjected to field review are reviewed in the office by the CAD appraiser assigned to real or personal properties. The office review relies on historical information in the real or business personal property file as the basis for deciding on the estimated value to be placed on the property for the current tax year.

When valuing real property, the characteristics of the property being reviewed are the driving force in value estimation. Experience in valuing other real property, such as comparable properties at different locations, helps the appraiser decide the estimated value to be placed on the subject improvements.

When valuing business personal property, the type of furniture, equipment, computers, etc., will be used along with any cost data provided by the property owner to estimate the value. Experience in valuing similar property at other facilities will help the appraiser estimate the value of the subject facility. Individual characteristics of the property, such as usage and maintenance will have a bearing on the value calculated by use of CAD schedules.

7.6 PERFORMANCE TESTS

7.6.1 SALES RATIO STUDIES

Ratio studies are an important tool to examine how close appraised values are to market values. The ratio study may use available sales data or may use independent, expert appraisals. Typically, there are not enough sales of industrial properties to show representativeness of that class of property in a ratio study. Ratio studies of industrial properties usually must rely on independent appraisals as an indicator of market values.

7.6.2 COMPARATIVE APPRAISAL ANALYSIS

This type of analysis is usually not done on industrial properties due to the unique nature of the property and because of time and budget constraints regarding available appraisal staff. Only in an instance where a jurisdiction would file a jurisdiction challenge with the Appraisal Review Board would the CAD perform such an analysis.

If a jurisdiction challenge is received by El Paso CAD on an industrial category of properties, the contract appraisers assigned to those accounts will research the appraisal roll to see what other similar properties exist. The real property values can be compared on an average value per square foot of structure basis, but the differences from one facility to another must be carefully compared because it is unlikely that two different facilities are going to build like improvements and use them in similar ways. In a similar manner, the business personal property values can be compared per category, such as furniture and fixtures, machinery, and equipment, etc., but the same comparison of the type of and use of the property must be examined to ensure proper comparison.

8.0 BUSINESS PERSONAL PROPERTY

8.1 INTRODUCTION

8.1.1 APPRAISAL RESPONSIBILITY

There are four different business personal property types appraised by the CAD's business personal property section: business personal property accounts, leased assets, vehicles, and multi-location assets. There are approximately 25,760 business personal property accounts in El Paso County. The CAD has contracted with Wardlaw Appraisal Group to appraise industrial, category "L2" accounts (reported under Section 7) and the CAD appraises the remaining accounts. In addition, CAD processes approximately 774 valuations on special inventories such as motor vehicle dealers' inventory, heavy equipment inventory, manufactured home dealer inventory and trailer and vessel dealer inventory under category "S" and 42 tangible non-business vehicles, category "H1".

8.1.2 APPRAISAL RESOURCES

- **Personnel** - *The Business Personal Property department staff consists of the Manager, Assistant Manager, ten (10) Appraisers and three (3) Administrative Specialists.*

- **Data** - *A common set of data characteristics for each business personal property account in El Paso County is collected in the field and entered in assigned IPAD or CAD computer. The property characteristic data drives the computer-assisted business personal property appraisal (CAPPA) system. The business personal property appraisers collect the field data.*

8.2 VALUATION APPROACH (MODEL SPECIFICATION)

8.2.1 SIC CODE ANALYSIS

Four-digit numeric codes, called Standard Industrial Classification (SIC) codes that were developed by the federal government are used by CAD to classify business personal property by business type uses.

SIC code identification and delineation is the cornerstone of the business personal property valuation system at the CAD. All the business personal property analysis work done in association with the business personal property valuation process is SIC code specific. SIC codes are delineated based on observable aspects of homogeneity. SIC code delineation is periodically reviewed to determine if further SIC code delineation is warranted.

8.2.2 HIGHEST AND BEST USE ANALYSIS

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, financially feasible, legally permissible, and that derives maximum production from the property. The highest and best use of business personal property is normally its current use.

8.3 DATA COLLECTION/VALIDATION

8.3.1 DATA COLLECTION PROCEDURES

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

8.3.2 SOURCES OF DATA

8.3.2.1 BUSINESS PERSONAL PROPERTY

The CAD's property characteristic data is collected through a massive field data collection effort coordinated by the CAD each year. When revaluation activities permit, CAD appraisers collect new data via the annual field drive-out. This project results in the discovery of new businesses not revealed through other sources. Various discovery publications such as The El Paso, Inc. and city permits are also used to discover business personal property. Tax assessors, city and local newspapers, and the public often provide CAD information regarding new business personal property and other useful facts related to property valuation.

8.3.2.2 VEHICLES

The CAD obtains a listing of vehicles from the Texas Department of Transportation (TXDOT) and from the Title/ Registration Division records. Other sources of data include property owner renditions and field inspections.

8.3.2.3 LEASED AND MULTI-LOCATION ASSETS

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

8.4 VALUATION AND STATISTICAL ANALYSIS (MODEL CALIBRATION)

8.4.1 COST SCHEDULES

Cost schedules are developed by SIC code by CAD business personal property valuation appraisers. Cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot format, but some exception SIC codes are in an alternate price per unit format, such as per room for hotels.

8.4.2 STATISTICAL ANALYSIS

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

8.4.3 DEPRECIATION SCHEDULE AND TRENDING FACTORS:

8.4.3.1 BUSINESS PERSONAL PROPERTY

The CAD's primary approach to the valuation of business personal property is the cost approach. The Replacement Cost New (RCN) is developed from property owner reported historical cost or from CAD developed valuation models. The trending factors used by the CAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by the CAD are also based on published valuation guides and in conjunction with other appraisal districts. The index factors and percent good depreciation factors are used to develop present value factors (PVF), by year of acquisition, as follows:

PVF = INDEX FACTOR x PERCENT GOOD FACTOR

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

MARKET VALUE ESTIMATE = PVF x HISTORICAL COST

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market.

8.4.4 COMPTROLLER'S FIELD APPRAISER'S GUIDE

This guide was developed by the Property Tax Division of the State Comptroller's Office. It consists of quality/density schedules and depreciation tables for specific SIC properties. These schedules are adjusted to local conditions by the appraisal staff.

The Guide is used in the general business personal property valuation program to estimate the value of new accounts for which no information has been provided at the time of field inspection or when valuing a national chain business.

8.4.5 VEHICLES

Value estimates for vehicles are based on NADA published book values or using PVF schedules or published guides.

8.4.6 LEASED AND MULTI-LOCATION ASSETS

Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then NADA or Blue Book published book values may be used in lieu of the PVF schedule. PVF schedules or published guides should be used by appraisers when asset cost is not listed by the vendor.

8.5 INDIVIDUAL VALUE REVIEW PROCEDURES

8.5.1 OFFICE REVIEW

8.5.1.1 BUSINESS PERSONAL PROPERTY

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

8.5.1.2 VEHICLES

A vehicle master file is received on tape from an outside vendor (TXDOT) and vehicles in the CAD's system are matched to current TXDOT records. The vehicles are sorted by owner name, business name or location address and then matched to CAD business personal property records. An appraiser uses PVF schedules or published guides to value vehicles that are not listed on the TXDOT records.

8.5.1.3 LEASED AND MULTI-LOCATION ASSETS

Leasing and multi-location accounts that have a high volume of vehicles or other assets may be loaded programmatically if reported by the property owner electronically. Electronic renditions often require reformatting before they can be loaded to the account. Accounts that are rendered by hard copy are entered by CAD staff.

8.6 PERFORMANCE TESTS

8.6.1 RATIO STUDIES

Every other year the Property Tax Assistance Division of the State Comptroller's Office conducts a Property Value Study (PVS). The PVS is a ratio study used to gauge appraisal CAD performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the business personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative business personal property values. These values are then compared to El Paso CAD's business personal property values and ratios are formed.

8.6.2 INTERNAL TESTING

The CAD can test new or revised cost and depreciation schedules by running the valuation program in test mode prior to the valuation cycle. This can give appraisers a chance to make additional refinements to the schedules if necessary.

9.0 LIMITING CONDITIONS

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

1. *The appraisals were prepared exclusively for ad valorem tax purposes.*

2. *The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the property appraised were performed as staff resources and time allowed.*

3. *Validation of sales transactions was attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential and commercial sales data obtained from vendors was considered reliable.*

4. *Attachment A is a list of staff providing significant mass appraisal assistance to the person signing this certification.*

5. *Attachment B is the CAD's latest Single Family ratio study results.*

10.0 CERTIFICATION STATEMENT

"I, Dinah L. Kilgore, Executive Director and Chief Appraiser for the El Paso Central Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the CAD subject to appraisal by me, and that I have included in the records all property that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law."

Dinah L. Kilgore, RPA

EPCAD Executive Director/Chief Appraiser

Registration #	Registrant's Name	Field	Designation(s)
77164	ACOSTA, JUAN	Appraiser	Working toward certification
77012	*ARVIZO FIERRO, RODOLFO	Appraiser	Working toward certification
74872	BEAR, MONICA C	Appraiser	RPA
77155	BELTRAN, JOSE VICTOR	Appraiser	Working toward certification
77455	CANCINO, JESUS	Appraiser	Working toward certification
77456	CANO, MAYRA SELENE	Appraiser	Working toward certification
73671	*CARNERA, JESSICA	Appraiser	RPA
71871	*CENICEROS, HAYDEE	Appraiser	RPA
70440	CERVANTES, MICHAEL	Appraiser	RPA
77014	CISNEROS, JULIO ALEJANDRO	Appraiser	Working toward certification
75157	CORDERO, JUAN JOSE	Appraiser	RPA
72370	DAVALOS, MARIBEL MENDOZA	Appraiser	RPA
76866	DELGADILLO, ROMUALDO	Appraiser	Working toward certification
76349	DURAN, PATRICK	Appraiser	Working toward certification
75267	DURAN-GONZALEZ, ALEJANDRA BERENICE	Appraiser	RPA
77457	ELIAS HERNANDEZ, JESUS FRANCISCO	Appraiser	Working toward certification
75268	ESCORZA, ALEJANDRA IRENE	Appraiser	RPA
76348	ESTRADA, ALEX DANIEL	Appraiser	Working toward certification
71619	FERNANDEZ, MELISSA RENEE	Appraiser	RPA
77465	FIERRO, ISAAC	Appraiser	Working toward certification
72369	GARCIA, JORGE	Appraiser	RPA
77458	GONZALEZ, ALONZO	Appraiser	Working toward certification
73474	GUTIERREZ, EZMERALDA	Appraiser	RPA
74631	GUTIERREZ, MARTA I	Appraiser	RPA
67879	GUZMAN, FELIPE D	Appraiser	RPA, CTA
77015	HERNANDEZ, JULIO EDUARDO	Appraiser	Working toward certification
75266	HURD, CAMERON SKJELSTAD	Appraiser	RPA
61755	*KILGORE, DINAH L	Appraiser	RPA
69288	*LOPEZ, LETICIA	Appraiser	RPA
77018	MANCIA, NESTOR	Appraiser	Working toward certification
73972	*MARTINEZ, DAVID	Appraiser	RPA
70747	*MARTINEZ, MICHELLE RAE	Appraiser	RPA
73667	MARTINEZ, PERLA	Appraiser	RPA
77459	MARTINEZ, VIVIAN BERNICE	Appraiser	Working toward certification
72780	*MEDINA, BEATRIZ	Appraiser	RPA
66487	*MEDINA, RICKIE ALLAN	Appraiser	AAS,RES,RPA,CTA
77460	MOINI, RENE DOWLING	Appraiser	Working toward certification
77461	MORENO, ARTURO	Appraiser	Working toward certification
77156	MUNOZ, DAISY	Appraiser	Working toward certification

Registration #	Registrant's Name	Field	Designation(s)
77019	OCHOA, REBECCA	Appraiser	Working toward certification
66290	OSBURN, IMELDA M	Appraiser	RPA, CTA
68231	*PEREZ, EDUARDO	Appraiser	RPA, CTA
77165	PEREZ, NICKALUS FELIPE	Appraiser	Working toward certification
71621	*PICKETT, CHRISTAL LYNN	Appraiser	RPA
72371	PROVIDENCE, ERIKA KATRICE	Appraiser	RPA
73112	*QUIJAS, NANCY CASILLAS	Appraiser	RPA
72781	RAMIREZ, ANGELICA	Appraiser	RPA
73669	READ, ANDREW RICHARD	Appraiser	RPA
77020	REYES, CHRISTINA	Appraiser	Working toward certification
76242	REYNOLDS, DOMINIC ALAN	Appraiser	RPA
73888	*RINCON, LIZETT	Appraiser	RPA
71148	*ROSAS, REUBEN PEREZ	Appraiser	RPA
77021	ROSS, RYAN MATTHEW	Appraiser	Working toward certification
74478	SALDIVAR, ERIC	Appraiser	RPA
75486	SALGADO-PHILLIPS, MARINA	Appraiser	RPA
73084	SANCHEZ, ESTHER	Appraiser	RPA
71870	*SCHAFER, RICHARD P	Appraiser	RPA
75158	SIFUENTES, NORMA ALICIA	Appraiser	RPA
77159	SOTELO, ALBERTO	Appraiser	Working toward certification
77462	STEPHENS, MARK EDWIN	Appraiser	Working toward certification
67995	*STONE, DAVID LEE	Appraiser	AAS, RPA, CTA
69433	*SWEENEY, OCTAVIUS	Appraiser	RPA
68221	*THOMPSON, JAMES EDWARD	Appraiser	AAS, RES, RPA, CTA
76347	VALDEZ, MARCO ANTONIO	Appraiser	RPA
77022	VALLES GOMEZ, ELIANNE A	Appraiser	Working toward certification
71377	VARGAS, ESPIRIDION M	Appraiser	RPA
72372	VIELMA, VILMA EMMA	Appraiser	RPA
75993	WOODS, WESLEY O'NEAL	Appraiser	RPA
72783	*WRIGHT, ARIK MARTIN	Appraiser	RPA
75010	*ZHANG, YI	Appraiser	RPA
77463	ZIELSDORF, CALVIN	Appraiser	Working toward certification

* Directors, Managers, Supervisorial Staff

SINGLE FAMILY RATIOS REPORT BY MARKET AREA, JULY 2023

Market Area	Count	Median	Mean	Wtd. Mean	IQR	SD	COD	COV	PRD
A West Area	758	0.9811	0.9875	0.9795	0.1091	0.091	7.069	9.2167	1.0082
B Upper Valley Area	274	0.9752	0.9885	0.9749	0.1304	0.0964	7.8380	9.7561	1.0140
C Northeast Area	986	1.0323	1.0366	1.0324	0.1255	0.0935	7.2180	9.0207	1.0040
D Central Area	211	0.9975	1.0097	1.0012	0.1708	0.1138	9.2240	11.2680	1.0085
E East Area	2,274	1.0192	1.0321	1.0281	0.1211	0.0904	7.1370	8.7603	1.0039
F Lower Valley	356	1.0000	1.0130	1.0070	0.1534	0.1024	8.2590	10.1042	1.0059
G Anthony	19	1.0578	1.0591	1.0555	0.0913	0.0518	3.8900	4.8942	1.0033
H Canutillo	92	1.0265	1.0420	1.0319	0.1135	0.0905	7.1410	8.6830	1.0098
J Clint	46	1.0252	1.0379	1.0419	0.1346	0.0977	7.5750	9.4171	0.9962
K Fabens	6	1.0597	1.0675	1.0650	0.1130	0.0625	4.8350	5.8509	1.0024
L San Elizario	17	1.0219	1.0399	1.0276	0.0605	0.0933	5.9000	8.9767	1.0120
M Tornillo	1	1.2312	1.2312	1.2312	0.0000		0.0000		1.0000
N City of Socorro	275	1.0709	1.0581	1.0514	0.1245	0.0879	6.7920	8.3080	1.0063
P Socorro	883	1.0214	1.0329	1.0262	0.1292	0.0962	7.5410	9.3093	1.0065
R City of Horizon	225	1.0288	1.0378	1.0328	0.1098	0.0888	6.8010	8.5571	1.0049
Total	**6,423**	**1.0143**	**1.0256**	**1.0169**	**0.1301**	**0.0933**	**7.519**	**9.0934**	**1.0086**

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
A West Area	AB20105500	4	0.9447	0.9507	0.9510	0.0657	0.0360	2.3680	3.7906	0.9997
A West Area	AC34008280	3	0.8944	0.9035	0.9008	0.1043	0.0527	3.8860	5.8354	1.0029
A West Area	AC34013450	6	0.9999	1.0055	0.9627	0.3013	0.1748	14.9710	17.3839	1.0444
A West Area	AC34014500	4	0.9263	0.9817	0.9661	0.2227	0.1332	8.7560	13.5678	1.0162
A West Area	AC80911215	11	0.9920	0.9742	0.9635	0.1298	0.0815	6.3700	8.3692	1.0111
A West Area	AC80916210	4	0.9236	0.9452	0.9409	0.1427	0.0778	6.0960	8.2355	1.0046
A West Area	AC81811230	16	0.9400	0.9646	0.9612	0.1619	0.0930	8.0200	9.6450	1.0036
A West Area	AC81816230	9	0.8844	0.9624	0.9384	0.2667	0.1593	13.9280	16.5467	1.0256
A West Area	AC83412440	6	0.9236	0.9510	0.9370	0.1962	0.1286	10.2540	13.5220	1.0150
A West Area	AF16917325	8	0.9618	0.9415	0.9405	0.1505	0.0800	6.9250	8.5001	1.0010
A West Area	AF60908650	14	0.9368	0.9382	0.9353	0.0761	0.0511	4.3630	5.4415	1.0031
A West Area	AF60910800	12	0.9648	0.9715	0.9679	0.0792	0.0622	4.7920	6.4017	1.0037
A West Area	AF60914700	18	0.9726	0.9714	0.9666	0.0916	0.0842	5.9680	8.6698	1.0050
A West Area	AP32716860	4	0.9368	0.9458	0.9449	0.0797	0.0430	3.6850	4.5460	1.0009
A West Area	AP32718850	7	0.9190	0.9828	0.9496	0.2600	0.1407	11.3760	14.3215	1.0350
A West Area	AR45727175	4	0.9462	0.9280	0.9141	0.2497	0.1307	10.6900	14.0812	1.0153
A West Area	AR46014340	6	0.9667	0.9793	0.9688	0.1820	0.1068	8.0820	10.9070	1.0108
A West Area	AT20810575	6	0.9557	0.9762	0.9679	0.1024	0.0867	5.5780	8.8761	1.0086
A West Area	AT21313350	7	0.9248	0.9427	0.9398	0.1519	0.0720	6.0900	7.6420	1.0031
A West Area	AT28115265	7	0.9651	0.9600	0.9549	0.1285	0.0901	7.1980	9.3818	1.0053
A West Area	AW14509325	29	0.9719	0.9677	0.9636	0.0904	0.0696	5.5970	7.1880	1.0042

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
B Upper Valley Area	BC16731155	3	0.9171	0.9118	0.9110	0.0424	0.0217	1.5400	2.3770	1.0008
B Upper Valley Area	BC67527180	3	0.9868	0.9551	0.9474	0.1663	0.0876	5.6190	9.1699	1.0081
B Upper Valley Area	BL76917130	4	0.8967	0.9151	0.9136	0.1304	0.0706	5.7890	7.7149	1.0016
B Upper Valley Area	BR57611385	8	1.0608	1.0785	1.0761	0.1571	0.0965	6.8760	8.9476	1.0022
B Upper Valley Area	BS68832215	3	0.9494	0.9341	0.9256	0.1472	0.0748	5.1680	8.0057	1.0091
B Upper Valley Area	BT23000000	16	0.9542	0.9624	0.9641	0.1184	0.0909	6.9460	9.4493	0.9982
B Upper Valley Area	BW13506535	5	0.9902	0.9649	0.9656	0.1440	0.0768	5.8190	7.9602	0.9993
B Upper Valley Area	H00919450	10	0.9428	0.9449	0.9401	0.0750	0.0584	4.3650	6.1850	1.0051
C Northeast Area	CB35109145	4	0.9112	0.9199	0.9207	0.0879	0.0466	3.7530	5.0619	0.9992
C Northeast Area	CM88909175	7	1.0550	1.0599	1.0560	0.1394	0.0986	6.4310	9.2987	1.0037
C Northeast Area	CP08207350	10	1.1084	1.0901	1.0830	0.1359	0.1012	6.5490	9.2821	1.0066
C Northeast Area	CP32414155	5	0.8852	0.9148	0.9095	0.1366	0.0971	6.1710	10.6161	1.0058
C Northeast Area	CP86308275	6	1.0975	1.0789	1.0731	0.1836	0.0893	6.3600	8.2806	1.0054
C Northeast Area	CS13707550	52	1.0547	1.0634	1.0592	0.0926	0.0763	5.5350	7.1719	1.0040
D Central Area	DC61926085	5	0.9582	0.9709	0.9623	0.1531	0.0803	6.3920	8.2701	1.0090
E Eastside Area	EE06612190	4	0.9197	0.9327	0.9193	0.2177	0.1135	9.6360	12.1661	1.0146
E Eastside Area	EE22216265	3	0.8985	0.9201	0.9169	0.1111	0.0586	4.1220	6.3716	1.0034
E Eastside Area	EG12812700	7	1.0096	0.9702	0.9621	0.1379	0.0662	4.4920	6.8186	1.0085
E Eastside Area	EG19507700	22	1.0928	1.0760	1.0793	0.1633	0.1005	7.6020	9.3424	0.9970
E Eastside Area	EH80505550	11	1.0789	1.0817	1.0738	0.1992	0.0988	7.8500	9.1315	1.0073
E Eastside Area	EI25607300	12	1.0364	1.0547	1.0545	0.1677	0.0975	8.1070	9.2403	1.0002
E Eastside Area	EI25806300	9	1.0890	1.0851	1.0775	0.1904	0.1103	7.8670	10.1676	1.0071

Market Area	Nbhd	Count	Median	Mean	Wtd Mean	IQR	SD	COD	COV	PRD
E Eastside Area	EP13314240	9	1.0797	1.0702	1.0571	0.1220	0.0984	6.1590	9.1968	1.0124
E Eastside Area	ES54106480	12	1.0652	1.0751	1.0730	0.1248	0.0798	5.8510	7.4182	1.0020
E Eastside Area	ES81208260	5	1.1350	1.1004	1.0839	0.2358	0.1215	8.3090	11.0392	1.0153
E Eastside Area	EV89713300	7	0.9356	0.9517	0.9549	0.1395	0.1143	8.2400	12.0099	0.9967
F Lower Valley	FV89311310	5	0.9706	0.9674	0.9693	0.1973	0.1006	8.1310	10.3984	0.9980
H Canutillo	HC10217547	6	1.1041	1.0806	1.0707	0.2409	0.1471	11.2930	13.6102	1.0092
N City of Socorro	NJ18710355	11	1.0697	1.0799	1.0779	0.0641	0.0484	3.3550	4.4834	1.0018
N City of Socorro	NS98608617	5	1.1344	1.1073	1.1066	0.0958	0.0553	3.3790	4.9898	1.0007
P Socorro	PE74217400	7	1.0231	1.0697	1.0592	0.1386	0.1011	7.0820	9.4546	1.0099
P Socorro	PE74706520	5	1.1038	1.0701	1.0599	0.3201	0.1612	11.6000	15.0640	1.0097
P Socorro	PS50506570	9	1.0438	1.0671	1.0702	0.1364	0.0953	6.9260	8.9345	0.9971
P Socorro	PT20006600	25	1.0519	1.0635	1.0649	0.0806	0.0773	5.3010	7.2690	0.9986
R City of Horizon	R220R09536	4	1.1582	1.0888	1.0786	0.3127	0.1855	9.3310	17.0409	1.0094
R City of Horizon	RD45709430	6	1.0655	1.0886	1.0807	0.1982	0.1169	7.5760	10.7399	1.0073
R City of Horizon	RE07509265	5	1.1292	1.1265	1.1292	0.1011	0.0641	3.5820	5.6870	0.9976
R City of Horizon	RH77010250	4	1.0618	1.0759	1.0640	0.1584	0.0834	5.9250	7.7525	1.0112
R City of Horizon	RP78908410	4	1.0391	1.0688	1.0658	0.1086	0.0667	3.7680	6.2437	1.0028

	Low ratio, values need to be raised.
	High ratio, values need to be lowered.

Independent School District ISD	Count	Median	Mean	Wtd. Mean	IQR	SD	COD	COV	PRD
Anthony ISD (IAN)	19	1.0578	1.0591	1.0555	0.0913	0.0518	3.8900	4.8942	1.0033
Canutillo ISD (ICA)	383	1.0013	1.0163	1.0061	0.1150	0.0880	6.9000	8.6569	1.0101
Clint ISD (ICL)	246	1.0308	1.0429	1.0389	0.1357	0.0958	7.5100	9.1858	1.0038
El Paso ISD (IEP)	1,654	0.9943	1.0043	0.9897	0.1415	0.1020	8.1210	10.1567	1.0147
Fabens ISD (IFA)	6	1.0597	1.0675	1.0650	0.1130	0.0625	4.8350	5.8509	1.0024
San Elizario ISD (ISA)	17	1.0219	1.0399	1.0276	0.0605	0.0933	5.9000	8.9767	1.0120
Socorro ISD (ISO)	3,201	1.0244	1.0356	1.0306	0.1225	0.0908	7.1500	8.7684	1.0049
Tornillo ISD (ITO)	1	1.2312	1.2312	1.2312	0.0000		0.0000		1.0000
Ysleta ISD (IYS)	896	1.0205	1.0270	1.0214	0.1346	0.0939	7.4060	9.1386	1.0054
Total	**6,423**	**1.0143**	**1.0256**	**1.0169**	**0.1301**	**0.0941**	**7.5190**	**9.1763**	**1.0086**

Wardlaw Appraisal Group, L.C.
Mineral, Utility, Industrial, & Personal Property
2023 Mass Appraisal Report

INTRODUCTION

Appraisal Responsibility

Wardlaw Appraisal Group, L.C. (WAG) is a contract mass appraisal firm responsible for developing fair and uniform market values on certain complex properties for client appraisal districts in Texas. The complex properties we appraise for El Paso Central Appraisal District (EPCAD) include utility, industrial, and personal properties. EPCAD uses these property appraisals as part of the appraisal roll for each of their taxing jurisdictions.

Each contract between WAG and our client appraisal districts specifies our appraisal responsibilities in support of that district. Generally, those responsibilities are to discover, inspect, appraise, and maintain ownership records of the specific properties that are the subject of the contract. The properties covered under our contract with EPCAD are J (utility), F1 (commercial real), F2 (industrial real), L1 (commercial personal) and L2 (industrial personal). EPCAD contracts with WAG to provide these services because the districts do not have the personnel or resources to perform the appraisal internally.

Appraisal Resources

- *Personnel – WAG maintains a professional employee and consulting staff that is skilled and experienced in property tax appraisal, engineering, information technology, administration, and division order maintenance. The appraisal staff consists of seven (7) registered appraisers, six of whom are Registered Professional Appraisers (RPA), and two (2) Texas Registered Professional Engineers. These appraisal personnel are listed in Attachment 'A'. All appraisers maintain a current registration in good standing with TDLR. Our appraisers improve and supplement their mass appraisal skills by participating in continuing education classes and by attending property tax related conferences.*

- *Data – The appraisers inspect their assigned properties, if appropriate, to obtain information about buildings, site improvements, process and shop equipment, and various items of personal property. In addition, appraisal personnel use information obtained from third party sources as well as information provided by property owners concerning the cost to purchase, install, and construct items of real and personal property.*

VALUATION APPROACH (MODEL SPECIFICATIONS)

UTILITY, INDUSTRIAL AND PERSONAL PROPERTY APPRAISAL

Area Analysis
The scope of market forces affecting industrial products and the capital goods used in the production process tends to extend beyond regional considerations. The effects of information and transportation technology are such that many industrial market forces are measured globally. One exception to this general concept is the market for industrial land. The pricing of land tends to be closely tied to possible alternative uses in the area. For this reason, the CAD appraisers assigned to land valuation analyze market forces for specific areas and adjust land value schedules appropriately.

Area Analysis

Neighborhood analysis of the type of properties valued by the industrial appraiser is not meaningful. Industrial properties do not have the type of generic "sameness" that is appropriate for neighborhood models.

Highest and Best Use Analysis

The highest and best use of real or personal property is the most reasonable and probable use of the property on the date of appraisal that is physically and financially feasible, legal, and that derives maximum production from the property. Usually, the current use of the property is the highest and best use of that property. Industrial facilities are commonly located in areas that support industrial use. In areas where mixed use does occur, the highest and best use of the property is examined by the appraiser to estimate the effect of this factor.

Market Analysis

Market analysis is the basis for finalizing value estimates on properties for which the utility, industrial and personal property appraiser has responsibility. Even though many utility and industrial properties are unique in nature, the market for this type property is analyzed to determine how the values of similar properties, or properties that are as similar as possible, are affected by market forces. Some industrial properties, such as machine shops, have many facilities that can be compared to similar subject properties in terms of type and size of equipment, type of property fabricated or services at the subject facility, and other factors. Those similarities help the appraiser estimate the value of the subject property.

Cost Analysis

The Cost Approach to value is applied to most personal property. This approach is utilized in conjunction with the Market and Income approaches to arrive at a final market value for most utility companies and many industrial companies. For the Cost Approach, depreciation schedules are developed based on the percent good typical for each property type at any specific age. Depreciation schedules have been implemented for what is typical of each major class of property by economic life categories. Schedules have been developed for improvements with varying years of expected life. The actual age, if known, and the effective ages of improvements are noted. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace.

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

Many utility, industrial and personal properties use the same types of buildings and, depending on the type of business, may use the same types of manufacturing or service equipment. Many of the buildings encountered at industrial facilities are generic in construction, such as pre-engineered metal buildings. The cost per square foot to construct these type structures can be used to estimate values at facilities that have similarly constructed buildings. However, the building as constructed will have differences that must be considered when estimating the final value of the property being reviewed. Most of these typical type buildings are appraised by CAD personnel.

However, some industrial properties, such as specialty chemical plants, are so unique in nature that the appraiser must use additional information such as output quantity, type of product manufactured, and other factors to estimate the value of the subject property. However, the way the entire business operation is put together may make a particular facility unique. The district uses information from similar businesses to examine the real property values at a particular business, but the individual characteristics of the business being reviewed determine the value estimation. Some industrial buildings are use specific and therefore have no comparable properties.

A similar analysis is used for personal property. Many items of personal property, such as furniture and fixtures, computers, and even machinery and equipment are generic in construction, but individual characteristics that affect value, such as usage, environment where used, and level of care will have an effect on the final value estimations. When cost data for this type of property is available and considered reliable, it is used for value estimation purposes at other plant facilities. However, on-site inspection and information provided by the property owner will affect the final value.

Income Analysis

Capitalization analysis is used in the income approach models. This methodology involves the capitalization of net operating income as an indication of market value for a specific property. Capitalization rates, both overall cap rates for the direct capitalization method and terminal cap rates for discounted cash flow analyses, can be derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of what a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived from the built-up method (band-of-investment). This method relates to satisfying the market return requirements of both the debt and equity positions of a type of company.

Many utility companies are appraised on a Unit Appraisal Model, which utilizes both the income and cost approaches to value. Information from publicly available sources such as FERC and RRC reports are utilized to arrive at the input parameters for these types of properties.

DATA COLLECTION/VALIDATION

Data Collection

An extended range of variations may exist within the same class of utility, industrial or personal property, and there are a multitude of property types within the industrial category. For this reason, effective data collection procedures would be very difficult to organize in a single comprehensive manual. WAG uses many different publications available to the industry, such as the Oilfield Appraiser and the Equipment Newsletter, Marshall and Swift and other companion data acquisition forms to standardize data collection for schedule building that are later assigned to the industrial appraisal staff. The data generated by these forms enables the appraiser to use the software to value industrial properties.

Industrial personal property also consists of many different classes of assets with a wide range of variation within each class. The district has adopted the convention of listing assets and estimating effective age of assets in the field. The field listing is then compared with information furnished by the property owners during the final valuation review.

Sources of Data

The original real and personal property data used by WAG on behalf of the CADs has been maintained on the CAD computer system. The district and contract appraisal personnel have updated that information based on field review, renditions, and personal contact information. For Commercial vehicles, an outside vendor, Just Texas, provides the appraisers with a listing of vehicles registered commercially in the County. The vendor develops this listing from the Texas Department of Transportation Title and Registration Division records. As new facilities are built, the appraisal personnel collect all the real and personal property data necessary to value the property initially and thereafter update the information when the property is again visited. Other sources of data include publications such as the Texas Register regarding waste control permits, various refining and chemical industry reports and articles, and Texas Industrial Expansion articles on new construction.

Data Collection Procedures

The district and contract appraisal personnel annually or periodically visit assigned plants and facilities. The frequency of the visit is determined by the nature of the business conducted at each facility. For example, refineries and chemical plants are continually changing or adding to processes to extract greater efficiencies or make new products, but some types of properties such as pipelines are not amenable to onsite inspections.

The appraisers take with them the past data on the building and site improvements and the prior listing of personal property at the facility being visited. Changes to the existing structures and personal property are noted and that information is used for value estimation purposes. In addition, if possible, pictures are taken at the time of inspection to validate information provided on the rendition or to utilize for the appraisal if no rendition is submitted. If cost information for the real or personal property is supplied later, the field data can be compared to that information to judge the accuracy of the information.

The WAG appraisal staff members are not assigned any one geographical area of the county. The category of property, the nature of the business, and whether the district has the staff resources available can each be a determining factor in identifying which properties are appraised by WAG and which properties are appraised by the district's appraisal staff. WAG appraisers are trained by accompanying appraisers who have performed field visit and appraisal functions for several years. In additions each WAG appraiser is registered with the Texas Department of Licensing and Regulation and is either an RPA or is working towards the RPA designation. Each WAG appraiser is responsible for the completeness and correctness of their valuation work, but a new appraiser is required to seek the advice of and review by experienced appraisal staff.

VALUATION ANALYSIS (MODEL CALIBRATION)

Final Valuation Schedules

WAG develops schedules based on indexed Marshall & Swift depreciation factors, as well as the schedules prepared by other appraisal districts, state appraisers and other cost estimates for use in the valuation of all business and industrial personal property. In addition, appraisal personnel, utilize actual cost data developed from both publicly available sources as well as proprietary information received from other companies without identifying information, to update these schedules annually.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

WAG personnel annually review their assigned real and personal property accounts. These accounts are physically inspected on a one to two-year cycle.

The results of prior year hearings, renditions, and indications of new activity are another source that initiates required field visits. Many times, during hearings, issues are presented that cause a value adjustment. Those issues must be field checked to see if these influences will be on-going and warrant permanent value adjustments or are transitory. The information will be recorded so the appraiser will be better able to estimate the property value. Any new construction or business activity is noted and the information necessary to value the property is recorded.

Part of the field review includes noting any land characteristics that would affect the land value. The district values all land for the properties over which it has responsibility, including those properties assigned to WAG. WAG advises the district of any characteristics that would affect the value of the land associated with an assigned facility.

Office Review

All properties are reviewed in the office by the WAG appraiser assigned to each utility, industrial, or personal property account. The office review relies on historical information in the utility, industrial, or personal property file as the basis for deciding on the estimated value to be placed on the property for the current tax year.

The date of last inspection, extent of that inspection, and the appraiser responsible are listed in the WAG system. If a property owner disputes the district's records concerning this data in a protest hearing, the property record may be altered based on the credibility of the evidence provided.

When valuing utility, industrial or personal property, the type of furniture, equipment, computers, etc., will be used along with any cost data provided by the property owner to estimate the value. Experience in valuing similar property at other facilities will help the appraiser estimate the value of the subject facility. Individual characteristics of the property, such as usage and maintenance will have a bearing on the value calculated by use of the WAG schedules.

PERFORMANCE TESTS

Sales Ratio Studies

Ratio studies are an important tool to examine how close appraised values are to market values. The ratio study may use available sales data or independent, expert appraisals. Typically, there are not enough sales of utility and industrial properties to show representativeness of that class of property in a ratio study. Ratio studies of utility and industrial properties normally rely on independent appraisals as an indicator of market values.

Comparative Appraisal Analysis

This type of analysis is not normally performed on industrial property due to the unique nature of the property. Only in an instance where a jurisdiction would file a jurisdiction challenge with the Appraisal Review Board would the district perform such an analysis.

If a CAD receives a jurisdiction challenge on a utility or industrial property category, the appraisers assigned to those accounts will research the appraisal roll to see what other similar properties exist. The real commercial property values can be compared on an average value per square foot of structure basis, but the location and type of improvement must be carefully accounted for in the valuation differences between two properties with the same square footage. Differences in location and type of improvement often account for a greater difference in market value than simple square footage. In like manner, the personal property values can be compared per category, such as furniture and fixtures, machinery and equipment, etc., but a comparison of the type and use of the property must be examined to ensure property value uniformity.

PROPERTY TAX APPRAISER CERTIFICATION		
TDLR #	*NAME*	*TYPE*
74200	*CRAIN, MALLORY M.*	*APPRAISER, RPA*
74717	*SHERWIN, PROCTOR D.*	*APPRAISER, RPA*
67635	*VILARRAL, MARTIN IV*	*APPRAISER, RPA*
66026	*WARDLAW, MARGARET A*	*APPRAISER, RPA*
77412	*CAMARILLO, AILEEN L*	*APPRAISER*
77317	*MADDIN, ELIZABETH*	*APPRAISER*
77346	*USSEGLIO, ATILIO M*	*APPRAISER*
68139	*WARDLAW, MALCOLM P*	*APPRAISER*
PROFESSIONAL ENGINEERING CERTIFICATION		
PE#	*NAME*	*BRANCH*
76914	*WARDLAW, MARGARET PEGGY ANNE*	*PETROLEUM*
57823	*WARDLAW, MALCOLM PENROSE*	*PETROLEUM*
PROFESSIONAL ENGINEERING FIRM CERTIFICATION		
FIRM #	*FIRM NAME*	
5194	*WARDLAW APPRAISAL GROUP LC*	