

2023

ASSESSMENT METHODOLOGY

INDUSTRIAL LAND

A summary of the methods used by the City of Edmonton in determining the value of industrial land properties in Edmonton for assessment purposes.

edmonton.ca/assessment

Edmonton



Table of Contents

Scope	2
Introduction	2
Mass Appraisal	4
Valuation Model	6
Property Groups	7
Sub-Group	7
Industrial land	7
Approaches to Value	8
Direct Comparison Approach	8
2023 Industrial Land Time Adjustment Factors	10
Zoning	11
Variables	12
Adjustments	15
Site Improvements	17
Definitions	17
Order In Council 359/2018	18
Sample Assessment Detail Report	19
Methods to Adjust Comparables	20
Quantitative Adjustments	20
Qualitative Analysis	21
References	22
Appendix	23
Map	23
Measure Conversion Chart	24
Zone Summary	24

Scope

This guide explains how industrial land properties are valued for assessment purposes. The guide is intended as a tool and complements the assessor's judgment in the valuation process. **Valuation Date** refers to the legislated date of July 1, 2022.

Introduction

Property assessments in the City of Edmonton are prepared in accordance with the requirements of the Municipal Government Act, R.S.A. 2000, c. M-26, (hereinafter "MGA") and the *Matters Relating to Assessment and Taxation Regulation, 2018*, Alta Reg 203/17, (hereinafter "MRAT"). The MRAT regulation establishes the valuation standard to be used, defines the procedures to be applied, and proposes objectives for the quality to be achieved in the preparation of assessments. The legislation requires the municipality to prepare assessments that represent market value by application of the mass appraisal process. All assessments are expected to meet quality standards prescribed by the province in the MRAT regulation.

Property assessments represent:

- an estimate of the value;
- of the fee simple estate in the property;
- as the property existed on December 31, 2022;
- reflecting typical market conditions;
- as if the property had been sold on July 1, 2022;
- on the open market;
- from a willing seller to a willing buyer.

The assessment is a prediction of the value that would result when those specific, defined conditions are met.

The legislation requires the City of Edmonton to assess the fee simple estate.

"Fee simple interest [is] absolute ownership unencumbered by any other interest or estate... leased fee interest [is] the ownership interest held by the lessor, which includes the right to the contract rent specified in the lease plus the reversionary right when the lease expires... leasehold interest [is] the interest held by the lessee (the tenant or renter) through a lease conveying the rights of use and occupancy for a stated term under certain conditions."

*Appraisal Institute of Canada, **The Appraisal of Real Estate Third Canadian Edition**,
Vancouver, Canada, 2010, page 6.4*

Both *market value* and *property*, along with additional terms are defined in the *MGA* and *MRAT*:

s.284(1)(r) "**property**" means

- (i) a parcel of land
- (ii) an improvement, or
- (iii) a parcel of land and the improvements to it

MGA s.284(1)(r)

s.1(k) "**regulated property**" means

- (i) land in respect of which the valuation standard is agricultural use value,
- (ii) designated industrial property, or
- (iii) machinery and equipment

MRAT s.1(k)

s.9(1) the **valuation standard** for the land and improvements is market value unless subsection (2)... applies

MRAT s.9(1)

s.1(1)(n) "**market value**" means the amount that a property, as defined in section 284(1)(r), might be expected to realize if it is sold on the open market by a willing seller to a willing buyer

MGA s.1(1)(n)

s.5 An assessment of property based on **market value**

- (a) must be prepared using mass appraisal,
- (b) must be an estimate of the value of the fee simple estate in the property, and
- (c) must reflect typical market conditions for properties similar to that property

MRAT s.5

s.289(2) Each assessment must reflect

- (a) the characteristics and physical condition of the property on **December 31** of the year prior to the year in which a tax is imposed

MGA s.289(2)(a)

s.6 Any assessment prepared in accordance with the Act must be an estimate of the value of a property on **July 1** of the assessment year

MRAT s.6

s.1(g) "**mass appraisal**" means the process of preparing assessments for a group of properties using standard methods and common data and allowing for statistical testing

MRAT s.1(g)

Mass Appraisal

Mass appraisal is the legislated methodology used by the City of Edmonton for valuing individual properties, and involves the following process:

- properties are stratified into groups of comparable properties
- common property characteristics are identified for the properties in each group
- a uniform valuation model is created for each property group

31(c) **“valuation model”** means the representation of the relationship between property characteristics and their value in the real estate marketplace using a mass appraisal process

MRAT s.31(c)

The following two quotations indicate how the International Association of Assessing Officers distinguishes between mass appraisal and single-property appraisal:

“... single-property appraisal is the valuation of a particular property as of a given date: mass appraisal is the valuation of many properties as of a given date, using standard procedures and statistical testing.”

“Also, mass appraisal requires standardized procedures across many properties. Thus, valuation models developed for mass appraisal purposes must represent supply and demand patterns for groups of properties rather than a single property.”

Property Appraisal and Assessment Administration, pg. 88-89

For both mass appraisal and single-property appraisal, the process consists of the following stages:

	Mass Appraisal	Single Appraisal
Definition and Purpose	Mass appraisal is used to determine the assessment base for property taxation in accordance with legislative requirements	The client specifies the nature of the value to be estimated, this includes: rights to be valued, effective date of valuation, and any limiting conditions.
Data Collection	Mass appraisal requires a database of property characteristics and market information.	The extent of data collection is specific to each assignment and depends on the nature of the client's requirements.
Market Analysis	Mass appraisal is predicated on highest and best use.	Market analysis includes the analysis of highest and best use
Valuation Model	Valuation procedures are predicated on groups of comparable properties.	Subject property is the focus of the valuation. The analysis of comparable properties is generally six or less
Validation	The testing of acceptable analysis and objective criteria	The reliability of the value estimate is more subjective. Acceptability can be judged by the depth of research and analysis of comparable sales

Valuation Model

A valuation model creates an equation of variables, factors and coefficients that explains the relationship between estimated market value and property characteristics. An assessed value is then calculated by applying the appropriate valuation model to individual properties within a property type.

- s.31 (a) **“coefficient”** means a number that represents the quantified relationship of each variable to the assessed value of a property when derived through a mass appraisal process
- (b) **“factor”** means a property characteristic that contributes to a value of a property;
- (d) **“variable”** means a quantitative or qualitative representation of a property characteristic used in a valuation model

MRAT, s.31 (a), (b) and (d)

s.33 Information prescribed ... does not include coefficients

MRAT, s.33(3)

Valuation Model

- variables are identified from property characteristics
- statistical analysis determines how variables affect market value
- factors and coefficients are determined
- the resulting valuation models are applied to property characteristics

Depending on the property type multiple regression analysis or other mass appraisal techniques are used to determine variables, factors and coefficients.

“Multiple Regression Analysis (MRA): a statistical technique used to analyze data to predict market value (dependent variable) from known values of property characteristics (independent variables)”

Property Appraisal and Assessment Administration, p.653

Property Groups

Industrial

There are a number of reasons why a given property is included in the industrial inventory. Zoning and highest and best use are key indicators in a property's classification. As well, based on the principles of urban economics, properties of similar use typically cluster together, and even when competing firms in the same sector cluster there may be advantages because the cluster attracts more suppliers and customers than a single firm could achieve alone.

Sub-Group

Some property groups have sub-groups. This guide is for the industrial land sub-group.

Industrial land

For the 2023 tax year, vacant properties were included in the industrial land inventory based upon their effective zoning. Properties with an effective zoning included in the City of Edmonton Zoning Bylaw 12800 Industrial Zones, with the addition of the Industrial Reserve Zone, are included in the 2023 industrial land inventory. See the definition of zoning provided later in this brief for a complete list of industrial land zonings. Some parcels may have minor improvements such as paving or fencing.

Approaches to Value

The approaches to determine market value are the direct comparison, income, and cost approaches.

Direct Comparison Approach	Typical market value (or some other characteristic) is determined by referencing comparable sales and other market data. It is often used when sufficient sales or market data is available. It may also be referred to as the Sales Comparison Approach.
Income Approach	This approach considers the typical actions of renters, buyers and sellers when purchasing income-producing properties. This approach estimates the typical market value of a property by determining the present value of the projected income stream. Often used to value rental or leased property.
Cost Approach	Typical market value is calculated by adding the depreciated replacement cost of the improvements to the estimated value of land. It is often used for properties under construction or when there is limited market data available.

Direct Comparison Approach

For this property group, the assessment is determined using the direct comparison approach. It is the most appropriate method of valuation for industrial land in the City of Edmonton because it mirrors the actions of buyers and sellers in the marketplace and sufficient sales data exists in order to derive reliable market estimates.

Support for the direct comparison approach comes from several reputable sources, for example:

This approach is usually the preferred approach for estimating values for residential and other property types with adequate sales.

(IAAO, 2013, sec. 4.3)

The Direct Comparison approach provides the most credible indication of value for owner-occupied commercial and industrial properties, i.e., properties that are not purchased primarily for their income-producing characteristics. These types of properties are amenable to direct comparison because similar properties are commonly bought and sold in the same market.

Appraisal Institute of Canada [AIC], 2010, p. 13.4

Sales

The City of Edmonton validates all land title transactions (sales). The validation process can include site inspections, interviews with parties involved, a review of land title documents, corporate searches, third party information, and sale validation questionnaires.

The City of Edmonton reviews sales occurring from July 1, 2017 to June 30, 2022 for the 2023 valuation of industrial land properties. Time adjustments are applied to sale prices to account for any market fluctuations occurring between the sale date and the July 1, 2022 legislated valuation date.

Sale price reflects the condition of a property on the sale date and may not be equal to the assessment.

2023 Industrial Land Time Adjustment Factors

YEAR	MONTH	ADJUSTMENT	YEAR	MONTH	ADJUSTMENT
2017	Jul	1.0000	2020	Jan	1.0000
2017	Aug	1.0000	2020	Feb	1.0000
2017	Sep	1.0000	2020	Mar	1.0000
2017	Oct	1.0000	2020	Apr	1.0000
2017	Nov	1.0000	2020	May	1.0000
2017	Dec	1.0000	2020	Jun	1.0000
2018	Jan	1.0000	2020	Jul	1.0000
2018	Feb	1.0000	2020	Aug	1.0000
2018	Mar	1.0000	2020	Sep	1.0000
2018	Apr	1.0000	2020	Oct	1.0000
2018	May	1.0000	2020	Nov	1.0000
2018	Jun	1.0000	2020	Dec	1.0000
2018	Jul	1.0000	2021	Jan	1.0000
2018	Aug	1.0000	2021	Feb	1.0000
2018	Sep	1.0000	2021	Mar	1.0000
2018	Oct	1.0000	2021	Apr	1.0000
2018	Nov	1.0000	2021	May	1.0000
2018	Dec	1.0000	2021	Jun	1.0000
2019	Jan	1.0000	2021	Jul	1.0000
2019	Feb	1.0000	2021	Aug	1.0000
2019	Mar	1.0000	2021	Sep	1.0000
2019	Apr	1.0000	2021	Oct	1.0000
2019	May	1.0000	2021	Nov	1.0000
2019	Jun	1.0000	2021	Dec	1.0000
2019	Jul	1.0000	2022	Jan	1.0000
2019	Aug	1.0000	2022	Feb	1.0000
2019	Sep	1.0000	2022	Mar	1.0000
2019	Oct	1.0000	2022	Apr	1.0000
2019	Nov	1.0000	2022	May	1.0000
2019	Dec	1.0000	2022	Jun	1.0000

Zoning

The rules and regulations for land development within Edmonton are contained in the Zoning Bylaw, No. 12800.

s.6.123 **zone:** a specific group of listed Uses and Development Regulations which regulate the Use and Development of land within specific geographic areas of the City...

Zoning Bylaw No. 12800, 2017, s. 6.123

An industrial zone summary is in the appendix.

The actual zoning may affect the property's classification; however, not all property conforms to the zoning use set out in the Zoning Bylaw. In these cases, an effective zoning is applied to reflect the current use and/or development potential of the property. The effective zoning is an internal coding and may differ from the actual zoning.

643(1) If a development permit has been issued on or before the day on which a land use bylaw or a land use amendment bylaw comes into force in a municipality and the bylaw would make the development in respect of which the permit was issued a nonconforming use or nonconforming building, the development permit continues in effect in spite of the coming into force of the bylaw.

MGA, s.643(1)

In cases where a legal non-conforming use is discontinued for six (6) or more months, any future use must conform to the Zoning Bylaw.

643(2) A non-conforming use of land or a building may be continued but if that use is discontinued for a period of 6 consecutive months or more, any future use of the land or building must conform with the land use bylaw then in effect.

MGA, s.643(2)

Variables

Below is the list of variables that affect the assessment value for 2023.

Effective Zoning	Lot size
Market area	Servicing
Traffic influence	

Effective zoning: Effective zoning is an internal coding applied to reflect the current use and/or development potential of a parcel. Effective zoning will generally reflect the actual zoning of a parcel, but may differ on properties with a legal non-conforming use, Direct Control zoning or in other limited circumstances. Refer to the Appendix for further zoning information. For 2023, Business Industrial (IB) and Heavy Industrial (IH) zoning affects the assessment value.

Lot size: Lot size is the area of a specific parcel determined through a Geographic Information System (GIS). Survey plans are validated with geometric-based mathematical calculations to each lot corner, registering these locations back to the survey control network established by the province. More information on the survey control network can be found on the Government of Alberta's website (<https://www.alberta.ca/geodetic-control-unit.aspx>).

Market area: Market areas are geographic areas defined using location boundaries. There are 12 market areas. See enclosed maps titled 2023 Industrial Land Market Areas.

For 2023, the following market areas were grouped together:

- Market Area 2 and Market Area 3
- Market Area 9 and Market Area 10

Servicing: The following services have been analyzed for 2023 valuation purposes:

- Sanitary sewer service
- Storm sewer service
- Water supply service

All properties are valued as fully serviced, partially serviced or unserviced. If a property has all three levels of servicing, it is valued as fully serviced. If a property lacks one or two levels of servicing, it is valued as partially serviced. If a property lacks all three levels of servicing, it is valued as unserviced. The servicing classifications are presented in the table below.

Levels of Services	Servicing Classification
All three services present	Fully Serviced
Lacks one or two services	Partially Serviced
Lacks all three services	Unserviced

Present indicates that a property has a specified service and **Absent** indicates that a property does not have a specified service.

The individual services are defined as follows:

Sanitary sewer service: Sanitary sewers refer to the public infrastructure (either separate or combined with storm sewers) provided for a property to collect sanitary waste water.

- **Present** - Our records show that sanitary sewers are adjacent to the property.
- **Absent** - Our records show that sanitary sewers are not adjacent to the property.

Storm sewer service: Storm sewers refer to the public infrastructure (either separate or combined with sanitary sewers) provided for a property to collect storm water.

- **Present** - Our records show that storm sewers are adjacent to the property.
- **Absent** - Our records show that storm sewers are not adjacent to the property.

Water supply service: Water supply service refers to the public water supply infrastructure available to a property.

- **Present** - Our records show that the property is adjacent to a water supply service.
- **Absent** - Our records show the property is not adjacent to a water supply service.

Traffic influence: This attribute is only applied to properties that have access to a traffic influence. Access is having direct entry to the property from public roads including service roads.

The level of influence is based upon the annual weekday traffic volume counts as reported by the City of Edmonton Transportation Planning Branch. The 2019 Average Annual Weekday Traffic Volumes Report is accessible on the City website, www.edmonton.ca, under "Driving, Cycling & Walking > Transportation Data > Traffic Flow Maps & Reports > Average Annual Weekday Traffic (AAWDT) Volume Data. The 2019 column of data was used for the 2023 assessments.

Definitions for each individual traffic attribute are as follows:

- **Minor**
Roads with the recorded traffic flow of 1,500-5,000 vehicles per day
- **Moderate**
Roads with the recorded traffic flow of 5,001-15,000 vehicles per day
- **Major**
Roads with the recorded traffic flow of 15,001-50,000 vehicles per day (for example, 50th Street, 170th Street or 97th Street)
- **Extreme**
Roads with the recorded traffic flow of more than 50,000 vehicles per day (for example, Whitemud Drive or Yellowhead Trail)
- **Anthony Henday Drive**
Property is adjacent to the Anthony Henday Drive ring road

For 2023, the following traffic attributes were grouped together:

- Major, Extreme, and Anthony Henday Drive

For the 2023 assessment year only properties with a Major, Extreme, or Anthony Henday Drive traffic influence were found to affect value.

Adjustments

Adjustments may be applied to properties with atypical influences on a site specific basis to recognize their effect on value. Adjustments include but are not limited to:

Access to lot	Easement	Restrictive covenant
Irregular shape	Adverse topography	Remnant lot
Contamination	Neighbourhood	Land market adjustment (LMA)

The following adjustment schedule is only applied when adjusting for *easement*, *restrictive covenant*, and *adverse topography*:

- **Minor**- 5% negative adjustment
- **Moderate**- 10% negative adjustment
- **Major**- 15% negative adjustment
- **Extreme**- 20% negative adjustment

Easement: An easement is a legal encumbrance registered against the title of land allowing the right to use and/or enter onto the real property of another without possessing it. Easements may include easements for access, locating utilities, or otherwise limiting or precluding the use of the area subject to the easement. An adjustment for an Easement will only be applied where the easement may impair (or "can be demonstrated to impair") the development potential of the land.

Restrictive covenant: An agreement that restricts the use or occupancy of all or part of a property and that may be registered on the title to a property and runs with the land. An adjustment for a Restrictive Covenant will only be applied where the covenant may impair the development potential of the land.

Adverse topography: Adverse topography indicates a property has certain topographical constraints that are not typical for the area and negatively affects the overall suitability of the land for development. These constraints may include, but are not limited to, significant slopes or wetland subsoil conditions resulting from sloughs, ponds and natural drainage onto the property. Portions of property that are designated to be stormwater management facilities or natural areas in the applicable area structure plan will be assessed at the parkland rate.

Access to lot: A -10% adjustment is only applied if a property does not have reasonable future accessibility to a city roadway or an abutting lane. A “Yes” on the detail report indicates that this adjustment has been applied.

Irregular shape adjustment: A -5% adjustment is only applied if the shape of a property hinders the developability of the property to a site coverage of 33%. A “Yes” on the detail report indicates that this adjustment has been applied.

Remnant lot: A -75% adjustment is applied to properties classified as remnant lots. A remnant lot is a vacant lot that is severely restricted due to a small lot size or atypical configuration. A “Yes” on the detail report indicates that this adjustment has been applied.

Contamination: Contamination refers to property that has been affected by environmental contamination which includes adverse conditions resulting from the release of hazardous substances into surface water, groundwater, or soil. As per our contamination procedure the cost to cure amount would need to be provided to determine the appropriate adjustment amount.

Neighbourhood: Each property is located in a neighbourhood according to boundaries set by the City of Edmonton. Maps identifying these neighbourhood boundaries are accessible on the City website, <http://maps.edmonton.ca/map.aspx> (click on “Areas” in the Legend and select “Neighbourhood” in the “I’m looking for” drop-down menu). For 2023, the following areas received adjustments based on market value analysis:

- **Market Area 5** - Hurstwood Special Development Area
- **Market Area 6** - 6160 (Davies Industrial East)
- **Market Area 10** - 8887 (Edmonton South Central)

Land market adjustment (LMA): An LMA is applied after all other adjustments to account for characteristics not common to many properties but can be demonstrated to impact market value. This adjustment is used in rare circumstances where the influence on the property cannot be accounted for or described by the usual attributes such as topography or shape, etc. The reason for the LMA will be provided in response to requests for information made pursuant to Section 299 or 300 of the MGA.

A Land Market Adjustment is a negative adjustment, and changes in increments of 5%. An LMA may be indicated as follows:

- **Land market adjustment applied (Yes)**

Site Improvements

Some parcels may have improvements such as paving or fencing. Typical market value is calculated by adding the depreciated replacement cost of the improvements to the estimated value of land. For more information please refer to the City of Edmonton's Non-Residential Properties Cost Methodology Guide found on the City website, www.edmonton.ca, under "Home & Neighbourhood > Assessment of Properties > Reference Materials > 2023 Cost.

Fencing: An industrial land property may be improved with fencing. Fencing on industrial land properties was valued using the Marshall & Swift Costing Manual.

Pavement: An industrial land property may be improved with hard surfacing, such as asphalt. Pavement on industrial land properties was valued using the Marshall & Swift Costing Manual.

Definitions

Land use (LUC): Land use is an internal coding used to categorize the current use of a property. The amount of a property subject to any specific LUC will be expressed as a percentage of total assessed value. For 2023, the LUC did not affect the value of industrial land. Industrial land may have the following LUCs:

Description	Description
Undeveloped non-residential land	Farm land
Fenced storage	Rural land adjacent to water and sewer (farmland class)
Paved/fenced parking lot for non-residential use	Undeveloped non-residential land
Unpaved/unfenced parking lot for non-residential use	Transitional land: non-residential to residential

Type: Type specifies whether the variable applies to the account, unit, site, or building.

- Account - An adjustment that is applied to a property account. A property account includes all of the improvements and site.
- Unit - An adjustment that is applied to a condo unit.
- Site - An adjustment that is applied to the site.
- Building - An adjustment that is applied to the building.

Order In Council 359/2018

This order approved the annexation of land from Leduc County and the Town of Beaumont to the City of Edmonton. The annexed area includes neighbourhoods 8885 - Edmonton South Central East, 8886 - Edmonton South East, 8887 - Edmonton South Central, and 8888 - Edmonton South West. Only Neighbourhood 8887 - Edmonton South Central has property in the Industrial Land inventory.

In assessing property in the annexation area, *O.C. 359/2018* states the following:

4(1) In 2019 and in each subsequent year up to and including 2068, the annexed land and assessable improvements to it, excluding linear property, must be assessed by The City of Edmonton on the same basis as if they were in Leduc County and taxed using

- (a) the municipal property tax rate established by Leduc County, or
- (b) the municipal property tax rate established by The City of Edmonton, whichever is lower, for property of the same assessment class.

(2) In 2020 and subsequent years, the assessor for The City of Edmonton must assess and tax the annexed land and the assessable improvements to it.

5(3) Despite subsections (1) and (2), in 2019 and in each subsequent year up to and including 2043, Discovery Lands, other than linear property, must be assessed by The City of Edmonton on the same basis as if the land had remained in Leduc County and must be taxed by The City of Edmonton using the municipal property tax rate established by Leduc County for property of the same assessment class.

To comply with *O.C. 359/2018*, a Neighbourhood adjustment (see definition on page 16) has been applied to Neighbourhood 8887 to account for its unique nature. For the purpose of the 2023 valuation, the determination of market value took into consideration the following:

- recent sales of similar properties that occurred within Leduc County, including Nisku;
- recent sales of similar properties that occurred within the Discovery Lands;
- recent listings of properties within the Discovery Lands.

Sample Assessment Detail Report

2023 Property Assessment Detail Report Assessment and Taxation



Account **9999999**

Report Date	January 16, 2023	page 1 of 1
2022 Assessed Value	\$1,146,500	
Date of Issue	January 16, 2023	
Property Address	10000 100 STREET NW	
Legal Description	Plan: 1234AE Block: 01	
Zoning	AGI - Industrial Reserve District	
Effective Zoning	AGI - Industrial Reserve District	
Neighbourhood	Morin Industrial	
Lot Size	76474.742	
Assessment Class	NON-RESIDENTIAL	
Property Use	100 % Undeveloped non-residential land	
Taxable Status	January 1 - December 31, 2023; FULLY TAXABLE	
Unit of Measurement	IMPERIAL (feet, square feet)	

Factors Used to Calculate Your 2023 Assessed Value

			MARKET VALUE APPROACH	DIRECT COMPARISON
LAND				
Variable	Factor	Type		
Lot size	76,475	Site		
Market area	11	Site		
Effective zoning	AGI	Site		
Traffic influence	NONE	Site		
Sanitary sewer service	ABSENT	Site		
Storm sewer service	ABSENT	Site		
Water supply service	PRESENT	Site		
			Land Value	1,146,729

Methods to Adjust Comparables

There are two types of techniques for reconciliation: **quantitative** and **qualitative**.

Quantitative Adjustments

Each characteristic of a property can be measured or quantified by a mathematical expression and adjusted for.

Several techniques are available to quantify adjustments to the sale prices of comparable properties: data analysis techniques such as paired data analysis, grouped data analysis, and secondary data analysis, statistical analysis, including graphic analysis...

(AIC, 2010, p. 14.2)

*In the direct comparison approach, the best comparables are those sales that require the least **absolute** adjustment.*

(AIC, 1995, p. 245).

Quantitative adjustments involve adjusting a known value (sale price for example) by adding or subtracting an amount that a given characteristic adds to or subtracts from that value. A quantitative adjustment should be made for each characteristic that differs between the subject property and the comparable property.

Due to the legislative requirement to use mass appraisal, the City has used statistical analysis to determine annual assessments.

"coefficient" means a number that represents the quantified relationship of each variable to the assessed value of a property when derived through a mass appraisal process.

MRAT s.31(a)

The City is not required to disclose the coefficients. In the absence of quantitative adjustments, an alternative technique is qualitative analysis.

Qualitative Analysis

Each comparable property is compared with the subject property on an overall basis. In a qualitative analysis, comparable properties are identified as inferior, similar, or superior overall to the subject property in order to bracket the probable value range of the subject property.

When a sale property is considered to offer important market evidence but finding the means to make quantitative adjustments is lacking, the appraiser may turn to other major direct comparison techniques, qualitative analysis.

(AIC, 2005, p. 19.10)

Qualitative analysis recognizes ... the difficulty in expressing adjustments with mathematical precision.

(AIC, 2010, p. 14.6)

...reliable results can usually be obtained by bracketing the subject between comparables that are superior and inferior to it.

(AIC, 2010, p. 14.7)

If one or two comparable properties require fewer total adjustments than the other comparable transactions, an appraiser may attribute greater accuracy and give more weight to the value indications obtained from these transactions, particularly if the magnitude of the adjustments is approximately the same.

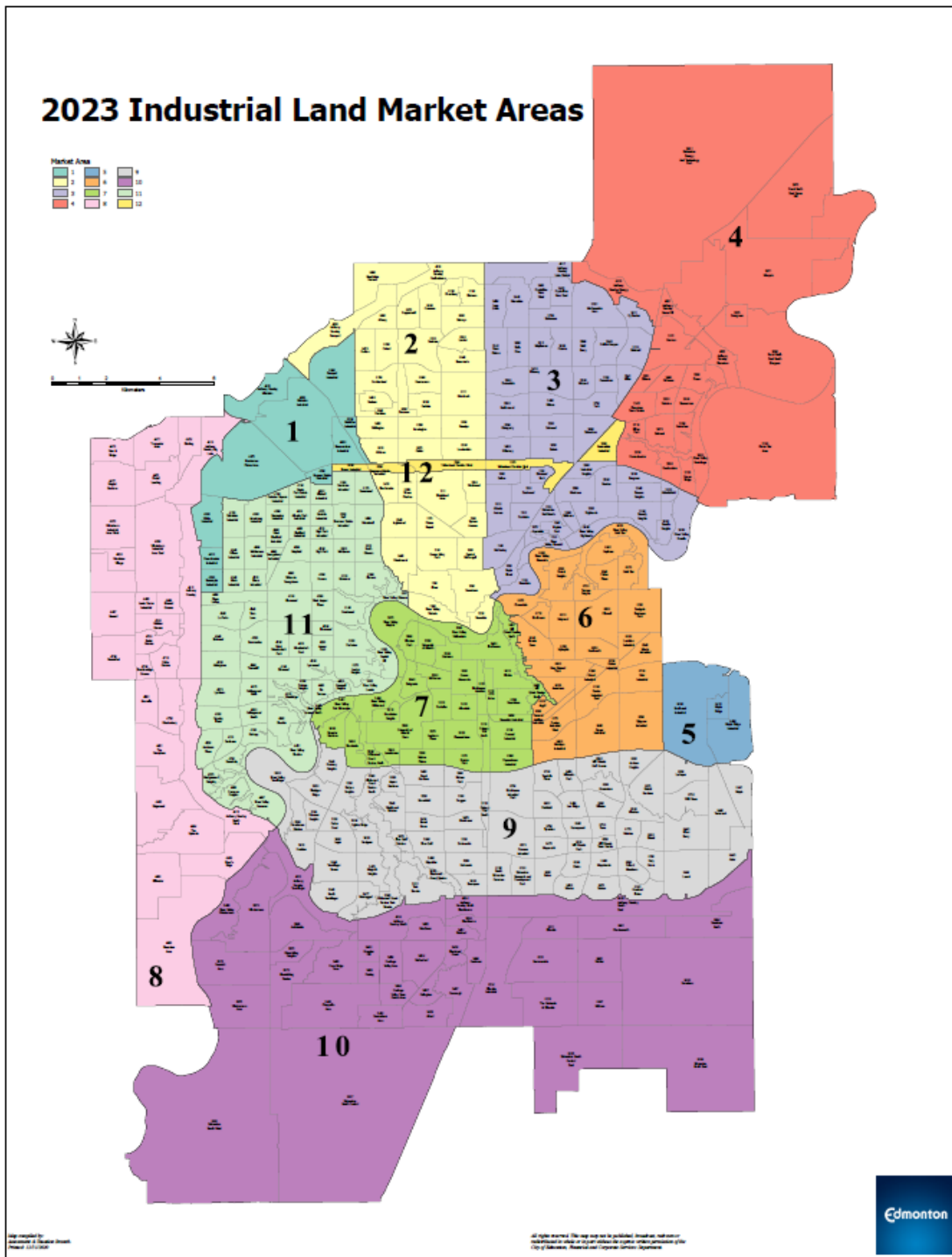
(AIC, 2010, p. 13.16)

References

- Appraisal Institute of Canada (1995). *Basics of Real Estate Appraising Fourth Edition*. Winnipeg, Canada.
- Appraisal Institute of Canada (2005). *The Appraisal of Real Estate Second Canadian Edition*. Vancouver, Canada.
- Appraisal Institute of Canada (2010). *The Appraisal of Real Estate Third Canadian Edition*. Vancouver, Canada.
- City of Edmonton. (2017). *Zoning Bylaw No. 12800*. Retrieved from City of Edmonton: http://webdocs.edmonton.ca/InfraPlan/zoningbylaw/bylaw_12800.htm
- Eckert, J., Gloudemans, R., & Almy, R. (1990). *Property Appraisal and Assessment Administration*. Chicago, Illinois: International Association of Assessing Officers.
- International Association of Assessing Officers (2013). *Standard on Mass Appraisal of Real Property*. Kansas City, the United States of America.
- Province of Alberta. (2018). *Matters Relating to Assessment and Taxation Regulation*. Edmonton, AB: Queen's Printer.
- Province of Alberta. (2018). *Municipal Government Act*. Edmonton, AB: Queen's Printer.
- University of British Columbia, Sauder School of Business (2009). *Advanced Computer Assisted Mass Appraisal*. Vancouver, Canada.

Appendix

Map



Measure Conversion Chart

Imperial to Metric - Length	Imperial to Metric - Area
1 inch (in) = 2.54 centimetres (cm)	1 square foot (sqft) = 0.09290 square metre (m ²)
1 foot (ft) = 0.3048 metres (m)	1 acre (ac) = 4,046.86 square metre (m ²)
Imperial Conversions	1 acre (ac) = 0.40469 hectares (ha)
1 acre (ac) = 43,560 square feet (sqft)	Metric Conversions
1 square mile = 640 acres (ac)	1 square kilometer (sq km) = 100 hectares (ha)
1 section = 640 acres (ac)	1 hectare (ha) = 10,000 square metres (m ²)

Zone Summary

Industrial Land Zonings	
IB	Industrial Business Zone (s.400) is for industrial businesses that carry out their operations such that no nuisance is apparent outside an enclosed building
IL	Light Industrial Zone (s.410) provides for high quality, light industrial developments, that operate with no nuisance factor apparent outside an enclosed building, limited outdoor activities
IM	Medium Industrial Zone (s.420) provides for manufacturing, processing, assembly, distribution, services and repair uses that carry out a portion of their operations outdoors, any nuisance should not generally extend beyond the boundaries of the site
IH	Heavy Industrial Zone (s.430) provides for industrial uses that, due to their appearance, noise, odour, risk of toxic emissions, or fire and explosion hazards are incompatible with residential, commercial, and other land uses. Normally located on the interior of industrial or agricultural areas.

Direct Control Provisions(s.710)	
DC1	<p>Direct Development Control (s.710) is to provide for detailed, sensitive control of the use, development, siting and design of buildings and disturbance of land where this is necessary to establish, preserve or enhance:</p> <ul style="list-style-type: none"> a. areas of unique character or special environmental concern b. areas or sites of special historical, cultural, paleontological, archaeological, prehistorical, natural, scientific or aesthetic interest
DC2	<p>Site Specific Development Control (s.720) is to provide for direct control over a specific proposed development where any other Zone would be inappropriate or inadequate.</p>

Agriculture and Reserve Zones (s.630)	
AGI	<p>Industrial Reserve Zone (s.630) is to allow for agricultural and rural land use activities that do not prejudice future use when the lands are required for industrial use</p>

Special Area: Ellerslie Industrial (s.930) and Edmonton South (s.1000)	
EIB	Ellerslie Industrial Business (s.930.4)
EIM	Ellerslie Medium Industrial Zone (930.5)
IBES	Industrial Business Edmonton South Zone
ILES	Industrial Light Edmonton South Zone
DC/IND	Direct Control/Industrial District Edmonton South

*For zonings not listed above, please see zoning bylaw 12800.