

2021

ASSESSMENT METHODOLOGY

GOLF COURSE

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

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Scope

This guide is an aid in explaining how golf course properties are valued for assessment purposes. The guide is intended as a tool and complements the assessor's judgment in the valuation process.

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, 2020;
- reflecting typical market conditions;
- as if the property had been sold on July 1, 2020;
- 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 property
- 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, including rights to be valued, effective date of valuation, and any limiting conditions
Data Collection	Mass appraisal requires a continuing program to maintain a current 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 Models

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.

- s31 (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 created from property characteristics
- analysis of how variables affect market value
- factors and coefficients are determined
- the resulting valuation models are applied to property characteristics

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.

Cost Approach

For golf course properties, the assessment is determined using the Cost approach. The cost approach produces the most accurate assessment for properties that are not actively traded in the marketplace due to their characteristics, where there is insufficient or atypical income and expense data available to effectively apply an income approach, or where the property is under construction. The cost approach rationale is that an informed purchaser will pay no more for a property than the cost of building a similar one.

The cost approach determines the replacement cost new of improvements less depreciation plus land value. The replacement cost and depreciation is determined using a cost manual. The cost manual is a guide for developing replacement cost and depreciated values for buildings and other improvements. The cost manual contains indexes for the replacement building costs and depreciation tables that are applied to the replacement cost. The City of Edmonton uses the Marshall & Swift Valuation Service (hereinafter the "M & S Manual") which is the most comprehensive cost manual and database in the marketplace.

Typically, the land value of a property is determined using the sales comparison approach. For a more detailed explanation, refer to the applicable 2021 Land Assessment Methodology and/or the 2021 Assessment Methodology Cost Approach at edmonton.ca.

$$\text{Replacement Cost New} - \text{Depreciation} + \text{Land Value} = \text{Assessment}$$

Replacement Cost New: *the cost, including material, labor, and overhead, that would be incurred in constructing an improvement having the same utility to its owner as a subject improvement, without necessarily reproducing exactly any particular characteristics*

Glossary for Property Appraisal and Assessment, p.120

Depreciation: *loss in value of an object, relative to its replacement cost new*

Glossary for Property Appraisal and Assessment, p.41

Zoning

Zoning regulates the use and development of a property and is set by the Edmonton 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

For further information see City of Edmonton Zoning Bylaw, No. 12800 available at www.edmonton.ca. The actual zoning of a property may affect the property's classification; however, not all properties conform to the zoning set out in the Zoning Bylaw. In these cases, an effective zoning is applied to reflect the current use and development of the property. The effective zoning may differ from the actual zoning when the current use differs from the Zoning Bylaw (e.g., a legal nonconforming use).

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)

Golf Course Valuation

The golf course assessment comprises the following components: land, servicing, building improvements and golf course improvements.

Land

The land for golf course properties is assessed based on its use. The golf course land is assessed as Park land. Park land refers to all or part of a property that is zoned or permitted to be used as Metropolitan Recreation Zone or Public Parks Zone as per City Zoning Bylaw 12800. Please see the 2021 Assessment Methodology Agricultural, Development and Other Land for more information.

Servicing

In order to account for servicing in valuation, an adjustment based on the cost of providing typical utility servicing to golf course properties may be applied.

There are two levels of servicing: City Standard Servicing and Rural Standard Servicing.

City Standard Servicing

The City Standard Servicing level typically includes a full range of municipal utility services that include paved roadway access, water, sanitary and storm sewer, along with electricity, natural gas, telephone, cable television and Internet.

Rural Standard Servicing

The Rural Standard Servicing level typically includes a drilled water well, which often includes a cistern(s) for water storage, and a septic field and/or pump out septic tank(s). All shallow utilities (power, natural gas & telephone) are typically provided to Rural Standard serviced parcels.

The Rural Standard Serving level typically does not include municipal water or sewer services, and road access typically comprises a gravel or cold rolled surface with drainage ditches and culverts.

Building Improvements

The City uses the M & S Manual to determine the replacement cost new less depreciation of improvements. For example, a clubhouse constructed on a golf course property is valued using the M & S Manual as per the 2021 Assessment Methodology Cost Approach.

Golf Course Improvements

Golf Course Improvements include fairways, irrigation and drainage systems, tees, greens, bunkers, bridges, cart paths, landscaping, and water features. According to the Alberta Assessors' Association best practice guide, golf course improvements add to the value of land for the purposes of a golf course:

Since tees, greens, fairways and obstacles such as bunkers, water hazards, landscaping, irrigation systems, slope, rough, and trees add to the value of land for the purposes of a golf course, they should be valued in addition to the raw land value. The course should be inspected and classified according to the guidelines provided in Section 5.0¹. The Marshall & Swift Manual breaks down such costs per hole by class of course. The costs per hole represent the replacement cost of the course improvements

Alberta Assessors' Association, 2008, p.19

Golf course information is provided by owners during the annual Request for Information (RFI) process. Property owners are requested to provide the following via the RFI process:

- A completed Owner Contact and Certification Form
- A completed Golf Course Survey including general course information and golf course improvements/facilities details
- A completed Project Cost Breakdown including building/yard and golf course improvement projects

Marshall and Swift Golf Course Classes

The M & S Manual breaks down cost per hole according to course classification. The costs per hole represent the replacement cost of the golf course improvements.

Class 1: Minimal quality, simply developed, budget course on open natural or flat terrain, few bunkers, and small tees and greens.

Class 2: Simply designed course on relatively flat terrain, natural rough, few bunkers, small built-up tees and greens, and some small trees.

Class 3: Typical private-type club on undulating terrain, bunkers at most greens, average elevated tees and greens, some large trees moved in or clearing of some wooded areas, and a driving range.

Class 4: Better championship-type course on good undulating terrain, fairway and greens bunkered and contoured, large tees and greens, large trees transplanted, driving range, may have name architect, and standard course.

¹ *Property Assessment in Alberta Handbook, Valuation Module, Golf Courses.*

Quality Index System

Additional classification is obtained through the use of a quantitative point system. The City utilizes a modified Quality Index² to determine the appropriate golf course classification. This modified system consists of the following nine golf course attributes that take into consideration the difficulty of play, condition, size, and cost of construction:

1. **Slope Rating:** In Canada, the slope rating is established by the Royal Canadian Golf Association (RCGA) / Golf Canada, and is the measure of relative playing difficulty of a course for players who are not experienced golfers. For this attribute, the City uses **the slope rating from the most difficult tees** (ex. Men's Black slope rating).
2. **Number of Bunkers:** A bunker is a golf course hazard that is a hole or depression in the ground filled in with sand (or a similar material).
3. **Acres of Greens:** A green is the area of short grass surrounding a hole. Greens can vary widely in shape and size, but are most commonly oval in shape. The larger the greens, the more costly to build them.
4. **Greens Built to United States Golf Association (USGA) Specifications³:** Building to USGA specifications indicates a more expensive course as they are designed for maximum drainage, allowing play to resume quickly after a storm. It is a "yes/no" component.
5. **Number of Bridges:** A bridge is a costly construction and maintenance expense item that adds interesting features to a golf course.
6. **Number of Bulkheaded Tees and Greens:** Bulkheads are retaining walls built around tees and greens that are typically used to separate hazards and/or for aesthetic purposes. This feature typically indicates a more prestigious course.
7. **Double Row Irrigation Systems:** These systems are advanced irrigation control systems with sprinkler heads that offer an improved efficiency over single-row coverage. Typically, they exist in areas where annual rainfall is minimal. It is a "yes/no" component.
8. **Berms and Undulations:** Berms are man-made hills that typically separate fairways between golf holes. This feature can be categorized as above average, average, or below average based on size and placement.
9. **Elevated Tees and Greens:** A tee is a cleared space on a golf course from which the ball is struck at the beginning of play for each hole. A green is the culmination of a golf hole, and where the flagstick and hole are located. Oftentimes these features are elevated as an added design feature. These features can be categorized as above average, average, or below average based on design and placement.

² The Quality Index System is based upon an article by J. George Moore titled *Mass Appraisal of Golf Courses*. Refer to the International Association of Assessing Officers, July/August 1999, Volume 6 – Number 4 Assessment Journal. Although the article has a U.S. context, it can also be applied to Canadian golf courses.

³ United States Golf Association / Green Section. *USGA Recommendations for a Method of Putting Green Construction*. 2004.

Figure 1 shows the point system used in the Quality Index.

FIGURE 1. Quality Index Point System

Slope Rating/ Points	Number of Bunkers / Points	Acres of Greens / Points
110* / 10	0 / 0	1* / 1
112* / 20	10* / 2	1.5* / 2
114 / 30	20* / 3	2 / 3
116 / 40	30 / 4	2.5 / 4
118 / 50	40 / 5	3 / 5
120 / 60	50 / 6	3.5 / 6
122 / 70	60 / 7	4 / 7
124 / 80	70 / 8	4.5 / 8
126 / 90	80 / 9	
128 / 100	90 / 10	
130 / 110	100 / 11	
132 / 120	110 / 12	
134 / 130		
136 / 140		
138 / 150		
141 / 160		

* - Midpoints are proportioned accordingly.

If greens are built to **USGA specifications**, add 10 points.

Bridges = 1 point each (Maximum 5 points).

Bulkheaded Tees and Greens = 2 points each (Maximum 72 points).

Double Row Irrigation = 10 points.

Berms

Below Average** = 20 points

Average** = 40 points

Above Average = 60 points

Elevated Tees and Greens

Below Average** = 20 points

Average** = 40 points

Above Average = 60 points

** - If the rating is below average to average or average to above average, add 30 or 50 points, respectively.

Golf Courses Classification Using the Quality Index and M & S Manual

The Quality Index System is used to classify golf courses into the M & S Manual categories using the following steps:

1. Assign points, as outlined in the Quality Index Point System table.
2. Total all points to arrive at the Quality Index.
3. Establish class boundaries by creating a range of points for each class.
4. Classify the course by matching the calculated Quality Index points with the proper M & S classification.

FIGURE 2. Golf Course Classification

Quality Index Points	Marshall & Swift Golf Course Class
0 - 99	Class 1 (minimal quality course)
100-198	Class 2 (simply designed course)
199 - 297	Class 3 (typical private-type club course)
298-396	Class 4 (better championship course)

Golf Course Component Adjustment

The M & S Manual suggests a component adjustment be made depending on the presence or absence of certain golf course elements. Examples of such elements are paved cart paths and manual/automatic irrigation systems.

Depreciation

The M & S Manual does not provide a suggested life for golf course improvements. Accordingly, there is no corresponding depreciation schedule for the golf course improvements. The Marshall Valuation Service rationale is based on the premise that the golf course improvements are in a constant state of repair and, therefore, are not intended to depreciate. Golf course improvements are always in a cyclical state of repair. Therefore, the City applies a fixed depreciation of 30% to the golf course improvements.

In practical application, the older the golf course, usually the more prestigious it becomes. In these cases, there is often considerable effort and expense put into upkeep in order to maintain the aesthetic nature of the course to meet the demands of members and tournament requirements.

Sample Golf Course Improvements Assessment

The following sample illustrates how the City calculates applicable points, determines the appropriate golf course class using the M & S Manual, and calculates the golf course improvements value.

Golf Club is an 18-hole course with the following golf course improvements:

Quality Index Attributes	Input	Points
Slope Rating	125	85
Number of Bunkers	32	4.2
Acres of Greens	1.25	1.5
Greens to USGA Specifications	Yes	10
Bridges	3	3
Bulkheaded Tees and Greens	12	24
Double Row Irrigation	Yes	10
Berms and Undulations	Average	40
Elevated Tees and Greens	Average	40
Total points		217.7

A total of 217.7 points falls within the range of 199 - 297 points for a Class 3 golf course. The indicated cost range per hole for a Class 3 course is \$154,000 - \$226,000⁴.

Using this information, the interpolated value per hole is determined using the following equation:

$$[(\text{Total Points} - \text{Minimum Points in Range}) / \text{Points Range}] \times \text{Value Range in Class} + \text{Minimum Value in Class} = \text{interpolated value per hole}$$

$$((217.7 - 199) / 98) \times 72,000 + 154,000 = \$167,739 \text{ per hole}$$

Based on the Golf Club's overall quality, the interpolated value per hole is \$167,739. Therefore, the total value of the golf course improvements equals \$3,019,302 (\$167,739 * 18 holes). No component adjustment was warranted for this golf course.

Next, the golf course improvements cost is adjusted by the current cost multiplier of 1.06 and the local multiplier of 1.31⁵ which results in \$4,192,603. A fixed depreciation of 30% is applied, resulting in the golf course improvements value of \$2,934,822. Finally, after the deduction of GST the total golf course improvement value for the Golf Course is \$2,795,000 (rounded).

⁴ Marshall and Swift Valuation Service provides the cost ranges per hole for each golf course class and updates them bi-yearly.

⁵ The current cost and local multipliers applicable for Edmonton are provided by the Marshall and Swift Service as of July 2019.

SAMPLE GOLF COURSE IMPROVEMENTS ASSESSMENT DETAIL REPORT



Account #	9999999	Number of Holes per Account	18
Golf Course	Golf Course	Address	11111 Sample Road NW
Total Number of Holes on Golf Course	18	Date	1/2/2021

GOLF COURSE IMPROVEMENTS (APPLICABLE TO THE ENTIRE GOLF COURSE)			
Golf Course Improvement	Input	Points	These golf course attributes and designated points are applicable to the entire golf course in order to determine the appropriate golf course classification. Marshall and Swift Valuation Service provides the cost range per hole for each golf course class.
Slope Rating	125	85	
Number of Bunkers	32	4.2	
Acres of Greens	1.25	1.5	
Greens to USGA Specifications	Yes	10	
Bridges	3	3	
Bulkheaded Tees and Greens	12	24	
Double Row Irrigation	Yes	10	
Berms and Undulations	Average	40	
Elevated Tees and Greens	Average	40	
Total Points		217.7	

VALUATION (APPLICABLE TO THIS ACCOUNT ONLY)		
Golf Course Class	3	See table below for reference
Suggested Cost Range per Hole	\$ 154,000-\$ 226,000	As per Marshall & Swift Manual
Interpolated Value Formula	[(Total points - minimum points in range)/points range]] x value range in class + minimum value in class = interpolated value per hole*	
Interpolated** Value per Hole	\$167,739	See table below for reference
Total Value (all holes per account)	\$3,019,302	Interpolated value per hole x number of holes
Golf Course Component Adjustment	No component adjustment	This adjustment is based on inspection.
Golf Course Component Adjustment Amount	\$0	
Golf Course Improvement Value with Component Adjustment	\$3,019,302	After component adjustment
Current Cost Multiplier	1.02	Current cost and local multipliers applicable to Edmonton are provided by the Marshall and Swift Service
Local Multiplier	1.31	
Undepreciated Golf Course Improvement Value	\$4,192,603	
Golf Course Improvement Value less Depreciation	\$2,934,822	Fixed depreciation of 30% is applied to golf course improvements
2021 Total Golf Course Improvement Assessment without GST	\$2,795,069	

Quality Index Points Range	Marshall & Swift Golf Course Class	Cost Range per Hole (as of December 2019)	Value Range in Class
0-99	1	\$ 74,500-\$ 102,000	\$27,500
100-198	2	\$ 106,000-\$ 152,000	\$46,000
199-297	3	\$ 154,000-\$ 226,000	\$72,000
298-396	4	\$ 232,000-\$ 371,000	\$139,000

* - For a more detailed explanation and sample refer to the 2021 Golf Courses Assessment Methodology Guide.

** - Interpolation is a calculation of a value within two known values in a sequence of values.

References

- Alberta Assessors' Association (2008). *Property Assessment in Alberta Handbook Valuation Module. Golf Courses*.
- Appraisal Institute of Canada (1995). *The Appraisal of Real Estate Third Canadian Edition*. Vancouver, Canada.
- Appraisal Institute of Canada (2005). *The Appraisal of Real Estate Third Canadian Edition*. Vancouver, Canada.
- Appraisal Institute of Canada (2010). *The Appraisal of Real Estate Third Canadian Edition*. Vancouver, Canada.
- City of Edmonton. (2018). *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 [IAAO]. (1997). *Glossary for Property Appraisal and Assessment*. Chicago IL.
- Marshall and Swift Valuation Service Cost Manual*, 2016, Corelogic Inc.
- Moore, J. G., *Mass Appraisal of Golf Courses*. The International Association of Assessing Officers, July/August 1999, Volume 6 – Number 4 Assessment Journal.
- Province of Alberta. (2018). *Matters Relating to Assessment and Taxation Regulation, 2018*. Edmonton, AB: Queen's Printer
- Province of Alberta. (2019). *Municipal Government Act*. Edmonton, AB: Queen's Printer.
- United States Golf Association / Green Section. (2004). *USGA Recommendations for a Method of Putting Green Construction*.