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SASKATCHEWAN ASSESSMENT MANAGEMENT AGENCY

Market Value Assessment in Saskatchewan Handbook

Grain Elevator

Valuation Guide

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Market Value Based Assessment Legislation in Saskatchewan

Saskatchewan has different assessment legislation[1] than other jurisdictions in Canada that must be taken into account when valuing properties for assessment and taxation purposes. There are specific definitions in Saskatchewan for "base date", "market value", "Market Valuation Standard" and "mass appraisal". It is important to understand how these definitions relate to one another and the requirement for market value based assessments to be determined in accordance with the Market Valuation Standard.

Base Date is defined as "...the date established by the agency for determining the value of land and improvements for the purpose of establishing assessment rolls for the year in which the valuation is to be effective and for each subsequent year in which the next revaluation is to be effective;"

Market Value is defined as the "...amount that a property should be expected to realize if the estate in fee simple in the property is sold in a competitive and open market by a willing seller to a willing buyer, each acting prudently and knowledgeably, and assuming that the amount is not affected by undue stimuli;".

Market Valuation Standard means the "standard achieved when the assessed value of property:

(i) is prepared using mass appraisal;

(ii) is an estimate of the market value of the estate in fee simple in the property;

(iii) reflects typical market conditions for similar properties; and

(iv) meets quality assurance standards established by order of the agency;"

Mass appraisal is defined as "…the process of preparing assessments for a group of properties as of the base date using standard appraisal methods, employing common data and allowing for statistical testing;".

Assessment legislation in Saskatchewan requires that non-regulated property assessments be determined pursuant to the Market Valuation Standard. Throughout this Handbook the term "market value based assessments" is used to refer to non-regulated property assessments. Unlike single property appraisals, market value based assessments must be prepared using mass appraisal and "...shall not be varied on appeal using single property appraisal techniques". All Handbook references to market value are subject to the requirements of the Market Valuation Standard.

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[1] The following Acts provide the statutory basis for property assessment in Saskatchewan:

- *The Assessment Management Agency Act*
- *The Legislation Act*
- *The Cities Act*
- *The Municipalities Act*
- *The Northern Municipalities Act, 2010*

For more details on how to access this information refer to Appendix 2: Resources - Section 2a (Queen's Printer).

1.0 Introduction

Elevators[2] are special purpose properties designed for limited uses centered on receiving, elevating, storing and shipping various types of grain. Some elevators also incorporate one or more grain processing activities such as cleaning, drying, and mixing. In addition, there is a growing presence of retail farm supply centres on elevator sites.

Elevators are distinguished by their storage capacity, the amount and variety of grain that can be stored at an elevator, as well as the volume of grain that can be moved through the facility (also known as grain handle). Due to the nature of their design, construction, and location, elevator properties provide little utility and little value for alternate uses. The values associated with these special purpose properties are therefore based upon the economic viability of the grain business and the competition for that business.

The grain industry is dominated by a relatively small number of grain companies, which tends to limit market activity in elevator properties. The result is an environment where elevators are seldom leased and are rarely sold - except for nominal amounts at the end of their economic life. This serves to limit the approaches that can be applied when valuing elevator properties using mass appraisal techniques.

In Saskatchewan, a special purpose property is valued pursuant to legislation using either the Market Valuation Standard or the Regulated Property Assessment Valuation Standard. Those properties that fall within the heavy industrial property definition, as stated in the *Saskatchewan Assessment Manual*, are governed by the Regulated Property Assessment Valuation Standard. Since elevators are not included within the heavy industrial property definition, this valuation guide pertains to the market value based assessment of elevators subject to the Market Valuation Standard. (Refer to the Special Purpose Properties Valuation Guide / Section 1.2 Special Purpose Properties in the Context of Saskatchewan Assessment Legislation for additional details.)

1.1 Elevators Covered in this Valuation Guide

Elevators are either licenced by the Canadian Grain Commission (CGC) or unlicenced. Since the majority of grain handled involves licenced elevators, this valuation guide will focus on the valuation of licenced elevators. All licenced elevators are operated by licenced grain dealers; however, in some cases there are licenced grain dealers who do not licence their elevators (e.g. seed cleaning plants).

Throughout this guide the general term “elevators” may also imply the existence of an annex. An annex is located adjacent to an elevator and is specifically designed to store grain.

The methods presented here may be applicable to other types of properties, but the material in this valuation guide does not directly address any type of property other than elevators.

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[2] Elevators are also commonly referred to as grain elevators or grain handling facilities. The term elevator is used in this valuation guide.

The three general categories of elevators licenced by the CGC are:

- Primary,
- Terminal, and
- Process.

Primary Elevators

Primary elevators focus on receiving grain directly from producers for storage and shipping. Most of the licenced elevators in Saskatchewan are primary elevators.

Terminal Elevators

Terminal elevators usually receive grain on or after the official inspection and weighing of the grain. These elevators also clean, store and treat grain before it is shipped. There are no terminal elevators in Saskatchewan at this time.

Process Elevators

Process elevators focus on receiving and storing grain for processing into other products. There are process elevators located in Saskatchewan.

Licenced primary elevators will be emphasized in this valuation guide as this type of elevator comprises the vast majority of elevators in Saskatchewan. Licenced elevators can be broken down further by their design and construction. The most common elevators are concrete elevators and annexes, steel annexes, steel bin elevators and wood elevators (cribs) and annexes.

1.2 Scope of Valuation Guide

- This valuation guide is designed as an aid in the valuation of elevator properties for assessment purposes.
- It sets out a procedure to derive market value based assessments for elevators using the cost approach.
- The valuation guide provides a practical tool to evaluate and determine these market value based assessments.
- Cost models and other valuation parameters will provide the guidelines and controls needed to establish equitable values for grain elevators as of the base date.
- The valuation guide is designed as a tool to assist the assessor in deriving market value based assessments; it is not intended to replace the assessor's judgment in the valuation process.
- The method presented in this valuation guide is aimed at deriving market value based assessments for a number of different models of elevators with typical attributes in a variety of conditions.

Hypothetical data and analysis are provided throughout this Valuation Guide in the narrative and in various examples, tables and forms. These examples are provided for illustrative purposes only. The exact form of the market value analysis is up to the discretion of the assessor subject to the Market Valuation Standard and other relevant legislation.

1.3 Background

The primary function of an elevator is to accumulate grains for temporary storage before shipment to market. The value of the facility is, therefore, related to the amount of grain stored and handled. Traditionally, elevators raise revenues from three sources:

- Receiving, preparing for shipping, and shipping grains to market,
- Storage of grains, and
- Retail activities.

Modern prairie elevators may also incorporate additional revenue generating functions before shipment or storage, as follows:

- Mixing grains,
- Cleaning grains, and
- Drying grains.

Typically, storage fees account for a smaller portion of the potential revenues generated from an elevator. Therefore, for a given size of elevator the general rule is the more grain that is handled the higher the elevator's value. It also follows that the values of these elevators tend to fluctuate with the amount of grain grown in the region and the market for grains.

The potential performance and value of an elevator is affected by many factors, including its grain handling capabilities, the economic conditions, competition, foreign exchange rates, and location of the property with respect to farmers, roads and rail lines, etc. These conditions affect how the market views an elevator property, and thus its value.

Grain Industry Trends

Elevators

In the past, prairie elevators and annexes were constructed of wood crib design. These were located on rail lines to serve farmers within a 15 to 20 mile radius. By modern standards, these elevators tend to have lower grain storage and handling capacity. The majority of these elevators have a rail car capacity of less than 50 cars. Over the last number of years grain companies have phased out these obsolete wood elevators in favour of elevators of modern design, constructed of concrete and/or steel, with high grain

storage and handling capacity. These elevators are referred to as high "throughput[3]" elevators. Rail car capacity is predominantly 50 cars or greater.

To reduce the number of times the grain is elevated and shipped, the operation has evolved towards one-time deliveries at these larger, high capacity elevators that are located on major rail lines. Although this gives rise to wider collection areas and longer initial delivery trips, these new, centrally located elevators enjoy certain economies of scale over older style elevators.

Grains

Although the traditional backbone of the grain industry is wheat, canola is becoming more significant. Rye, oats, flax and pulse crops, etc. are gaining prominence in the market place. Such grains have different characteristics and weights per measure of volume (e.g. per bushel). However, not all elevators are equipped to handle all types of grains.

Influence on Value

The value of a specific elevator to its owner is dependent on a number of variables including but not limited to:

- Grain throughput or grain handling capacity,
- Storage capacity,
- The presence or lack of cleaning, drying, and mixing facilities,
- Types of grain grown in the area,
- Prices of wheat and other grains,
- Competitor decisions,
- The annual crop yield,
- World-wide demand and supply issues, and
- Rail rates and railway accessibility issues.

A number of these issues are business related as opposed to being a function of the real estate; others are beyond the control of the individual property operator.

[3] *Refer to Section 3.6 Obsolescence Deducted from Replacement Cost New Less Depreciation (RCNLD) for additional details on "throughput".*

2.0 Analysis of Valuation Approaches

The specialized types of improvements and the nature of the elevator business both serve to limit the methods that can be used to value these properties.

2.1 Approaches to Value

Sales Comparison Approach

Due to the relatively small number of grain companies and an overall small number of elevators in Saskatchewan, sales activity in elevators is quite limited. Elevators such as the obsolete wood cribs, do not sell until near the end of their economic lives. At this point the elevators often sell as grain storage elevators for farm use. The sale of modern, high throughput concrete or steel elevators is not common. Given these facts and due to a general lack of sales data, the sales comparison approach is typically not useful in determining market value based assessments for elevators.

Income Approach

Although elevator values are largely dependent upon the amount of income generated from the grain handled, the income approach is not the preferred method of establishing market values for assessment purposes. These properties typically do not rent. In addition, the lack of sales data makes it difficult to establish the appropriate capitalization rate in order to apply the income valuation approach. Also, the complexity of factors that contribute to the generation of income in an elevator makes it difficult to delineate the income attributable to the real estate. These issues make it difficult to establish the valuation parameters required in an income analysis.

Cost Approach

Although elevators vary in size and function; can be constructed of wood, metal, and/or concrete; and in some cases suffer from significant amounts of depreciation, the cost approach can be used to value this type of property. The cost approach is based on the development of replacement models depicting the average costs to build elevators. Replacement cost new can be determined by analyzing local construction data as well as from cost publications such as *Marshall Valuation Service*. Tables in these cost publications may also be used to indicate normal physical deterioration. Other forms of depreciation and obsolescence may be established through the research process. In summary, since the requisite cost data for elevators is usually available, the cost approach is typically recognized as the most appropriate method for establishing market value based assessments for elevator properties.

(Refer to the Special Purpose Valuation Guide for additional information regarding the application of the cost approach.)

2.2 Recommendation

The cost approach is recommended for the valuation of elevator properties for assessment purposes.

3.0 Elevator Valuation Process

Overview of the Procedure

The following steps summarize the process one may use to value an elevator property using the cost approach.

1) Collect appropriate information.
2) Establish land values using the sales comparison approach.
3) Classify elevators by type according to their size and features.
4) Estimate replacement cost new (RCN) of improvements based upon the type of elevator.
5) Determine normal physical depreciation on the basis of the age-life method and condition of improvements. Deduct this amount from the replacement cost new. This is often referred to as replacement cost new less depreciation (RCNLD).
6) If present, determine typical functional and external obsolescence. Deduct this from the RCNLD.
7) Add or deduct other appropriate values, if required to determine a market value based assessment of the improvements.
8) Add the market value based assessment of the land to the market value based assessment of the improvements to determine the market value based assessment of the property.

3.1 Collect Appropriate Data

More than any other factor, the effort made at the data collection stage will determine the quality of the final analysis.

Supporting Information

Sources of supporting information include:

- Assessment records;
- Grain elevator companies;
- Contractors;
- Western Grain Elevator Association (WGEA);
- Inland Terminal Association of Canada (ITAC);
- The Canadian Grain Commission (CGC);
- Building permits; and
- Cost publications such as *Marshall Valuation Service.*

Performance and Industry Data

Performance and industry data refers to a facility's licenced storage capacity as well as its grain handling capability for a given crop year. This data is useful in determining an elevator's throughput which in turn determines whether functional or external obsolescence is present. Industry data may also refer to recent elevator sales that may be used to quantify obsolescence. *(Refer to Section 3.6 "Obsolescence Deducted from Replacement Cost New Less Depreciation (RCNLD)"for additional details.)*

Property Information

To compare, classify and develop valuation parameters for elevators, it is necessary to obtain physical and descriptive information. Typical information that could be collected for a property and entered into the assessor's valuation system is shown on the Elevator Data Entry Example. *(Refer to Figure 5.)*

Property Inspection

To keep records up to date, all assessed properties are generally inspected from time to time. Along with the designed capacities (e.g. bushels, tonnes), square footages, and physical measurements, the following types of items may be noted when inspecting an elevator:

- Building design and construction materials;
- Construction dates;
- Building and assessable equipment condition;
- Operation problems and equipment adequacy;
- Time since last equipment upgrade;
- Extra features in the elevator and/or yard;
- Site location, suitability, and environmental issues,
- Transportation/ rail service (leases, line condition, etc.);
- Number of rail car loading spots;
- Types of grain handled;
- Throughput history; and
- Competition.

It may be necessary to talk with the elevator manager or other contacts within the grain company to obtain some of this information.

Construction Costs

The bricks and mortar construction costs of a building can be estimated from a number of different cost publications (e.g. *SAMA's Cost Guide*, *Marshall Valuation Service*). Some of these publications include construction models of elevators that can be used to estimate costs new.

Analyzing actual construction costs is also a useful way of determining typical costs associated with an elevator. These costs can be used to determine rates for a particular type of elevator/annex which then can be used to calculate replacement cost new.

The actual construction cost data for all new elevators and major reconstruction work can be requested from grain companies and their building contractors. In addition, it may be useful to consider the information provided on any building permit for an elevator.

When analyzing construction cost data ensure the actual costs only reflect those items that are assessable.

3.2 Estimate Land Value

Land value is usually established through the analysis of comparable market data.

The initial step of determining the market value based land assessment is to locate applicable land sales data. Preferably, the land sales should be of sites of approximately the same size, with similar zoning, situated in a comparable location, and adjusted to reflect values as of the base date.

Once sales data has been collected and is consistent with the applicable base date, it becomes possible to establish the value of the elevator site using the sales comparison approach.

Adjustments to the land value may have to be made for the following points of comparison:

- Location,
- Access/ transportation,
- Size of site,
- Zoning,
- Topography,
- Site servicing costs,
- Environmental concerns, and
- Time of sale.

Comparable land sales should be investigated through a sales verification process to ensure the results reflect the market value of the estate in fee simple subject to the requirements of legislation.

3.3 Classify the Elevator by Type

Elevators and annexes vary in size, construction materials and function. *SAMA's Cost Guide* uses these three elements to identify the following major types of elevators and annexes:

- Concrete elevators and annexes,
- Steel annexes,
- Steel bin elevators, and
- Wood elevators (cribs) and annexes.

3.4 Estimate Replacement Cost New (RCN)

The valuation of elevators is typically based upon a replacement cost new (RCN) model. Under this model, all elevators of a certain size and function would have their replacement cost new estimated based upon the cost of modern equivalents constructed using modern construction techniques. This is not to imply that the type of elevator would change to reflect the current elevator designs and specifications.

Developing RCN Elevator Rates

Replacement cost rates for typical elevators of various types (concrete, steel or wood) should be established on a rate per bushel or tonne basis. These rates are established by analyzing actual construction costs and cost publications for elevators constructed of concrete, steel and wood. It is important that the costs only cover assessable structural and equipment components as of the applicable base date.

A general method for developing replacement cost new for elevator rates is as follows:

1) Contact the WGEA, ITAC, or individual elevator companies for typical cost data associated with various types of elevators as of the applicable base date.
2) Contact various construction firms with similar requests for cost data.
3) Analyze the cost data associated with each elevator type.
4) Compare costs from cost publications such as *Marshall Valuation Service* to the local cost data. If required, make the necessary adjustments to the rates in order to reflect variations in local construction costs.
5) Create a rate schedule on a dollar per bushel (or tonne) basis for each elevator type.

SAMA's Cost Guide contains elevator rates that have been developed using the above methodology.

RCN Rates – Other Buildings located on an Elevator Site

Replacement cost new of other buildings on an elevator site (i.e. drive shed, separate regional office, farm input store, and yard improvements) can be determined through the study of actual costs or through the use of cost publications such as the *Marshall Valuation Service.*

Estimating RCN for an Elevator

Once rates are finalized, the replacement cost new can be calculated by multiplying the applicable rate by the elevator's current licenced capacity. *(Refer to Figure 2.)*

Replacement Cost Rates per Bushel Example

A study of local costs and costs contained in cost publications such as *Marshall Valuation Service* can be used to produce valuation rates per tonne (bushel) such as those presented in *Figure 1*. Costs developed in this manner would include the value of all assessable items typically associated with an elevator as of the applicable base date.

Offices, drivesheds, warehouses, stores and other such items are typically categorized according to their quality and costs per square foot (or linear foot). Costs for these structures can be developed from studies of actual construction or from cost publications.

Note: The example cost rates presented in *Figure 1* are designed to cover most of the improvements found in a typical elevator. There may be other items that should be costed but are not included with this example.

Figure 1: Cost Rates by Elevator Type Example

	Rate per Bushel of Licenced Capacity	
	Concrete Elevator	**Concrete Annex**
Base Size in Bushels	**450,000**	**500,000**
Base Model Rate per Bushel	**$8.36**	**$4.00**

Rates per Bushel Adjustment Table

From	To		
300,001	350,000	$ 9.04	$6.00
350,001	400,000	$ 8.86	$4.95
400,001	500,000	$ 8.36	$4.00
500,001	1,000,000	$ 7.42	$3.80
1,000,001	2,000,000	$ 4.83	$2.60

Other Improvements		**Quality of Improvement**		
		Low	**Average**	**High**
Office	Sf	$68.00	$85.00	$102.00
Drive Shed	Sf	$56.00	$70.00	$84.00
Retail Store	Sf	$76.00	$95.00	$114.00
Warehouse	Sf	$48.00	$60.00	$72.00

Other Yard		Rate
Pavement	Sf	
Fence	Lf	

Figure 2: Replacement Cost New Analysis Example

Address	
Municipality	
Assessment Roll #	
Base Date	

Replacement Cost Analysis

Item	Units in Bushels	Rate	Replacement Cost New
Concrete Elevator	450,000	$8.36	$3,762,000
Concrete Annex	500,000	$4.00	$2,000,000
Office (sf) Average	1,000	$85.00	$85,000
Drive Shed (sf) Average	3,000	$70.00	$210,000
Warehouse (sf)	0		$0
Retail Store (sf)	0		$0
Other Bldg (sf)	0		$0
Pavement (sf)	0		$0
Fence (lf)	0		$0
Other Yard	0		$0
Total Assessable Structures and Equipment			$6,057,000

3.5 Physical Depreciation Deducted from RCN

Physical depreciation acknowledges that all building improvements deteriorate over time and, as a result have limited life spans. Therefore, physical depreciation generally relates to the age of the property. Such depreciation is determined by establishing the current condition of the property and estimating the effective age and the physical life expectancy of the improvements. Physical depreciation is usually expressed as a percentage of costs new.

Though a replacement cost analysis typically gravitates towards one type of construction for a class of elevator, the normal physical depreciation inherent in a property should be based on the age and condition of the improvements.

Depreciation Schedules

Most valuation publications contain depreciation schedules that are intended to reflect the typical amount of normal, physical, and age-related depreciation in a property. This method of estimating depreciation relies on three separate points of analysis:

- Analyzing the effective age and condition of the improvements,
- Determining the life expectancy of the improvements, and
- Recognizing that the property may be subject to other forms of depreciation

Application of Depreciation Schedule

To determine the appropriate amount of physical depreciation the assessor should analyze the effective age of the elevator improvements. The effective age is the typical age of the structures equivalent to the one in question with respect to condition and utility and reflects the remaining economic life of the building or structure. The elevator may be valued using one overall effective age. Ages for the other assessable improvements (office, store, cleaning facilities, etc.) may be based upon the actual year of construction (unless otherwise adjusted).

An example of a depreciation calculation is presented in *Figure 3*. In 2006, the elevator portion of this property had an effective year built of 2000, or an effective age of six years. Looking up six years on *Marshall Valuation Service*'s 60-year life depreciation table indicates a typical depreciation rate of 2%, which was then applied to reduce the cost new to $3,686,760. Similarly, other improvements of the property were also analyzed based upon their effective age and estimated economic life. This example assumes an average condition rating factor of 1.0.
(Refer to the Depreciation Analysis Guide for a detailed discussion of physical deterioration.)

Figure 3: Depreciation Calculation Example

Address	
Municipality	
Assessment Roll #	
Base Date	

Replacement Cost Analysis

Item	Replacement Cost New	Effective Yr. Built	Life Expectancy	Depreciation %	RCNLD
Concrete Elevator	$3,762,000	2000	60	2%	$3,686,760
Concrete Annex	$2,000,000	2000	60	2%	$1,960,000
Office (sf)	$85,000	2000	50	3%	$82,450
Drive Shed (sf)	$210,000	2000	50	3%	$203,700
Warehouse (sf)	$0	0		0%	$0
Retail Store (sf)	$0	0		0%	$0
Other Bldg (sf)					
Other Bldg (sf)					
Total	$6,057,000			2.05%	$5,932,910

3.6 Obsolescence Deducted from Replacement Cost New Less Depreciation (RCNLD)

Functional and External Obsolescence - Definitions

In addition to physical deterioration, elevators may also experience a loss in value due to functional and/or external obsolescence.

Functional obsolescence is the loss in value due to the lack of utility or desirability of all or a portion of the property. This form of obsolescence is the result of changes in demand, design and technology. By emphasizing a replacement cost analysis based upon the licenced capacity of the elevator, assessors deal with most of the functional obsolescence arising as a result of layout and construction problems. In most instances, any remaining functional obsolescence is a function of the relationship between capacity and throughput. In the case of an unlicenced elevator or annex that is not fit for any use other than as salvage, additional functional obsolescence should be applied.

External obsolescence (also referred to as economic obsolescence) is the loss in value due to the lack of utility or desirability of a property as a result of factors outside the property and independent of it.

(Refer to the Depreciation Analysis Guide for a detailed discussion on functional and external obsolescence.)

Functional and External Obsolescence

Functional and external obsolescence applicable to a licenced elevator and related buildings can be determined by using either a Throughput Adjustment Factor (TAF), or where sales are available, by methods similar to other commercial property valued using functional obsolescence and the Market Adjustment Factor (MAF). An elevator can either have a TAF or MAF, but not both as this would amount to obsolescence being deducted twice.

Although there may be exceptions, typically the TAF accounts for all functional and external obsolescence for high throughput elevators (usually concrete and/or steel elevators), while the MAF is used to account for obsolescence in wood crib elevators.

Analysis of Obsolescence Using Throughput

As mentioned, the value of an elevator relates in large part to its throughput. An elevator's throughput is a ratio of the total amount of grain brought into an elevator (grain handle) at a single location (e.g. CGC station) to that elevator's licenced capacity in a given crop year (August 1 – July 31). Grain handle should include all grains purchased and subsequently brought into the elevator (receipts permitted) plus any other additional grain moved or transferred into the elevator (e.g. transferred receipts). Licenced capacity is reported by the CGC and should include all of the company's elevators and annexes (condos), but not temporary storage piles.

The concept of functional and external obsolescence based on throughput is applied in other assessment jurisdictions. It is also an acceptable approach from the owner's point of view because it is based on the grain handling performance of the property. A well performing property is affected less by obsolescence than a property that does not achieve a certain standard. The TAF is usually not applied to unlicenced elevators as the amount of grain handled each crop year is not consistently available.

In order to account for the cyclical nature of the grain industry and to establish an accurate allowance for functional and external obsolescence, it is a good practice to stabilize the TAF by considering the throughputs over a number of consecutive years. For example, *SAMA's Cost Guide* suggests stabilizing the throughput figures that are determined for a given base date by using three years of crop data preceding the base date. Once an elevator's throughput is stabilized, the associated TAF can be determined in order to be applied to the elevator's RCNLD. An example of a TAF schedule is presented in *Figure 4*.

It is worth noting that functional and external obsolescence affect elevator values when they have less than five turns of their licenced capacity. Maximum obsolescence occurs at one turn (0.30 factor or 70% discount). *(Refer to Figure 4.)*

Figure 4: Throughput Adjustment Factors (TAF) Example

Average Throughput	Throughput Adjustment Factor (TAF)	Average Throughput	Throughput Adjustment Factor (TAF)
≥ 5.0	1.00	2.9	0.69
4.9	0.99	2.8	0.67
4.8	0.97	2.7	0.66
4.7	0.96	2.6	0.64
4.6	0.94	2.5	0.62
4.5	0.93	2.4	0.60
4.4	0.92	2.3	0.58
4.3	0.90	2.2	0.57
4.2	0.89	2.1	0.55
4.1	0.87	2.0	0.53
4.0	0.86	1.9	0.51
3.9	0.84	1.8	0.48
3.8	0.83	1.7	0.46
3.7	0.81	1.6	0.44
3.6	0.80	1.5	0.41
3.5	0.78	1.4	0.39
3.4	0.77	1.3	0.37
3.3	0.75	1.2	0.35
3.2	0.74	1.1	0.32
3.1	0.72	≤ 1.0	0.30
3.0	0.71		

3.7 Add / Deduct Other Values

There may be certain properties where the entire value of the property is not completely captured by the foregoing analysis. In these situations a lump sum adjustment may be required. For example, a property may have surplus or excess land which is not developed due to current market conditions. This land may be valued separately and added to the market value based assessment for the entire property.

A similar lump sum adjustment may also be applied for improvements if warranted. For example, a lump sum addition may be required to account for foundation adjustments such as compacted gravel base or pilings. The presence of an elevating leg at an annex may also require a lump sum addition to the value of an elevator property.

3.8 Market Value Based Assessment of Property

The market value based assessment of an elevator is determined by adding the value of the land as established through a sales comparison approach to the value of the improvements. Improvement values are established on the basis of replacement cost new less physical deterioration and obsolescence (functional and external). The resulting market value of the improvements is added to the value of the land. Then if required, any additional value considerations are taken into account to determine an overall market value based assessment for the property.

An example of an elevator valuation is presented in *Section 5.0*

4.0 Validation of Results

The strength of an assessment system rests on two tenets: (1) its ability to produce appropriate market value based assessments, and (2) its treatment of similar properties in a fair and consistent manner.

To accomplish these ends, the valuation process should reflect the views and methods used in the marketplace. The process is applicable to all properties. There are two areas where the quality of the results can be ensured quickly and efficiently:

1) Valuation parameters; and
2) Checks against sales values.

Valuation Parameters

The assessor's valuation system has valuation parameters that have been researched, collected and analysed by local assessors. Appropriate statistical measures (median, mean, range) can be determined for each valuation parameter. When the assessor applies these valuation parameters to all similar properties, then the market value based assessments will be fair and consistent.

Check against Sales Values

To ensure that the market value based assessments developed are in line with the local market, the assessment values will typically be checked against any sales of similar properties that took place. Such sales also have inferences for values of similar properties.

Since there is a notable lack of appropriate sales to check, it may be difficult to carry out this process for elevators.

5.0 Elevator Valuation Example

The following two pages present a hypothetical example of a market value based assessment analysis of an elevator.

Figure 5: Elevator Data Entry Example

Example of typical pertinent physical and descriptive data about the property.

Figure 6: Elevator Valuation Summary Example

Example of summary data that would enable the assessor to calculate the appropriate market value based assessment of the property.

Figure 5: Elevator Data Entry – Example

Address	
Owner's Name	
Municipality	
Assessment Roll #	

Base Date	
Measurements in	
Grain in	Bushels
Licensed Capacity	950,000

Elevator	Capacities in Bushels	Construction Date	Construction Material
Elevator	450,000	2000	concrete
Storage #1	500,000	2000	concrete
Storage #2			
Storage #3			
Other			

Effective Year Built Calculation	
Condition: good, avg, poor	Average
Effect of Cond.	0.0
Effective Age	2000

Other Structures	Areas in (sf)		Quality
Office	1,000	2000	Average
Drive Shed	3,000	2000	Average
Retail Store			
Warehouse			
Other bldg			

Yard Improvements	
Pavement (sf)	
Fence (lf)	
Other yard	
Other yard	

Equipment	Capacity	Age	Comments
Cleaning		2000	
Drying		2000	
Other			

Inspection Notes	
Inspection date	August 15/05
Building type/condition	Modern standard concrete elevator / Average condition
Comment on operations	
Time of last upgrade	Full maintenance program completed in June, 2004.
Extra features	
Comment of site/location	Excellent access for all truck sizes. Prime cropland in area.
Number of car loading spots	100 car spot.
Comment on rail line/lease	CP rail access
Comment on competition	3 high throughput elevators within 20 miles.

Land	Site area	11.800

Crop Year			Year 1	Year 2	Year 3
Bushels			6,289,000	8,340,000	9,587,000
Capacity			950,000	950,000	950,000
Throughput			6.62	8.78	10.09

Stabilized throughput ratio based on three year average of Crop Years 1-3 (preceding Base Date)	8.50

Figure 6: Elevator Valuation Summary – Example

Address	
Municipality	
Assessment Roll #	
Base Date	

Licensed Capacity	950,000	Value Influencing Breakpoint	5.00
Average Turns	8.50	TAF:	1.00

Replacement Cost Analysis

Item	Units in Bushels	Rate	RCN	Effective Yr. Built	Life Expectancy	Dpn %	RCNLD	Obs. %	Improvement Value
Concrete Elevator	450,000	$8.36	$3,762,000	2000	60	2%	$3,686,760	0.0%	$ 3,686,760
Concrete Annex	500,000	$4.00	$2,000,000	2000	60	2%	$1,960,000	0.0%	$ 1,960,000
Office (sf)	1,000	$85.00	$85,000	2000	50	3%	$82,450	0.0%	$ 82,450
Drive shed (sf)	3,000	$70.00	$210,000	2000	50	3%	$203,700	0.0%	$ 203,700
Extra floor (sf)	0		$0	0		0%	$0	0.0%	$ 0
Retail store (sf)	0		$0	0		0%	$0	0.0%	$ 0
Other bldg (sf)	0		$0	0		0%	$0	0.0%	$ 0
Pavement (sf)	0		$0			0%	$0	0.0%	$ 0
Fence (lf)	0		$0			0%	$0	0.0%	$ 0
Other yard	0		$0			0%	$0	0.0%	$ 0
Other yard	0		$0			0%	$0	0.0%	$ 0
Total: Assessable Structures			**$6,057,000**			**2.05%**	**$5,932,910**	**0.0%**	**$ 5,932,910**

Land Value	
Site area (acres)	11.800
Land value per acre	$ 15,500
Land Value	**$ 182,900**

Value Summary	
Land value	$182,900
Building value	$5,932,910
Market Value	**$6,115,810**
Market Value Based Assessment	**$6,115,000**

6.0 Grain Elevator Valuation Guide

Subject Index