

### Summary

This chapter contains the valuation procedures for determining the replacement cost new, physical deterioration, functional obsolescence, market adjustment factor, throughput adjustment factor, and assessed value for residential or commercial buildings or structures valued using the cost approach.

SAMA's 2015 Cost Guide provides direction for the valuation of property by the cost approach; it does not have the force of law.

Portions of this chapter are not available for viewing due to licensing with Marshall and Swift. Therefore the classification guidelines, rates and factors etc. have been intentionally left blank.

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**Summary**

This section contains the calculation procedures used to calculate the assessed value for residential and commercial buildings and structures after the Replacement Cost New (RCN) has been determined.

**Residential and Commercial Buildings and Structures**

The following calculation procedure is used for all residential and commercial buildings and structures except grain elevators and annexes.

Description	No.	Page No.
a) Replacement Cost New (RCN)	3.3	1-5
b) Cost Factor	3.4	1-2
c) $RCN \times Cost\ Factor = a \times b$		
d) $RCN\ Less\ Physical\ Deterioration = c \times (1 - (d_1 \times d_2))$		
d <sub>1</sub> . Physical Deterioration	3.8	1-15
d <sub>2</sub> . Condition Rating	3.8	15-17
e) $RCN\ Less\ Physical\ Deterioration\ and\ Functional\ Obsolescence = d \times e_1$		
e <sub>1</sub> . Functional Obsolescence Factor	3.9	1
f) Market Adjustment Factor	3.10	1-4
g) Assessed value = $e \times f$		

**Grain Elevators and Annexes**

The following calculation procedure is used for grain elevators and annexes.

Description	No.	Page No.
a) Replacement Cost New (RCN)	3.3	1-5
b) Cost Factor	3.4	1
c) $RCN \times Cost\ Factor = a \times b$		
d) $RCN\ Less\ Physical\ Deterioration = c \times (1 - (d_1 \times d_2))$		
d <sub>1</sub> . Physical Deterioration	3.8	1-5
d <sub>2</sub> . Condition Rating	3.8	15-17
e) $RCN\ Less\ Physical\ Deterioration\ and\ Functional\ Obsolescence = d \times e_1$		
e <sub>1</sub> . Functional Obsolescence Factor	3.9	1
f) Throughput Adjustment Factor; or	3.11	1-2
g) Market Adjustment Factor	3.10	1-4
h) Assessed value = $(d \times f)$ or $(e \times g)$		

## Improvements

### Calculation Procedures after RCN

3.2

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### Summary

This section contains the valuation procedures for determining the replacement cost new for residential and commercial buildings and structures.

### Use of Rate Schedules

Where a rate schedule does not state the units of comparison, the units of comparison are dollars per square foot (\$/sq. ft.).

Where a rate schedule does not contain a rate, factor or multiplier for a specific dimension or size, mathematical interpolation of the next highest and next lowest rate, factor or multiplier is used to calculate the required rate, factor or multiplier.

### Costs Included

Both direct costs and indirect costs are included in the rates.

Direct costs include all labour and materials; site preparation, grading and excavation for the foundation; and connection of utilities that are directly related to the building or structure.

Indirect costs include legal and selling fees, permits and plans, survey fees, net sales taxes, service charges and interest on building funds during construction, overhead costs, contractor's profit, worker's compensation and unemployment insurance costs, fire and liability insurance, unemployment insurance, temporary equipment and facilities, and security.

### Measurement of Buildings and Structures

All building and structure measurements are imperial or metric standards. Linear measurements are determined to the nearest foot.

The floor area of a building or structure, or a section of a building or structure, includes the interior partitions, elevators, stairways and exterior walls.

The floor area of a building or structure or a section of a building or structure is measured to the outside finished surface of the exterior walls, unless otherwise specified.

The floor area of the following occupancies are measured to the inside finished surface of the exterior walls:

- residential lofts (No. 6.12);
- finished rooms in garages (No. 6.2);
- basement rooms (No. 5.12). Note: Basement room area is calculated as a percentage of the total basement area.

The total floor area of a residential outbuilding (Chapter 6) is the sum of all areas for that occupancy code.

## Improvements

### Replacement Cost New

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#### Unit of Comparison

The units of comparison are in imperial or their metric equivalent.

The following are the units of comparison and their application for determining the replacement cost new of buildings and structures.

Type	Units of Comparison	Abbreviation
Section Area	Square Feet	sq. ft.
Unit Area	Square Feet	sq. ft.
Floor Area	Square Feet	sq. ft.
Surface Area	Square Feet	sq. ft.
Base Area	Square Feet	sq. ft.
Building Volume	Cubic Feet	cu. ft.
	Bushels	bushels
Tank Volume	Imperial Gallons	imp. gal.
	U.S. Gallons	USG
	Imperial Barrels	barrels
	Cubic Meters	M <sup>3</sup>
Bin Volume	Bushels	bushels
Elevator Volume	Bushels	bushels
Structure Volume	Pounds per Hour	lb./hr.
Structure Height	Feet	ft.
Structure Length	Feet	ft.
Perimeter	Feet	ft.
Structural Unit	Unit	unit
Reservoir	Acre Foot	af.
	Imperial Gallons	imp. gal.
	U.S. Gallons	USG

#### Conversion Chart for Volume and Mass

1	U.S. Gallon	=	0.8327	Imperial Gallon
1	Imperial Gallon	=	1.2009	U.S. Gallons
1	U.S. Gallon	=	3.7854	Litres
1	Litre	=	0.26417	U.S. Gallon
1	Imperial Gallon	=	4.5461	Litres
1	Litre	=	0.21996	Imperial Gallon
1	Acre Foot	=	325,900	U.S. Gallons
1	U.S. Gallon	=	0.1337	Cubic Feet
1	U.S. Gallon	=	0.1074	Bushel
1	Barrel (oil)	=	42	U.S. Gallons
1	Bushel	=	1.2444	Cubic Feet
1	Cubic Foot	=	0.8036	Bushel
1	Cubic Meter	=	6.11026	Imperial Barrels

### General

#### Residential

The replacement cost new of residential buildings and structures is determined by calculating the cost of construction using the square foot method, primarily based on the valuation procedures in the Marshal & Swift Residential Cost Handbook.

The square foot method for determining replacement cost new is used where a building or structure can be classified in accordance with the classification guidelines in:

- Chapter 4 – Residential Adjustments;0
- Chapter 5 – Residential Dwellings;
- Chapter 6 – Residential Outbuildings.

#### Commercial

The replacement cost new of commercial buildings and structures is determined by calculating the cost of construction using the calculator method, unit-in-place cost method, segregated cost method or trended original cost method. The methods are applied in accordance with the valuation procedures in the Marshall Valuation Service.

#### **Climate Rating**

When using the Marshall Valuation Service for the calculator method, the unit-in-place cost method and the segregated cost method, the extreme climate cost adjustments are used for heating, ventilation and air conditioning (HVAC).

#### **Calculator Method**

The calculator method for determining replacement cost new is used where a building or structure can be classified in accordance with the classification guidelines in:

- Chapter 7 – Commercial Tanks and Reservoirs;
- Chapter 8 – Commercial Grain Elevators, Annexes and Bins;
- Chapter 9 – Commercial Miscellaneous;
- Marshall Valuation Service, Calculator Method.

The replacement cost new using the calculator method is determined by application of the following calculation procedure:

1. Determine the occupancy code for the building or structure;
2. Determine the building attributes required to calculate the replacement cost new from the classification and calculation procedures for the specific occupancy code; and
3. Calculate the replacement cost new in accordance with the calculation procedures for the specific occupancy code.

#### **Unit-in-Place Cost Method**

The unit-in-place cost method for determining replacement cost new is used where a specific commercial building or structure attribute can not be classified in accordance with the classification guidelines for the Marshall Valuation Service, Calculator Method, and can be classified in accordance with the unit-in-place classification guidelines, rate schedules,

and calculation procedures in Marshall Valuation Service, Unit-In-Place Costs, Sections 51 to 67.

Where a building or structure cannot be classified in accordance with the classification guidelines for the calculator method, the replacement cost new is determined by application of the following calculation procedure:

1. Determine the structural components that comprise the building or structure;
2. Determine the unit-in-place cost for each structural component;
3. Calculate the replacement cost new for each structural component by multiplying the unit-in-place cost by the number of units; and
4. Calculate the replacement cost new of the building or structure by summing the replacement cost new of the structural components.

#### **Segregated Cost Method**

The segregated cost method for determining replacement cost new is used where a specific commercial building or structure attribute cannot be classified in accordance with the classification guidelines for the calculator method or the unit-in-place cost method, and can be classified in accordance with the segregated cost classification guidelines, rate schedules, and calculation procedures in the Marshall Valuation Service, Segregated Method.

#### **Trended Original Cost Method**

The trended original cost method for determining replacement cost new is used where a specific commercial building or structural attribute cannot be classified in accordance with the classification guidelines for the calculator method, the unit-in-place cost method or the segregated cost method.

Both direct costs and indirect costs are included where the replacement cost new of a commercial building or structure is determined by the trended original cost method.

Direct costs should include all labour and materials; site preparation, grading and excavation for the foundation; and connection of utilities that are directly related to the building or structure.

Indirect costs related to the building or structure should include architectural and engineering fees, permits and plans, survey fees, net sales taxes, service charges and interest on building funds during construction, building supervision and overhead costs, contractor's profit, worker's compensation and unemployment insurance costs, fire and liability insurance, temporary equipment and facilities, and security charges related to the construction of the building or structure.



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Costs excluded from the determination of replacement cost new by the trended original cost method are as follows:

- land improvement costs, subdivision and development costs, studies for the project, appraisal or other consulting fees, including:
  - costs related to the purchase or assembly of land and related legal fees, and
  - property taxes, demolition, storm drain charges or rough site grading;
- financing discounts or bonuses, start-up costs, developmental overhead and fixture and equipment purchases;
- site improvement costs such as signs, landscaping, paving, walls, lighting, swimming pools or other recreational facilities;
- off site costs including roads, streets and other infrastructure, acreage and subdivision development fees, connection charges, environmental impact or other assessments;
- furnishings, fixtures or equipment not included in the general building contract;
- marketing or real estate expenses to create occupancy; and
- costs considered specialized tenant improvements.

The replacement cost new for commercial buildings and structures using the trended original cost method is determined by application of the following calculation procedure:

1. Determine the original construction cost of the building or structure.
2. Determine the direct and indirect costs requiring an adjustment.
3. Determine the comparative cost factor from (See Section 98) Marshall Valuation Service required to adjust construction costs to January 1, 2015.
4. Calculate the replacement cost new of the building or structure by adjusting the original construction cost for any direct or indirect costs requiring adjustment and multiplying the adjusted original construction cost by the comparative cost index.

## Improvements

### Replacement Cost New

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### **Description**

This section contains the valuation procedures for determining the cost factor for all commercial and residential buildings and structures.

### **Cost Factor Formula**

The cost factor is calculated by the following formula:

Cost Factor = Current Cost Multiplier x Local Multiplier x Saskatchewan Cost Factor

### **Marshall Valuation Service Commercial Current Cost Multipliers**

#### Calculator Method

When using the calculator method use the Marshall Valuation Service current cost multipliers in Section 99 (Current and Local Cost Multipliers), page 3, Current Cost Multipliers, Calculator Cost Sections, Central, dated 10/2014.

#### Segregated Method

When using the segregated method use the Marshall Valuation Service current cost multipliers in Section 99 (Current and Local Cost Multipliers), page 3, Current Cost Multipliers, Segregated Cost Sections, Central, dated 10/2014.

#### Unit-in-place Method

When using the unit-in-place method use the Marshall Valuation Service current cost multipliers in Section 99 (Current and Local Cost Multipliers), page 3, Current Cost Multipliers, Unit-In-Place Cost Sections 51 to 67, Central, dated 10/2014.

### **Marshall Valuation Service Commercial Local Multipliers**

Apply the Marshall Valuation Service local multipliers from Section 99 (Current and Local Cost Multipliers), page 5, Local Multipliers, Canada, Saskatchewan, dated 10/2014.

The Canadian Tax Removal adjustment in Section 99, page 5, shall not be applied in the determination of Replacement Cost New (RCN) and Assessed values in Saskatchewan.

### **Commercial Saskatchewan Cost Factor**

The Saskatchewan Cost Factor is 1.10.

### **Cost Factor**

The Cost Factor (Current Cost Multiplier x Local Multiplier x Saskatchewan Cost Factor) for the following commercial buildings and structures is 1.00:

- Concrete Annex (S830)
- Crib Elevator (S831)
- Concrete Elevator (S832)
- Crib Annex (S834)
- Frame Annex (S835)
- Steel Annex (S844)
- Steel Hoppered Annex (S845)
- Steel Bin Elevator (S846)

## Improvements

### Cost Factor

3.4

#### Residential Current Cost Multiplier

Apply the following current cost multiplier to residential buildings and structures.

Description	Current Cost Multiplier
Single Family Dwellings (and all other residential buildings and structures on the same property)	
Multi-Family Dwellings (Semi-Detached; Townhouse) (and all other residential buildings and structures on the same property)	
Summer Cottages (and all other residential buildings and structures on the same property)	
A-Frame Summer Cottages (and all other residential buildings and structures on the same property)	
Manufactured Homes (and all other residential buildings and structures on the same property)	
Residential buildings and structures on properties with no main dwelling (No. 4.3, page 1)	

#### Residential Local Multiplier

The residential local multiplier is .

#### Residential Saskatchewan Cost Factor

The Saskatchewan Cost Factor is 1.15.

### Summary

This section contains the valuation procedures for determining building height adjustments for various types of commercial buildings.

### Application

Building height adjustments that may be applied to commercial buildings are:

- storey height
- section height
- building height (total number of storeys)

### Storey Height

Storey height is the vertical height of the exterior wall, which is measured as follows:

- in a flat roof 1 Storey building the vertical distance from the top of the floor to the top of the roof;
- in a slant roof building the average vertical distance from the floor to the top of the roof;
- in a 1 Storey standard gable roof building the vertical distance from the top of the floor to the top of the exterior wall;
- in a multi-storey building the vertical distance from the top of the floor to the top of the next floor above; and
- for non-standard or high pitched roofs, by dividing the cubic volume of the building section by the area of the building.

Where the storey height varies from the standard storey height for the building, a storey height factor is applied.

The standard storey height and the storey height factor are specified in structural components and adjustments sections for the specific occupancy codes to which they apply.

### Section Height

Section height is the number of storeys in a section of a building, where each storey is constructed to the same construction standard.

### Building Height (Total Number of Storeys)

Building height is the total number of storeys for all portions of a building that are attached vertically, excluding below ground portions such as basements and underground parkades. Apply the building height factor to all storeys including below ground portions.

The unit of measure for building height is the number of storeys.

## Improvements

### Building Height - Commercial Buildings

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Building Height (Total Number of Storeys)	Factor	Building Height (Total Number of Storeys)	Factor
1		26	
2		27	
3		28	
4		29	
5		30	
6		31	
7		32	
8		33	
9		34	
10		35	
11		36	
12		37	
13		38	
14		39	
15		40	
16		41	
17		42	
18		43	
19		44	
20		45	
21		46	
22		47	
23		48	
24		49	
25		≥ 50	

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**Summary**

This section contains the valuation procedures for determining incomplete construction adjustments for various types of commercial buildings and structures.

**Application**

The incomplete construction adjustment is used to adjust the replacement cost new of buildings or structures that are under construction.

Where the base rate is adjusted for a missing building component, an incomplete construction adjustment for the missing component is not included in the calculation of replacement cost new.

Where a building is under construction and the base rate is not adjusted for a missing component, the incomplete construction factor is determined using the formula:

$$\text{Incomplete Construction Factor} = \frac{(\text{Total Construction Cost} - \text{Costs Incurred to Date})}{\text{Total Construction Cost}}$$

## Improvements

### **Incomplete Construction - Commercial Buildings**

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**3.6**



**Summary**

This section describes the incomplete construction adjustment for residential dwellings. For incomplete construction for garages see No. 6.2.

**Application**

The incomplete construction adjustment may be applied to the living area (No. 4.4, pages 1-4) of the following residential dwellings:

- Single family dwellings
- Multi-family dwellings (Semi-Detached; Townhouse)
- Summer cottages
- A-Frame summer cottages
- Manufactured homes
- Manufactured home extensions

Where a building component is missing and the missing component is not included in the base rate, an incomplete construction adjustment for the missing component should not be included in the calculation of replacement cost new.

Where a building component is partially constructed, the incomplete construction adjustment for that component may be adjusted in proportion to the amount of construction for the building component that is remaining to be completed.

**Application**

There are two steps in the application of the incomplete construction adjustment.

1. Determine the total incomplete construction for the dwelling using the following table:

<b>Description of Building Components</b>	<b>Percentage (%) of Structure Rate</b>
Framing (walls, roof, & floor structure)	30
Exterior wall finish	9
Roof cover	4
Exterior doors and windows	3
Insulation	1
Electrical (wiring & mechanical rough-in)	9
Light fixtures and finished hardware	3
Interior drywall and ceiling finish	12
Interior doors, trim and cabinets	19
Painting	6
Floor cover	4
<b>TOTAL</b>	<b>100%</b>

## Improvements

### Incomplete Construction - Residential Dwellings

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2. Use the following ranges to determine which incomplete construction percentage adjustment should be applied:

<b>Low End of Range (%)</b>	<b>High End of Range (%)</b>	<b>% Incomplete Adjustment Applied</b>
5	10	10% Incomplete
11	20	20% Incomplete
21	30	30% Incomplete
31	40	40% Incomplete
41	50	50% Incomplete
51	60	60% Incomplete
61	70	70% Incomplete
71	80	80% Incomplete
81	99	90% Incomplete

No incomplete construction adjustment is applied when the total incomplete construction percentage is less than 5%.

### Summary

This section contains the valuation procedures for determining the amount of physical deterioration for residential and commercial buildings and structures valued by the cost approach.

### Application

Physical deterioration is the loss in value from replacement cost new due to wear and tear, decay and structural defects caused by the forces of nature.

Some causes of physical deterioration are normal use, breakage, neglect, infestation of insects, dry rot, moisture, and climatic elements. The occurrence of physical deterioration is dependent on the quality of the workmanship and materials used to construct the building or structure, and the use, abuse and general maintenance of the building or structure since its construction.

The physical deterioration and condition rating schedules account for all curable and incurable physical deterioration and normal functional obsolescence not accounted for in the replacement cost new of the building or structure.

No additional allowance should be made for physical deterioration except as may be accounted for in the calculation of the market adjustment factor for buildings and structures and the throughput adjustment factor for licenced grain elevators.

Where the total percentage amount of physical deterioration is equal to or greater than the replacement cost new of the building or structure, the amount of physical deterioration is 99%.

Physical deterioration may be determined by the age-life method or lifetime method.

### Age-Life Method

The age-life method is used where the actual or effective age of the building or structure is known or can be estimated, and the condition of the building or structure can be determined or estimated.

‘Actual age’ is the number of years elapsed since an original structure was built.

‘Effective age’ is the typical age of structures equivalent to the one in question with respect to condition and utility and reflects the remaining economic life of the building or structure. Effective age can be either shorter or longer than actual age.

‘Economic life’ means, with respect to a building or structure, the period during which a given building or structure is expected to contribute (positively) to the value of the total property. This period is typically shorter than the period during which the improvement could be left on the property, that is, its physical life. Renovation, remodelling, or rehabilitation can extend a building’s physical life and can have an effect on its remaining economic life.

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#### Commercial Buildings and Structures

The amount of physical deterioration for commercial buildings and structures is determined by application of the following calculation procedure:

1. Determine the normal life expectancy for the class and type of building or structure.
2. Determine the effective age and the percentage amount of deterioration for the class and type of building or structure using the physical deterioration schedules.
3. Determine the condition and condition factor using the condition rating schedule.
4. Calculate the total percentage amount of physical deterioration by multiplying the amount of physical deterioration from the physical deterioration schedule by the condition factor from the condition rating schedule.

### Lifetime Method

The amount of physical deterioration by the lifetime method for commercial buildings and structures is 40%. The condition rating is 1.0.

The lifetime method is used for the following commercial buildings and structures:

1. Marshall Valuation Service:
  - Secure Storage Shed: Section 17, page 25
  - Farm Storage: Section 17, pages 54 to 55
  - Tanks: Section 61
  - Miscellaneous Industrial Costs: Section 62, pages 5 to 6
  
2. SAMA's 2015 Cost Guide
  - Chapter 7: Commercial Tanks and Reservoirs
  - Chapter 8: Commercial Cylindrical Bin (S840)
  - Chapter 8: Commercial Hopper Bin (S841)
  - Chapter 8: Utility Bin (S842)
  - Chapter 8: Utility Hopper Bin (S843)
  - Chapter 9: Stacks (S852)
  - Chapter 9: Incinerators (S853)
  - Chapter 9: Mill Incinerator (S854)
  - Chapter 9: Brick Incinerator (S855)
  - Chapter 9: Towers (S860)
  - Chapter 9: Guyed Towers (S861)
  - Chapter 9: Drive-In Theatre Screen (S865)
  - Chapter 9: Waterslides (S876)
  - Manufactured Home Park Development – Cost Schedule (2.10, page 4)
  - Airport Land Development – Cost Schedule (2.12, page 2)
  - Golf Course Development – Cost Schedule (2.13, page 2)

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**Commercial Building and Structure Physical Deterioration Schedule**

Use the physical deterioration schedule in the Marshall and Swift Valuation Service Section 97, Depreciation – Commercial Properties dated October 2012 except for occupancy codes that use a life expectancy from the Specified Commercial Building Life Expectancy Table.

Properties built in 2015 or newer are assigned an effective age of '0'.

For commercial buildings and structures, the following construction classes are used to assign life expectancies from the Specified Commercial Building Life Expectancy Table. The class of construction is the basic subdivision in the Marshall Valuation Service, dividing all buildings into basic cost groups by type of framing.

<b>Construction Class</b>	<b>Construction Class Description</b>
C	Concrete Frame (Masonry) Exterior Wall
D	Wood Frame Exterior Wall
P	Pole Frame Exterior Wall
S	Steel Frame Exterior Wall
W	Steel Frame Exterior Slant Wall

## Improvements

### Physical Deterioration

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**Specified Commercial Building Life Expectancy Table**

Occupancy Code	Occupancy Description	Const. Class	Construction Quality			
			Low Cost	Average	Good	Excellent
104	Commodity Warehouse	C				
		D				
		P				
		S				
		W				
123	Seed Processing Storage	D				
		P				
		S				
339	Lumber Storage Shed	D				
		P				
		S				
390	Lumber Storage Building	D				
		P				
		S				
391	Material Storage Building	C				
		D				
		P				
		S				
		W				
420	Bulk Fertilizer Storage	C				
		D				
		P				
		S				
468	Material Storage Shed	C				
		D				
		P				
		S				
		W				
471	Light Commercial Utility Building	C				
		D				
		P				
		S				
		W				
554	Shed Office Structure	C				
		D				
		P				
		S				
555	Light Commercial Quonset	D				
		P				
		S				
556	Bulk Oil Storage	D				
		P				
		S				

#### **Residential Buildings and Structures**

Properties built in 2015 or newer are assigned an effective age of '0'.

The quality of main dwellings and other residential buildings and structures referenced in the following procedures is determined using the procedures in No. 4.3.

#### **Residential Properties with Main Dwellings**

The amount of physical deterioration for all residential buildings and structures on a property with a main dwelling is determined by application of the following calculation procedure:

1. Determine a single overall effective age for the quality of the main dwelling.
2. Determine a single overall physical deterioration percentage from the physical deterioration schedule.
3. Determine a single overall condition factor for the main dwelling using the condition rating schedule.
4. Multiply the physical deterioration percentage (Step 2) by the condition factor (Step 3) to calculate the total physical deterioration percentage to apply to the main dwelling.
5. Apply the physical deterioration percentage calculated for the main dwelling (Step 4) to all other residential buildings and structures on the property.

#### **Residential Buildings and Structures on Properties with no Main Dwelling**

The amount of physical deterioration for all residential buildings and structures on a property with no main dwelling is determined by application of the following calculation procedure:

1. Determine a single overall effective age for the quality of the residential buildings or structures on a property.
2. Determine a single overall physical deterioration percentage from the physical deterioration schedule.
3. Determine a single overall condition factor for residential buildings and structures using the condition rating schedule.
4. Multiply the physical deterioration percentage (Step 2) by the condition factor (Step 3) to calculate the total physical deterioration percentage to apply to all residential buildings and structures on the property.



#### **Residential Building and Structure Physical Deterioration Schedules**

The amount of physical deterioration for main dwellings and residential buildings and structures is determined by application of the following physical deterioration schedules:

- Single Family Dwelling
- Multi-Family Dwelling
- Summer Cottage and A-Frame Summer Cottage
- Manufactured Home

Residential buildings and structures on properties with no main dwelling use the Single Family Dwelling Physical Deterioration Schedule.

## Improvements

### Physical Deterioration

**3.8**

#### Single Family Dwelling Physical Deterioration (%)

Effective Age	Quality						
	Excellent	Very Good	Good	Average	Fair	Low	Very Low
≥ 74	80	80	80	80	80	80	80
73	79	79	79	79	80	80	80
72	79	79	79	79	80	80	80
71	78	78	79	79	80	80	80
70	77	77	78	78	80	80	80
69	76	76	78	78	80	80	80
68	75	75	77	77	79	79	80
67	74	74	76	76	79	79	80
66	73	73	76	76	79	79	80
65	72	72	75	75	79	79	80
64	70	70	74	74	78	78	80
63	69	69	73	73	78	78	80
62	68	68	72	72	77	77	80
61	67	67	71	71	76	76	80
60	65	65	70	70	76	76	80
59	64	64	69	69	75	75	80
58	62	62	68	68	74	74	79
57	61	61	67	67	73	73	79
56	60	60	66	66	72	72	78
55	58	58	65	65	71	71	77
54	57	57	63	63	70	70	76
53	55	55	62	62	69	69	76
52	54	54	61	61	67	67	75
51	52	52	59	59	66	66	73
50	51	51	58	58	65	65	72
49	49	49	56	56	63	63	71
48	48	48	55	55	62	62	70
47	46	46	53	53	60	60	68
46	45	45	52	52	59	59	67
45	43	43	50	50	57	57	65
44	42	42	49	49	55	55	63
43	40	40	47	47	54	54	62
42	39	39	46	46	52	52	60
41	37	37	44	44	50	50	58
40	36	36	43	43	49	49	56
39	35	35	41	41	47	47	55
38	33	33	40	40	45	45	53
37	32	32	38	38	44	44	51
36	31	31	37	37	42	42	49

## Improvements

### Physical Deterioration

**3.8**

**Single Family Dwelling Physical Deterioration (%) (cont'd)**

Effective Age	Quality						
	Excellent	Very Good	Good	Average	Fair	Low	Very Low
35	29	29	35	35	40	40	47
34	28	28	34	34	39	39	45
33	27	27	32	32	37	37	43
32	26	26	31	31	35	35	42
31	24	24	29	29	34	34	40
30	23	23	28	28	32	32	38
29	22	22	27	27	31	31	36
28	21	21	25	25	29	29	35
27	20	20	24	24	28	28	33
26	19	19	23	23	26	26	31
25	18	18	22	22	25	25	30
24	17	17	21	21	24	24	28
23	16	16	19	19	22	22	26
22	15	15	18	18	21	21	25
21	14	14	17	17	20	20	23
20	13	13	16	16	19	19	22
19	13	13	15	15	18	18	21
18	12	12	14	14	16	16	19
17	11	11	14	14	15	15	18
16	10	10	13	13	14	14	17
15	9	9	12	12	13	13	16
14	9	9	11	11	13	13	14
13	8	8	10	10	12	12	13
12	7	7	9	9	11	11	12
11	7	7	9	9	10	10	11
10	6	6	8	8	9	9	10
9	6	6	7	7	8	8	9
8	5	5	6	6	7	7	8
7	4	4	6	6	7	7	7
6	4	4	5	5	6	6	6
5	3	3	4	4	5	5	5
4	2	2	3	3	4	4	4
3	2	2	3	3	3	3	3
2	1	1	2	2	2	2	2
1	1	1	1	1	1	1	2
0	0	0	0	0	0	0	0

## Improvements

### Physical Deterioration

**3.8**

#### Multi-Family Dwelling Physical Deterioration (%)

Effective Age	Quality				
	Excellent	Very Good	Good	Average	Fair
≥ 74	80	80	80	80	80
73	79	79	79	79	80
72	79	79	79	79	80
71	79	79	79	79	80
70	78	78	78	78	80
69	78	78	78	78	80
68	77	77	77	77	79
67	76	76	76	76	79
66	76	76	76	76	79
65	75	75	75	75	79
64	74	74	74	74	78
63	73	73	73	73	78
62	72	72	72	72	77
61	71	71	71	71	76
60	70	70	70	70	76
59	69	69	69	69	75
58	68	68	68	68	74
57	67	67	67	67	73
56	66	66	66	66	72
55	65	65	65	65	71
54	63	63	63	63	70
53	62	62	62	62	69
52	61	61	61	61	67
51	59	59	59	59	66
50	58	58	58	58	65
49	56	56	56	56	63
48	55	55	55	55	62
47	53	53	53	53	60
46	52	52	52	52	59
45	50	50	50	50	57
44	49	49	49	49	55
43	47	47	47	47	54
42	46	46	46	46	52
41	44	44	44	44	50
40	43	43	43	43	49
39	41	41	41	41	47
38	40	40	40	40	45
37	38	38	38	38	44
36	37	37	37	37	42

## Improvements

### Physical Deterioration

3.8

**Multi-Family Dwelling Physical Deterioration (%) (cont'd)**

Effective Age	Quality				
	Excellent	Very Good	Good	Average	Fair
35	35	35	35	35	40
34	34	34	34	34	39
33	32	32	32	32	37
32	31	31	31	31	35
31	29	29	29	29	34
30	28	28	28	28	32
29	27	27	27	27	31
28	25	25	25	25	29
27	24	24	24	24	28
26	23	23	23	23	26
25	22	22	22	22	25
24	21	21	21	21	24
23	19	19	19	19	22
22	18	18	18	18	21
21	17	17	17	17	20
20	16	16	16	16	19
19	15	15	15	15	18
18	14	14	14	14	16
17	14	14	14	14	15
16	13	13	13	13	14
15	12	12	12	12	13
14	11	11	11	11	13
13	10	10	10	10	12
12	9	9	9	9	11
11	9	9	9	9	10
10	8	8	8	8	9
9	7	7	7	7	8
8	6	6	6	6	7
7	6	6	6	6	7
6	5	5	5	5	6
5	4	4	4	4	5
4	3	3	3	3	4
3	3	3	3	3	3
2	2	2	2	2	2
1	1	1	1	1	1
0	0	0	0	0	0

## Improvements

### Physical Deterioration

**3.8**

**Summer Cottage and A-Frame Summer Cottage Physical Deterioration (%)**

Effective Age	Quality			
	Good	Average	Fair	Low
≥ 74	80	80	80	80
73	79	80	80	80
72	79	80	80	80
71	79	80	80	80
70	78	80	80	80
69	78	80	80	80
68	77	79	79	80
67	76	79	79	80
66	76	79	79	80
65	75	79	79	80
64	74	78	78	80
63	73	78	78	80
62	72	77	77	80
61	71	76	76	80
60	70	76	76	80
59	69	75	75	80
58	68	74	74	79
57	67	73	73	79
56	66	72	72	78
55	65	71	71	77
54	63	70	70	76
53	62	69	69	76
52	61	67	67	75
51	59	66	66	73
50	58	65	65	72
49	56	63	63	71
48	55	62	62	70
47	53	60	60	68
46	52	59	59	67
45	50	57	57	65
44	49	55	55	63
43	47	54	54	62
42	46	52	52	60
41	44	50	50	58
40	43	49	49	56
39	41	47	47	55
38	40	45	45	53
37	38	44	44	51
36	37	42	42	49

## Improvements

### Physical Deterioration

3.8

**Summer Cottage and A-Frame Summer Cottage Physical Deterioration (%) (cont'd)**

Effective Age	Quality			
	Good	Average	Fair	Low
35	35	40	40	47
34	34	39	39	45
33	32	37	37	43
32	31	35	35	42
31	29	34	34	40
30	28	32	32	38
29	27	31	31	36
28	25	29	29	35
27	24	28	28	33
26	23	26	26	31
25	22	25	25	30
24	21	24	24	28
23	19	22	22	26
22	18	21	21	25
21	17	20	20	23
20	16	19	19	22
19	15	18	18	21
18	14	16	16	19
17	14	15	15	18
16	13	14	14	17
15	12	13	13	16
14	11	13	13	14
13	10	12	12	13
12	9	11	11	12
11	9	10	10	11
10	8	9	9	10
9	7	8	8	9
8	6	7	7	8
7	6	7	7	7
6	5	6	6	6
5	4	5	5	5
4	3	4	4	4
3	3	3	3	3
2	2	2	2	2
1	1	1	1	2
0	0	0	0	0

# Improvements

## Physical Deterioration

3.8

**Manufactured Home Physical Deterioration Schedule (%)**

Effective Age	Quality		
	Good	Average	Fair
≥ 48	80	80	80
47	79	80	80
46	79	80	80
45	78	80	80
44	77	80	80
43	76	80	80
42	75	80	80
41	74	79	80
40	73	79	80
39	71	78	80
38	70	77	80
37	68	76	80
36	67	75	80
35	65	73	80
34	63	72	80
33	61	70	80
32	59	68	80
31	57	66	80
30	55	64	80
29	52	62	79
28	50	60	78
27	48	58	77
26	45	55	75
25	43	53	73
24	41	50	71
23	38	48	68
22	36	45	65
21	34	42	62
20	32	40	59
19	30	37	56
18	28	35	53
17	26	32	50
16	24	30	46
15	22	28	43
14	20	25	40
13	19	23	37
12	17	21	34
11	15	19	31
10	14	17	28
9	13	16	25



**Manufactured Home Physical Deterioration Schedule (%) (cont'd)**

Effective Age	Quality		
	Good	Average	Fair
8	11	14	22
7	10	12	19
6	9	11	17
5	8	9	14
4	6	8	12
3	5	6	9
2	3	4	7
1	2	2	4
0	0	1	2

**Condition Rating Schedule**

The condition of buildings and structures is determined taking into consideration the remaining economic life of both short-lived and long-lived items.

Short-lived items have a shorter life than the basic structure, for example, roofing, interior finish, floor coverings, heating system and plumbing fixtures.

Long-lived items are in the basic structure of the building and are not usually replaced during the economic life of the building. Long-lived items include such things as the foundation, frame, floor and roof structure, piping, heat ducts, insulation and electrical wiring.

The condition factor for residential and commercial buildings and structures is determined by application of the following condition rating schedule.

## Improvements

### Physical Deterioration

3.8

Condition Rating	Description	Condition Factor
Excellent	<p><u>Remodelling</u>: Extensive remodelling has occurred in recent years. No functional inadequacies of any consequence.</p> <p><u>Long-lived items</u>: Long-lived items have had good maintenance, remodelling, or renovation where necessary.</p> <p><u>Maintenance</u>: Above normal regular general maintenance has occurred. All items that can normally be repaired or refinished have recently been corrected.</p> <p><u>Short-lived items</u>: All major short-lived items are in like-new condition.</p>	0.5
Superior	<p><u>Remodelling</u>: Some remodelling has occurred in recent years. Little evidence of functional obsolescence and a high degree of utility.</p> <p><u>Long-lived items</u>: Long-lived items have had good maintenance, remodelling or renovation where necessary.</p> <p><u>Maintenance</u>: Above normal regular general maintenance has occurred.</p> <p><u>Short-lived items</u>: Most major short-lived items are in like-new condition.</p>	0.6
Very Good	<p><u>Remodelling</u>: Some remodelling has occurred since construction of the original building. Little evidence of functional obsolescence and a high degree of utility.</p> <p><u>Long-lived items</u>: Long-lived items have been repaired where necessary. No visible evidence of deterioration.</p> <p><u>Maintenance</u>: Normal regular general maintenance has occurred. Many items have been overhauled and repaired as they've shown signs of wear.</p> <p><u>Short-lived items</u>: Many of the major short-lived items are in like-new condition, while others are well maintained and some may require minor repair.</p>	0.7
Good	<p><u>Remodelling</u>: Utility is above the standard.</p> <p><u>Long-lived items</u>: Long-lived items have been repaired where necessary.</p> <p><u>Maintenance</u>: Normal regular general maintenance has occurred. No obvious maintenance required.</p> <p><u>Short-lived items</u>: A few major short-lived items are in like-new condition, while others are well maintained and some may require minor repair.</p>	0.8

## Improvements

### Physical Deterioration

3.8

Condition Rating	Description	Condition Factor
Above Average	<p><u>Remodelling:</u> Building is substantially in its original state.</p> <p><u>Long-lived items:</u> Most long-lived items have been repaired where necessary.</p> <p><u>Maintenance:</u> Normal regular general maintenance has occurred.</p> <p><u>Short-lived items:</u> A few major short-lived items are in like-new condition, while others are well maintained and some may require minor repair.</p>	0.9
Average	<p>Irrespective of the following description, new or recently built buildings are considered to be in average condition.</p> <p><u>Remodelling:</u> Building is substantially in its original state. Utility is standard for properties with a similar class and usage.</p> <p><u>Long-lived items:</u> Most long-lived items have been repaired where necessary.</p> <p><u>Maintenance:</u> Normal regular general maintenance has occurred. May have some evidence of deferred maintenance as a few minor repairs and refinishing are needed.</p> <p><u>Short-lived items:</u> A few major short-lived items may require repair or replacement, while others will not require replacement in the short term.</p>	1.0
Below Average (Badly Worn)	<p><u>Remodelling:</u> Building is substantially in its original state. Inadequate building utility and services.</p> <p><u>Long-lived items:</u> Lack of maintenance of long-lived items has resulted in structural decay and defects.</p> <p><u>Maintenance:</u> Deferred general maintenance is apparent. Much repair is needed.</p> <p><u>Short-lived items:</u> Some major short-lived items require repair or replacement, while others show noticeable wear.</p>	1.15
Poor (Worn Out)	<p><u>Remodelling:</u> Building is substantially in its original state. Usually contains numerous functional inadequacies.</p> <p><u>Long-lived items:</u> Lack of maintenance of long-lived items has resulted in structural decay and defects that cannot be economically repaired.</p> <p><u>Maintenance:</u> General maintenance has been neglected.</p> <p><u>Short-lived items:</u> Most short-lived items need major repairs or replacement.</p>	1.3



### Summary

This section contains the valuation procedures for determining the amount of functional obsolescence for residential and commercial buildings and structures valued by the cost approach.

Functional obsolescence is the loss in value from replacement cost new less physical deterioration due to the inability of the building or structure to adequately perform the function for which it is used.

Functional obsolescence is caused by changes in demand, design and technology that result in a loss in the utility of the building or structure.

Functional obsolescence is any functional obsolescence not accounted for in the replacement cost new less physical deterioration or market adjustment factor. Where there is no functional obsolescence attributed to a building or structure the functional obsolescence factor is 1.0.

Functional obsolescence not accounted for in the replacement cost new less physical deterioration or market adjustment factor can be accounted for in accordance with the replacement cost method.

The amount of obsolescence is determined from the replacement cost of a substitute building or structure.

### Replacement Cost Method

The amount of functional obsolescence is determined by application of the following calculation procedure:

1. Determine the replacement cost new less physical deterioration of the building or structure with the functional obsolescence.
2. Determine the replacement cost new less physical deterioration of a substitute building or structure without the obsolescence.
3. Calculate the functional obsolescence factor by dividing the replacement cost new less physical deterioration of the substitute building or structure by the replacement cost new less physical deterioration of the building or structure with the functional obsolescence.



### Summary

This section contains the valuation procedures for determining the market adjustment factor (MAF) for residential and commercial buildings and structures valued by the cost approach.

The market adjustment factor accounts for all economic obsolescence and any loss or gain in value of the building or structure due to any difference in replacement costs and any difference in the amount of physical deterioration or functional obsolescence, that have not already been taken into account.

The market adjustment factor can be determined by the sales comparison method, condominium unit method, comparable neighbourhood method, or mixed buildings and structures method.

### Sales Comparison Method

The sales comparison method is used where there are sufficient improved property sales to establish a market adjustment factor.

The market adjustment factor is determined by application of the following calculation procedure:

1. Identify improved properties with comparable buildings or structures that are sales.
2. Determine the market ratio for each improved property sale:
  - i. Determine the improved property sale price.
  - ii. Determine the assessed value of the land
  - iii. Determine the replacement cost new less physical deterioration and functional obsolescence of the buildings or structures.
  - iv. Calculate the residual building value by subtracting the assessed value of the land from the improved property sale price.
  - v. Calculate the market ratio by dividing the residual building value by the replacement cost new less physical deterioration and functional obsolescence.
3. Determine the market adjustment factor for the comparable buildings and structures.

### Comparable Neighbourhood Method

The comparable neighbourhood method is used where improved sales are limited and there are sufficient improved property sales in a comparable neighbourhood to establish a reliable market adjustment factor.

The market adjustment factor is determined by application of the direct comparison formula or ratio comparison formula.

#### Direct Comparison

The market adjustment factor by direct comparison is determined by application of the following formula:

$$MAF_{SUB} = MAF_{COMP}$$

where:  $MAF_{SUB}$  = market adjustment factor in the subject neighbourhood  
 $MAF_{COMP}$  = market adjustment in the comparable neighbourhood

#### Ratio Comparison

The market adjustment factor by ratio comparison is determined by application of the following formula:

$$MAF_{SUB} = \frac{MAF_2 \times MAF_{COMP1}}{MAF_{COMP2}}$$

where:  $MAF_{SUB}$  = market adjustment factor for the subject buildings and structures  
 $MAF_2$  = market adjustment factor for other buildings and structures in the subject neighbourhood  
 $MAF_{COMP1}$  = market adjustment factor for buildings and structures comparable to the subject and located in the comparable neighbourhood  
 $MAF_{COMP2}$  = market adjustment factor for buildings and structures comparable to the other buildings and structures in the subject neighbourhood and located in the comparable neighbourhood



### Condominium Unit Method

The condominium unit method is used where there are sufficient improved condominium unit sales to establish a market adjustment factor.

For condominium units, including bare land condominium units, the market adjustment factor is determined by application of the following calculation procedure:

1. Identify comparable improved condominium unit sales.
2. When needed, determine the method of apportioning. Apportioning methods may be condominium unit factors, square feet, RCN or other units of comparison.
3. Determine the market ratio for each improved condominium unit sale:
  - i. Determine the assessed value of the land associated with each improved condominium unit sale by apportioning the assessed value of the parcel of land.
  - ii. Determine the building residual sale price for each improved condominium unit sale:
    - determine the improved condominium unit sale price; and
    - calculate the building residual value by subtracting the assessed value of the land associated with the condominium unit from the improved condominium unit sale price.
  - iii. Calculate the replacement cost new less physical deterioration and functional obsolescence (RCNLD) of each condominium unit:  
**Note:** for condominium units where RCNLD procedures do not separate the RCNLD for all or a portion of the individual condominium units apportion the RCNLD using the appropriate method.
  - iv. Calculate the market ratio by dividing the building residual sale price of the condominium unit by the replacement cost new less physical deterioration and functional obsolescence of the condominium unit.
4. Determine the market adjustment factor for the condominium unit.

### Mixed Buildings and Structures Method

The Mixed Buildings and Structures Method does not apply to residential condominiums, as each residential condominium is a separate property.

Method 1 or method 2 of the mixed buildings and structures method may be used where there are insufficient improved property sales to establish a single market adjustment factor for the entire property using the sales comparison method, condominium unit method, or comparable neighbourhood method.

#### Method 1

This method may be used where:

- two or more buildings or structures with different present uses are located on the same parcel of land; and
- there are sufficient improved property sales in the subject neighbourhood or a comparable neighbourhood, to establish a market adjustment factor for each of the present uses separately.

The market adjustment factor is determined by application of the following calculation procedure:

1. Identify improved properties that have sold with buildings or structures comparable to each of the present uses.
2. Determine the market adjustment factor for each present use.
3. Apply the market adjustment factor calculated for each present use to the buildings and structures located on the mixed use parcel of land with the same present use.

#### Method 2

This method may be used where:

- two or more parts of a building or structure, located on the same parcel of land, have been classified as separate building groups;
- one building group does not predominate the property; and
- there are sufficient improved property sales in the subject neighbourhood or a comparable neighbourhood, to establish a reliable market adjustment factor for buildings and structures comparable to each of the separate building groups.

The market adjustment factor is determined by application of the following calculation procedure:

1. Identify improved properties that have sold with buildings or structures comparable to each of the separate building groups.
2. Determine the market adjustment factor for each of the comparable buildings and structures.
3. Apply the market adjustment factor calculated for each of the comparable buildings or structures to the comparable building group of the subject building or structure.

#### **Summary**

This section contains the valuation procedures for determining the Throughput Adjustment Factor (TAF) for elevators and annexes valued by the cost approach.

The depreciation for licenced elevators and annexes is determined by calculating the amount of physical deterioration by the age-life method and adjusting for any functional or economic obsolescence by using either a Throughput Adjustment Factor (TAF) or, when sales are available, methods similar to other commercial property valued using functional obsolescence and the market adjustment factor (MAF). The TAF accounts for all economic and functional obsolescence.

The TAF is not applicable to unlicenced elevators and annexes.

The TAF for a licenced elevator or annex and the associated office and drive shed is determined in accordance with the throughput adjustment rate schedule.

The throughput and average throughput are calculated on a crop year basis for all licenced elevators and annexes owned by the same company and located at the same station using the crop years 2011-12, 2012-13 and 2013-14.

The throughput is the amount of grain handled for the crop year divided by the licenced capacity of the elevators and annexes for the crop year.

The average throughput is the sum of the throughputs for each crop year divided by three.

#### **Unlicenced Elevator or Annex (Empty and Unfit for Use)**

The functional obsolescence factor for an unlicenced elevator or annex that is not fit for any use other than as salvage is 0.01.

These improvements must be unlicenced, closed, empty of product and no longer usable (unfit for use).

## Improvements

### Throughput Adjustment Factor

3.11

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Average Throughput	Factor	Average Throughput	Factor
≥ 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		