January 31, 2016

In accordance with the direction issued by the Minister of Finance on April 18, 2015, pursuant to subsection 10(1) of the Municipal Property Assessment Corporation Act, the Municipal Property Assessment Corporation (MPAC) has published Market Valuation Reports for the following industries:

- pulp and paper mills
- sawmills
- value-added wood products manufacturing plants
- steel manufacturing plants
- automotive assembly plants
- automotive parts manufacturing plants

These Market Valuation Reports share sector level market analytics and are intended to provide clarity and transparency as to how property types in the above mentioned industries will be assessed for the 2016 province-wide Assessment Update. MPAC reserves the right to amend the Market Valuation Reports as appropriate. Updates will be posted on www.mpac.ca.

Antoni Wisniowski    Rose McLean, M.I.M.A.
President and Chief Administrative Officer    Chief Operating Officer
Acknowledgements

As part of the preparation of the Market Valuation Reports, MPAC consulted with affected property taxpayers, municipalities, and representatives. MPAC engaged the International Property Tax Institute as an independent facilitator to undertake consultation sessions, which included the following industries:

- pulp and paper mills
- sawmills
- value-added wood manufacturing plants
- steel manufacturing plants
- automotive assembly plants
  automotive parts manufacturing plants

MPAC would like to acknowledge and thank the following parties who participated in the consultation process through industry-specific forums (November 2015–January 2016).

- Township of Terrace Bay
- City of Thunder Bay
- Town of Espanola
- Township of James
- Town of Fort Frances
- City of Mississauga
- Town of Marathon
- City of Sarnia
- City of North Bay
- St. Clair Township
- City of Cambridge
- City of Sault Ste. Marie
- City of Toronto
- Town of Whitchurch-Stouffville
- City of Guelph
- Town of Milton
- Town of Oakville
- City of St. Catharines
- Region of Durham
- Town of Ingersoll
- County of Oxford
• City of Brampton
• City of Brampton
• City of Guelph
• Matachewan Township
• Greater Sudbury
• Tembec
• Resolute Forest Products
• Aditya Birla
• Domtar
• Ontario Mining Association
• Goldcorp Canada Ltd.
• Unimin Canada Ltd.
• Sudbury Integrated Nickel Operation (a Glencore Company)
• Primero Mining Corp.
• Imperial
• Suncor
• Shell Canada
• Altus Group
• Nova Chemicals
• Gerdau Corporation
• ASW Steel Inc.
• Max Aicher North America
• Taylor Steel
• Ivaco Rolling Mills LP
• ArcelorMittal Dofasco Inc.
• Hamilton Specialty Bar
• DJ Glavanizing
• Fisher Canada Stainless Steel
• Sandvik Materials Technology
• Valco Manufacturing Inc.
• Welded Tube of Canada Corp.
• Associated Tube Industries
• U.S. Steel Canada Inc.
• Tenaris Algoma Tubes Inc
• Sanofi Pasteur
• GlaxoSmithKline
• Purdue Pharma
• Toyota Motor Manufacturing Canada Inc.
• Ford Motor Company of Canada
• Honda Canada Inc.
• General Motors of Canada Ltd.
• Fiat Chrysler Automotives Canada Inc.
• Fiat Chrysler Automotives U.S. LLC
• Magna International Inc.
• Canadian Mist
• Constellation Brands
• Arnprior Aerospace
• AEC Property Tax Solutions
• Walker West Longo LLP
• DuCharme, McMillen & Associates, Inc.
• Nixon Fleet & Poole LLP
• Municipal Finance Officers' Association of Ontario
• Municipal Tax Equity Consultants Inc.
• James Petrin Property Assessment Services
• Ryan ULC
• MinsterLaw
• PS JOHNSON Valuation Consultants Ltd.
• Altus Group Ltd.
• Carrel + Partners LLP
• PS Johnson Legal Services
• International Property Tax Institute
• Equitable Value Inc.
• Nixon Fleet and Poole
• Aird & Berlis LLP
• Cushman and Wakefield
• Yeoman & Company
• Prestige Property Tax Specialists
• Conway Davis Gryski
• Kingmont Consulting

We also acknowledge those property owners who provided information submissions as part of MPAC’s formal information request.
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**Introduction**

The Municipal Property Assessment Corporation (MPAC) – www.mpac.ca – is responsible for accurately assessing and classifying property in Ontario for the purposes of municipal and education taxation.

In Ontario, property assessments are updated on the basis of a four-year assessment cycle. The next province-wide Assessment Update will take place in 2016 when MPAC will update the assessments of Ontario’s more than five million properties to reflect the legislated valuation date of January 1, 2016. Assessments updated for the 2016 base year are in effect for the 2017–2020 property tax years. Ontario’s assessment phase-in program prescribes that assessment increases are phased in over a four-year period. Any decreases in assessment are applied immediately.

Achieving an accurate valuation of large special purpose industrial properties, such as sawmills, for property tax purposes is challenging due to the size and specialized nature of the properties concerned and the fact that very few, if any, of them are bought, sold or leased in the market on a regular basis.

For that reason, it is important to ensure that the valuation methodology applied is capable of providing a realistic estimate of current value at the relevant valuation date and, in turn, enables all stakeholders to understand the valuation process and have confidence in the fairness and consistency of its outcome.

This Market Valuation Report (MVR) has been prepared for the benefit of MPAC assessors, property owners and their representatives, municipalities and their representatives, Assessment Review Board members, provincial officials, and the general public.

It should be noted that “large” in the context of industrial properties means a property that falls within the definition of the “Large Industrial Property Class” contained in section 14 (1) of Ontario Regulation 282/98. In general, this refers to an industrial property in excess of 125,000 square feet in terms of “exterior measured area.”

The following definitions of “special purpose properties” may be helpful in reviewing this MVR:

- “A limited market property with a unique physical design, special construction materials, or layout that restricts its utility to the use for which it was built.”

---

“A property that is rarely if ever sold in the market, except by way of sale of the business or entity of which it is part, due to the uniqueness arising from its specialized nature and design, its configuration, size, location or otherwise.”

Special purpose properties are likely to have the following characteristics:

- They are unique in improvements, design, layout, size, construction materials and/or building services that facilitate one or a limited number of uses.
- Generally contain machines and machine fittings that are designed to facilitate one purpose.
- Adaptation to other uses is typically challenging, requiring significant alterations and rarely finding economically viable uses for all of the improvements.
- There are limited market possibilities, except as a going concern business.
- They typically have specialized building services.
- They tend to serve large market areas that are more regional, national or international in scope.
- The expansive geographic scope of these properties typically requires research of regional, national or international data to support a market value analysis.
- Understanding the “market” for special purpose properties also requires understanding of the industry in which it operates (i.e., the nature, condition and financial health of the potential buyers and sellers).

Special Purpose Business Property Assessment Review and Advance Disclosure

MPAC’s disclosure efforts support one of the key objectives of MPAC’s 2013–2016 Strategic Plan to deliver fair and accurate 2016 assessed values and align with the recommendations made in the 2013 Ministry of Finance’s Special Purpose Business Property Assessment Review (SPBPAR).

The SPBPAR focuses on the assessment of specialized and unique types of business properties that are not commonly bought and sold and often involve complex assessment methodologies. As part of the review process, feedback was gathered from municipalities, MPAC, the

---

Assessment Review Board (ARB) and business taxpayer representatives. The recommendations outlined in the SPBPAR promote changes necessary to improve the assessment of large and special purpose properties and, generally, the property assessment system in Ontario. You may access the full report here.

The purpose of this MVR is to continue iterative discussions with taxpayers, municipalities and key experts and to begin to act upon the Ontario Government’s recommendations under the category of Advance Disclosure and Assessment Methodologies.

**Three Levels of Advance Disclosure**

There are three levels of Advance Disclosure.

<table>
<thead>
<tr>
<th>Level</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Methodology Guides</td>
<td>Comprehensive guides that explain assessment methodology</td>
</tr>
<tr>
<td>2</td>
<td>Market Valuation Reports</td>
<td>Comprehensive guides that explain how methodology was applied to value properties for the 2016 Assessment Update</td>
</tr>
<tr>
<td>3</td>
<td>Property Specific Valuation Information</td>
<td>Detailed information that is available through secure access only or upon written request from taxpayers, representatives and municipalities</td>
</tr>
</tbody>
</table>

There are no discrete current values shared at the first two levels of Advance Disclosure.

The Property Specific Valuation Information for each of the large sawmills will be provided at Level 3 of Advance Disclosure, where property taxpayers, municipalities and their respective representatives will be able to understand and review how the current values for each of the large sawmills were calculated.

**How to Best Use This Report**

This report encompasses Level 2 of Advance Disclosure and is best reviewed in association with the Methodology Guide for large sawmills.

The Methodology Guide offers a comprehensive overview of the assessment procedures MPAC should carry out to arrive at estimates in current value for large sawmills.
This MVR will share and discuss the data parameters and calculations that MPAC intends to rely upon to determine the assessed values for all of the large sawmills in Ontario.

Any of the data parameters and calculations contained herein should be viewed as preliminary and subject to revision in the event that additional information is disclosed by any of the parties.

Additional information has been included as schedules.

Schedule A refers to the economic/external obsolescence report and Schedule B includes the useful life table.

Please note a report containing market valuation parameters associated with the land values will be made available as soon as possible.
Description of the Subject Properties

Sawmills

IBISWorld, a recognized data provider, describes the sawmill sector as follows:

“This industry manufactures boards, dimension lumber, beams, poles, ties, siding and wood chips from logs or bolts. The industry also produces pilings and posts treated with preservatives. Industry wood products may be rough or dressed by a planing machine to create uniform sizes, but no further shaping takes place. The industry also includes companies that apply preservatives to wood from other establishments. The industry excludes veneer or engineered lumber (e.g., plywood) manufacturing.”

The primary activities of this industry are:

• sawing and planing hardwood logs
• sawing and planing softwood logs
• preserving or treating lumber with chemicals and resins

This report will focus on sawmills where the gross floor area exceeds 125,000 square feet. The size benchmark is consistent with the description of properties included in the Large Industrial Property Class as defined in Ontario Regulation 282/98. However, as many sawmills are situated in smaller municipalities and often represent a significant portion of the assessment base, this report will also have reference to smaller sawmills as well.

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2 ibid
3 ibid
Inventory of Subject Properties

Large Sawmills in Ontario

The following table contains a list of sawmills in Ontario – there are 35 in total. The list is sorted from largest floor area to smallest.

<table>
<thead>
<tr>
<th>Roll Number</th>
<th>Address</th>
<th>City</th>
<th>Occupant</th>
<th>Site Area (acres)</th>
<th>Gross Floor Area (sq.ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>480103000141200</td>
<td>24749 Highway 60</td>
<td>Madawaska</td>
<td>Murray Bros Lumber Co Ltd</td>
<td>157.24</td>
<td>230,373</td>
</tr>
<tr>
<td>579100000413900</td>
<td>Highway 17</td>
<td>White River</td>
<td>White River Forest Products</td>
<td>139.06</td>
<td>212,234</td>
</tr>
<tr>
<td>52310000028900</td>
<td>100 Old Nairn Rd</td>
<td>Nairn Centre</td>
<td>Eacom Timber Corporation</td>
<td>292.80</td>
<td>188,070</td>
</tr>
<tr>
<td>567601000608169</td>
<td>67 Fontaine Dr</td>
<td>Hearst</td>
<td>Tembec Fpg-Hearst Inc</td>
<td>50.24</td>
<td>157,185</td>
</tr>
<tr>
<td>567601000523400</td>
<td>67 Fontaine Dr</td>
<td>Hearst</td>
<td>Tembec Fpg-Hearst Inc</td>
<td>37.98</td>
<td>6,303</td>
</tr>
<tr>
<td>603462000124600</td>
<td>120 The Mill Rd</td>
<td>Sioux Lookout</td>
<td>Mckenzie Lumber Inc</td>
<td>65.93</td>
<td>143,351</td>
</tr>
<tr>
<td>563901000527501</td>
<td>Seventeenth Ave</td>
<td>Cochrane</td>
<td>Tembec Industries Inc</td>
<td>81.05</td>
<td>136,532</td>
</tr>
<tr>
<td>476907201511300</td>
<td>206 B Black Point Rd</td>
<td>Killaloe</td>
<td>Ben Hokum And Son Ltd</td>
<td>136.22</td>
<td>130,017</td>
</tr>
<tr>
<td>604200000100100</td>
<td>361 Sawmill Rd</td>
<td>Ear Falls</td>
<td>Eacom Timber Corporation</td>
<td>196.60</td>
<td>129,193</td>
</tr>
<tr>
<td>572400000311900</td>
<td>41 Sherwood Rd</td>
<td>Thessalon</td>
<td>Midway Lumber Mills Ltd</td>
<td>49.04</td>
<td>128,951</td>
</tr>
<tr>
<td>444202001901300</td>
<td>75 Old Nairn Rd</td>
<td>Huntsville</td>
<td>Tembec Industries Inc</td>
<td>57.92</td>
<td>118,572</td>
</tr>
<tr>
<td>544200000126200</td>
<td>1 6th St</td>
<td>Elk Lake</td>
<td>Eacom</td>
<td>57.65</td>
<td>114,291</td>
</tr>
<tr>
<td>562705003313200</td>
<td>Mountjoy Con 2 S Pt Lot 2</td>
<td>Timmins</td>
<td>Eacom Timber Corporation</td>
<td>18.00</td>
<td>107,764</td>
</tr>
<tr>
<td>528957000602200</td>
<td>Panet Con 1 Pt Lot 6</td>
<td>Chapleau</td>
<td>Tembec Industries Inc</td>
<td>15.13</td>
<td>107,604</td>
</tr>
</tbody>
</table>

© Municipal Property Assessment Corporation– Effective January 31, 2016
| Property ID | Address | Location | Company Name | Value | Assessment
|-------------|---------|----------|--------------|-------|-------------
| 587671000113110 | 101 Blueberry St | Greenstone | Long Lake Forest Products Inc | 132.04 | 93,030
| 579902100001600 | 2 Becker Rd | Hornepayne | Olav Haavaldsrud Timber Co | 359.65 | 86,124
| 480101000004001 | 384 Hay Creek Rd | Whitney | McRae Lumber Company | 54.40 | 67,212
| 601601000118300 | Hwy 17 W | Kenora | Kenora Forest Products Ltd | 119.03 | 66,609
| 485204000224100 | 175 Goulard Rd | Sturgeon Falls | Goulard Lumber (1972) Ltd | 57.01 | 52,701
| 331054102006500 | 1300 Jackson | Tillsonburg | Townsend Lumber Inc | 6.24 | 49,783
| 529938000400200 | Westbrook Pcl 30454 Loc Cl 8906 | Westbrook | Gogama Forest Products Inc | 67.08 | 49,143
| 494601002801000 | 204 Forest Lake Rd | Sundridge | Kent Trusses Ltd | 5.23 | 48,763
| 194900002257500 | 13130 Dufferin St | King City | Alpa Lumber Mills Inc | 12.09 | 42,527
| 600100001001111 | Highway 17 | Ignace | Resolute Fp Canada Inc | 23.15 | 40,905
| 562701009101401 | 1465 Norman St | Timmins | Little John Enterprises Ltd | 17.82 | 29,089
| 546200000435202 | 15511 Dump Rd | Larder Lake | Cheminis Lumber Inc | 38.77 | 28,757
| 530717002604205 | Capreol Con 4 Pt Lot 10 | Capreol | Portelance Lumber Ltd | 14.51 | 16,151
| 520101000025903 | Turenne Rd | Alban | Lahaie Lumber Ltd | 16.42 | 15,972
| 495600000112950 | 39 Ena Ave | South River | Almaquin Forest Products | 25.13 | 12,480
| 520101000048200 | 399 Highway 64 | Alban | Lahaie Lumber Ltd | 1.00 | 11,609
| 529200000405712 | 175 Planer Rd | Chapleau | Tembec | 7.14 | 9,791
| 541803001008401 | 584104 Mowat Landing Rd | Haileybury | South Wabi Sawmill | 118.50 | 5,535
| 520105000009000 | 96 Notre Dame St E | Noelville | H & R Chartrand Lumber | 15.58 | 5,110

© Municipal Property Assessment Corporation—Effective January 31, 2016
<table>
<thead>
<tr>
<th>Property ID</th>
<th>Address</th>
<th>Location</th>
<th>Company Name</th>
<th>Mill Output</th>
<th>Capital Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>*577900000000100</td>
<td>21 Pine St</td>
<td>Dubreuilville, Province of Ontario</td>
<td>Dubreuil Forest Products Ltd</td>
<td>119.34</td>
<td>224,767</td>
</tr>
<tr>
<td>*580808000111700</td>
<td>94 Vibert Rd</td>
<td>Oliver Paipoonge, Ontario</td>
<td>2276642 Ontario Inc</td>
<td>170.30</td>
<td>198,352</td>
</tr>
<tr>
<td>*580401009725900</td>
<td>Marina Park Dr</td>
<td>Thunder Bay, Ontario</td>
<td>2276630 Ontario Inc</td>
<td>65.94</td>
<td>170,041</td>
</tr>
<tr>
<td>*562701006028100</td>
<td>5310–5420 Highway 101 W</td>
<td>Timmins, Ontario</td>
<td>Tembec Industries Inc</td>
<td>252.37</td>
<td>134,940</td>
</tr>
<tr>
<td>*587672000136555</td>
<td>100 Exton Rd</td>
<td>Greenstone, Ontario</td>
<td>Long Lake Forest Products</td>
<td>100.69</td>
<td>133,307</td>
</tr>
</tbody>
</table>

* Indicates sawmills that are closed or idle
Responsibility of MPAC

Role of the Assessor

MPAC has a statutory responsibility to estimate the current value of the fee simple interest in the land as of January 1, 2016. The assessed values will be relied upon to allocate property taxes for the 2017 to 2020 taxation years.

More simply, MPAC has an obligation to estimate what a property would realize if it were to sell on, or around, January 1, 2016.

The definition of current value is commonly accepted to represent the concept of value in exchange.

With this in mind, it is important to determine how the subject properties would be exchanged. There are three scenarios involving the subject properties that would be considered by the participants involved in the exchange:

- continued use of the improvements
- alternate use of the improvements
- raze the improvements and redevelop the land

This reality is the rationale for determining the highest and best use of the land while undertaking an appraisal of the subject properties.

The subject properties are large sawmills. The processes involved with a sawmill are highly specialized, and the real property is highly integrated with the dedicated manufacturing equipment; in fact, the subject’s design, sheer size and configuration to accommodate this special purpose causes it to not be feasible to adapt much of the plant to another purpose.

As stated above, each subject property’s design prevents alternate uses from being practical. This leaves two potential scenarios under which a subject property would exchange: continued use or razing all or a portion of the improvements to accommodate redevelopment.

Analysis contained in this report is based upon the assumption that the current use is highest and best; therefore, the value in exchange of the subject contemplates a willing seller and buyer who each make value judgements based upon the utility derived by the subject property to manufacture wood (i.e., lumber, boards, poles, etc.).
Much of this report is intended to stimulate dialogue between assessors and the owners of sawmills to ensure that the aforementioned value judgements made by buyers and sellers are fully understood and appropriately reflected by the assessors deriving the current values of the subject properties.
Appraisal Theory

Highest and Best Use

Overview

The highest and best use of a property may be defined as “the reasonably probable and legal use of vacant land or improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value.”5

This economic concept measures the interaction of four criteria: legal permissibility, physical possibility, financial feasibility and maximum profitability. Estimating the highest and best use of a property is the most critical component of an appraisal as it sets the valuation context for the selection of comparable properties and analysis undertaken in the report.

Physical Possible Uses

This refers to the legal, physically possible uses of the subject that can be accomplished on the site considering the size, shape, topography, soils and environmental conditions.

Legal Permissible Uses

This refers to the possible uses of the subject permitted legally by land use controls, any existing leases, easements, deed restrictions or subdivision controls, covenants and restrictions or any other public or private limitations.

Financially Feasible Uses

This refers to the legal, physically possible uses of the subject that will produce a positive net financial or economic return to the owner of the site.

Maximally Productive Use

This refers to the use that satisfies the three criterions listed above and that produces the highest value.

Summary

The highest and best uses of the subject properties are assumed to be the current uses of each property. Each of the properties was in operation as of the date of the report; therefore, it is assumed that each of the four criterions has been satisfied.

Due to the design of the subject properties, there is likely only one use that is financially feasible.

**How to Derive Current Value**

There are traditionally three approaches to value estimation employed by an assessor: the cost approach, the direct comparison approach and the income approach. There may not always be sufficient data for development of all value methods and varying degrees of reliability may be achieved based on the quality and quantity of data gathered for each approach. The process of value correlation seeks to determine the most representative estimate of value for the subject property based on the strengths and weaknesses of each approach. For complete descriptions of each of the three approaches, please refer to *The Appraisal of Real Estate*.

**How to Derive Current Values for the Subject Properties**

As previously stated in this report, there may not always be sufficient data for development of all valuation methods. For most property types, there is an active market of sales and leases that are instructive to an assessor estimating current value; however, that is not the case for the subject properties.

A dearth of sales precludes the use of the direct comparison approach, and a lack of lease agreements prevents the use of the income approach; therefore, the assessor is left with only the cost approach to derive current value.

A more detailed explanation for sole reliance upon the cost approach follows.

**Why the Direct Comparison Approach Was Not Developed**

In the direct comparison approach, properties similar to the subject that have been sold recently or for which listing prices or offers are known are compared to the subject. Comparable properties “should have the same or similar highest and best use as the improved subject property.”

It is important to note that when large special purpose manufacturing plants transact they are often repurposed or razed, resulting in a change in use.

---

6 *The Appraisal of Real Estate*, 7.11.
A change-in-use sale involves the sale of a property where the designed and intended use was no longer viable. As a result, production had ceased and the plant sits idle. A large plant is expensive to maintain after production has ceased, and it becomes a liability as opposed to a profitable asset; this greatly motivates a vendor to part with its property. The desire to sell such a property is usually met with tepid demand; the large floor area is frequently much greater than the subsequent user requires, and the capital and operating costs associated with such a plant is often prohibitive to a purchaser.

The opposing motivations of most market participants to a change-in-use sale are the source of a volatile market. As a result, if the use of the plant changes after its sale, it can no longer be used for comparison to the subject property.

Research did not uncover verified sales of similar facilities from which to draw any conclusions based on direct comparison.

**Why the Income Approach Was Not Developed**

The income approach to value is based, in large part, on the appraisal principle of anticipation, which assumes a definite relationship between a property’s value and the income it produces. The process of the income approach discounts the present worth of the future income benefits the property will produce during the remainder of its economic life or during a projected term of ownership.

Properties similar to the subject properties seldom, if ever, trade as an asset that generates a rental income. An investor is unlikely to accept the risk associated with securing and retaining a tenant to occupy a plant designed to accommodate a sole use; large special purpose manufacturing plants are invariably owner-occupied.

Research did not uncover any rental information involving properties similar to the subject properties.

**Why the Cost Approach Was Developed**

Special purpose business properties, such as sawmills, are amongst the most challenging types of properties to derive current values for. This reality is the catalyst for Recommendation 12, which is contained in the Ministry of Finance’s SPBPAR:

“The Province should require MPAC to (a) carry out iterative discussions with taxpayers, municipalities, and key experts to develop and disclose the parameters and guidelines for assessment methodologies; and (b) comply with and apply with consistency the agreed-upon
assessment methodologies. This process will first be applied to special purpose business properties considered in the Review.”7

In the fourth quarter of 2014, MPAC engaged with an independent third party, the International Property Tax Institute (IPTI), to carry out the recommended iterative discussions with taxpayers, municipalities and key experts to develop the guidelines for assessment methodologies.

Following the discussions, MPAC composed an assessment methodology guide, Assessing Sawmills in Ontario.

This guide states that “the valuation approach to be used for the valuation of large special purpose manufacturing plants such as sawmills is the cost approach.”

MPAC’s conclusion is consistent with guidance from The Appraisal of Real Estate, an authoritative text used by the assessment industry.

Although the valuation approach may be agreed upon, there are key steps within the cost approach that require the assessor to demonstrate careful consideration.

Assessing Sawmills in Ontario was designed to assist the assessor in navigating through the process and producing an accurate estimate of current value of sawmills, utilizing the recognized and approved cost approach methodology.

The purpose of this report is to exhibit the data relied upon and the conclusions reached by the assessor as he/she navigated through the process to produce accurate estimates of current value for sawmills throughout Ontario.

How the Subject Properties Will Be Assessed

How MPAC Will Derive the Current Values of the Subject Properties

The guide *Assessing Sawmills in Ontario* recommends a valuation process comprising eight steps:

1. Evaluate the property’s functionality (i.e., what it can do).
2. Evaluate the utility of the property (i.e., the expected benefits to be derived).
3. Consider how the functionality and utility of the subject property compares to a modern and efficient property.
4. Establish the value of the subject property by using a cost manual – MPAC’s Automated Cost System (ACS) – to determine reproduction cost as new.
5. Apply a breakdown approach to depreciation whereby each separate element of depreciation is identified and applied as follows:
   a. If required, revise the reproduction cost new to reflect the cost to replace the improvements.
   b. Apply physical deterioration due to age from the typical depreciation tables found in the cost manual.
   c. Make adjustments as required to age-related depreciation due to the actual state and condition of the property.
   d. Apply functional obsolescence as required.
   e. Apply external obsolescence as required.
6. Determine the current value of the building(s) and any other site improvements.
7. Verify the estimated current value of the improvements using one of the following approaches:
   a. Compare the total depreciation allowance with other approaches, such as age-life or market extraction.
   b. Verify the current value by reference to market sales of similar properties.
8. Estimate the current value of the land and add it to the value of the improvements.
**Steps 1 to 3 in the Valuation Process**

The first three steps are completed concurrently and require the assistance of the owner of the subject property:

1. Evaluate the property’s functionality (what it can do).
2. Evaluate the utility of the property (the expected benefits to be derived).
3. Consider how the functionality and utility of the subject property compares to a modern and efficient property.

As a result of concluding that the subject property is special purpose and that the current use is highest and best, the first step in the process is very straightforward – the property’s function is to produce wood.

In order to perform steps two and three, the assessor requires the assistance of the owner of the subject property. Evaluating the functionality and utility of a sawmill requires a broad understanding of the processes occurring within the plant – with few exceptions, this is beyond the scope of an assessor.

The assessor must engage with the owner to complete these two steps of the valuation process. The assessor should ask one preliminary question and follow the answer with a series of subsequent questions that begin with “Why.” The assessor may ask as many subsequent questions as required in order to understand.

The assessor should encourage the owner to compare the existing plant against an ideal or contemporary plant that could perform the same function when considering his/her answers.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well is the subject performing its intended purpose?</td>
<td>Not as well as intended.</td>
</tr>
<tr>
<td>Why.....?</td>
<td>As intended.</td>
</tr>
<tr>
<td>Why.....?</td>
<td>Better than intended.</td>
</tr>
<tr>
<td>Why.....?</td>
<td>Because...</td>
</tr>
<tr>
<td>Why.....?</td>
<td>Because...</td>
</tr>
</tbody>
</table>
This preliminary discussion with the owner will afford the assessor a thorough understanding of how well the subject property facilitates the manufacturing of wood and will help to frame many of the mathematical adjustments that are made later in the valuation process.

Throughout the iterative consultations and during related inspections, the owner of the subject property is encouraged to offer as much insight as possible.

**Step 4 in the Valuation Process**

This step is largely the result of data collection and data entry:

4. Establish the value of the subject property by using a cost manual – MPAC’s Automated Cost System (ACS) – to determine reproduction cost as new.

The data required to estimate the reproduction cost new is collected by the assessor during site inspection and is often validated by viewing building plans.

The primary data collected is:

- gross floor area of the building(s)
- height of the building(s)
- type of building materials
- quality of building materials

The data is manually entered into ACS, MPAC’s proprietary software. It is a component-based cost system where major building components are valued in place, which includes all costs associated with building and installing a particular component. Components include foundations, floor structure, frame and span, exterior base walls and additives, roof finishes, partitions, interior finishes, built-ins, electrical, plumbing, heating, ventilation and air conditioning and fire protection.

Component costs, including labour, material and equipment costs, have been normalized. Material costs are considered on the basis of current (base year dates) market costs. Labour costs are based upon typical union labour rates, including benefits.

The practice listed above is consistent with how an MPAC assessor would derive the reproduction cost new for any type of building. Due to the specialized nature of a sawmill and due to recent litigation before the Assessment Review Board involving the estimation of
reproduction cost new of a special purpose manufacturing plant, MPAC has opted to have a third party provide additional data to verify the costs estimated by assessors using ACS.

The additional data was provided by Hanscomb Limited, founded in 1957 and one of the largest cost consulting companies in Canada.

Throughout the consultations, MPAC will work with the owners and municipalities to validate the range provided by Hanscomb Limited.

**Step 5a in the Valuation Process**

This is the step in the valuation process where the assessor must demonstrate sound judgement and analysis:

5. Apply a breakdown approach to depreciation whereby each separate element of depreciation is identified and applied as follows:

   a. If required, revise the reproduction cost new to reflect the cost to replace the improvements.

There is a key distinction between reproduction cost new and replacement cost new.

Reproduction cost new is the cost to construct an exact replica as of the effective appraisal date whereas replacement cost new is the cost to construct a modern facility that offers the same utility as the original improvements.

This is a key step in the application of the cost approach because the assessor must discern if the existing plant would have been replaced by a similar plant as of the effective date of value or if the replacement plant (often referred to as a model) would have been substantially different.

The determination of the reproduction cost new is largely a factual undertaking, whereas the exercise involving the derivation of replacement cost new may involve some professional judgement – although the existing plant is a tangible entity, the replacement plant may be based upon a hypothetical construct.

The differences, if any, between the cost to construct the existing plant and the cost to construct its replacement must be reflected in the cost approach.

It is important to note that the existing plant reflects the prevailing market conditions when the plant was constructed. A brief overview of the steps involved in designing and constructing a large sawmill is as follows:
1. Estimate effective market demand for the wood product to be manufactured.

2. Forecast how much of the market share the company will achieve.

3. Design a manufacturing process that will enable the company to fulfill their share of the market.

4. Design and construct a plant to house the manufacturing process.

The greater the period of time that passes from the date of construction to the effective date of value, the more likely it is that some of the aforementioned conditions will have changed. Any changes in conditions may result in a replacement plant that differs from the existing plant.

Although it is very possible that every plant owner, with the benefit of hindsight, would replace their plant differently, the most substantial differences would occur when the plants are older – the question is, how much older?

Not surprisingly, there is no definitive answer to this question; however, there have been two significant changes in recent history impacting manufacturing companies located in North America:

- the North American Free Trade Agreement (NAFTA)
- the rise of globalization

NAFTA came into effect in 1994, and globalization can be traced back to the late 1980s and early 1990s.

In addition to the geopolitical influences of NAFTA and globalization, there are other changes that must be considered by the assessor:

- changes in consumer tastes
- changes in manufacturing processes
- changes in building design

There is no definitive answer to the question “how much older?”; however, due to the significant geopolitical events and the potential for additional changes that may have occurred since a plant was constructed, MPAC will give more attention to the plants that are 25 years old or greater.
It is beyond the area of an assessor’s expertise to opine on how a large sawmill would have been constructed on January 1, 2016, to reflect the present market conditions. With this in mind, MPAC will focus the iterative discussions on plants constructed in 1991 (i.e. 2016 – 25 years) or prior.

The consultative process will involve the following steps:

1. Identify all plants constructed in 1991 or earlier.

2. Notify the plant owner of the critical factors associated with the derivation of the reproduction cost new (i.e., gross floor area, average building height and type of construction materials).

3. Ask the plant owner if the replacement plant would differ from the existing plant.

4. If the answer is no, then MPAC will conclude the existing plant would have been replaced by a similar plant, indicating there are no excess capital costs.

5. If the answer is yes, MPAC will meet with the owner to determine how the replacement plant would be different and ascertained why it would have been different.

Following the consultation, best efforts will be made to validate both the claims made by the property owner and the cost to construct the replacement as of January 1, 2016, estimated by the assessor.

This is a key step in the valuation process because the assessor requires the assistance of the sawmill owner. Throughout the iterative discussion and during the related inspection(s), the owner of the subject property is encouraged to offer as much insight as possible.

In the absence of shared insight, MPAC will analyze trends in the design of sawmills to discern if and/or how a contemporary plant differs from a plant constructed prior to 1992. If there is no distinguishable trend, MPAC will assume that the existing plant would be replaced with something very similar to what is present and conclude that there are no excess capital costs.

**Steps 5b and 5c in the Valuation Process**

These steps in the valuation process are to account for normal and abnormal wear and tear:

b. Apply physical deterioration due to age from the typical depreciation tables found in the cost manual.
c. Make adjustments as required to age-related depreciation due to the actual state and condition of the property.

Within ACS there are life tables that calculate the loss in value resulting from the normal wear and tear that buildings and structures suffer from over their estimated useful life. It is important to note that there is a difference between an improvement’s useful and economic life. The economic life of a structure is the period over which the improvements contribute to property value, and the useful life is the period over which the improvement is expected to function according to its design.

The useful life is used to estimate physical deterioration.

The life tables within ACS do not assign different rates of physical deterioration to long-lived and short-lived items. Instead, the varying useful lifespans of the items are blended and the overall useful life estimation is applied to the entire building or structure.

In addition to the useful life determination, MPAC’s estimate of physical deterioration is affected by the effective age of the improvements. It is important to note that there is a difference between actual age and effective age. The actual age refers to the time that has passed since the building was completed. The effective age refers to the building’s condition and is based on the assessor’s judgement and interpretation of the market.

The effective age of a structure is impacted by the level of maintenance that it has received. If a structure has been well maintained, the effective age may be less than the actual age; conversely, if a structure has been poorly maintained, the effective age may be greater. If a structure has received typical maintenance, its effective and actual age may be the same.

An example of the methodology for physical deterioration follows:

<table>
<thead>
<tr>
<th></th>
<th>Parameter</th>
<th>Formula</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost New</td>
<td>$1,350,000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Year Built</td>
<td></td>
<td>1993</td>
</tr>
<tr>
<td>3</td>
<td>Level of Maintenance</td>
<td></td>
<td>Typical</td>
</tr>
<tr>
<td>4</td>
<td>Effective Year of Valuation</td>
<td></td>
<td>2016</td>
</tr>
</tbody>
</table>
5 Actual Age  Line 4 – Line 2  23 years
6 Effective Age  23 years
7 Estimated Useful Life  50 years
8 Remaining Useful Life  Line 7 – Line 6  27 years
9 MPAC Life Table8  OR 50
10 Percent Good Allotment  54%
11 Estimated Physical Deterioration (%)  100% – Line 10  46%
12 Estimated Physical Deterioration ($)  Line 1 * Line 11  $621,000

**Step 5d in the Valuation Process**

This is the step in the valuation process that accounts for any functional obsolescence not already captured by comparing the reproduction cost new to the replacement cost new:

   d. Apply functional obsolescence as required.

It is difficult to estimate a loss in value resulting from inefficiencies or inadequacies that impair the utility and/or cause the owner to incur excess operating costs. In lieu of a definitive adjustment, there are qualitative adjustments made for this type of depreciation; the most common example of this is for piecemeal construction that results in the owner incurring excess operating costs.

In theory, a quantitative adjustment to account for a loss in value resulting from excess operating costs is not difficult. The assessor sums the annual excess operating costs and selects the appropriate discount rate and term to determine the present value of the loss in value caused by the deficiency.

While easy in theory, in practice a quantitative adjustment is difficult to account for. There is little difficulty in selecting a discount rate and term; however, in order to determine excess costs the assessor must be aware of normal costs. Normal operating costs are not within an

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8 The useful life tables are contained as Schedule B.
The assessor’s area of expertise and would need to be provided by the owner of the building – most owners are either disinclined to provide such information or find it challenging to discern and display normal operating costs. As a result, this method is not easy to implement in a mass appraisal setting.

The qualitative adjustment made to estimate a loss in value resulting from inefficiencies or inadequacies that impair the utility and/or cause the owner to incur excess operating costs range from 5–15% of the replacement cost new. The following table illustrates the allotments made:

<table>
<thead>
<tr>
<th>Actual Age of Plant</th>
<th>Allotment for Excess Operating Costs</th>
<th>Actual Age of Plant</th>
<th>Allotment for Excess Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0%</td>
<td>16</td>
<td>8%</td>
</tr>
<tr>
<td>2</td>
<td>1%</td>
<td>17</td>
<td>8%</td>
</tr>
<tr>
<td>3</td>
<td>1%</td>
<td>18</td>
<td>9%</td>
</tr>
<tr>
<td>4</td>
<td>2%</td>
<td>19</td>
<td>9%</td>
</tr>
<tr>
<td>5</td>
<td>2%</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>3%</td>
<td>21</td>
<td>10%</td>
</tr>
<tr>
<td>7</td>
<td>3%</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>8</td>
<td>4%</td>
<td>23</td>
<td>11%</td>
</tr>
<tr>
<td>9</td>
<td>4%</td>
<td>24</td>
<td>12%</td>
</tr>
<tr>
<td>10</td>
<td>5%</td>
<td>25</td>
<td>12%</td>
</tr>
<tr>
<td>11</td>
<td>5%</td>
<td>26</td>
<td>13%</td>
</tr>
<tr>
<td>12</td>
<td>6%</td>
<td>27</td>
<td>13%</td>
</tr>
<tr>
<td>13</td>
<td>6%</td>
<td>28</td>
<td>14%</td>
</tr>
</tbody>
</table>
The rationale for the sliding scale is that deficiencies become more prominent over the normal passage of time.

Despite the commentary provided above, during the consultations MPAC will engage with any owners willing and able to provide the meaningful information required to complete a quantitative analysis.

**Step 5e in the Valuation Process**

This step in the valuation process takes into consideration the external factors that influence current value:

- e. Apply external obsolescence as required.

There are two subcategories that fall under the heading of external obsolescence:

- economic obsolescence
- locational obsolescence

“Economic obsolescence is defined as a form of depreciation, or an incurable loss in value, caused by unfavorable conditions external to the property, such as the local economy, economics of the industry, availability of financing, encroachment of objectionable enterprises, loss of material and labor sources, lack of efficient transportation, shifting of business centers, passage of new legislation, and changes in ordinances. EO also may be caused by a reduced demand for the product; overcapacity in the industry; dislocation of raw material supplies; increasing costs of raw materials, labor, utilities, or transportation, while the selling price remains fixed or increases at a much lower rate; foreign competition; legislation; and environmental considerations.”

It is difficult to cite a robust definition of locational obsolescence; however, as the name implies, it is a loss in value resulting from a location that adversely impacts the utility or profitability of a property.

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This report will focus on the estimation of economic obsolescence. Any instances of locational obsolescence will be uncovered and dealt with during the iterative consultations.

Although the recommended valuation methodology is the cost approach, the assessor must still have regard for the market.

There are two markets to be analyzed when studying industrial real property:

- “The real estate market, in which industrial properties trade and space in those properties is leased and occupied.”
- “The market for the goods produced in industrial facilities.”

As previously stated, the subject properties are not often traded on the open market – in fact, research did not uncover any real estate market data related to the subject properties to be analyzed.

In the absence of real estate market data, MPAC analyzed the market for the goods produced at the subject properties when estimating their current values. This analysis involved a review of financial ratios associated with publicly traded companies involved in the manufacture of wood (sawmills).

The current financial ratios were contrasted against those realized in recent history to gauge the economic well-being of the companies, with the corollary being the state of the market for the goods produced (i.e., lumber, boards, poles, etc.) at the subject properties.

MPAC sought the assistance of American Appraisal to analyze the financial ratios relied upon as indicators of the state of the market for dimensional lumber to determine the allotment for external obsolescence.

American Appraisal reviewed the following ratios:

- capacity utilization
- gross margin
- return on capital
- price to book ratio

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10 Appraising Industrial Properties (Appraisal Institute, 2005), 51.
11 Appraising Industrial Properties, 52.
• wood fibre costs

Many of the ratios analyzed were indicative of the financial performances of publicly traded companies with operations both within and outside of Ontario. American Appraisal relied on public data due to the unavailability of Ontario-specific data.

American Appraisal came to the conclusion that the external obsolescence for sawmills was 19%.

These findings were shared with stakeholders at the fall forum hosted in Thunder Bay and at consultations held as part of MPAC’s preliminary Market Valuation Reports. Property owners expressed concerns that the proposed allotments for external obsolescence were too low and did not sufficiently account for the adverse external factors impacting the viability of Ontario sawmills.

Sawmill owners suggested that the fate of Ontario sawmills is grimmer than what is realized in other locations. Therefore, the proposed allotments (based upon public data reflecting the broader sector) did not accurately account for the circumstances in Ontario.

A property owner agreed to share financial statements and details on the performance of his/her sawmills over the past ten years in an effort to better illustrate the circumstances facing Ontario mills. MPAC reviewed these statements and met with senior personnel from the sawmills to better comprehend the economic conditions realized by Ontario mills.

MPAC’s conclusions of the review of the financial ratios contained in the statements is contained in the following table:

<table>
<thead>
<tr>
<th>Ratio Analysis - Sawmills</th>
<th>Indicated EO</th>
<th>Assigned Weight</th>
<th>Weighted Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit Margin</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>EBITDA Margin</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>U.S. Housing Starts</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Canadian Housing Starts</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Wood Prices</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Shipments</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Production</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Capacity Utilization</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>Estimated Rate of External Obsolescence (rounded)</td>
<td>41%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All of the financial data is confidential and has been redacted.

After completing the review, MPAC has concluded the proper allotment for Ontario sawmills is 41% for external obsolescence.

The financial statements reflect the performances of the mills over the past ten years and do not take into consideration the expiration of the softwood lumber agreement (SLA) that Canada has with the United States. It expired on October 13, 2015, and discussions with the sawmill company indicate that hypothetical sales of the subject properties would be adversely impacted by the uncertainty surrounding the expiration of the agreement. The sawmill company suggested an additional 5% adjustment would account for the doubt surrounding the expiring SLA. MPAC agrees that the ambiguity related to the expiring SLA adversely impacts current value and has adopted the qualitative adjustment proposed by the sawmill company.

After engaging in iterative discussions with a property owner and reviewing the financial statements for Ontario mills, MPAC is revising the allotments made for external obsolescence for the sawmill sector.

The revised allotment for sawmills is 46%. The ratio analysis undertaken in connection with the Ontario sawmills is the most persuasive information available to MPAC and is aligned to recent submissions made by other industry stakeholders.

**Step 6 in the Valuation Process**

This step in the valuation process is the result of subtracting total depreciation from the reproduction cost new to arrive at the current value of the buildings and other site improvements:

6. Determine the current value of the building(s) and any other site improvements.
The steps in the valuation process can be converted into the following mathematical equation:

<table>
<thead>
<tr>
<th>Line</th>
<th>Step</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Data Collection</td>
<td>No Mathematics</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Reproduction Cost New</td>
<td>(Gross Floor Area of Existing Plant) * (Cost New per Square Foot)</td>
</tr>
<tr>
<td>5</td>
<td>5A</td>
<td>Replacement Cost New</td>
<td>(Gross Floor Area of Replacement Plant) * (Cost New per Square Foot)</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Functional Obsolescence – Excess Capital Costs</td>
<td>Line 4 – Line 5</td>
</tr>
<tr>
<td>7</td>
<td>5B &amp; 5C</td>
<td>Physical Deterioration</td>
<td>Line 5 * (100% – % Good in Useful Life Table)²¹²</td>
</tr>
<tr>
<td>8</td>
<td>5D</td>
<td>Functional Obsolescence – Excess Operating Costs</td>
<td>Line 5 * (Qualitative Adjustment)</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Subtotal</td>
<td>Line 5 – (Line 7 + Line 8)</td>
</tr>
<tr>
<td>10</td>
<td>5E</td>
<td>External Obsolescence</td>
<td>Line 9 * (External Obsolescence Factor)</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>Depreciated Value of Improvements</td>
<td>Line 9 – Line 10</td>
</tr>
</tbody>
</table>

The same valuation process is applicable to the buildings and to the other site improvements. The other site improvements include such items as asphalt paving, weigh scales, storage tanks and railway sidings.

¹² The useful life table is provided as Schedule B.
Steps 7a & 7b in the Valuation Process

These steps in the valuation process are introduced to validate the estimate of total depreciation:

7. Verify the estimated current value of the improvements using one of the following approaches:
   a. Compare the total depreciation allowance with other approaches, such as age-life or market extraction.
   b. Verify the current value by reference to market sales of similar properties.

This is a step in the valuation process where the assessor should have reference to sawmills that have reached the end of their economic lives or have been involved in sales transactions.

If there are a sufficient number of sawmill closures, an assessor can derive an estimate of economic life and measure depreciation via the age-life method.

The age-life method relies upon the assessor’s estimates of effective age and total economic life for the subject’s improvements. The depreciation is calculated as a ratio of the effective age to the total economic life and then applied to the cost new of the improvements.

For example, if there were a sufficient number of plant closures where the ages at closure ranged from 38 to 42 years, the assessor would conclude an economic life of 40 years.

This would indicate an annual depreciation rate of 2.5% (100% / 40 = 2.5%) on a straight-line basis. To validate the total depreciation derived via the breakdown method, the assessor would compare the results of each method. There may be sufficient sawmill closures to perform the validation suggested in Step 7a.

The market extraction method relies upon the availability of sales from which depreciation can be extracted. The sold properties must be similar in terms of age and utility to the subject, and preferably the sales are current and from the subject’s market area. Reliance upon this method implies that the land value and cost new of the improvements can be accurately estimated. There are not sufficient sawmill sales to perform this validation suggested in Step 7a.

As noted above, and elsewhere in this report, properties similar to the subject properties do not trade frequently on the real estate market. There are not sufficient sawmill sales to perform this validation suggested in Step 7b.
Step 8 in the Valuation Process

This step in the valuation process deals with the determination of the land as if vacant:

8. Estimate the current value of the land and add it to the value of the improvements.

The land values are derived via the direct comparison approach. In short, recent arms’ length sales of lands principally zoned for industrial uses are analyzed to determine how much vacant land traded for in the open market as of the effective date.

Land analysis reports will be made available to stakeholders in first quarter 2016.
Preliminary 2016 Current Value Parameters

Reproduction Cost New

In preparation for each province-wide Assessment Update, MPAC undertakes a review of its cost estimates. As part of this review, MPAC retained Hanscomb Limited to provide 2016 sample cost estimates for the various special purpose property sectors in the form of a range of reproduction cost new per square foot. MPAC’s review is ongoing and considers input from stakeholders as critical to this process. This includes cost considerations such as indirect costs, economies of scale and the cost of foundations on which machinery and equipment rest.

Replacement Cost New

The preliminary position advanced in this report is that any sawmills constructed prior to 1992 (i.e., at least 25 years old) should be more closely examined to determine if the existing plant would be replaced with a plant that would be significantly different.

As previously noted, there is no definitive age to rely upon as a firm benchmark; therefore, the assessor will also examine the more modern plants if the owners make sufficient information available for review.

This will require extensive input and assistance from the owners of the subject properties.

The most helpful information that an owner can share with the assessor are examples of existing plants elsewhere in North America (and possibly beyond) that offer the same utility as the subject property. In order for the assessor to complete his/her research, he/she will need to know (at least) the size and character of construction of the contemporary plant along with the production capacity.

Functional Obsolescence – Excess Capital Costs

This step in the valuation process is to establish the difference, if any, between the cost to construct the existing plant and the cost to construct a replacement plant that offers the same utility.

Physical Deterioration

The initial allotments for physical deterioration are based on the assumption that all of the subject properties are realizing normal maintenance. If that is not the case, it would be beneficial for the owner of the subject property to alert the assessor of any instances of abnormal maintenance.
The useful lifespan of the buildings is believed to be 50 years – in general, this produces an annual depreciation rate of approximately 2%. The occurrences of sawmills that were constructed in the 1950s and 1960s that continue to operate appear to validate this belief; however, MPAC is willing to discuss the issue further if the owners believe this lifespan is too long.

Functional Obsolescence – Excess Operating Costs

The preliminary adjustments made to account for excess operating costs are qualitative in nature – they are identified in the following table:

<table>
<thead>
<tr>
<th>Actual Age of Plant</th>
<th>Allotment for Excess Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 9 years</td>
<td>0% to 5%</td>
</tr>
<tr>
<td>10 to 19 years</td>
<td>5% to 10%</td>
</tr>
<tr>
<td>20 to 29 years</td>
<td>10% to 15%</td>
</tr>
<tr>
<td>30 years or greater</td>
<td>15%</td>
</tr>
</tbody>
</table>

As stated, the adjustments are qualitative – MPAC is willing to consider quantitative adjustments if the owner is willing and able to share meaningful data to assist with the process.

External Obsolescence

The preliminary allotment to account for external obsolescence is 46%. This conclusion is the result of contrasting current financial indices against those realized in recent history along with an interpretation of what the trends represent.

MPAC is willing to consider additional indices to obtain a more fulsome understanding of the health of the sawmill industry.
Comparison Between 2012 and 2016 Current Value Parameters

The following table illustrates the change in parameters between the two valuation dates and the replacement cost new per square foot rates and assumed allocations for the sector. These are averages and rates may differ based on the actual use of the property.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2012</th>
<th>2016</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost New per Square Foot</td>
<td>$55 to $65</td>
<td>$85 to $105</td>
<td>Please refer to schedule C for additional information.</td>
</tr>
<tr>
<td>Excess Capital Costs</td>
<td>Nominal</td>
<td>Nominal</td>
<td>MPAC does not anticipate this parameter will be a prominent issue when deriving current values.</td>
</tr>
<tr>
<td>Physical Deterioration</td>
<td>An increase of 8% over the 4-year period is due to the passage of time and the associated wear and tear realized by the buildings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess Operating Costs</td>
<td>Maximum of 5%</td>
<td>Maximum of 15% depending on the age of the plant</td>
<td>Historically, MPAC capped this adjustment at 5%. Property owners indicated this was too low; therefore, MPAC has revised its position.</td>
</tr>
<tr>
<td>External Obsolescence</td>
<td>24%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>Land Values</td>
<td>–</td>
<td>–</td>
<td>Industrial land rates will be released for consultation with stakeholders and industry during Level 3 disclosure.</td>
</tr>
</tbody>
</table>
Steps an Owner Can Take to Help an Assessor

Property Inspections

MPAC will be conducting inspections of the subject properties on an as-needed and/or as-requested basis.

Prior to the inspection, MPAC will estimate the time required and identify the number of participants attending. It would be very helpful for the owner to advise the assessor of any special safety equipment that is required to complete the inspection.

Additional Information

In order for an inspection to be productive, the owner should be prepared to set aside some time to discuss the plant with the assessor prior to entering the manufacturing area – it is often too loud in a manufacturing area to have a meaningful conversation, and there are often distractions involving lift trucks and manufacturing equipment, which can impair an exchange of information.

The initial discussion should focus on the manufacturing process and how well it is integrated with the plant. This discourse can shine light upon the following issues:

- Has the process changed – if yes, how well do the existing buildings integrate with the process?
- Are there bottlenecks – if yes, where and why?
- Are there areas in need of repair – if yes, where and why?
- Are there recent renovations – if yes, where and why?
- Knowing then (i.e., when constructed) what you know now – what would you build and why?

With the benefit of an introductory discussion in a setting more suitable for dialogue, the assessor will be better equipped to address the aforementioned issues.

The following additional useful information that could be shared with an assessor before or after an inspection is:
• Identifying any contemporary plants elsewhere in North America and sharing as much information as possible about the aforesaid plants.

• Recent construction costs for new plants and/or additions to compare against the cost rates provided in this report.

• Recent closures of sawmills in North America along with the dates the plants opened and closed.

• Financial benchmarks and indices that would help the assessor gauge the performance of the subject property and/or the entire sawmill industry.

• Recent appraisals of the subject properties (regardless of the purpose).

**Iterative Discussions**

After the benefit of an inspection and additional information, the assessor will be in a much better position to estimate the current value of a subject property. However, the assessor may need to seek clarity from the owner during his/her analysis of the new information; as a result, there may be a need for continued communication (electronic, telephone or in person) between the parties.

Your patience and consideration will be instrumental in enabling the assessor to undertake the difficult task of estimating the current value of a complex business property.

**Next Steps**

MPAC will begin consultations on preliminary values for 2016.
CANADIAN UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL (CUSPAP) COMPLIANCE

Client and Intended Users

The client and intended users of the report are the valuation personnel of the Municipal Property Assessment Corporation, the owners and occupants of the properties described herein and the municipal and provincial levels of government.

Intended Use of the Report

The intended use of the report is to describe the analysis and explain the steps taken to derive the 2016 current value assessments for the properties described herein. The report will not address the current values on specific properties; rather, it will provide an overview of the valuation process for sawmills in Ontario.

Purpose of the Report

The purpose of this report is to share and discuss the data parameters and calculations that MPAC relied upon to determine the assessed values for all of sawmills in Ontario.

Real Property Interest Appraised

The legal interest being appraised in this report is the current value of the unencumbered fee simple estate. Fee simple is defined as "absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the four powers of government: taxation, expropriation, police power, and escheat." The owner of a fee simple interest has the right to sell, occupy, lease, or mortgage the property.

Definition of Value

The assessment of land in Ontario is based on its current value. Current value is defined as “the amount of money the fee simple, if unencumbered, would realize if sold at arm’s length by a willing seller to a willing buyer.”

Effective Date of Value

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13 The Appraisal of Real Estate, 6.1.
14 Ontario Assessment Act
The effective date of valuation is January 1, 2016.

Date of the Report

The date of the report is January 31, 2016.

Ordinary Assumptions

The values established in this report are based on the following ordinary assumptions:

- Reliability of data sources;
- Compliance with government regulations;
- Marketable title;
- No defects in the improvements;
- Bearing capacity of soil;
- No encroachments;
- No site contamination exists;
- Due diligence by intended users.

Ordinary Limiting Conditions

The values established in this report are based on the following ordinary limiting conditions:

- Denial of liability to non-intended users and for any non-intended use;
- Conclusions may be valid only in connection with the proceedings resulting from the appeals;
- Responsibility denied for legal factors;
- No environmental audit was undertaken;
- Report must not be used partially;
- Possession of report does not permit publication;
• Any cost estimates are not valid for insurance purposes;

• Value conclusion is in Canadian dollars;

• Denial of responsibility for any unauthorized alteration to a report;

• Validity requires original signature.

**Extraordinary Assumptions**

The current use of the properties complies with applicable zoning by-law regulations, and is considered to be a legal non-conforming use. Subject to rare exceptions, the mass appraisal of the subject properties is based upon the extraordinary assumption that the current uses of the properties are highest and best.

**Extraordinary Limiting Conditions**

An extraordinary limiting condition has not been invoked in this report.

**Hypothetical Conditions**

A hypothetical condition has not been invoked in this report.

**Jurisdictional Exception**

A jurisdictional exception has not been invoked in this report.

**Certification**

I certify that, to the best of my knowledge and belief:

• The statements of fact contained in this report are true and correct;

• The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are the personal, impartial, and unbiased professional analyses, opinions and conclusions of MPAC;

• I have no present or prospective interest in the properties that are the subject of this report and no interest with respect to the parties involved;

• I have no bias with respect to the properties that are the subject of this report or to the parties involved with this assignment;
• My engagement in this assignment was not contingent upon developing or reporting predetermined results;

• My engagement in and compensation for completing this report is not contingent upon the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal;

• The analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Canadian Uniform Standards of Professional Appraisal Practice;

• I have not made personal inspections of all the subject properties that are the subject of this report.

Malcolm Stadig, MRICS, CAE, ASA, MIMA
Assessor/Manager, Advisory Services