

**AUTOMATED COSTING SYSTEM:
OLD WINE IN NEW BOTTLES**

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All properties in the Province of Ontario have undergone a reassessment for the 2003 taxation year to a base valuation date of June 30, 2001.

Traditionally, industrial properties and special purpose built commercial properties were valued by the Municipal Property Assessment Corporation ("MPAC") utilizing a home-grown in the Province of Ontario, made-for assessors valuation manual. The Ontario Valuation Manual is a tool of mass appraisal which was designed to establish replacement costs for building improvements. This valuation manual methodology determined a replacement cost new ("RCN") as of the 1969 base date for value. The RCN was then adjusted by use of a local modifier developed with reference to increases in local construction costs since 1969. These established base costs were indexed from the 1969 base year to the valuation date utilized for assessment purposes.

The replacement cost approach to value combined the valuation manual approach to establish the RCN of buildings and improvements less depreciation ("RCNLD"), coupled with a land value based on comparative sales data.

The Valuation Manual itself contained guidelines for depreciation in tabular form based upon average life. Thus, the depreciation tables were based upon chronological age, average condition, considering only normal physical deterioration and normal functional obsolescence.

The historic Assessment Program Policy provided that any other condition allowance to the RCN would be made based upon the amount of renovations or abnormal obsolescence only as agreed to by the manager within the region.

Functional obsolescence was defined as:

". . . a loss in value to the structure because of an inability of the structure to perform its proper function efficiently. It is inherent in the property and is a loss from the cost new, as at the date of valuation caused by overcapacity or inadequacy."

Economic obsolescence was defined as:

". . . a loss in value to a building arising from diminished utility due to locational causes external to the property."

There were no publicly available guidelines or specifications with respect to functional or economic obsolescence.

The 12th edition of The Appraisal of Real Estate, published by The Appraisal Institute, characterizes obsolescence as:

"one cause of depreciation representing an impairment of desirability and usefulness caused by new inventions, changes in design, improved processes for production, or external factors that make a property less desirable and valuable for a continued use."

The text notes that obsolescence may be either functional or external (economic) and speaks extensively to issues of whether or not the obsolescence is curable or incurable. The measurement of obsolescence in a particular property has historically been determined by assessors in Ontario using hand-me-down rules of thumb such as five per cent allowance for piecemeal construction, where merited, in the opinion of the assessor.

The actual measurement of obsolescence requires sophisticated modelling techniques but is crucial to the conduct of successful assessment appeals in determinations of current value. A greenfield model of an efficient plant of 100 per cent utility is one such tool to measure obsolescence based on the principle of substitution.

The historic valuation manual approach to assessment conducted by MPAC required consideration of the value of the "bricks and mortar", excluding machinery and equipment used in the manufacturing process. Thus, the structural elements from the foundation to the roof would be valued and additives such as heating, ventilation and air conditioning (HVAC) would become part of the valuation.

The application of a base rate to the basic building with adjustments to reflect quality class was the assessor's first step followed by the calculation of values for additives such as the HVAC system.

Commencing with the reassessment in 1998, many regional offices of MPAC made empirical studies of industrial building sales and compared the sale values to the RCNLD of the sold buildings in order to create a market adjustment factor ("MAF"). This factor typically reflected sales of standard steel frame buildings of lesser square footage which represent the predominant number of transactions. Given that very large industrial properties are unique and not similar to standard steel frame warehouses of 10,000 square feet, for instance, it is questionable whether the MAF provided an appropriate market adjustment to establish current value for any but the most common of industrial properties.

The MAF was not applied to commercial properties, nor was it applied to certain selected industrial properties in various regions. This inconsistent approach has never been adequately explained.

The flaws in the Valuation Manual itself were legion and well known to consultants and lawyers practising in the assessment field, and even admitted to by the more candid and senior assessors. The Valuation Manual is based upon construction techniques in place in 1969 and could not provide an appropriate current value calculation for large or special purpose built facilities. It was premised or modelled upon a 10,000 square foot building.

As part of the ongoing evolution in the assessment world, MPAC committed to change the valuation methodology for industrial and special purpose built facilities to replace the 1969 Valuation Manual. The new automated cost system ("ACS") based on a quantity surveyor's approach to unit costing, has produced new values, in many cases, substantially in excess of the previous years' values. It is a computerized system that is purported to automatically determine the RCNLD of buildings and structures.

MPAC believes that the ACS is simpler than the Valuation Manual in that it no longer requires adjustments based upon the character of construction, quality class, pointing, shape adjustment, missing wall adjustments, area adjustments, height adjustments, HVAC adjustments, or local modifiers etc.

ACS is described by MPAC as a component based cost system where major buildings components are valued "in place". Major building components include foundations, floor structure, frame and span (including a floor or roof deck where required), exterior base walls and additives, roof finishes, partitions, interior finishes, built-ins, electrical, plumbing, HVAC, and fire protection.

The component costs for the assembly include labour, materials and equipment costs, including subcontractor's overheads and profit for all required excavation, form work, concrete reinforcing and backfill.

MPAC states that the component costs have been "normalized" in that they represent normal market prices, practices and standards. Material costs are considered on the basis of current base year date market material costs, and labour costs are based upon typical union labour rates including benefits.

The ACS database is updated quarterly based on component cost data supplied by Hanscombe Limited, (an independent engineering and consulting firm specializing in construction project and cost consulting).

The ACS includes a discount for economy of scale savings through application of a "Quantity Adjustment Factor" to building costs in excess of \$5 million beginning with a one per cent discount climbing to a 16 per cent discount for buildings in excess of \$645,000,000 in direct costs.

Once the ACS develops a RCNLD, then depreciation tables based on average life are applied to adjust the effective age: just as was done according to the Valuation Manual.

As it was with the 1969 Valuation Manual, there are no specific allowances for economic or functional obsolescence. These issues remain the purview of appraisers, engineers and taxpayers.