



# INFORMATION REPORT

<b>TO:</b> Chair and Members Audit and Administration Committee	<b>WARD(S) AFFECTED:</b> CITY WIDE
<b>COMMITTEE DATE:</b> June 2, 2010	
<b>SUBJECT/REPORT NO:</b> 2009 Tangible Capital Assets Report (FCS10047) (City Wide)	
<b>SUBMITTED BY:</b> Antonio D. Tollis Treasurer Corporate Services Department	<b>PREPARED BY:</b> Brian McMullen 905-546-2424 ext 4467 Tony Del Monaco 905-546-2424 ext 3020
<b>SIGNATURE:</b>	

**Council Direction:**

Not Applicable.

**Information:**

Report (FCS10047) and Appendix “A” to report (FCS10047) 2009 Tangible Capital Assets Report provide an overview, analysis and interpretation of the City of Hamilton’s Tangible Capital Assets (TCA). Appendix “A” to report (FCS10047) provides details by each of the TCA categories as at December 31, 2009. Table 1 and 2 provide other TCA summaries.

The City of Hamilton’s Tangible Capital Assets (TCA) project was initiated in 2007 following adoption of new accounting standards for municipal governments in Canada for reporting in financial statements for the year 2009.

One of the primary reasons for the implementation of tangible capital asset accounting was the emphasis on asset management and sustainability from governments and funders.

The Canadian Institute of Chartered Accountants (CICA) Public Sector Accounting Board (PSAB) Handbook section PS3150 titled “Tangible Capital Assets” provides the accounting standards to be followed by governments in Canada.

In addition to meeting legislated requirements, the CICA suggests that implementation of TCA accounting will also aid in achieving the following desirable outcomes:

- Capital Asset replacement cost requirements are quantified, predicted and reported;
- Enhanced quality of information allows for improved analysis of issues involving TCA's. Costs of providing different levels of service are quantified to provide a basis for improved decision making regarding resource allocation;
- Risk and liability are managed and due diligence in infrastructure stewardship is demonstrated;
- More comprehensive communication with citizens, rate payers, elected officials, financial-rating organizations and regulatory agencies;
- Service delivery and operational requirements are coordinated;
- More effective asset management practices;
- Fiscal responsibility;
- Accountability;
- Provide information to support measurement of cost of service and improved information to support long-term planning;
- Ensure integrity of the asset values used for insurance purposes and risk management;
- Help ensure assets are being properly maintained to meet Health and Safety requirements; and
- Provide more accurate performance measurement reporting.

Over the past few years (from August 2007 to May 2010) the City's Tangible Capital Assets Project Team have been inventorying, analyzing and calculating the value of the City's investment in tangible capital assets. Existing asset and infrastructure asset management systems were used to obtain the inventory, where these systems were available. Estimating techniques were used to calculate the initial valuation of the tangible capital assets as permitted by the PSAB when historical records were not available. Exhibit 1, attached, provides information on the City's tangible capital assets and capitalization thresholds.

The culmination of the TCA work is included in Appendix "A" to report (FCS10047) 2009 Tangible Capital Assets Report. Table 1, below, summarizes the net book value of tangible capital assets at historical cost (i.e. acquisition cost less accumulated amortization to date).

**Table 1**

**Tangible Capital Assets Net Book Value Summary**  
**as at December 31<sup>st</sup>**

	<u>2009</u> \$000's	<u>2008</u> \$000's
<b>General</b>		
Land	\$ 193,416	\$ 170,956
Land improvements	106,577	107,351
Buildings	265,909	237,972
Vehicles	125,361	107,044
Computer hardware and software	4,323	4,724
Other	57,847	48,167
<b>Infrastructure</b>		
Roads	1,244,350	1,268,848
Bridges and structures	160,935	162,861
Water and wastewater facilities	166,758	150,165
Underground and other networks	<u>1,380,969</u>	<u>1,331,191</u>
<b>Net Book Value</b>	<b>3,706,446</b>	3,589,279
<b>Assets under construction</b>	<u>179,788</u>	<u>104,653</u>
<b>Total Tangible Capital Assets</b>	<b><u>\$ 3,886,234</u></b>	<b><u>\$ 3,693,932</u></b>

**Analysis**

As required by the accounting standards, tangible capital assets must be reported on at historical costs. Historical cost is the cost of the assets at the time of acquisition, construction or donation.

Consequently, the historical cost of tangible capital assets will be different than the replacement cost of TCA's. The historical costs of TCA's as at December 31, 2009 total \$5.7 billion. However, because of inflation, the costs to replace all of our capital and infrastructure assets today would require an estimated \$15.8 billion.

Table 2, below, provides a summary of the historical cost versus replacement cost, 2009 amortization, 2009 capital spending, sustainable annual spending and spending surplus or deficit.

**Table 2****Tangible Capital Assets Summary**

Asset	Historical Cost	Estimated Replacement Cost	2009 Amortization	2009 Capital Spending	Sustainable Annual Spending	Spending Surplus (Deficit)
Land (note 1)	\$193M	\$663M	\$0	n/a	n/a	n/a
Land Improvements	\$198M	\$339M	\$6.6M	\$5.7M	\$11.3M	(\$5.7M)
Buildings	\$683M	\$1,478M	\$14.9M	\$39.9M	\$37.0M	\$2.9M
Vehicles	\$244M	\$258M	\$18.7M	\$37.9M	\$22.3M	\$15.6M
Computer	\$10M	\$11M	\$2.9M	\$2.5M	\$2.8M	(\$0.3M)
Other	\$85M	\$95M	\$6.5M	\$16.2M	\$2.6M	\$13.6M
Roads	\$1,932M	\$4,454M	\$73.3M	\$45.2M	\$136.2M	(\$91.0M)
Bridges & Other Structures	\$199M	\$482M	\$2.6M	\$0.7M	\$6.4M	(\$5.7M)
W/WW Facilities	\$436M	\$1,895M	\$9.2M	\$22.4M	\$47.4M	(\$24.9M)
Underground & Other Networks	\$1,772M	\$6,153M	\$21.5M	\$42.5M	\$67.4M	(\$24.8M)
<b>TOTAL</b>	<b>\$5,754M</b>	<b>\$15,827M</b>	<b>\$156.3M</b>	<b>\$213.1M</b>	<b>\$333.4M</b>	<b>(\$120.3M)</b>

Notes to Table 2:

Sustainable annual spending represents the estimated replacement cost divided the useful life of the assets in the category. Spending Surplus (Deficit) is calculated as capital spending less sustainable annual spending.

(1) Land is an asset that does not need to be replaced over time, therefore sustainable annual spending to replace the asset is not applicable. Capital spending on land acquisitions in 2009 of \$17.9M is not reflected in the table.

Amortization is the process of allocating the cost of a tangible capital asset to operating periods as an expense over the useful life of the asset. In 2009, amortization on assets amounted to \$156.3 million using the historical cost of assets. Based on the estimated replacement cost of \$15.8 billion, an annual sustainable spending level to ensure that our assets are replaced and redeveloped in a timely manner would be approximately \$333 million. Capital spending on asset replacements and redevelopments in 2009 amounted to \$213.1 million which resulted in a gap of \$120 million.

It should be noted that this type of comparison can be misleading when viewed in isolation. Certain assets in Table 2 show a spending surplus but this may have occurred to catch up on a past backlog of needs. As we move forward with tangible capital asset accounting a clearer picture of gaps between annual expenditures and sustainable spending levels will develop.

In conclusion, the quantitative accounting analysis based on the new reporting requirements of PSAB 3150 supports the qualitative analysis from the Public Works' Asset Management section and State of the Infrastructure Reports which indicates that there is an infrastructure deficit that needs to be addressed in order for our capital assets to be sustained into the future.

**Exhibit 1 – Tangible Capital Assets - Capitalization Thresholds**

Exhibit 1 describes the types of assets included in each category (i.e. sub-classes) and also provides the dollar capitalization thresholds that were established for accounting purposes.

<b>Asset Class</b>	<b>Sub-Class</b>	<b>Baseline Valuation Threshold</b>	<b>Thresholds Going Forward</b>
<b>Land</b>	Land (General)	0.15Ac in size.	No threshold, all lands included.
	Land (Housing)	No threshold, all lands included.	No threshold, all lands included.
	Land Under Roads	No threshold, all lands included.	No threshold, all lands included.
<b>Land Improvements</b>	Land Development Costs for Parks, Trails, Golf Courses, Cemeteries, Parking Lots, Transit Terminals	An estimate of the quantities and costs were made based on available data such as the Development Charges Study.	Minimum approved Capital Budget of \$100,000 or more.
<b>Buildings</b>	All types (except for W/WW Facilities which have their own category)	1000 sq ft. or current estimated value of \$100,000.	Minimum approved Capital Budget of \$100,000 or more.
<b>Vehicles</b>		No threshold used, all vehicles included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Computer</b>	Hardware	Minimum current estimated value of \$1 million in total for the same type of items.  Only items with book value (i.e. purchased within last 3 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
	Software	Minimum value of \$1 million or more.  Only items with book value (i.e. purchased within the last 5 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
<b>W/WW Facilities</b>		No threshold used, all W/WW facilities included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Roads</b>	Road Network (including sidewalks)	No threshold used, all road segments included.	Minimum approved Capital Budget of \$100,000 or more.
	Streetlights	Only Streetlights with book value were included.	Minimum approved Capital Budget of \$100,000 or more.
	Traffic Signals	Only Traffic Signals with Book Value were included.	Minimum approved Capital Budget of \$100,000 or more.

<b>Asset Class</b>	<b>Sub-Class</b>	<b>Baseline Valuation Threshold</b>	<b>Thresholds Going Forward</b>
<b>Bridges &amp; Other Structures</b>	Bridges & Culverts	All bridges.  Only culverts greater than or equal to 3m in span were included. Culverts of any size for driveway approaches were not included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Underground &amp; Other Networks</b>	Water Pipes (includes valves & appurtenances)	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Water Meters	Only items with book value (i.e. installed within the last 18 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
	Wastewater Pipes	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Pipes	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Management Ponds	No threshold used, all ponds included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Inlets & Outfalls	Only those assets with book value were included.	Minimum approved Capital Budget of \$100,000 or more.
	Drainage Channels	No baseline value assigned. Will be tracked going forward based on actual expenditures.	Minimum approved Capital Budget of \$100,000 or more.
<b>Other</b>	Machinery & Equipment	Minimum estimated value of \$50,000 or more OR like items with a combined value of \$1 million or more.	Minimum approved Capital Budget of \$100,000 or more.



## City of Hamilton

# Tangible Capital Assets Report as at December 31, 2009

May 2010

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## Overview

The City of Hamilton's Tangible Capital Asset (TCA) project was initiated in 2007 following adoption of new accounting standards for municipal governments in Canada for 2009.

One of the primary reasons for the change was the emphasis on asset management and sustainability from governments and funders.

The Canadian Institute of Chartered Accountants ("CICA") Public Sector Accounting Board ("PSAB") Handbook section PS3150 titled "Tangible Capital Assets" provides the accounting standards to be followed by governments in Canada.

Over the past few years (from August 2007 to May 2010) the City's tangible capital asset project team have been inventorying, analyzing and calculating the value of the City's investment in tangible capital assets. Existing asset and infrastructure asset management systems were used to obtain the inventory, where these systems were available. Estimating techniques were used to calculate the initial valuation of the tangible capital assets as permitted by the PSAB when historical records were not available.

In addition to meeting legislated requirements, the implementation of TCA Accounting will also aid in achieving the following desirable outcomes:

- Capital Asset replacement cost requirements are quantified, predicted and reported.
- Enhanced quality of information allows for improved analysis of issues involving TCAs. Costs of providing different levels of service are quantified to provide a basis for improved decision making regarding resource allocation.
- Risk and liability are managed and due diligence in infrastructure stewardship is demonstrated.
- More comprehensive communication with citizens, rate payers, elected officials, financial-rating organizations and regulatory agencies.
- Service delivery and operational requirements are coordinated.
- More effective asset management practices;
- Fiscal responsibility;
- Accountability;
- Provide information to support measurement of cost of service; and improved information to support long-term planning;

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- Ensure integrity of the asset values used for insurance purposes and risk management;
- Help ensure assets are being properly maintained to meet Health and Safety requirements; and
- Provide more accurate performance measurement reporting.

Details on each of the tangible capital asset categories are found in this report.

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## Tangible Capital Asset Schedule

	<u>2009</u> \$000's	<u>2008</u> \$000's
<b>General</b>		
Land	\$ 193,416	\$ 170,956
Land improvements	106,577	107,351
Buildings	265,909	237,972
Vehicles	125,361	107,044
Computer hardware and software	4,323	4,724
Other	57,847	48,167
<b>Infrastructure</b>		
Roads	1,244,350	1,268,848
Bridges and structures	160,935	162,861
Water and wastewater facilities	166,758	150,165
Underground and other networks	<u>1,380,969</u>	<u>1,331,191</u>
<b>Net Book Value</b>	<b>3,706,446</b>	<b>3,589,279</b>
<b>Assets under construction</b>	<u><b>179,788</b></u>	<u><b>104,653</b></u>
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NOTE: Refer to the TCA schedule at the back of this report for a summary by each tangible capital asset category.

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**Background on Accounting for Tangible Capital Assets**

At a minimum, the following needs to be recorded and tracked for tangible capital asset accounting purposes:

- Cost
- Annual Additions, Betterments, Disposals, and Write-Downs
- Annual and Accumulated Amortization
- Net Book Values

The amount to amortize is the asset's acquisition cost, less its residual value. Amortizable assets have finite lives. Historically the word "depreciation" was used to represent this concept, but "amortization" is the term currently used.

As the cost of the asset is allocated over time its carrying amount decreases. This lower amount is often called the asset's net book value (NBV). The difference between the initial carrying amount and the NBV is called "accumulated amortization".

The amount of cost allocated is the difference between the cost of acquisition and the "residual value" of the asset or component. This difference is called the "amortizable amount".

$$\text{Amortizable Amount} = \text{Acquisition Cost less Residual Value}$$

The amortization charge calculated each year is treated as an expense and is reported in the City of Hamilton Consolidated Financial Statement in the Statement of Operations. It forms part of the cost of operations and contributes directly to the net annual operating result. Including part of the acquisition cost of an asset as an expense in each year subsequent to its acquisition through amortization allows an entity to determine whether its revenues are sufficient to cover all of its operating costs, including the acquisition cost of the asset. The annual amortization expense does not represent a cash outflow – the cash outflow occurred when the asset was acquired. Amortization also is not an indication of how much is needed to be spent on future asset acquisition (replacement or renewal) or on asset maintenance.

All assets within an ascertainable expected life will be amortized in a systematic manner reflective of the use of the asset and will be established by collaboration between staff in the Operating Departments, Accounting, and Budgets. Amortization of capital leases and leasehold improvements will be on a straight line basis over the term of the lease.

Amortization for new assets will begin in the year of capitalization. Six months of amortization expense will be recognized in the year of capitalization for newly acquired assets. Therefore, six months of amortization will be required in the year of disposal.

The half year amortization rule implies that all assets are constructed by the City or donated to the City of Hamilton on July 1st of each year. Amortization equal to a half year of amortization begins in the same year for all July 1st infrastructure assets. In addition, roads linear infrastructure assets will be amortized using engineering road

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deterioration curves. These deterioration curves represent the consumption of the asset over time based on its condition.

### Thresholds

Capitalization thresholds were established to make the TCA implementation practical to administer and maintain. Generally the threshold amount for each asset class is the minimum cost or size an individual asset must have before it is treated as a tangible capital asset and added to the asset accounting register. The threshold amounts are used as a guide in addition to professional judgement.

The following table identifies the thresholds that apply to individual assets within each asset class for the purposes of establishing initial valuations and the thresholds that will be used as we move forward.

<b>Asset Class</b>	<b>Sub-Class</b>	<b>Baseline Valuation Threshold</b>	<b>Thresholds Going Forward</b>
<b>Land</b>	Land (General)	0.15Ac in size.	No threshold, all lands included.
	Land (Housing)	No threshold, all lands included.	No threshold, all lands included.
	Land Under Roads	No threshold, all lands included.	No threshold, all lands included.
<b>Land Improvements</b>	Land Development Costs for Parks, Trails, Golf Courses, Cemeteries, Parking Lots, Transit Terminals	An estimate of the quantities and costs were made based on available data such as the Development Charges Study.	Minimum approved Capital Budget of \$100,000 or more.
<b>Buildings</b>	All types (except for W/WW Facilities which have their own category)	1000 sq ft. or current estimated value of \$100,000.	Minimum approved Capital Budget of \$100,000 or more.
<b>Vehicles</b>		No threshold used, all vehicles included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Computer</b>	Hardware	Minimum current estimated value of \$1 million in total for the same type of items.  Only items with book value (ie. purchased within last 3 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
	Software	Minimum value of \$1 million or more.  Only items with book value (ie. purchased within the last 5 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
<b>W/WW Facilities</b>		No threshold used, all W/WW	Minimum approved Capital

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<b>Asset Class</b>	<b>Sub-Class</b>	<b>Baseline Valuation Threshold</b>	<b>Thresholds Going Forward</b>
		facilities included.	Budget of \$100,000 or more.
<b>Roads</b>	Road Network (including sidewalks)	No threshold used, all road segments included.	Minimum approved Capital Budget of \$100,000 or more.
	Streetlights	Only Streetlights with book value were included.	Minimum approved Capital Budget of \$100,000 or more.
	Traffic Signals	Only Traffic Signals with Book Value were included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Bridges &amp; Other Structures</b>	Bridges & Culverts	All bridges.  Only culverts greater than or equal to 3m in span were included. Culverts of any size for driveway approaches were not included.	Minimum approved Capital Budget of \$100,000 or more.
<b>Underground &amp; Other Networks</b>	Water Pipes (includes valves & appurtenances)	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Water Meters	Only items with book value (ie. installed within the last 18 years) were included.	Minimum approved Capital Budget of \$100,000 or more.
	Wastewater Pipes	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Pipes	No threshold used, all pipes included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Management Ponds	No threshold used, all ponds included.	Minimum approved Capital Budget of \$100,000 or more.
	Storm Water Inlets & Outfalls	Only those assets with book value were included.	Minimum approved Capital Budget of \$100,000 or more.
	Drainage Channels	No baseline value assigned. Will be tracked going forward based on actual expenditures.	Minimum approved Capital Budget of \$100,000 or more.
<b>Other</b>	Machinery & Equipment	Minimum estimated value of \$50,000 or more OR like items with a combined value of \$1 million or more.	Minimum approved Capital Budget of \$100,000 or more.

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## Asset Tracking Details

Different types of assets are being tracked at different levels of detail. In general, high dollar value assets are tracked in more detail than smaller dollar value assets.

Once again, the differentiated level of asset tracking is in the interest of keeping the asset accounting register practical to administer and maintain. The chart below provides a summary of the level of detail to which asset information is being maintained for accounting purposes. Asset managers may have their own databases which track the assets at a more detailed level for asset management purposes.

<b>Asset Class</b>	<b>Sub-Class</b>	<b>Asset Tracking Level</b>	<b>Disposal Details</b>
<b>Land</b>	Land (General)	One land parcel equals one asset.	Based on actual disposal of the asset.
	Land (Housing)	One land parcel equals one asset.	Based on actual disposal of the asset.
	Land Under Roads	All land under roads summarized as one asset.	Based on actual disposal of the asset.
<b>Land Improvements</b>	Park Development Costs	One Park = One asset	Based on actual disposal or redevelopment of the asset.
	Trails, Golf Courses, Cemeteries, Parking Lots, Transit Terminals	Costs are summarized by year of construction.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
<b>Buildings</b>	All types (except for W/WW Facilities which have their own category)	One Building = One Asset	Based on actual disposal or redevelopment of the asset.
<b>Vehicles</b>		One Vehicle = One Asset	Based on actual disposal of the asset.
<b>Computer</b>	Hardware	Costs are summarized by year of acquisition.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
	Software	Costs are summarized by year of acquisition.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
<b>W/WW Facilities</b>		One Facility = One Asset	Based on actual disposal or redevelopment of the asset.
<b>Roads</b>	Road Network (including sidewalks)	One Road Segment = One Asset  A road segment is from one intersection to the next.	Based on actual disposal or redevelopment of the asset.
	Streetlights	Costs are summarized by year of acquisition/ construction.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
	Traffic Signal	Costs are summarized by year	Deemed disposal once the

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<b>Asset Class</b>	<b>Sub-Class</b>	<b>Asset Tracking Level</b>	<b>Disposal Details</b>
		of acquisition/ construction.	asset reaches \$0 Net Book Value (NBV).
<b>Bridges &amp; Other Structures</b>	Bridges & Culverts	One Bridge = One Asset One Culvert = One Asset	Based on actual disposal or redevelopment of the asset.
<b>Underground &amp; Other Networks</b>	Water Pipes (includes valves & appurtenances)	Costs are summarized by year of acquisition/ construction.	Based on actual disposal or redevelopment of the asset except for pipe lining which is deemed disposed of once \$0 NBV is reached.
	Water Meters	Costs are summarized by year of acquisition.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
	Wastewater Pipes	Costs are summarized by year of acquisition/ construction.	Based on actual disposal or redevelopment of the asset except for pipe lining which is deemed disposed of once \$0 NBV is reached.
	Storm Water Pipes	Costs are summarized by year of acquisition/ construction.	Based on actual disposal or redevelopment of the asset except for pipe lining which is deemed disposed of once \$0 NBV is reached.
	Storm Water Management Ponds	One Pond = One Asset	Based on actual disposal or redevelopment of the asset.
	Storm Water Inlets & Outfalls	Costs are summarized by year of construction.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
	Drainage Channels	Costs are summarized by year of acquisition/ construction.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).
<b>Other</b>	Machinery & Equipment	Costs are summarized by year of acquisition.	Deemed disposal once the asset reaches \$0 Net Book Value (NBV).

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**General TCAs - Land****Land Holdings**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Land	Not applicable	Over 2000 land parcels.  Over 25,000 Acres of land, including nearly 15,000 Acres of land for roads.	\$193,416,470	\$663M

**Initial Valuation:**

The Vailtech tax database was used as the source of the Land listing.

In most cases, estimates were used to calculate the initial baseline TCA valuation. These estimates were based on City-wide averages of assessed values for vacant lands.

Acquisition dates were not always available. Various sources were referenced but where no date was available, 1959 was used. (This was the average of the known acquisition dates).

The area of land under roads was obtained from the Hansen Roads Database which contains the length and width of roads. For the baseline valuation, all lands under roads were valued at \$2500/acre and deflated back to 1959 to come up with an estimated historical cost.

Going forward, land acquisitions will be based on actual expenditures.

Lands held for resale are not considered TCAs and have been excluded from the Land listing. Examples of this would be industrial lands held for resale.

To recognize their impaired value, cemetery lands were assigned a value of \$0.

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**Capitalization Threshold:**

A threshold of 0.15Ac was used for the initial valuation. I.e. lands smaller than this were excluded. The reason is that because lands this small in size were difficult to identify and locate and cross reference with another source such as GIS or Teranet was not helpful.

This threshold did not apply to Housing lands (ie. all Housing lands were included, regardless of size).

Going forward, all land purchases will be tracked and included, regardless of size.

**Useful life:**

Not applicable. Land does not amortize.

**Amortization Method:**

Not applicable. Land does not amortize.

**2009 Net Additions (Net Disposals):**

Land	120 acres	\$23 million
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Major acquisitions in 2009 included Land for Airport runway expansion, various acquisitions for Parkland, & the QEW/ Fruitland tourism centre.

**2009 Amortization Expense:**

Not applicable

**Analysis and Interpretation:**

Land is not an asset that amortizes so there is no need to set aside reserves for the future replacement of the asset.

Often times land is “dedicated” to the City by developers. Land for roads in new subdivisions and lands for parks and pump stations are examples. In total, \$5.5 million of lands were dedicated to the City in 2009. Although there is no up-front cost to acquire these lands there are annual financial implications in the form of on-going maintenance of these lands that should be considered.

## 2009 City of Hamilton Tangible Capital Assets Report

**General TCAs - Land Improvements**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Cemeteries	30 years	66	\$6,075,629	\$338M
Golf Courses	30 years	2	\$3,235,721	
Car Parks	30 years	59	\$11,921,291	
Parks, Trails, Amenities	30 years	936 parks	\$83,017,051	
Transit Land Improvements	20 years		\$2,327,479	
<b>TOTAL</b>			<b>\$106,577,171</b>	<b>\$338M</b>

TCAs Under Construction	varies		\$9,120,253	n/a
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**2009 Net Additions (Net Disposals):**

(Notable additions in brackets)

Cemeteries	\$0
Golf Courses	\$426K
Parking lots	\$70K
Parks, Trails, Amenities (Dundas Driving Park; Lawfield Park Redevelopment)	\$5.1 million
Transit Land Improvements	\$0
<b>Total</b>	<b>\$5.6 million</b>

**2009 Amortization Expense:**

Cemeteries	\$410K
Golf Courses	\$189K
Parking lots	\$818K
Parks, Trails, Amenities	\$5 million
Transit Land Improvements	\$166K
<b>Total</b>	<b>\$6.6 million</b>

**Cemeteries****Initial Valuation:**

An inventory of cemeteries was provided by the Superintendent of Cemeteries. This included the acreage for each cemetery, an estimated opening year, cemetery activity status, and various cemetery amenity details.

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In 2003 The City of Hamilton opened Glanbrook Municipal Cemetery. Actual construction charges for this cemetery were obtained and used to calculate a per acre cost that was applied to all cemeteries to establish a baseline value for cemetery land improvements.

Going forward, cemetery land improvements will be valued based on actual expenditures charged to related capital projects.

**Capitalization Threshold:**

No threshold was used for the baseline valuation – all City-owned cemeteries were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

A useful life of 30 years was given to all cemeteries. This is based on the average useful life for parks as noted in the 2009 Hamilton Development Charge Study.

The majority of cemeteries were constructed in the 1800's, however for TCA purposes it is assumed that the date of the most recent major refurbishment is 1994, thereby making each cemetery half way through its useful life.

**Amortization Method:**

Cemeteries will be amortized over their useful life on a straight-line basis starting with ½ year's worth of amortization in the first year.

**Golf Courses****Initial Valuation:**

An inventory of all parks, trails and open spaces (including golf courses) was provided by the Parks Operations and Maintenance department. Inventory was provided in the form of an Excel spreadsheet derived from a program called BreakThru. This provided the total hectares for each course, which was converted to acres for valuation purposes.

To estimate costs, 3 well known Canadian golf course construction companies were contacted. All three stated that there are many determining factors in golf course construction cost.

The first could not provide a per acre construction cost estimate.

The second estimated \$20K per acre.

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**2009 City of Hamilton Tangible Capital Assets Report**

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The third, who is familiar with the Hamilton courses, estimated a value of \$5M for King's Forest and \$4M for the Chedoke courses. These figures fell closely in line with the second estimation, so a \$20K per acre cost was used for our valuation purposes.

Going forward, golf course improvements will be valued based on actual expenditures charged to related capital projects.

**Capitalization Threshold:**

No threshold was used for the baseline valuation – both City-owned golf courses were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

The Chedoke Martin course was built in 1896.

The Chedoke Beddoe course was built in 1942.

King's Forest was built in 1973.

A 30 year useful life was used. It was assumed that all courses were last redeveloped in 1994, thereby making each half way through their useful lives.

**Amortization Method:**

Golf courses will be amortized over their useful life on a straight-line basis starting with ½ year's worth of amortization in the first year.

**Parking Lots (Car Parks)****Initial Valuation:**

An inventory listing of carparks, number of spaces and value per space was provided by the Manager of Parking Operations and Maintenance. This same inventory was used for the Development Charge Study.

A value of \$10,000 per parking space for surface lots and \$25,000 per space for the York Street Parkade was used. These values included a land component which was deducted for each lot (to avoid double counting Land).

**Capitalization Threshold:**

No threshold was used for the baseline valuation – all City-owned parking lots were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

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**Useful life:**

A useful life of 30 years was assigned to all car parks, and it is assumed that the in service date is 1994, thereby making each lot half way through its useful life.

**Amortization Method:**

Car Parks will be amortized over their useful life on a straight-line basis starting with ½ year's worth of amortization in the first year.

**Parks, Trails and Amenities****Initial Valuation:**

An inventory of all parks and open spaces was provided by the Parks Operations and Maintenance department. The inventory was provided in the form of an Excel spreadsheet derived from a program called BreakThru. This provided the total acreage for each park.

An inventory of all trails and parks amenities was taken from the 2009 Hamilton Development Charge Study.

A per acre cost for each of the type of parkland was taken from the Development Charge Study.

The total value of park amenities was taken from the DC Study. The total amenity value was then proportioned among the active parks based on the acreage of each park.

The total replacement cost of each active park is based on the per acre cost for that type of park, plus the value of the amenities associated with that park.

A per kilometer cost for each trail was taken from the DC Study.

If the cost of development or full redevelopment was known (for recent developments), then the actual costs were used for valuation.

Parks that are not owned by the City were excluded.

Parks noted as "proposed" were excluded.

Parks on Utility Lands were excluded to avoid possible double counting with other assets (ie. site costs related to SWM ponds were already included in the Storm assets valuation).

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Westfield Heritage Village and Confederation Park land is owned by the City and included in the Land valuation, however the operations of these parks are the responsibility of outside agencies, and therefore these have been excluded from the Parks valuation.

Golf courses were valued separately.

Various recreation facilities were included in the facilities valuation and excluded from parks.

Parks classified as “General Open Space” and “Natural Open Space” were excluded from the Park valuation. It was assumed that this was “raw” land with no park built on it and no park amenities, therefore minimal if any capital development costs are associated with these areas. It should be noted that the land itself for these areas was included in the Land valuation.

All shelters, buildings and facilities were excluded. These were included in the Facilities initial valuation.

**Capitalization Threshold:**

No threshold was used for the baseline valuation – all City owned parks, trails and amenities were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

A useful life of 30 years was given to all parks, trails and amenities based on the average useful life for parks as noted in the Development Charge Study.

The construction date for the majority of parks and trails is unknown, therefore for TCA purposes it was assumed that the date of the most recent full redevelopment is 1994, thereby making each park half way through its useful life.

**Amortization Method:**

Parks and trails will be amortized over their useful life on a straight-line basis starting with ½ year’s worth of amortization in the first year.

**Analysis and Interpretation:**

Comparing 2009 to 2008, there is an increase in Park-related Additions & Betterments from \$4.4 million in 2008 to \$5.2 million in 2009. \$385,000 worth of parkland improvements were also contributed to the City in 2009 via developers.

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The Expenditure to Replacement Cost ratio for Parks is about 2% whereas it should be around 3.3% or about \$8.5 million per year based on the average useful life of 30 yrs and the estimated replacement cost of \$257.8 million.

2009 was actually a deflationary year for construction prices. Construction prices fell by 1.9% which is the primary reason the network's Replacement Value decreased by about \$1.7 million from 2008 to 2009 despite the increase in the park network from new development.

## 2009 City of Hamilton Tangible Capital Assets Report

**General TCAs - Buildings**

<b>Asset Description</b>	<b># of Facilities</b>	<b>Net Book Value at Dec 31/09</b>	<b>Estimated Replacement Value at Dec 31/09</b>
Administration	7	\$5,142,606	\$55.9M
Arenas	20	\$16,495,036	\$131.7M
City Owned & Leased	3	\$15,909,196	\$36.8M
Fire & EMS	31	\$11,228,783	\$44.7M
HECFI	3	\$22,765,177	\$181.6M
Housing	546	\$37,541,298	\$344.4M
Libraries	16	\$11,347,862	\$56.9M
Museums & Historical	21	\$1,883,270	\$25.6M
Outdoor Pools	11	\$1,716,632	\$8.4M
Park Facilities	96	\$6,716,976	\$30.3M
Police Facilities	3	\$13,746,290	\$59.3M
Recreation & Community Centres	34	\$18,973,810	\$102.3M
Special Use	15	\$30,062,733	\$147.4M
Sports Clubs & Community Halls	27	\$1,826,911	\$45.1M
Waste Management	8	\$43,943,306	\$81.8M
Work Yards & Maintenance	62	\$26,609,585	\$125.8M
<b>Total Buildings</b>	<b>903</b>	<b>\$265,909,471</b>	<b>\$1,478M</b>

TCAs Under Construction	various	\$72,362,120	n/a
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**Initial Valuation:**

The Facility valuation was based on information from Public Works' Real Estate Capital Asset Priority Planning (RECAPP) system (where available). Other sources included data gathered from City Housing; RS Means (construction cost data supplier) replacement value estimates; and actual construction prices for recently constructed buildings.

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**2009 City of Hamilton Tangible Capital Assets Report**


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All City Facilities are valued on a whole asset approach, whereby one building is treated as one asset.

Going forward, all facility construction will be valued based on actual expenditures charged to related capital projects.

**Capitalization Threshold:**

For the initial valuation, buildings greater than 1,000 square feet or having a replacement cost in excess of over \$100,000 were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

A useful life of 40 years was used for all City Facility assets.

**Amortization Method:**

Straight line amortization is used.

**2009 Amortization Expense:**

Facilities (excluding W/WW Facilities)	\$14.9 million
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**2009 Net Additions (Net Disposals):**

(Notable additions shown in brackets)

Protection Services (Fire Stn #20)	\$3.1 million
Environmental Services (CCF & MRF)	\$1.5 million
Health & Social Services (Housing – First Place)	\$20.9 million
Culture & Recreation (Turner Park Library; Nash Jackson Reno; Cemetery Office)	\$15.1 million
<b>TOTAL</b>	<b>\$40.6 million</b>

**Analysis and Interpretation:**

The “City Owned & Leased” category refers to buildings owned by the City and leased to other parties. This includes the Mohawk 4Ice Centre, the Art Gallery, and the Dundas Centre for the Arts.

Notable buildings in the “Special Use” category include both Homes for the Aged, the Courthouse, the Parking Garage beneath Hamilton Place & the Convention Centre, the Central Utilities Plant and Hamilton Incubator of Technology.

The average age of the City’s facilities is approximately 45.6 years, in excess of the useful life of such assets. Given the total estimated replacement cost of the facilities of \$1,478M, and the expected useful life of 40 years, annual expenditures should be about \$37 million to sustain and replenish the assets.

**2009 City of Hamilton Tangible Capital Assets Report**

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Additions & Betterments in 2009 were \$42 million but more than half of that was for the acquisition of new facilities which indicates that we're falling further behind on investments in our general buildings infrastructure. However, it should be noted that there are significant works-in-progress (\$72 million) that should allow us to catch up on some of the backlog. Over half of the WIP dollars (\$49 million) relate to the City Hall renovations (which will be capitalized in 2010).

Other significant works-in-progress include (with WIP dollars spent as of end of 2009) the Downtown Market Improvements (\$8 million), the Bridgewater Court Housing Development (\$6 million), the Downtown Transit Terminal (\$2 million); Flamborough Twin Pad Arena (\$1.7 million), Multi-Agency (Police, Fire, EMS) Training Facility (\$1.6 million); and the Central Library Improvements (\$1.3 million).

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**2009 City of Hamilton Tangible Capital Assets Report**


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**General TCAs - Vehicles**

<b>Asset Description</b>	<b># of Vehicles</b>	<b>Net Book Value at Dec 31/09</b>	<b>Estimated Replacement Value at Dec 31/09</b>
Emergency Medical Services (EMS)	51	\$3,143,967	\$5.6M
Fire	127	\$11,791,458	\$29M
Public Transit Buses	239	\$61,862,373	\$113.5M
Specialized Accessible Transit (DARTS) vehicles	76	\$3,844,076	\$12.1M
Transit (Non-Revenue)	17	\$425,262	\$698K
Police	314	\$3,770,936	\$8.4M
Central Fleet	1297	\$40,522,582	\$88.7M
<b>Total Vehicles</b>	<b>2121</b>	<b>\$125,360,654</b>	<b>\$258M</b>

TCAs Under Construction		\$0	n/a
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**Initial Valuation:**

The Vehicle valuation was based on information from the host Department resources such as Excel and Avantis as well as vehicle data research.

Going forward, all vehicles assets will be valued based on actual expenditures charged to related capital projects.

**Capitalization Threshold:**

No threshold was utilized. All vehicles were valued as part of the baseline valuation (i.e. lawnmowers to garbage collection trucks).

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

Useful lives for most vehicles were determined based on the vehicles license weight. Vehicles generally fall into one of three categories:

Light weight = 8yr useful life

Medium weight = 10 year useful life

Heavy weight = 12 year useful life.

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**2009 City of Hamilton Tangible Capital Assets Report**


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Exceptions are:

Police patrol vehicles = 4 year useful life

Conventional public transit vehicles (buses) = 12 year useful life

Fire fighting vehicles = 17 year useful life

Paramedic vehicles = 6 year useful life

Useful lives for vehicle exceptions are based on industry standards, and comparable to other municipalities.

**Amortization Method:**

Straight line amortization is used.

**2009 Amortization Expense:**

Vehicle Assets	\$18.75 million
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**2009 Net Additions (Net Disposals):**

Emergency Medical Services (EMS)	\$761K
Fire	\$1.1 million
Public Transit Buses	\$22.6 million
Specialized Accessible Transit (DARTS)	\$1.8 million
Transit Non-Revenue vehicles	\$108K
Police	\$539K
Central Fleet	\$1.8 million
<b>TOTAL FLEET</b>	<b>\$28.8 million</b>

**Analysis and Interpretation:**

Comparing 2009 to 2008 shows a \$10 million increase spending on vehicles from \$27 million in 2008 to \$37 million in 2009. Replenishing our fleet inventory on a timely basis would require an annual investment of about \$22 million (not including expansions to the fleet).

The estimated replacement cost for the entire fleet rose by \$11.5 million in 2009 to \$258 million (\$246 million – 2008). The most significant area in terms of 2009 expenditures was Public Transit with over \$20 million spent on new and replacement buses.

In terms of dollar values, Public Transit Buses and Central Fleet vehicles make up about 80% of the entire City Fleet.

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**2009 City of Hamilton Tangible Capital Assets Report**


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**General TCAs – Computer**

Asset Description	Estimated Useful Lives (in years)	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Hardware	3	\$3,319,425	\$6.7M
Software	5	\$1,003,349	\$3.8M
<b>TOTAL</b>		<b>\$4,322,773</b>	<b>\$10.6M</b>

TCAs under Construction		\$769,025	n/a
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**Initial Valuation:**

An inventory of hardware items was provided. Actual costs were available in most cases but estimates were utilized where necessary.

For software, an examination of recent purchases over the last 5 years was done to identify any significant software purchases and upgrades (over \$1 million).

Given the large quantity and relatively small dollar value of these assets compared to our other assets, we are collectively pooling the value of these assets by year and assuming they are disposed of once their estimated useful life has been reached. As a result, only items with Book Value were included in the valuation. (ie. hardware items less than 3 years old and software items less than 5 years old).

It should be noted that the Water & Wastewater Department's SCADA monitoring and control system has been included as part of the W/WW Facilities asset valuation. Other specialty use hardware and software items may also be included in the "Other" asset categories such as Police radios, etc.

**Capitalization Threshold:**

A threshold of \$1 million was used for the baseline valuation. For software, the purchase or upgrade had to be \$1 million or more to be included in the valuation.

For hardware items, the collective value of all similar items needed to be worth \$1 million or more to be included in the baseline valuation. As a result, Servers, Laptops, and Desktop Computers met the capitalization threshold. Items such as Blackberries, Cell Phones, and Tablets did not meet the threshold and were excluded from the baseline valuation.

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**2009 City of Hamilton Tangible Capital Assets Report**


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Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

Hardware	3 years
Software	5 years

**Amortization Method:**

Straight-line amortization is used with ½ year's worth of amortization taken in the year of acquisition.

**2009 Net Additions (Net Disposals):**

Hardware	\$(137K)
Software	\$523K
<b>Total</b>	<b>\$386K</b>

**2009 Amortization Expense:**

Hardware	\$2.2M
Software	\$681K
<b>Total</b>	<b>\$2.9M</b>

**Analysis and Interpretation:**

With rapid advances in technology, computer equipment can become dated and obsolete very quickly. A sustainable annual funding rate for computer equipment should be upwards of \$2.8 million per year. That's based on the estimated current replacement value of \$10.6 million and an estimated useful life of 3.7 years for hardware and software.

Because the TCA valuation only includes hardware items purchased 3 years ago or less and software items purchased 5 years ago or less, the sustainable funding rate is likely higher than \$2.8 million when we take into account older items that are still in use but have been deemed to be disposed of for accounting purposes.

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**General TCAs – Other**

Asset Description	Estimated Useful Lives (in years)	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Machinery & Equipment	Varies	\$57,847,405	\$94.8M

TCAs under Construction		\$8,972,802	n/a
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Items in this asset category relate to miscellaneous items that do not fall under the other asset categories. Items include primarily machinery & equipment such as those used by Fire, Police, Transit, Central Fleet and various other departments. Assets from Boards & Agencies that are consolidated into the City's Financial Statements such as Library & HECFI materials & equipment are also included.

**Initial Valuation:**

Departments across the City were contacted for information on potential assets they may be using. Given the size of the City, high thresholds were used to make this task more manageable (see below).

Given the large quantities and relatively small dollar value of these assets compared to our other assets, we are collectively pooling the value of these assets by year of purchase and assuming they are disposed of once their estimated useful life has been reached. As a result, only items with Book Value are included in the valuation.

This method of dealing with these assets is perfectly acceptable under PSAB 3150 and is preferred because it is more administratively practical.

**Capitalization Threshold:**

The following thresholds were used to determine what items would be included in the baseline valuation:

- Machinery & Equipment with an individual current replacement value of \$50,000 or more, or;
- Machinery & Equipment with a total combined current replacement value of \$1 million or more for individual items worth less than \$50,000.

We are using a deemed disposal approach whereby assets will be deemed to be disposed of once they reach \$0 Net Book Value (NBV). As

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a result, the baseline valuation only includes those assets that still have a positive NBV as of the end of 2008.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

Useful lives vary but are generally in the range of 10 years for small, light use equipment (ie. Police radios), 20 years for medium use equipment (ie. weigh scales at Transfer Stations, and 40 years or more for heavy-duty equipment (ie. bus wash stations).

**Amortization Method:**

Straight-line amortization is used with ½ year's worth of amortization taken in the year of acquisition.

**2009 Net Additions (Net Disposals):**

Transit Fare Box replacements	\$3.8M
Transit Radio Communications	\$2.6M
Fire Dept Equipment & Gear	\$2.0M
Other purchases	\$4.0M
<b>Total</b>	<b>\$12.4M</b>

**2009 Amortization Expense:**

“Other” Asset category:	\$6.5M
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**Analysis and Interpretation:**

The weighted average useful life of these assets is about 35 years (weighted by estimated replacement cost) which would indicate that about \$2.6 million needs to be set aside annually to replenish these assets at the end of their useful lives.

However, the useful lives of the assets in this category vary significantly. Also, the valuation only includes assets with book value so it does not include older assets that are still in use that are beyond their useful life already. Furthermore, high thresholds were used to arrive at the baseline valuation so the \$2.6 million needed annually would be representative of a bare minimum amount of annual funding required.

To get a better picture of the health of these assets they should be analyzed individually.

The \$8.9 million of works-in-progress relates to Trunk Radio upgrades for Emergency Services.

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## Infrastructure TCAs - Roads

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Roads	18-35 years	6490 lane Km	\$1,052,721,440	\$4,173M
Red Hill	50 years		\$140,619,754	\$147M
Streetlights	20-40 years	14,698 road segments	\$30,942,221	\$85M
Traffic Signals	Signals 40 yrs  Controller Boxes 10 yrs		\$20,066,434	\$49.5M
<b>TOTAL</b>			<b>\$1,244,349,848</b>	<b>\$4,454M</b>

TCAs Under Construction	various		\$11,183,067	n/a
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### Initial Valuation:

An inventory of all road segments was provided by the PW Asset Management department in the form of an Excel spreadsheet derived from a program called Hansen.

Budget estimates (supplied by the City's design section) for road reconstruction costs were used for each of the road classes as the basis for standard unit costs.

Overall Condition Index (OCI) scores from the Hansen database were used to arrive at an effective age. The OCI tells us the remaining expected life of a road segment. By plotting the OCI value on industry standard deterioration curves we arrived at an effective age for each segment.

There are cases in which road ownership is shared between the City and a bordering municipality. They have been valued at 50% to reflect this.

The initial valuation of the Red Hill Valley Expressway was based on the analysis of the actual charges found in the capital projects pertaining to the expressway, and apportioning the charges based on the size of each segment.

Streetlight and Traffic Signal inventories were also obtained from Hansen. Costs estimates were obtained from Public Works staff to arrive at the baseline valuation.

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**2009 City of Hamilton Tangible Capital Assets Report**


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**Capitalization Threshold:**

No threshold was used for Road segments – all City owned roads were included.

Streetlights and Traffic signals are tracked on a deemed disposal basis whereby the assets are disposed of once they reach \$0 NBV. As a result, streetlights and traffic signals that are beyond their useful life are excluded from the valuation.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

“Linc” Parkway:	18 years
Arterials:	28 years
Urban collectors, Urban locals, Rural locals:	35 years
Rural collectors:	30 years
Red Hill Valley Parkway	50 years
Streetlights	20-40 yrs
Traffic Signals	10-40 yrs

Useful lives are based on industry standards for each road class and staff estimates for Streetlights & Traffic signals.

**Amortization Method:**

Amortization for Road segments is based industry standard deterioration curves for each specific type of road class. Amortization for Streetlights & Traffic Signals is on a straight-line basis with ½ a year’s worth of amortization taken in the year of installation.

**2009 Net Additions (Net Disposals):**

Roads	\$32.5M
Red Hill Valley Parkway	\$3.7M
Streetlights	\$(254K)
Traffic Signals	\$1.7M
Developer Contributions	\$5.4M
<b>Total</b>	<b>\$43.2M</b>

**2009 Amortization Expense:**

Roads	\$70M
Red Hill Expressway	\$113K
Streetlights	\$2.1M
Traffic Signals	\$1.0M
<b>Total</b>	<b>\$73.2M</b>

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**2009 City of Hamilton Tangible Capital Assets Report**

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**Analysis and Interpretation:**

Comparing 2009 to 2008 shows a decline in additions & betterments (\$48 million in 2009 vs \$64 million in 2008). To keep up with our roads infrastructure our annual investment in the road network should exceed our annual depreciation which was \$73 million in 2009.

However, the dollars were spent wisely. The average age of the network has remained steady at 24 years which indicates that although we had less dollars to use we spent them on the roads that were in need of most attention. Our Expenditure to Replacement Cost ratio is still only about 1% whereas it should be around 3% or \$135 million based on the average useful life of 32 yrs.

2009 was actually a deflationary year for construction prices. Construction prices fell by 1.9% which is the primary reason the network's Replacement Value decreased by about \$80 million from 2008 to 2009 despite the increase in the network from new development.

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**2009 City of Hamilton Tangible Capital Assets Report**


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## Infrastructure TCAs – Bridges and other structures

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Bridges	75	254	\$148,181,378	\$435M
Culverts	75 or 40	124	\$12,753,561	\$46M
<b>TOTAL</b>		<b>378</b>	<b>\$160,934,939</b>	<b>\$482M</b>

TCAs Under Construction	varies		\$4,128,324	n/a
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### Initial Valuation:

The City Of Hamilton enlisted the services of Stantec Consulting Ltd to value the City's Bridges & Culverts as of Dec 31, 2007.

Construction dates are based on actual information where available and estimates in other cases. Where estimated, the Ministry of Transportation Rehabilitation Manual was used by Stantec.

Historical costs are not available, so deflated replacement costs were used as a substitute. Replacement costs are based on a value per square metre of deck area multiplied by the deck area of the structure. Stantec used 1 of 12 costs per square metre depending on the type of bridge.

Costs were deflated back to the date of acquisition using the Non-residential Building Construction Price Index.

There are 5 cases in which bridge ownership is shared between the City and another organization (ie. bordering municipality or Rail Company). They have been valued at 50% to reflect this.

### Capitalization Threshold:

No threshold was used in the valuation, however only culverts with a span of greater than 3m are included in the Public Works database. Furthermore, culverts within road right of ways that are used for driveway approaches are not included in the database or in this valuation (even if they are greater than 3m).

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

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**2009 City of Hamilton Tangible Capital Assets Report**

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**Useful life:**

A 75 year useful life has been used for all structures, except for corrugated steel pipe (CSP) culverts which have been assigned a 40 year useful life. This is based on Stantec's report which supports our own staff's professional judgment.

**Amortization Method:**

Straight line amortization is used.

**2009 Net Additions (Net Disposals):**

Bridges & Culverts	\$717K
(Bridge #70 Concession 10 East, FLM)	

**2009 Amortization Expense:**

Bridges & Culverts	\$2.6 M
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**Analysis and Interpretation:**

Comparing 2009 Additions & Betterments to 2008 shows a decline from \$4.4 million in 2008 to only \$724,000 in 2009. On one hand this is not surprising considering that the majority of our bridges and culverts (85%) are not in need of replacement until 10 or more years from now, but on the other hand, we may be missing a good opportunity to catch up on the backlog of about 25 structures that already beyond their useful life.

Sustainable funding levels for Bridges & Culverts would be in the order of about \$6.5 million annually given the average useful life of 73 years and the estimated network replacement cost of \$482 million.

2009 was actually deflationary year for construction prices. Construction prices fell by 1.9% which is the primary reason the network's Replacement Value decreased by about \$8 million from 2008 to 2009.

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**2009 City of Hamilton Tangible Capital Assets Report**


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## Infrastructure TCAs – Water & Wastewater Facilities

Asset Description	Quantities	Net Book Value at Dec 31/09	Estimated Reproduction Value at Dec 31/09
Water Treatment	1 Plant	\$3,425,144	\$403.8M
Water Distribution	55 Outstations	\$13,836,885	\$337.5M
Wastewater Treatment	3 Plants	\$30,617,933	\$821.4M
Wastewater Collection	105 Outstations	\$118,878,232	\$332.2M
<b>TOTAL</b>	<b>164 Facilities</b>	<b>\$166,758,194</b>	<b>\$1,894.9M</b>

TCAs Under Construction		\$58,340,530	n/a
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### Initial Valuation:

The 2008 Baseline data for the Water and Wastewater facility asset inventory was obtained from RV Anderson's report titled 'Valuation of City Water and Waste Water Facility Assets for PSAB 3150 Reporting'.

Reproduction values were based on 2008 replacement values inflated by the Non-Residential Building Construction Price Index (NRBCPI) to arrive at 2009 reproduction costs.

Going forward, all assets will be valued based on actual expenditures charged to related capital projects.

### Capitalization Threshold:

Expenditures in any water or wastewater capital project must exceed \$100,000 in order to be considered a TCA related expenditure.

For non-Plant Water & Wastewater Facility renovations and refurbishments, in order for expenditures to be considered TCAs, the project's cumulative expenditures (related to a specific facility) must be equal to, or exceed 75% of the original facility's replacement value.

Plant-related Water & Wastewater capital refurbishments or renovations are not subject to this set minimum expenditure requirement because of the high dollar value on Water & Wastewater Plant facilities. Virtually all capital expenditures would not reach this 75% replacement threshold. Whether or not the Plant-related project is capitalized depends on the nature of the work being done.

Capital-related Water & Wastewater annual expenditures, not directly related to a specific asset, and over \$100K are considered 'annual

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**2009 City of Hamilton Tangible Capital Assets Report**


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projects' which are pooled together and amortized together based on the year in which the costs were incurred. (ie. Annual Outstation Improvements).

**Useful life:**

A 40 year useful life was assigned to coincide with all other City Facility Assets.

**Amortization Method:**

Straight line amortization is used with ½ year amortization in the year of acquisition.

**2009 Amortization Expense:**

Water & Wastewater Facility Assets	\$9.23 million
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**2009 Net Additions (Net Disposals):**

Water Distribution	\$333K
Water Treatment	\$1.3 million
Wastewater Collection	\$23.2 million
Wastewater Treatment	\$947K
<b>TOTAL</b>	<b>\$25.8million</b>

**Analysis and Interpretation:**

2009 Additions & Betterment of \$26 million appear to be significantly below the sustainable funding level of about \$47 million per year, however there are significant works-in-progress (\$58 million) that once completed should boost expenditures closer to the sustainable level.

Although there are 164 W/WW facilities in total the majority of the asset values are for the 4 Plants (1 Water, 3 Wastewater). For asset sustainability, expenditures on W/WW Facilities should be at about a 2-1 ratio in favour of the Plant assets.

Most of the works-in-progress relates to the Woodward Wastewater Treatment Plant (\$31.4M).

## 2009 City of Hamilton Tangible Capital Assets Report

**Infrastructure TCAs – Underground and associated networks**

Asset Description	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Water linear infrastructure TCAs	\$405,653,525	\$1,641M
Wastewater linear infrastructure TCAs	\$529,418,186	\$2,811M
Storm water linear infrastructure TCAs	\$444,280,277	\$1,701M
Drainage Channels	\$1,617,333	\$1,6M
<b>TOTAL</b>	<b>\$1,380,969,321</b>	<b>\$6,153M</b>

TCAs Under Construction	\$14,911,541	n/a
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**Watermains**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Watermains lined	30 years	1937 km of watermains	\$20,335,253	\$86M
Watermains unlined	75 years for installation in 2007 and prior.  50 years for installations in 2008 and later.		\$367,131,205	\$1,508M
Water meters	18 years		\$18,187,068	\$47M
<b>TOTAL</b>			<b>\$405,653,525</b>	<b>\$1,641M</b>

TCAs Under Construction	various		\$7,251,966	n/a
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2009 City of Hamilton Tangible Capital Assets Report

**Wastewater Pipes**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Wastewater pipes - lined	50 years	1683 km of wastewater pipes	\$45,094,323	\$83M
Wastewater pipes - unlined	100 years		\$481,519,362	\$2,716M
Wastewater – drop shafts	100 years	2 drop shafts	\$2,804,501	\$12M
<b>TOTAL</b>			<b>\$529,418,186</b>	<b>\$2,811M</b>

TCAs Under Construction	various		\$4,886,427	n/a
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**Storm water Pipes**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Storm water pipes - lined	50 years	1024 km of storm pipes	\$5,406,942	\$9M
Storm water pipes - unlined	100 years		\$409,739,695	\$1,632M
Storm water – ponds	100 years		\$27,374,990	\$54M
Storm water – inlets/outlets shafts	100 years		\$1,758,650	\$6M
<b>TOTAL</b>			<b>\$444,280,277</b>	<b>\$1,701M</b>

TCAs Under Construction	various		\$2,185,129	n/a
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**Drainage Channels**

Asset Description	Useful Life (in years)	Quantity at Dec 31/09	Net Book Value at Dec 31/09	Estimated Replacement Value at Dec 31/09
Drainage Channels	100 years	Not reviewed.  This asset is only being tracked going forward.	\$1,617,333	\$1,6M

TCAs Under Construction			\$588,019	n/a
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**Initial Valuation:**

The linear infrastructure data was based on Public Works' Hansen Water, Wastewater, & Storm water database. The Hansen data was used to obtain year of last construction and pipe attributes such as length.

Estimates were used to calculate the initial baseline TCA valuation. Pipes are summarized by year to reduce the administrative work and complexity.

Going forward, linear infrastructure will be valued based on actual expenditures charged to related capital projects.

**Capitalization Threshold:**

No threshold was used for the baseline valuation – all pipes in the Hansen database were included.

Going forward, the capitalization threshold for capital projects is a minimum budget of \$100,000 or more.

**Useful life:**

Water Pipes constructed before 2008 were made out of various materials from concrete to PVC that were expected to last from 50 to 100yrs. As a result, a 75 year useful life was used. Pipes constructed after 2008 are now made with PVC which has an expected useful life of 50 years. Pipe lining is a relatively new technology and the useful life may be up to 50 years but because this is a new technology of past data is not available we used a conservative 30 yr life for Pipe Lining.

Wastewater and Storm pipes are expected to last longer than water pipes and have been assigned a 100 useful life with 50 years for pipe lining.

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**Amortization Method:**

Straight line amortization is used.

Pipe dispositions are based on a FIFO (first-in, first out) basis depending on the length of pipe replaced and lined in a given year. For example, 19,865m of water pipes were replaced and lined in 2009, meaning that 19,865m of pipe built in the year 1900 (the oldest pipe pool) were disposed of in 2009.

Pipe lining dispositions occur on a deemed disposal basis (ie. once they reach the end of their useful life).

**2009 Net Additions (Net Disposals):**

Water Linear	8.5km	\$30 million
Sanitary Linear	6.4 km	\$16.7 million
Storm Linear	9.9 km	\$22.3 million
Drainage Channels		\$797K
<b>Total</b>		<b>\$69.8 million</b>

The above figures include developer contributions of \$28.7 million.

**2009 Amortization Expense:**

W/WW/SW Linear Network	\$21.5 million
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**Analysis and Interpretation:**

2009 Additions & Betterments were \$42 million compared to \$30 million in 2008. \$28 million worth of underground infrastructure was also contributed by developers in 2009.

Based on an estimated replacement cost of \$6.2 billion for the entire network, annual expenditures should be around \$70 million per year to be sustainable. However, it is important to note that more cost-effective pipe lining is becoming more and more common, which would reduce the sustainable funding amount.

Pipe lining is much more cost effective than pipe replacements since it does not require the road to be dug up, reducing construction and labour costs. Given that this is a relatively new technology, there is not much historical data to rely on to determine the useful life of pipe lining. Those in the industry claim that pipe lining will have a 50 year life but because of the lack of historical data we used a more conservative 30 years for water pipes because they are under higher amounts of pressure.

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The useful life of installing a replacement pipe ranges from 50 years (water pipes) to 100 years (sanitary & storm pipes). Assuming the useful lives of lined pipes is accurate, that would mean that a lined water pipe would have to be relined 1.67 times to match the useful life of newly installed replacement pipe. The ratio is 2-1 for sanitary & storm pipes.

Therefore, all else being equal, it is more cost-effective to line the water pipes provided the lining cost is at least 40% less than the cost of a replacement pipe. Sanitary and Storm lining is more cost-effective provided it costs 50% or less than installing a replacement pipe.

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## TCAs Under Construction

Asset Description	WIP Value at Dec 31/09
Land Improvements	\$9,120,254
Buildings	\$72,362,124
Computer	\$769,025
Other	\$8,972,802
Roads	\$11,183,067
Bridges	\$4,128,324
W/WW Facilities	\$58,340,530
Underground Networks	\$14,911,541
<b>TOTAL</b>	<b>\$179,787,667</b>

The above table lists the value of assets under construction or works-in-progress (WIP) as of the end of 2009. WIPs are assets that have not yet been put in service. There is no amortization on WIPs – they will begin to amortize in the year they are put into service.

Significant WIPs as of the end of 2009 include (with expenditures up to the end of 2009):

City Hall	\$48.7M
Woodward WW Plant Upgrades	\$32.0M
Roadwork	\$11.2M
Emergency Services Trunk Radio System	\$9.0M
Downtown Farmer's Market	\$8.1M
Water Treatment Plant Upgrades	\$7.6M
Water Linear Pipe Network	\$7.3M
Ewen (McMaster) CSO Tank	\$6.1M
Bridgewater Court Housing Development	\$6.0M
Wastewater Linear Pipe Network	\$4.9M

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## **Non Tangible Capital Assets**

The following assets are not considered tangible capital assets.

### **General TCA – Lands Held for Resale**

Lands held for resale are not considered Tangible Capital Assets because they are not being held to provide goods or services. As a result about 125Ac of industrial lands being held for resale are not included as tangible capital assets.

### **General TCAs – Building Component Replacements**

After extensive review and consideration with Facilities staff it was decided that the most manageable approach going forward for tracking TCA activity with respect to Buildings was to use a whole asset approach. Under the whole asset approach, one building is treated as one asset.

The alternative was to use a component approach whereby each building is broken out into components that each have different useful lives and amortize at different rates. (ie. building structure, roof, HVAC systems, etc).

Both methods are perfectly acceptable under PSAB 3150.

The whole asset approach was selected was because this approach is more practical and workable given existing business processes.

Using a component approach would require changes to existing business processes from the point of view of the Facilities managers. Feedback provided to us was that changes were not desirable mainly due to the increased staff time that would be involved in providing more detailed information for accounting purposes.

When capital projects are budgeted for, one capital project usually relates to one facility. For example, there is one capital project that relates to City Hall, one capital project that relates to Fire Station 20, etc. In sum, one capital project relates to one asset. All dollars spent in that capital project are attributable to the one asset. This method of budgeting lends itself to using a whole asset accounting approach.

If we were to move to a component approach, we would require more detailed information such as which dollars were spent on which components of the building. This would require a move to budgeting by components or added staff time on the part of project managers to break out actual costs by components.

As a result, expenditures in capital projects such as “Annual Roof Replacement” or “Annual Chiller Replacements” are considered non-capital expenses.

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Thought was given to pooling these expenditures annually as a “General Improvement” pool that is not tied to a specific asset but this approach would not work either since these projects are a mix of capital (ie. full roof replacement) and maintenance (ie. Roof patching). If each project were broken out into 2 (ie. one for Annual Roof Replacement and one for Annual Roof Patching) then we could capture these costs as capital.

**General TCAs – Furniture & Fixtures**

If costs for furniture and fixtures are charged to a TCA capital project the related expenditures are included as part of the cost of the asset.

For example, any charges for furniture and fixtures related to the City Hall project will be capitalized as part of the City Hall building. Any charges for furniture and fixtures charged to a non-TCA capital project or to an Operating Dept ID will not be picked up as a TCA expenditure.

Given the relatively small dollars involved in relation to our overall asset values, this is not a material issue and will not skew our financial position whether these costs are included or excluded.

**Non-Controlled Assets**

Whether or not the City should report capital assets in its financial statements is based on the concept of control. Ownership does not necessarily equal control.

The concept of control of an asset’s economic benefit is a key issue in determining whether an asset should be reported in our financial statements.

Indicators of control include the following:

- Is the City the beneficiary of future economic benefits from the asset?
- Do the terms and conditions of legislation or a contract transfer substantially all benefits and risks incidental to ownership to the City?
- Is the City responsible for the asset’s performance, availability and maintenance?
- Is the City responsible for renewal and replacement of the asset?
- Does the City bear all risk of obsolescence, environmental liability, uninsured damage or condemnation of the asset?
- Has the City been using the asset on a continuing basis in the production or supply of goods and services?

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- Have third parties made significant use of the asset but the City is able to restrict such use?
- Is the City responsible for the construction costs of the asset and the financial or other implications of cost and time overruns caused by events outside of its control during the construction period, or subsequent warranty repairs?

Significant assets that the City owns, but does not control, include:

- John C. Munro Airport
- Confederation Park
- Westfield Heritage Village

In all of the above cases, the only assets related to these sites that have been capitalized as City TCAs is the land associated with these sites. Other assets such as land improvements, buildings, and machinery & equipment associated with these sites have not been included as City TCAs because they are not controlled by the City.

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## **Glossary**

### ***Accumulated Amortization***

Accumulated amortization is the sum of all amortization charges to date made for a tangible capital asset and represents the total consumed or used portion of that asset.

### ***Amortization***

Amortization is the process of allocating the cost of a tangible capital asset less its residual value to operating periods as an expense over its estimated useful life in a rational and systematic manner.

### ***Betterment***

The cost incurred to enhance the service potential of a tangible capital asset is a betterment. Service potential is enhanced if one of the following occurs:

- There is an increase in the previously assessed physical output or service capacity;
- Associated operating costs are lowered;
- The original useful life is extended; or
- The quality of output is improved

Betterments and replacements are additions to a tangible capital asset, or a substitution of a component part of tangible capital asset. The distinguishing feature between betterment and a replacement is that betterment is the substitution of a *better* component (one that will enhance the service potential of the asset) for the component currently used. Betterments are treated as tangible capital assets, attached to the affected asset, and amortized accordingly.

### ***Capital Lease***

A capital lease is defined as a lease that transfers substantially all the benefits and risks incidental to ownership of the property to the lessee. A capital lease would normally occur when, at the inception of the lease, one or more of the following conditions are present:

- There is reasonable assurance the lessee will obtain ownership of the leased property by the end of the lease term. This condition is usually signified when ownership does pass at the end of the lease or when the lease provides for a bargain purchase option.
- The lease term is of such duration that the lessee will receive substantially all the economic benefits expected to be derived from the use of the leased property over its life span. The threshold for this benefits test is 75%.
- The minimum lease payments, excluding any portion relating to executors' costs, are equal to 90% or more of the fair market value of the leased property at the inception of the lease. This includes ancillary contractual arrangements that pertain to services related to the leased property (i.e. maintenance or management of a facility) rather than to the asset itself.

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Even without those conditions, a lease may still be classified as a capital lease. It is not appropriate to focus on one factor in isolation. Each factor should be considered in terms of its relative significance to a particular lease.

The following factors should be considered as indicative of a capital lease, even if the above three conditions are not identifiably present (PSG 2-10):

- Ownership – the asset provides an essential service for which there is no practical alternative use or lessee (i.e. roads, highways, jails).
- Financing – the lessee contributes significant financial assistance (i.e. land, loan guarantees, transfers, etc.) toward the cost of acquiring or constructing the property to be leased.
- Control of the asset – the lessee has significant control over the idle capacity of the leased asset (i.e. although there is a potential for third-party use of the asset, the lessee is able to restrict such use, whether or not it pays for that capacity).
- Residual risk or benefit – the lessee faces significant penalties for early termination or the lessee shares in any residual loss or gain on the leased property, or the lessor has the option to transfer the leased property to the lessee at the end of the lease (the “walk –away” clause).
- Operating risk – the municipality is responsible for the performance, availability and/or maintenance of the leased asset, and may otherwise be subject to penalties.
- Business risk – the lessee bears significant future cost increases, such as a CPI escalator.
- Construction risk – the lessee bears the finance or other implications of cost and time overruns caused by events outside of their control.
- Demand risk – the lessee pays for the capacity, regardless of whether it is needed or not.
- Other potential risks – the lessee is responsible for the asset’s obsolescence, environmental liability, uninsured damage or condemnation, etc.

**Cost**

The gross amount of consideration given up to acquire, construct, develop or better a tangible capital asset, and includes all costs directly attributable to acquisition, construction, development, or betterment of the tangible capital asset, including installation costs. The cost of a contributed tangible capital asset is considered to be equal to its fair value at the date of contribution. Capital grants would not be netted against the cost of a tangible capital asset. See the definition of “capital lease” for the cost of a leased tangible capital asset.

***Deflated / Discounted Reproduction Cost***

The current cost of reproducing an asset in its *same physical form* (substantially the same materials and design) and using a price index or cost index to deflate or discount the current cost to the date of acquisition.

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***Deflated / Discounted Replacement Cost***

The current cost of replacing an asset in a *different physical form* but with the *same productive capacity* and using a price index or cost index to deflate or discount the current cost to the date of acquisition.

***Disposal***

Disposals occur when the ownership of a tangible capital asset is relinquished and may occur by sale, destruction, loss or abandonment.

***Expense***

Expenses including losses are decreases in economic resources, either by outflows/reductions of assets or by incidence of liabilities resulting from the operations, transactions and events of the accounting period.

***Fair Value***

The fair value of an asset is the amount for which an asset could be exchanged, or liability settled, between knowledgeable, willing parties, in an arms length transaction. It is therefore the best estimate of the price reasonably obtainable in the market at the date of the valuation. It is the most advantageous price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer. The estimate specifically excludes an estimated price inflated or deflated by special terms or circumstances such as atypical financing, sale and leaseback arrangements, or concessions granted by anyone associated with the sale.

Underlying the definition of fair value is a presumption that the entity is a going concern without any intention or need to liquidate, to curtail materially the scale of its operations or to undertake a transaction on adverse terms. Similarly, to determine the fair value of an asset, it is assumed that the asset is exchanged after an adequate period of marketing to obtain its most advantageous price.

The fair value of an asset is determined by reference to its highest and best use, that is, the use of the asset that is physically possible, legally permissible and financially feasible; and as such results in the highest value. Opportunities that are not available to the entity are not taken into account.

***Full Accrual Basis of Accounting***

The full accrual basis of accounting recognizes the financial effects of transactions in the period(s) in which they occur irrespective of when the cash has been received or paid. It requires that tangible capital assets be reported on the balance sheet (statement of financial position) at historical cost and expensed (amortized) in the annual results of operations over their estimated useful lives.

***Maintenance and Repairs***

The cost incurred to maintain the service potential of a tangible capital asset is a repair. These expenditures are made to maintain the asset in operating condition and are expensed in the year they occur.

***Net Book Value (NBV)***

The net book value is the difference between the cost of a tangible capital asset and its accumulated amortization. It represents the unconsumed cost of a tangible capital asset attributable to its remaining service life.

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***Residual Value***

Residual value is the estimated net realizable value of a tangible capital asset at the end of its useful life to the City.

***Straight Line Method of Amortization***

The straight line method is an approach of amortizing a tangible capital asset where the amortization is considered as a function of time instead of a function of usage. It is assumed that the economic usefulness is the same each year and therefore the amortization charge is the same for each year of its useful life.

***Tangible Capital Asset (TCA)***

Tangible capital assets are non-financial assets with physical substance that:

1. are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible capital assets;
2. have useful economic lives extending beyond an accounting period;
3. are to be used on a continuing basis; and
4. are not for sale in the ordinary course of operations.

***Threshold Amount***

The capitalization threshold is the value above which assets are capitalized and reported in the balance sheet. The threshold amount is to be used as a guide in addition to professional judgment.

The purpose of a threshold amount is to minimize the administrative burden of accounting for small value assets. The threshold should be set at a practical level that would not result in a material misstatement of the financial statements.

***Useful Life***

The estimated period over which a tangible capital asset is expected to be used by the City is referred to as its useful life. With the exception of land, useful life is finite and is normally the shortest of the physical, technological, commercial, and legal life. The life of a tangible capital asset may extend beyond the useful life of the tangible capital asset.

***Work-in-Progress (WIP)***

Work-in-progress consists of the costs of construction or development of a tangible capital asset in progress that is not yet in use.

***Write-down***

A reduction in the cost of a tangible capital asset is made when the value of future economic benefits associated with the asset is less than its net book value, when the asset no longer contributes to the City's ability to provide goods and services, or when the City has no intention of continuing to use the asset in its current capacity and there is no alternative use for it. When the asset no longer contributes to the City's ability to provide goods and services, the asset is written down to its residual value, if any. In other circumstances, it will be necessary to write down the asset to the estimated value of expected remaining future economic benefits.

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City of Hamilton Consolidated Schedule of Tangible Capital Assets As at December 31, 2009													2009	2008
	General						Infrastructure				Assets under construction	2009	2008	
	Land	Land Improvements	Buildings	Vehicles	Computer	Other	Roads	Bridges and other structures	W/WW Facilities	Underground and other networks				
<b>Cost</b>														
Balance, beginning of year	\$ 170,956,141	191,867,449	642,863,988	215,074,268	9,945,605	72,745,247	1,888,986,201	198,637,073	410,270,917	1,702,656,596	104,653,793	5,608,657,278	5,434,058,227	
Add: Additions during the year	17,927,771	5,663,176	39,887,006	37,930,330	2,528,232	16,174,173	45,230,153	724,337	22,438,678	42,530,224	155,443,195	386,477,274	225,378,025	
Less: Disposals during the year	(1,033,695)	(407,242)	(2,247,958)	(9,129,888)	(2,142,724)	(3,806,712)	(7,500,326)	(7,821)	(121,277)	(1,613,351)	(1,936,553)	(29,947,548)	(33,435,491)	
Other: Donations and Transfers	5,566,252	385,000	2,928,620	100,147	-	-	5,455,700	-	3,400,000	28,738,310	-	46,574,029	46,687,138	
Other: WIP Transfer to TCA											(78,372,769)	(78,372,769)	(64,030,620)	
Balance, end of year	\$ 193,416,470	197,508,383	683,431,656	243,974,856	10,331,113	85,112,708	1,932,171,728	199,353,588	435,988,318	1,772,311,780	\$ 179,787,667	5,933,388,265	5,608,657,278	
<b>Accumulated amortization</b>														
Balance, beginning of year	\$ -	84,516,531	404,892,447	108,030,528	5,221,775	24,577,920	620,137,786	35,776,001	260,105,915	371,465,988	-	1,914,724,891	1,789,659,342	
Add: Amortization during the year	-	6,618,302	14,877,695	18,748,141	2,929,288	6,494,095	73,288,519	2,649,322	9,230,326	21,489,821	-	156,325,510	149,342,116	
Less: Amortization on Disposals	-	(203,621)	(2,247,958)	(8,164,469)	(2,142,724)	(3,806,712)	(5,604,425)	(6,674)	(106,117)	(1,613,351)	-	(23,896,051)	(24,276,566)	
Balance, end of year	\$ -	90,931,212	417,522,185	118,614,201	6,008,339	27,265,303	687,821,880	38,418,649	269,230,124	391,342,459	-	2,047,154,350	1,914,724,891	
<b>Net book value of Tangible Capital Assets</b>	\$ 193,416,470	106,577,171	265,909,471	125,360,655	4,322,773	57,847,405	1,244,349,848	160,934,939	166,758,194	1,380,969,321	179,787,667	3,886,233,915	3,693,932,388	
<b>Works-in-Progress</b>	-	9,120,254	72,362,124	-	769,025	8,972,802	11,183,067	4,128,324	58,340,530	14,911,541	179,787,667			
Gain(Loss) on Disposition of Assets	\$ 479,268	(203,621)	2,825,012	292,923	-	-	(1,895,901)	(1,147)	(15,160)	-	-	1,481,375	3,865,368	
Proceeds on Disposition	\$ 1,512,964	-	2,825,012	1,258,343	-	-	-	-	-	-	-	5,596,318		
<b>Estimated Replacement Values as of end of 2009</b>	\$ 663,076,373	338,656,330	1,478,069,882	258,019,601	10,579,002	94,758,164	4,453,621,800	481,628,209	1,894,934,457	6,153,353,087		15,826,696,905	15,993,749,096	
Average Useful Life (in years)	n/a	29.9	40	11.6	3.7	36.4	32.7	74.8	40	91.4				
<b>Estimated Annual Sustainable Funding Levels</b>	\$	11,330,088	36,951,747	22,300,743	2,843,818	2,605,394	136,196,385	6,436,728	47,373,361	67,352,814		333,391,079	336,390,998	
<b>Infrastructure Spending Gap</b>		(5,666,912)	2,935,259	15,629,586	(315,586)	13,568,779	(90,966,232)	(5,712,392)	(24,934,684)	(24,822,590)		(120,284,772)	(172,800,000)	