

7.2



Hamilton
Public Works

**Public Works
Capital Planning & Implementation**

**Public Works Committee
Local & Collector Road Strategy**

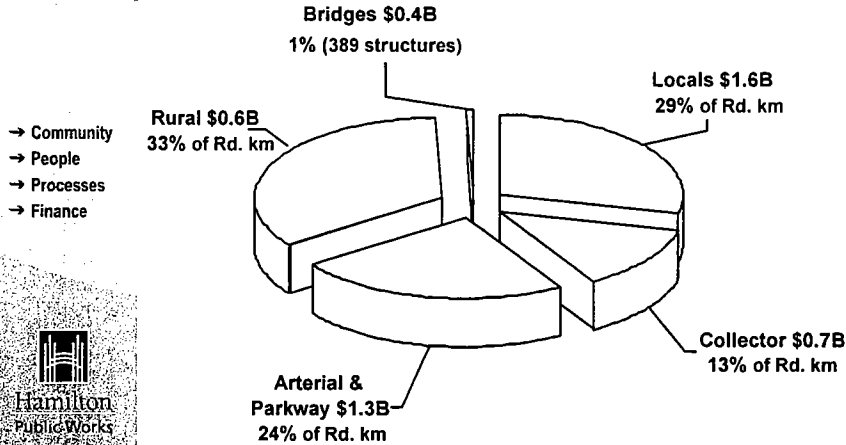
September 8, 2008

Providing services that bring our City to life!

Asset Management - Where are we at currently

CP & I
Moving Forward
Strategically

Roads / Bridges



Replacement Value \$4.6B

Pavement Asset Preservation – Local and Collector Road Methodology

- Community
- People
- Processes
- Finance



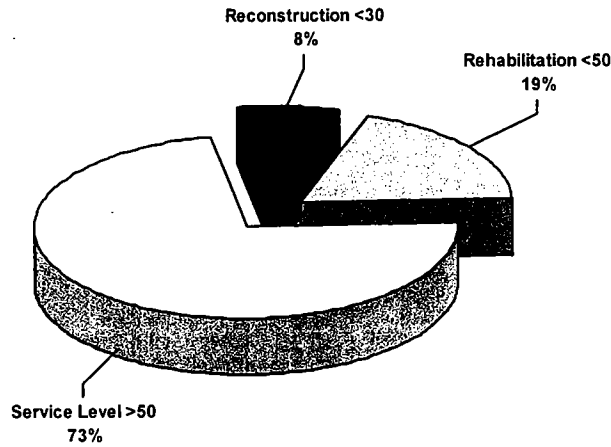
Roads Asset Management

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Strategically

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Local & Collector Road Condition



Pavement Asset Preservation – Local and Collector Road Methodology

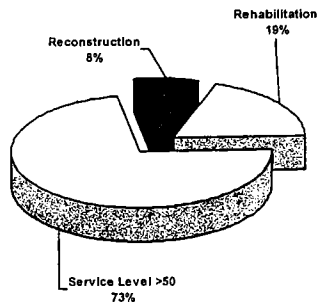
Roads Asset Management

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Local & Collector - Road Reconstruction



- 8% of Local Network = 218 Inkm
- Road and Sidewalk Reconstruction
- Underground coordination
- Low Risk Level
- Maximum Life Cycle = 35 - 40 years
- Estimated 2008 dollars \$190M
- Average cost \$206 / sq.m

Pavement Asset Preservation – Local and Collector Road Methodology

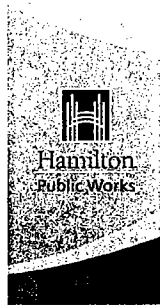
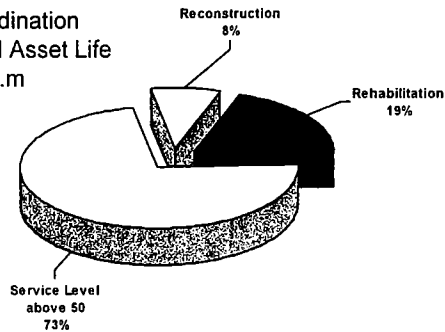
Roads Asset Management

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Local & Collector - Road Rehabilitation

- Community
- People
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- 19% Local Network = 520 Inkm
- Estimated 2008 dollars = \$190M
- High Risk Concrete repairs
- Moderate Risk
- No Underground coordination
- 15 - 25 year Extended Asset Life
- Average cost \$64 / sq.m



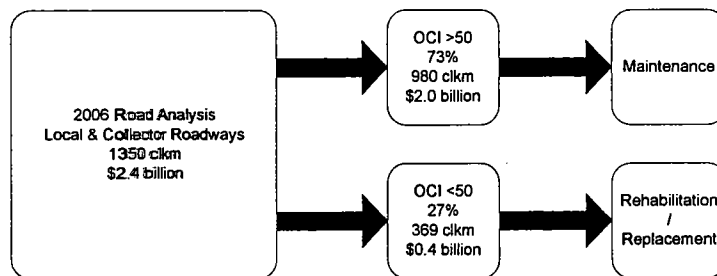
Pavement Asset Preservation – Local and Collector Road Methodology

Asset Management – Current Practice

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Road Funding Allocation Methodology Asset Strategy - Maximum Revitalization of Pavement Assets

- Community
- People
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Pavement Asset Preservation – Local and Collector Road Methodology

Know your options ... Windows of Opportunities

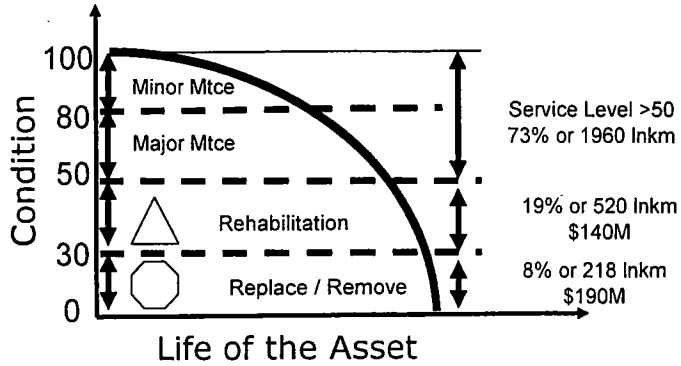
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Local & Collector Roadways



Pavement Asset Preservation – Local and Collector Road Methodology

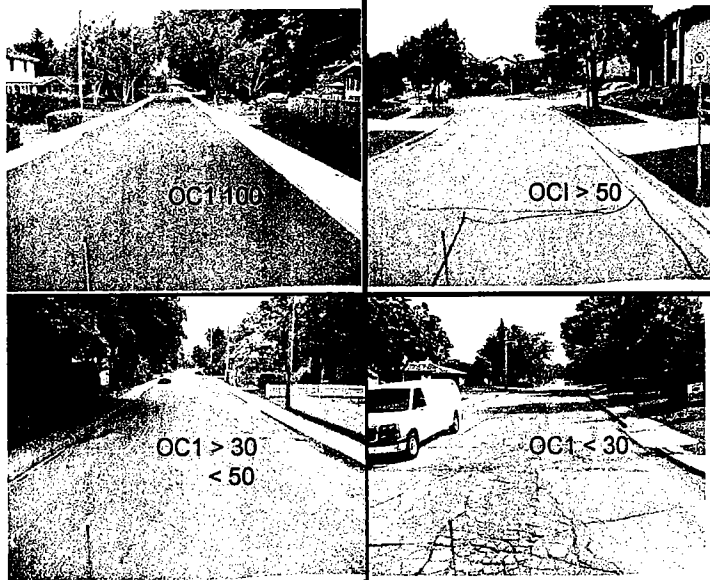
The Good, The Bad, and The Ugly

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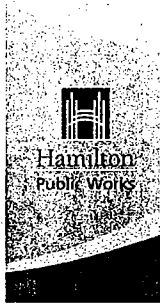
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Pavement Asset Preservation – Local and Collector Road Methodology

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Road Network Condition Summary

	Arterials & Parkway	Locals & - Collectors	Rural Network
Network Percentage	24%	42%	34%
Service Level >50	49%	73%	66%
Rehabilitation	40%	19%	30%
Replace / Remove	11%	8%	4%
Financial Needs	\$364M	\$330M	\$123M

Pavement Asset Preservation – Local and Collector Road Methodology

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Road Project Selection Process



- Right of Way Coordination;
- 2006 Pavement Condition Survey;
- Subsurface Infrastructure Assessment;
- Master Planning;
- Critical Surface and Subsurface Infrastructure;
- Public Safety;
- Risk and Liability;
- Service Levels & Expectations;
- Service Level Impact;
- Construction Impact;
- Maintenance Costs;

Pavement Asset Preservation – Local and Collector Road Methodology

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Local & Collector Delivery Options

- Individual Project Level – current practise
 - Underground priority
 - Reconstruction / replacement focus
 - Worst road first logic
 - Maximum life cycle
 - Maximum cost

 - Limited cost effectiveness
 - Reduced efficiency
 - Minimum impact
 - Emergency only / reactive
 - Not sustainable

- Pavement Asset Preservation - optional
 - is "a program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety and meet motorist expectations." Source: FHWA Pavement Preservation Expert Task Group

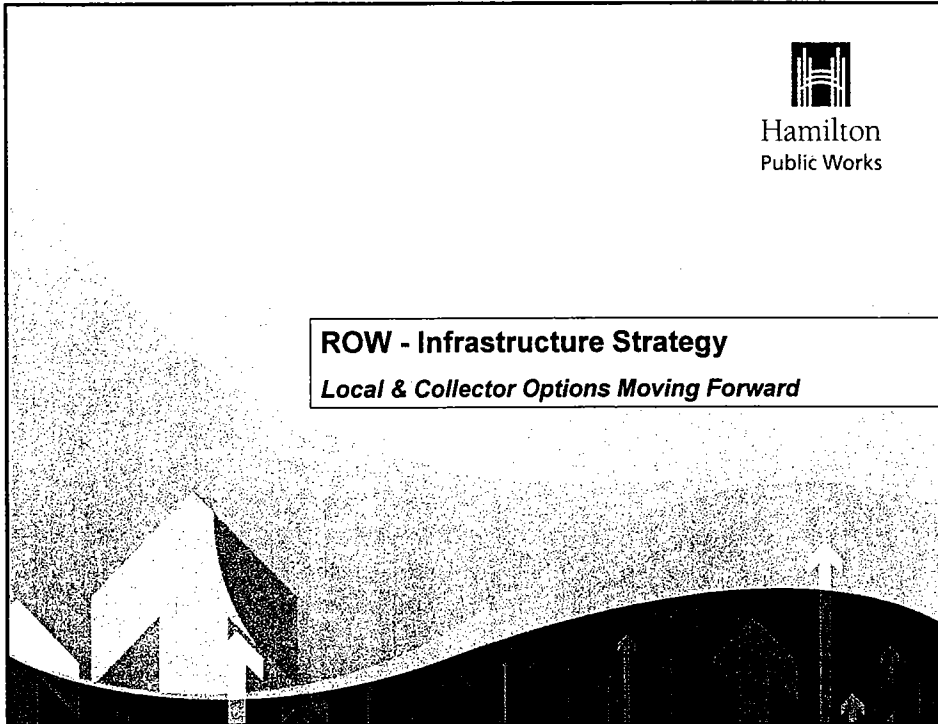
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ROW - Infrastructure Strategy

Local & Collector Options Moving Forward





Local & Collector Delivery Options

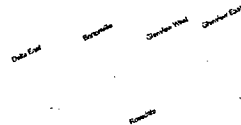
- Pavement Asset Preservation
 - As recommended with \$8.8 million Provincial funding allocation
 - Resulted in three (3) contracts
 - Addressed 37 Inkm of arterial roadway
 - Additional 10 Inkm of supplementary arterial roadways to be completed
 - Favorable tenders estimated at \$2.2 million
- Applied Methodology to Local & Collector Roadway
 - Neighbourhood approach
 - 237 neighbourhoods created
 - Local and Collectors within the Urban Boundary
 - Weighted Surface Condition (calculated) Priority

Pavement Asset Preservation – Local and Collector Road Methodology



Local & Collector Asset Preservation Options

- 38 Neighbourhoods with a weighted SCI value <50.
- Within neighbourhoods, only roadways under a surface condition of 30 to 50 to be addressed, unless improves overall delivery.
- Industrial & smaller neighbourhoods, creating a non-cost effective delivery are not included .
- ROW requiring infrastructure replacement and/or functional improvement are not included.



Pavement Asset Preservation – Local and Collector Road Methodology

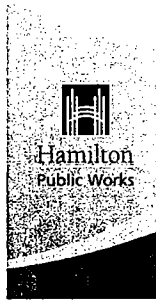
Local & Collector Funding Allocation

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Analysis of Pavement Preservation and Reconstruction

	Pavement Preservation	Reconstruction
Unit cost	\$64 / m	\$205 /m
Network Improvement	2.5 Inkm	1.0 Inkm
Deliverable	< 1 – 2 years	1 – 2 years
Project Coordination	Minimum	Maximum
Level of Risk	Moderate	Low
ROI	High	Low

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Pavement Asset Preservation – Local and Collector Road Methodology

Local & Collector Delivery Options

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- Pavement Asset Preservation - optional
 - Improved planning process
 - Neighbourhood equality
 - Cost effective delivery
 - Coordination with trenchless technology
 - Maximum return in investment
 - Reduced risk and liability

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Pavement Asset Preservation – Local and Collector Road Methodology



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Questions?

