

Alberta Municipal Benchmarking Initiative – Snow & Ice Control



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What is AMBI?

- 5 Alberta municipalities
- Grant from Alberta Municipal Affairs
- Collaboration to build a framework, develop benchmark definitions and allow comparison
- Develop an ongoing benchmarking process of 8 service areas



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Why Benchmarking?

A benchmark is an established point of reference against which things can be measured and compared

- Helps to tell the municipal 'performance story'
- Sound business practice
- Share knowledge and best practices
- Identifies opportunities for change
- Encourages continuous improvement
- Demonstrates transparency and value for money



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Two Definitions

Efficiency

- a measure of productivity: quantity
- often expressed in cost per unit

Effectiveness

- a measure of value or benefit of service: quality
- often expressed as percentage or rate



Snow and Ice Control (SNIC)

An effective and efficient SNIC program is necessary to allow the municipality to function under normal winter weather conditions, to reduce snow and ice hazards, and to provide reasonable winter mobility on:

- Roadways
- Parking Lots
- Sidewalks
- Pathways



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Snow and Ice Control (SNIC)

SNIC benchmarks

- 8 efficiency measures
- 3 effectiveness measures

Trend – over 3 years

Comparison – to others for most recent year or average



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Factors Influencing SNIC

- Size of system
- Urban density
- Urban Growth
- Weather Conditions



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SNIC

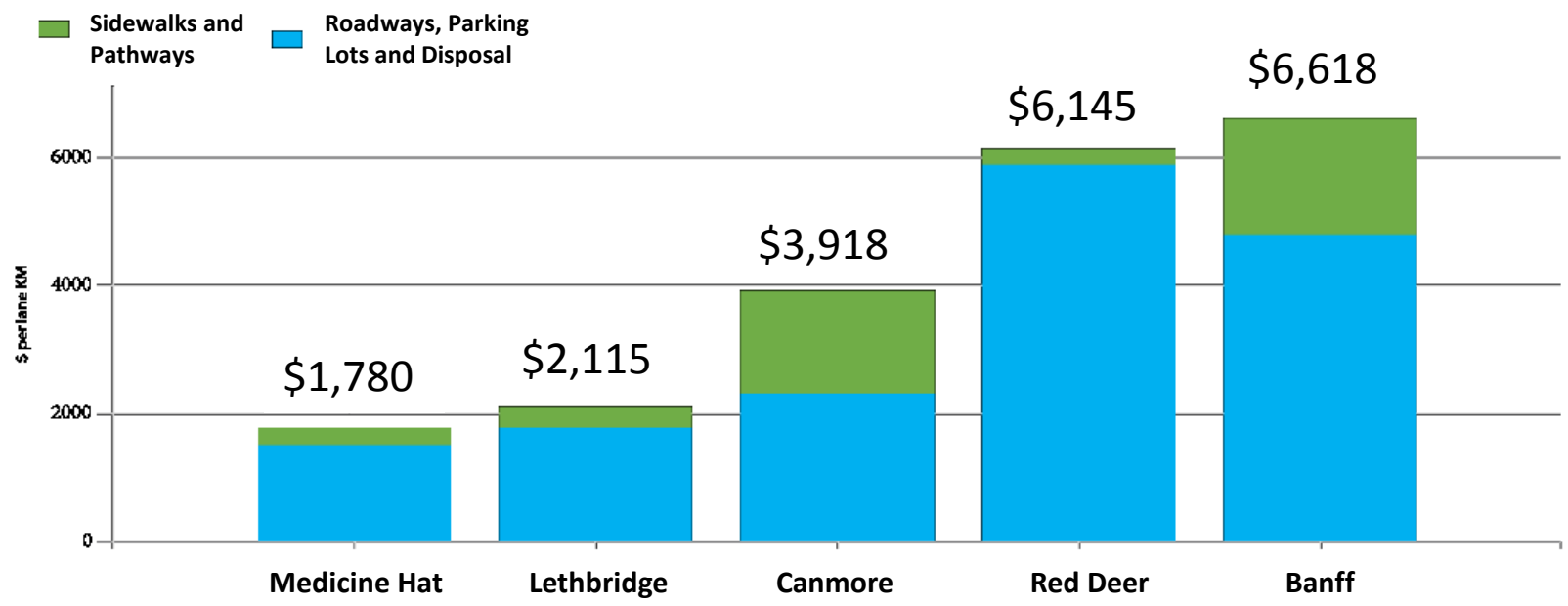
Narrative factors (2014)

Municipality	Vehicles > \$10,000 (#)	Days Snow & Ice equipment sent out	Contracted snow removal, standby full service
Banff	10	150	No
Canmore	2	69	Yes
Lethbridge	13	92	No
Medicine Hat	15	67	No
Red Deer	24	135	No



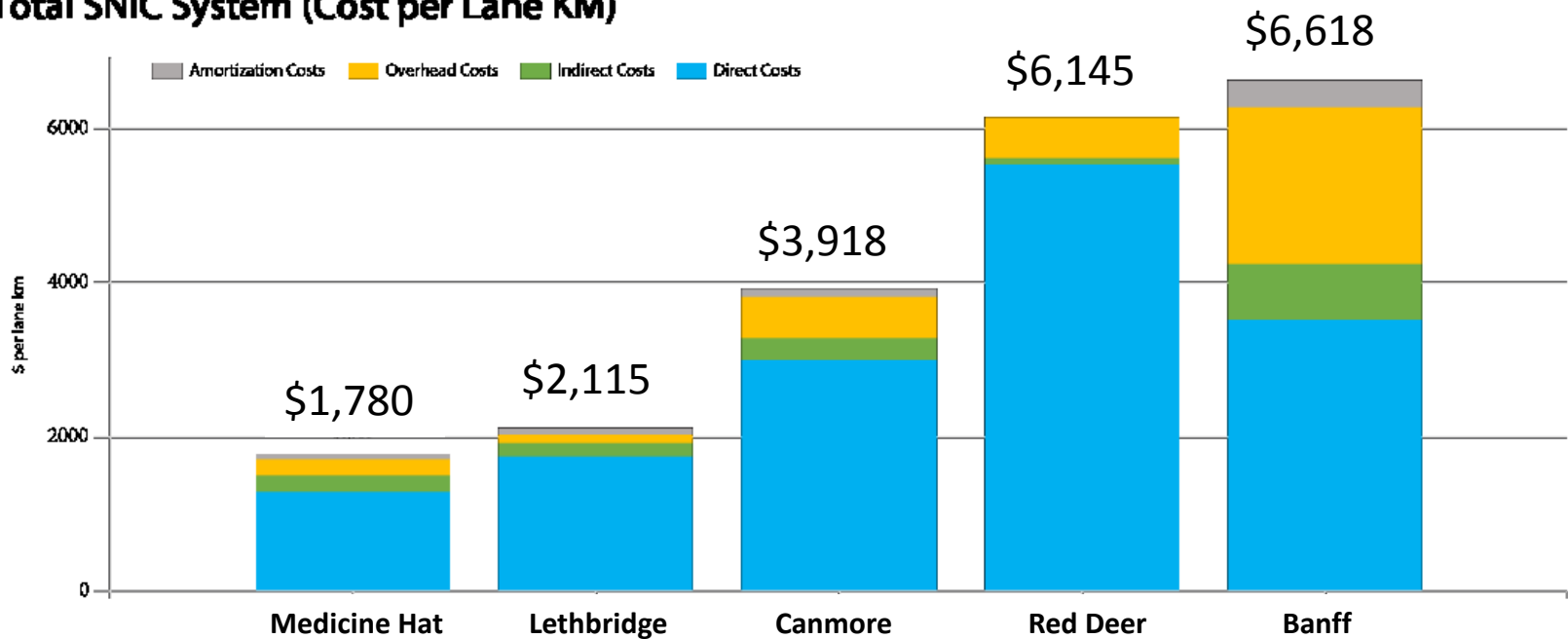
SNIC Total Cost (\$/lane KM)

Total SNIC System (Cost per Lane KM)



Total SNIC System (\$/total lane KM)

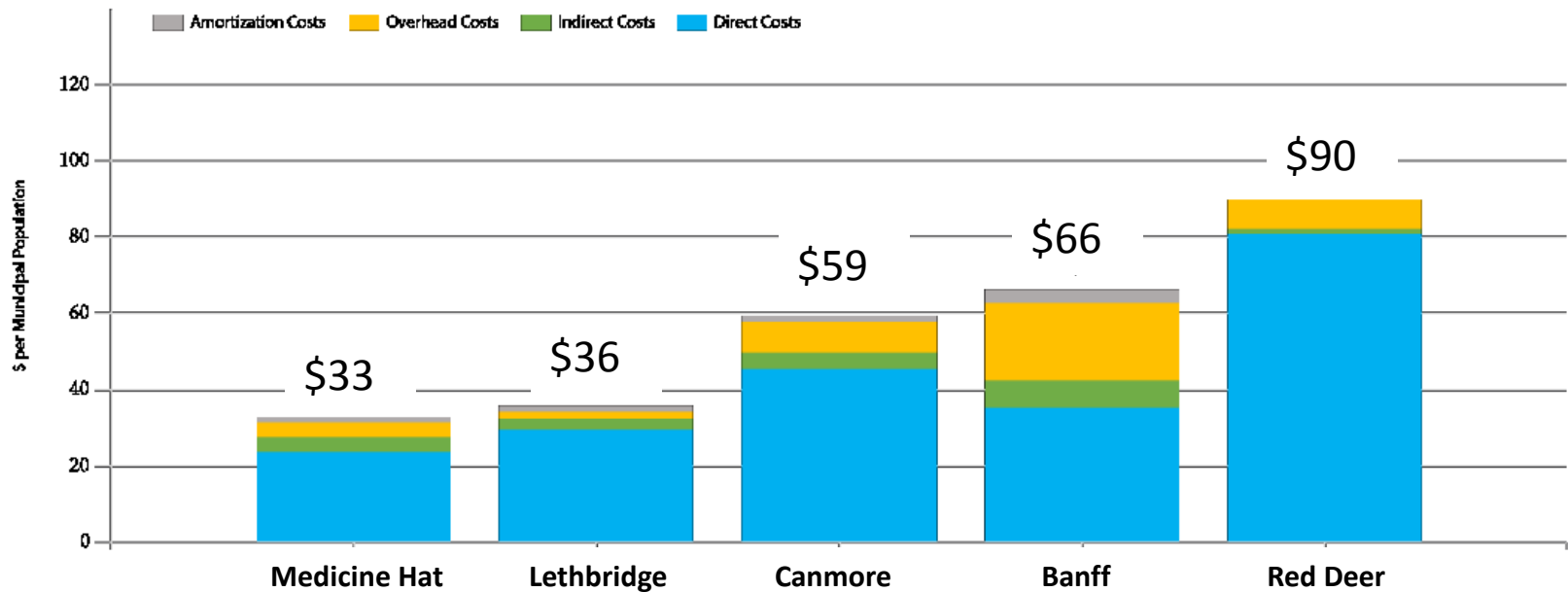
Total SNIC System (Cost per Lane KM)



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Total SNIC System (Cost per Capita)

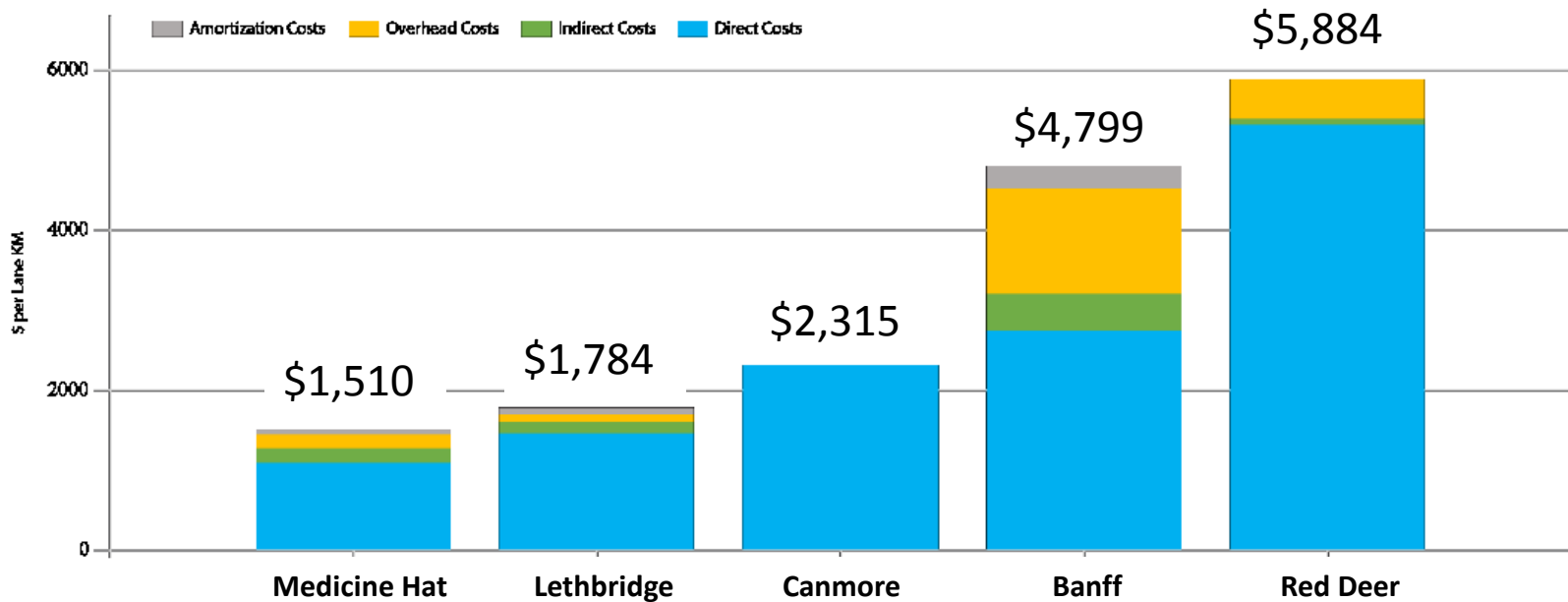
Total SNIC System (Cost per Capita)



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Roads and Parking Lots Clearing (Cost per Lane KM)

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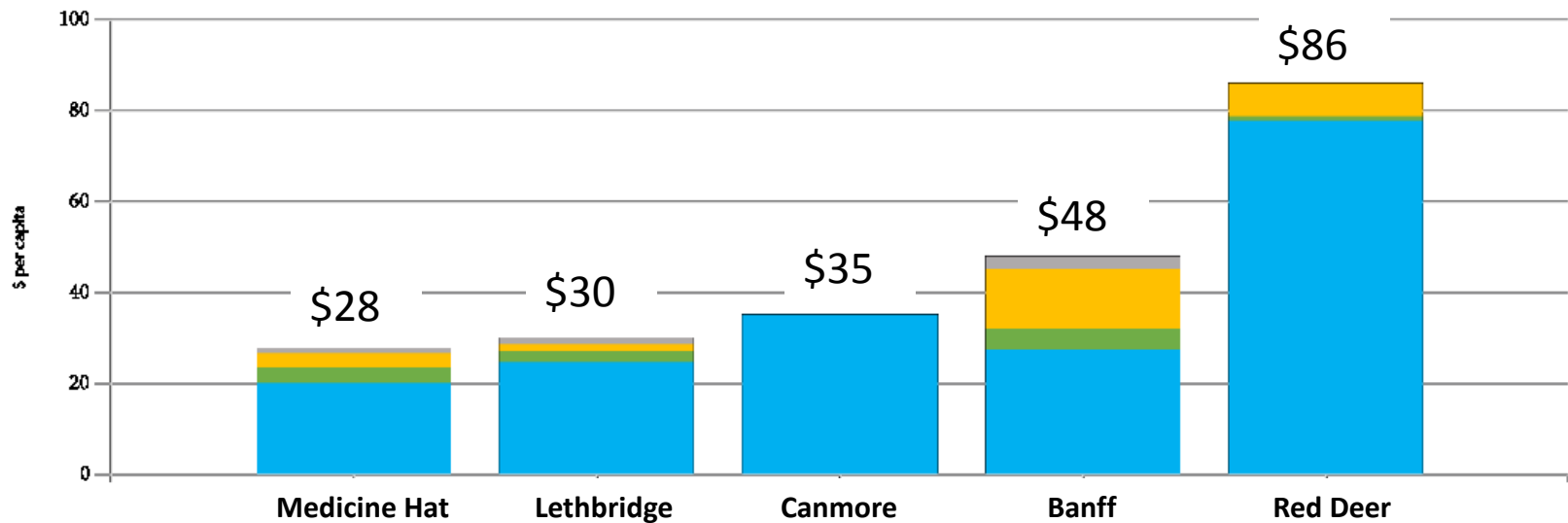


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Roads and Parking Lots Clearing (Cost per capita)

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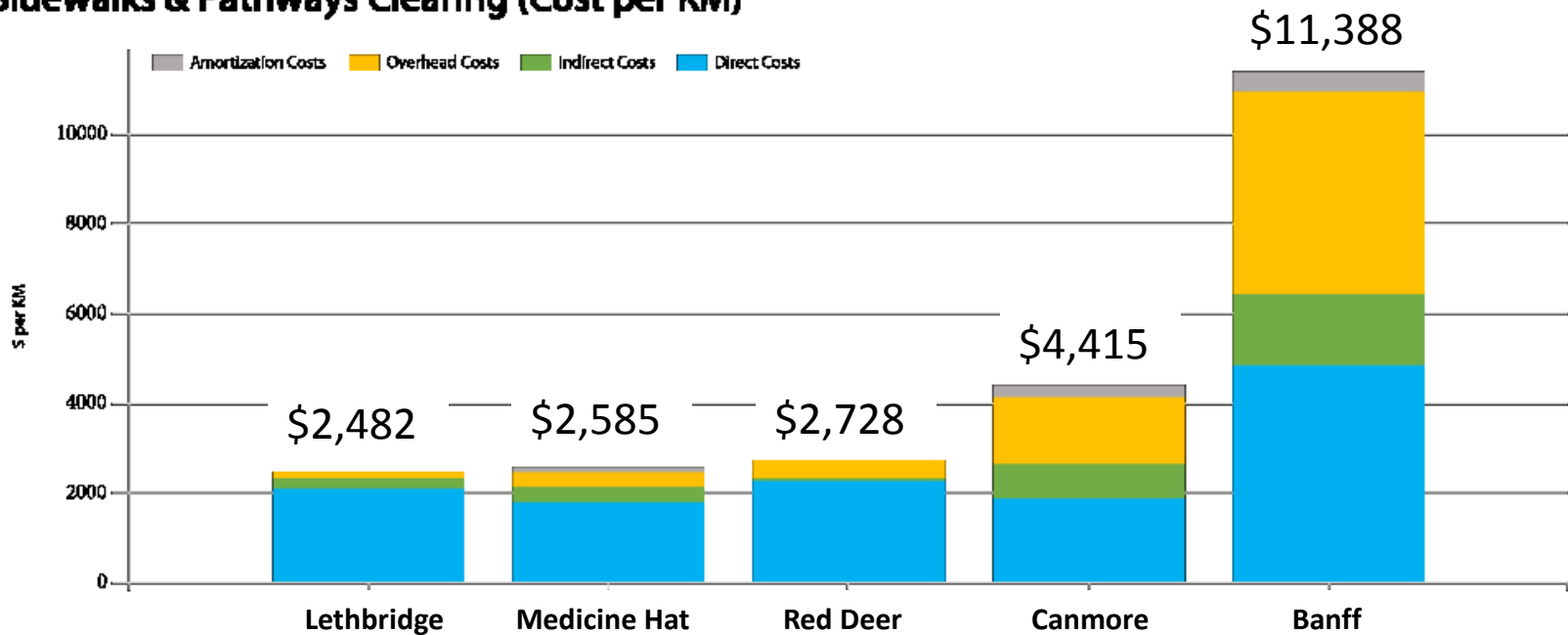
Amortization Costs Overhead Costs Indirect Costs Direct Costs



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Sidewalks & Pathways Clearing (Cost per KM)

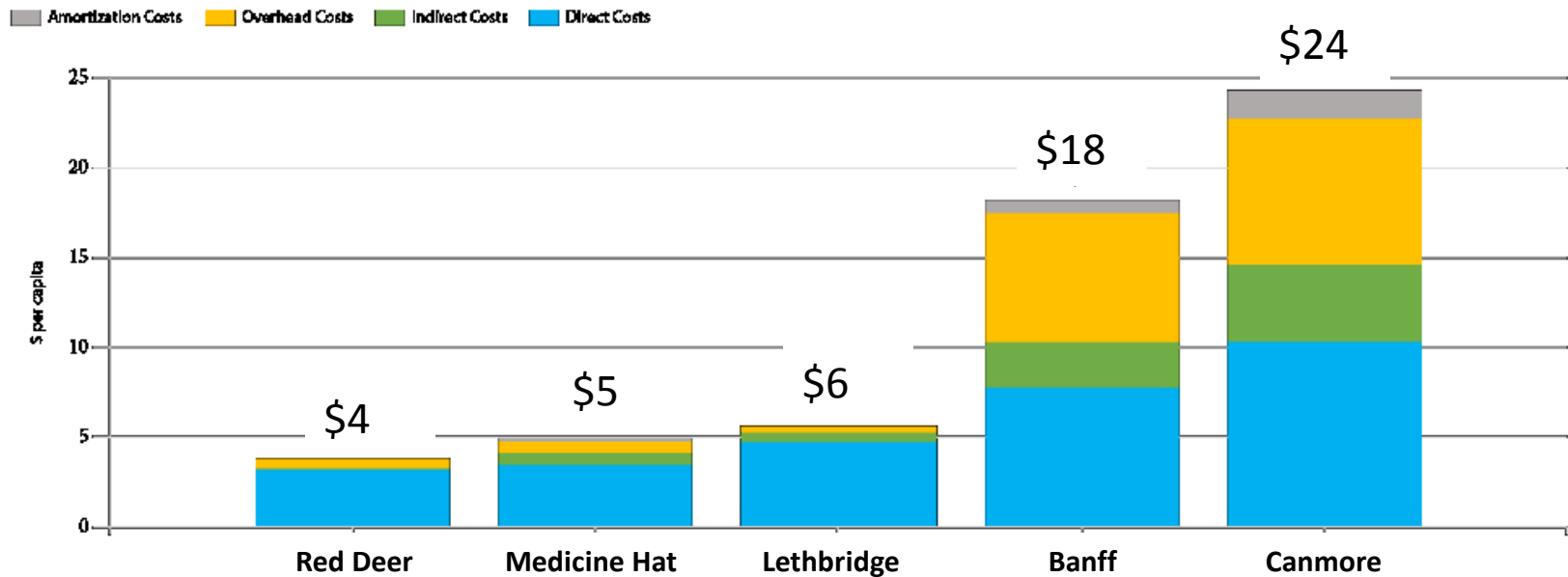
Sidewalks & Pathways Clearing (Cost per KM)



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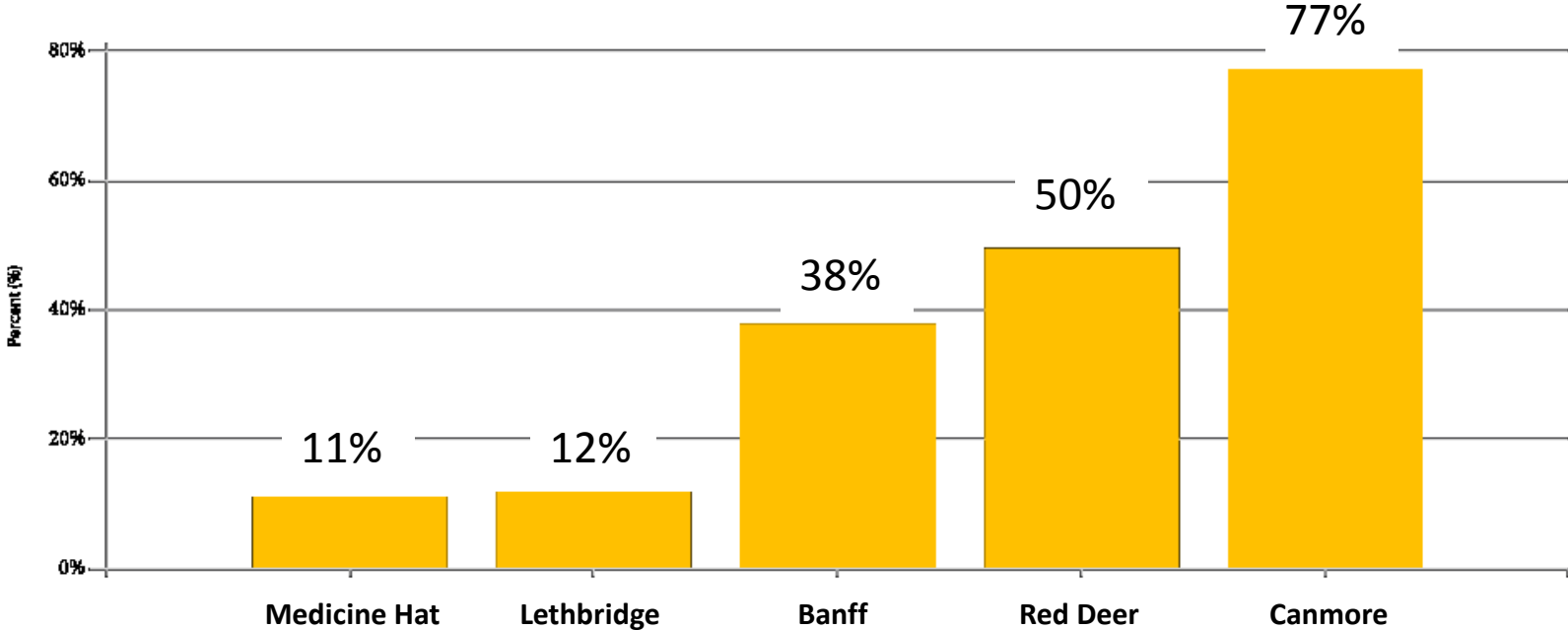
Sidewalks & Pathways Clearing (Cost per Capita)

Sidewalks & Pathways Clearing (Cost per Capita)



Contract vs Total Direct Costs (%)

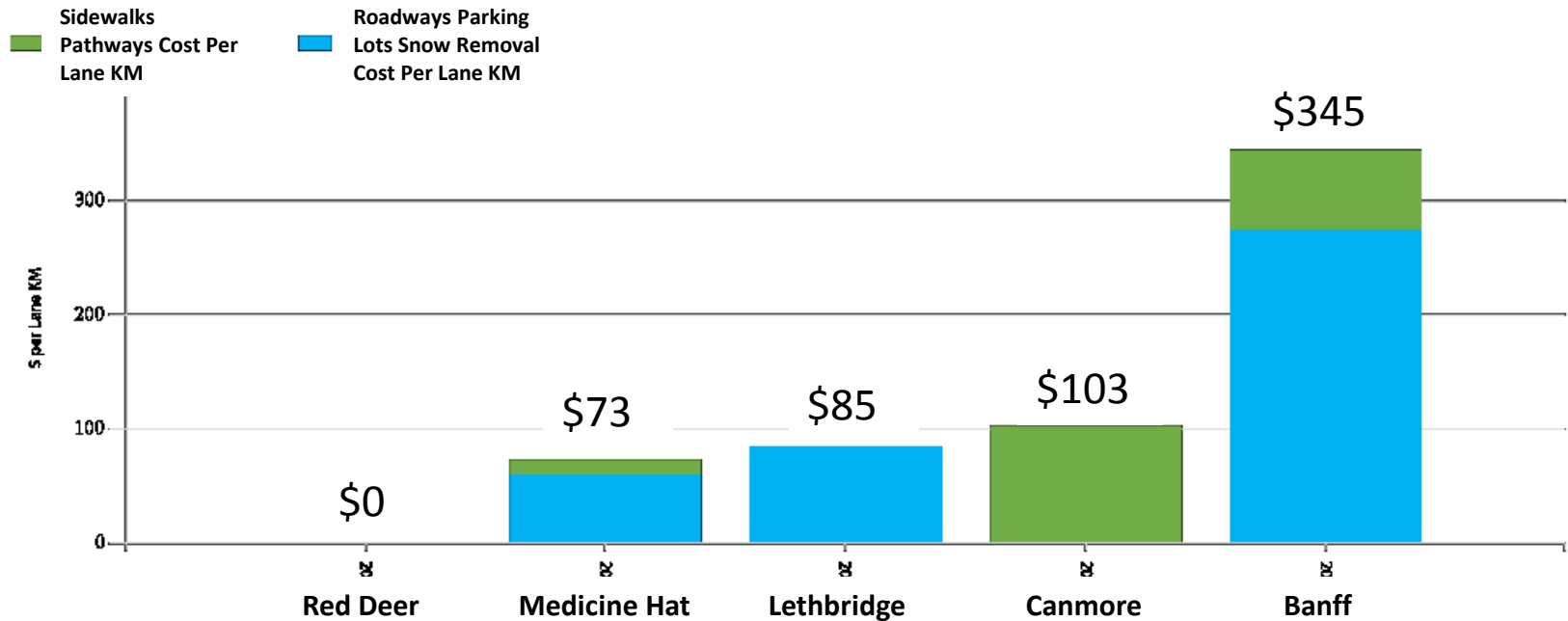
Contract vs Total Direct Costs (%)



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Amortization (Cost per Lane KM)

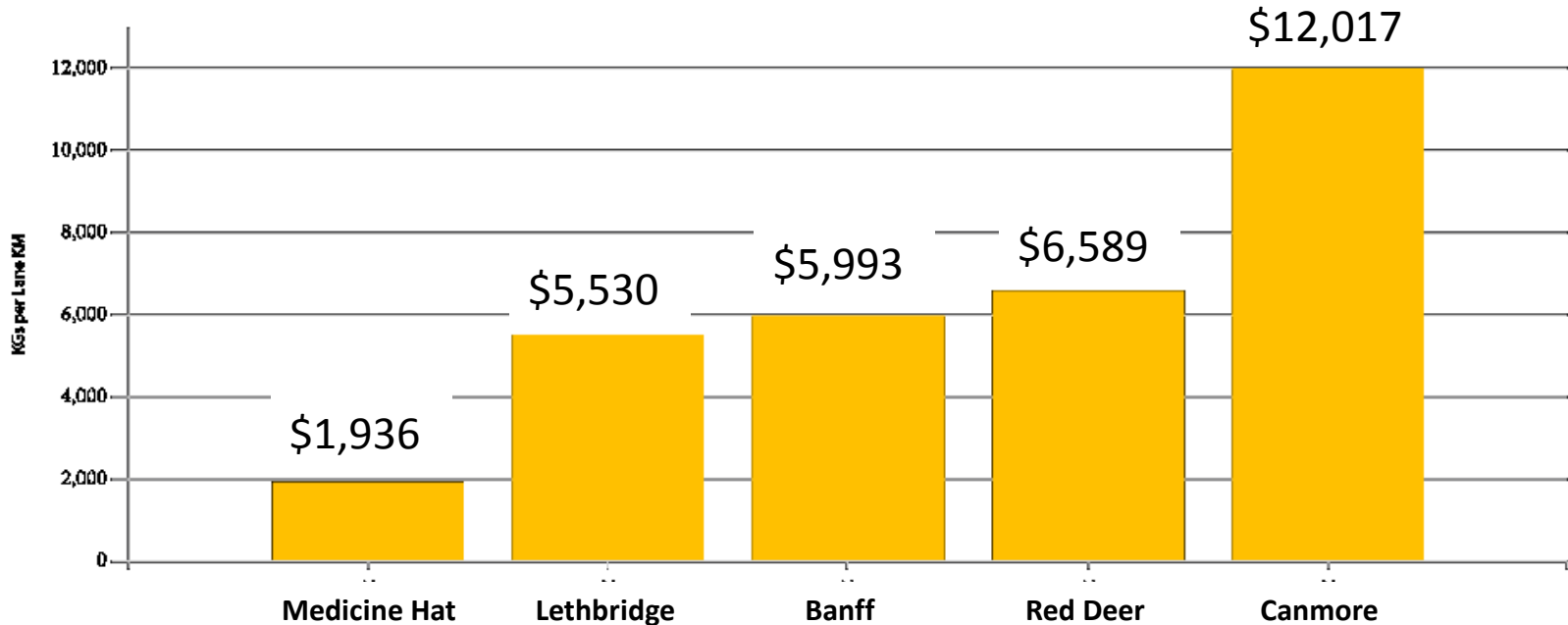
Amortization (Cost per Lane KM)



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Materials – Abrasives (KG/Lane KM)

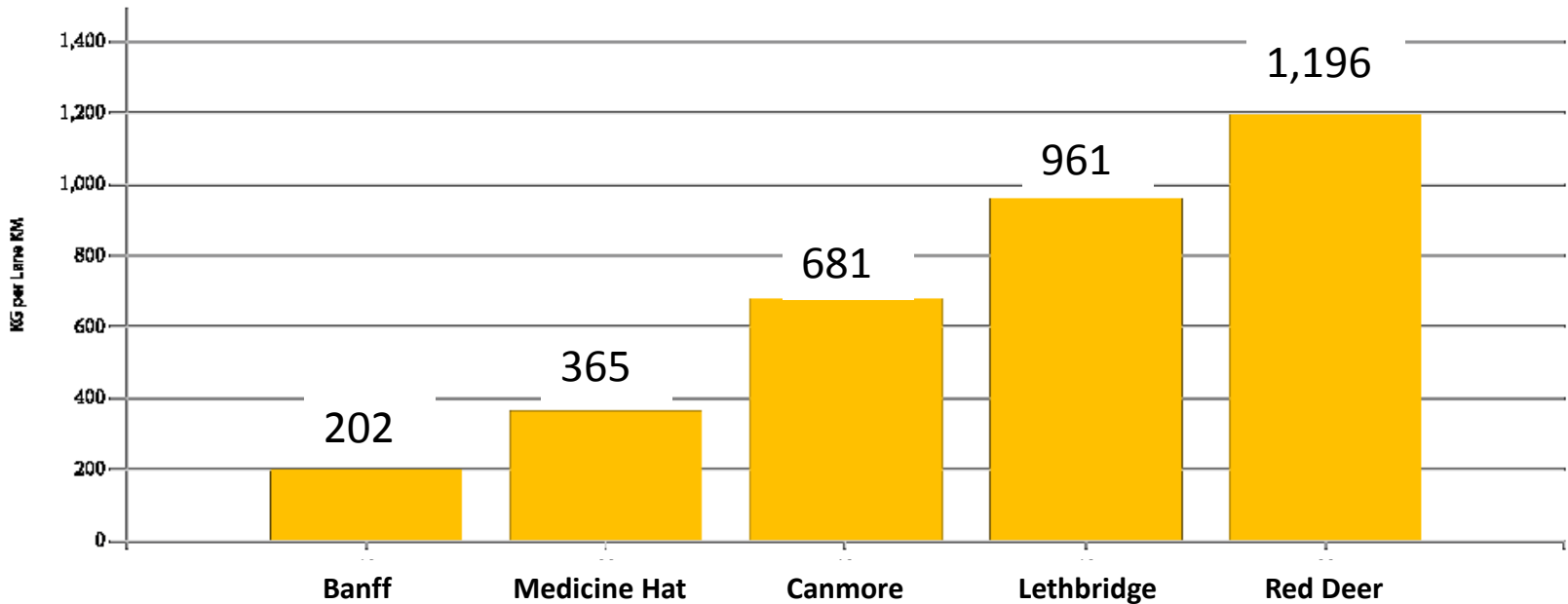
Materials - Abrasives (Kilograms per Lane KM)



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Materials – Salt (KG/Lane KM)

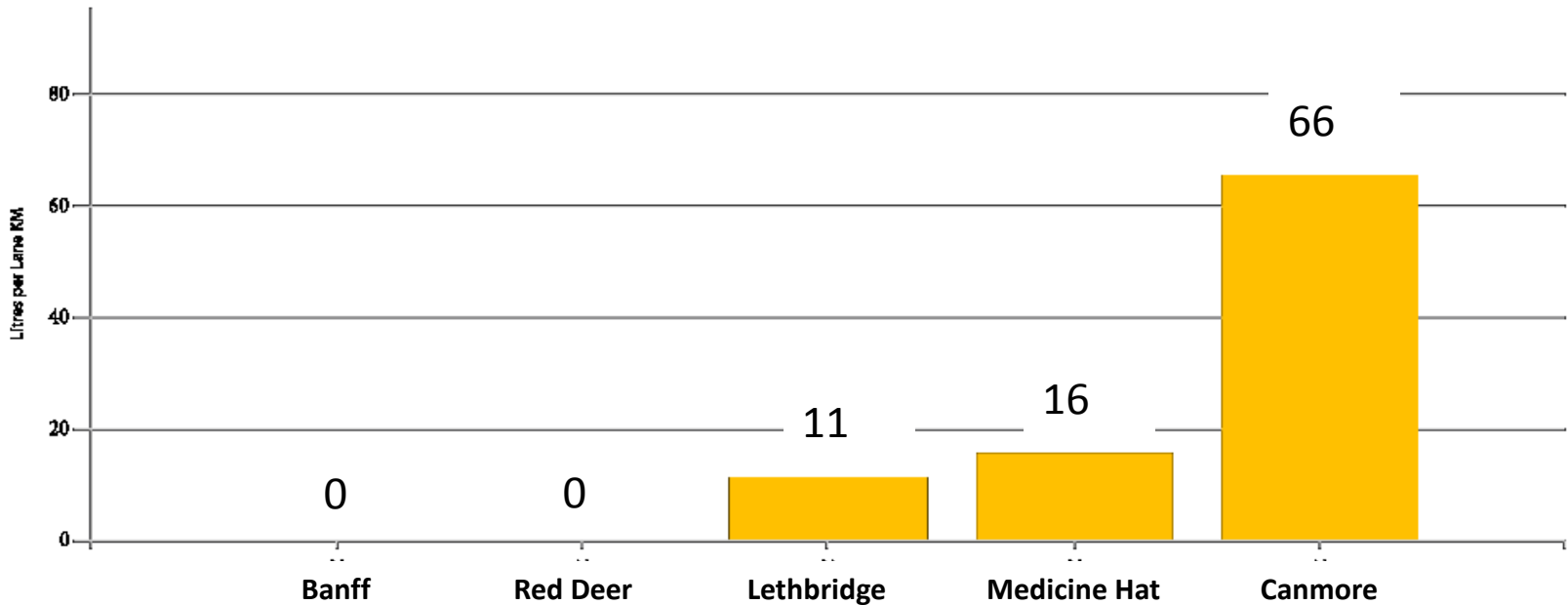
Materials - Salt (Kilograms per Lane KM)



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Materials – Liquids (L/Lane KM)

Materials - Liquids (Litres per Lane KM)



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