

SMART *Remediation*

Excess Soils Regulation: A Project Leader's Perspective



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City of Ottawa
SMART Ottawa

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Excess Soils Regulation

A Project Leader's Perspective



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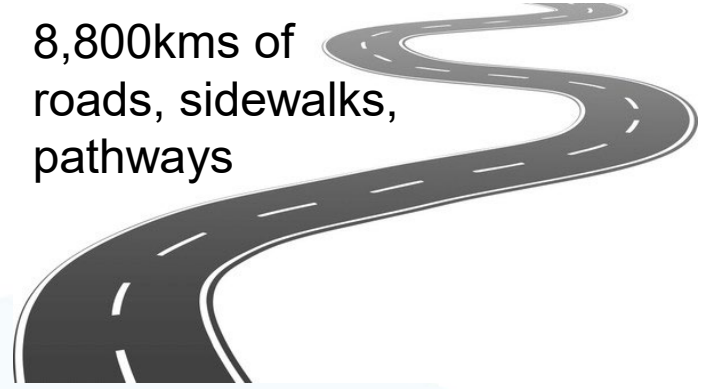
City Assets



9,200kms of watermains + sewers



+2652 parks + rec facilities



8,800kms of roads, sidewalks, pathways



7,170 bridges + culverts



200 stormwater management ponds



+1,000 buildings + facilities

<p>\$+70B*</p>	<p>\$2.2B</p>	<p>\$609M</p>	<p>890</p>
<p>Infrastructure assets to manage</p>	<p>Value of active projects</p>	<p>2024 capital project authority</p>	<p>Active projects</p>

* Does not include value of LRT

On-Site and Infrastructure Reuse Challenges



- Grade-restricted urban environment
- Minimal ability to stockpile on-site
- Geotechnical constraints on reuse
- Infrastructure exemptions not practical
- No City-owned final receiver sites

- 250,000 cu.m in 2022 and in 2023
- Contractor designated 3rd party receiver sites
- Low-risk exemptions not recognized
- Receiver sites default to full volumetric testing and planning documents

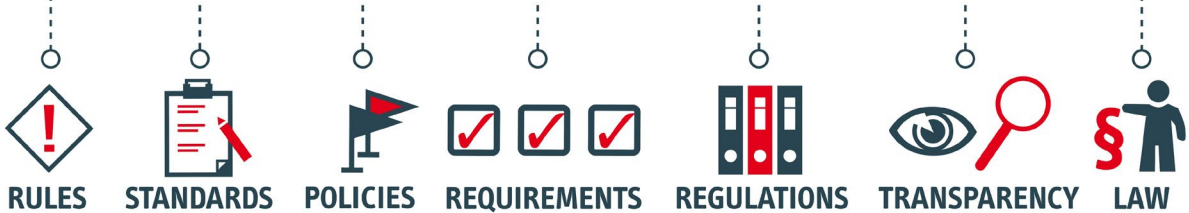
Soil Characterization in Urban Roads



- Planning costs are high
- QPs are in short supply
- Urban investigations are challenging
- Are samples representative?
- The more you test...
...the dirtier the soil.
- Segregating clean from dirty...
... is it practical?
- Landfill disposal increasing
- Unstable commodity market

Municipal Risks and Mitigations

COMPLIANCE



BUSINESS CONTINUITY



The Future Dream State

REDUCE:

- We **plan our projects** to minimize the generation of excess soils, balancing cuts/fills and maximizing on site reuse wherever possible.

REUSE:

- We own and operate a **soil bank site** where we **stockpile soils on City lands** for future use.
- We have a **dating system** to connect opportunities for final reuse of soils on City projects.
- We actively **create opportunities for beneficial reuse of soils** through our Official Plan.

RECYCLE:

- We build and maintain a **processing/recycling facility** that allows us to sort, treat, screen and improve our soils to be reused, either on City projects or sold as a commodity to others.

RETIRE:

- We operate a **City-owned soil disposal facility (soil landfill)** where we can finally place impacted and contaminated soils or soils that cannot otherwise be beneficially reused.

