

# TOWN OF OXFORD

From Crisis to Confidence: How we used asset management to secure our infrastructure future

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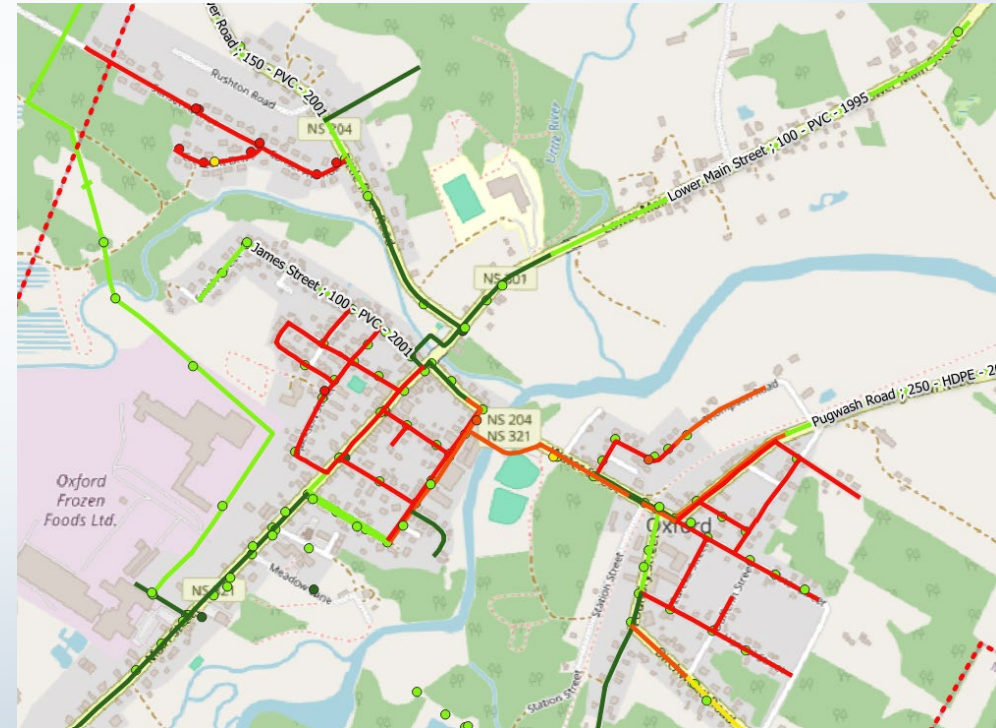
# Town at a Crossroads

- ~1300 residents
- Experiencing growth since 2021
- 30% population over 60 years old
- Asset Management – not an overnight affair
  - 2019 / 2020 – MAMP – Inventory, mapping, level of service, risk assessments
  - 2021 / 2022 – MAMP – Capital plan and first asset management supported rate study
  - 2024 / 2025 – Updated capital plan and rate study
  - 2025 – Public engagement and funding strategies



# Key Issues

- \$136M in assets
- Full suite of municipal services
- Aging water system (1930s – 1970s)
- 25% poor or very poor condition
- Original reservoir past end of life (SAR)
- Inflation outpacing road investment
- Main Street in poor condition
- Insufficient funding for renewal



# Risk Based Prioritization

Score	Definition	Interpretation and Relation to Consequence of Failure
5	Rare	<b>RATE:</b> Fewer than 1 in 1000 assets with this score will experience a service disruption* in the next five years. Where failure occurs, consequences are typically minor issues that do not compromise core service delivery.
4	Unlikely	<b>RATE:</b> Fewer than 1 in 100 assets with this score will experience a service disruption in the next five years. Where failure occurs, consequences are typically short-term like small leaks in a pipe or surface cracks in a road that don't disrupt day-to-day life significantly.
3	Possible	<b>RATE:</b> Fewer than 1 in 20 assets with this score will experience a service disruption in the next five years. Where failure occurs, consequences are typically still minor issue, but a few outliers may cause the defined consequence of service failure.
2	Likely	<b>RATE:</b> Fewer than 1 in 10 assets with this score will experience a service disruption in the next five years. Where failure occurs, consequences are most likely to cause the defined consequence of service failure.
1	Almost Certain	<b>RATE:</b> Fewer than 1 in 2 assets with this score will experience a service disruption in the next five years. Where failure occurs, consequences are most likely to cause the defined consequence of service failure.

Probability of Failure	Consequence of Failure				
	1	2	3	4	5
5	1	3	6	10	15
4	2	5	9	14	19
3	4	8	13	18	22
2	7	12	17	21	24
1	11	16	20	23	25

# Risk Based Prioritization

CONSEQUENCE	RANK	CULTURAL / POLITICAL	ECONOMIC	LEGAL	SAFETY	ENVIRONMENTAL	EQUITY	OPPORTUNITY COST / REWARD
INSIGNIFICANT	1	Public will not notice. No impact to cultural resources or groups. No impact to relations with other levels of government.	Costs are minor and expected within ongoing operational budget.	No regulatory or legal impacts.	No risk to safety above baseline conditions.	No impact to the environment.	Impacts to residents are experienced relatively equally	There is no potential lost opportunity
MINOR	2	Minor public notice, public contacts staff only - single point of contact. Municipality can alert the public prior to widespread social media activity. No impact to cultural resources or cultural groups. No impact to relations with other levels of government.	Unexpected operational cost can be accommodated by redistribution of yearly budget. Grant can offset the unexpected cost.	Failure may result in small claims.	Risk of "near miss" incidents, low risk of injury.	Short term effects to the environment requiring one time remediation of mitigation to restore the system to its original state. Notification to NSE.	Impacts disproportionately affect a specific economic or cultural group for the duration of the service disruption with respect to access to core services like water, transportation, recreation, etc.	Service disruption or delay in project results in a delay of planned economic development, deferred savings in operations costs.
MODERATE	3	Moderate public notice - multiple single points of contact, elected officials are contacted. Social media has a presence in terms of pictures or video. Coverage in local news, requires official municipal response. Impact to cultural groups limited.	Unexpected operational cost requires cancellation of minor planned activities accommodate. No long-term financial impacts. Minor impact to tourism. Grant cannot offset unexpected cost.	Failure may result in litigation and informal inquiry.	More unlikely than likely to cause short- or long-term injury, no risk of loss of life.	Short term effects to the environment requiring temporary remediation or mitigation which restore the system to its original state. Submit plans for approval to NSE.	Impacts disproportionately affect a specific economic or cultural group with respect to access to core services like water, transportation, recreation, etc. that continues in the year following the service disruption.	Service disruption or delay in project could result in a long-term delay of significant economic development opportunities or major operational savings that could be diverted to capital projects.
MAJOR	4	Potential for injury. Mayor / CAO is notified. Public notice is widespread, large volume of multiple contacts. Social media has a strong awareness in terms of pictures or video. Coverage in local news, requires official municipal response. Interruption of service greater than 1 day. Coverage in provincial news. Impact to cultural groups widespread.	Unexpected operational cost requires cancellation of major planned activities to accommodate. Long term financing required to accommodate. Loss of commercial or tourism service greater than 5 days.	Failure may result in class action litigation and formal inquiry.	More likely than not to cause short- or long-term injury, low potential for loss of life.	Long term effects to the environment requiring sustained remediation or mitigation. System may not ultimately reach its original state. NSE issues a directive to the Town.	There are medium-term (<10 years) effects limited to a specific economic or cultural group resulting in displacement / relocation, health impacts or financial loss.	Service disruption or delay in project could result in lost opportunity to realize significant economic development opportunities or major operational savings that could be diverted to capital projects.
CATASTROPHIC	5	Potential for loss of life. Road sinkhole / caving in. Coverage on the National.	Property damage that the Town is liable for. Loss commercial or tourism service greater than a season. Financing requirements may render the municipality insolvent.	Failure results in contravention of laws, significant litigation, court action and multiple litigations.	More likely than not to cause short- or long-term injury, potential for loss of life.	Permanent or long-term environmental effects that cannot be remediated or mitigated. Failure to comply results in legal action.	There are long-term (>20 years) effects limited to a specific economic or cultural group resulting in displacement / relocation, health impacts or financial strain.	Service failure results in inability to achieve strategic plan goals, resulting in a need to redefine the plan. Inability to complete project results in loss of significant (>80%) funding opportunity.

# Risk Based Prioritization

- **Extreme Risk** - immediate intervention. High likelihood of major or catastrophic impacts within the planning period, which is not acceptable at any time.

- If the asset has failed (still providing the service, but not at expected service levels):

Consequence = catastrophic, address in year 1 of the 5-year plan

Consequence = major, address in year 1 or 2 of the 5-year plan

Consequence = moderate, address in year 3 of the 5-year plan

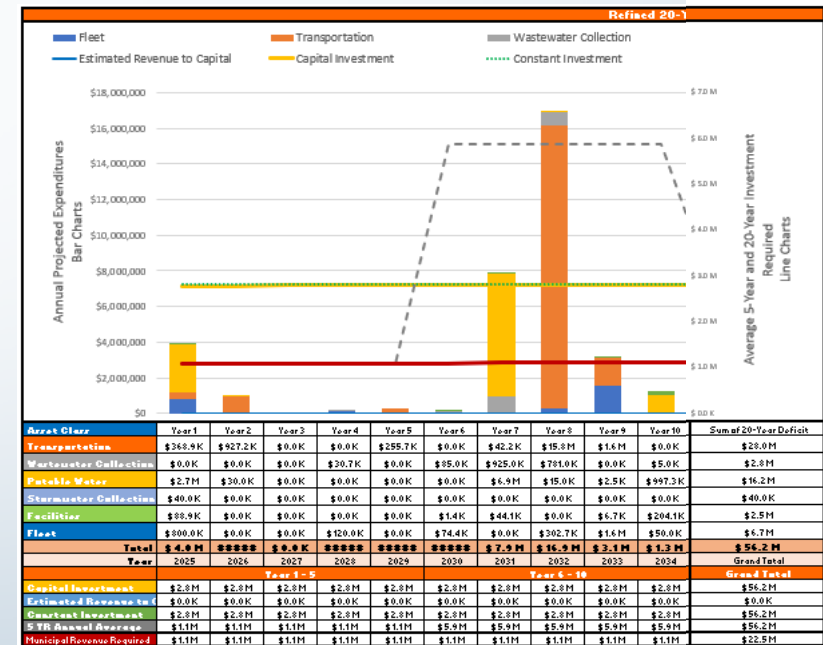
Consequence = minor, address in year 4 of the 5-year plan or defer

Consequence = insignificant, address in year 5 of the 5-year plan or defer

- **High Risk** - Fix in the 5-year program, where assets with shorter lifespans (fleet) are included earlier in the program, and those with longer lifespans (water mains) can be included later in the program.
- **Very Low to Medium Risk** are forecast for replacement outside the 5-year plan based on:
  - a) when they are forecast to become high risk, or
  - b) at a percentage of anticipated life depending on consequence of failure, or
  - c) run to failure for low and very low consequences, unless funding is available

# Choosing Asset Management – A Turning Point

- Rate setting – look forward, not backward
- Requested reserve funds for future work
- Project go-ahead requires 50% funding from outside sources
- Big picture thinking – road investment driven by critical underground assets
- Level of Service focus – identify risks to services
- Sustainable thinking – incorporate climate planning and leverage funding in financial plan



*Asset management is a tool used in preparing capital budgets, UARB rate studies, transparency to audit committee and funding applications.*

# Working Toward Buy-In

- Council Engagement
  - Condition maps and future projections
  - State of infrastructure and modern challenges
  - Risks to services without action
  - Reality of limited funding
- Community Engagement
  - Public session on infrastructure
  - Input and dialogue with press
  - Open and transparent

Town of Oxford Capital Program  
2025/26 to 2029/30  
April 2025





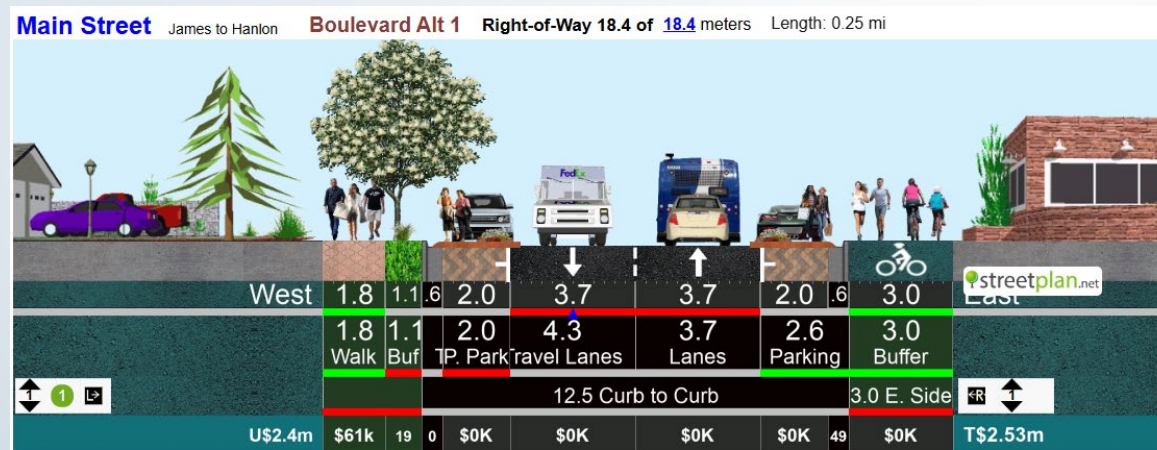
# Key Takeaways

- Consider all assets together in planning
- Municipal revenue is insufficient for large projects – rely on creative outside funding
- Next major projects: Main Street and Pugwash Road (water system)
- Priority is replacing water system from the 1930s, align road replacements
- Public engagement: educate on issues and emphasize this is not “an Oxford issue.”
- Prioritize upgrades for water and wastewater regulatory compliance
- Consider feasibility of investment in big ticket facilities (arena) or adding new infrastructure

**Well thought out planning can avoid further increases in spending and defer projects to make up infrastructure gap.**

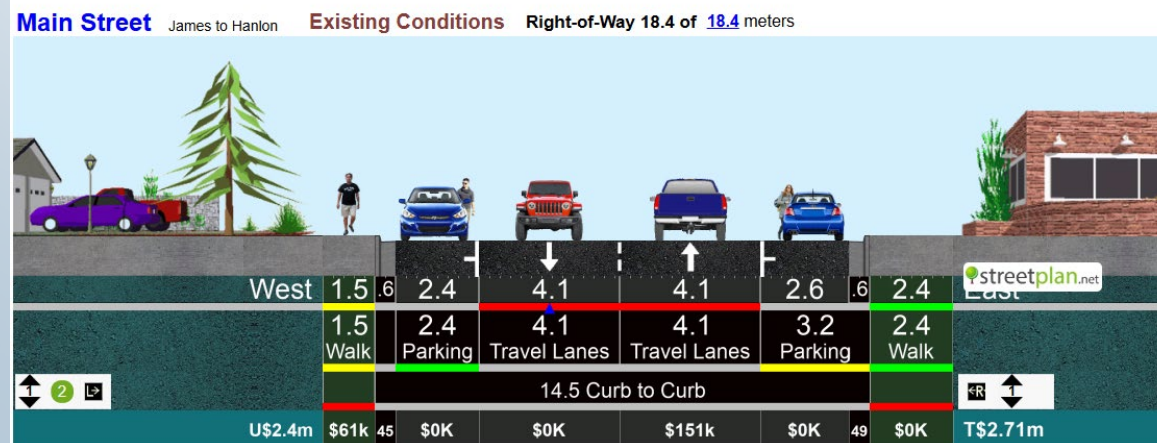
# Strategic Project Design

- Community Demand: Replace Main Street Asphalt
- Used the Climate Ready Infrastructure Service to make it resilient
- Open new funding pathways (LLCA), modern design



## Proposed Design

- Use natural solutions (rain gardens)
- 3690m<sup>2</sup> asphalt, 7.2m wide, 2 lanes plus permeable pavers for parking
- Accessible active transportation
- Climate resilient storm system
- \$4.4M



## Existing condition

- 5200m<sup>2</sup> asphalt, 14m wide, 2 lanes plus parking both sides
- Regulatory issues
- No funding
- \$4.3M



# Closing Thoughts

- You can't do everything all at once
- Services will age faster than the ability to replace them
- What are critical services – prioritize what you can't lose
- New infrastructure: cost to operate and replace
- Managing infrastructure = managing finances (tax and rates)
- Water rates are likely to go up in municipalities across Canada

*We are all in this together!*

# Questions and Discussion

