

# Township of King, ON

## Case Study



### Overview

- 1 The Township of King initiated a partnership with CITYROVER for a pilot program to enhance maintenance of all road related infrastructure.
- 2 With CITYROVER, the Township gained the capability to automatically gather accurate data on its road infrastructure and prepare efficient plans which resulted in shorter repair times.
- 3 On completion of the pilot program, the Township of King decided to continue its partnership with CITYROVER and currently employs two CITYROVER cameras to assist in road infrastructure scanning and streamline maintenance operations.

### Outcomes

- The Township of King's road operations originally were dependent on paper based processes for reporting and record keeping.
- Inspections were time consuming, error prone and tedious, requiring staff members to juggle between driving and surveying road infrastructure conditions, contributing to longer inspection cycles and prolonged risk exposure for all commuters and inspectors. This resulted in a slow and inefficient maintenance workflow.
- Report details were left to the operator's discretion on the severity and what action is required for a repair.



### Limitations of Previous Methods

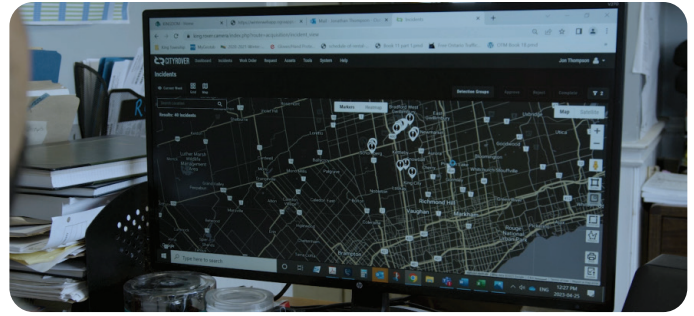
Previously, the Township of King employed a road maintenance method that relied heavily on paper patrol sheets for reporting and keeping track of road hazards and their repairs. The process involved municipal staff who would go on regular inspection patrols to identify road infrastructure issues, such as potholes and damaged manholes. Upon discovering a deficiency, the

inspector would have to pull the vehicle to a complete stop and step out to record the detection details for future processing. However, this method was laborious and prone to inefficiencies such as missed or forgotten detections, leading to lengthy repair times and prolonged risk exposure for all road users.

## Solution

To address these limitations, the Township of King initiated a pilot program in 2022 to integrate the CITYROVER smart camera system into road operations. This solution leverages artificial intelligence technology to automate road infrastructure inspection and asset maintenance.

During the pilot, two CITYROVER detection devices were affixed to the windshields of municipal patrol vehicles. These cameras acted as a second pair of eyes, focusing solely on identifying road asset defects and recording infrastructure issues. The collected data is then used to automatically generate incident reports, which can be reviewed in near real time through a web interface.



By conducting frequent and consistent surveys of road assets, the Township can quickly assess and determine the best course of action for faster and more effective repair plans.

- The pilot program streamlined road surveying and inspection by mounting detection devices onto existing patrol vehicles.
- This approach led to a faster and more effective process due to automated and passive data collection.
- Encouraged by the program's success, the Township of King decided to operationalize CITYROVER within its road maintenance operations.

## Results

CITYROVER's deployment has enabled the Township of King to quantify the exact number of deficiencies on both pavement and gravel roads within its jurisdiction, leading to accurate reports to council regarding road maintenance progress.

The introduction of AI into maintenance operations has eliminated human error with respect to road infrastructure issue detection, and expedited the repair process. Shorter repair times ultimately led to a lower exposure risk to maintenance personnel and to travellers, resulting in safer roads for all commuters.



**"I would recommend CITYROVER to any other municipality looking at streamlining their pothole repair processes. It allows their operators and patrollers to keep their eyes on the road while allowing the AI CITYROVER to essentially track all the potholes and repairs in their road network."**

Jonathan Thompson,  
Roads Supervisor,  
City of King City Durham Region

**"Its ability to take a previously tedious and time-consuming task and turn it into a seamless process is just absolutely astounding."**

Barry Budhu,  
Manager of Transportation Services,  
City of King City