



# Committee Report

<b>To:</b>	Warden Milne and Members of Grey County Council
<b>Committee Date:</b>	March 23, 2023
<b>Subject / Report No:</b>	TR-CW-06-23
<b>Title:</b>	Pavement Condition Index Single Source Award
<b>Prepared by:</b>	Trevor Ireton, Project Planning Engineer
<b>Reviewed by:</b>	Pat Hoy, Director, Transportation Services
<b>Lower Tier(s) Affected:</b>	None
<b>Status:</b>	Recommendation adopted by Committee as presented per Resolution CW57-23; Endorsed by County Council April 13, 2023, per Resolution CC29-23.

## Recommendation

1. **That report TR-CW-06-23 regarding the Pavement Condition Index Single Source Award be received; and**
2. **That the completion of the Pavement Condition Index for all County owned roads be awarded to Iris R&D Group on a three-year single source contract for \$224,259.00 + HST; and**
3. **The project deficit of \$5,964 (\$6,069 net HST) will be funded from any surplus realized in the Transportation Services 2023 budget. If no surplus is realized, it will be funded from the Transportation Services General Reserve.**

## Executive Summary

The County of Grey performs Pavement Condition Inspections (PCI) on the entire County Road network, 1,738 lane km, for each respective road section on an annual basis. These inspections rate the condition and integrity of all County roads and assist the Engineering Division in maintenance and capital planning.

The Iris R&D Group completed these PCI inspections for Grey County in 2022 and Transportation Services has received the data which provides valuable information for non-subjective evidence-based inspections that are free from human biases.

Staff recognize that to better predict the deterioration of County Roads, utilizing a consistent methodology and approach to PCI inspections is critical to allow for an apples-to-apples comparison year over year to better predict the lifecycle of our roads.

Staff is recommending the award to the IRIS R&D Group, a three-year single source contract for the completion of PCI inspections for all Grey County Roads.

# Background and Discussion

## **Pavement Condition Index (PCI) Data Collection**

Each year, PCI inspections are conducted on the entire County Road network, 1,738 lane km, for each respective road section to better understand the current state of the County Road infrastructure. These inspections are utilized in several of the departments major decision-making processes including, but not limited to, the 10 Year Capital Plan, the Asset Management Plan, and the Capital Construction Budget.

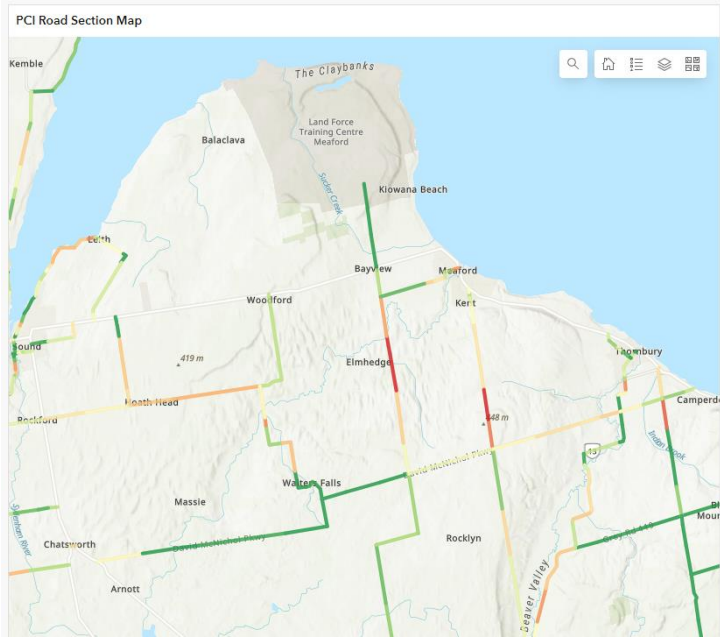
It is important that PCI data is collected in a similar way each year for Staff to investigate patterns in the data that allows for better prediction of the deterioration of our roads. With IRIS R&D Group, utilizing a camera-based approach alongside AI recognition models gives Staff evidenced based PCI inspections that are free from human bias and are consistent year-over-year. These inspections will also allow staff to better identify current and future levels of service for the road network as we continue to advance our Asset Management Plan according to Provincial Regulations.

## **PCI Data Dashboard**

As part of the services included in the Contract, the IRIS R&D Group provide a digital dashboard that allows Staff to review the inspection data in several different ways. Staff can review the road network as a whole or look at individual locations to identify smaller maintenance issues.

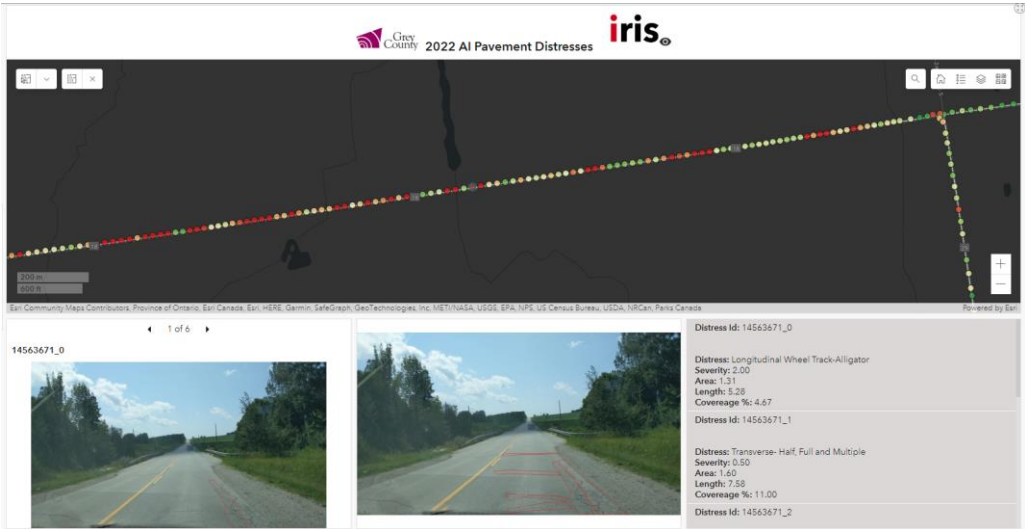
As part of the capital planning process, Staff can assess the entire road network and very quickly identify areas within the County which require further investigation to determine an optimal replacement strategy and incorporate into the 10-Year Capital Plan. Figure 1 below is a screen capture of the dashboard showing various road sections within the County, colour coded based on their PCI rating.

**Figure 1: PCI Road Section Dashboard**



From a maintenance perspective, the dashboard also includes imagery and cracking patterns at a granular level at intervals of approximately 10 m. This information is vital when reviewing potential localized maintenance treatments such as spot repairs and minor asphalt patching. Figure 2 below shows numerous colour-coded points based on their condition. Each point also includes an image of the road at that location along with individual cracking issues identified by the model. Having the ability to filter and review this imagery to identify different pavement failures allows Staff to target treatments much more efficiently. For example, Staff can filter locations with severe edge cracking to identify potential locations for edge patching maintenance during the summer.

**Figure 2: Point Location Cracking Imagery**



**Why Single Source**

Staff have been investigating various competitors with similar abilities and technology for several years now and have determined that this solution represents the best fit for meeting the needs for required services at the best cost per kilometre.

Although PCI Inspections are a standardized process in Ontario, utilizing the same company for several consecutive years will allow Staff to better correlate results into more efficient deterioration models. These models are incorporated into our Asset Optimizer software to allow Staff to better predict preventative replacement strategies and reconstruction timing for our road assets. Further, the familiarity IRIS R&D Group has with our internal systems and data configurations through our 2022 work will allow for seamless transition of data moving forward without any need for reconfiguration.

Staff have built a strong relationship with the data operations staff at IRIS R&D Group and will continue to work together to further develop their AI models and software to continue to improve providing us an even stronger product as we work together.

**Member Municipality Participation**

Staff discussed the potential of a discounted pricing structure with IRIS R&D Group dependent on several of the member municipalities joining the County in utilizing their services. IRIS R&D Group noted that without obtaining information on each individual municipality’s infrastructure (total road network kilometres, number of patrol areas, types of infrastructure etc.), they would not be able to provide any accurate estimates on the types of discounts they could provide. The IRIS R&D Group provide several additional services that may be of interest to various member municipalities including PCI inspections, road patrol, and asset data collection to name a few.

Through several conversations with IRIS R&D Group on this topic, Staff decided that the best option is for the IRIS R&D Group to present to the Grey County Public Works Association to provide each municipality a breakdown of the services they provide. This will allow municipal staff an opportunity to decide for themselves if the service is useful in their municipality. If there is interest, the municipality can work with IRIS R&D Group to secure a better pricing structure for future work which in turn, may also secure some future savings for the County.

**Legal and Legislated Requirements**

Privacy

The Iris R&D Group is a privacy-centric technology company who never capture private information, such as people’s faces or license plate numbers, in any form as part of their video capture. They work in complete compliance with the Municipal Freedom of Information and Privacy Protection Act. All private data collected is redacted through patented AI technology.

**Financial and Resource Implications**

Item	Excluding HST	Net HST
2023 Roads Needs Study Budget	\$68,789	\$70,000
3-Year Term Standard Rate Annual Total	\$74,753	\$76,069
Project Deficit	(\$5,964)	(\$6,069)

The project deficit of \$5,964 (\$6,069 net HST) will be funded from any surplus realized in the Transportation Services 2023 budget. If no surplus is realized, it will be funded from the Transportation Services General Reserve.

Staff recommend Iris R&D Group be awarded a three-year single source contract to complete PCI inspections for all County roads for \$224,259.00 + HST. The company has provided excellent data in the past and continued work will provide consistent data that will better aid Staff in predicting future deterioration of County roads. Staff wish to proceed with an award to ensure that the inspections are completed within the ideal summer window.

## Relevant Consultation

- Internal - Financial Analyst, Purchasing, Director Transportation Services, Deputy CAO, CAO
- External – Iris R&D Group

## Appendices and Attachments

None.