

REPORT TO COUNTY COUNCIL

2024 Annual Transportation System Performance

To: Warden and Members of County Council

From: Director of Public Works

RECOMMENDATION

1. That County Council receive Report PW 2025-20 entitled “2024 Annual Transportation System Performance” as information.

REPORT HIGHLIGHTS

- This report provides an overview of the performance of Oxford County’s regional transportation system, along with activities undertaken in 2024 related to planning, design, construction, operations, and maintenance.
- A summary of annual transportation system capital investments (forecast ~ \$41 M) and an overview of key maintenance activities that were completed on the transportation infrastructure assets is provided within this report in the 2024 Transportation System Infrastructure Capital Investments sub-section. The ongoing commitment to preventative maintenance standards and road pavement and bridge condition reviews ensures that all County roadways are maintained in a good state of repair for residents, businesses, and visitors.
- Oxford County continues to ensure the safe and efficient operation of its regional road network through proactive programs such as pedestrian crossing studies, intersection studies, traffic calming, speed management and road safety reviews.

IMPLEMENTATION POINT

Following Council’s receipt, this report will be posted on the County’s website for public access.

Financial Impact

There are no financial impacts that will result from the recommendation contained in this report. Any required actions that will result in expenditures have been accounted for in the 2025 Business Plan and Budget for Transportation.

Communications

The 2024 Annual Transportation Report will be available for public viewing on the County’s website on March 27, 2025, at <https://www.oxfordcounty.ca/en/your-government/reports-and-publications.aspx#Public-Works-Annual-Reports>.

This Council report will also be circulated to Area Municipalities, Woodstock Police Service, and Ontario Provincial Police.




In addition, the County will further communicate 2024 performance highlights of key Public Works systems, including Transportation, to the public through an annual social media campaign during National Public Works Week (May 18 – 24, 2025).

2023-2026 STRATEGIC PLAN

Oxford County Council approved the **2023-2026 Strategic Plan** on September 13, 2023. The Plan outlines 39 goals across three strategic pillars that advance Council’s vision of “Working together for a healthy, vibrant, and sustainable future.” These pillars are: (1) *Promoting community vitality*, (2) *Enhancing environmental sustainability*, and (3) *Fostering progressive government*.

The recommendation in this report supports the following strategic goals.

Strategic Plan Pillars and Goals

PILLAR 1	PILLAR 2	PILLAR 3
		
Promoting community vitality	Enhancing environmental sustainability	Fostering progressive government
<p>Goal 1.2 – Sustainable infrastructure and development</p> <p>Goal 1.3 – Community health, safety and well-being</p> <p>Goal 1.4 – Connected people and places</p>		<p>Goal 3.1 – Continuous improvement and results-driven solutions</p> <p>Goal 3.2 – Collaborate with our partners and communities</p>

See: [Oxford County 2023-2026 Strategic Plan](#)

DISCUSSION

Background

Under the *Municipal Act, 2001*, the County of Oxford holds non-exclusive municipal authority over “Highways, including parking and traffic on highways” where both upper and lower-tier municipalities have the power to pass by-laws to regulate its transportation systems. Accordingly, the *Municipal Act* also affords the County with the ability to delegate its powers and duties pertaining to the same through agreements with Area Municipalities on behalf of the County.

In the current state service delivery model, Oxford County (road authority) owns all the transportation network assets within its regional (arterial) road right-of-ways. Oxford County also operates and maintains all these same system assets, with the exception of regional roads and bridge assets that are located within the urban limits of Woodstock, Ingersoll, and Tillsonburg. In these cases, Woodstock, Ingersoll, and Tillsonburg operate and maintain the arterial transportation network (roads and bridges) on behalf of Oxford County, under urban road maintenance service contract agreements.

Additionally, the County shares operational and maintenance responsibilities of its boundary road with other neighbouring municipalities through various service contract agreements.

The County road network is shown on Attachment 1.

Transportation System Operations and Maintenance Levels of Service

To ensure that monitoring and maintenance of the County’s Regional Road Network is undertaken in accordance with established Provincial Level of Service standards, Oxford County adopted the road classification system used by the Ministry of Municipal Affairs and Housing in O.Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways (MMSMH), under the *Municipal Act, 2001*.

The MMSMH establishes six road classifications. All County Regional roads are major arterial roads with Class 2 through Class 5 classifications, which carry relatively high volumes of traffic. To comply with Ontario Regulation 239/02, road classifications are reviewed annually to ensure they are current. The review is based on average annual daily traffic volumes and speed limits. Using these two values, road classifications are set to meet the Provincial standards. As a result of road classification adjustments, maintenance requirements may be amended accordingly.

In 2003, (Report [PW 2003-148](#)) County Council adopted the Winter Road Maintenance Level of Service (LOS) in accordance with MMSMH and hours of service for winter maintenance from 5:00 a.m. to 11:00 p.m..

Traffic control devices (signage, traffic signals, pavement markings) are installed and maintained in accordance with the Ontario Traffic Manual (OTM) and Manual of Uniform Traffic Control Devices (MUTCD) to ensure consistent application and regulatory compliance in accordance with the Ontario Highway Traffic Act (HTA).

County Transportation System Overview

The Transportation division within Oxford County's Public Works Department is responsible for management of the County's transportation network and associated assets including annual operations and maintenance, transportation planning and traffic and corridor management to provide a safe and efficient multi-modal transportation system for the movement of people and goods into and through the County.

The function and structure of the County transportation network, as defined in the Oxford County Official Plan (OP), is to serve moderate to high volumes of inter-municipal and long-distance traffic movements between Provincial highways and local roads. The strategic approach established in the OP is intended to minimize conflict between non-local and local traffic, identify necessary improvements over time, provide a safe pedestrian environment, and integrate transportation facilities provided by Area and neighbouring Municipalities.

The functionality of the County's transportation network is maintained through corridor management policies to limit direct access to abutting properties where possible, control the number of access points to Residential and Industrial, Commercial, and Institutional (IC&I) development, and restrict on-street parking as necessary.

The County's entrance By-law 5222-2010 and accompanying guidelines (Attachment 2) was adopted by County Council in 2010 and regulates the number, location, spacing, and function of County road access points from abutting properties and developments.

The County is responsible for the operation and maintenance of ~ \$1.15 B of transportation network infrastructure assets as follows:

- 1,335 lane km of roads
- 163 bridges/culverts (> 3m span)
- 128 retaining walls
- 175 km of storm sewer
- 1,200 km of ditches/swales
- 40 signalized traffic light intersections
- 3 roundabouts
- 15 pedestrian crossings (PXOs)
- 5,562 regulatory/warning signs
- 30 km of active transportation infrastructure (bike lanes, multi-use paths, trails)
- 22 grade level railway crossings*

*Ownership of grade level crossings is by the Rail Authority, who are responsible for the condition of the crossing surface and warning devices. Road authorities are responsible for approaches, warning signs, and sightlines.

Comments

2024 Annual Transportation System Summary

Highlights of the activities undertaken in 2024 related to the planning, design, construction, operations and maintenance of Oxford County's regional transportation system include, but are not limited to:

- Completion of 62 km of road reconstruction and/or road asphalt resurfacing
- 3 bridge/culvert (>3m span) replacements/rehabilitations completed
- 740 m of guide rails installed (replaced and/or new)
- Implementation of 18 Speed Feedback Signs, two controlled PXOs, and one newly signalized intersection
- 2 traffic signal optimizations and 11 studies completed (i.e. Class Environmental Assessment Studies, Intersection Control/Pedestrian, etc.)
- Winter control response (2023/2024 winter season) to 53 storm weather events
- 873 annual motor vehicle collisions reported, with 7 fatal collisions
- 215 Road Issue Notifications on Municipal 511 automated notification system
- Seasonal load restrictions in effect for 21% of the road network

Traffic and Road Safety Management

Initiatives to promote traffic calming, speed management and road safety have been undertaken in recent years to provide a safe, sustainable, and multi-modal transportation network that supports all road users and are further summarized below.

Active Transportation

Ongoing initiatives to support active transportation (AT) include the incorporation of cycling infrastructure and improvements to pedestrian facilities that meet current Accessibility for Ontarians with Disabilities Act (AODA) standards as part of scheduled capital improvements and asset management. In 2024, these initiatives resulted in the following AT improvements:

- Cycling infrastructure on Oxford Road 24 from Tavistock to Punkeydoodles Corners;
- Wider asphalt platform on Oxford Road 2 resurfacing project;
- Curb bump outs and improved pedestrian crossings at intersection of Oxford Road 20 (North Street West) and Quarter Townline in Tillsonburg;
- Bike lanes and sidewalk improvements on Oxford Road 9 (Ingersoll Road) in Woodstock;
- Audible pedestrian signals at signalized intersection of Oxford Road 15 (Parkinson Road) and Springbank Avenue in Woodstock; and
- New traffic signals at Oxford Road 35 (Devonshire Avenue) and Clarke Street in Woodstock.

Community Safety Zone (CSZ) Implementation

In 2024, an additional nine locations throughout the County were approved by County Council for CSZ implementation (refer to Report [PW 2024-04](#)) in accordance with the County's CSZ criteria and warrant process adopted by County Council in 2021 (Report [PW 2021-31](#)). This brings the total number of designated CSZs throughout the County transportation network to 29.

Designated CSZs will also be eligible for Automated Speed Enforcement (ASE) applications as part of a potential future County-wide ASE program that will be developed and presented to County Council in 2025 that, if adopted, will promote road safety for all users and potentially reduce the number of collisions and fatalities on the County regional road network.

County-wide Approach to Speed Management and Traffic Calming

In 2024, speed data was collected at various locations throughout the County's transportation system where previous traffic calming measures had been implemented. The post monitoring speed data will be utilized to assess effectiveness and to determine if additional traffic calming measures are warranted in accordance with the County-wide approach to Speed Management and Traffic Calming.

Road Safety

Staff utilized traffic management principles and engineering best practice methodologies to develop and implement various site-specific evidence-based recommendations intended to improve road safety measures at the following locations:

- Controlled PXOs on Oxford Road 18 (Main Street West) in Norwich and on Oxford Road 20 (North Street East) in Tillsonburg;
- All-way stop implemented at the intersection of Oxford Road 29 (Maplewood SR) and 16th Line;
- Lateral acoustic (rumble) strips at intersection of Oxford Road 28/Oxford Road 6 and Oxford Road 17/Oxford Road 6;
- Installation of 18 speed feedback signs;
- Road diet on Oxford Road 9 (Ingersoll Road) in Woodstock;
- Intersection realignment and improvements at Punkeydoodles Corners; and
- CSZ designations.

Frequency and Severity of Collisions

A review of the collision data shows a total of 873 collisions, 106 of which resulted in injuries/fatalities across the County's road network in 2024. This represents a 10% increase in total collisions, and a 20% decrease in injury/fatality related collisions, since 2019 (refer to Figure 1). The decrease in total and injury/fatality related collisions from 2020 – 2023 (compared to 2019) may be attributable to COVID-19 traffic impacts which has since rebounded to pre-pandemic conditions. A total of 7 fatal collisions occurred on the County road network in 2024 and has averaged 6 fatal collisions per year from 2019 -2024.

The 2024 collision rate on the County road network is estimated at 0.36 collisions per one million vehicle kilometres and is below the 2021 Provincial collision rate of 1.0.

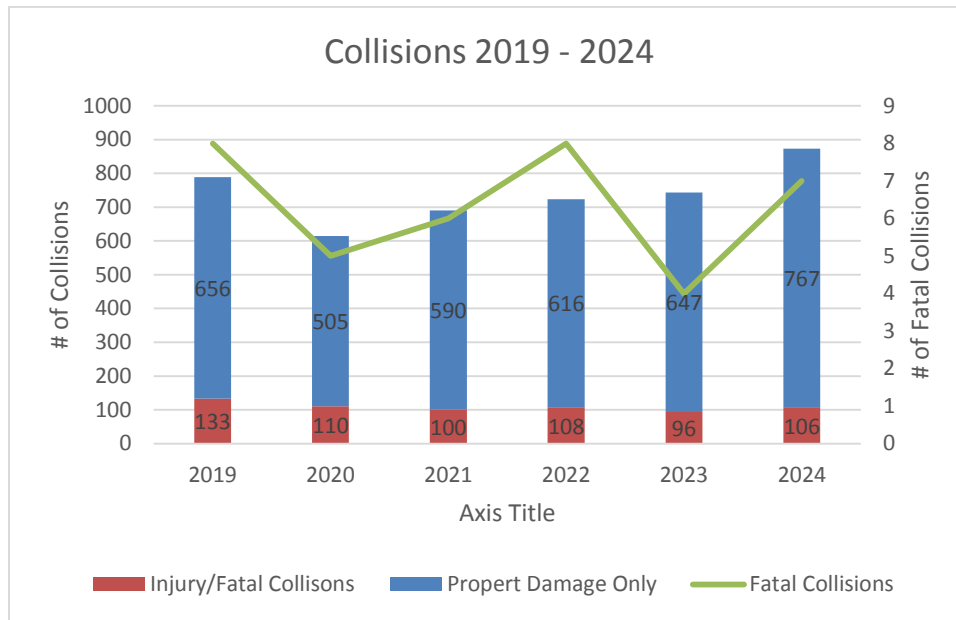


Figure 1 – 2019-2024 Collision Occurrences on County Road Network

The distribution of collision occurrences throughout the County between 2019 and 2024 is shown on Attachment 3 with the highest number of collisions occurring in the three urban municipalities (Woodstock, Ingersoll, and Tillsonburg).

Collision occurrences are typically higher at intersections where the risk of conflicts is greater as a result of turning movements, speed differential (rear-end collisions), and driver non-compliance (failure to yield, failure to stop, etc.). The top ten urban collision locations are at County intersections within the City of Woodstock and can be attributed to generally higher traffic volumes at these locations.

Transportation System Asset Management

The overall asset condition of the County regional transportation system is monitored regularly through the Road Needs Study and biennial Bridge and Culvert inspections. Other inspection programs are initiated from time to time, as required, and include retaining walls, guide rails, and grade level crossings.

These programs provide an inventory of assets, quantitative condition and performance measures, performance prediction as well as engineering and economic analysis tools to provide costs for future transportation system improvement needs such as resurfacing, rehabilitation, replacement, and reconstruction.

The asset condition monitoring of Oxford County’s bridges and major culverts is done through biennial Ontario Structural Inspection Manual (OSIM) inspections as per Provincial legislation O.Reg. 104/97 ‘Standard for Bridges’. This legislation requires that inspections be undertaken on all structures that have a span greater than three meters in accordance with the OSIM, every two years under the direction of a Professional Engineer. The condition of bridges and major

culverts is assessed using the MTO methodology Bridge Condition Index (BCI) and is used to prioritize capital improvements.

A Road Needs Study is performed every five years through a visual examination to inventory and appraise improvement needs within each road section. The study provides an overall rating of the road system by section, including factors such as surface type, surface width, capacity, structural adequacy, drainage, and geometry. The Study reports on the deficiencies, needs and conditions captured through the Road System Inventory, Road Appraisal Sheets, and Railway Level Crossing Inventory. The Study also identifies recommended timing and estimated cost of the proposed construction and/or rehabilitation improvements.

Similar to bridges and major culverts, the road network is assessed using the MTO Pavement Condition Index (PCI) methodology to rank the current condition of the road segment and identify maintenance and rehabilitation requirements.

2024 Transportation System Infrastructure Capital Investments

As per the revised 2024 Forecast in the 2025 Business Plan and Budget, the County invested approximately \$41 M in tax supported transportation infrastructure which included, but is not limited to, several notable capital projects as follows:

- Oxford Road 8/36 - roundabout construction (\$1,700,000)¹
- Oxford Road 16 – phase 2 reconstruction (\$6,500,000)
- Oxford Road 9 (Ingersoll Road) – road reconstruction (\$1,500,000)
- Punkeydoodles Corners – intersection improvements (\$1,100,000)
- County-wide road resurfacing (\$6,800,000)
- County-wide rural storm replacement (3,000,000)
- Bridge Rehab – Oxford Road 33 (\$1,350,000)
- Bridge Rehab – Oxford Road 59 (\$8,500,000)²
- Culvert Rehab – Oxford Road 8 (\$800,000)
- Culvert Rehab – Oxford Road 16 (\$500,000)
- County-wide guiderail installation – (\$300,000)
- Controlled Pedestrian Crossings - PXOs (\$240,000)
- Traffic Signal Upgrades (\$1,100,000)
- Princeton Drain (\$600,000)

1. Oxford's 50% share of total cost

2. Construction carryover to 2025

2024 Operation and Maintenance of Transportation System

In addition to the transportation system capital investments noted above, several planned operational and maintenance activities are carried out annually to help optimize the useful service life and efficiency of transportation infrastructure assets and support a safe and reliable transportation network. The 2024 Roads Operational Expense was approximately \$12 M and included several key annual maintenance activities performed on the transportation network as noted in Table 1.

Table 1: Transportation System Operation and Maintenance (2024)

Activity	Quantity
Road Salt Application - Tonnes of Salt (2023/2024 Winter)	8,750 tonnes
Road Sand Application - Tonnes of Sand (2023/2024 Winter)	5,500 tonnes
Road Side Maintenance / Shouldering - Tonnes of Gravel Placed	14,770 tonnes
Ditch Clean Outs - Length of Ditches Cleaned Out	7,400 metres
Asphalt Patching / Pothole Repair – Tonnes of Hot Mix Placed	1,380 tonnes
Line Painting (kms)	1,818 kms
Sign Inspections / Reflectivity	6,587 signs
Bridge Washing (Area)	13,618 square metres
Snow Fence Installation/Removal - Metres	9,700 metres
Number of Regulatory Signs Replaced	451

CONCLUSIONS

The 2024 Annual Transportation System Performance Report demonstrates Public Works' continued efforts to maintain the County's transportation systems in a good state of repair to effectively serve Oxford County residents, businesses and travelling public, and promote safe, efficient, and sustainable movement of people and goods into, out of, and throughout Oxford County.

The County continues to institute industry best management standards to annually monitor the levels of service and financial performance of its transportation infrastructure and to ensure transportation infrastructure assets are maintained in optimal condition through effective preventative maintenance and optimized infrastructure decision-making.

Through on-going investment in capital expansion, state-of-good repair works, and operational improvement measures, the performance of the system will continue to meet or exceed current levels of service.

SIGNATURES

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ATTACHMENTS

- Attachment 1 – County Base Map
- Attachment 2 – Entrance By-law and Guidelines
- Attachment 3 – MTO Collision Heat Map 2019-2024