REPORT TO COUNTY COUNCIL

2025 Annual Transportation and Storm Water System Performance

To: **Warden and Members of County Council**

From: **Director of Public Works**

RECOMMENDATION

1. **That County Council receive Report PW 2026-13 entitled "2025 Annual Transportation and Storm Water System Performance" as information, including the 2025 Storm Water Consolidated Linear Infrastructure Summary Report in accordance with the reporting requirements established in the Environmental Compliance Approval and the requirements of the *Ontario Environmental Protection Act.***

REPORT HIGHLIGHTS

- This report provides an overview of the performance of Oxford County's regional transportation and storm water systems, along with activities undertaken in 2025 related to planning, design, construction, operations, and maintenance.
- A summary of annual transportation and storm system capital investments and an overview of key maintenance activities that were completed in 2025 is provided within this report. The ongoing commitment to preventative maintenance standards and capital upgrades ensures that County transportation and storm assets are maintained in a good state of repair for residents, businesses, and visitors.
- The 2025 Annual Storm Water System report is included with this report and will be submitted to the Ministry of Environment Conservation and Parks (MECP) and posted on the Oxford County website in accordance with environmental approvals issued under the Ontario *Environmental Protection Act.*

IMPLEMENTATION POINTS

Following Council's receipt, this report will be posted on the County's website for public access and will include the 2025 Storm Water Performance Report that will also be submitted to the

Ministry of the Environment, Conservation and Parks (MECP) in accordance with regulatory requirements.

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 2026 Business Plan and Budget for Transportation.

Communications

The 2025 Annual Transportation and Storm Water System Performance report will be available for public viewing on the County's website by April 30, 2026, at www.oxfordcounty.ca/publications under 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 2025 performance highlights of key Public Works systems, including Transportation, to the public through an annual social media campaign during National Public Works Week (May 15 – 21, 2026).

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**
Goal 1.2 – Sustainable infrastructure and development Goal 1.3 – Community health, safety and well-being Goal 1.4 – Connected people and places		Goal 3.1 – Continuous improvement and results-driven solutions Goal 3.2 – Collaborate with our partners and communities

See: Oxford County 2023-2026 Strategic Plan

DISCUSSION

Background

Oxford County Transportation Network

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 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, apart from 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 roads 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 were adopted by County Council in 2010 and regulate 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 ~ $1.63 billion of transportation network and storm water infrastructure assets as follows:

- 1,335 lane km of roads
- 164 bridges/culverts (> 3 metres span)
- 128 retaining walls
- 104 km of storm sewer
- 1,219 km of ditches/swales
- 39 signalized traffic light intersections
- Three roundabouts
- 17 pedestrian crossings (PXOs)
- 6,410 regulatory/warning signs
- 38 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.

Oxford County Storm Water System

Oxford County owns and operates a storm water collection system that is approved under Environmental Compliance Approval (ECA) number 071-S701. The ECA incorporates the County's entire storm water network and was issued by MECP on February 3, 2023, as part of the Consolidated Linear Infrastructure (CLI) approach where historical ECAs are combined as part of one municipal system. Annual system performance reporting is a condition of the CLI-ECA.

The CLI-ECA approach streamlines the approval process by providing pre-authorization for routine system activities and alterations that meet specified design criteria activities. A review of the ECA is required in 2026 and will involve updates to the storm water collection system based on alterations and additions that meet pre-approval criteria and have been completed since the CLI-ECA was issued.

The County's storm water system consists of storm sewers, open ditches, and culverts within County Road right-of-ways (ROW), and is interconnected with Area Municipality systems to control surface water runoff from overland flow to mitigate flooding and property damage. System maintenance is provided by County forces, except in Woodstock, Tillsonburg, and Ingersoll and some boundary roads where storm sewer maintenance is provided by municipal staff as part of associated service agreements.

Comments

2025 Transportation System Performance

Highlights of the activities undertaken in 2025 related to the planning, design, construction, operations, and maintenance of Oxford County's regional transportation system include, but are not limited to:

- Completion of 36 km of road reconstruction and/or road asphalt resurfacing
- Three bridge/culvert (>3 metres span) replacements/rehabilitations completed
- 2,045 metres of guide rails installed (replaced and/or new)
- Implementation of four Speed Feedback Signs, and two controlled PXOs
- Two traffic signal optimizations and six studies completed (i.e. Class Environmental Assessment Studies, Intersection Control/Pedestrian, etc.)
- Winter control response (2024/2025 winter season) to 82 storm weather events
- 774 annual motor vehicle collisions reported, with ten fatal collisions
- 130 Road Issue Notifications on Municipal 511 automated notification system
- Seasonal load restrictions in effect for 21% of the road network
- Implementation of MTO predictive tool for determining start and end dates of reduced load period.

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, as 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 2025, these initiatives resulted in the following AT improvements:

- Cycling infrastructure on Oxford Road 119 from Ingersoll to Thamesford;
- Bike lanes and sidewalk improvements on Oxford Road 35 (Devonshire Avenue) in Woodstock, and;
- Audible pedestrian signals at signalized intersections of Oxford Road 35 (Devonshire Avenue) and Wellington Street and Vansittart Avenue in Woodstock.

County-wide Approach to Speed Management and Traffic Calming

In 2025, speed data was collected at various locations throughout the County's transportation system. The speed data was utilized to undertake speed management and road safety reviews in areas throughout the County to inform traffic calming recommendations and to assess

effectiveness of traffic calming measures previously implemented, 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 3 (Wilmot Street) in Drumbo and on Oxford Road 53 (Tillson Avenue) in Tillsonburg;
- All-way stops implemented at the intersection of Oxford Road 28 (Maplewood Sideroad) and Oxford Road 119 and Oxford Road 33 and Oxford Road 60 (16th Line);
- Installation of centreline flexible delineators at:
    - Oxford Road 9 – Beachville
    - Oxford Road 20 - Delmer
    - Oxford Road 119/Oxford Road 16 - Kintore
    - Oxford Road 28 and Oxford Road 119 – Uniondale;
- Installation of four speed feedback signs; and
- Community Safety Zone (CSZ) designation on Oxford Road 6 in Embro.

As part of the 2026 Budget and Business Plan, County Council authorized (PW 2025-59) the development of an Oxford County Road Safety Strategy in collaboration with Area Municipalities that will expand on road safety initiatives listed above to identify short and long term strategies to reduce serious injury and fatal collisions. To support this undertaking, a Traffic Management division will be established within the Public Works department in 2026 that will be responsible for ongoing road safety and traffic management initiatives.

Frequency and Severity of Collisions

A review of the collision data shows a total of 774 collisions, 104 of which resulted in injuries/fatalities across the County's road network in 2025. This represents an 11% decrease in total collisions, and a 2% decrease in injury/fatality related collisions, compared to 2024 (refer to Figure 1).

A total of ten fatal collisions occurred on the County road network in 2025 and has averaged seven fatal collisions per year from 2019 -2025.

The 2025 collision rate on the County road network is estimated at 0.32 collisions per one million vehicle kilometres, which is below the 2022 Provincial collision rate of 1.1

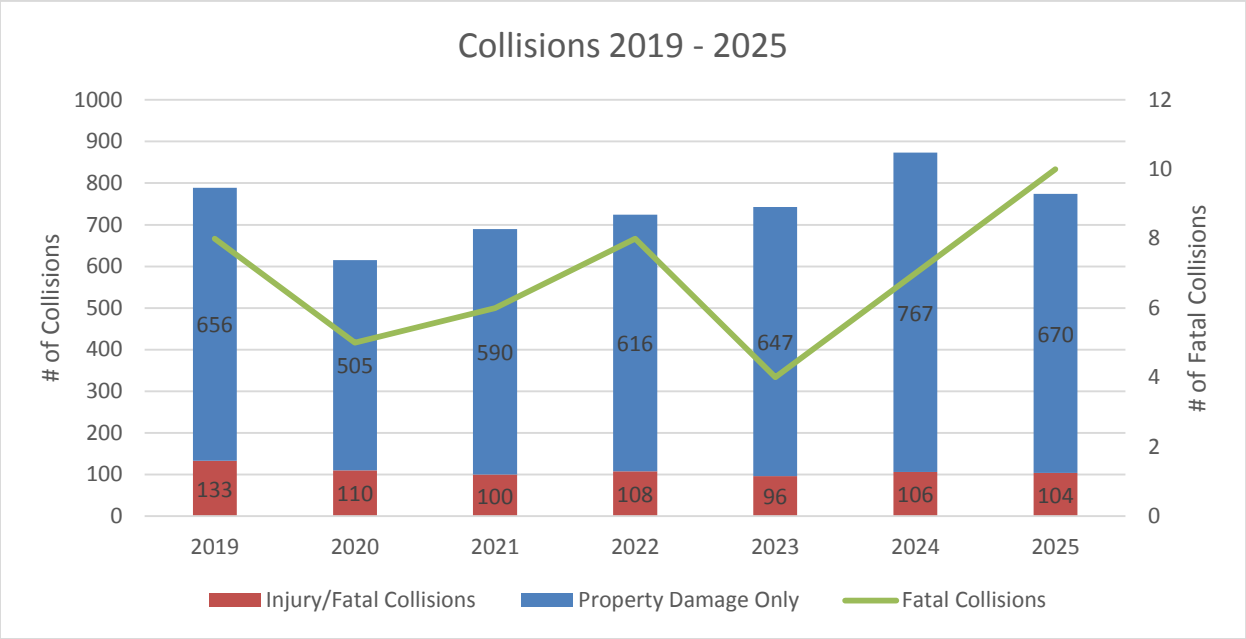

Figure 1 – 2019-2025 Collision Occurrences on County Road Network

The distribution of collision occurrences throughout the County between 2019 and 2025 is shown on Attachment 2 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.

While the total number of collision occurrences in 2025 decreased compared to 2024, the number of fatal collisions in 2025 is concerning as it represents the highest number since 2019. A cursory review of the 2025 data indicated that six of the ten fatal collisions occurred at rural intersections. Of the four non intersection related fatal collisions, two were the result of oncoming vehicle impacts, one involved a pedestrian, one was a single motor vehicle that lost control.

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 metres 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 was initiated in 2025 and 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.

2025 Transportation System Infrastructure Capital Investments

The County invested approximately $25 million in tax supported transportation infrastructure which included, but is not limited to, several notable capital projects as follows:

- Oxford Road 3 Urbanization Princeton – ($1,400,000)
- Oxford Road 35 (Devonshire Avenue) – phase 1 reconstruction ($2,000,000)
- Oxford Road 59 (Vansittart Avenue) road reconstruction ($1,040,000)
- County-wide road resurfacing ($5,240,000)
- County-wide rural storm replacement ($3,300,000)
- County-wide urban storm replacement ($650,000)
- Bridge Rehab – Oxford Road 6 ($1,700,000)
- Bridge Rehab – Oxford Road 16 ($970,000)
- Culvert Rehab – Oxford Road 27 ($615,000)
- County-wide guiderail installation – ($465,000)
- Controlled Pedestrian Crossings – PXOs ($280,000)
- Traffic Signal upgrades ($965,000)
- Princeton Drain ($828,000)

2025 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 2025 Roads Operational Expense was approximately $13.2 million and included several key annual maintenance activities performed on the transportation network as noted in Table 1. The 2024/2025 winter season experienced an increase in winter events compared to the previous season that was largely impacted from significant weather events that occurred in Q1 of 2025. Additionally, the start of the 2025/2026 winter season also experienced and increase in weather events, in Q4 2025, which lead to a five-year high in winter related weather events.

Table 1: Transportation System Operation and Maintenance (2025)

Activity	Quantity
Road Salt Application - Tonnes of Salt (2024/2025 Winter)	12,400 tonnes
Road Sand Application - Tonnes of Sand (2024/2025 Winter)	7,290 tonnes
Road Side Maintenance / Shouldering - Tonnes of Gravel Placed	13,530 tonnes
Ditch Clean Outs - Length of Ditches Cleaned Out	10,755 metres
Asphalt Patching / Pothole Repair – Tonnes of Hot Mix Placed	1,200 tonnes
Line Painting (kms)	643 centreline kms
Sign Inspections / Reflectivity	6,459 signs
Bridge Washing (Area)	16,630 square metres
Snow Fence Installation/Removal - Metres	10,600 metres
Number of Regulatory Signs Replaced	609

2025 Storm Water System Performance

The 2025 Storm Water System Annual Performance Report (Attachment 3) will be submitted to the MECP by April 30, 2026, and will be posted on the County's website in accordance with regulatory requirements.

Highlights of the storm water system performance in 2025 include:

- No operation and/or performance issues were identified.
- Annual maintenance activities include ditch cleaning and catch basin cleaning.
- 21 complaints/inquiries were received and addressed during the reporting period.
- Alterations include infrastructure improvements related to land development and the County's annual capital replacement program.

In 2025, several initiatives were undertaken in support of the County's storm water system asset management and to ensure compliance with the CLI-ECA that was issued in 2023, as briefly described below.

- An annual storm sewer inspection program utilizing closed-circuit television (CCTV) was initiated to establish infrastructure condition ratings that will support the County's asset management plan and prioritize capital improvements.
- Ongoing field survey to collect missing storm water asset data.
- The administration of storm water system alterations, record keeping, and compliance requirements was transitioned to the Water and Wastewater Technical Services division with support from the Transportation division.
- Submission to MECP of inventory of storm sewer catchment areas and treatment classifications.

2026 Storm Water System Initiatives

In 2026, several initiatives will be undertaken in support of the County's storm water system and CLI-ECA, as briefly described below.

- Continuation of annual storm sewer inspection program utilizing closed-circuit television (CCTV).
- Administration of storm water system alterations, record keeping, and compliance requirements.
- Renewal of CLI-ECA as required by MECP that will include approved system alterations completed since the CLI-ECA was issued in 2023.

CONCLUSIONS

The 2025 Annual Transportation and Storm Water System Performance Report demonstrate Public Works' continued efforts to maintain the County's transportation and storm water infrastructure in a good state of repair through effective preventative maintenance and optimized infrastructure decision-making.

Submission of the 2025 Annual Storm Water System report to the MECP and posted on the Oxford County website complies with environmental approval conditions issued under the Ontario *Environmental Protection Act.*

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

SIGNATURES

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ATTACHMENTS

Attachment 1 – County Road Network Map
Attachment 2 – MTO Collision Heat Map 2019-2025
Attachment 3 – 2025 Storm Water System Performance Report