



ENGINEERING & PUBLIC WORKS DEPARTMENT 2025 – 2027 BUSINESS PLAN

Rob Raycroft,
Director of Engineering & Public Works

Overview

The Department is divided into two portfolios, namely the Public Works Division and the Engineering Division.

The *Public Works Division* is responsible for the operation and four seasons maintenance of the Township's linear infrastructure which includes: roads and road side ditches; bridges and culverts; boulevard trees; traffic control devices, signage and pavement markings; catchbasins, storm sewers and stormwater management facilities; sidewalks; streetlights; and, Municipal parking lots. The Department is also responsible for the maintenance and oversight of the Corporation's fleet (except fire apparatus) of vehicles and equipment.

The *Engineering Division* is responsible for the design and delivery of the Municipality's capital works program related to the repair, rehabilitation or expansion of the linear infrastructure network. These functions include: infrastructure master plans; preparation of Class Environmental Assessments; design, construction, contract administration, commissioning, and, cost control of linear capital projects. Additionally the Engineering Division is responsible for the development review process which would include subdivision / site plan engineering review & inspections, and, the administration of subdivision / site plan agreements. The Engineering Division, in consultation with the affected Department, also coordinates and undertakes the capital works program associated with new buildings, building additions and major facility rehabilitation construction. The Engineering Division is also responsible for the administration of the Township's Site Alteration By-law and review / permitting programs under the terms of the By-law.

Mission Statement

The Department's Mission Statement is to protect public safety and provide services related to the Municipality's roads, sidewalks and bridges. The Department acts in a fiscally responsible manner as stewards of the Township's current and future linear infrastructure while applying sound operating practices and engineering principles.



ENGINEERING & PUBLIC WORKS DEPARTMENT

2025 – 2027 BUSINESS PLAN

Goals

- To exceed the expectations of our residents by providing the highest level of service possible, in a cost effective manner. Strive to be recognized in Waterloo Region as a leader in the delivery of infrastructure related services
- To proactively develop and maintain an Asset Management Plan that will assist in the prioritization of capital undertakings that will inform the program to plan, build, operate and upgrade the linear infrastructure network of the Township
- To meet, and where practical, exceed the expectations of the Ontario Minimum Maintenance Standards for Municipal Highways
- To provide timely follow up and address deficiencies or calls for service related to the linear infrastructure system
- To develop proactive and forward thinking engineering solutions for the Township's current and future linear infrastructure network, including programs to adapt to climate change and its associated influences.
- Review and inspect development related infrastructure to ensure public safety and long term financial sustainability of development related infrastructure upon assumption of the services

Policy Guidelines for Service Delivery

- Accessibility for Ontarians with Disabilities Act
- Occupational Health & Safety Act
- Various Council approved Policies and Procedures



ENGINEERING & PUBLIC WORKS DEPARTMENT 2025 – 2027 BUSINESS PLAN

Policy Guidelines for Service Delivery (Continued)

- Collective Bargaining Agreement CUPE Local 1656.02
- Ontario Minimum Municipal Maintenance Standards
- Highway Traffic Act
- Municipal Engineers Association Class Environmental Assessment processes
- Ontario Water Resources Act and other Provincial Legislation
- Township Engineering Standards
- Bridges and major culverts are inspected and maintained in accordance with the Ontario Standards for Bridges regulation
- Winter maintenance of roads and sidewalks are inspected and maintained in accordance with Ontario Minimum Maintenance Standards for Municipal Highways regulation and in keeping with the Township's Salt Management Plan and is aligned with the Municipality's level of service standards
- Design and installation of traffic control devices, traffic signage and pavement markings is undertaken as per the regulations under the Highway Traffic Act and the Ontario Traffic Manual, including analysis and application of the recommended warrants
- Maintenance and operation of storm water management facilities is undertaken in conformance with the Ministry of the Environment, Conservation & Parks Certificate of Approval and good engineering practices
- Engineering design standards, including where applicable Ontario Provincial Standard Drawings



ENGINEERING & PUBLIC WORKS DEPARTMENT

2025 – 2027 BUSINESS PLAN

Key Issues & Challenges

- Ability to maintain, rehabilitate and replace the linear infrastructure system is a financial challenge. As this infrastructure continues to age, the pressure to undertake preventative maintenance and rehabilitation of the system will grow exponentially
- Responding to the pressures of growth on the infrastructure network, and, integrating new infrastructure into the existing network
- Quantifying, understanding and prioritizing the long term (ie: 10 year forecast) rehabilitation and major repairs to the Township's linear infrastructure network, and, then funding the required capital program
- The Township has introduced a formal Maintenance Management / Work Management on-line reporting system. The need to leverage, manage and document the requirements associated with the Township's linear infrastructure system has to become part of the culture of the Organization
- Ability for the Township to respond to customer service requests continues to be a challenge and will grow overtime as the infrastructure ages and more requests are received for service based upon a growing population base
- Transitioning from a strictly road maintenance program to a more fulsome and proactive approach to managing all aspects of the linear infrastructure network in an integrated fashion
- Co-ordination of the replacement of underground services, such as water mains, sanitary sewers and the associated appurtenances with the Region of Waterloo needs to be enhanced to ensure the integrated rehabilitation of roads
- Activating and leveraging upper level Government grants and programs to maximize finite available dollars for major infrastructure projects such as the rehabilitation of bridge structures



ENGINEERING & PUBLIC WORKS DEPARTMENT

2025 – 2027 BUSINESS PLAN

Key Issues & Challenges (Continued)

- Hardening of the Township's linear infrastructure, and in particular the roadside drainage network, storm sewers and stormwater management facilities, to respond to Climate Change and the influences of weather related events
- Prepare and maintain the rolling stock of the Township to be adaptable and diverse in their specifications so that a multitude of tasks can be undertaken to deliver services in an efficient and cost effective manner
- Update the Township's fleet of service vehicles and equipment to reflect the changing dynamics of the Municipality's portfolio of the linear infrastructure system
- The renovation and expansion to the Public Works depot to properly accommodate the expanding fleet of vehicles; repair facilities; storage of materials and supplies; and, the proper accommodation for front line personnel
- Development of new Development and Engineering Standards needs to be undertaken

Year 2025

- Establish a framework and model for the four season inspection and investigation of the Township's road network to achieve on a consistent basis the Ontario Minimum Standards for Municipal Highways regulation through the recently deployed digital Road Patrol program
- Develop and submit to Council for approval a Boulevard Tree Management Plan and standard level of service
- Undertake a review of local streets within Ayr and make recommendations to Council on areas for No Parking and/or Parking on one side of the road



ENGINEERING & PUBLIC WORKS DEPARTMENT 2025 – 2027 BUSINESS PLAN

Year 2025 (continued)

- Develop the framework of a Climate Adaption / Mitigation response as it pertains to the Township's linear infrastructure network
- Implement Phase 2 of the LED Streetlight Conversion program focussed on the decorative / top post mounted streetlight luminaires
- Review and update the Township's Site Alteration By-law 2612-14 taking into consideration the Province's Excess Soils regulations
- Continue work initially commenced in 2024 with the Township's Engineering Consultant on creating an updated Engineering Standards Manual

Year 2026

- Continue work on the development of a framework of a Climate Adaption / Mitigation response as it pertains to the Township's linear infrastructure network, and with the approval of Council, commence with the implementation of Phase 1
- Develop a preventative maintenance strategy for Municipal bridges and major culverts
- Develop a preventative maintenance strategy to extend the operating life of hard topped roads within the Township's network
- Develop a storm sewer and catch basin cleaning program



ENGINEERING & PUBLIC WORKS DEPARTMENT

2025 – 2027 BUSINESS PLAN

Year 2026 (continued)

- Review, and where necessary, update the templates for the Township's Site Plan Control Agreements and Subdivision Agreements for the consideration of Council
- Review, and where necessary, update the Township's Traffic Calming Policy and associated implementation plan for the consideration of Council
- Retain a Consultant to complete the bi-annual OSIM Report on the condition of Municipal bridges and major culverts

Year 2027

- Establish a storm water management pond monitoring and reporting program
- Prepare a RFP to retain the services of a Consultant to undertake a Traffic Operations Study for the Community of Ayr with Recommendations from the Study to be provided to Council for consideration
- Assess the status and success of the Corporate Fleet Management Strategy adopted in 2024 and its alignment with the TransformWR targets designed to reduce Green House Gas (GHG) emissions for presentation to Council
- Continue work on the development of a framework of a Climate Adaption / Mitigation response as it pertains to the Township's linear infrastructure network, and with the approval of Council, commence with the implementation of Phase 2