

York Region Readiness for Transportation Technology Advancements

Transportation Technology Initiatives Underway to Position the Region for the Impacts of New Technology



iCity-CATTS Program

York Region staff will better understand and evaluate technology impacts and prepare for infrastructure decisions and investments using products (research reports, data, and modelling techniques) developed by the University of Toronto researchers. One of the projects is the development of a region-wide mesoscopic model to exploit optimal real-time adaptive traffic signal control with vehicle connectivity to improve traffic operations at selected intersections and corridors (in partnership with University of Toronto, Transportation Research Institute).



Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO)

The goal of this partnership is to identify and coordinate CAV testing sites. Highway 7, including the portion running through the Cities of Vaughan, Richmond Hill and Markham, may be a potential test location for MACAVO as the roadway connects communities across southern Ontario from the City of Windsor to the City of Ottawa (in partnership with Ontario Good Roads Association, other municipalities across Ontario).



Autonomous Bus Shuttle (National Smart Vehicle Demonstration and Integration Trial)

This project plans to integrate semi-autonomous and, eventually, fully autonomous, connected and electric vehicle shuttles/pods and buses as first-mile/last-mile applications. The primary project objectives are the development of standardized Vehicle-to-Vehicle and Vehicle-to-Infrastructure communication protocols, interoperability standards for electric low-speed autonomous shuttle (e-LSA) manufacturer equipment and standardized cybersecurity protocols (in partnership with Canadian Urban Transit Research and Innovation Consortium).



Dedicated Short Range Communication Pilot

The Region is working with the Ministry of Transportation Ontario, Metrolinx and 407ETR to test on-board and roadside technology from various manufacturers to facilitate traffic signal priority to York Region Transit buses and GO buses operating on Pine Valley Drive, Jane Street and Keele Street, including the interchanges at Highway 407 (in partnership with Ministry of Transportation Ontario, Metrolinx, 407 ETR).



Advanced On-board Technology

The Vehicle Health Monitoring System being developed by York Region Transit will measure, monitor and report on the status of critical systems and components on the bus and improve the maintenance standards of the fleet.