Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager, Environment and Infrastructure**
Subject: **Draft Connected and Automated Vehicle Plan**
Date: **September 13, 2022**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the Connected and Automated Vehicle Plan:

(a) The draft Connected and Automated Vehicle Plan, as summarized in the Executive Summary attached hereto as Appendix A, **BE RECEIVED**; and,

(b) The Civic Administration **BE DIRECTED** to proceed with additional public and stakeholder engagement to further inform the document; and,

(c) City staff **BE DIRECTED** to prepare a final Connected and Automated Vehicle Plan for Council approval.

Executive Summary

Purpose

This report provides Council with an opportunity to review the draft Connected and Automated Vehicle Plan. This draft plan has been prepared with expertise from a variety of stakeholders, advisory committees, the public and subject matter experts. It is recommended to Council that additional feedback be sought prior to finalization of the plan. The Executive Summary is appended, and the complete report can be viewed at this link.

Context

In June 2018, Council directed Civic Administration to develop a Connected and Automated Vehicle Plan. This plan will support the City of London in its efforts to increase and improve transportation options through strategic actions that can help the City prepare for the emergence of connected and automated vehicle (CAV) technology.

Linkage to the Corporate Strategic Plan

The following report supports the Corporate Strategic Plan through the strategic focus area of “Building a Sustainable City” by increasing access to transportation options though the development of “a strategic plan for a future with connected and autonomous vehicles”.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- May 28, 2018, Civic Works Committee, Connected and Autonomous Vehicles Technology Strategy

2.0 Discussion and Considerations

2.1 Introduction

The gradual introduction of driving automation and connectivity continues across North America as the industry develops new CAV technologies. CAVs have the potential to improve transportation safety, efficiency, sustainability, and have the potential to transform cities. The creation of this Connected and Automated Vehicle Plan aims to position London to maximize the potential economic, mobility, and urban form benefits while managing and mitigating potential risks as these technologies become more advanced and begin to influence how we live.

This Connected and Automated Vehicle Plan will be used by decision-makers who are responsible for the planning, implementation, and maintenance of public infrastructure and the urban built form which will be impacted by the emergence of CAV technology. This Connected and Automated Vehicle Plan has been prepared in a way that can communicate the City of London's context and unique approach to CAV technology to interested external stakeholders, industry players, and the public. This plan is an important informative element for the Mobility Master Plan and contributes to other initiatives such as the London Plan and the Climate Emergency Action Plan.

This Connected and Automated Vehicle Plan is proactive, based on the needs to prepare the City for the arrival of CAV technologies in a timely manner. The action items listed in this Connected and Automated Vehicle Plan are adaptable and will need to be further developed as part of a future Implementation Plan and will be looked at through a lens of deliverability, resourcing, and sustainability.

The future Implementation Plan and any proposed programs, projects, and sub-projects will need to be carefully considered in alignment with Council's Strategic Plan including Corporate priorities and resourcing. Given the emerging nature of these technologies, there are many unknowns yet to manage, and there will be a need to regularly review the progress of these technologies, including "triggering" events and specific timelines that will require City attention.

2.2 Connected and Automated Vehicle Plan Overview

The draft Connected and Automated Vehicle Plan is structured with two sections:

- **Part I: Background** provides an explanation of the current realities of CAV technology in London and elsewhere and explores anticipated timelines associated with the technology development. It is important to note that given the emerging nature of CAV technology, the information provided within this section is subject to change.

- **Part II: Detailed Actions** presents the core areas of focus and actions that may be available to the City of London to consider in response to CAV technology. To implement the actions that have been identified in this section, a subsequent Implementation Plan will need to be developed. The future Implementation Plan will consider each action and identify what is needed to proceed with implementation including triggering events, timelines, and required additional staff and financial resources.

More details, including the list of potential actions that may be pursued by the City of London, can be reviewed in this Plan.

2.3 Development of the Plan and Stakeholder Engagement

The City of London began monitoring the emergence of CAVs in 2016 with the introduction of the Ministry of Transportation Ontario's (MTO's) Automated Vehicle Pilot Program. In May 2018, City Council was presented with a Staff Report and CAV Technical Background Report providing the resolution for this Connected and Automated Vehicle Plan and the formation of an internal City working group to manage the emergence of this technology. City staff have also participated with other municipalities and stakeholders in the Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO).

Additionally, a panel of external CAV experts were invited to the Rapid Transit Implementation Working Group in February 2019 to present and discuss how CAV technology may influence the City's plans for Rapid Transit. The panel was attended by the members of the Rapid Transit Implementation Working Group and members of City staff.

A working group was formed with members from various City service areas and external stakeholders to develop the Purpose, Vision, Mission, and Values, and the Strategic Areas of Focus, for the Connected and Automated Vehicle Plan. These tools were used to guide the development of this draft plan.

PURPOSE **Why?**	To better understand and prepare for the introduction of connected and automated vehicles in our community to improve the lives of our citizens and minimize the environmental impact of this technology as it becomes more commonplace.
VISION **What?**	A sustainable community that integrates connected and automated vehicles into city-building and daily activities by pursuing improved safety, environmental stewardship, and travel mobility options.
MISSION **How?**	To engage internal and external stakeholders, identify potential implications of connected and automated vehicles, and provide a plan and actions that will proactively prepare for the introduction of connected and automated vehicles.
VALUES	• Alignment with the 2019-2023 Strategic Plan for the City of London • Alignment with the London Plan • Climate Emergency Action Plan • Driven by Community • Human Health and Community Safety • Information Security and Privacy • Integrated Mobility • Proactive Leadership • Responsible Governance • Social Equity • Stakeholder Collaboration • Supporting Innovation

Under this Connected and Automated Vehicle Plan, eight Areas of Focus were identified under which identified actions have been developed:

- Road Safety and Security
- Mobility Integration and Efficiency
- Environmental Sustainability
- Social Health and Equity
- Data Privacy, Security, and Governance
- Land Use and Urban Form
- Economic Sustainability
- City Fleet and Services

Stakeholder engagement was pursued early in the development of the Connected and Automated Vehicle Plan, including a public consultation period from December 2019 to February 2020 on the City's 'Get Involved' platform. During this period, 236 Londoners contributed their thoughts and concerns about the emerging technology. The three areas of focus that were identified as priority by more than 40% of survey respondents were Road Safety and Security, Environmental Sustainability, and Mobility Integration and Efficiency.

The City's advisory committees were also engaged in 2020 during the initial stages of developing the draft Connected and Automated Plan, including the:

- Accessibility Advisory Committee;
- Community Safety and Crime Prevention Advisory Committee;
- Cycling Advisory Committee; and
- Transportation Advisory Committee.

Prior to this presentation of the draft Connected and Automated Vehicle Plan to Council, the plan was circulated to two external subject matter experts. This review confirmed that the plan is technically accurate and consistent with industry conditions.

2.4 Next Steps

Moving forward, this draft Connected and Automated Vehicle Plan will continue to be made available for a period of public consultation and advisory committees will again be engaged for their feedback. This phase of engagement will include gauging the relative importance and prioritization of the actions identified with the intent of initial prioritization. Following this final phase of engagement, the Connected and Automated Vehicle Plan will be finalized and presented to Council for adoption.

Following adoption of the final Connected and Automated Vehicle Plan, staff will continue to monitor the development of technology and will identify when it is an appropriate time to initiate the development of an Implementation Plan for the actions identified in the Connected and Automated Vehicle Plan. The action items will be further developed in the Implementation Plan with consideration given to deliverability and creation of resourcing in coordination with other corporate initiatives identified in Council's Strategic Plan.

Conclusion

This report provides Council with an opportunity to review the draft Connected and Automated Vehicle Plan, prior to final stakeholder review and finalization of the Plan. This report also describes the previous stakeholder consultation that has taken place as part of the development of this draft Connected and Automated Vehicle Plan.

This Connected and Automated Vehicle Plan will be used by decision-makers who are responsible for the implementation and maintenance of public infrastructure and built urban form which will be impacted by the emergence of Connected and Automated Vehicle technology. This Connected and Automated Vehicle Plan has been prepared in a way that can communicate the City of London's context and unique approach to CAV technology to interested external stakeholders, industry players, and the public. The work to create the Connected and Automated Vehicle Plan and the recommendations herein will also inform the long-term recommendations of the Mobility Master Plan.

Following Council's acceptance of this report, the draft Connected and Automated Vehicle Plan will move to final stakeholder engagement and finalization.

Submitted by:	**Doug MacRae, P. Eng., MPA, Director, Transportation and Mobility**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager, Environment and Infrastructure**

Attach: Appendix A – Draft Connected and Automated Vehicle Plan, Executive Summary

c: Jon Kostyniuk, Traffic Engineering
Connected and Automated Vehicle Plan Working Group

Connected and Automated Vehicle Plan

Executive Summary DRAFT

Prepared by the Corporation of the City of London
September 2022

London
CANADA

How will this **Connected** and **Automated Vehicle Plan** be Used?

This Connected and Automated Vehicle (CAV) Plan will be used by decision makerswho are responsible for the implementation and maintenance of public infrastructure which will be impacted by the emergence of CAV technology. This CAV Plan has been prepared in a way that can communicate the City of London's context and unique approach to CAV technology to interested external stakeholders, industry players, and the public.

Part I: Background provides an explanation of the current realities of CAV technology in London and elsewhere and explores anticipated timelines associated with the technology development. It is important to note that given the emerging nature of CAV technology, information provided within this section is subject to change.

Part II: Detailed Actions presents the core areas of focus and actions that may be available to the City of London to consider in response to CAV technology. To implement the actions that have been identified, a subsequent Implementation Plan will need to be developed. The future Implementation Plan will consider each action and identify what is needed to proceed with implementation including triggering events, timelines, and required additional staff and financial resources.

This CAV Plan is proactive in nature, based on the needs to prepare the City for the arrival of CAV technologies in a timely manner. The action items identified in this plan will need to be further developed as part of a future Implementation Plan and looked at through a lens of deliverability, resourcing, and sustainability.

The future Implementation Plan and any proposed programs, projects, and sub-projects will need to be carefully considered in alignment with Council's CAV Plan including Corporate priorities and resourcing.

Purpose, **Vision**, **Mission**, and **Values**

The Purpose, Vision, Mission, and Values are the guiding framework for the Connected and Automated Vehicle Plan and the detailed actions within it. Through internal consultation, the Purpose, Vision, Mission, and Values were adopted by the City's internal working group on December 12, 2019 as follows:

PURPOSE

Why? To better understand and prepare for the introduction of connected and automated vehicles in our community to improve the lives of our citizens and minimize the environmental impact of this technology as it becomes more commonplace.

VISION

What? A sustainable community that integrates connected and automated vehicles into city-building and daily activities by pursuing improved safety, environmental stewardship, and travel mobility options.

MISSION

How? To engage internal and external stakeholders, identify potential implications of connected and automated vehicles, and provide a plan and actions that will proactively prepare for the introduction of connected and automated vehicles.

VALUES

- Alignment with the 2019-2023 Strategic Plan for the City of London
- Alignment with the London Plan
- Climate Emergency Action Plan
- Driven by Community
- Human Health and Community Safety
- Information Security and Privacy
- Integrated Mobility
- Proactive Leadership
- Responsible Governance
- Social Equity
- Supporting Innovation
- Stakeholder Collaboration

Strategic Areas of Focus

Strategic Areas of Focus (SAFs) were developed in collaboration with internal City stakeholders as guideposts to spur discussion in the development of the CAV Plan. The final SAFs constitute the core of the CAV Plan as detailed herein.

For each of the SAFs, broad goals were identified and are listed below. For full details about specific action items under each goal, there is discussion provided in the full CAV Plan document.

1. Road Safety and Security

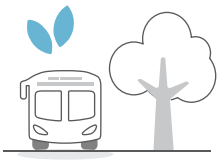
The City will encourage the adoption of CAVs that are supportive of improved road safety. A net benefit to road safety will be achieved through actions that focus on protecting vulnerable users, preventing collisions, updating infrastructure, and improving emergency response. Actions will address both the knowns and unknowns of CAVs and will look at the ideal policies, technology, standards, and training required to achieve improved safety.

1.1 Prevent Collisions
1.2 Update Infrastructure
1.3 Update Emergency Response

2. Mobility Integration and Efficiency

The City will incorporate CAV technology and encourage its adoption within the City's mobility network. Increased infrastructure efficiency will be achieved through an enhanced ability to manage traffic in real-time, allowing individual mobility needs to be served at any given time.

2.1 Increased Space Efficiency
2.2 Design Complete Streets
2.3 Increase System Integration
2.4 Urban Goods Movement
2.5 Mobility Network Efficiency and Performance
2.6 Transportation Demand Management



3. Environmental Sustainability

The City will encourage the adoption of CAVs in a manner that incentivizes environmental sustainability across a vehicle's entire lifecycle. Reducing vehicle emissions and waste through incentivizing or promoting zero emission vehicles and sustainable use practices.

3.1 Reduce Vehicle Emissions
3.2 Reduce Vehicle Waste

4. Social Equity and Health

The City will encourage the adoption of CAVs in a manner that improves accessibility, social equity, and prioritizes health and safety for all Londoners.

4.1 Ensure Barrier Free Access for All
4.2 Increase Mobility Equity
4.3 Promote Health and Safety

5. Data Privacy, Security, and Governance

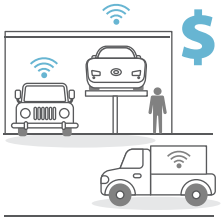
The City will support and enhance data privacy and transportation network security with a particular focus on the City's collection and use of information generated by CAVs and related systems where authorized by law. Actions will focus on protecting privacy and security through policy and by-law, providing oversight and evaluation, and incorporating privacy principles into any potential collection and use of information generated by CAVs. Further, data gathered should be used to inform the implementation and evaluation of this plan and to improve how the City delivers services.

5.1 Protect Public Privacy
5.2 Business Intelligence

6. Land Use and Urban Form

The City will plan for the potential impacts and implications of CAVs in the context of sustainable urban form, land use, growth, development, placemaking, and the approved London Plan.

6.1 Integrate CAV Infrastructure Elements with Land Use
6.2 Protect Urban Structure Integrity
6.3 Resilient CAV Policy Development and Implementation
6.4 Reclaim Surplus Land



7. Economic Sustainability

The City will support and enhance sectors related to the development and use of both CAVs and associated technology, with a particular focus on retaining and attracting industries, investment, and employment. Actions related to Economic Sustainability will aim to expand London's regional position as it relates to CAVs.

7.1 Develop a Top-Quality Workforce
7.2 Attract New Jobs and Investments
7.3 Create a Supportive and Thriving Environment

8. City Fleet and Services

The City will enhance its fleet and services through CAVs and related systems for the purpose of improving safety and public service delivery. Actions will evaluate the transformation of fleet vehicles and City services as well as potential impacts to employment and labour needs.

8.1 City Services and Fleet Vehicles
8.2 Future-Proofing
8.3 People Services and Labour

Prepared by the Corporation of the City of London
September 2022

London
CANADA