Transportation and Building 21st Century Cities

Intersection of Transportation and Land Use Planning

City of Guelph Transportation Master Plan

Background Paper Series

Transportation Master Plan

CITY OF Guelph
Making a Difference

Guelph Transportation Master Plan

Moving Guelph Forward

Guelph is growing and how we move around our city is changing. We're exploring transportation options to make our city move better in every way. Through the Transportation Master Plan update, we will look at all of the ways we move: walking, cycling, riding transit, driving, trucking and using trains. A renewed plan will ensure we have the right travel options and capacity to support the people and jobs we expect as Guelph grows, while maintaining high quality of life for residents and workers.

The updated Transportation Master Plan (TMP) will define how our transportation system will support the community as Guelph continues to grow. The update will look at transportation planning in Guelph beyond 2031. The main objectives are:

1. to ensure the new plan builds upon current policies, including the Official Plan and other master plans that have been approved since 2005;

2. to recommend new policies and guidelines that reflect our community's vision and that balance mobility, environment and efficiency while prioritizing safety and access for all travellers; and

3. to explore how new and evolving technologies and travel services will shape the future of transportation in Guelph.

This series of background papers offer information and analysis of some of the key trends and concepts that will underpin the development and set the strategic direction of the City of Guelph TMP. The papers are intended to support conversations in the community and across City Hall about how Guelph plans for the future of mobility.

The series includes the following papers, all available at guelph.ca/tmp.

1. **Transportation Technology and New Mobility Options**

2. **The Changing Transportation System User**

3. **Transportation and Building 21st Century Cities**

4. **Road Safety**

5. **Network Planning**

6. **Transportation System Resilience**

Each of these background papers opens with an introductory primer on the topic before examining key trends globally, followed by a look at how these topics and trends are currently addressed in Guelph, before concluding with an analysis of the implications for planning Guelph's future transportation system.

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Intersection of Transportation and Land Use Planning: A Primer

Land use and transportation are intertwined. Therefore, land use and transportation planning must be coordinated to ensure that the objectives of both are achieved. This paper speaks to some of the key points of intersection between land use planning and transportation planning being considered by the City of Guelph.

How does land use planning influence transportation planning?

Land use planning establishes levels of activity/demands for travel

The City of Guelph's *Official Plan* (OP) establishes the overall distribution of people and jobs throughout the City. It also establishes land uses for all land in the city. Land uses include ways that properties can be used, how tall buildings can be and how many residential units there can be on each property – known as density – which is basically a measure of how many people live or work in a building or a neighbourhood. The more people living or working in a neighbourhood or along a street, the more opportunity there is to serve travel demands using mass transportation like public transit.

Land use planning and practices influence mode choice...

...through land use mix

The mix of land uses in an area determines the number of everyday destinations that can be easily accessed using short trips. The broader the range of services, housing, shopping, jobs and restaurants available close-by, the more likely it is that people will choose the local option, keeping their trips short. Short trips offer travellers a broader range of mode choice because walking and cycling are only attractive options for many people if the trip is short.

A mix of land uses around employment centres also supports transit use for commuter trips. Employees who have access to a range of services close to work are more likely to use transit for their primary trips. Additionally, mixing land uses around employment centres creates demand for two-way travel, increasing travel demand in areas well served by transit.

...through community design

"Direct-ness" of street pattern impacts access, connectivity and trip length for active transportation modes - walking and cycling. Street patterns that create short walking distances and direct connections to community boundaries are more supportive of active modes. Street patterns also impact the efficiency and quality of transit service.

...through site design

Site design sets the location of different features on a site. The approach taken to site design impacts access and trip length to and from the site for active modes. Site design also affects travel distances and environments for sustainable modes - pedestrians, cyclists and transit users - which strongly influences mode choice. Site designs that do not include supportive elements for sustainable modes (e.g. bike parking, showers and change facilities, etc.) promote cars as a preferred mode choice.

...through parking regulations

Convenience, cost and availability of parking at the home end of a trip influences car ownership and general car use. Convenience, cost and availability of parking at the destination end of a trip makes driving to that destination more attractive than using any other mode.

Note that parking is not just a transportation issue. Parking is often used to generate revenue for a city. Parking supply is also perceived to be a critical support for economic activity and land development. These goals often encourage increasing parking supply in areas where objectives for increasing sustainable transportation mode share would discourage it. The desire for high levels of convenience have historically led to an over-supply of parking capacity, particularly where land prices are lower.

How does transportation planning reflect land use planning?

The Transportation Master Plan (TMP) reflects strategic community objectives

The TMP sets the level of priority given to the different modes of travel across the city. It makes sure that the networks, policies and programs for different modes are planned to reflect the community objectives.

The TMP sets mode share targets

The TMP sets the targets for the percentage of travelers that will use each mode of transportation for personal travel in the community in the future. These percentages are collectively referred to as the mode share targets. The mode share targets consider the historical travel choices by residents of Guelph and the City's strategic goals related to transportation, climate change and urban form.

The TMP connects neighbourhoods

The TMP develops the networks for all modes of travel. It makes sure that all travel options are available for all destinations across the city and that networks for each mode are connected and continuous.

The TMP determines local priorities for travel modes

The TMP identifies the priority networks (i.e. the connection of streets and paths that will provide a comfortable and convenient environment) for travellers using every mode. The priority networks reflect the existing neighbourhood structure and the growth objectives of the City set by the OP.

The TMP also identifies the City's design practices to improve the environment for the priority modes along different streets. Where the priority networks overlap, the TMP will establish practices for integrating the priority networks.

The TMP influences how well streets integrate into the community

The TMP identifies the design practices that the City will follow to reflect the environment of the street and avoid creating a barrier. The practices will consider the unique needs of streets in different areas, such as urban areas, suburban areas, industrial areas and natural areas.

Intersection of Transportation and Land Use Planning in Guelph

City of Guelph Official Plan

The City of Guelph's *Official Plan* (OP) is the guiding document that provides the long-term framework for growth, development and the protection of many valuable cultural and natural heritage resources located across the city. It is a legal document under the Planning Act that contains the goals, objectives and policies to manage and direct physical (land use) change, and its effects on the cultural, social, economic and natural environment within the community. The City also has several areas across the city that have been or are being planned through Secondary Plans defining detailed land use and policies.

The OP was consolidated in 2018 and is currently being reviewed to address conformity with the Planning Act and a number of provincial policies. The vision and principles for growth within the OP include:

. A compact, connected and complete city;

. An environment-first approach;

. Safe and connected transportation choices; and

. A range and mix of housing that is accessible and affordable.

The TMP is one way that the City will implement its OP vision and principles for growth.

Urban Structure and Strategic Growth Areas

Schedule 1 of Guelph's OP defines an urban structure based on a nodes and corridors model of growth. The Intensification Corridors and Community Mixed-Use Nodes identified in the City's OP are intended to be vibrant areas with increased density and a variety of land uses. The density and mix of uses will create a lot of short trips that can be completed by walking and cycling while also supporting the viability of existing and planned transit service. Greenfield areas (i.e. new subdivisions) will be planned to be compact and will be developed at densities that encourage travel by sustainable modes and promote opportunities to live in close proximity to jobs.

The City of Guelph has done some initial work to consider street design in some the Intensification Corridors and Community Mixed-Use Nodes. *Urban Design Concept Plans* have been prepared for the:

. Woodlawn/Woolwich mixed-use node and the Woolwich intensification corridor;

. Gordon/Clair mixed-use node;

. Paisley/Imperial mixed-use node;

. Watson/Starwood mixed-use node; and

. Gordon Street intensification corridor.

The TMP will consider the direction from the *Urban Design Concept Plans* and leverage and support the opportunities presented by the Intensification Corridors and Community Mixed-Use Nodes.

Vision for Downtown

The *Downtown Secondary Plan* establishes a comprehensive vision for revitalizing Downtown Guelph to 2031, reinforcing the historic character of Downtown Guelph while responsibly and creatively planning for growth. The planning framework for Downtown includes several key transportation elements:

. A *Downtown Streetscape Manual* that establishes unique street characteristics (such as flexible streets) for the area and emphasizes walking and cycling as preferred modes of travel;

. New walking/cycling connections to Downtown across the Speed River;

. The major transit station area and a high level of local and regional public transit service; and

. Public on-street and off-street parking facilities throughout Downtown.

The City also has a *Parking Master Plan* for Downtown that calls for a 1,300 to 1,700 increase in the number of parking stalls.

These strategic plans are key components of the vision for Downtown. The TMP will consider all of these commitments, incorporating what it can and identifying any elements that need further study.

Acknowledgements

City of Guelph

Jennifer Juste, Project Manager

With support from: Melissa Aldunate, David de Groot, Natalie Goss and Krista Walkey

Consultant Team – Dillon Consulting

Shawn Doyle, Project Manager/Primary Author

Mariam Bello, Project Coordinator

With support from: Jeff Axisa, Nicole Beuglet, Morgan Boyco, Maria King, Adam Lanigan, and Kristin Lillyman